PRODUCTIVITY COMMISSION

Business Failure and Change: An Australian Perspective

Staff Research Paper

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Glossary

Adverse selection	The process whereby higher risk people purchase insurance — lower risk people do not participate (or they leave) to avoid subsidising the higher risks.
Automatic discharge (Australia)	A bankrupt is released from bankruptcy three years from the date of filing a Statement of Affairs with the Official Receiver, provided that no objection to discharge has been made.
Bankrupt (Australia)	A bankrupt is a person who is unable to meet his or her liabilities and has either presented a debtor's petition to the Official Receiver, or had a sequestration order made against their estate.
Bankruptcy (Australia)	The process by which a trustee is appointed to take control of the property of a bankrupt, to sell certain assets and pay the proceeds (less fees and charges) to the creditors. The trustee can be the Official Trustee in Bankruptcy or a registered trustee.
Bankruptcy notice (Australia)	A notice issued by the Official Receiver to a debtor advising that, if the specified debt is not paid, proceedings may be commenced to obtain a Sequestration Order.
Business bankruptcy rate	The ratio of business–related bankruptcies to some numerical measure of the stock of businesses, usually expressed on a per annum basis.
Business–related bankruptcy	A business bankruptcy occurs when the individual's bankruptcy is directly related to his or her proprietary interest in a business.
Business exit	A business that exits the business population, due to either a change in ownership or because it ceases all operations.
Business failure	A business that ceases operations and exits the business population because it is no longer a viable concern.
Business stakeholders	All groups who have an interest in a business. These include the owners, employees, suppliers and creditors.

Charge	An encumbrance over assets. A charge can be fixed or floating or both. A fixed charge is a charge on a specific asset. A floating charge is a charge on all property of a business and is usually registered as being over the business itself, rather than just its assets.
Composition	An arrangement whereby at least some creditors to a business agree to accept payment of their debts by instalments, or by partial payment of the amounts owed to them.
Debenture	A document that creates a charge over a company.
Debtor's petition (Australia)	A petition by a debtor against him/herself requesting the Official Receiver to bankrupt him/her.
Deed of arrangement	A formal arrangement that allows the debtor to arrange his/her affairs with a view to the payment, in whole or in part, of his/her debts. The deed must be in favour of all the creditors of the debtor and may provide for an assignment of all the debtor's property.
Deed of assignment	A formal arrangement whereby debtors assign some or all of their property to the benefit of creditors.
Deed of company arrangement	A deed between a company under administration, the Administrator of the company, the directors of the company and the company's creditors. The deed binds all the unsecured creditors of the company, whether they voted for the deed or not.
Insolvency	Situation where an individual or a business is unable to pay debts as and when they fall due for payment.
Insolvency practitioner	Individuals registered as having the experience and qualifications to act, in the event of insolvency, as liquidators, company administrators or private trustees.
Liquidation	The process of terminating, or 'winding–up', an incorporated business. This involves ceasing business operations, realising its assets, discharging its liabilities and distributing any surplus assets among its members.
Liquidation rate	The ratio of the number of liquidations to the number of incorporated businesses, usually expressed on a per annum basis.

Moral hazard	The effect of incentive on behaviour. For example, persons with house and contents insurance may be less prudent about ensuring their house is secure when they are absent.
Official Liquidator (Australia)	A person who is qualified to act as a Liquidator in Court windings–up under the Corporations Law. They are registered liquidators who have been additionally approved and registered as official liquidators by the Australian Securities Commission.
Official Receiver	A public official, under the control of the court, whose main function is the administrative supervision of bankruptcy. There are Official Receivers for each bankruptcy district in Australia.
Official Trustee (Australia)	A body corporate, represented by the Official Receivers who act on its behalf. It performs trustee functions when no registered trustee has been appointed (or is acting) and it has the same powers and obligations as a registered trustee.
Priority creditor	An unsecured creditor who is afforded a priority over other unsecured creditors.
Receiver	A person appointed by a secured creditor to take control of the secured assets for the benefit of the secured creditor. In addition, a person may be appointed Receiver by the Court to take charge of assets.
Receivership	The process in which a receiver is appointed to a company to collect or protect property for the benefit either of the appointor or the persons ultimately held entitled to that property.
Registered trustee (Australia)	A person who is registered under the *Bankruptcy Act 1966*, who has been qualified to act as a Trustee of a bankrupt's estate
Reorganisation	The situation where an insolvent business is being continued under existing ownership, rather than being sold as a going concern or liquidated.

Scheme of arrangement	A restructuring of a company's capital structure or rescheduling of its debts. The arrangement is binding on all its creditors/members (either or both), or classes of either or both. A scheme may be proposed by the company, the Liquidator or a creditor or member and is approved by special resolution.
Secured creditor	A creditor who is in a position to obtain repayment, partially or wholly, from the assets of the debtor in priority to unsecured creditors. This creditor will hold some special security for his debt, for example, a charge on a particular property
Unsecured creditor	A creditor to a business or individual who has no mortgage, charge, or lien on the property of the debtor as security for the debt.
Voluntary administration (or voluntary liquidation)	The appointment of an administrator to take control of the affairs of a financially distressed company.

Key messages

- Contrary to common perceptions, most Australian businesses survive for a considerable time
  - for example, around two–thirds of businesses are still operating after five years and almost one–half are still operating after ten years.
- Around 7.5 per cent of businesses exit each year
  - cessations account for around 80 per cent of exits (changes in ownership account for the remainder)
  - but most exits are *not* firm failures.
- Each year, cessations account for, at most, between 9–10 per cent of total job losses and 3–4 per cent of GDP
  - however, in net terms, these impacts are outweighed by the corresponding gains from new business start–ups.
- Less than 0.5 per cent of businesses exit each year due to 'catastrophic' failure (bankruptcy or liquidation). The failure rate has fallen significantly in the past decade
  - the estimated failure rate was 3.6 failures per 1000 enterprises in 1999-00, one–third of the rate in 1991-92
  - the decline is attributable to fewer company liquidations, rather than any fall off in unincorporated business bankruptcies.
- Governments play an important role in regulating the orderly closure or reorganisation of insolvent businesses
  - some countries (including Australia) have so-called 'creditor–oriented' insolvency arrangements that allocate control rights to creditors
  - others (such as the USA) have 'debtor–oriented' arrangements that allow the existing owners a continued stake in the management of a reorganised business.
- A comparative assessment of the Australian and US approaches to reorganisation reveals advantages and disadvantages of both systems
  - a possible weakness of the Australian system may be a bias towards premature liquidations
  - however, this is a relatively minor consideration in light of the evidence suggesting that US style reorganisation typically fails, is protracted, costly and does not honour contracts.
- An insolvency regime cannot fully protect the interests of all parties and its prime intent is to create incentives for prudence among business owners and for a willingness for creditors to provide funds.
- To the extent that employees of insolvent businesses are low in the order of priority for claims, this is best handled through insurance arrangements. Governments around the world use a variety of mechanisms to protect employee entitlements. The Australian scheme is administratively simple, has few transactions and adjustment costs for business, and has relatively low ongoing costs (although liabilities may be significantly higher during economic downturns).

Overview

The stock of businesses that make up the Australian economy is like a pool, with an outflow of businesses every year being more than replenished by an inflow of new or transformed businesses.

This turnover of firms is a natural phenomenon in market economies — and has significant positive effects. New businesses often offer innovative products and services, while the loss of businesses may also provide economic benefits (for example, by freeing up people and resources for more productive uses). At the same time, this turnover of businesses may involve significant costs.

This research paper is about the outflow of businesses — 'business exits'. It examines recent evidence about the nature and magnitude of different types of exit in Australia, including business failures. It also examines institutional arrangements and policy mechanisms for dealing with insolvent businesses.

Business exits in Australia

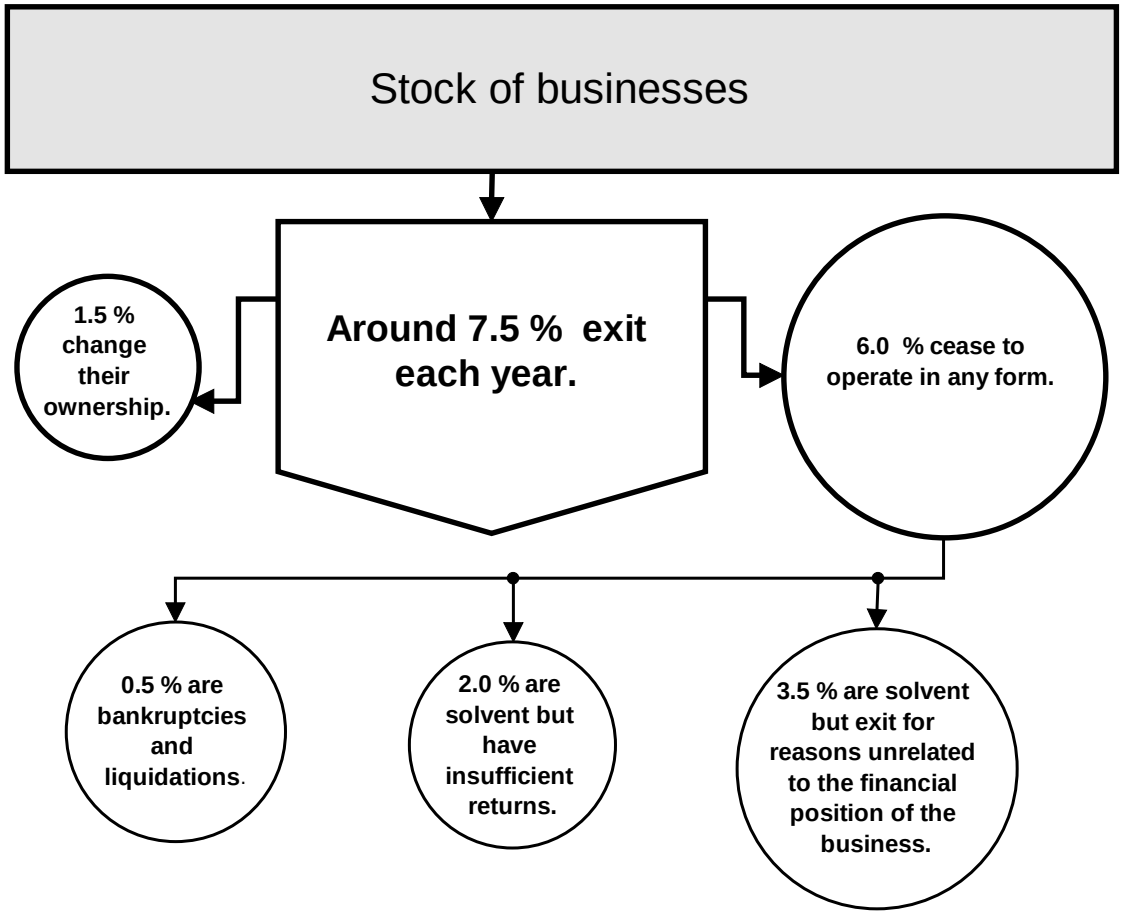
Existing data on exits are patchy and sometimes inconsistent. However, Australian Bureau of Statistics data indicate that around 7.5 per cent of businesses exit each year (figure 1). There are two broad avenues by which businesses can exit.

- *Changes in ownership* occur in around 1.5 per cent of businesses and account for 20 per cent of exits. These include businesses that have been sold, merged or taken over, and may involve substantial changes to the operations of the business. Although the old business no longer exists in name, it rejoins the business pool in a new guise.
- *Cessations* occur in around 6 per cent of businesses and account for 80 per cent of exits. Some cessations involve business failure, such as when a business goes bankrupt (unincorporated enterprises), is liquidated (incorporated enterprises) or simply closes because the owners are unable to secure a sufficient return. But failure is a comparatively rare phenomenon. The majority of cessations involve solvent businesses closing for reasons unrelated to their financial position — such as when the owner retires, seeks a different lifestyle or dies.

Contrary to common perceptions, most Australian businesses survive for a considerable time. In fact, around two–thirds of businesses are still operating after 5 years and almost one–half are still operating after 10 years. Even after 15 years, around one–third of businesses will have survived. Moreover, most of the exits are not failures. These perceptions, while wrong, may have damaging effects on entrepreneurs' willingness to commence new businesses because of an exaggerated concern about the risks.

Various factors influence the likelihood of business exits — including location, industry sector and characteristics of the businesses themselves. Of the latter, empirical evidence in Australia and overseas is particularly telling with respect to the age and size of businesses. Newly–formed businesses are more likely to exit than older businesses, and small businesses are more likely to exit than larger ones.

Figure 1 **Business exits in Australia**



Economic impacts of business exits

The extent of reallocated resources associated with exits can be estimated on the basis of displaced value added and employment.

Each year, an estimated 55 000 – 65 000 businesses economy wide cease to operate.

- The value added accounted for by cessations represents, at most, between 3–4 per cent of GDP.
- Direct job losses resulting from business cessation are likely to account for, at most, between 9–10 per cent of total annual job losses.

However, in net terms, these impacts are more than offset by the corresponding gains from new business start–ups (and the growth of surviving businesses). In recent years, for example, the entry rate for businesses has been around two–thirds higher than the exit rate.

Furthermore, although business exits — particularly failures — often involve negative outcomes, they have a number of positive economic effects. For example:

- productivity growth is enhanced when inefficient and unprofitable businesses are replaced by efficient and profitable ones;
- exits may be the result of longer–term structural changes that provide an opportunity for resources in the economy to be configured in new and better ways; and
- the learning experience gained by entrepreneurs involved in exits will assist them in doing things differently next time around.

These positives underscore the fact that exits are a natural and expected phenomenon associated with dynamic market economies.

Business failure trends

The majority of exits are either ownership changes or closures unrelated to the financial position of the business (figure 1). The remainder, representing around one–third of exits, are commonly referred to as 'business failures'. There are two categories of failure.

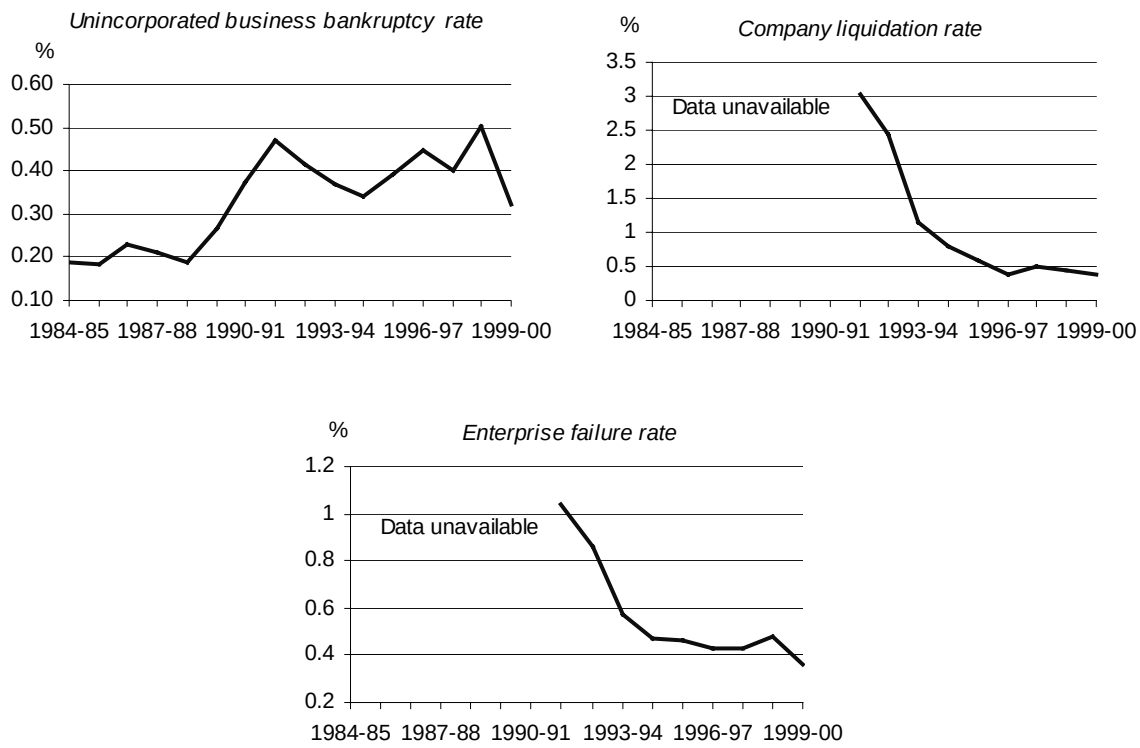
- 'Solvent failures' are businesses that have ceased operations because they could not make a go of it and/or to avoid making further losses, but without owing any debts. These account for the majority of business failures.
- 'Insolvent failures' are a more narrow, legal definition of failure. They involve businesses that have ceased operations as a consequence of bankruptcy or

liquidation. These ‘catastrophic’ failures are estimated to represent only around one in five business failures.

Whereas objective measures of the former kind of failure are rarely available, the latter category is relatively data rich and also of most policy interest. Accordingly, although representing only a fraction of business exits, insolvent failures account for the bulk of the analysis in this publication.

Based on this definition, the rate of (insolvent) business failure in Australia has fallen sharply in the past decade (figure 2). In 1999-00, the economy–wide business failure rate in Australia was estimated to be around 3.6 failures per 1000 enterprises (or 0.36 per cent). This was approximately one–third of the rate in 1991-92, when the comparable figure was 10.4 failures per 1000 enterprises (1.04 per cent).

Figure 2 **Business failure rates**



This decline is attributable to fewer liquidations by incorporated businesses. The company liquidation rate for 1999-00 (0.38 per cent) was only around one–eighth of the rate for 1991-92 (3.02 per cent). In contrast, the failure rate of unincorporated businesses — as measured by business–related bankruptcies — remained relatively constant over the 1990s (average of around 0.4 percent per annum), albeit with considerable year-to-year variation.

Some of the decline in the rate of company liquidations is likely to stem from the introduction in 1992 of Voluntary Administration provisions under the Corporations Law. These offer much greater scope for companies to trade their way out of difficulties when they are no longer solvent. By 1999-00, Voluntary Administrations had grown to account for around two–thirds of company insolvencies. Nevertheless, even if Voluntary Administrations are counted as corporate failures, the overall rate of corporate insolvency has still declined markedly from the early-1990s. It appears likely that the major reason for this decline is sustained economic growth since the downturn in the early-1990s.

Following a surge in the late-1980s and early-1990s, the bankruptcy rate of unincorporated businesses fluctuated around the higher level during the 1990s (despite strong economic growth). The reason for the discrepancy between the trends in company liquidation rates and unincorporated business bankruptcy rates is unclear.

Government involvement with business exits

Governments play an important role in regulating the closure or reorganisation of insolvent businesses, and in ensuring that insolvency policy provides an appropriate set of incentives for entrepreneurs.

Insolvent businesses have two principal courses of action. They can either submit to bankruptcy or liquidation, or they can reorganise their affairs and try to prevent closure. Governments around the world invoke rules governing either the reorganisation and survival of businesses or their ‘orderly’ exit through liquidation.

Even though relatively few businesses exit each year via bankruptcy or liquidation — less than 1 per cent of all businesses in the economy — government involvement in this area is important for several key reasons.

- Insolvency regulations and arrangements do not just affect the businesses directly involved, but have implications for all businesses. Firstly, they provide strong incentives for appropriate attitudes to risk by entrepreneurs and managers. Secondly, by ensuring that debt contracts underpinned by assets are honoured, they preserve an important source of credit.
- Insolvency regulation can influence the efficiency of resource allocation in an economy over time — for example, by encouraging the closure of non-viable businesses and the survival of efficient ones.
- The costs associated with individual business failures for creditors can be relatively high and sometimes concentrated on vulnerable groups (for example, employees).

Insolvency codes

There are many options for designing insolvency systems. Reflecting the diversity of policy choices, different countries have different regulatory arrangements associated with business closure. In policy debates, two themes emerge as particularly important:

- the issue of whether insolvency regulation should allow significant scope for insolvent businesses to continue trading under incumbent management; and
- the order of priority of claimants on the assets of an irretrievably insolvent business.

Some countries have so-called 'creditor–oriented' insolvency arrangements that allocate control rights to creditors. The Australian insolvency regime — which rests principally on the Corporations Law and the *Bankruptcy Act 1966* — is usually regarded as belonging to this category. Although there are considerable legal provisions for assisting insolvent businesses to help avoid closure, creditors exercise substantial control over the reorganisation of businesses.

Other countries have 'debtor–oriented' arrangements that allow the existing owners a continued stake in the management of a reorganised business. The most prominent example of a debtor–oriented insolvency system is the United States, where chapter 11 of the Bankruptcy Code governs the reorganisation of insolvent businesses. In essence, chapter 11 allows business owners the opportunity and the time to reorganise and restructure in order to pursue *their* long–term objectives (and not those of their creditors).

A comparative assessment of the Australian and US approaches to reorganisation reveals advantages and disadvantages of both systems. A possible weakness of the Australian system may be a bias towards premature liquidations. However, this is a relatively minor consideration in light of the evidence suggesting that US style reorganisation typically fails, is protracted, costly and does not honour contracts.

A critical issue in the liquidation process is the allocation of available funds to the various stakeholders in the insolvent business. In Australia, the current order of priority, at its simplest level, distinguishes between secured creditors and unsecured creditors. Secured creditors have the right to assets of a business, whereas unsecured creditors do not have rights over a specific asset.

Alternatives to the current order of priority have been put forward mainly on social grounds, although there may be some efficiency spin-offs. Most concern is about the ranking of employees. Some consider there is a case for elevating the priority of

employees above secured creditors. However, there are a number of limitations in changing the order in favour of employees.

- It would reduce the pay–off to secured creditors, with possible consequences for credit supply and interest rates.
- If employers responded to re–prioritisation by earmarking assets for employee entitlements, this would affect working capital in the business.
- The creation of special privileges for employees could be regarded as inequitable in that it would effectively deprive other unsecured creditors of their claim to available funds (such as people seeking damages).
- Even when employees get priority, they may still lose a significant share of their claims.

For these reasons, most countries deal with employee losses through other policy instruments (see below).

The purpose of this paper is not to make recommendations about future directions for Australia's insolvency regime. However, it emphasises that the key to good insolvency policy is to take into account its multiple objectives and to recognise that its subtle incentive effects can have wide influences throughout the economy.

Protecting employee entitlements

The employment impacts of business insolvencies are relatively modest. Direct job losses resulting from bankruptcies and liquidations in Australia in 1999–00 are estimated to have accounted for less than 1 per cent of total job losses in that year.

Nevertheless, in the event of business insolvency, employees are seen as a particularly vulnerable group that often loses a significant share of its claims on the insolvent business. Entitlements that may be due to employees of insolvent businesses include those accrued during service — such as annual leave, long service leave, unpaid wages and pay in lieu of notice — as well as any redundancy pay. The Commonwealth Government has estimated that the long run liability could be expected to be around $110 million per annum, affecting up to 19 000 employees (an average loss per employee of around $5 700).

Governments around the world use a variety of mechanisms to protect employee entitlements in the event of business insolvency. These mechanisms generally consist of an employee protection fund made up of contributions from governments, employers or employees. A government–funded national employee protection fund was introduced in Australia in early 2000.

Employee protection funds have some significant advantages. They are easy to implement, administratively simple, have few transactions and adjustment costs for business, and have relatively low ongoing costs (although liabilities may be significantly higher during economic downturns). However, they also have some limitations.

- As the premiums are funded by government, riskier businesses face no penalty through insurance premiums. This might increase risk–taking behaviour — the problem of 'moral hazard'.
- The capping practices associated with government–funded protection schemes mean that some employees can receive relatively low levels of insurance cover.

Other forms of employee protection mechanisms that are potentially available include compulsory risk–rated employer insurance, voluntary employee insurance and accrued employee entitlements held in trust. The advantages and disadvantages of these alternatives are described and analysed in the paper.

Other insolvency issues

The paper also examines how unsecured creditors other than employees fare under current provisions. In most cases, such as that of trade creditors, there seems to be few grounds for concern about the order of priority. However, an issue warranting further research is the extent to which insolvency regimes should deal with damages claims for product liability or environmental problems. Such claimants are involuntary unsecured creditors (as no explicit contracts are agreed to), but the costs may be quite substantial and fall onto small and vulnerable groups.

A further issue for policy consideration is the obstacles that are placed in the way of bankrupt business owners who wish to engage in future entrepreneurial activity. Currently in Australia, bankrupts are not barred from starting up a new business during the period of their bankruptcy (usually three years). However, in practice, it can be very difficult for undischarged bankrupts to maintain a business, due to restrictions applying to their business operations — such as the amount of credit they may obtain.

The desirability or otherwise of early discharge has to balance two considerations.

- On the one hand, early discharge may reduce incentives for business prudence and allow incompetent entrepreneurs to set up businesses with a high likelihood of future failure — with costs to others.

- On the other hand, business failure can create entrepreneurial human capital, through people learning from their business experiences. This capital is only productive if these entrepreneurs can apply it in subsequent ventures.

The paper explores a number of ‘filters’ that might be used to identify the circumstances in which some entrepreneurs could be provided with earlier discharge from bankruptcies.

1 Introduction

1.1 What are business exits?

The stock of businesses that make up the Australian economy is like a pool (figure 1.1). Every year, thousands of new businesses — mostly small — go 'out of business' and flow from the pool, only to be replenished by a strong inflow of new or transformed businesses.

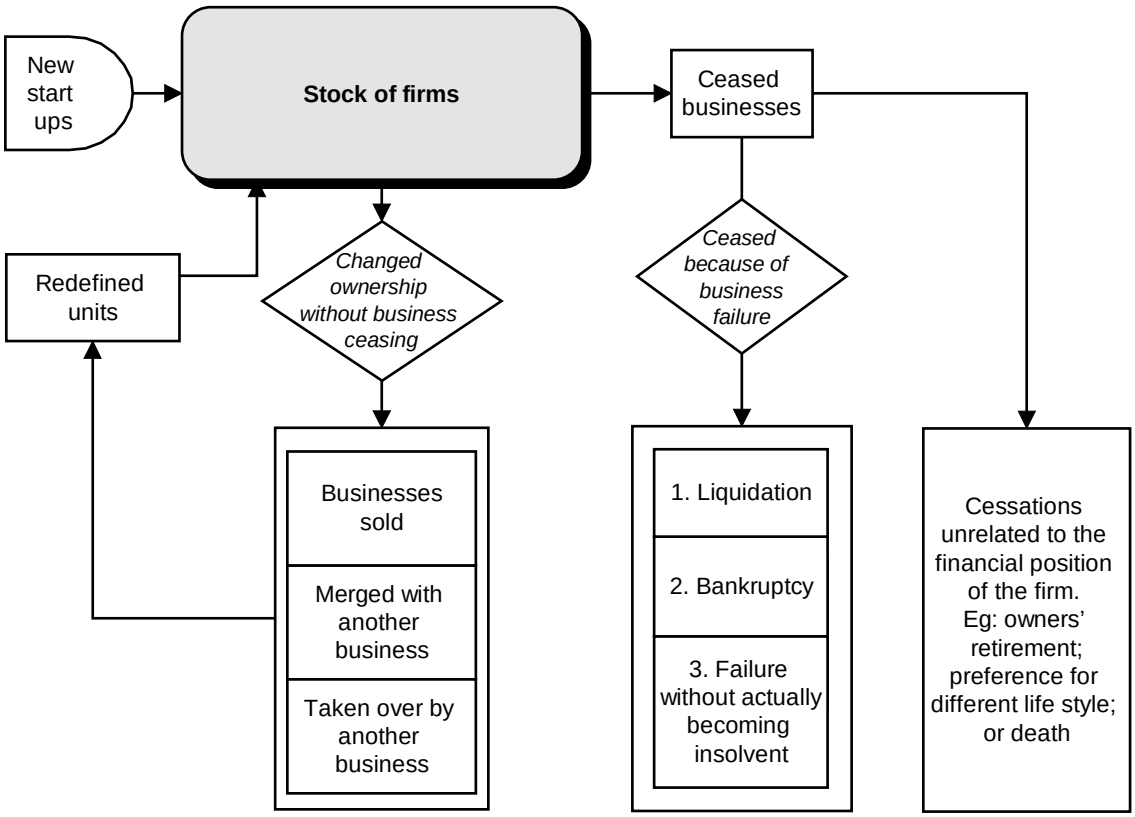
This paper is about the outflow of businesses — 'business exits'. Currently there is a lack of detailed empirical work examining business exits. Accordingly, a main aim of this paper is to provide data on different types of business exits, to comment on the reasons why these occur and to highlight some of the key economic implications emerging from the data.

We can divide business exits into two distinct classes.

- *Changes in ownership (temporary exits).* In many cases, businesses change ownership with varying degrees of modification of the structure and operations of the business. The business may be sold, taken over or merged. This category includes 'successful' exits (selling out for high profits and mergers), but also businesses that have been sold because of poor market performance, financial difficulties or other reasons. Changes in ownership are classified as exits because they often involve substantial changes to the operations of the business and invariably invoke transactions and other reorganisation costs.
- *Cessations (permanent exits).* These represent 'real' deaths where businesses cease operations altogether. The majority of cessations consists of solvent businesses closing for non–financial, 'lifestyle' reasons — for example, when the owner retires or seeks a different lifestyle. However, other cessations involve business failure. In most cases this is because the owners have been unable to secure a sufficient return, but have remained solvent ('solvent failures'). In some cases, though, 'insolvent failure' occurs, resulting in liquidations or bankruptcies (depending upon whether the business concerned is incorporated or not).[1]

[1] See section 3.1, chapter 3 for a discussion of different types of business failure.

Figure 1.1 **Dynamics of entry and exit**



1.2 The economic role of business exits

Business exits — particularly failures — involve costs. These may include: costs to government of organising and regulating orderly exits (such as administration of the Bankruptcy Act); losses to creditors, personal costs to employees and owners; search costs as people look for new jobs (including welfare payments); and costs of re–organising resources generally. The way in which societies deal with these costs — principally through insolvency law and regulations — is the subject of chapters 4–7 of this paper.

However, it is also important to look beyond the relationship between business failures and insolvency codes and to consider the broader economic role played by exits. Along with business start–ups, exits are a measure of turbulence in the pool of firms making up the economy. Turbulence introduces benefits as well as costs — some of which are not acknowledged in debates about the 'problems' of business failures. In fact, exits are an integral part of a vibrant market economy. An economy that features a lot of new entrepreneurs and businesses is inevitably going to witness large numbers subsequently exiting.

Thus, although business exits — particularly failures — often suggest negative outcomes, they have a number of positive economic effects. These positives underscore the fact that exits are a natural and expected phenomenon associated with dynamic market economies.

Business exits as a productive mechanism

Business failures are part of a process in which inefficient and unprofitable businesses (low returns) are replaced by efficient and profitable ones (high returns). In this regard, the OECD (1998, p. 112) has noted how the entry and exit process can sometimes make a sizeable contribution to productivity growth. The empirical evidence used by the OECD suggests that the main factor behind any increased productivity is the exit of businesses whose productivity is poor (rather than the entry of businesses whose productivity is above average).

Economies get better through a process of experimentation and natural selection (BIE 1995). New entrepreneurs constantly introduce new production processes and offer consumers new products. During this process some businesses survive and prosper, but others fail. Thus the process of entry and exit generates information on which combinations of products and services best satisfy consumer tastes. From this perspective, failures are an investment that society makes in the dynamic competitive process (Baldwin et al. 1997).

Role of business exits in structural adjustment

There are longer–term factors at work in an economy that will affect the pattern of entry and exit in different industries.

The demand for, and the supply of, goods and services change over time. In response the structure of the economy changes. Thus businesses in some industries will face much lower returns because of changing circumstances (regardless of how technically efficient they are).

Structural changes also provide an opportunity for resources *within* an industry to be configured in new and better ways — hastening technological diffusion. But this may require some business exits to succeed. For example, describing the effect of the Great Depression on the American automotive industry, Bresnahan and Raff (1991) found that the large contraction in demand was felt most by smaller plants that used less cost–effective craft, rather than mass production, techniques. The Great Depression effectively eliminated these factories and the structure of the industry moved towards having larger, more efficient mass–production plants.

The study of business exits also provides a context for considering the adjustment costs of business closures caused by government policy changes or other 'shocks' to the economy. Changes in government policies may alter the economic environment in which firms operate and favour some firms over others. Some firms inevitably exit and this occasions adjustment costs (because resources do not move instantly to new uses). It appears, however, that structural adjustment and firm closures arising from policy shocks — for example, tariff cuts — are dwarfed by business closures that occur as a consequence of other factors (see chapter 2).[2]

In the context of this broader picture, policy reform that threatens the viability of some firms looks much less problematic set against a background of the perpetual adjustment of much vaster resources.

Relationship between business exits and entrepreneurship

Business failures may promote dynamic efficiency through their effects on entrepreneurs. There are several aspects to this.

- The learning experience for those involved in business failures (how to do things differently next time).
- The creation of information about risks. Information about business failure — including, for example, the relative riskiness of industries — can provide guidance to those entrepreneurs contemplating starting a business.
- The transfer of skills. Business exits may hasten technological diffusion as both owners and employees with specialist skills and knowledge are freed to work in new ventures. However, the exit of a business may also involve the loss to society of intangible skills and knowledge possessed by some owners or employees.

The role of government

Business exits perform an important function in a market economy. It can be argued that government policies premised on allowing businesses to fail will *generally* result in an appropriate allocation of resources and facilitate economic efficiency improvements. The businesses that survive are the most efficient and those with products most in demand. And the economy further benefits from improved technological and learning processes.

[2] For an up–to–date discussion of tariff reductions and adjustment consequences, see *Review of Australia's General Tariff Arrangements* (PC 2000).

However, notwithstanding the potential dynamic gains from business exits, there may be costs from business failure that are borne by debtors, creditors, employees and others. There is also the likelihood that government policy premised on allowing businesses to fail, will sometimes condemn struggling businesses that might have been economically viable in the long run.

Accordingly, in the case of insolvent businesses, it is important for governments to weigh the possible economic benefits of their exit against possible economic or social reasons for facilitating their survival. Relevant economic objectives centre around improving the efficiency of businesses and markets, while social objectives include the protection of social values and rights.

A related point is that in view of the potential dynamic gains from business failures, there is a need to ensure that insolvency policy does not make the cost of failure too high. An insolvency regime that imposed high failure costs could stifle risky — but high returning — investments, and discourage entrepreneurship and experimentation.

In special circumstances, business failures resulting from insolvency may sometimes reflect unfavourable macroeconomic conditions[3] and, in some cases, exacerbate them — with adverse impacts on economic efficiency. That is, bankruptcies and liquidations may also have a causal impact in their own right. In particular, widespread firm failures can deepen and prolong recessions.

A combination of many failures at once may have knock–on macro implications (contagion) which governments might be concerned about. The sudden and rapid spreading of business failures was witnessed across some Asian economies in the 1990s.

The most appropriate policies for preventing contagion effects are likely to revolve around effective and efficient insolvency regimes and particular policies for key sectors (such as prudential regulation of financial institutions). These are important in limiting financial crises and facilitating the rapid and orderly workout of business failures. However the macroeconomic dimensions of insolvency policy is a complex and distinct field that is beyond the scope of this paper.

[3] See, for example, Melicher and Hearth (1988) and Holtz–Eakin et al. (1994).

1.3 Scope and data sources

Business exits are a complex phenomenon. The majority are either ownership changes or closures unrelated to the financial position of the business. The remainder, commonly referred to as business failures, consist of two types — businesses that have ceased operations without owing any debts, and businesses that have ceased operations as a consequence of bankruptcy or liquidation.

Unfortunately, comprehensive data are unavailable for all the different forms of exit and the different business sub–groups (such as employing/non–employing, agricultural/non–agricultural). The richest data sets relate to broad exits by employing businesses and for 'catastrophic' failures involving bankruptcy or liquidation. As the latter are also the type of exit of most policy interest, they account for the bulk of the analysis in the paper.

We use three major sources of statistical data to describe the nature and extent of business exits and failures in this paper.

- First, we use novel ABS data on exit rates and types by the age, location, size and type of legal organisation of the business. Limitations of these data, however, are that they only exist for two years in the mid–1990s and are for employing businesses only.
- Second, we analyse a rarely used but comprehensive set of data on business–related bankruptcies published by the Inspector-General in Bankruptcy. The major limitation associated with these data is that they indicate the number of *individuals* who have become bankrupt rather than the number of *enterprises*. Accordingly they will overstate the actual number of failed businesses because several individual bankruptcies may result from a single business exit.
- Third, we use data on company liquidations published by the Australian Securities and Investments Commission (ASIC). While the ASIC data are informative, they lack the depth and richness of the bankruptcy data (the organisation has only been in existence since the early 1990s).

Some data from the UK, US and other overseas countries are also presented in the paper. However, caution is advised in any comparisons between Australia and other countries due to definitional variations and the time periods for which data are available.

1.4 Outline

The first part of the paper is about the significance of business exits in Australia. We present broad data as well as examining evidence on their causes.

- In chapter 2 we describe and analyse data on Australian business exits and compare them with other countries.
- In chapter 3 we review Australian business bankruptcy and liquidation data and assess why the pattern has changed over recent years.

The second part of the paper focuses on the institutional mechanisms and relevant policies for dealing with particular types of exit — that is, business insolvencies.

- Chapter 4 outlines the various avenues for winding up or reorganising insolvent businesses.
- Chapter 5 assesses the Australian insolvency code and includes comparisons with other models used overseas.
- Chapter 6 focuses on one class of increasingly prominent unsecured creditor — employees — and discusses employee entitlement protection mechanisms that may be used in the event of business insolvency.
- Chapter 7 raises some other issues relating to insolvency, including how unsecured creditors, other than employees, fare under current provisions.

2 Nature and extent of business exits

This chapter presents a statistical overview of business exits in Australia. The majority of the data available are for the years 1994-95 and 1995-96 and relate to *employing businesses only*.[1] Accordingly, caution needs to be exercised in drawing conclusions about exit rates economy wide.

Some of the key questions to be answered in the following pages include:

- how many businesses exit each year?
- what proportion of exits are cessations and changes in ownership?
- how long can new businesses expect to survive?
- is the likelihood of exit linked to certain firm characteristics — for example, the size or age of a business?
- does the likelihood of exit vary according to industry or location?

Further statistics on Australian business exits — including the data underlying the charts presented in this chapter — are tabulated in appendix A. Overseas data on business exits are presented in appendix B.

2.1 Magnitude and impact of business exits

Number and rate of exits

Tens of thousands of businesses exit their industries every year. In 1994-95, over 26 000 businesses alive at the start of the year had exited by year's end, while in 1995-96 the corresponding figure was around 30 per cent higher at over 34 000 businesses (table 2.1).

[1] Most Australian data presented in the chapter are sourced from the Australian Bureau of Statistics study of business exits undertaken in 1997. Some are taken from the resulting publication, *Business Exits, Australia* (ABS 1997), while others are unpublished data emanating from the study. The ABS data exclude businesses in two statistical categories — Agriculture, forestry and fishing, and Government administration and defence.

Table 2.1 **Exits of employing businesses, 1994-95 and 1995-96**

	1994-95	*1995-96*	*Average*
Business exits (no.)	26 234	34 158	30 196
Exit rate[a] (%)	7.2	8.0	7.6[b]

[a] The number of exits by employing businesses as a proportion of the number of employing businesses. [b] Weighted rate of exit calculated as c.a/(a+b) + d.b/(b+a) where a is the total number of employing businesses and c is the rate of exit in 1994-95 and b is the total number of employing businesses and d is the rate of exit in 1995-96.

Source: ABS (*Business Exits, Australia*, Cat. no. 8144.0).

To understand the significance of these numbers we need to compare them with the stock of employing businesses in the economy. This 'exit rate' is the ratio of exits by employing businesses to the total number of employing businesses. The exit rates for the two years in question were 7.2 per cent in 1994-95 and 8.0 per cent in 1995-96 — giving a two–year weighted annual average exit rate of around 7.6 per cent.[2]

Business exits can be classified as ownership changes or cessations (see chapter 1). The former are temporary changes, whereby businesses are redefined and returned to the pool of businesses in the economy. The latter account for businesses that cease operations and permanently leave the pool of businesses. Business exits according to these categories are shown in table 2.2.

Changes in ownership account for around one–fifth of all exits. Most of these are a consequence of businesses being sold rather than the result of takeovers or mergers.

The usefulness of the data for cessations (around four–fifths of all exits) is limited to some extent by the large proportion of untraceable or unknown exits — these account for over one quarter of the total.

Company liquidations are ABS estimates, based on the business exits survey. However, it should be noted that the number shown in table 2.2 appears to be underestimated when compared to data collected by the Australian Securities and Investments Commission (see chapter 3). As liquidations are only relevant for *incorporated* businesses, the data in table 2.2 do not provide a complete picture of the number of businesses that exit due to insolvency. Separate ABS exit data showing the number of insolvent *unincorporated* businesses (bankruptcies) do not exist. In table 2.2, these exits are included under 'other cessations' along with other traceable business closures.

[2] These estimates may be on the high side. This is because there are a number of alternative estimates for employing businesses. If the higher estimates of employing businesses in table A.1, appendix A are used instead, this would result in exit rates for 1994-95 and 1995-96 of 5.6 per cent and 6.8 per cent respectively.

Table 2.2 **Exits of employing businesses by type of exit, 1994-95 and 1995-96[a]**

Type of Exit	*Business exits*	*Proportion of total exits*	*Exit rate[b]*
	No.	%	%
Sold	4 858	16.1	1.2
Takeover/merger	1 583	5.2	0.4
Total changes in ownership	6 441	21.3	1.6
Company liquidations[c]	830	2.8	0.2
Other cessations[d]	16 528	54.7	4.2
Untraceable	6 073	20.1	1.5
Unknown	324	1.1	0.1
Total cessations	23 755	78.7	5.9
Total exits	30 196	100.0	7.6

[a] Averages for the two years. [b] The number of exits by employing businesses as a proportion of the number of employing businesses. Weighted rates of exit calculated as c.a/(a+b) + d.b/(b+a) where a is the total number of businesses and c is the rate of exit in 1994-95 and b is the total number of businesses and d is the rate of exit in 1995-96. [c] Includes receiverships. [d] Includes closures due to, for example, retirement, sickness, death and bankruptcy.

Source: ABS (*Business Exits, Australia*, Cat. no. 8144.0).

'Other cessations' includes a mixture of business failures and non–financial related deaths. The former comprise business bankruptcies and cessations attributable to owners being unable to secure a sufficient financial return, while the latter are cessations attributable to reasons unrelated to the financial position of the business (such as when the owner retires, seeks a different lifestyle or dies).[3]

Economic impact of business exits

The extent of reallocated resources associated with exits can be estimated on the basis of displaced value added and employment.

[3] The ABS data do not specify the relative proportions belonging to each category. However, on the basis of business failure data presented later in the paper, it would appear that cessations unrelated to the financial position of the business represent the largest category (around 60 per cent). See chapter 3 for data on business bankruptcies and solvent businesses that close due to insufficient returns.

Value added

We can estimate the annual production attributable to exiting businesses by combining limited data on cessations[4] and average value added during 1994-95, namely:

- 5.5 per cent of businesses ceased operating;[5]
- 97.5 per cent of cessations involved small businesses (less than 20 employees) and 2.5 per cent involved the larger businesses;[6] and
- small businesses and larger businesses had average value added of approximately $176 000 and $5 784 000 respectively.[7]

The cessation and value added data are for non–agricultural, employing businesses only. However, assuming they apply economy wide, there would have been almost 56 000 business cessations during 1994-95. The annual value added associated with this level of cessations is estimated at $17 646 million — equivalent to 3.7 per cent of GDP in 1994-95.[8] Given that cessations will probably often involve businesses that have smaller value added per employee than average for their scale, it is likely that the real figure is considerably smaller. It should also be emphasised that the estimate is only intended to illustrate the extent to which cessations involve the reallocation of resources. It does not imply that up to 3.7 per cent of GDP is 'lost' as a result of business cessations. This is because the figure ignores the response by existing businesses and new entrants, whose growth displaces cessations.

Employment

The employment impacts of business cessation are quite significant in absolute terms. For example, in 1994-95 and 1995-96, a maximum of 160 000 employees per

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4 Ownership changes, accounting for around 20 per cent of exits, are ignored in this section. It is assumed that these businesses undergo transformation with little impact on value added.

5 See table A.3, appendix A.

6 Average for 1994-95 and 1995-96. See table A.6, appendix A.

7 Estimated from data contained in IC and DIST (1997). Strictly speaking, the average product for small businesses applies only to employing businesses, but it is assumed here that the same figure is also applicable to non–employing businesses.

8 The assumption is that the cessation rate for non–employing businesses is the same as the ABS found for employing businesses. 5.5 per cent of all businesses (1 014 718) gives 55 809 cessations, with 54 414 involving small businesses and 1 395 involving larger businesses. Multiplying the number of cessations for each size category by their respective average products results in a total of $17 646 million.

annum might have lost their job because of business cessation.[9] It is likely that this estimate is biased upwards because exiting firms will tend to employ less people than other firms within any size category, but it still provides a useful upper bound. In addition, around 38 000 proprietors might have been put out of work.[10]

To put this in perspective, there was an average of about 780 000 unemployed during 1994-95 and 1995-96. However, given that the unemployment stock is constantly changing as people find jobs and lose them, the number of separate incidents of job loss in any given year is many factors times the unemployment level at any particular time. For example, 2.1 million people ceased a job at least once during the year ending February 1996.[11] Once account is taken of this, the data suggest that direct job losses resulting from business cessation are likely to account for, at maximum, between 9–10 per cent of total annual job losses.

Other aspects

The two previous sections provide a perspective on the scale of the reallocation of resources with business exits. It is important to examine *how* the resources may be reallocated and the extent to which such reallocation may involve economic gains — rather than assuming that a cessation necessarily causes net losses to the economy. Growth of existing businesses and entry of new businesses are the vehicles of reallocation.

The stock of businesses in Australia has been growing quite rapidly in recent years (see appendix A), which immediately indicates that new businesses have been more than replacing exits. In addition, there are some limited data available on business

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[9] The estimate was produced by noting that the average employment size of employing businesses was 4.5 for businesses employing 1 to 19 employees and 95 for businesses employing 20 or more employees (IC/DIST 1997). These average employment figures were then multiplied by the respective business size cessation numbers for employing businesses — that is, 23 164 involving small businesses and 588 involving larger businesses (see table A.6, appendix A.). As with value added above, ownership changes are ignored in this section.

[10] The majority of cessations involve solvent businesses closing for reasons unrelated to their financial position (such as when the owner retires, seeks a different lifestyle or dies). Accordingly, working proprietors belonging to this group are not 'put out of work' as a consequence of cessation and are not included in this estimate. However, it is reasonable to assume that all working proprietors involved with business failure are without work — at least for a limited period — as a result of cessation. On an economy-wide basis, approximately 23 000 cessations in 1994-95 and 1995-96 might have been due to business failure. Multiplying this number by the assumed average number of working proprietors per small business (1.65) gives around 38 000 affected proprietors. (See chapter 3 for the derivation of the data for business failures and average working proprietors per business.)

[11] *Labour Mobility, Australia, February 1996* (ABS Cat. no. 6209.0).

entries for the mid-1990s.[12] In 1994-95, the entry rate for (non-agricultural) businesses was estimated to be 14.1 per cent. The equivalent figure for 1995-96 was 11.1 per cent. Comparing the average business entry rate for 1994-95 and 1995-96 (12.6 per cent) with the average exit rate for same two years (ie 7.6 per cent), shows entries to be around two–thirds higher than exits.

The majority of exits are not failures. So, to the extent they do represent economic losses in the form of opportunity costs, these are the results of individual choices based on rational behaviour.[13] Indeed, as discussed in chapter 1, there may be some real economic gains associated with business exits, particularly failures. These include, for example:

- productivity growth is enhanced when inefficient and unprofitable businesses (low returns) are replaced by efficient and profitable ones (high returns);
- exits may be the result of longer–term structural changes that provide an opportunity for resources in the economy to be configured in new and better ways; and
- the learning experience gained by entrepreneurs involved in exits will assist them in doing things differently next time around.

2.2 Business exits by location and industry sector

Business exits by location

The relative state shares of total business exits in Australia could be expected to be broadly in line with the number of businesses in each state.

The state data shown in table 2.3 confirm this expectation, but with some significant variations at the margins. Thus while the largest two states, NSW and Victoria, accounted for around 61 per cent of all Australian businesses in 1994-95 and 1995-96, they were responsible for approximately 69 per cent of all business exits.

[12] Unpublished ABS estimates based on data for business exits and the stock of businesses.

[13] If an exit was due to retirement, for example, the cost to business owners of *not* retiring could be considerable (depending, amongst other things, on the value they attribute to additional leisure).

Table 2.3 **Exits by employing businesses and number of employing businesses by state, 1994-95 and 1995-96[a]**

	Business exits	*Share of exits*	*Number of businesses*	*Share of businesses*
	'000	%	'000	%
New South Wales	11.4	37.8	167.7	34.5
Victoria	9.4	31.2	128.1	26.4
Queensland	4.5	15.0	86.2	17.7
South Australia[b]	1.6	5.3	37.0	7.6
Western Australia[b]	2.6	8.6	44.3	9.1
Tasmania and Territories[b]	0.6	2.0	22.8	4.7
Australia	30.2	100.0	486.0	100.0

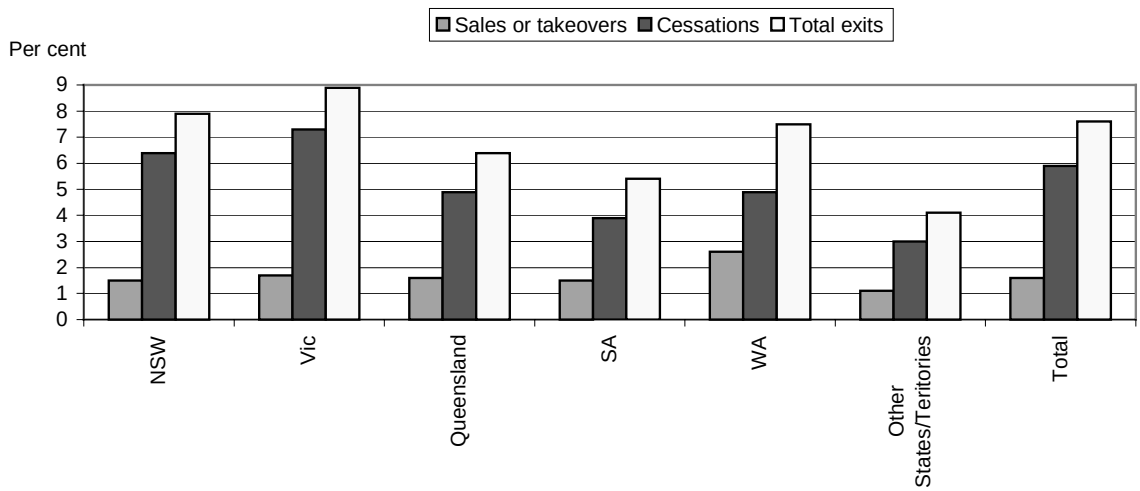
[a] Averages for the two years. [b] Estimates for South Australia, Western Australia, Tasmania and the two territories may be subject to errors greater than that normally included in ABS statistics.

Sources: ABS (*Business Exits, Australia*, Cat. no. 8144.0; *Small Business in Australia, Update* 1997-98, Cat. no. 1321.0.40.001).

These results are reflected in the business exit rates shown in figure 2.1. Average exit rates over the two year period 1994-95 and 1995-96 were highest for Victoria (8.9 per cent) and New South Wales (7.9 per cent). The greater exit activity in these two states relative to the rest of Australia is principally due to higher cessation rates.

The exit rates related to changes in ownership are broadly comparable across all states, with only Western Australia varying markedly from the average.

Figure 2.1 **Business exit rates[a] by state, 1994-95 and 1995-96[b]**



[a] The number of exits by employing businesses as a proportion of the number of employing businesses in the relevant category. [b] Averages for the two years. For methodology see table 2.1.

Source: ABS (*Business Exits, Australia*, Cat. no. 8144.0).

Some overseas research relating to the location of business exits (Storey 1994) suggests:

- businesses in urban areas have higher rates of exit than rural areas; and
- areas with high rates of new business formation are also those with the highest exit rates. Entry and exit are positively correlated — the more businesses that enter the more that fail.

As only state exit data are available for Australia, the test of any relationship with urban/rural location has to be undertaken on this basis. Victoria is currently the most urbanised state (per cent of resident population in major population centres) at around 83 per cent, followed by NSW with 81 per cent, Queensland (78 per cent), Western Australia (75 per cent) and South Australia (73 per cent). Comparing these data with the exit data in figure 2.1, the thesis that the rate of business exits will be higher in more urbanised locations has mixed support. Victoria and NSW have the highest rates of exit and South Australia the lowest. Queensland and Western Australia, however, go against the predicted outcome.

Comparing business exit rates with business entry rates in each state (using unpublished ABS estimates), broadly confirms the thesis that areas with the highest rates of new business formation will also be those with the highest exit rates. For the period 1994-95 to 1996-97, Victoria and Western Australia had the highest business entry rates in Australia (15 per cent). These were followed by Queensland (12 per cent), NSW (11 per cent) and South Australia (9 per cent).

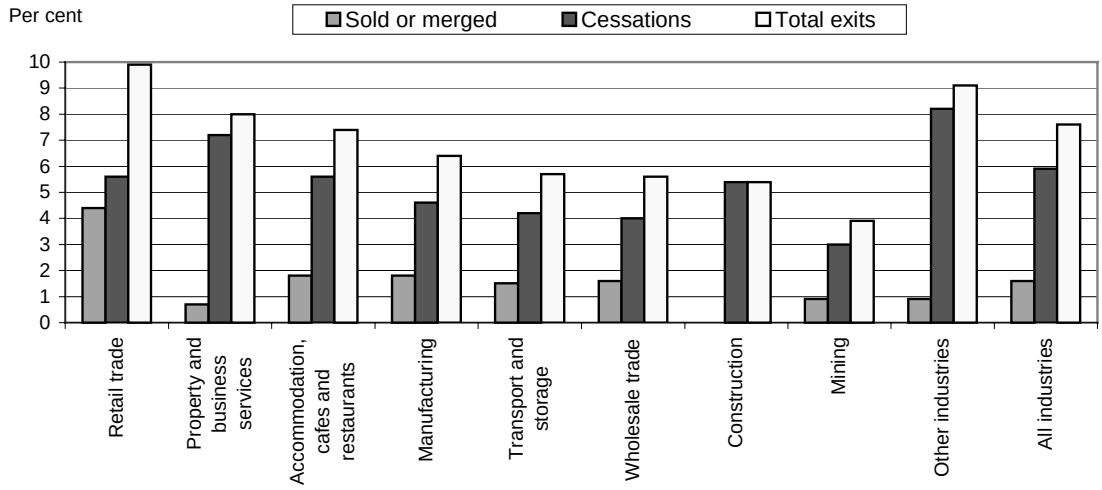
Of course, both cases above are based on very limited data and do not allow for any lags. Caution should therefore be exercised in interpreting the results.

Business exits by industry

Average data for business exits by industry over 1994-95 and 1995-96 indicate considerable variation between industries (figure 2.2).

Retail trade has the highest overall exit rate of 9.9 per cent, followed by *property and business services* and *accommodation, cafes and restaurants*. *Retail trade* exits are fairly evenly matched between cessations and changes in ownership — but while the cessation exit rate is close to the national average, the exit rate due to changes in ownership is more than double the rate of any other industry. Exits in the latter two industries, on the other hand, are mainly driven by cessations, with very few exits due to changes in ownership.

Figure 2.2 **Business exit rates[a] by industry, 1994-95 and 1995-96[b]**



a The number of exits by employing businesses as a proportion of the number of employing businesses in the relevant category. **b** Averages for the two years. For methodology see table 2.1.

Source: ABS (*Business Exits, Australia*, Cat. no. 8144.0).

The *other industries*' category, which has the highest cessation rate, includes 'electricity, gas and water', 'communication services', 'education', health and community services', 'cultural and recreational services' and 'personal and other services'.

2.3 Characteristics of exiting businesses

Ownership of business

Business exits can be classified according to their type of legal organisation, which for the most part will be either a sole proprietorship, a partnership or a company (table 2.4).

Companies represent by far the most number of exits for the two years for which data are available — they account for more than all the other categories combined. This is particularly highlighted for cessations. It should be recalled however that the data presented in this chapter refer only to employing businesses. If the large number of sole proprietorships and partnerships that do not engage employees were included in the analysis, the picture could be quite different.

Table 2.4 **Business exits and exit rates[a] by type of legal organisation, 1994-95 and 1995-96[b]**

Type of exit	*Sole proprietor*		*Partnership*		*Company*		*Other*	
	Exits	Exit rate	Exits	Exit rate	Exits	Exit rate	Exits	Exit rate
	No.	%	No.	%	No.	%	No.	%
Sold	1 138	1.9	992	1.5	2 079	1.0	649	1.0
Takeovers	334	0.5	487	0.8	535	0.3	227	0.4
Total ownership changes	1 472	2.4	1 479	2.3	2 614	1.3	876	1.4
Ceased	1 850	3.0	2 742	4.3	9 512	4.6	2 425	3.8
Liquidations[c]	0	0.0	12	0.0	705	0.3	115	0.2
Untraceable	1 008	1.6	1 400	2.2	2 898	1.4	764	1.2
Unknown	211	0.3	46	0.1	46	0.0	21	0.0
Total cessations	3 068	5.0	4 200	6.5	13 161	6.3	3 327	5.2
Total exits	4 540	7.5	5 680	8.9	15 775	7.5	4201	6.5

[a] The number of exits by employing businesses as a proportion of the number of employing businesses in the relevant category. [b] Averages for the two years. For methodology see table 2.1. [c] Includes all company liquidations and receiverships, but does not include bankruptcies of unincorporated businesses.

Sources: ABS (*Business Exits, Australia*, Cat. no. 8144.0 and unpublished data).

The data for exit rates provide a more accurate — although still incomplete — indication of the distribution of business exits by ownership status. According to this criterion, partnerships had the highest average exit rate for the years 1994-95 and 1995-96, attributable to both a high cessation rate and a high rate of ownership changes.

Data on the deregistration of UK businesses between 1980 and 1990 (Storey 1994), indicate that sole proprietorships had the highest ‘exit’ rate (12.1 per cent). Companies and partnerships had ‘exit’ rates of 11.0 per cent and 9.7 per cent respectively.[14]

Size of business

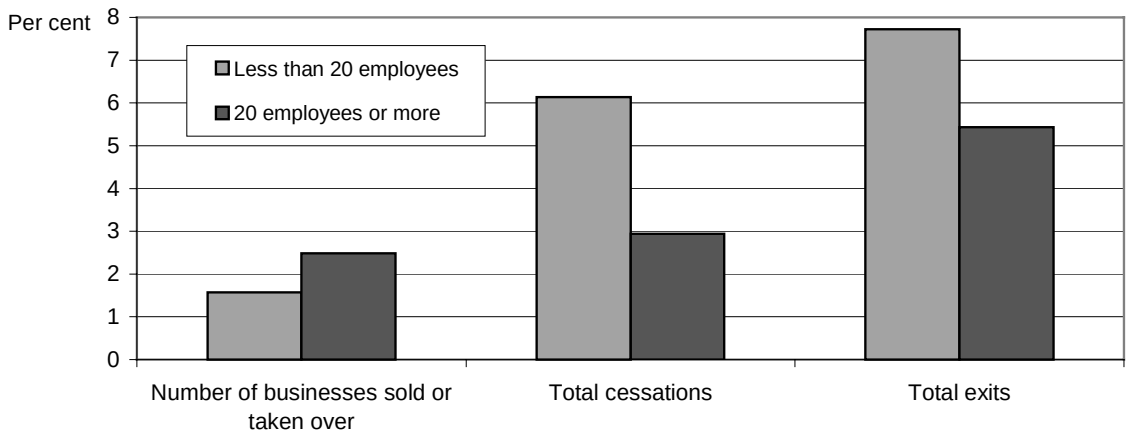
Storey (1994) remarks that the fundamental characteristic that distinguishes small businesses from large businesses is their higher probability of ceasing to trade. The available Australian data would seem to confirm this observation.

Small Australian businesses appear considerably more likely to exit their industry in any given year than their larger counterparts (figure 2.3). In 1994-95 and 1995-96,

[14] The UK data are useful only as an indicator of differing relativities between the ownership types and not as a comparison with absolute rates of exit in Australia (due to definitional variations).

close to 8 per cent of small businesses (less than 20 employees) exited, compared with around 5 per cent for medium to large businesses.

Figure 2.3 **Business exit rates[a] by employment size, 1994-95 and 1995-96[b]**



[a] Number of exits by employing businesses as a proportion of number of employing businesses in the relevant category. [b] Averages for the two years. For methodology see table 2.1.

Source: ABS (*Business Exits, Australia*, Cat. no. 8144.0).

The higher overall exit rate of small businesses is due to the wide disparity in cessations between them and larger businesses. During the two years in question, small businesses with less than 20 employees ceased operations at twice the rate of all other businesses.

The pattern shown in figure 2.3 can be principally explained by the nature of small business operations.

- Small businesses are typically owner–operated. If the owner dies, gets sick or seeks a lifestyle change, business cessation is the likely outcome. For larger firms with more diversified ownership, any individual shareholder can relinquish ownership without threatening the survival of the business as a whole.
- In addition, smaller businesses may be less likely to continue than larger businesses due to absolute size considerations. For example, Dunne and Hughes (1994) suggest that small declining businesses hit a boundary of minimum sustainable size and then exit, while larger declining businesses can fall down through the size distribution for a long time before reaching this boundary. Even if shocks to output growth in businesses are random across different size classes, smaller businesses facing negative growth shocks tend to exit, while larger businesses usually do not.

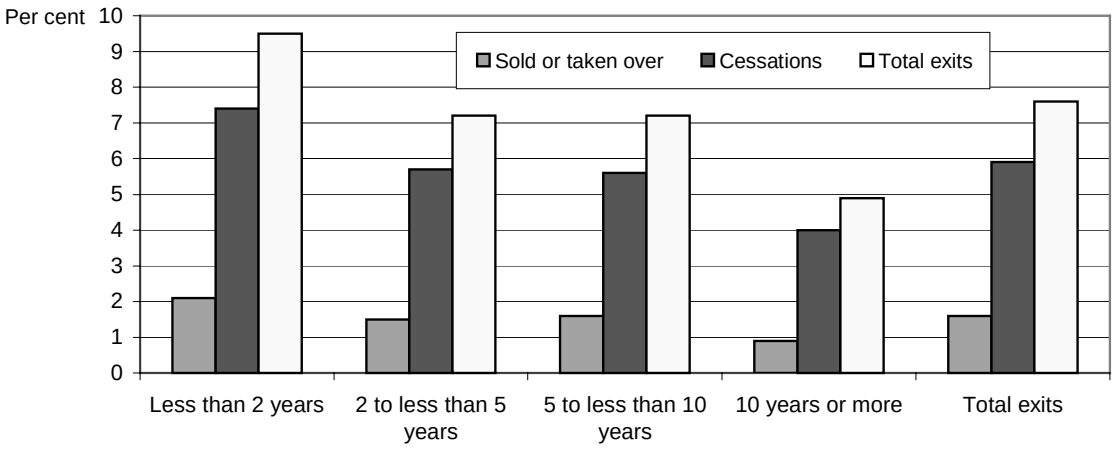
Age of business

The Australian business exits data suggest a strong link between exit rates and the age of a business — although this is most notable at the extremes of the age spectrum (figure 2.4).

Total exit rates appear to be significantly higher for very young businesses aged less than 2 years and lower for businesses over 10 years. In fact, exit rates of the former — at close to 10 per cent — are almost twice as high as the latter. This exit rate disparity between the youngest and oldest businesses applies fairly equally to both changes in ownership and cessations.

The relationship between age and the risk of business exit is often described by the proportion of total exits accounted for by businesses of particular ages. The ABS data suggest that 53 per cent of total exits are accounted for by businesses that are less than 3 years old. They also reveal that 90 per cent of total exits are accounted for by businesses that are less than ten years old. This stylised fact — also found in the other major Australian study (Watson and Everett 1996) — should not be confused with the likelihood that a business will cease operations during its first ten years. That likelihood is much lower — at around 55 per cent (section 2.4).

Figure 2.4 **Business exit rates[a] by age of business, 1994-95 and 1995-96[b]**



[a] The number of exits by employing businesses as a proportion of the number of employing businesses in the relevant category. [b] Averages for the two years. For methodology see table 2.1.

Source: ABS (*Business Exits, Australia*, Cat. no. 8144.0).

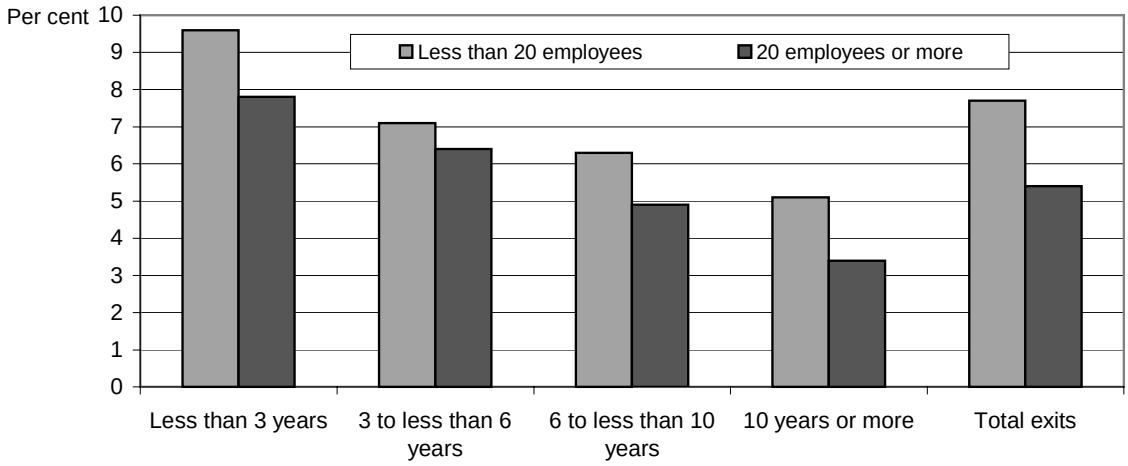
The apparent links between the age of a business and the likelihood of exit may be confounded by interaction with the business size variable. The data above reveal that both smaller and younger businesses tend to exit more often than larger and

older businesses respectively. But younger businesses tend to be smaller, while mature businesses are larger. This raises the question of whether age and size are having independent effects or whether one is highly correlated with the other.

To look at this more closely, we examined changes in exit rates as age increases for businesses of a given size (figure 2.5). The fact that exit rates are higher for smaller businesses in each age category is a good indication that age and size are having an independent effect.

One of the possible reasons why larger businesses appear to have lower exit rates — after accounting for age — is that they have other ways (with lower transaction costs) of reorganising without exiting. These include downsizing and corporate restructuring.

Figure 2.5 **Business exit rates[a] by employment size and age of business, 1994-95 and 1995-96[b]**



[a] The number of exits by employing businesses as a proportion of the number of employing businesses in the relevant category. [b] Averages for the two years. For methodology see table 2.1.

Source: ABS unpublished data.

Unsuccessful businesses

The ABS has gathered data on the perceived success of small businesses over the previous 12 months (table 2.5). Overall, the data reveal that around 5 to 6 per cent of firms rate their business as unsuccessful, which is likely to be a good indicator of subsequent business cessation (and matches quite closely the cessation rate identified previously).

Table 2.5 **Share of businesses rating themselves as unsuccessful by business type, 1995 and 1997 (per cent)**

	1995	*1997*
Source of funds		
Less than $1000 used	5	4
Personal savings/borrowings	7	4
Pay-outs from previous employment	8	4
Company borrowings from financial institutions	6	6
Other	6	4
Number of operators		
1 operator	7	5
2 operators	6	5
3 or more operators	3	5
Management training		
With management trained operators	6	4
Without	7	4
Employing businesses		
With training intentions	2	2
Without training intentions	5	4
Business plans		
With	5	2
Without	7	5
Advisory services		
Used	6	4
Not used	7	6
Location of operation		
From home	..	6
At home	..	8
Not at home	..	6
Family business		
Yes	..	7
No	..	6
State		
NSW	5	7
VIC	6	7
QLD	3	6
SA	3	6
WA	4	4
TAS	4	5
ACT	..	6
Size		
Non-employing businesses	6.0	7.5
1–4 employees	3.7	5.8
5–19 employees	2.0	3.5
Total	4.5	6.3
Age of business		
Less than 1 year old	3.9	6.1
1 to less than 5 years old	4.8	6.1
5 to less than 10 years old	4.1	7.4
10 or more years old	4.8	5.6

Source: ABS (*Characteristics of Small Business 1997*, Cat. no. 8127.0).

The data suggest that smaller businesses are more likely to be rated as unsuccessful, with non-employing businesses having the greatest likelihood of perceived failure. Curiously, there is little difference between businesses of different ages in their judgement of success[15], though the previously cited evidence indicates that younger businesses are much more likely to exit. This suggests that, compared to established businesses, young businesses are more likely to respond to business failure by closing. One possible explanation for this is that older businesses are likely to have greater access to short term finance that can act as a temporary buffer for sporadic downturns in the fortunes of the business.

The data also suggest that businesses are more likely to rate themselves as unsuccessful if they do not:

- have a business plan;
- engage in training staff; and
- use advisory services.

Other factors, such as source of business funds, degree of management training, the number of operators and family business status, do not appear to have consistent influences on perceived success over the two years of data available.

2.4 Business survival rates

Using the average exit rates by age of business for 1994-95 and 1995-96, cumulative exit rates can be estimated. These are calculated on the assumption that the average exit rates apply consistently across time. That is, the exact same proportion of businesses of a certain age will continue to exit every year. The corollary of these cumulative exit rates are average business survival rates over time.[16]

The results of this exercise are shown in table 2.6. These data imply that most Australian businesses survive for a considerable time — contrary to a commonly

[15] On the other hand, younger businesses are much more uncertain about their success than other businesses, with 18.7 per cent of businesses aged 1 year or less saying they were 'unsure/did not know' compared to 2.4 per cent of businesses aged 10 years or more.

[16] These survival rates are based on cross–sectional data. Ideally, estimates of survival rates should be based on longitudinal data that can distinguish cohort effects (which may include the impacts of past economic cycles) from pure age effects. However, we do not believe that any biases will be substantial.

publicised belief that most new businesses will die in the first few years of their operation.[17] They reveal, for example, that:

- after 5 years, around two–thirds of businesses operating at the beginning of the period will have survived (34.6 per cent exited);
- after 10 years, a little under half (45 per cent) of the businesses that were operating at the beginning of the period are still alive; and
- around one third of businesses are still operating after 15 years.

Looking only at cessations, it takes 7 years before one–third of new businesses have exited (as opposed to 5 years for all exits), and 15 years before one–half of businesses have ceased (around 9 years for all exits).

Table 2.6 **Cumulative exit rates and survival rates[a]**

Years operating	*Changes in ownership*	*Cessations*	*Total exits*	*Total survivals*
	%	%	%	%
1	2.1	7.4	9.5	90.5
2	4.0	14.1	18.1	81.9
3	5.3	18.8	24.1	75.9
4	6.5	23.0	29.5	70.5
5	7.6	27.0	34.6	65.4
6	8.6	30.7	39.3	60.7
7	9.6	34.1	43.7	56.3
8	10.5	37.2	47.7	52.3
9	11.3	40.2	51.5	48.5
10	12.1	42.9	55.0	45.0
11	12.5	44.7	57.2	42.8
12	12.9	46.4	59.3	40.7
13	13.3	48.0	61.3	38.7
14	13.7	49.5	63.2	36.8
15	14.0	51.0	65.0	35.0

a Employing businesses.

Source: ABS (*Business Exits, Australia*, Cat. no. 8144.0).

The estimates shown in table 2.6 suggest that new Australian businesses may tend to survive longer than some of their overseas counterparts (although differences in

[17] Business newspapers and magazines commonly afford ready examples. For example, Croshaw (1998) states that 18 per cent of all businesses fail within the first six months and 70 per cent within the first five years. And Tolhurst (2000) claims that 80 per cent of all small businesses fail within three years. In fact, as tables 2.6 and 2.7 demonstrate, only around 35 per cent of 'all businesses' and 'small businesses' exit in their first five years of operation. Moreover, most of the exits are not failures.

methodology and time periods mean that the comparisons should be treated with caution).[18]

- A study of new businesses entering the Canadian market over the 1984–1994 period (Baldwin et al. 2000) found that one–half of all entrants had exited prior to their third birthday. After 5 years almost two–thirds (64 per cent) of businesses operating at the beginning of the period had exited and only 20 per cent survived a decade.
- An earlier study of survival rates of British firms (Phillips and Kirchoff 1989) found that only around 40 per cent of firms 'born' between 1976 and 1978 were still in existence after 6 years. Interestingly though, this survival rate increases to at least 66 per cent for businesses that grew at all during the period (as measured by employment). Businesses with zero growth had an exit rate of 72 per cent (that is only 28 per cent survived). Analysis of these data led Storey (1994) to conclude that the key for survival for new businesses is to achieve growth (the *rate* of growth being of secondary importance).

Australian data are also available for cumulative exit rates according to business size (table 2.7). These show that smaller businesses are always more likely to exit than larger businesses for a given age category, although the differences are not as great as might be imagined.

However, the overall data disguise considerable variations in the cumulative exit rates for cessations and changes in ownership. For example, the cessation rates of new, small businesses (1–2 years) are twice those of larger businesses. This situation is reversed with respect to ownership exit rates — with young, larger businesses twice as likely as small businesses to change ownership.

Phillips and Kirchoff (1989) found that UK businesses that start larger have higher survival rates — 37 per cent of very small businesses (less than five employees) survived for six years, compared with 49 per cent of new businesses with more than five employees.

And in Canada, Baldwin et al. (2000) show that the exit rate of new businesses is higher among industries with smaller firm sizes. This is particularly apparent in the first year of life. Beyond the first year, the exit rates of businesses in industries dominated by small and medium sized businesses are virtually identical. New businesses in industries with large firm characteristics have lower exit rates at every time interval.

[18] In addition, the ABS notes that the Australian survival rates may be over–estimates because of an under–representation of younger businesses in its sample.

Table 2.7 **Cumulative exit rates and survival rates, by size of business[a]**

Years of operation	*Changes in ownership*	*Cessations*	*Total exits*	*Total survivals*
	%	%	%	%
Small businesses				
1	2.1	7.5	9.6	90.4
2	3.9	14.3	18.3	81.7
5	7.4	27.4	34.9	65.1
10	11.8	43.5	55.3	44.7
15	13.5	52.1	65.6	34.4
Large businesses				
1	4.4	3.8	8.2	91.8
2	8.4	7.3	15.7	84.3
5	12.2	16.3	28.5	71.5
10	20.7	27.1	47.7	52.3
15	25.2	30.9	56.1	43.9

a Small and large businesses are defined as businesses employing 1–19 persons and 20 or more persons respectively.

Source: ABS (*Business Exits, Australia*, Cat. no. 8144.0).

2.5 Comparisons with other Australian evidence

Relatively few past studies have been made into business exit rates and survival in Australia. Pioneering analysis was undertaken by Williams (1986), which found that exit rates were around 25 per cent annually, around three times higher than found in the ABS data.[19] Watson and Everett (1992, 1996) undertook a large–scale longitudinal study over 30 years, albeit for only a segment of the business sector.[20] They found that, on average, around 9.4 per cent of retail businesses exited each year, which is very close to the ABS estimate (9.9 per cent) cited for the same business sector (see figure 2.2).

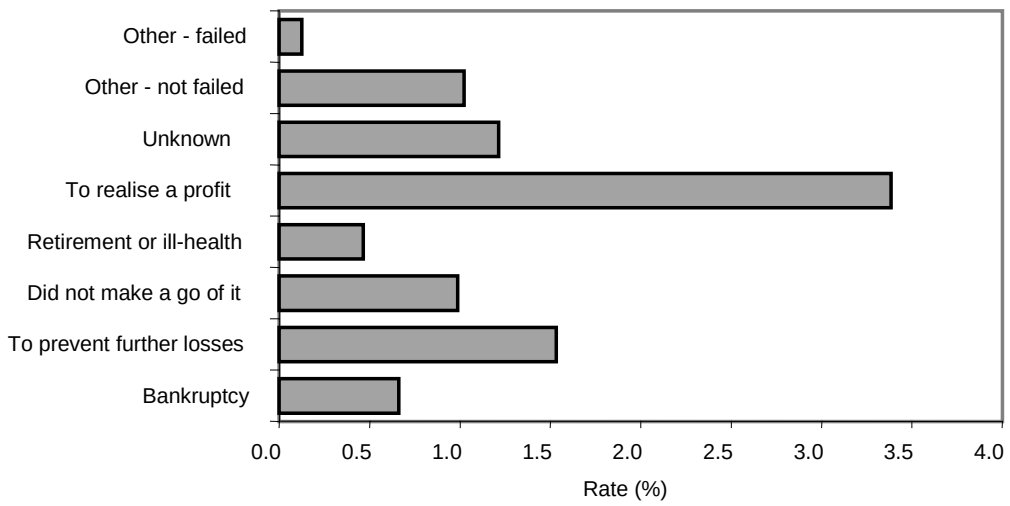
The Watson and Everett study also provides revealing information about the reasons for business exits (figure 2.6). The single greatest reason was to realise a profit (contributing around 3.5 percentage points). This with retirement, ill–health, unknown reasons and other exits that do not amount to a business failure account for around 6 percentage points of the overall exit rate, suggesting that the business

[19] A number of scholars have been sceptical of the Williams' data because of the sparsity of information about method, definitions and analytical procedures used (for example, Watson and Everett 1992, p. 57).

[20] Their study relates to businesses inside major shopping centres (primarily retail businesses).

failure rate[21] is around 3.5 per cent per annum. In the majority of such failures, the business closed prior to liquidation or bankruptcy, thereby avoiding costs to creditors. An interesting feature of the Watson and Everett database is that it suggests that around 60 per cent of firm exits did not result in discontinuance of the firm, but rather the transfer of ownership.

Figure 2.6 **Reason for business exit, 1961–1990**



Source: Watson and Everett (1996).

2.6 Business exit intentions

The ABS Business Longitudinal Study (undertaken over four years from 1994-95) provides data on business exit intentions and actual exits, and on the nature of expected exits (for example, sale of business versus closure) by different business categories. The data indicate the degree to which:

- businesses that intend to exit really do so. This is relevant because intentions may be realised relatively infrequently, so that intentions data may provide both a guide to both the degree of turbulence in the stock of businesses, and be a misleading indicator of the sorts of businesses that actually exit; and
- businesses that did not intend to exit subsequently have an unplanned exit. This is relevant because unplanned exits are more costly than planned exits (reflecting the reduced time to adjust labour, financial and other resources).

[21] This is a wide definition of failure that includes exits by solvent businesses that have provided insufficient returns to owners, as well as exits due to liquidation and bankruptcy. See chapter 3 for a discussion of the different types of business failure and estimates of their magnitude.

Realisation of exit intentions by business size

Table 2.8 shows the proportion of businesses that indicated they would exit — when surveyed in 1994-95 — and subsequently did so over the following three year period. Somewhat surprisingly, only about half of the businesses that indicated they would exit (54 per cent) actually carried out these intentions. On this basis, intentions to exit are a relatively poor indicator of actual exits. Overall, intentional exit rates do not vary greatly with business size. However, over the three year period, a greater proportion of the smallest businesses completed their intended exits than was the case with the other size groups.

The percentage of firms unintentionally exiting in the three years following the 1994-95 survey is considerably less than for those that intentionally exited. Of those businesses that did not expect to exit when surveyed, approximately 21 per cent did so in the three subsequent years.

Realisation of exit intentions by business age

There is some variation in the proportion of businesses completing intended exits according to age, although this only becomes marked for the well established businesses over 20 years old (table 2.9). The data indicate that around 56 per cent of newly formed businesses that were surveyed anticipated their exit over the following three years.

Earlier in the chapter we noted how the very youngest businesses have higher *actual* exit rates than their older counterparts (figure 2.4). The data shown in table 2.9 with respect to unintentional exits suggest that a significant proportion of the owners of new businesses do not anticipate these events. Broadly speaking, the older the business, the less likely the occurrence of an unintentional exit. However, once a business has been around for 5 years the differences between age groups are comparatively slender.

Table 2.8 Intentional and unintentional exits by size of business (number of employees), 1995-96 to 1997-98

	1 to less than 5	*5 to less than 20*	*20 or more*	*All firms*
Intentional exits[a]	%	%	%	%
Intentional exits in 1994-95 as a per cent of all respondents in that year	11.4	12.1	3.8	10.9
Intentional exits that ***did*** exit in the 3 years to 1997-98 as per cent of all respondents	6.2	5.1	1.7	5.4
Realisation ratio (%)[c]	53.9	42.4	45.4	50.0
Unintentional exits[b]	%	%	%	%
Unintentional exits in 1994-95 as a percent of all respondents in that year	88.6	97.4	96.2	89.2
Unintentional exits in 1994-95, that subsequently exited, as a percent of all 1994-95 respondents	21.1	17.3	14.8	19.1
Unintentional exits in 1994-95, that subsequently exited, as a percent of all 1994-95 unintentional exits	23.8	17.8	15.4	21.4

[a] Respondents that indicated in 1994-95 that they intended to either sell or close the business in the subsequent three years. [b]Respondents that indicated in 1994-95 that they did not intend to either sell or close the business in the subsequent three years. [c]Ratio of above two categories. It therefore measures the percent of businesses that expected to exit when survey in 1994-95, and subsequently did exit, to the number of businesses that intended to exit in 1994-95..

Source: ABS unpublished data.

Table 2.9 Intentional and unintentional exits by age of business (in years) 1995-96 to 1997-98

	Less than 2	*2 to less than 5*	*5 to less than 10*	*10 to less than 20*	*20 years or more*	*All firms*
Intentional exits[a]	%	%	%	%	%	%
Intentional exits in 1994-95 as a per cent of all respondents in that year	13.1	9.8	10.7	9.6	10.6	10.9
Intentional exits that ***did*** exit in the 3 years to 1997-98 as per cent of all respondents	7.3	5.1	4.29	5.11	7.8	5.4
Realisation ratio (%)[c]	55.5	52.2	40.3	53.3	73.4	50.0
Unintentional exits[b]	%	%	%	%	%	%
Unintentional exits in 1994-95 as a percent of all respondents in that year	86.9	90.2	89.4	90.4	89.4	89.2
Unintentional exits in 1994-95, that subsequently exited, as a percent of all 1994-95 respondents	32.9	20.1	14.5	12.8	9.2	19.1
Unintentional exits in 1994-95, that subsequently exited, as a percent of all 1994-95 unintentional exits	37.8	22.3	16.2	14.2	10.3	21.4

[a] See table 2.8 for notes and sources.

2.7 Summary

Exit — through cessation or ownership change — occurs for about 7.5 per cent of employing businesses each year. In an assessment of the international literature, Watson and Everett (1996, p. 47) found that average reported exit rates varied from 6.5 per cent to 9 per cent. The Australian estimates, therefore, are quite consistent with the international picture of exit rates.[22]

Business exit should be distinguished from business failure. There are many reasons for businesses to exit, not least of which is taking advantage of an option of realising a profit from the sale of the business. Catastrophic failure — leading to bankruptcy or liquidation — is considerably rarer (see chapter 3).

Nor should it be assumed that a business exit necessarily results in the discontinuance of the business. According to the ABS data, around 20 per cent of exits are changes in ownership,[23] which are unlikely to have either the employment or financial impacts of other exits.

It appears that many exits are anticipated some years before — with the likelihood that adjustment costs from exiting are reduced.

These differentiated features of business exits underlines the importance of not assuming exits are synonymous with either business failure, loss of employment or costly adjustment.

Finally, the data imply that most businesses survive for a considerable time. It is folklore that most new businesses will die in the first few years of their operation. For example, about 45 per cent of businesses survive for the first ten years without either changing ownership or ceasing (and about 60 per cent survive without cessation over this period). The folklore, while wrong, may have damaging effects on entrepreneurs' willingness to commence new businesses because of an exaggerated concern about their risks.

[22] See appendix B for additional data on overseas exits.

[23] Watson and Everett (1996) find an even higher proportion of business exits that are merely changes in ownership, though their data only relate to businesses in retail shopping centres.

3 Business failures

The majority of business exits are either ownership changes or closures unrelated to the financial position of the business (for example, when the owner retires or seeks a different lifestyle). The remainder can be broadly classified as 'business failures'.

Although relatively small in proportion to all business exits, there are good reasons for examining business failures (chapters 4–7). At this stage, we simply note that some failures can have widespread and long lasting effects for stakeholders (owners, managers, employees, financial creditors and trade creditors). Key matters of concern include the payment of any monies owing to the different stakeholders and the reorganisation of resources amongst other enterprises in the economy.

The sections below present broad data on business failure trends in Australia. They also examine the factors affecting their likelihood and evidence on their causes.[1]

Further statistics on business failures in Australia are tabulated in appendix C, while overseas data on business failures are contained in appendix B.

3.1 Measuring business failures

A variety of definitions for business failure exists in the literature. Some of these are very broad and might include, for example, the discontinuance of a business for any reason. At the other extreme, some narrow definitions of failure include only businesses that close owing money to creditors.

The essence of business failure is the inability of owners to make a go of their business from a *financial* perspective. Thus, faced with insufficient profits or losses over a sustained period, the business owner is left with little choice but to cease operations.

In broad terms, then, a failure is the discontinuance of a business because it is no longer a viable concern.[2] However, there may also be different degrees of

[1] Unlike the exit data in chapter 2, which are restricted to non–agricultural employing businesses, the data presented in this chapter include both employing and non–employing businesses, economy wide.

‘viability’. Accordingly, for the purposes of this study, we distinguish two categories of failure.

- ‘Solvent failures’ are businesses that have ceased operations because they are uneconomic — unable to secure a sufficient return — but without being insolvent (that is, there are sufficient funds to pay all creditors).
- ‘Insolvent failures’ are a more narrow, legal definition of failure and involve businesses that have ceased operations as a consequence of bankruptcy or liquidation (that is, the business closes owing money to creditors).

Unfortunately, objective measures of solvent failures are rarely available — even though it appears they account for the majority of business failures in Australia. One such measure is available from a large–scale longitudinal study undertaken by Watson and Everett (1996).[3] The study included information about the reasons for business exits, three principal categories of which were ‘bankruptcy’, ‘to avoid further losses’ and ‘did not make a go of it’. The latter two categories (along with ‘other failures’) are consistent with our definition of solvent failures.[4] According to the Watson and Everett data, 28 per cent of all business exits can be classified as solvent failures. Applying this proportion to the average business exit rate in Australia for 1994-95 and 1995-96 (7.6 per cent), indicates that 2.1 percentage points might be solvent failures.

In contrast to solvent failures, insolvent failures are relatively data rich. Watson and Everett (1996, p. 47) point out ‘the definition of failure used by researchers has depended on the nature of the data available’. But, data considerations aside, the more narrow definition of business failure is also of most policy interest in subsequent chapters of this paper. Thus, although ‘catastrophic’ failures resulting from insolvency are relatively rare, they account for the bulk of the analysis in this chapter.

Insolvent failures are measured in several ways in the following sections.

- For incorporated businesses, the number of businesses closing due to insolvency can be measured by data on company liquidations. These involve the winding up of companies by creditors or the courts.

[2] In practice, some changes of ownership — sales, takeovers or mergers — may also be due to business owners being unable to make sufficient financial returns. These are ignored in this chapter.

[3] Their study relates to businesses inside major shopping centres (primarily retail businesses).

[4] Note, however, that the Watson and Everett data cover reasons for the sale of a business as well as cessation. We make the assumption that the same proportions apply equally to cessations alone.

- For unincorporated businesses, there are no data available that measure the number of businesses closing as a result of insolvency. However, business failures in this sector can be estimated from business-related bankruptcies, which occur when an individual's bankruptcy is directly related to his or her proprietary interest in an unincorporated business.[5]

3.2 Trends in business-related bankruptcies and company liquidations

Business-related bankruptcies

Business-related bankruptcies for individuals are the principal means of estimating the nature and extent of failure in the Australian unincorporated business sector.

A long-term picture of business-related bankruptcies is shown in figure 3.1. The rising trend over the period is not altogether surprising — an increasing population and number of businesses implies such an increase. Of more interest is whether bankruptcies are increasing over, and above, what might be expected from these influences. One way of examining this is to normalise the bankruptcy data through indicative ratios — in this case the 'business bankruptcy rate'. This is defined here as the ratio of business-related bankruptcies to the number of 'entrepreneurs' (employers plus self-employed).[6]

In fact, as figure 3.1 demonstrates, business bankruptcy rates closely mirror the number of business-related bankruptcies over the extended period 1928-29 to 1999-00. In the post-war period, four distinct periods are apparent.

- From approximately the end of the Second World War to 1963-64. The number and rate of business-related bankruptcies increased rapidly during this period, with the trend rate of growth of the latter being 15.6 per cent per annum.
- From 1963-64 to 1988-89. Business-related bankruptcies and the bankruptcy rate were relatively constant in this period — albeit with considerable fluctuation toward the end. The trend rate of growth in the business bankruptcy rate in this period was only 0.7 per cent per annum.

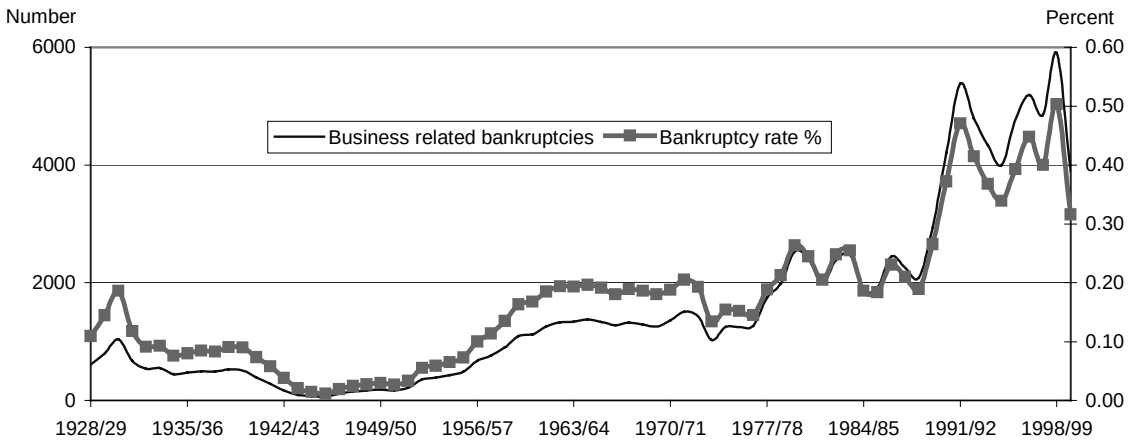
[5] Strictly speaking, some business–related bankruptcies recorded by the Inspector-General in Bankruptcy could result from the failure of incorporated businesses. However, as these are not likely to represent a significant proportion of these bankruptcies, this issue has been ignored throughout the paper.

[6] See appendix D for a discussion of a variety of ways of defining a business bankruptcy rate.

- From 1988-89 to 1991-92. The number of business-related bankruptcies and the business bankruptcy rate accelerated rapidly — the latter rising from 0.19 per cent to 0.47 per cent.
- From 1991-92 to 1999-00. The number and rate of business-related bankruptcies 'plateaued' at an average of around 0.4 percent per annum, albeit with considerable year-to-year variation.

The period from 1988-89 to the present has witnessed a clear upward shift in business-related bankruptcies and business bankruptcy rates to levels well above the hitherto long–term trend (table 3.1). The number of business-related bankruptcies approximately doubled from 2 088 in 1988-89 to 3 899 in 1999-00 (and reached a peak of 5 905 in 1998-99). As indicated above, the business bankruptcy rate rose correspondingly. Some of the possible explanations behind the rapid growth in business bankruptcies from the late-1980s are discussed in section 3.5 below.

Figure 3.1 **Number and rate[a] of business-related bankruptcies, 1928-29 to 1999-00[b]**



[a] Business-related bankruptcies for individuals as a percentage of the total number of employers and self-employed. The number of employers and self-employed for 1999-00 was estimated from 1999 data because of definitional changes in the ABS labour force survey in 2000.

Source: Annual reports of the Inspector-General in Bankruptcy. ABS (*Labour Force Australia*, Cat. No. 6203.0, various issues)

Table 3.1 **Business-related bankruptcies and business bankruptcy rates[a], 1988-89 to 1999-00**

	Business-related bankruptcies	*Total employers and self–employed [b]*	*Business bankruptcy rate*
	No.	No.	Per cent
1988-89	2 088	1 102 450	0.19
1989-90	2 947	1 108 800	0.27
1990-91	4 203	1 129 975	0.37
1991-92	5 387	1 144 450	0.47
1992-93	4 796	1 156 125	0.41
1993-94	4 335	1 177 325	0.37
1994-95	3 998	1 178 500	0.34
1995-96	4 773	1 213 059	0.39
1996-97	5 191	1 158 422	0.45
1997-98	4 854	1 212 918	0.40
1998-99	5 905	1 172 000	0.50
1999-00	3 899	1 233 200	0.32

[a] The business bankruptcy rate is the ratio of the number of business-related bankruptcies for individuals to the total number of employers and self–employed. [b] The number of employers and self-employed for 1999-00 was estimated from 1999 data because of definitional changes in the ABS labour force survey in 2000.

Sources: Annual reports of the Inspector-General in Bankruptcy. ABS (*Labour Force, Australia*, Cat. no. 6203, various issues).

Company liquidations

Reliable company liquidation data are only available from 1991-92 onwards. There are also some difficulties involved in obtaining accurate data for the number of *active* companies. ASIC data showing the number of registered companies appear to include large numbers of shelf or inactive companies — and therefore grossly overstate the number of active companies at any one time. Accordingly, the data for the number of companies used in this section were estimated from ABS data for total and unincorporated businesses.

Company liquidations and liquidation rates for the period 1991-92 to 1999-00 are shown in table 3.2. In contrast to business-related bankruptcies, company liquidations (and liquidation rates) declined over the course of the 1990s — very steeply at first, before settling down at lower levels (figure 3.2).

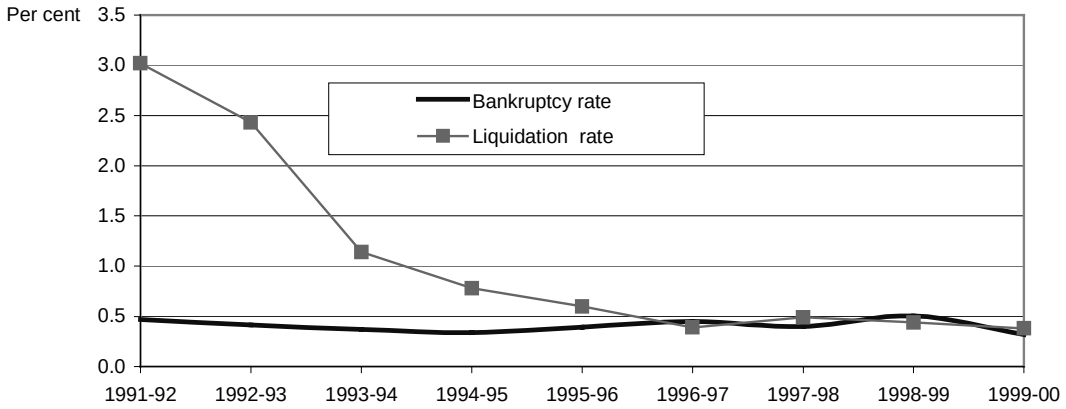
Table 3.2 **Company insolvencies, liquidations and liquidation rates, 1991-92 to 1999-00**

	Incorporated businesses [a]	*Company insolvencies* [b]	*Company liquidations*	*Company liquidation rate* [c]
	No.	No.	No.	%
1991-92	200 564	7 116	6 057	3.02
1992-93	199 437	5 742	4 842	2.43
1993-94	244 216	3 772	2 795	1.14
1994-95	300 476	3 468	2 357	0.78
1995-96	317 870	3 153	1 901	0.60
1996-97	347 379	2 502	1 353	0.39
1997-98	356 214	2 835	1 748	0.49
1998-99	396 797	2 836	1 748	0.44
1999-00	452 966	2 661	1 725	0.38

[a] Estimate of the number of *active* incorporated businesses rather than simply the number of those registered. [b] Essentially comprising liquidations, administrations and receiverships. [c] The company liquidation rate is the ratio of the number of company liquidations to the estimated number of active incorporated businesses.

Sources: Australian Securities and Investments Commission (annual reports and unpublished data). ABS (*Small Business in Australia*, Cat. no. 1321.0, various issues; unpublished data). Study estimates.

Figure 3.2 **Business bankruptcy rates and company liquidation rates, 1991-92 to 1999-00[a]**



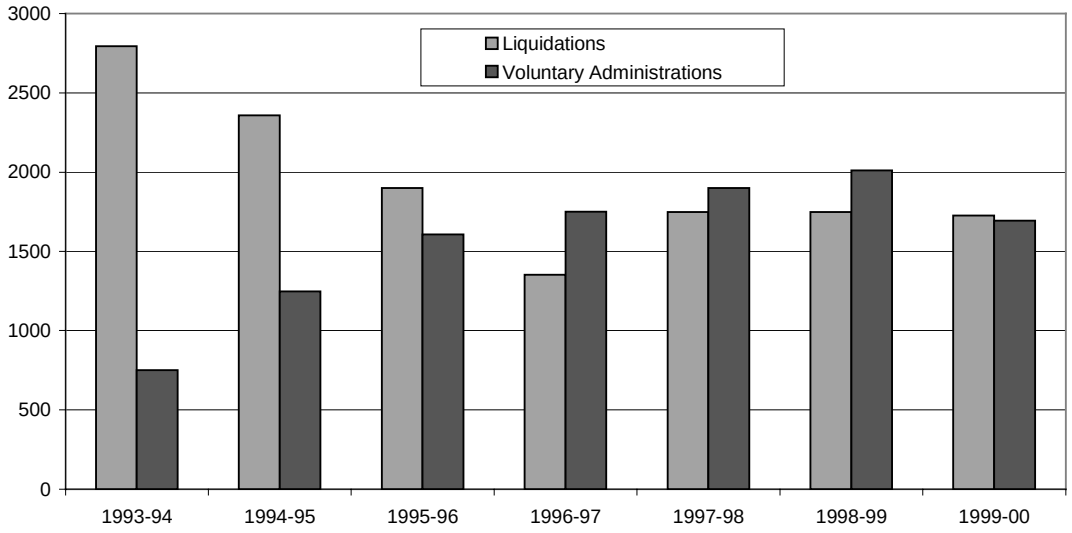
[a] The business bankruptcy rate is ratio of the number of business-related bankruptcies for individuals to the total number of employers and self–employed. The company liquidation rate is the ratio of the number of company liquidations to the estimated number of active incorporated businesses.

Sources: Annual reports of the Inspector-General in Bankruptcy. Australian Securities and Investments Commission (annual reports and unpublished data). ABS (*Labour Force, Australia*, Cat. no. 6203, various issues).

Some of the decline in the liquidation rate from 1992-93 onwards — and the subsequent stabilising — appears to stem from a change in the Corporations Law in 1992. Voluntary Administration provisions were introduced to provide an

alternative to statutory arrangements for financially-distressed companies. These provisions offered much greater scope for companies to trade their way out of financial difficulties.[7] In their first full financial year of operation (1993-94), Voluntary Administrations numbered 750, or around 20 per cent of company insolvencies. By 1999-00, they had grown to 1 693, or about 64 per cent of company insolvencies. The increasing use of Voluntary Administrations are contrasted with changes in liquidations in figure 3.3.

Figure 3.3 **Company liquidations and voluntary administrations, 1993-94 to 1999-00 (number)**



Source: Australian Securities and Investments Commission (unpublished data).

Nevertheless, even if Voluntary Administrations are counted as corporate failures,[8] the overall rate of corporate insolvency has still declined markedly from the early 1990s (see table 3.2). It appears likely that the major reason for this decline is sustained economic growth since the downturn in the early 1990s.

In contrast, business bankruptcy rates have fluctuated around a roughly fixed level during the 1990s, despite strong economic growth. The reason for the discrepancy

[7] These and other reorganisation provisions for companies in financial difficulties are discussed in chapter 4.

[8] The Australian Securities Commission (ASC 1998, p. 20) suggested that possibly 75 per cent or more of the companies entering into Voluntary Administration between June 1993 and June 1997 might eventually become deregistered. The ASC also refers (p. 22) to a Coopers and Lybrand study that suggests that 80 per cent of Voluntary Administrations between 1992 and mid-1995 resulted in liquidation.

between the liquidation and business bankruptcy rates is unclear. However, one explanation may be that many so-called business-related bankruptcies are, in reality, the result of personal credit problems that become 'blurred' with the bankrupt's business operations.

3.3 Magnitude and impact of enterprise failures

Enterprise failures in Australia

An important omission from the data presented above is the aggregate number of *enterprises* that are failing each year in Australia. This figure is equal to the sum of failed incorporated businesses (liquidations) and failed unincorporated businesses (bankruptcies). While data for the former are readily available, those for the latter are not.

Australian data used in this chapter (and elsewhere in the paper) relating to the failures of unincorporated businesses, are derived from bankruptcy data of *individuals*.[9] Unfortunately these data — while rich and reliable — do not provide information on the actual number of unincorporated *enterprises* involved in failure. The difficulty is that, in some cases, there will be more than one bankrupt individual associated with the same business.

However, we can combine information on the average number of owners per unincorporated business with business-related bankruptcies data, to estimate the number of unincorporated businesses (both employing and non-employing) likely to be involved in failure.

- Data from the *Business Longitudinal Survey* (IC/DIST 1997, p. 46) suggest that there are, on average, around 1.6 proprietors per business for businesses employing between 1 and 19 persons.
- Data from *Characteristics of Small Business 1997 (*ABS Cat. No. 8127.0) suggest that the number of proprietors per business (covering non-employing businesses and those employing less than 20 persons) is around 1.75. The figures relate to both unincorporated and incorporated businesses, but may still provide a reasonable indication of the number of owners per unincorporated enterprise (especially given that larger firms have been excluded).
- Data from *Small Business in Australia* (ABS Cat. No. 1321.0) indicate that, in 1998-99, there were 1.55 proprietors per non-employing business. According to

[9] That is, those bankruptcies assessed by the Inspector-General of Bankruptcy to have been directly related to business interests.

information supplied by the Inspector–General in Bankruptcy (ITSA, Canberra, pers. comm., 6 October 2000), virtually all business-related bankruptcies — over 99 per cent — involve non-employing businesses. However, these data may be somewhat misleading because they only reveal the number of employees *at the time of bankruptcy*. In some instances, bankrupt business owners, who are apparently self employed, may once have been operating with a small number of employees — but were obliged to retrench these workers in the face of mounting financial distress.

Assuming an average of 1.65 owners per unincorporated business, this suggests that in 1999-00, for example, there may have been around 2 363 business failures associated with the 3 899 business-related bankruptcies involving individuals. Using the same methodology for unincorporated businesses for all years between 1991-92 and 1999-00 [10] — and combining these results with company liquidation data — enables us to produce estimates of economy–wide enterprise failures (table 3.3).

Table 3.3 **Economy–wide enterprise failures, 1991-92 to 1999-00**

	Failed incorporated businesses (liquidations)		*Failed unincorporated businesses (bankruptcies)*[a]		*Total failed enterprises*	
	No.	Rate (%)	No.	Rate (%)	No.	Rate[b](%)
1991-92	6 057	3.02	3 265	0.47	9 322	1.04
1992-93	4 842	2.43	2 907	0.41	7 749	0.86
1993-94	2 795	1.14	2 627	0.37	5 422	0.57
1994-95	2 357	0.78	2 423	0.34	4 780	0.47
1995-96	1 901	0.60	2 893	0.39	4 794	0.46
1996-97	1 353	0.39	3 146	0.45	4 499	0.43
1997-98	1 748	0.49	2 942	0.40	4 690	0.43
1998-99	1 748	0.44	3 579	0.50	5 327	0.48
1999-00	1 725	0.38	2 363	0.32	4 088	0.36

[a] Derived from the average number of business-related bankruptcies for individuals and assuming 1.65 owners per unincorporated business. [b] Measured as the sum of company liquidations and failed unincorporated businesses as a proportion of Australian enterprises.

Sources: Tables 3.1 and 3.2. Study estimates.

The estimated rate of enterprise failure declined from a peak of 1.04 per cent in 1991-92 to around one–third of this rate (0.36 per cent) in 1999-00. These changes were attributable to the decline in liquidations, as the estimated number (and rate) of unincorporated business failures remained in a fairly narrow range throughout.

[10] Adopting a different average number of owners per business than 1.65 would obviously affect the estimates of unincorporated businesses involved in failure. However, this would not affect the trend as this is totally reliant on changes in the number of business–related bankruptcies.

The data in table 3.3 can also be used to estimate the share of failed enterprises in total business exits (which can not be derived from ABS exit data — see chapter 2). For the two years for which ABS exit data are available (1994-95 and 1995-96), the average number of failed enterprises represented around 6.1 per cent of all business exits.[11]

Overseas comparisons of enterprise failures

Some overseas comparisons of enterprise failures are contained in appendix B. These comparisons present difficulties due to different definitions and methods of collection and must be treated with caution.

However, there are some notable features relevant to the 1990s.

- In the USA, the most readily comparable statistic is for enterprises that cease operations with a financial loss to one or more creditors. By this definition, US business failures recorded a sharp increase in 1991 to reach 10.7 failures per 1000 enterprises, but subsequently showed a downward trend and stood at 8.8 failures per 1000 enterprises in 1997. The equivalent Australian data in 1991-92 and 1997-98 (table 3.3) were 10.4 failures per 1000 enterprises and 4.3 failures per 1000 enterprises respectively.
- In Canada, the number of business bankruptcies (as measured by sole proprietorships, partnerships and limited liability companies) increased in the early 1990s and in 1995 stood at 14 per 1000 enterprises (Baldwin et al. 1997). In 1995-96, there were 4.6 equivalent business failures per 1000 enterprises in Australia (table 3.3).
- In Japan, business bankruptcy data cover all bankrupt enterprises with liabilities of 10 000 yen or more. The business bankruptcy rate fell to a low of 0.11 per cent in 1989, but then rose to reach 0.16 per cent in 1991 and 0.22 by 1994. The Australian equivalent business failure rates in 1991-92 and 1994-95 were 1.04 per cent and 0.47 per cent respectively (table 3.3).

[11] The ABS exit data are for non–agricultural, employing enterprises only. However, we have assumed here that the same exit rates applying to these enterprises would also apply economy wide. On this basis, there would have been an average of 78 575 business exits economy wide during 1994–95 and 1995–96 (that is, 7.6 per cent of 1 033 888 businesses). This compares with 30 196 non–agricultural, employing enterprises — see table 2.1). From table 3.3, the average number of failed enterprises for 1994–95 and 1995–96 was 4 787, or 6.1 per cent of the estimated economy–wide exits.

Economic impact of enterprise failures in Australia

As is the case with business exits (see chapter 2), the extent of reallocated resources associated with insolvency can be estimated on the basis of displaced value added and employment. While the sections below focus on 'losses' in value added and employment, it should be noted that such resource reallocation is also likely to involve economic gains.[12]

Value added

We can estimate annual 'lost' production through enterprise failures in Australia, by making certain assumptions and combining data on failures and average value added during 1994-95.

- All failed unincorporated businesses in table 3.3 are assumed to be small businesses (less than 20 employees). As noted above, virtually all business-related bankruptcies are likely to involve either non-employing businesses, or businesses operating with a small number of employees.
- 97.5 per cent of failed incorporated businesses in table 3.3 are assumed to be small businesses. This is in line with the proportion of cessations belonging to the same category.[13]
- In 1994-95, average value added was approximately $176 000 for small businesses and $5 784 000 for larger businesses with 20 employees or more.[14]

Multiplying the number of failed enterprises for each size category by their respective average products, results in a total of $1 172 million in gross product 'lost' due to bankruptcies and liquidations. This corresponds to 0.25 per cent of GDP in 1994-95. However, given that catastrophic failures will probably often involve businesses that have smaller value added per employee than average for their scale, it is likely that the real figure is even smaller.

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[12] As noted in chapter 2, the growth of existing businesses and entry of new businesses are the vehicles of resource reallocation. According to unpublished ABS estimates, the average rate of entry for new enterprises during 1994-95 and 1995-96 was 12.6 per cent. Comparing this with the average enterprise failure rate in the same years (0.46 per cent) indicates that, for every failure exiting the business population, there were around 27 new businesses starting up.

[13] See table A.6, appendix A. In 1994–95 and 1995–96, of the 23 752 cessations, there were 23 164 cessations involving businesses with less than 20 employees and 588 cessations involving businesses with 20 or more employees.

[14] Estimated from data contained in IC and DIST (1997). Strictly speaking, the average product for small businesses applies only to employing businesses, but it is assumed here that the same figure is also applicable to non–employing businesses.

Employment

The economy–wide employment impacts of failing businesses in Australia (as shown in table 3.3) can be estimated by making a number of assumptions about the nature of the incorporated and unincorporated businesses involved in liquidations and bankruptcies respectively.

- The proportion of failed incorporated enterprises with less than 20 employees is identical to the proportion of cessations belonging to the same category (that is, 97.5 per cent). This results in an average of 6.7 employees per failed incorporated enterprise.[15]
- A maximum of 10 per cent of failed unincorporated businesses are employing businesses[16] and that all of these failures are in the small employment size category (ie an average of 4.5 employees per business).
- There is an average of 1.65 working proprietors for all unincorporated businesses (see previous section).
- There is an average of 1.65 working proprietors for incorporated businesses with less than 20 employees (larger businesses are assumed not to have working proprietors).

It should be noted that the assumed average employee estimates for failed unincorporated and incorporated enterprises — 4.5 persons and 6.7 persons respectively — are likely to be biased upwards. This is because enterprises closing due to insolvency will tend to employ less people than other firms within any size category. However, they still provides useful upper bounds.

Estimates of the economy–wide employment impacts of failing businesses in recent years are shown in table 3.4. The data mirror those for enterprise failures (table 3.3), with virtually all of the 66 per cent decline in insolvency-related job losses between 1991-92 and 1999-00 being attributable to the incorporated business sector. The

[15] Multiplying the average number of cessations in 1994–95 and 1995–96 for the two employment size categories — 23 164 for small businesses and 588 for larger businesses (table A.6, appendix A) — by the average number of employees — 4.5 for small businesses and 95 for larger businesses (IC/DIST 1997) — results in an average of 6.74 employees per cessation.

[16] As noted above, virtually all business–related bankruptcies are likely to be non–employing businesses at the time of bankruptcy (ITSA, Canberra, pers. comm., 6 October 2000). However, this does not allow for the fact that bankrupt business owners, who are apparently self employed, may have been obliged to retrench employees in the face of mounting financial distress. It is randomly assumed here that up to 10 per cent of unincorporated business failures may have been employing businesses that shed employees in the face of insolvency. It would seem unlikely that the proportion would be much higher than 10 per cent but, even if it were double this amount, it would not significantly impact on the estimate of overall job losses.

employment losses for unincorporated enterprises mainly reflect the number of displaced working proprietors.

Table 3.4 **Employment impacts of enterprise failures, 1991-92 to 1999-00**

	Employment loss for incorporated enterprises [a]	*Employment loss for unincorporated enterprises* [b]	*Total employment loss*
	No.	No.	No.
1991-92	50 326	6 857	57 183
1992-93	40 231	6 105	46 336
1993-94	23 223	5 517	28 740
1994-95	19 584	5 088	24 672
1995-96	15 795	6 075	21 870
1996-97	11 242	6 607	17 848
1997-98	14 524	6 178	20 702
1998-99	14 524	7 516	22 040
1999-00	14 333	4 962	19 295

[a] Comprises all employees plus working proprietors for small incorporated enterprises (less than 20 employees).

[b] Comprises all employees and working proprietors.

Sources: Table 3.3. Study estimates.

The employment impacts of business failures are modest in both absolute and relative terms. To put them in perspective, there was an average of 661 000 unemployed during 1999-00. However, as noted previously, the number of separate incidents of job loss in any given year is many times the unemployment level at any particular time (approximately 2 million people cease a job at least once every year).[17] Once account is taken of this, the data suggest that direct job losses resulting from enterprise failures in 1999-00 were likely to account for only around 1 per cent of total annual job losses.

3.4 Factors influencing the likelihood of business failure

Many factors appear to influence the probability of a business closing due to financial difficulties. Data limitations restrict our ability to present the evidence in the Australian context.

[17] Around 2.16 million people ceased a job at least once during the year ending February 2000, while the equivalent figure for the year ending February 1998 was 1.98 million. See *Labour Mobility, Australia*, (ABS Cat. no. 6209.0).

However, the available data — mainly covering business-related bankruptcies — provide some answers for:

- where business failures are most likely to occur (geographic location and industry sector); and
- the characteristics of those who own businesses that fail (occupation and age).

The section also draws on some overseas evidence relating to other factors influencing business failure — in particular, characteristics of the businesses themselves (such as size and age).

Location

Both business bankruptcy and company liquidation information is available on a state-by-state basis. However, only the former is presented in this section. State company liquidation data have not been included principally because of the small numbers involved. In addition, where a company is registered may often bear little relation to where its principal operations or markets are based. While this may also be true for some unincorporated businesses, it is unlikely to be a major concern with respect to the business bankruptcy data used here (with their focus on individuals).

There are marked differences in bankruptcy rates between states at certain times, but these differences tend not to persist.[18] The rates tend to follow a similar pattern over time, probably reflecting common national determinants of bankruptcy (figure 3.4).

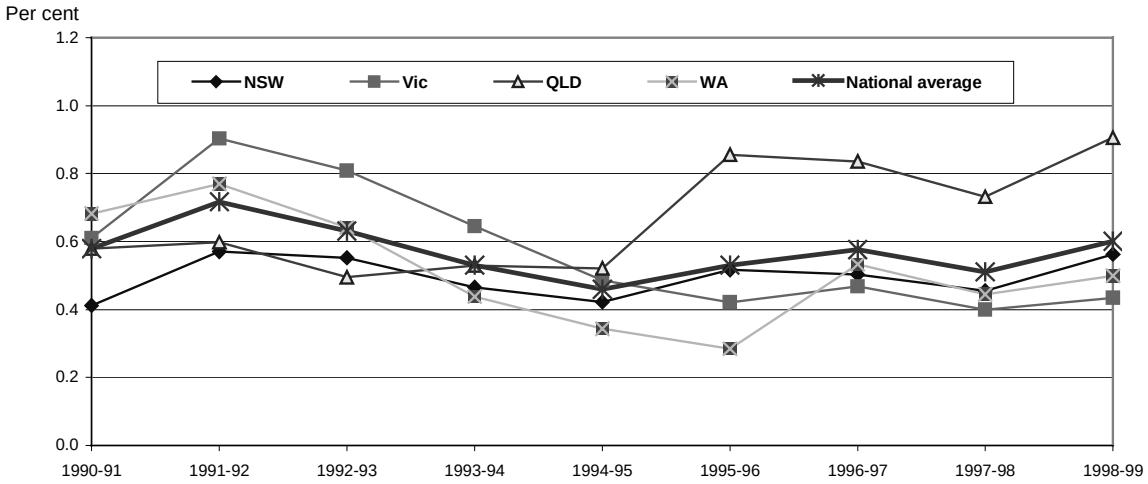
Industry sector

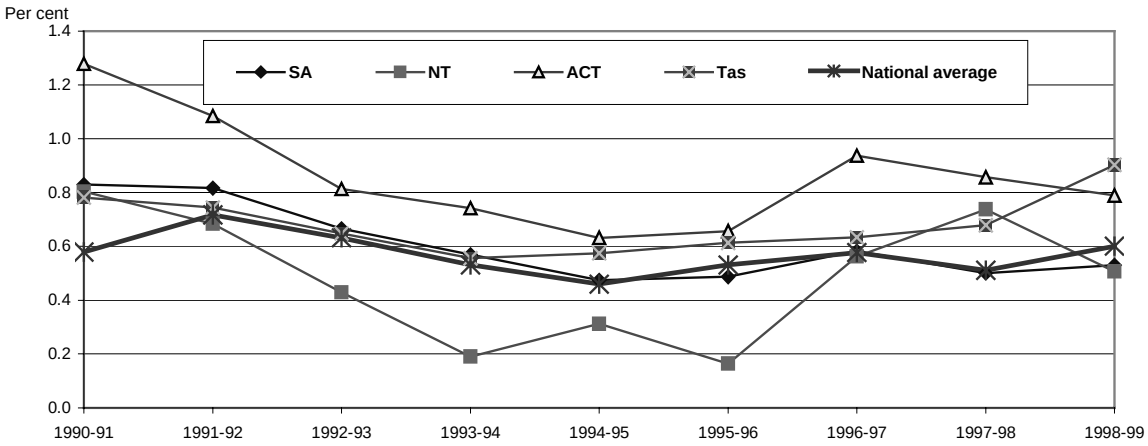
The industry classifications used for business bankruptcy data do not directly correspond with the industry definitions used by the ABS — either for the number of employers and self-employed or the number of small businesses. While it is impossible to present a comprehensive picture of how the propensity for bankruptcy varies across different industries over time, some limited data are available (figure 3.5).

There are no official data showing company liquidations by industry. However, when a business has financial difficulties or is subject to a formal insolvency administration, an attempt will sometimes be made to sell the business (or at least test the market interest). This is known as a 'stress sale' and normally such a sale will result in the transfer of effective control of a business.

[18] See tables C.2 and C.3, appendix C.

Figure 3.4 **Business bankruptcy rates[a] by state, 1990-91 to 1998-99**





[a] The business bankruptcy rate is the ratio of the number of business-related bankruptcies to the total number of small businesses.

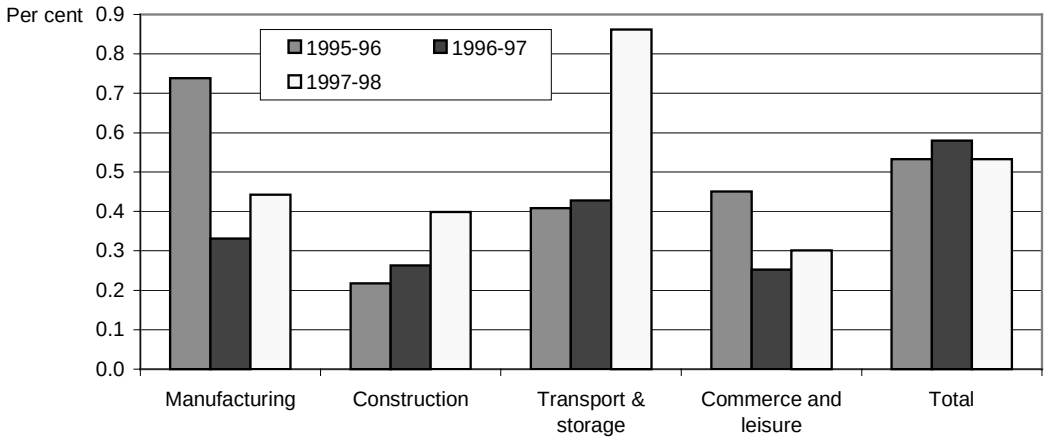
Sources: Annual Reports of the Inspector-General in Bankruptcy. ABS (*Small Business in Australia*, Cat. no. 1321.0, various issues).

Until 1996, Ernst & Young undertook an annual survey of nationally advertised corporate 'stress sales'. The Ernst & Young surveys only covered businesses that were substantial employers or held significant assets — most of which can be reasonably assumed to have been incorporated enterprises. Stress sales by industry sector therefore should provide some guidance on the propensity for company liquidations in different industries (figure 3.6).

The five-year averages suggest that in the first half of the 1990s the industry categories of 'mining', 'manufacturing', and 'property and business services' were the most susceptible to financial distress. Industries the least susceptible were

'finance and insurance' and 'construction'.[19] It is unknown whether these differences will persist over the long run.

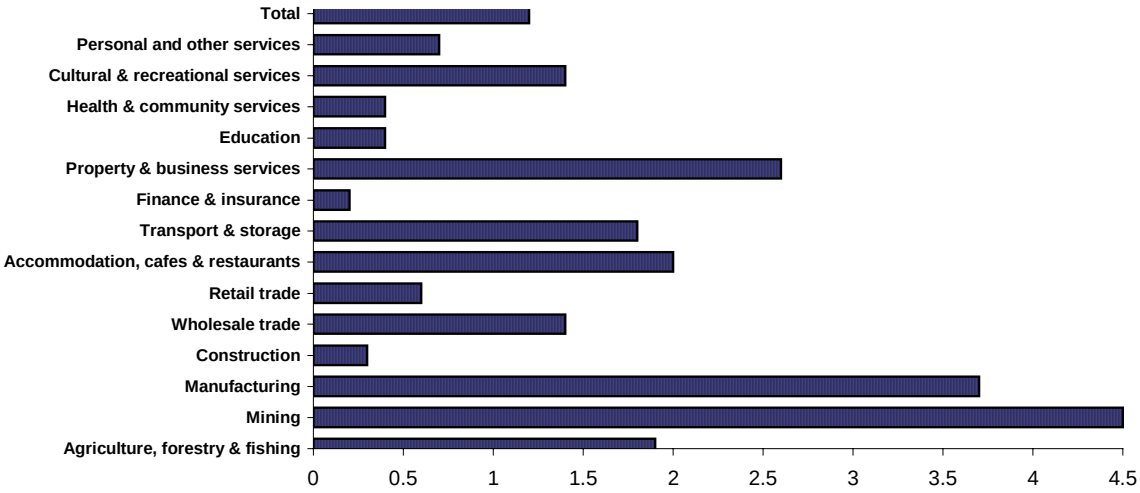
Figure 3.5 **Business bankruptcy rates[a] for selected industry sectors, 1995-96, 1996-97 and 1997-98 (per cent)**



[a] The business bankruptcy rate is the ratio of the number of business-related bankruptcies to the total number of small businesses.

Sources: Annual Reports of the Inspector-General in Bankruptcy. ABS (*Small Business in Australia*, Cat. no. 1321.0, various issues).

Figure 3.6 **Frequency of 'stress sales'[a] per 1000 establishments, by industry, 1991-92 to 1995-96[b]**



[a] Businesses sold due to financial difficulties or subject to formal insolvency administration. [b] 5 year average.

Source: Ernst & Young (*Annual Survey of Stress Sales*, various years).

19 However, Ernst & Young considered that the figure for construction is understated because it is rare to sell construction businesses under stress.

Overseas evidence suggests that differences in the failure rates of businesses between sectors are modest.

- Research into the survival rates of new US businesses demonstrates a marked similarity of failure rates according to industry sector (Phillips and Kirchoff 1989).
- A study of US businesses across different industries found there were no overall differences in business failure once company and owner operator characteristics were taken into account (Kalleberg and Leicht 1991).
- A study of the survival rates of Canadian businesses also found that once the characteristics of businesses are taken into account, the magnitude of differences between industries is often slight (Baldwin et al. 2000). It also found that stronger evidence of industry effects emerges at different stages of a business's life cycle. Thus, whereas new start-ups in wholesale trade and business services are among the most likely to survive the first year, these differences become less apparent among adolescent businesses.

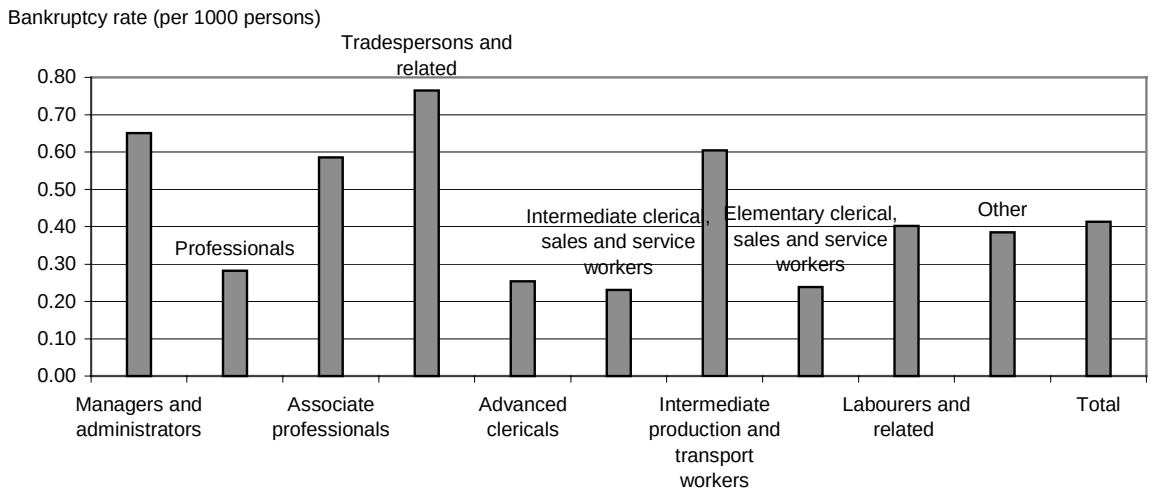
Occupation of business owner

The Inspector–General in Bankruptcy provides details of the occupational status of business bankrupts. The occupational classification of a business-related bankruptcy is based solely on the bankrupt's occupational status prior to bankruptcy.

Sales workers have been the most prevalent occupational category for business-related bankruptcies — accounting for 30 per cent or more in most years over the period 1972-73 to 1997-98. The next most common occupational category was Farmers, fishermen and related workers. This category often accounted for over 25 per cent of all business related bankrupts in the years 1972-73 to 1978-79, but has since shown a declining trend.

In 1998-99, the occupational status of bankrupts was for the first time based on the Australian Standard Classification of Occupations (ASCO) codes. These data are not fully reconcilable with previous data. The largest single category of business bankrupts for 1998-99 was 'Tradespersons and related' (14 per cent). Taken together, however, the 'white collar' categories of Professionals, Associate Professionals and Managers and administrators accounted for almost 23 per cent of business-related bankruptcies. Turning to business bankruptcy *rates* in 1998-99, 'Tradespersons and related' is again the highest single occupational category (figure 3.7).

Figure 3.7 **Business bankruptcies per 1000 persons by occupation, 1998-99**



a The classification of a bankrupt's occupation is based on the bankrupt's occupational status prior to bankruptcy.

Sources: Inspector-General in Bankruptcy (*Annual Report*, 1998-99). ABS (unpublished data).

Age of business owner

The relationship between age and business survival is often argued to be of an inverted U–shape (Storey 1994, p. 99). The age groups said to be the least likely to survive are the youngest business owners (inexperienced, lacking financial resources) and the oldest business owners (lacking motivation and energy).

This hypothesis does not appear to be borne out by Australian data, with the 'old' facing low bankruptcy risk (table 3.5).[20]

[20] Storey (1994, p. 109) notes that other characteristics of the business owner — such as family background, gender, work experience and education — do not (with the exception of education) appear to have significant effects on business performance and failure. Other factors that are likely to have a strong bearing on the likelihood of business failure (based on overseas evidence) are the size and age of businesses. Storey (1994, p. 92), for example, comments that the empirical evidence showing an inverse relationship between business failure rates and business size is virtually unanimous. Similarly, the overseas evidence is that business failure is more characteristic of young businesses (see for example, DTI 2000a and Baldwin et al. 2000).

Table 3.5 **Business bankruptcies per 1000 employers and self-employed, by age, 1997-98**

	Business bankrupts	*Employers and self–employed*	*Bankruptcies per 1000 employers and self–employed*
	No.	No.	No.
Less than 25	252	46 340	5.44
25–34	1 547	230 950	6.70
35–44	1 936	353 250	5.48
45–54	1 548	332 930	4.65
More than 54	604	249 450	2.42
Total	5 887	1 212 920	4.85

Sources: Inspector-General in Bankruptcy (*Annual Report*, 1997-98). ABS (unpublished labour force data).

3.5 Causes of business failure

As noted in chapter 1, the entry and exit of businesses are an important part of a dynamic market economy. From this perspective, despite its potentially costly consequences for the parties affected by a business failure, there are often broader economic welfare gains stemming from the effect of failure on productive efficiency and incentives. That said, this does not imply that the set of behaviours that bankruptcy penalises (such as poor book keeping, failure to set aside funds for employee liabilities and lack of business planning) should not be investigated and addressed.

The set of entrepreneurial practices and characteristics that are associated with success or failure may be affected by government regulations or the target of government programs. For this reason, it can be useful to examine the specific factors that can lead to business failure.[21]

Causes of business-related bankruptcies in Australia

The causes of bankruptcy discussed in this section are self-attributed. It is thereby likely that the data overstate the importance of external influences, such as economic conditions, while understating the influence of personal limitations such as lack of business experience.[22]

[21] The data in this section relate only to business–related bankruptcies as separate data for company liquidations are unavailable.

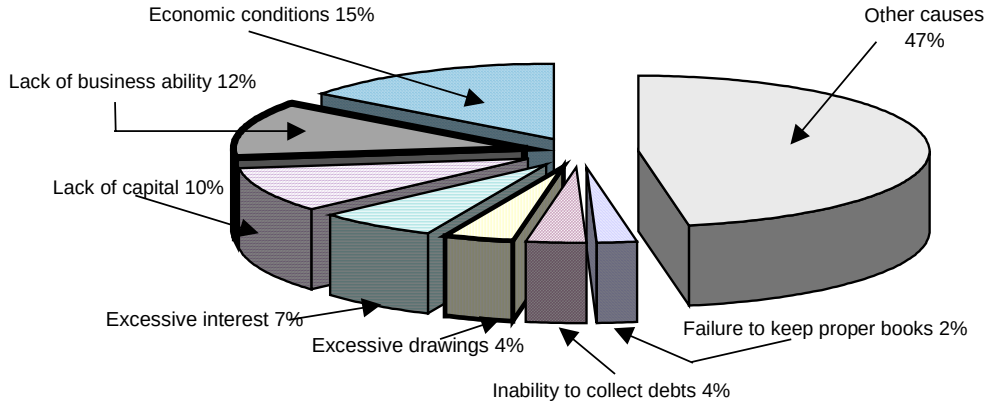
[22] The causation categories used by the Inspector General of Bankruptcy are defined in more detail in appendix C.

In 1998-99, key external factors — economic conditions affecting industry and excessive interest payments on loans — together accounted for around 22 per cent of all business-related bankruptcies (figure 3.8). Other notable contributors to business failures were lack of business ability, acumen, training or experience (12 per cent) and lack of sufficient initial working capital (10 per cent). The large block of 'other causes' includes reasons not stated by the bankrupts. It also includes 'personal reasons', which accounted for 18 per cent of business-related bankruptcies.

Although data for the most recent year are of interest, a better picture of the causes of business-related bankruptcies in Australia can be found by examining longer-term trends. From the early 1970s to the beginning of the 1990s, three major causes account for about 60 to 70 per cent of business-related bankruptcies: economic conditions, lack of capital and lack of business ability.[23]

The relative importance of the three major stated causes of business bankruptcy has changed over time. Until 1990-91, lack of business ability was the most commonly cited reason for business bankruptcy, with its share of all stated causes varying from just over 20 per cent to over 30 per cent. However, after 1990-91 its share fell to just over 10 per cent.

Figure 3.8 **Causes of business-related bankruptcies, 1998-99**



Source: Inspector-General in Bankruptcy (*Annual Report*, 1998-99).

Since 1990-91, economic conditions has been the most commonly stated reason, peaking at around 36 per cent in 1992-93 — a peak reflecting the recession of that

[23] See tables C.8 and C.9, appendix C.

year. Since 1992-93, the importance of economic conditions has declined, levelling off at approximately 15 per cent for the three years ending 1998-99.

The third major stated cause, 'lack of capital', also shows some signs of moving in a pro-cyclical fashion. More significantly, its importance as a stated cause has trended downward since the 1970s. This downward trend is particularly pronounced from its 1987-88 peak of 23 per cent — possibly reflecting the effects of financial deregulation in early and mid-1980s on the availability of credit.

The Inspector–General in Bankruptcy also provides data showing how the reasons for becoming bankrupt vary with age (table 3.6).

- Lack of business ability shows little variation for age groups up to 44 years, but then declines as a reason for the older and more experienced age groups.
- Economic conditions moves in the opposite direction to lack of business ability. It would seem that the older business bankrupts are, the more likely they are to blame external economic factors for their failures.
- Lack of capital shows little variation across age groups, although there is less of a tendency for this to be cited as a factor amongst older bankrupts.

Table 3.6 **Reasons for business bankruptcy by age of bankrupt, 1995-96 to 1998-99** [a]

	Less than 25 years	*25 to 34 years*	*35 to 44 years*	*45 to 54 years*	*More than 54 years*	*Average across all ages*
Lack of business ability	12.4	13.0	11.7	8.9	9.9	11.1
Economic conditions	8.2	13.8	18.4	20.8	19.6	17.6
Excessive interest	17.0	9.6	7.6	7.5	7.6	8.4
Lack of capital	10.2	11.4	9.9	8.7	8.4	9.8
Personal reasons	21.8	15.1	12.9	12.4	12.4	13.6
Excessive drawings	1.4	2.0	2.7	3.6	4.7	2.9
Inability to collect debts	1.9	2.7	3.0	3.0	2.9	2.9
Gambling or speculations	1.9	1.2	0.9	1.0	0.9	1.0
Failure to keep proper books	2.2	2.0	1.4	1.4	1.3	1.0
Seasonal conditions	1.1	1.4	1.6	2.0	2.1	1.7
Other/unknown reasons	21.9	27.8	29.8	30.7	30.3	29.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

[a] Average percentage of age group giving the indicated cause over years 1995-96 to 1998-99.

Source: Inspector-General in Bankruptcy (*Annual Report*, 1995-96 to 1998-99).

Other reasons for business bankruptcy are generally relatively unimportant and show no marked differences across age groups. However there are two exceptions. Personal reasons account for a significant number of business-related bankruptcies,

especially amongst the younger age groups. Excessive interest payments are also markedly significant for the youngest age group as a cause of business bankruptcy.

Modelling analysis

The most conspicuous feature of Australia's bankruptcy data is the steep and sustained rise in apparent bankruptcy rates that occurred in the late 1980s. In order to explain this rise and to examine some of the other determinants of aggregate bankruptcy rates, the data were examined using a variety of statistical techniques.

The key results emerging from the modelling analysis[24] are listed below.

- Short run decreases in economic activity as measured by changes in GDP increase the bankruptcy rate.
- Decreases in new business credit — which measures both the economic cycle and short-term credit availability — are associated with increased bankruptcy rates.
- Over the longer run, decreased interest cover (the ratio of unincorporated income to interest payments) appears to have exposed businesses to greater risks and to a heightened rate of bankruptcy.
- Capital gains associated with inflation on existing stocks of business debt made businesses less vulnerable to bankruptcy during the high inflation period from the 1970s to the mid-1980s. When inflation abated and real interest rates rose in the 1990s, this placed upward pressure on bankruptcy rates.

There is also evidence that reductions in liquidity constraints on small business — prompted by financial de-regulation — have increased the bankruptcy rate. When financial markets were highly regulated, finance to small business was rationed, so that only the lower risk firms got finance and leverage ratios were lower. With de-regulation, more firms were able to gain access to funds. The quid pro quo of this was that leverage ratios increased and more higher risk firms were involved — thus increasing bankruptcy risk, especially during times of high interest rates. It should not be assumed that this is an adverse outcome. To the contrary, it illustrates precisely why bankruptcy rates should be interpreted carefully. It might be possible to reduce bankruptcy rates by rationing finance only to 'gilt-edged' businesses, but the costs to the economy from lost entrepreneurship would be likely to outweigh the gains.

[24] See appendix D.

Overseas studies

Numerous studies of the causes of business failure have been undertaken around the world. A common theme is to attribute the causes to either external or internal factors. We briefly report here the results of three recent prominent studies in the United Kingdom, the United States and Canada:

- *United Kingdom* (DTI 2000a). A survey of business failures in early 1999 resulted in 1 412 cases where it proved possible to identify the main cause of failure. The causes of bankruptcy were classified by Official Receivers rather than the business owners themselves. The most frequent causes of business bankruptcy were failure to deal with income tax/corporation tax/VAT affairs (around 20 per cent) and loss of markets/loss of a major customer (around 19 per cent). The only other common element with an 'external' aspect to it was 'bad debts' (around 6 per cent). There were two other significant causes of business bankruptcy — lack of working capital/poor cash flow (around 10 per cent) and poor management (around 7 per cent).
- *United States* (Sullivan et al. 1998). A longitudinal study of non-farm business bankruptcies during 1994 involved 781 debtors providing 1 461 (multiple) responses on the reasons for their business failures. The most likely reason for bankruptcy provided by almost 39 per cent of respondents was the external business climate (such as increased competition or the increased cost of doing business). The other two most frequently listed reasons were issues relating to the financial structure of the business (28 per cent) and internal business conditions, such as mismanagement or high accounts receivable (27 per cent). Overall, around 70 per cent of all bankrupt businesses cited at least one of these three reasons. Other prominent reasons given for business failure were tax issues (20 per cent) and a dispute with a particular creditor (19 per cent).
- *Canada* (Baldwin et al. 1997). The Statistics Canada study provides a comprehensive overview of the causes of business bankruptcy. It found that about half of businesses that go bankrupt do so primarily due to factors beyond their control (such as economic conditions, increases in competition and technological change). The other half fail primarily due to basic internal weaknesses. Significantly though, even in bankruptcies originating in external events, internal weaknesses are important factors contributing to failure. The main reason for failure was inexperienced management, with the most fundamental problems generally related to poor financial management skills (70 per cent of businesses failing because of bad financial planning). Three particular problems were found to be regularly occurring: an unbalanced financial structure (with a deficiency of equity capital), an inability to manage working capital and under-capitalisation.

3.6 Summary

In 1999-00, the economy–wide business failure rate in Australia was estimated to be around 0.36 per cent, or 3.6 failures per 1000 enterprises. This represented a sharp decline from earlier in the decade — in 1991-92, the comparable figures were 1.04 per cent, or 10.4 failures per 1000 enterprises.

This decline in overall business failure rates is attributable to fewer company failures. The company liquidation rate fell during the 1990s, from 3.04 per cent in 1991-92 to 0.38 per cent in 1999-00. This decline may in part be explained by changes to the Corporations Law that provided much greater scope for companies to trade their way out of financial difficulties.

On the other hand, the failure rate of unincorporated businesses — as measured by business bankruptcies — remained relatively constant over the same period (average of around 0.4 percent per annum), albeit with considerable year-to-year variation. However, this followed a surge of failures in the late-1980s and early-1990s, having been relatively constant for almost three decades.

Particularly important in explaining the increase in business bankruptcies at the turn of the decade would seem to be the disappearance of capital gains associated with the interaction of inflation on debt, combined with the effects of the deep recession in the early 1990s. An alternative explanation, however, is that of high real after tax interest rates (which rose steeply in the early 1990s).

4 Insolvency arrangements in Australia

Owners and creditors of insolvent businesses — those unable to satisfy all creditors as, and when, their debts fall due — face a fundamental dilemma. They can reorganise, and attempt to continue trading, or wind up the business. And if the business is wound up, a further issue concerns the distribution of the proceeds from its sale among the various stakeholders.

This chapter describes the various legal avenues for reorganising, or winding up, insolvent businesses. It also outlines the legal framework for dealing with the related issue of who, amongst the various stakeholders of an insolvent business, is legally entitled to what. These legal arrangements — collectively the 'insolvency regime' — raise issues of economic efficiency and equity (which are addressed in chapters 5–7).

Australia's insolvency regime rests on two laws. If a business is incorporated, the Corporations Law largely establishes the relevant legal framework for both liquidation and receivership. If, however, the business is unincorporated (a partnership or sole trader), the *Bankruptcy Act 1966* provides the relevant statutory framework. In some insolvencies, these laws may overlap. For example, directors of private companies may be forced into bankruptcy if they have provided personal guarantees for debts in a failed company.[1]

While there is broad similarity between the three processes involved — bankruptcy, liquidation and receivership — they can vary in detail, depending on the legal form of the insolvent business and which of the three it is subject to. For example, differences occur in:

- the parties that can initiate insolvency proceedings;
- events that can trigger proceedings;
- control rights over the business in the period between insolvency and winding up or reorganisation;
- the ability to finance continued operations;

[1] Australia's insolvency regime not only establishes the legal arrangements that can be entered into by the various stakeholders in a failing business, but also sets the parameters for informal arrangements negotiated outside the legal framework.

- avenues for continued trading; and
- constraints on businesses continuing as going concerns.

The objective of the chapter is to provide sufficient information to facilitate an understanding of the issues raised in chapters 5–7. It therefore concentrates on a limited number of topics rather than attempting to describe the three processes or the insolvency regime in detail. A table comparing the processes can be found in the attachment at the end of the chapter.

Sections 4.1 and 4.2 describe the reorganisation and liquidation arrangements for incorporated businesses (based on the relevant provisions of the Corporations Law) and unincorporated businesses (the Bankruptcy Act) respectively. Section 4.3 discusses receivership (the appointment of an agent, usually on behalf of a secured creditor, to manage a debtor's assets or receive income). The final section describes the order of priority amongst creditors, employees and other business stakeholders when a business is liquidated.

4.1 Incorporated enterprises

The Corporations Law sets the legal framework for incorporated businesses. It is a special schedule attached to State and Territory Corporation Acts. In effect, the arrangement provides a national statute regulating company law. Chapters 5 and 2K of the law cover winding up provisions. Other provisions cover receivership (see below) and other aspects of corporate regulation.[2] Figure 4.1 provides a schematic outline of the relevant provisions of the Corporations Law.

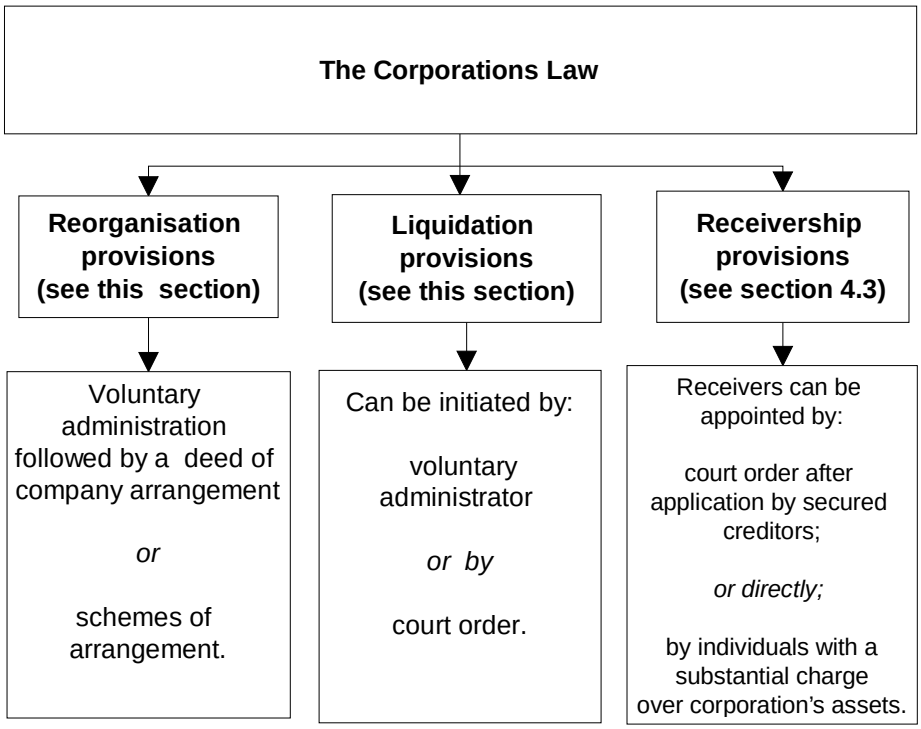
Reorganisation alternatives to liquidation

There are two ways that insolvent companies may reorganise under the Corporations Law: *Voluntary Administration* (followed by a Deed of Company Arrangement), or a *Scheme of Arrangement*. Of these, the former is by far the most important. In the financial 1999-2000, there were 1 693 voluntary administrations, of which 532 resulted in Deeds of Company Arrangement. By contrast, there was only one Scheme of Arrangement.[3]

[2] This section is largely based on Keay (1999).

[3] ASIC data (http://www.asic.gov.au — accessed on 2 August 2000 and 28 August 2000).

Figure 4.1 **Outline of the relevant provisions of the Corporations Law**



Voluntary Administration

Voluntary Administration, introduced in 1992, replaced earlier arrangements that were considered to offer too little scope for companies to trade their way out of difficulties. As the name implies, Voluntary Administration involves the appointment of a professional practitioner, the administrator, to take control of the company's affairs from its directors. It can be initiated by the directors (the usual case), corporate liquidators if the company is in liquidation, or by the holder of a property charge over the whole, or at least a substantial portion, of the company's assets.

One of the most important effects of the appointment of an administrator is that it triggers a moratorium on actions against the company. This provides the administrator and the creditors a chance to assess the situation and work out the best course of action. The moratorium:

- prevents the company being wound up;
- prevents charges being enforced;
- prevents an owner or lessor recovering property which is being used by the company;

- prevents proceedings being commenced or continued against the company and any enforcement action in proceedings already under way; and
- prevents the triggering of any guarantee by the company's directors or relatives.

Administrators essentially take over the duties and responsibilities of the company's directors. However, their primary task is to prepare a report on the company's financial position for a meeting of its creditors. This meeting will generally be held within 28 days of appointment. The notice of the meeting will include the administrator's assessment as to whether it would be in the interests of the company's creditors to:

- execute a Deed of Company Arrangement (see below);
- end the administration (which would restore control to the directors); or
- wind up the company.

The creditors decide at the meeting, which of these options are preferred. A majority of qualified creditors present at the meeting, in both number and value, is required to pass a resolution.[4]

Secured creditors (see below) have 10 days to decide whether to rely on their security. If they do exercise their security, it effectively puts an end to the voluntary administration, as the administrator will usually be left with no assets to administer. But, in practice, they usually agree to allow a Deed of Company Arrangement, presumably because they anticipate a better return than if the company is immediately wound up. The deed effectively places secured creditors on the same footing as other creditors.

A Deed of Company Arrangement

A Deed of Company Arrangement is an agreement between a company and its creditors, the details of which vary with the particular circumstances involved. The Deed is required to specify the following matters (Section 444A (4), Tomasic 1993, p. 155):

- the administrator of the Deed;
- the property of the company that is available to pay creditors' claims;
- the nature and duration of any moratorium period;
- to what extent the company is to be released from its debts;

[4] A poll can be demanded, in which case a majority in number and more than 50 per cent of the outstanding debts is needed to pass a resolution.

- the conditions (if any) under which the Deed will come into operation;
- the conditions (if any) for the Deed to continue in operation;
- the circumstances in which the Deed terminates;
- the order in which the proceeds of realising the company's property are to be distributed amongst those bound by the Deed; and
- the day on or before which claims must have arisen to be admissible.

Once agreed, the Deed is binding on creditors, except for those secured creditors who did not vote for the arrangement at the meeting (Section 444D of the Corporations and Securities Legislation). If the creditors' meeting resolves a Deed of Company Arrangement, the administrator of the company becomes the administrator of the Deed unless the meeting decides to appoint someone else. Except with express permission from the court, while the deed is in place those bound by the deed are prevented from:

- applying for the company to be wound up;
- bringing or continuing a proceeding against the company or its property; or
- attempting to levy execution or other enforcement processes.

Statutory Schemes of Arrangement

Statutory Schemes of Arrangement are available under Part 5.1 of the Corporations Law. But as the following indicates, procedures for putting them in place are cumbersome and costly compared to Voluntary Administration and Deeds of Company Arrangement. The following steps are involved (Tomasic 1993, pp. 95–96):

- a decision by the company's board or its liquidator to seek a scheme of arrangement;
- preparation of an explanatory statement and other documents required under the Corporations Law;
- seeking the court's approval to call a meeting of creditors to consider the scheme;
- holding meetings of creditors and shareholders to consider the proposed scheme and obtaining the majorities prescribed by law;
- seeking the approval of the court to the scheme document approved by creditors and shareholders; and
- lodgement of a copy of the court order with the Australian Securities and Investment Commission (ASIC).

Because of the cost and time involved in adhering to these procedures, Statutory Schemes of Arrangement have been seldom used since the introduction of Voluntary Administration and Deeds of Company Arrangement in 1992.

Liquidation of incorporated businesses

Winding up (liquidation) is the process of ending a company's business operations. It involves selling its assets and discharging its liabilities, settling any questions of account or contribution between its members and dividing the surplus (if any) between those members. Winding up does not preclude the sale of the business as a going concern.

There are two ways of winding up a corporation that is insolvent[5]:

- the appointment of a voluntary administrator by creditors (outlined above) and their subsequent decision to wind up at a creditors' meeting; and
- compulsory (court ordered) liquidation.

During 1999-2000, around two–thirds of all liquidations (1135 in number) were court ordered, while the remaining one–third (590 in number) were attributable to winding up by creditors.[6]

Winding up via creditors voluntary administration

If the compulsory creditors' meeting held after the appointment of the administrator votes to wind up the company, a registered liquidator must be appointed. There are two types of registered liquidators, official liquidators who are appointed by ASIC and others (mainly lawyers and accountants). The creditors' meeting, or a committee appointed at the meeting, decides whether to approach ASIC to nominate an official liquidator or to choose a non-official liquidator.

Where a company is to be wound up, the role of the liquidator is to investigate its affairs and take legal action against company personnel if appropriate. The liquidator may also take action to recover assets under certain circumstances. In more detail, the main tasks of a liquidator where the corporation has clearly failed are to:

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[5] Provided a company remains solvent, members (owners) may initiate its liquidation by passing a special resolution to that effect. Voluntary winding up by members often forms part of an amalgamation with some other company or enterprise. Less commonly, it is a means of ending mismanagement in the affairs of the company (Keay 1999, p. 4).

[6] The number of court–ordered liquidations includes 174 provisional wind ups. Calculated from ASIC data (http://www.asic.gov.au — accessed on 2 August and 28 August 2000).

- collect, preserve and sell the company's assets including any surplus arising from receivership;
- investigate and report to creditors any preferential payments which may be recoverable;
- arrange for the distribution of proceeds to creditors according to their priority; and
- complete the liquidation and apply for deregistration of the company.

The relative priority of creditors is set out in the Corporations Law (see below for a description).

Compulsory or court ordered winding up

Compulsory winding up requires a court order. It most often arises when creditors petition the court following the failure of a corporation to meet debt repayments. If the petition is successful, the Court appoints an official liquidator.

Instead of a final winding up order, the court may grant a *provisional liquidation* order. The objective of provisional liquidation is to remove control of the company from its directors while further investigation is undertaken. It is most commonly granted when there are concerns that the company's assets may be dissipated. Provisional winding up often precedes full liquidation.

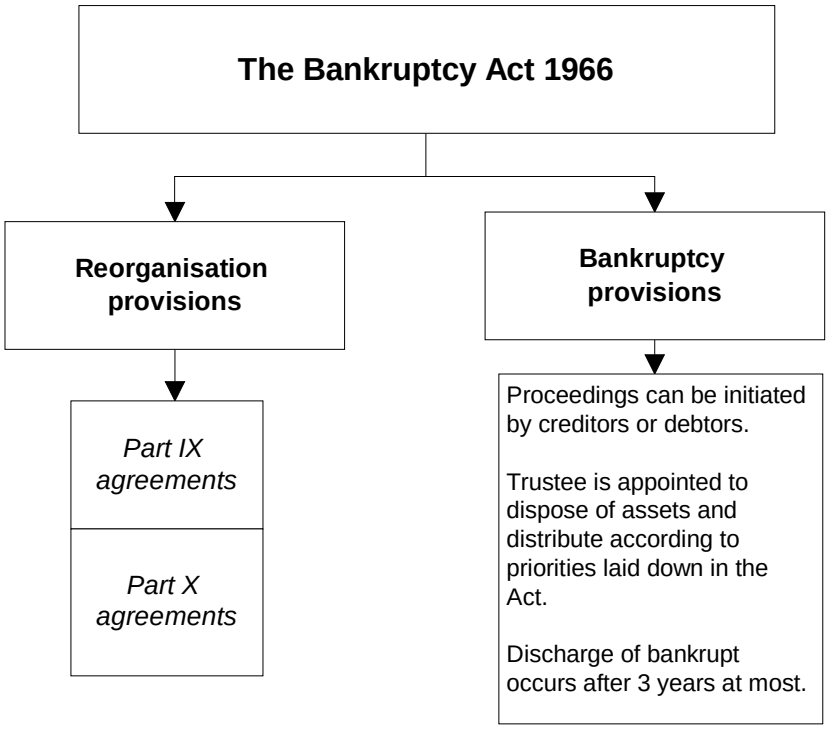
4.2 Unincorporated enterprises

The *Commonwealth Bankruptcy Act 1966* is the relevant statute for insolvent individuals, whether from business related or personal causes. Under the provisions of the Act, both debtors and creditors can initiate proceedings. Unlike the Corporations Law however, the Bankruptcy Act has no receivership provisions.[7] Nevertheless, holders of a debt secured by assets that are part of a business owned by a sole proprietor, or partnership may still appoint a receiver under common law if the terms and conditions accompanying the debt are breached.

Figure 4.2 provides a schematic outline of the main reorganisation and bankruptcy provisions of the Bankruptcy Act.

[7] The discussion in this section draws extensively on Rose (1999).

Figure 4.2 **Reorganisation and bankruptcy provisions of the Bankruptcy Act**



Reorganisation alternatives to bankruptcy

Overview

Under the Bankruptcy Act, there are two main ways that insolvent, or near insolvent, individuals may come to agreement with their creditors and thus continue in business:

- Part IX Debt Agreements; and
- Part X Debt Agreements.

To be eligible to enter into these agreements, the debtor must not have been bankrupt, had a debt agreement, or signed an authority to enter bankruptcy under Part IX or Part X of the Bankruptcy Act (for specified periods).

There were 1 196 debt agreements registered with the Insolvency and Trustee Service Australia (ITSA) in 1999-2000, of which about two thirds (67.4 per cent) were Part IX agreements and one third (32.6 per cent) were Part X agreements (ITSA 2000).

As an alternative to Part IX and Part X, temporary relief to a debtor may be available through a *Declaration of Intention to Present a Petition Form*. This prevents creditors from taking action to recover debts for 7 days. Informal agreements also provide a low cost alternative to the Bankruptcy Act reorganisation procedures. However, their terms and conditions are likely to be considerably influenced by the Act's provisions.

There are a number of advantages to both debtors and creditors from entering into agreements outside of bankruptcy. Debtors avoid the stigma of bankruptcy and may obtain more favourable treatment than they would under bankruptcy. More importantly, such agreements may allow debtors time to trade their way out of difficulties or accrue income from other sources. They also avoid the restrictions on their activities that occur under the Act from being declared bankrupt. From the creditors' perspective, they avoid the often not inconsiderable cost and delays associated with bankruptcy. Some creditors may also gain from continued supply to any businesses concerned.

Part IX Debt Agreements

Part IX debt agreements usually involve an agreed payment schedule and third parties (administrators) to oversight repayments. Once the agreement has been entered into the National Personal Insolvency Index (an electronic record of bankruptcies and other matters prescribed under the Act), the effect is the same as if the debtor had been discharged from bankruptcy. Thus, depending on the terms negotiated between the debtor and creditors, the debtor may be free to pursue existing business interests, including the day-to-day control of pre-existing businesses — albeit constrained by the provisions of the debt agreement. Debt administrators may be, amongst others, a trustee, a relative of the business owner or ITSA itself.

Procedures to put a Part IX agreement in place are relatively straightforward:

- the debtor puts a proposal to the Official Trustee in Bankruptcy;
- creditors are notified by the trustee of the proposed agreement, but a creditors' meeting is not obligatory; and
- to be officially accepted, the proposed agreement must obtain a majority in number, and at least three–quarters in value, of the creditors (or their representatives) at a meeting if one is held or, alternatively, responding through a postal ballot conducted by the trustee.

Unlike agreements under Part X, a Part IX Agreement does not require creditors to prove their debts to the trustee, as debtors may pay their creditors directly.[8]

However, Part IX agreements are limited to people with unsecured debts of less than approximately $55 000 (as at December 1999) and having income of half of that value. Both thresholds are indexed to the Consumer Price Index. Because of these relatively low thresholds, Part IX agreements tend to occur more commonly in situations where the debt is not related to business failure.[9]

Part IX agreements come to an end when one of the following occurs:

- the debtor's obligations under the agreement have been discharged;
- acceptance by creditors of a termination proposal by the debtor;
- the debtor becomes bankrupt; or
- termination by the court on application by the debtor or by a creditor if:
  - the court is satisfied that the terms of the agreement have not been carried out; or
  - the carrying out of the agreement would be unjust or cause undue delay to the debtor or a creditor; or
  - for any other reason the agreement should be terminated and it is in the interests of creditors to do so.

Part X Debt Agreements

Part X provides for three types of insolvency agreements as alternatives to bankruptcy: Deeds of Assignment, Compositions and Deeds of Arrangement.

- Under Deeds of Assignment, debtors assign sufficient of their property to cover their debts to the benefit of creditors.
- A Composition is an arrangement whereby at least some creditors agree to partial payment of the amounts owed to them. Some debtors may be paid in full, but if all debtors are paid in full, the arrangement is not a Composition.
- A Deed of Arrangement is any deed, other than a Deed of Assignment. Thus, Deeds of Arrangement offer a wide range of possibilities, including provisions for allowing time to meet creditors' claims.

[8] Although there is no requirement to actually prove the debts, they must be provable by nature.

[9] The Commonwealth has foreshadowed amendments which will double both the debt and income thresholds (Vanstone 2000).

Setting in place Part X agreements is complex.[10] Put simply, all involve the debtor authorising a trustee, or a solicitor, to take control of the debtor's affairs, and calling a meeting of all creditors to consider entering into an agreement covering repayments and whether to continue an active business. Creditors vote on the proposed arrangement at the meeting. For a proposal to be accepted, it must receive a majority of the eligible votes cast at the meeting, and have the votes of those creditors with at least 75 per cent in dollar value of the proposer's liabilities.

Unlike Part IX agreements, there are no income or debt limits for Part X agreements. Accordingly, they are more relevant for business-related bankruptcies.

Declaration of Intention to Present a Debtor's Petition Form

Insolvent individuals may obtain temporary relief from their financial difficulties by lodging a *Declaration of Intention to Present a Debtor's Petition* with ITSA. Lodgement prevents creditors (or the bailiff or sheriff) from taking action to recover debts for 7 days. But only one such declaration is allowed every 12 months. Thus, at best, it provides only temporary respite to debtors. Moreover, its use could provide sufficient evidence for creditors to apply to the Federal Court to initiate bankruptcy proceedings.

Informal alternatives

Informal arrangements between debtors and creditors are a low cost alternative to formal bankruptcy proceedings. These usually involve a renegotiation of loan arrangements — for example a rescheduling of payments — and thus may allow the continuation of a business owned by a person in financial difficulties.

They are most feasible where the number of creditors is small, and when the debt involved is not sufficient to threaten the long-term viability of the business involved. The disadvantage of such agreements is that they may not be binding on all creditors, and may be cancelled if the debtor does not maintain repayments, thus placing the parties back at square one.

Bankruptcy

Bankruptcy in Australia can be said to have two overlapping objectives (Rose 1999):

[10] See Rose (1999) for a detailed description.

- to allow individuals in a hopeless financial position to be cleared of their accumulated debt and make a fresh start; and
- to enable the orderly accumulation and distribution of the individual's assets to pay creditors in proportion to the amounts owed to each.

The role of the trustee is central to bankruptcy proceedings. In Australia, this role is undertaken either by ITSA itself, or by a private trustee registered with ITSA. Proceedings may be initiated by creditors, in which case they choose the trustee, or by debtors, in which case they choose the trustee subject to the approval of creditors. The role of trustees is to:

- investigate the debtor's affairs and report any offences by the debtor for possible prosecution;
- dispose of assets;[11]
- collect any debts owed to the debtor to pay creditors; and
- receive creditors' proofs of debt and distribute proceeds to creditors in accordance with priorities laid down in the Act (see below).

Discharge from bankruptcy releases the debtor from most of the debts owed at the start of the bankruptcy — creditors lodge claims with the trustee rather than the bankrupt. Bankrupts are automatically discharged from bankruptcy after three years unless the trustee or Official Receiver objects. However, early discharge is possible under the Bankruptcy Act and, in practice, approximately 60 per cent of bankrupts are eligible for early discharge after 6 months. The Commonwealth has foreshadowed amendments (Vanstone 2000) which will eliminate the early discharge provisions from the Act. The standard period for discharge from bankruptcy will become two years.

4.3 Receivership

Receivership is a device whereby the holders of a properly constituted mortgage or charge (the mortgage debenture) over the assets of a business, or other property, may appoint an agent — the 'receiver' or 'receiver and manager'. [12] This agent may receive the rents or other income from the charged property. Or, if it is desired to continue the business involved, the agent can buy and sell and generally carry on

[11] Section 116(2) of the Bankruptcy Act lists a number of assets that are protected from such disposal. These include: household goods; motor vehicle to a specified value; tools of trade to a specified amount; superannuation to a specified value; and legal rights of action for injury or death.

[12] This section follows the standard practice of referring to 'receivers and managers' as 'receivers'.

the business involved (O'Donovan 1981, p.2 and 1992 pp. 622-3). Receivers may also be appointed by the court.

The legal alternative to receivership — mortgagee in possession — can involve difficulties for the mortgage holder. For example, the mortgagee may be held accountable, not only for the income from the mortgaged property, but also for any potential income lost through the wilful default of the mortgagee (Blanchard and Gedye 1994).

Unincorporated enterprises and receivership

Receivership has had a long evolution in common law, dating back to at least the fifteenth history in England. Over time, common law receivership has developed in such a way that mortgage debenture holders have the power to appoint a receiver if the mortgagor fails to pay the debt when due. In addition, standard mortgage debentures usually specify a wide range of situations when a receiver can be appointed. For example, a receiver would be appointed if the business is being operated at a loss and, in the opinion of the debenture holder, continued business operations would endanger the security created by the debenture.

Debenture holders also typically have the power to appoint an inspector to examine the books and assets of the business in order to protect their interests (O'Donovan 1981).

Incorporated enterprises and receivership

Under the Corporations Law, receivers can be appointed by the court or as an agent of individuals having a property charge over all, or a substantial part, of a company's assets.[13] In either case, the receiver has substantial powers over the business concerned, including day-to-day control over its activities.

The appointment of a receiver outside of the courts in many ways parallels that of liquidation. A particular class of creditors — secured debenture holders — have the power to place the company in receivership. Receivers normally have the authority to take proceedings in the name of the company, to collect and sell its property and,

[13] The *Corporate Law Reform Act 1992* introduced the concept of 'controller of property' to the Corporations Law. This is a slightly broader concept than receiver or receiver and manager (it includes mortgagee in possession for example). However, the two are virtually equivalent and, for the purposes of this chapter, the more commonly used terms of 'receiver' and 'receivership' is preferred. In addition, reference to 'receiver' and 'receivership' includes the right to manage the assets in question (ie receivership and management) and therefore for the business to continue trading.

most importantly, to carry on its business. Only registered liquidators may be appointed as receivers under the Corporations Law (Section 418(1)).

Unlike liquidators, a receiver's primary duty is to deal with the payment of debts secured by the relevant charge. They have to obtain the best price for the sale of any of the Corporation's assets and, with the approval of the corporation's liquidator or of the court, have the power to continue the corporation's business. However, they are under no obligation to do so. Nor are they obliged to attempt to revive the business or restore its profitability, even if this is in the interests of creditors as a whole (O'Donovan 1981 pp. 656–7). Their responsibility is to the relevant debenture holders or to the court (if court appointed) and *not* to the business' owners, unsecured debtors or to any other business stakeholders.

Liquidation may follow, or occur simultaneously with receivership, in which case the receiver, as representative of the mortgagees, has prior claim over unsecured creditors to possession of the secured assets. In many cases, this will amount to virtually all of the company's assets.

Receivership and bankruptcy law

The role and powers of receivers do not form part of the Bankruptcy Act. Thus the powers of a receiver over the assets of an unincorporated enterprise are, in the main, set by the terms and conditions associated with that debt (the debenture) and any relevant property and case law. Accordingly, holders of secured debt in a bankrupt estate are free to deal with their security with one exception. If the trustee gives written notice to a Sheriff in possession, any properly charged property must be delivered to the trustee. In the absence of such a notice, the Sheriff is free to sell the property (Rose 1999, p. 100).

Thus, for the holders of secured debt in a bankrupt estate, there are effectively four alternative courses of action (Rose 1999, p. 118):

- rely entirely on the security of the debt and lodge no proof of debt with the trustee;
- realise the security independently and provide proof of any balance still owing;
- surrender the security to the trustee for the benefit of all creditors and provide proof for all of the debt as an unsecured creditor; or
- estimate the value of the security and provide proof to the trustee for the difference between the debt and the estimated value of the security.

State Supreme Courts and the Federal Court have the power to appoint receivers upon the application to the court of suitably qualified persons — for example

mortgagees, shareholders or creditors. Unlike private appointment of receivers, court appointed receivers are officers of the court and interference with court appointed receivers in pursuit of their duties can result in contempt of court charges. Court appointment of receivers is considerably less common than private appointment (Tomasic 1993, p. 43).

4.4 Statutory priorities in liquidation, bankruptcy and receivership

For corporate liquidation and personal bankruptcy (whether business related or not), the underlying principle governing the distribution of business assets is one of equality — all persons similarly situated are entitled to equality of treatment in the distribution of the available assets of the bankrupt estate (Keay 1999, p. 574).

This principle does not altogether hold with receivership. If the receiver is privately appointed, their overriding consideration is the interests of the secured creditor they represent. When they are court appointed, they are directly responsible to the court rather than any company stakeholder. That said, where the business is owned by a corporation, receivers are subject to the Corporations Law. And, under Part 5.2 and Section 433, they are required to distribute the *available* assets of a company in receivership in a way virtually identical with what is required for companies in liquidation. In general however, assets covered by a property charge do *not* form part of the assets available for distribution. In this sense, secured creditors can be said to have priority over all other company stakeholders — except in the case of a 'floating charge' where the assets subject to that charge are available for payment of employee wage and superannuation debts (Keay 1999).[14]

Not surprisingly, given the essential similarity of all three processes, bankruptcy law incorporates a broadly similar order of priority to liquidation and receivership (table 4.1).

Ranking high in the order of priorities for all three processes are expenses incurred by business administrators (liquidators, trustees or receivers) and their remuneration. The rationale for this ranking is that, in its absence, administrators

[14] A floating charge is a claim which 'floats' over the assets subject to the charge until certain events occur which result in its crystallisation. Examples of the latter include an event defined by the terms and conditions of the debenture, the appointment of a receiver by the debenture holder or liquidation. The assets subject to the charge can be very broad, including all present and future assets of the company. It is also possible for debentures to have combined fixed and floating charges, thereby giving them priority over employee wages and superannuation for the fixed component of the charge.

could be liable for the costs incurred under their administration and their remuneration would be at risk — with obvious implications for the willingness of suitably qualified persons making themselves available. The exception to the high priority of business administrators is receivership, where remuneration is set by the court (if court appointed) and by the relevant debenture document (if privately appointed). Receiver's costs and remuneration can be periodically deducted from the proceeds of the assets under their control (Tomasic 1993).

Under both the Corporations Law and the Bankruptcy Act 1966, employee entitlements have priority over unsecured creditors including the Australian Taxation Office and ordinary trade creditors.[15] The rationale for this appears to be equity based. Employees are regarded as being in a particularly vulnerable position unlikely, for example, to be able to avoid the consequences of their employer going bankrupt for wages, superannuation or leave entitlements (chapter 6).

Table 4.1 **Priorities in the distribution of assets of a liquidated business[a]**

Corporate liquidation, bankruptcy and receivership compared

Priority in declining order	*Corporate liquidation*	*Bankruptcy*	*Receivership*
Highest priority	Costs of winding-up: reasonably incurred by the liquidator or provisional liquidator. Includes wages and salaries of employees during the administration period.	Charges owing under Bankruptcy (Estate Charges) Act 1997.	Any insurance liability owing to a third party where the company has already received the payment from the insurer.
		Certain expenses incurred by the trustee in administering the estate or carrying on the bankrupt's business.	
Next priority	Applicable in the case of compulsory winding up only: the cost of the application for winding-up order.	All other fees, costs and charges incurred by the trustee in administering the estate or carrying on the business. These include, for example, employees' long service, annual leave, recreation and sick leave entitlements (all subject to limits).	Reasonable fees and expenses of an auditor incurred before the appointment of the receiver.

Table continued next page.

[15] However, assets that are subject to fixed securities are not available for distribution to unsecured creditors or employees.

Table 4.1 **Priorities in the distribution of assets of a liquidated business (cont'd)**

Next priority	Debts incurred by administrator during administration of the company and certain deferred expenses. Primary amongst these is the remuneration of the liquidator.	Refund of petitioning creditor's deposit where applicable. Petitioning creditor's taxed costs where applicable.	
Next priority	Wages and superannuation contributions of employees. Under S 561 these debts have priority over floating charges but not other forms of security (Keay 1999. p. 595).	Trustee's remuneration. All wages and salaries of the bankrupt under a certain threshold indexed to the CPI for services rendered to the bankrupt before the date of bankruptcy. Workers' compensation claims.	Employee wage and superannuation contributions. But see note below.
Next priority			Employee leave entitlements (but see note below).
Priority in declining order	*Corporate liquidation*	*Bankruptcy*	*Receivership*
Next priority	Employee retrenchment payments.	Long service, annual and other leave for any period *before* the date of the bankruptcy.	Employee retrenchment payments.
Next priority	Dividends to unsecured creditors.	Payments to apprentices and articled clerks. Special priorities approved at duly convened creditors' meeting.	Payment of interest and principal to relevant debenture holder or holders.
Lowest priority	Any surplus to shareholders.	Any remaining 'ordinary' claims by creditors. Any surplus to bankrupt.	Distribution of any surplus to unsecured creditors.

[a] Assets covered by a property charge do not form part of the assets available for distribution. In this sense, creditors secured by a property charge can be said to have priority over all other stakeholders. In the case of a floating charge this may effectively entail all the present and future assets of the company (Keay 1999, p. 469). A partial exception to this, however, is that the employee wages and superannuation debts have priority over debts secured by a floating (but not fixed) charge.

Sources: Keay (1999). Rose (1999). Tomasic (1993).

Attachment

Comparison of bankruptcy, corporate liquidation and receivership codes

	Bankruptcy	***Corporations Law: Administration/Liquidation***	***Receivership***
Proceedings can be initiated by:	Creditors or debtors.	Voluntary administration is usually initiated by the company's directors, but can be initiated by a liquidator or the holder of a charge over all or a substantial part of the assets. Creditors voluntary liquidation, initiated by creditors at a creditors' meeting. Compulsory (court ordered) liquidation, initiated upon the application of a creditor or creditors.	Receivership is initiated by a *particular* secured creditor (with a floating or fixed charge or combination of both).
Trigger mechanisms	Debtor presenting a *debtor's petition* to the Official Receiver to be declared bankrupt. Upon its acceptance by the Official Receiver, the debtor becomes bankrupt. Creditor's petition to the court after default of a debt of at least $2000, or if the debtor has been involved in other *acts of bankruptcy* (such as absconding place of residence or business). After a public hearing, the court may make a sequestration order which places the debtor's property temporarily in the hands of the court.	Members voluntary: company members appoint and oversee the liquidator. Creditors voluntary: usually an insolvent company, creditors' meeting appoints the liquidator. Compulsory winding-up, creditor(s) file a winding-up application with the court usually after the company has defaulted on a debt payment. The court appoints an *Official Liquidator* responsible to it. Court may order a *Provisional Liquidation* as a speedy interim step to prevent the assets being dissipated and to facilitate investigation of the company's affairs.	Default or more specifically, breaching, of the terms and conditions of trust deed accompanying the loan. However, the creditor still has to decide whether to appoint a receiver or enter into some other arrangement.

	Bankruptcy	***Corporations Law: Administration/Liquidation***	***Receivership***
Allocation of control rights post business failure.	Most of bankrupt's property is taken over by the Official Trustee in Bankruptcy or a registered trustee.	To liquidator, who has to take account of all creditors. Duties are for most part defined by law. Like directors, has fiduciary relationship with company, but at all times subject to the direction of the court.	To receiver or receiver manager (usually the latter). Has to take account of other secured creditors but not more junior creditors. Does not have to have court approval unless there is no trust deed.
Is there an automatic stay against creditors' claims?	Yes. The trustee may summon a meeting of creditors who may appoint a *committee of inspection* to represent them. But individual creditors cannot pursue their specific claims except in the case of secured creditors who may still appoint a receiver (but not a receiver manager).	Voluntary administration automatically stays creditors claims (a moratorium). For liquidation, yes. Rights of creditors to take legal proceedings and enforce ordinary remedies against the company or its property are restricted (Keay 1999). Not applicable if company is in administration.	No. Secured creditors may precipitate liquidation by repossessing assets, even if needed to keep business running.
Is there an ability to finance continued operations?	Conceivable, provided it forms part of carrying on the business of the bankrupt for eventual disposal. But such circumstances are likely to be rare.	Yes, can enter into new debt and generally continue operations.	Requires agreement of creditors for more debt unless that debt is junior. Does not require agreement of owners or courts.
Can liabilities be renegotiated?	Yes, trustee is specifically empowered to make a compromise with a creditor.	liquidators are supervised by a court and subject to its directions which, depending on the views of the court, would seem to make renegotiation possible. In liquidation, depends on what creditors' meeting decides.	If privately appointed, it depends upon the wishes of the principal to whom the receiver is agent, but it is unlikely once proceedings have reached this stage. If an official receiver is involved, it would appear to depend upon the attitude of the court.
	Bankruptcy	***Corporations Law: Voluntary Administration/Liquidation***	***Receivership***
Powers of the trustee, liquidator or receiver.	Trustee has the power (subject to the limitations under 116 (2) of the Bankruptcy Act) to sell any of bankrupt's property, carry on the business, mortgage or charge estate property, institute or defend legal proceedings, employ the bankrupt to	Specific *liquidators' powers* include power to bring and defend actions, to sell or otherwise dispose of company property, to act in its name and on behalf of the company, and to draw cheques and obtain finance. Also general authority to do what is necessary to	Normally confers power to take proceedings in the name of the company to sell and collect property, to carry on its business and in so doing, to act as its agent. Winding up cannot effectively proceed until receiver has completed duties. Does not generally require

	superintend the business, manage the estate and accept money due to the bankrupt.	wind-up the company and distributing its property. *Administrators' powers* are very broad and enable them to take full control of company from its directors for period of administration, to act as its agent in this period, and to investigate its affairs.	court or creditor permission. May terminate contracts and raise funds to continue the business, but such loans are junior to existing loans. Cannot nullify other fixed charges, hence may have to negotiate with other creditors to continue business.
What are the avenues for continued trading?	Prior to becoming bankrupt, parts IX and X allow several arrangements outside of bankruptcy (see main text). Once bankrupt, trading can only continue with the permission of the trustee. At any time after becoming bankrupt, the debtor may propose to creditors a composition or scheme of arrangement for paying off all debts or an agreed part of them. If they accept, the bankruptcy is annulled.	Possible via voluntary administration, but limited once liquidator has been appointed.	Renegotiation of the debt or other informal arrangement only. Also, holder of secured asset can initiate voluntary administration and receiver may become liquidator and then initiate administration if appropriate.
Constraints on business continuing as a going concern.	Prior to becoming bankrupt, it depends essentially on creditors' wishes. However, considerable scope exists for both informal agreement outside the Bankruptcy Act and through arrangements under the Act. Once bankrupt, there are large constraints on continuing the business as a going concern (for example, in obtaining credit).	Difficult once liquidator appointed, except to the extent necessary for beneficial disposal or winding up. But Liquidator does have the option of putting company into voluntary administration if it is sought to continue trading.	Secured creditor can instruct receiver to liquidate, even if business is worth more as going concern.

Sources: Keay (1999). Rose (1999). Tomasic (1993).

5 Assessing insolvency codes

This chapter is about the regulations and laws that come into play when a business becomes insolvent. It does *not* deal with some of the broader issues surrounding business failure, which may also have policy significance. These include the role of business exits in structural adjustment and the macroeconomic effects of exits.[1]

The next section explains why insolvency policy matters. The following section (5.2) discusses the rationales for, and limits of, government regulatory policy for business insolvency. It also examines the broad economic implications of insolvency policies — implications that extend well beyond the insolvent business or its creditors. Section 5.3 then develops some criteria for evaluating policy alternatives.

In discussions about insolvency policy and regulations, two themes emerge as particularly important:

- the extent to which insolvency regulation should allow significant scope for insolvent businesses to continue trading under incumbent management, as they can, for example, under US chapter 11 rules; and
- the order of priority of claimants on the assets of an irretrievably insolvent business, and particularly the issue of whether secured creditors[2] should always be given primacy.

Sections 5.4 and 5.5 examine these issues.

[1] It also ignores a specialised branch of business failure regulation — the prudential regulation of financial institutions. This area of regulation aims to avert bank runs or excessively risky exposure by banks, thus reducing the risk of default for depositors and more general financial instability.

[2] Secured creditors in this context typically refers to creditors who have the right, on default, to force the sale of a specific asset. Another category of secured creditor, those holding a 'floating charge', do not have priority over some other creditors, notably employees.

5.1 Why does insolvency matter?

It may be thought that policy for business insolvencies is unimportant because relatively few businesses exit this way — only around 0.5 per cent of businesses are terminated through insolvency each year.[3]

However, there are three reasons why insolvency policy matters more than might be obvious at first glance.

First, regulatory provisions for business insolvency have effects beyond those just related to the failing business — they affect economic incentives more broadly by changing the willingness of people to lend money to businesses, and the level of prudence adopted by entrepreneurs. This affects every business in the economy. Berkowitz and White (1999), for example, found for the US that the supply of credit was lower to unincorporated businesses (and its demand higher) in states that imposed lower penalties for bankruptcy.[4] As White (1996a, p. 496) notes:

> … if we evaluate bankruptcy policy based on how it treats firms already in bankruptcy, we are allowing the tail to wag the dog, since the number of firms in bankruptcy is small relative to the total number of firms affected by bankruptcy policy. The primary goal of bankruptcy policy should not be to save efficient but financially distressed firms. Instead it should be to create efficient incentives for managers of firms in general.

Insolvency policy can also directly affect the number of businesses that become insolvent. In this sense, insolvency policy can not only be a solution for businesses' financial problems, but also a cause. The effect of differences in bankruptcy provisions on bankruptcy rates may, in part, be illustrated by comparing personal bankruptcy rates in the United States and Australia. The rate was 0.73 per cent in the US in 1998 and less than one fifth of that (0.14 per cent) in Australia in 1997-98.[5] While social differences, such as the large group of medically uninsured in the US, explain some of the differences, it is also widely thought that US personal bankruptcy provisions provide very strong incentives for seeking bankruptcy (White 1998).

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[3] See section 3.3, chapter 3.

[4] In the US, a bankrupt has a varying obligation to meet creditors' claims. In some states, almost all personal assets are exempt from claims. In others, creditors can claim a significant share of the personal assets of a bankrupt.

[5] The rate is calculated as the ratio of personal bankruptcies to the adult population. The US bankruptcy data are from the American Bankruptcy Institute (www.abiworld.org/stats/1980annual.html) while the adult population data (aged 20 and over) are derived from US census data (http://www.census.gov/ipc/www/idbnew.html). The Australian data are from the Inspector General in Bankruptcy, *Annual Report* and the adult population data (aged 18 or over) from the Australian Bureau of Statistics.

Second, the costs associated with individual business failures for creditors can be relatively high and sometimes concentrated on vulnerable groups (such as employees).

Third, insolvency regulation can partly determine the extent of reorganisation of resources in an economy over time, with potential long run impacts on overall business dynamism and productivity. Insolvency regulation should encourage resources to shift from configurations and managements that are poor to better ones. But, in some cases, an insolvent business will still be essentially viable and efficient. Around the world, there are different degrees to which insolvency regulation accommodates the possibility of business reorganisation rather than closure.

What does an insolvency regime do?

Insolvency regulations are invoked when a business is unable to meet its financial obligations.[6] The regulations specify how the claims of creditors and employees against the business are settled. They also affect the timing of closure or, in some cases, the reorganisation of the business. The law also sets restrictions against the failed proprietor.

In the situation where a business is no longer solvent — unable to pay its debts as and when due — there are two principal pathways for possible government involvement and action.

- The legislative and regulatory framework may include provisions that help financially distressed businesses to trade their way out of difficulties under either incumbent management or new owners — ie reorganisation.
- Where a business exit is certain due to irretrievable insolvency, governments may have a role in the liquidation process.

Different countries have radically different regulatory arrangements associated with business closure. Some have so-called ‘creditor-oriented’ arrangements that favour liquidation rather than reorganisation. Others have ‘debtor-oriented’ arrangements that allow the existing owners a continued stake in the management of a reorganised business. Sanctions against debtors vary, as do the priorities of claims among creditors.

[6] This chapter is concerned only with *involuntary* business exits. It is taken as given that there is no credible basis for governments to intervene when there are *voluntary* business exits (such as when a business closes when solvent, say due to the retirement of the owner).

This chapter considers the broad frameworks, the sorts of questions and the types of evidence that are relevant when determining the most appropriate regulatory environment.

It does not, however, attempt to make recommendations about the best arrangements. Nor does it undertake an analysis of all the technical and complex facets of the laws and regulations — the Bankruptcy Act, Corporations Law, and the Workplace Relations Act — that make up Australia's existing regulatory framework. These matters are beyond the scope of this paper.

5.2 The role of government in business insolvency

Rationales for intervention

In the absence of special statutory and regulatory provisions for business insolvency, general legal provisions relating to contractual obligations would prevail. This includes the common law. These laws would, for example, enable secured and unsecured lending to a business. Creditors and business debtors would generally negotiate their contractual requirements and courts could enforce these at insolvency. Debtors would have far greater control over the liquidation and distribution process.

However, there is a range of arguments advanced as to why such general laws may produce worse outcomes than ones tailor-made for insolvency.

Orderly closure and the 'creditor race' argument

In the absence of special insolvency regulations, each creditor has an incentive to collect their debt as soon as possible, since they receive higher redemption values the earlier they are in the queue. Such a 'creditor race' may lead to a range of problems.

- Premature dissolution and less value to creditors as a whole. This may happen because the insolvent business's assets may be sold too rapidly or in parcels that reduce their value as each creditor seeks to maximise their own returns.
- The expenditure of significant resources trying to 'win' the race and duplication of the transaction costs of arranging for claims.
- Inequitable outcomes, by favouring creditors with the strongest negotiating position or those with the knowledge to secure an early place in the queue. For example, creditors holding long term claims have relatively little bargaining

power with management. In contrast, those with short term claims may be willing to provide new loans if they can convert old unsecured loans to partly secured ones (White 1996b, Schwartz 1981).

- More uncertain outcomes for creditors if winning in the race is something resembling a lottery. In that case, risk averse creditors would prefer a certain share of the assets to only a chance of recovering all their debt.

In theory, creditors could coordinate their claims, but the transaction costs of such coordination — including deterrence of cheating — may be high (especially when the number of creditors is large). Thus, the absence of specific insolvency law may lead to coordination failures, premature dissolution and net social costs.

Insolvency law aims to benefit creditors through the *orderly* distribution of the realised assets. Thus an independent liquidator takes control of the insolvent business, tries to maximise the value of assets and is then responsible for distributing the proceeds.

Debtors too may benefit from orderly procedures. For example, such procedures should help protect the rights of business owners (and their employees).

The IMF (1999) has noted these benefits to creditors and debtors, but it also emphasises the importance of economy-wide benefits. The IMF observes that orderly liquidation processes play a critical role in fostering growth and competitiveness and may assist in the prevention and resolution of financial crises.[7]

Insolvency law as insurance

Unincorporated business owners face significant downside risks associated with their investments. In the absence of insolvency laws, their potential liabilities on failure can be very high. A creditor would have claims on all of the assets of the debtor, including their human capital — a failed entrepreneur might have to work the rest of his/her life to pay off debts. An entrepreneur may well wish to insure against such a catastrophe.

Insolvency law acts like a form of compulsory insurance (White 1991, p. 693). The creditors are the insurers, who ask for a premium on their lending to cover their increased risk.[8] In return, the debtor (the insured) faces limited liabilities on failure.

[7] Some commentators question whether insolvency law really aids creditors (or debtors) in this way. See, for example, Bowers (1990).

[8] Secured creditors are like insurers who are willing to take only a small amount of risk (and their premium is thus much smaller). Unsecured creditors take a lot more risk and charge higher premiums.

The fact that liabilities are faced at all reflects the need of a good insurance scheme to avoid moral hazard. Thus, the loss of personal assets (with some exemptions) and mandatory periods before bankrupts can be 'discharged'[9] serve like front-end deductibles in insurance.[10] They discourage (but do not eliminate) excessively risky behaviour by the insured. The compulsory element of the insolvency regime also has the benefit that it overcomes the adverse selection that would likely bedevil voluntary private insurance arrangements (an issue that is developed in chapter 6).

Debtor protection

Debtor protection is related to the previous rationale, but with the added dimension of social concern about the implications of business insolvency for debtors. Insolvency law limits the assets that can be used to pay creditors to certain specified current assets and specifically excludes other assets up to some threshold (such as a car and tools of trade). It also excludes future income and allows the bankrupt to be discharged from their bankrupt status after a fixed period. In the absence of insolvency codes, claims could potentially extend until death, with unhappy consequences for some.[11] Even if good risks are forced to pay for bad risks through higher premiums on interest rates, the social benefits from avoiding personal catastrophes for some debtors might be worth it.

Compensating for tax policy

The Australian income tax system, like those of other countries, taxes profits but does not provide for tax loss trading or immediately redeemable cash credits for tax losses. Instead, past losses can only be offset against any future profits.

But a dollar today is worth more than a dollar tomorrow and, for many businesses, there is a relatively high risk that there may be no profits tomorrow. This implies that tax losses are worth a fraction of their value compared to a situation where tax losses are treated more favourably by the taxation system.

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[9] Bankruptcy involves a number of constraints, such as not being able to travel overseas. These constraints are lifted when the bankrupt is discharged.

[10] These are amounts that the insured person must pay in the event of a claim.

[11] As well, it could generate substantial labour market inefficiencies. This stems from the fact that creditors' claims over the human capital of the debtor are incomplete, and in particular, a creditor cannot require that a debtor work off the debt (tantamount to slavery). But once creditors' claims over a debtor's human capital are conditional, then it creates poverty traps. For example, if a debtor were required to pay creditors the excess of their labour income over some basic living wage, they would face large disincentives to work.

This asymmetric treatment of tax losses and gains biases businesses against risky ventures. If society as a whole has less aversion to risk, this bias is inefficient.

One way of dealing with this bias is to allow tax loss trading. However, governments around the world prohibit tax loss trading because of the scope it creates for tax avoidance.

Another way of offsetting this bias, without the problems posed by tax loss trading, is to limit the liability of entrepreneurs, either through the limited liability provisions of company law or through debtor protection under insolvency law.

Enforcing debt contracts where there is a risk of absconding

Insolvency law typically contains provisions to restrain debtors' access to their assets upon debt default if there are reasonable grounds to believe that the individual intends to liquidate their assets and abscond. In Australia, persons who have had a bankruptcy notice issued against them, may have their assets vested in a trustee — by order of a court — pending the hearing of the bankruptcy petition. This could occur where there is reason to believe the individual is leaving the country, or even their usual dwelling or place of business (Rose 1999).

While there may be alternative mechanisms for reducing debtors' access to their assets — for example, the use of caveats in the case of property assets — these mechanisms are likely to involve higher transaction costs to the creditor (and to society generally) and to provide for less surety and timeliness.

Summary

Bankruptcy and insolvency codes are intended to resolve a range of economic and social issues. They provide incentives for competent management by entrepreneurs. They protect creditors by efficiently honouring contracts and protect debtors by limiting the consequences of honouring such contracts to the hilt. They represent a compromise between the interests of the parties. In addressing these objectives, governments seek to:

- balance these interests appropriately; and
- choose effective and efficient mechanisms.

5.3 Criteria for assessing insolvency codes

An insolvency regime has to encompass regulations to deal with many aspects associated with financially-distressed businesses. It must provide rules about the timing and terms of business closures, sales or reorganisations, the settling of creditors' claims and so on.

Given the substantial variation in insolvency regulation both over time and between countries, it is useful to have some criteria for assessing various alternatives.[12] Given that insolvency codes aim to achieve more than one purpose (such as creditor *and* debtor protection), it is possible that scoring highly on one criterion will lead to low scores on other criteria.

(I) Closing the right businesses

From an efficiency perspective, an insolvency regime should encourage the dissolution of non-viable and inefficient businesses and the survival of efficient ones. 'Filtering failure' occurs if an insolvency system systematically prolongs the survival of inherently inefficient businesses or prematurely dissolves efficient ones (Fisher and Martel 1996, p. 15).

Insolvency regulations should allow existing owners continued custodianship if they can make marginal investments that are expected to earn a higher than normal rate of return. If owners lose control to administrators under these conditions, then a premature liquidation has occurred. The opposite problem occurs if the owners retain control during the insolvency process with resources that would have earned higher real returns if the business had been sold as a going concern to new owners and management, or sold off in parts (including any transaction costs in shifting them).

The insolvency regime should also provide the right incentives for secured creditors to prevent premature liquidations. A good insolvency code allows secured creditors (such as banks) to provide early feedback to businesses in financial difficulties. This could be achieved through banks initiating informal arrangements or negotiations with the debtor businesses.

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12 See Franks and Torous (1996, p. 451ff), Warren (1996, p. 82ff), UN (1999, p. 9ff), IMF (1999, p. 6ff) and World Bank (1999) for a variety of perspectives on the principles and criteria that should be used to judge different insolvency regimes.

(II) Maximising the value of liquidated assets

The IMF (1999) notes that many of the features of insolvency systems are designed to achieve the objective of maximising the value of liquidated assets. These include the appointment of independent administrators with broad powers. These persons effectively take control of the business and, in the event it cannot be saved, are responsible for winding it up and selling the assets for maximum value.

Ironically, insolvency proceedings intended to maximise the value of assets for the benefit of creditors may temporarily void creditors' 'rights'. This is because acting automatically on such rights can actually reduce the value of an insolvent business. Secured creditors can undermine the basic objectives of insolvency proceedings by frustrating the liquidator's ability to maximise the value of the estate prior to distribution.

Consequently, an aspect of maximising returns is the imposition of stays on creditors. A temporary stay gives the liquidator time to arrange a sale that will give the highest return for the benefit of all unsecured creditors.[13]

(III) Equitable treatment

A major policy objective is to achieve an equitable distribution of the liquidated assets amongst the creditors in the insolvent business. These comprise the employees (if applicable), sub-contractors, suppliers, financial creditors and other creditors.

An equitable arrangement does not necessarily mean one where stakeholders are treated equally, but rather in a way that 'reflects the different bargains that they have struck with the debtor' (UN 1999, p. 9). Accordingly, given the nature of their pre-arranged contracts, it is commonly considered equitable that secured creditors are given priority over unsecured creditors. Similarly, it should be considered equitable that, within each debtor class, stakeholders with the largest financial stake receive the most money back while those with smallest stake get the least.

In other areas, defining what is equitable may be very difficult. For example, people seeking damages from a business (for example, after the release of carcinogens into the local water supply) are rated as unsecured creditors. However, unlike some other unsecured creditors, they may have never entered a specific debt contract. In effect, they are involuntarily unsecured. Similarly, is it equitable that employees seeking access to their leave and other entitlements are ranked higher in the order of

[13] The sale of the business may also benefit secured creditors in some circumstances. For example, the particular asset over which the secured creditor has a charge, may be worth less than the debt.

priority than secured creditors with a floating charge, and higher than other unsecured creditors such as sub-contractors?

One basis for distinguishing classes of unsecured creditors is whether the creditor can feasibly take into account the risk of insolvency in entering a contract with the debtor. For example, people seeking damages can rarely attempt to reduce their risks (and, as noted above, may not necessarily have entered such a contract at all). And employees probably do not often see the possibility of insolvency as a material factor when entering an employment contract. But financiers extending unsecured credit are well aware of default risk, extract a premium for it and should undertake prudent evaluations of risk and seek to diversify their risks by having a portfolio of loans. Similarly, many trade creditors are aware of the risks of default among some of their customers, and may be able to vary the terms of their accounts and diversify their risks.

A further basis for judging equity and, in turn, the priority of claims is the 'ability to pay', or in this case the ability to withstand the loss of money 'staked' in an insolvent business (Warren 1996, p. 82). This suggests different treatment of stakeholders in different circumstances. For example, the loss of $50 000 of employee entitlements will have far bigger implications for a worker than a similar loss to a large finance company with diversified ownership.

For obvious reasons, equity holders are usually excluded from the distribution of the liquidated assets of the insolvent business. However, there are also social and equity grounds for balancing the need for debtors to exercise due care when making business decisions and the personal liabilities they face when they are unlucky or incompetent. This consideration affects the value of the personal assets of debtors that are claimable by creditors, discharge periods and the degree to which future commitments to pay off debts can be sought. The issue of priority is further examined in section 5.5.

(IV) Honouring contracts

Agents enter implicit and explicit contracts with the business. Secured lenders provide credit on the basis that they are entitled to first claims on business assets in cases of insolvency. Not receiving priority effectively destroys the principle of secured credit, increases the risk of lending and presumably reduces its level. As small businesses particularly are dependent on credit finance for growth, reduced credit availability may affect their entry, growth and survival rates.

(V) Discouraging incentives to run down non-secured assets close to insolvency

The ratio of liabilities to assets of businesses that have been declared bankrupt is often high, with the implication that unsecured creditors are unlikely to get much relief. It also implies that insolvency proceedings rarely commence just at the point when net assets become negative. In turn, this means that the owners (or equity) are in charge during the period when the balance sheet of the business is deteriorating.

The insolvency code has implications for the behaviour of managers (including directors) just prior to the declaration of insolvency.

- It can encourage perverse incentives in management. For example, after the declaration of insolvency, the owners can typically expect no return, effectively relinquishing all assets. But, in this case, any risky investment with the possibility of making a return looks attractive to management. This then implies that, at the time insolvency is finally declared, only secured assets are likely to be intact. Management will also typically lose their jobs during the transitional period, encouraging them to also defer insolvency proceedings. Thus, apparently pro-creditor arrangements, by ignoring the incentives of debtors prior to insolvency proceedings, may actually hurt creditors and reduce economic efficiency. As noted by White (1996b, p. 229):

  > As long as streamlining the bankruptcy procedure involves compensating creditors according to the Absolute Priority Rule [that gives zero priority to equity after bankruptcy], then managers will have an incentive to gamble with creditors' assets as they try desperately to avoid bankruptcy's draconian treatment of equity… Ironically, while bankruptcy is supposed to be the procedure by which the economy moves towards long run efficiency, the bankruptcy liquidation procedure gives managers of failing firms incentives to engage in inefficient behaviour trying to avoid it.

- If the behaviour of managers prior to declaration of insolvency is subject to sanctions after insolvency (such as criminal prosecution), the incentives to make prudent investment decisions and to provide earlier advice about insolvency are increased.

- Insolvency regimes can call for restrictions on the managers or directors of some debtors, such as limitations on re-entry into business and claims on their personal assets. These also increase incentives for prudent investment and earlier disclosure of insolvency.

(VI) Predictable and transparent processes

Clear and predictable processes provide all stakeholders with information about how the insolvency regime will operate. It helps prevent disputes, clarifies priorities and defines the limits of any discretion (UN 1999).

(VII) Minimising the direct costs of insolvency

A goal of any insolvency regime is to reduce the transaction costs — for example, accounting and legal costs — of either business closure or of reorganisation. In this context, the time taken to wind up or reorganise a business may also be relevant.

5.4 Liquidation or reorganisation?

Picture the situation where a business has encountered financial difficulties and has reached the stage where it has become insolvent. Three things may happen:

- the business is 'reorganised' — the business continues under the old management and owners, but with arrangements to pay back creditors;
- the business may be sold — administrators sell the business as a going concern. In this case, assets are retained and workers may retain their jobs, but new owners (and typically) new management replace the old; or
- the business may be liquidated — the business is closed, its workers retrenched, and its assets sold piecemeal.[14]

An important issue that has emerged in Australia and other countries is how much scope insolvency regulations should allow financially-distressed businesses to reorganise their affairs and to continue trading under incumbent management.

This section discusses the role of reorganisation as a goal of the insolvency regime and its usefulness as an alternative to sale or liquidation (with the emphasis on the latter).[15] This is done in the context of the current policy approach in Australia and alternative arrangements in other countries.

Current policy approach in Australia

In Australia, the legislative framework for insolvency arrangements (see chapter 4) has evolved from United Kingdom practices and procedures. This form of insolvency code is generally categorised as being 'creditor-oriented', because it allocates control rights to creditors. In contrast, countries with 'debtor-oriented'

[14] A fourth possibility is that governments may sometimes provide assistance to a business to keep it afloat (such as by waivers on bills due to government, soft loans or a guaranteed workload). Such circumstances lie outside the general insolvency regime and are not considered here.

[15] As Jackson (1996) points out, the drafters of insolvency codes have typically ignored the possibility of disposing of a business as a going concern and focused on reorganisation as the only alternative to a piecemeal liquidation of assets.

insolvency procedures allow the debtor to retain control of the insolvent business (the United States being a noted example).[16]

Creditor-oriented insolvency processes not only allow creditors to effectively control the direction and pace of procedures, but the procedures themselves are significantly geared towards the protection of creditors' interests.

However, this is not to say there is no scope for reorganisation in Australia. The Bankruptcy Act and Corporations Law contain provisions allowing financially-distressed businesses some scope to resolve their financial problems. These were outlined in chapter 4 and are summarised in box 5.1. There is evidence of businesses increasingly taking advantage of the provisions to trade their way out of financial difficulties (see chapters 3 and 4).

The 'reorganisation provisions' — with the exception of Schemes of Arrangement (which require court sanctioning) — are relatively simple, inexpensive and flexible arrangements, designed to involve important stakeholders and to provide opportunities to save financially-distressed businesses.

Their objectives are twofold. The first is to allow businesses a temporary respite from creditors' claims — and protection from winding up — while all parties work out proposals for the business's future. The second is for businesses and their creditors to try to reach an agreement whereby the business is able to survive and to repay its debts. However, if it is not possible for a business to continue, the administrator will aim to achieve the best possible return for creditors through the sale of the business or its assets.

The underlying rationale of the Australian insolvency code to place creditors' interests first and foremost has several consequences. A benefit of the code is that, if a business can be saved, the focus on creditors' rights encourages a relatively speedy reorganisation. Strict timetables are applied to the administration and debt agreement processes, with the result that struggling businesses are not kept in limbo for lengthy periods. Resources are quickly rearranged within the business or redeployed elsewhere.

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[16] The categorisation of the Australian insolvency code as 'creditor-oriented' may come as a surprise to some, as there appear to be perceptions in the community that the current insolvency code allows debtors to escape too lightly. Indeed, addressing community concern is the principal argument put forward to justify foreshadowed legislation in Australia to toughen bankruptcy laws (Vanstone 2000). The proposed measures include eliminating the mechanism for early discharge and strengthening provisions that allow trustees to lodge objections to discharge from bankruptcy. Nevertheless, the rights afforded to creditors under the Australian code are still significantly greater than those afforded to creditors under so-called 'debtor-oriented' codes. See below.

Box 5.1 **Legal provisions for assisting insolvent businesses to avoid closure**

Bankruptcy Act provisions for unincorporated businesses

- **Temporary relief from creditors** via the lodgement of a 'Declaration of intention to present a debtor's petition' by a business prevents creditors from taking action to recover debts for 7 days. Only one declaration can be given every 12 months. A creditor can use the declaration to apply to the Federal Court to make the debtor bankrupt.
- **Part IX Debt Agreement** allows the debtor to arrange his/her affairs with a view to the payment, in whole or in part, of his/her debts. The deed must be in favour of all the creditors of the debtor and may provide for an assignment of all the debtor's property. It releases debtors from their debts once creditors accept. Debt agreements include an agreed payment schedule (such as instalments or lump sums) and may involve administrators to oversight repayments. There are limitations on the size of unsecured debts and after tax income.
- **Part X Arrangements** allow a debtor to authorise a trustee or solicitor to take control of the debtor's affairs with a view to entering into an arrangement with creditors. This could involve: debtors giving all their assets to creditors; debtors paying money over time; a friend or relative paying a lump sum to settle debts; or operating a business to repay debts. There are no income or debt limits. The trustee investigates the debtor's affairs and reports to creditors — who then vote on the proposed arrangement at a meeting.

Corporations Law for incorporated businesses

- **A Scheme of Arrangement** is a statute-approved procedure permitting a company to make a compromise or arrangement binding on all its creditors/members (either or both), or classes of either or both. A scheme may be proposed by the company, the Liquidator or a creditor or member, and is approved by special resolution.
- **Voluntary Administration** is designed to provide an alternative to statutory arrangements for financially-distressed companies. The Voluntary Administration procedures allow an independent administrator — appointed by company directors — to take control of the company to assess its viability and determine a plan for its future. The Administrator's report includes a recommendation to creditors on whether the company should be:
  - wound up;
  - returned to the control of the directors; or
  - allowed to execute a Deed of Company Arrangement, which sets out terms by which the company can operate for a nominated time period (administration ceases upon execution of the deed).

Sources: ITSA, http://law.gov.au/aghome/commaff/itsa/ (accessed 13 April 2000). Knights Insolvency Administration, http://www.knights.com.au (accessed 14 April 2000).

On the other hand, the fact that creditors are in control of the insolvency process means they will tend to exercise the option that maximises their return — even if there may be broader adverse economic and social consequences. And by favouring creditors, the insolvency code places the interests of other stakeholders — such as

employees of affected businesses — in a vulnerable position. It also tends to overlook the potentially specialised human capital of the debtor/owner.

A further concern is that a creditor-oriented system may reduce the value of the business by encouraging premature liquidation to the disadvantage of unsecured creditors such as employees, sub-contractors and other trade creditors. For example, secured creditors may choose to liquidate, even if a business is worth more as a going concern to all creditors. The OECD (1994, p. 1) notes that in countries where the enforcement of creditors' rights are sacrosanct:

> …the result might be a net transfer of wealth from junior to senior creditors and a net increase in social costs resulting from the unwarranted demise of a going concern with a positive present value.

The critical point is that, while current legislation provides opportunities for insolvent businesses to survive as going concerns, it is not *designed* for this purpose — it is designed primarily to serve the best interests of creditors.

Alternative policy approaches

A broad alternative to a creditor-oriented regime is one that is debtor-oriented. This approach to assisting businesses to avoid insolvency is principally underscored by the rationale that the business in question may have the potential to earn long-run profits under either its existing owner/managers or under a new team.

By favouring business owners and debtors, a debtor-oriented scheme can provide businesses with greater opportunities to restructure their operations and their relations with creditors. The reorganisation procedures associated with such schemes are designed to give businesses a considerable amount of time to recover from more permanent debt problems.

The most prominent example of a debtor-oriented insolvency system occurs in the United States, where there are two main bankruptcy procedures:

- Chapter 7 of the Bankruptcy Code is the liquidation provision — it provides for the appointment of a trustee to oversee the winding up of a business.
- Chapter 11 of the Bankruptcy Code governs the reorganisation of insolvent businesses. The stated major objective of chapter 11 is to maintain businesses as going concerns — and as a result has been deliberately designed to be debtor-oriented.

Substantial rights are given to business owners and company boards to run the business while a reorganisation plan is developed. In essence, chapter 11 allows business owners the opportunity and the time to reorganise and restructure in order

to pursue *their* long-term objectives (and not those of their creditors). After filing under chapter 11, an automatic stay of proceedings is triggered. This enables the business to continue trading and freezes all unsecured creditors' rights against the debtor's assets. Secured creditors are not bound by this initial stay of proceedings. However, their rights to realise their claims may be stayed by the bankruptcy court (for a period of up to six months) to allow the debtor some breathing space.

The debtor has the exclusive right to propose a reorganisation plan for the first 120 days (and a further 60 days to obtain creditor approval). The fact that management can always seek to liquidate under chapter 7 as an alternative (in which case all unsecured creditors are likely to get nothing) enables them to bargain from a position of strength with unsecured creditors under chapter 11 (White 1996b). This is in contrast to creditor-oriented systems whereby creditors are effectively in control of both the timing and content of any reorganisation proposals.

Allowing struggling businesses more opportunity to reorganise and survive may bring economic and social benefits. The IMF (1999, p. 12), for example, suggests that reorganisation along the lines of US chapter 11 can serve the interests of all participants in the economy, although these appear to skate over some significant weaknesses in the US approach:

- It encourages debtors to restructure before their financial difficulties become too severe (and so may be economically beneficial in long run).[17] As noted by White (1996b, p. 229):

  > …there is a trade-off between improving the bankruptcy procedure itself and improving the efficiency of decision-making outside of bankruptcy.

- It may be economically and socially beneficial in that it gives debtors a second chance and thereby encourages growth of the private sector and the entrepreneurial class. On the other hand, there are moral hazard problems associated with giving debtors immediately realisable second chances, since it increases the potential returns from excessively risky behaviour. Moreover, a creditor-oriented system, as in Australia, does not preclude the continued involvement of the debtor. But the debtor would have to convince the creditors that they were efficient custodians of the business. It is not clear that debtors should be given second chances without a strong governance regime outside their influence that would punish incompetent or self-serving behaviour. The empirical evidence suggests that US chapter 11 proceedings rarely establish long run viable businesses. Only around 6.5 per cent of businesses emerge from chapter 11 as an ongoing entity. In comparison, the Canadian system of

[17] This is the incentive effect (criterion V) described in section 5.3.

reorganisation, which gives more emphasis to creditors' rights, has a success rate ten times higher (Fisher and Martel 1996, p. 16).

- In the modern economy — with emphasis more on technical expertise and goodwill, and less on physical assets — the degree to which a business's value can be maximised through liquidation of assets has been significantly reduced. Creditors wishing to maximise the value of their claims may be best served if the business is able to be maintained as an entity and utilise its skilled human resources. This point may be correct, but it does not necessarily point to the superiority of chapter 11 style reorganisation. A creditor-centred system can still sell the business as a going concern rather than breaking it up. Presumably, creditors will tend to favour such sales if they yield better returns than the piecemeal disposal of assets. This may not be true if the debtor brings some specialist knowledge to the enterprise that would vanish were the business to pass out of his or her hands. However, although small and medium enterprises dominate US chapter 11 filings in numerical terms, most do not appear to be small specialist businesses where a single entrepreneur may play a large role (Micronomics 1998, p. 10).
- It may serve social and political objectives, particularly the protection of employees of a distressed business. Employees benefit not only by virtue of preserving their entitlements but also because they still have jobs. This may be of particular social value in areas of high unemployment. However, it should be noted that this presumes that chapter 11 style arrangements are effective at establishing ongoing businesses, when the empirical evidence suggests that this is untrue. In any case, the rate of business entry and expansion in other viable businesses typically means that people losing jobs from business exits acquire new jobs.

Quite apart from the fact that some of the supposed benefits of chapter 11 style insolvency do not withstand scrutiny, there are other dangers associated with a primary focus on such debtor-oriented insolvency regimes.

First, it might increase credit risk and affect the incentives of creditors to write debt contracts. In most cases, chapter 11 reorganisations deviate from the absolute priority rule (APR). The APR is the priority of claims on debtors' assets with, for example, secured creditors always getting first access. Franks and Torous (1989) find that APR is violated in 78 per cent of chapter 11 cases. Since creditors presumably anticipate this default risk, it is either incorporated into liquidity constraints or interest rates.

Second, a debtor-oriented system may confer a competitive advantage on struggling businesses, violating the principle of competitive neutrality. In the United States, businesses operating under chapter 11 are able to obtain cheap finance, reduced

interest payments and other benefits that have the effect of lowering their costs relative to their market rivals:

> If firms in an industry are generally in financial difficulties, then those firms entering chapter 11 may find access to new financing less costly than those firms which are in distress but which have not entered bankruptcy. The result may follow from the provision which allows new financing raised in chapter 11 to take priority over pre-bankruptcy financing. Managers of solvent US airlines have been particularly vigorous in their complaints that firms in chapter 11 have enjoyed a competitive advantage. (Franks and Torous 1996, p. 463)

Another example is the steel industry. It was estimated that one large US steel maker was able to reduce its steel making costs from $460 to $380 per ton from the implicit subsidies that it received after a filing for bankruptcy (White 1996b, p. 225). In effect, under chapter 11 type insolvency arrangements, reorganising businesses receive subsidies relative both to businesses that liquidate and other viable businesses. These subsidies come from either governments or from creditors.

Third, permitting the debtor (owners) to retain control of a business during insolvency may give rise to abuse and is likely to be a more lengthy, more expensive and more complex process than a creditor-oriented system. In the United States, these problems have apparently encouraged businesses to complete private 'workouts' outside of the bankruptcy process.[18] Commentators have labelled Chapter 11 as 'time consuming, litigious and costly' (Fisher and Martel 1996, p. 4).

Finally, from an equity perspective, a debtor-led system may be more likely to favour employees than a creditor-led system, but it may also reduce the proceeds available to some creditors.[19]

Summing up

All insolvency systems allow insolvent businesses to continue trading if they meet some criteria. In the US, such businesses are often reorganised under chapter 11, which gives a powerful hand to debtors, sometimes courts and rarely creditors. In most other countries, including Australia, creditors exercise much more control over the reorganisation of the business.

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[18] According to Franks and Torous (1996), most firms enter chapter 11 only after attempting an informal reorganisation or workout. A workout can take the form, for example of an exchange offer for outstanding debt, or the negotiation of a reduction in interest payments. Workouts generally involve lower direct costs than chapter 11 cases because the time spent in reorganisation is much shorter.

[19] Under chapter 11 reorganisation plans, secured creditors lose their absolute priority.

Criteria for making policy judgements about differing insolvency codes were outlined in section 5.3. A comparative assessment of the Australian and US codes — based on their approaches to reorganisation — against these criteria is shown in table 5.1.

Table 5.1 **Assessment of Australian and US insolvency codes**

Criteria	*Australian insolvency code*	*US insolvency code*
Closes the right businesses	Unclear. May have a bias towards premature liquidations, despite existence of debt agreements and voluntary administration provisions. Lack of evidence regarding successful reorganisation of businesses.	Prolongs the survival of too many inefficient businesses (very few successful reorganisations).
Maximises the value of assets	Insufficient evidence.	Unclear, although the stay on creditors potentially provides an opportunity for higher returns.
Equitable treatment	Emphasis on satisfying creditors and less favourable to employees.	Favours equity holders and employees.
Honouring contracts	Secured creditor contracts have a pre-eminent role.	Does not honour credit contracts.
Discourages any running down of assets	Pro-creditor nature of code may encourage managers/directors to 'gamble' with assets in businesses close to insolvency.	Encourages equity holders to take a second chance and restructure rather than running down assets.
Predictable and transparent	Clear and predictable processes.	Greater complexity might mean that outcomes are less predictable.
Minimises direct costs	Relatively simple, quick and inexpensive processes.	Relatively complex, lengthy and expensive processes.

The US system has the advantage that it weakens perverse incentives by equity interests prior to the declaration of insolvency or bankruptcy. But, overall, the evidence suggests that US style reorganisation typically fails, is protracted, costly and does not honour credit contracts.

Unfortunately, empirical evidence about the comparative effectiveness of the Australian system is lacking. Other comparative evidence provides mixed results. Analysis of the Finnish system — which is relatively close to the Australian — found that the costs of going-concern sales and liquidations appeared higher than in the US and that creditors got less (Ravid and Sundgren 1998). However, the Canadian system, which gives much more emphasis to creditor rights than the US, appears to generate better outcomes (Fisher and Martel 1996).

5.5 Appropriate allocation of liquidated assets

A critical issue in the liquidation process is the allocation of available funds to the various stakeholders in the insolvent business. Because there are usually insufficient funds from the liquidation of assets to satisfy all stakeholders, a system has developed — under the Bankruptcy Act and the Corporations Law — for prioritising stakeholders' entitlements when funds are distributed. This system is described in chapter 4.

The current order of priority, at its simplest level, distinguishes between secured creditors and unsecured creditors. Secured creditors have the right to the assets of a business based upon the terms agreed by the parties concerned. They can force the sale of a specific asset if the business is unable to meet its repayments.[20] Unsecured creditors do not have rights over a specific asset.

The order of priority was changed most recently in 1993 when the Bankruptcy Act and the Corporations Law were amended to remove the special priority afforded to the Australian Tax Office (making it just an 'ordinary' creditor).

Is the current order of priority efficient and equitable?

Why should one stakeholder group have a greater claim on liquidated assets than other groups?

The logic behind giving secured creditors, such as banks and other financial institutions, priority is that in its absence, 'secured' credit becomes untenable, and credit supply would fall and interest rates rise. The main adverse efficiency impact of the strict priority rule is that management faces disincentives to seek early insolvency. However, since the early 1990s Australian insolvency law has allowed financially distressed businesses to make arrangements with creditors to continue trading, and to potentially make a long run return to equity.[21] Accordingly, to the extent that the potential for voluntary administration reduces perverse incentive

[20] The exception to this is creditors holding a floating charge. A floating charge usually relates to the entire assets of a company. On default, the creditor can enforce the debtor's obligations against these assets. The Corporations Law and Bankruptcy Act, however, require that any unpaid employee entitlements have priority over claims by a holder of a floating charge.

[21] Furthermore, taxation laws may provide an incentive for company directors to seek voluntary administration. In the event that a company falls behind in its taxation instalments, the Australian Taxation Office has the power to demand that directors choose one of three alternatives: immediate payment of the debt by the company; immediate payment of the debt by the directors; or, apply for voluntary administration.

effects, the protection afforded to secured creditors appears to be consistent with efficiency criteria.

The existing priorities may well have impacts on the behaviour of stakeholders in the business, but in general, these represent appropriate responses to risk.

- The combination of (typically) no return to equity and the requirement to meet some debtor's obligations out of personal assets (in the case of entrepreneurs of unincorporated enterprises) may affect the business start-up rate. For example, Fan and White (2000) find that, in the US, the willingness to start a business is substantially increased in states that have full or very substantial exemption of personal assets from bankruptcy proceedings.
- Trade creditors, that tend to diversify their risks by supplying more than one business, may carefully appraise their terms (or even their willingness to contract) when dealing with potentially vulnerable businesses or seek out trade credit insurance.[22]
- In theory, employees could take account of the insolvency risk of an employer when deciding to take a job and may also reduce their risks by avoiding large accumulated entitlements (eg untaken leave). To the extent that employees are aware of the risks, this will tend to bid up wage rates in such businesses. However, in practice, most employees do not consider insolvency risks — or lack information and monitoring opportunities — and are unable to determine high from low risks.

How equitable is the current order of priority in Australia? Recalling the different elements of equity discussed in section 5.3, the current system provides equal treatment of stakeholders who belong to the same group, but it does not take into account creditors' relative abilities to pay or the degree to which they could take measures to reduce their risks. This affects, for example, employees and those seeking damages for product liability or environmental problems.

Although employees are ranked relatively highly (near the top of unsecured creditors), their position is subservient relative to most secured creditors.[23] Because

[22] Trade credit insurance exists to cover bad debts arising from the supply of goods and services and to offer protection against losses incurred following insolvency. Australian businesses have access to numerous underwriters of Trade Credit Insurance both for domestic commercial risks and the commercial and political risk associated with the export trade. Domestic risks covered under a credit insurance policy are insolvency of the insured's buyer and protracted default by the buyer. Such insurance is not expensive (in the US at least). Premiums usually cost a fraction of 1 per cent of sales based on type of business, loss experience and annual sales. (www.exportfinancenetwork.com).

[23] The exception being secured creditors with a floating charge.

there are rarely sufficient funds available following liquidation, employees tend to receive only part of their entitlements (table 5.2) — although no data for Australia are available. This can be very costly as employees often have substantial financial stakes tied up in insolvent businesses through entitlements, such as annual leave and long service. In the UK, for example, payments from the Redundancy Payments Service in 1998-99 were £147 million of which only £21.2 million was funded from recoveries from business assets (DTI 2000b). This suggests that 14.4 per cent of employee entitlements would have been recovered using the usual insolvency code.

Table 5.2 **Pay-off rates for employee claims in the event of employer insolvency[a]**

	Super privileged claims	*Ordinary privileged claims*	*Non-preferential claims*	*Total employee claims*
	%	%	%	%
France	81	18	6	39
Austria	na	17	1	..
Canada	na	..	..	4–11[b]
US	na	..	..	1.4[c]
UK[d]	na	..	..	14.4
Belgium[d]	na	..	..	~10
Sweden[d]	na	..	..	~15–20
Spain[d]	..	..	..	~1

a Various years. **b** Estimated on the basis of the figures indicated by the International Labour Organisation (ILO). **c** Prior to the 1978 Bankruptcy Reform Act which ranked employee claims ahead of the tax authorities. Pay-off rates should have increased since. **d** A rough measure of the pay-off rate can be imputed from the recovery rate from business assets of monies advanced to employees from wage guarantee funds.

na: not applicable, .. not available.

Sources: Data for France, Austria, Canada and the US are from the ILO (1991, pp. 36–37). Data for Belgium, Sweden and Spain are from Bronstein (1987, p. 728). Data for the UK are from DTI (2000b).

Additionally, there is some concern that where the usual priority can be renegotiated, such as under voluntary arrangements and deeds of company arrangement procedures, employees' interests may also not be well served. This is because they can be unfamiliar with their rights and may find it difficult to act collectively (Shaw 1999).

An alternative allocative system?

Alternatives to the current order of priority have been put forward mainly on social grounds, although there may be some efficiency spin-offs.

The most concern is about the ranking of employees. This group actually enjoys a rather privileged position in the order of priority, due to a historical view that they are particularly vulnerable when insolvency occurs.[24] However, there is a current view that employees' protection has been sufficiently eroded to make a case for elevating their priority even further — that is, above secured creditors. Some countries have already introduced such a system, although only part of the employee entitlement is generally protected. For example, Greece provides priority of severance pay and unpaid salary over secured or preferred claims.

In Australia, the ACTU supports a shift in the priority of employees above secured creditors (ACTU 1999). The Australian Institute of Company Directors also believes employees' claims should be elevated:

> The priorities could possibly be altered further to place these accrued benefits [of employees] before those of secured creditors, and thus near the top of the queue when a company is placed in voluntary receivership or liquidation. A maximum payment should be set for claims, with courts given discretion to lift this in particular circumstances (Warburton and Dunlop 2000).

Such a system would have some advantages in that it would provide strong incentives for employers to make adequate provisions for the future entitlements of employees, so that they could still earmark other assets as collateral for secured credit. It would also mean that, to the extent insolvency risks vary, these risks would be internalised by the enterprises concerned. It may also reduce strategic behaviour prior to the initiation of formal insolvency proceedings by short-term creditors trying to convert unsecured loans to secured ones (because secured loans no longer hold top priority).

But there are also a number of problems associated with changing the order in favour of employees. First, it reduces (but does not eliminate) the pay-off to secured creditors, with consequences for the cost and availability of credit. Shaw (1999), for example, argues that:

> …caution should be exercised before considering this type of approach. The application of secured creditor arrangements is fundamental to commercial lending arrangements (p. 4).

On the other hand, some question the magnitude of any credit problems associated with 'super-priority' for employees. For example, the Australian Institute of Company Directors does not see capital raising as severely affected by reprioritising employee claims:

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[24] The priority was first introduced into insolvency legislation for social welfare reasons to ease the financial hardship for a relatively poor and vulnerable section of the community (Cork Report 1982).

> While this proposal [‘super’ preference for employee entitlements] may have some adverse implications with regard to capital raising, companies and their financiers would adjust to the proposal over time; it would also introduce greater discipline into bank lending and credit practices (Warburton and Dunlop 2000).

There is also a view that borrowing and lending entities would find other ways of ensuring the lender’s funds are not put at risk by the operation of the super-priority, so lessening any credit impacts. However, if such schemes were possible, this would obviously limit the effectiveness of changing the order of priority.

Second, if employers respond to reprioritisation by earmarking assets for employee entitlements, it will affect the availability of working capital in the business. In this sense, reprioritisation is somewhat similar to proposals for trust funds to be established for employee entitlements (see chapter 6).

Third, the creation of special privileges for employees could also be regarded as inequitable in that it would effectively deprive other unsecured creditors of their claim to available funds (such as people seeking damages).

Finally, and most importantly, even when employees get priority, they still may lose a significant share of their claims. For example, despite super-priority for employees, Bronstein (1987) found that in France only 39 per cent of employee's claims were met in bankruptcy cases (table 5.2). This suggests that, if more complete insurance was required, super-priority would need to be supplemented by another mechanism for guaranteeing employee's claims.

5.6 Summary

Insolvency systems have a multiplicity of purposes, from:

- providing strong incentives for appropriate attitudes to risk by entrepreneurs and managers;
- ensuring that debt contracts underpinned by assets are honoured, so as to preserve an important source of credit;
- ensuring that vulnerable groups do not suffer significantly as a result of business failure;
- assisting the orderly closure of businesses; and
- protection of debtors from working the rest of their lives to repay debts as a result of business failure.

There are many different options for designing such systems, each giving different emphasis to different objectives and using different mechanisms. Interest in insolvency regimes around the world has been high in recent years, partly arising from concern about the general financial vulnerability that became apparent during the Asian financial crisis. But interest also reflects shifts in attitude about the stigma of bankruptcy, recognition of the important roles of entrepreneurs in creating wealth and concerns about vulnerable creditors. These concerns have been central in recent UK reviews of company rescue mechanisms and personal bankruptcy.

This chapter does not make recommendations about the direction in which Australian insolvency policy should go. It does, however, conclude that insolvency policy has general incentive effects extending beyond insolvent businesses. A key to good insolvency policy is to take into account the multiple objectives of the policy and to recognise that subtle incentive effects can have widespread influences in the broader economy.

An insolvency regime cannot fully protect the interests of all parties. Insolvency only occurs when some groups must be losers, and its prime intent is to create incentives for prudence among business owners and for a willingness for creditors to provide funds. If nothing else, that suggests caution in switching its objectives to other stakeholders, including employees. Of course, even if switching priorities is deemed impractical or undesirable, a number of alternative regulatory options may be workable — an issue to which we turn in the next chapter.

6 Protecting employee entitlements in the event of insolvency

Because of the difficulties associated with changing the order of priority when allocating liquidated assets (see chapter 5), other ways have been put forward for dealing with the claims of subordinate stakeholders. This has particularly focused on one class of unsecured creditor — employees.

A number of high profile cases involving lost employee entitlements in the event of business insolvency have arisen in recent years (box 6.1).

Box 6.1 **Recent cases involving lost employee entitlements**

- **National Textiles, Rutherford (2000)** — 340 employees owed approximately $11.0 million in accrued entitlements on closure.
- **Oakdale Colliery, Camden (1999)** — 125 employees lost $6.3 million in accrued entitlements.
- **CSA Copper Mine, Cobar (1998)** — 270 employees owed approximately $9.0 million in accrued entitlements on closure (eventually recouped around 85 per cent).
- **Gilberton Abattoir, Grafton (1997)** — 250 employees lost around $3 million in accrued entitlements.

Sources: ACTU (1999, 2000).

Employee entitlement protection mechanisms accept the current order of priority in legal terms, but recognise that employees are rarely going to be able to access the proceeds of any liquidated assets in the event of insolvency. They represent an alternative policy option that places employees in a more secure position, without weakening the position of secured creditors.

Following a brief discussion of the type and magnitude of employee entitlements at stake, section 6.2 outlines the current policy approach in Australia to protecting the entitlements of employees. The remaining sections analyse various employee protection schemes (section 6.3) and discuss how their design aspects might influence their outcomes (section 6.4).

6.1 What is at stake?

Number of employees affected

The number of Australian employees that will be affected each year by insolvency is uncertain. In chapter 3 (table 3.4), we estimated that the employment loss associated with enterprise failures was around 19 000 persons in 1999-00. However, this includes working proprietors. The employee component of this number is likely to be in the order of 12 000 –13 000 persons.

There have been three other recent estimates of affected employees.

- The ACTU (1998, p. 14) estimated that about 80 000 employees lost their jobs annually as a result of employer insolvency. This figure is based on 8 000 companies and 5000 unincorporated businesses failing each year — a significantly higher number than our own data.[1] The ACTU then assumed that employees would lose some entitlements in around half of the insolvent firms, leading to 40 000 affected employees annually.
- Benfield Greig (1999), a worldwide company specialising in reinsurance broker services and risk advice, was commissioned by the NSW Department of Industrial Relations to examine wage guarantee schemes. As part of this exercise, Benfield Greig assumed that around 2 950 businesses (incorporated only) each year might become insolvent without paying their employee entitlements. Then, by assuming 8.75 employees per business, this results in a total of approximately 26 000 affected employees. Benfield Greig correctly focuses on companies and not unincorporated businesses to calculate the number of affected employees. However, the estimate of 2 950 companies overstates the number of annual company closures due to insolvency in any one year, as it includes administrations and receiverships (which may, or may not, result in liquidations at a later stage).
- In researching its new Employee Entitlements Support Scheme (see below), the Commonwealth Government (Reith 2000a) estimated that, based on long-term trends, up to 19 000 employees annually could be affected by lost entitlements.

[1] The ACTU number for company 'failures' appears to measure *all* terminations and insolvencies, including, for example, voluntary wind-ups of solvent businesses and voluntary administrations (which do not involve closure). The ACTU figure also appears to overstate the number of failures by unincorporated businesses, using instead the number of business-related bankruptcies involving individuals. Moreover, an insignificant number of failed unincorporated businesses are likely to have any employees at the point of bankruptcy (see chapter 3).

Range of employee entitlements

The list of entitlements that may be due to employees of insolvent businesses[2] include those accrued during service as well as any redundancy payments, that is:

- annual leave;
- long service leave;
- unpaid wages;
- pay in lieu of notice; and
- redundancy pay.

Even though all of the above are legal employee entitlements in the event of insolvency, the coverage of entitlements in practice could vary according to different schemes. But any scheme requiring community acceptance would probably need as a minimum to include annual leave, long service leave and unpaid wages. A recently introduced scheme in Australia (see section 6.2) extended employee protection coverage to all of the above five entitlements.

Another, often ignored, source of debt to the employee is superannuation. Employers are required to pay superannuation contributions into a fund, but there is no statutory requirement for regular payments. Consequently, there are cases of insolvency where no payments have been made for months or even years (Shaw 1999, p. 15). It should be noted, however, that the compulsory element of employer-funded superannuation benefits is a debt to the Australian Tax Office and not the employee.[3]

Value of lost employee entitlements

The ACTU (1998) estimated that employees could lose around $140 million per annum due to business insolvencies. This was based on various assumptions about the number and size of business insolvencies each year, the number of employees affected (20 000) and the average entitlements of workers in a small sample of major insolvencies (around $7 000 per employee).[4]

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[2] The discussion of employee entitlements in this chapter effectively relates only to incorporated businesses, as less than one per cent of unincorporated business insolvencies in Australia occur in employing businesses (Inspector–General in Bankruptcy, ITSA, Canberra, pers. comm., 6 October 2000).

[3] The loss of superannuation entitlements in the event of employer insolvency is not addressed further in this paper.

[4] While the ACTU said that up to 40 000 employees could be affected by business insolvencies, it then went on to assume that only half (ie 20 000) would lose the average entitlement of $7 000.

Making assumptions about the number of closures and size of affected businesses — and using the ACTU estimate of average losses per employee — Benfield Greig (1999) calculated that annually around 26 000 employees lose about $180 million in entitlements from insolvency. While they considered this might overestimate the problem, another scenario developed by Benfield Greig suggested claims could even be as high as $460 million (although this was regarded as 'extreme').

The Commonwealth Government (Reith 1999) suggests that employee losses from insolvencies may be somewhat lower than the amounts suggested by the ACTU and Benfield Greig because:

- many insolvencies occur in relatively small and immature businesses, where entitlements have not accumulated and wage rates are lower; and
- some employees will receive a return from the debtor's assets on insolvency.

The Commonwealth estimates that on a long-term trend basis around 19 000 employees annually might lose about $110 million[5] in entitlements from insolvency — or an average amount lost per employee of around $5 700 (Reith 2000a). The Commonwealth arrived at this estimate on the basis of data collected from ASIC, ITSA and the ABS — and on the basis of analysis provided by a leading insurance broker. The notion of any 'average' loss should be treated with caution — the amount of employee entitlements at stake will clearly vary considerably for different-sized businesses and across different industries.

6.2 Current policy approach in Australia

In theory, existing workplace relations and company law provide a means of enforcing the payment of employee entitlements in case of insolvency.

The Commonwealth has recently taken steps to tighten legislation to deter undesirable corporate behaviour affecting employee entitlements. The Corporations Law Amendment (Employee Entitlements) Act 2000 amended the Corporations

[5] Alternative figures, imputed from compulsory insurance premiums estimated by an insurance company, imply that the total premiums would be around $3.3 billion (reported in Reith 2000a). It was claimed that the 70 per cent of workers in smaller businesses would cost $800 or more per annum in premiums and that the rest, in larger companies, would cost between $20 and $150 per annum. Using Benfield Greig's (1999) estimate of 5.73 million private sector employees, and supposing that the average premium for the larger companies was $40, suggests costs of around $3.3 billion. While this includes the costs associated with providing insurance, this figure is hard to reconcile with the estimated insurance pay-outs of one *thirtieth* of this amount suggested by Reith (2000a). We have, accordingly, ignored this estimate. Note, however, that premium costs of $800 may not be unusual for small businesses in a *voluntary* scheme, because of the existence of adverse selection.

Law in two ways. First, it introduced anti-avoidance measures by prohibiting directors from entering into arrangements (such as corporate restructuring) to prevent the recovery of employee entitlements. Second, it strengthened the prohibition against insolvent trading so that directors would be breaking the law if they entered into an uncommercial transaction which led to the company's insolvency.

Other possibilities exist to amend company legislation to protect employee entitlements.

- *Personal director liability*. Company directors could be held personally liable for employee entitlements where they have not acted with due diligence to make provisions. In British Columbia, Canada, for example, directors are held liable for 'wages' in the event of insolvency if they have failed to make proper provision. In some cases this includes annual leave and superannuation payments[6] (Parliamentary Library 2000).
- *Related entities within a corporate group*. The imposition of employer liabilities on related entities — by allowing assets in group companies to be pooled — would help where one company is insolvent but the other is solvent. In a major review of insolvency law, the Australian Law Reform Commission (ALRC 1988) proposed that courts be given a wide discretion to order related companies to pay all, or part, of amounts claimed by liquidators.

However, amending legislation to protect employee entitlements cannot avert financial distress to employees in some cases, even if it reduces their incidence.

Accordingly, the Commonwealth considered new options with a focus on *guaranteeing* a financial return to affected employees. A ministerial discussion paper issued in August 1999 (Reith 1999) canvassed two main options for protecting employee entitlements — an employee protection fund and a compulsory insurance scheme. In February 2000, the Commonwealth established, on an interim basis, the Employee Entitlements Support Scheme (box 6.2), which is a form of employee protection fund. And in April 2000, following further consideration, the Commonwealth announced that the Employee Entitlements Support Scheme would run for at least three years (Reith 2000a). The Commonwealth proposed that the scheme be jointly funded by it and the State/Territory Governments, though not all governments have agreed to do so.

[6] However, while increased (or even unlimited) liability of business owners might assist in paying off employees, it could be at a high cost to business starts. Many would-be entrepreneurs will not be prepared to put everything at risk.

The employee protection fund and compulsory insurance scheme models — along with other possible options for protecting employee entitlements — are described and analysed in the following sections.

Box 6.2 **The Employee Entitlements Support Scheme**

The Commonwealth Government has established the Employee Entitlements Support Scheme (EESS), in order to provide a national safety net for the basic protection of employees' entitlements in the event of an employer's insolvency.

If workers had their employment terminated on, or after, 1 January 2000 because their employer has become insolvent or bankrupt, the EESS may advance them some money for the entitlements that they are owed. Depending on their employment conditions, former employees may be entitled to receive:

- up to 4 weeks unpaid wages;
- up to 4 weeks annual leave accrued in the last year;
- up to 5 weeks pay in lieu of notice;
- up to 4 weeks redundancy pay; and
- up to 12 weeks long service leave.

This assistance will be paid at ordinary time rates. The maximum rate of payment for each week's entitlements will be the rate corresponding to an annual wage of $40,000. There will be a $20,000 cap (based on combined funding) on the amount any individual may receive from the fund.

The EESS will seek to get back some or all of this money later, if funds become available (for example, from a distribution of the insolvent employer's assets).

Source: DEWRSB (2000).

6.3 Mechanisms for protecting employee entitlements

A variety of employee protection schemes is possible (box 6.3). These schemes involve different combinations of who pays (employers, governments, employees) and on what basis (flat rate, variable rate, risk rated, non-risk rated). The key features, advantages and disadvantages of the various approaches to protecting employee entitlements are discussed below.[7]

[7] A discussion of options relating to some *common* issues with employee entitlement protection mechanisms — such as capping payments and exemptions — is left over for section 6.4.

Box 6.3 **Approaches to protecting employee entitlements**

- **Voluntary employee insurance**

Private insurance policies taken out by employees, or voluntary arrangements between employers and employees, to protect employee entitlements in the event of insolvency.

- **Universal insurance (non-risk rating of employers)**

A national fund available to collectively insure employees for any lost entitlements in the event of insolvency. Also referred to as 'wage guarantee funds' or 'basic payment schemes'.

- **Universal insurance (risk-rating of employers)**

A system of compulsory risk-rated insurance whereby employers take out policies to ensure the payment of their employees' collective entitlements in the event of insolvency.

- **Trust fund (non-risk pooling)**

Accrued employees' entitlements held in trust so that other creditors could have no claim against them in case of insolvency.

Voluntary employee insurance

Given that employees bear the risk, it may be thought appropriate to enable them to enter into insurance arrangements if they wish. This is analogous to a range of other voluntary insurance services. These include insurance for life, house and contents, holidays, income protection and a range of other insurance services. Many of these have greater values than employee entitlements.

Some private arrangements have already occurred. For example, in March 2000 a Sydney enterprise and unions negotiated the acquisition of an irrevocable insurance bond to protect employee entitlements (Workers Online 2000). The bond will insure approximately $17 million of accrued entitlements — covering around 400 employees — for the life of the current enterprise agreement. This will satisfy any shortfall in the enterprise's ability to meet any accumulated employee entitlements in case of insolvency.

The prime advantages of voluntary personal insurance are that it can allow individuals to cover their risk according to their preferences and would distinguish high from low risk businesses. In addition, those with low leave entitlements (eg new workers) would pay lower premiums than those with large leave entitlements.

There are, however, a number of potential problems with *voluntary* arrangements as a solution to lost entitlements.

- Employees may feel they have a right to expect their legal entitlements to be paid to them and should not have to insure at their own expense. Interestingly though, it is possible that employees may be nearly as well off whether they self-insure or if the government guarantees their entitlements. This is because of wage adjustment in response to any guarantees. However, this depends on assumptions about the way labour markets work (box 6.4).
- It is possible that many employees will not seek cover because of ignorance about the risks.
- There are millions of employees. The costs associated with monitoring and administration of a large number of policies is likely to be prohibitive, even if only a small proportion seek cover.
- There is likely to be adverse selection problems (similar to the problems of having a voluntary debtor insurance scheme). Insurers may not know as much about an employer's risk of insolvency as an employee — especially in smaller enterprises. This means that premiums will be set for general risk categories that include a mixture of high and low risks. Employees in the low risk category will not generally want to pay the premium, while those who perceive themselves to be in the high-risk category will. If the low risks drop out, premiums rise, sparking others to give up insurance — resulting in a vicious cycle that can lead to only the highest risks (or indeed no one) being insured. Some of these adverse selection problems could be dealt with by having different insurance products with different excesses. High-risk employees will prefer smaller excesses. But this reduces, rather than eliminates, adverse selection.

Compulsory personal arrangements would deal with the adverse selection problems, but would remain administratively expensive.

Universal insurance (non-risk rating of employers)

The idea of *collectively* insuring employees was first raised as a possibility in the Australian context by the Australian Law Commission in its inquiry into insolvency (ALRC 1988). It recommended the creation of a ‘wage-earner protection fund’ to protect employee entitlements on insolvency.

Box 6.4 Wage adjustment and employee entitlement insurance

It may be thought that measures to increase the priority of employee creditors in the insolvency regime or to reduce their risk by insurance would be equivalent to a real wage increase. This is important because it is relevant to the question of who ultimately pays for insurance.

Case 1: Informed employees and competitive labour markets

Prior to any insurance scheme, forward-looking informed employees comparing different job offers would consider business insolvency risk, small as it is, as just one of many factors influencing their job choices. The risk of losses of entitlements is clearly something undesirable. Therefore, to compensate for these risks, employees would expect a wage premium to work for a high insolvency risk business. High-risk employers would have to pay higher wages, and their costs and prices would therefore be higher, reducing their output below that of identical lower risk businesses. Thus, where employees are aware of risk this has the advantage that the output share of high-risk businesses is reduced.

If a particular employee is risk averse, then they could seek to insure against these risks (assuming that a viable insurance market existed). If the insurance market is very efficient, the insurance premium will be close to the wage premium. In this way, employees in riskier firms can replicate roughly the same conditions they would have got had they elected to take a job at a lower wage in a low risk firm.

If the government guaranteed employees' legal entitlements, then, in the short run, this would make risky firms more attractive to workers than less risky firms. This is because they no longer would have to trade off a higher wage rate against a risk of losing entitlements. Over time, riskier firms would lower wage rates to those of other firms and still get enough job applicants. Prices of risky firms' products would fall (and their output rise) and average real wages of all employees would accordingly rise very slightly. The final distributional consequences are three-fold. First, the Government must fund its guarantee — say from taxes on labour income (thus reducing wages slightly across the board). Second, employees in risky firms take a wage cut roughly equal to the insurance premium they would have to pay to secure certainty over their entitlements. And then all employees receive a small real wage increase (achieved through a reduction in consumer prices). Hence, with well informed forward-looking employees and competitive labour markets, the distributional effects of a government guarantee is very close to that when employees buy risk rated insurance, except that it shifts some output to higher risk firms (moral hazard).

Case II: Employees know of the general risks, but not the firm-specific ones

The above analysis relies in part on employees who can observe risk differences between businesses, which is probably unrealistic. This is because the risks concerned are very low and employees may not be aware of differences between firms. If this is the case, prior to any insurance arrangements, wages are the same across low risk and high-risk businesses. Employees might still enter voluntary insurance arrangements to reduce their general risks in relation to employee entitlements but, by definition, their desire to enter such contracts would not depend on the firm that employed them. Wage rates are just a little higher than they would be in the absence of any risk of losing entitlements. But employees who have unknowingly chosen a high-risk firm would not be compensated by a wage differential.

If the government were to guarantee entitlements, then workers would regard this as an effective small across-the-board wage increase. Since labour supply is highly inelastic, actual cash wages would not be significantly reduced by increased labour participation. The government guarantee would thus be an effective way of compensating those employees who unknowingly select a high-risk employer. If the government funds the guarantee from taxes on labour income, then the scheme becomes like a general compulsory insurance policy paid for by all employees and benefiting those who work in high-risk businesses.

Case III: What if business bears the cost?

If businesses were legally required to purchase a risk-rated insurance policy for their workers, this would be passed on as lower wages for workers (ie future wage growth would be less than otherwise). Assuming that employees cannot differentiate high from low risk businesses, wages would fall (slightly) across the board. However, risk rated premiums would vary, as insurers discovered which businesses posed the greatest risks of insolvency over the next year. Higher insurance premiums would be reflected in output prices, and the share of the economy accounted for by inherently risky activities would fall. Interestingly, the introduction of informed agents — in this case, insurers — produces the same outcome as if fully informed employees were personally insured (as in case 1).

Employee protection funds of this kind are quite common overseas, where they are often referred to as ‘wage guarantee funds’ or ‘basic payment schemes’. They consist of a national fund to protect all private sector employees involved with businesses that are forced into liquidation. Affected employees are able to claim lost entitlements against the fund. However, variations occur over the types of entitlements covered, the amounts covered, caps on payments and who is responsible for paying the contributions to the funds.

To the extent that employees are unaware of the relative risks of losses of entitlements when choosing jobs (case II in box 6.4), then a government funded insurance policy is like a compulsory insurance scheme for all employees, albeit with a much more efficient collection method.

The model announced by the Commonwealth on 8 February 2000 — the Employee Entitlements Support Scheme — is intended to be funded entirely by governments (Commonwealth and State) at a cost of around $100 million per annum. This is around 0.055 per cent of total private sector employees' earnings.[8] This would make it among the least costly such schemes around the world (although the cost will increase during downturns in the business cycle).

- Benfield Greig (1999) found that comparable schemes cost between 0.1 and 0.3 per cent of wages, but reported that they have been as high as 1 per cent of wages in Spain during an economic recession.
- The Ministerial Discussion Paper (Reith 1999 p. 18ff) found that the basic contribution rates as a share of employee compensation were 0.43 per cent in Belgium, 0.05 per cent in Finland, 0.15 per cent in Greece and 0.2 per cent in Italy. Variations reflect the different scope of the insurance schemes.
- Contribution rates vary significantly over time. For example, in Austria, the scheme cost 0.1 per cent of wages in 1981, 0.8 per cent in 1983-84, 0.5 per cent in 1985 and 0.2 per cent in 1986 — so that the annual cost has varied over the cycle by a factor of 8 times (ILO 1991, p. 44). Over a few years, the cost of similar schemes have varied by factors of over 2 in Belgium, 1.4 in Denmark, 5.5 in Spain, 2.3 in France and 2 in the UK (ILO 1991, DTI 2000b).

It is intended that 50 per cent of the cost of the Australian scheme will be paid for from state payroll tax revenues. To the extent that state and territory governments agree to participate in the scheme, businesses are in effect also sharing the cost burden (although the smallest businesses are exempted from any involvement).

[8] In 1998-99, gross private sector wage and salary earnings were around $183 billion (based on ABS, *Wage and Salary Earners*, Cat. No. 6248.0).

However, while payroll taxes are *paid* by larger businesses, their true *incidence* is on employees through lower wages (Stiglitz 1988, Nickell and Bell 1996).[9]

A publicly-funded universal coverage scheme has some significant advantages:

- by providing coverage for all employees, it avoids the adverse selection problem of voluntary schemes;
- it avoids new mechanisms for funding; and
- it has simplicity and low administrative costs. For example, in 1998-99, the UK scheme (the Redundancy Payments Service) had running costs of £4.7 million for payments of £147 million — or 3.2 per cent of total pay-outs to employees.[10]

A universal budget-funded coverage scheme also has some limitations. The most important of these is that it is not risk-rated. An advantage of risk rating in insurance is that it signals the areas of the economy where risks are inherently higher and shifts resources out of them. However, the gains from this signalling are likely to be small because the probability of default is low and the degree to which insurers could differentiate relative risks is likely to be highly imperfect anyway. Moreover, there are other ways of addressing excessive risk taking than risk rating (we return to this issue in section 6.4). Even so, it may be useful to develop a database from claims to the Commonwealth budget-funded scheme about the nature of the insolvent businesses. This could form useful information for a possible future transition to a risk-rated employer funded scheme.

Budget funding exposes governments to unknown future liabilities. It would be expected that unpaid liabilities would increase significantly during downturns in the business cycle — when government budgets are already under severe pressure. Inter-temporal risk pooling — in which reserves are accumulated during the low default part of the cycle and run down during downturns — solves some of these problems. But this would more readily be a feature of an employer-funded scheme than one financed from the government budget.

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9 To this extent, the relatively popular idea that a flat rate tax on employers is superior to taxpayers 'subsidising' failed businesses misses the point. It is likely that the long run implication of both financing methods is that the burden is felt by wages. Moreover, regardless of where the money comes from, any insurance system that is not explicitly risk-rated implies that higher-risk businesses are subsidised.

10 Data are from DTI (2000b). These running costs are largely fixed costs, so that they are projected to fall to 2.3 per cent of pay-outs by 2001-02 when total payments are expected to be significantly higher. Note that administrative costs (of about 6 per cent of pay-outs) reported in previous reports about the scheme included a range of other costs not directly related to the Redundancy Payments Service.

Universal insurance (risk rating of employers)

A requirement for employers to take out insurance to protect employees' entitlements has been proposed on several occasions in recent years:

- Commonwealth Private Member's Bill — Employee Protection (Wage Guarantee) Bill 1998;
- Benfield Greig Report commissioned by the NSW Department of Industrial Relations in 1999; and
- Commonwealth Government option raised in a Ministerial Discussion Paper (Reith 1999).

Employers insure (pay a premium) to protect employee entitlements in case of their insolvency and there being insufficient funds to pay such entitlements. The existing commercial insurance market would be utilised (insurance companies already write policies for trade creditors in case of a customer's insolvency).

While premiums could potentially be either variable risk-rated or a flat percentage rate (both have been proposed), a flat rate policy is essentially identical to a government-funded scheme funded from labour taxes (option 2 above). Accordingly this is not discussed further here. A risk-rated policy would take into account any factor that might increase the risk of insolvency (such as the size of the business, the extent to which assets are earmarked for employee entitlements, leverage, current profits to assets, and existing credit ratings). The premium would change periodically with the changing risk exposure of the business. However, the information underlying risk rating is costly. Accordingly, insurers would trade-off the gains from finer gradations of risk rating against the transaction costs of writing made-to-measure policies and information gathering. It would be expected that a few simply monitored variables would be used as the basis for risk rating.

It is important to note that, at least in theory, a business that established a trust for their employees' entitlements — see option 4 below — should face a zero premium (or be exempted by the government from having to take out insurance). A trust is a device in which all of the risk is borne by the employer, whereas insurance 'pools' risks. The fact that one pools risks while the other does not, suggests that risk-rated insurance should be less costly than trusts.

Like trusts and voluntary employee insurance, risk-rated employer insurance implies that the risky part of the economy would contract somewhat in response to the higher premium rates. The use of price signals in the form of risk-rated premiums might have some impact on reducing the risk of insolvency — through employers putting greater effort into financial planning, risk management and other preventive measures to reduce the at-risk amount of outstanding employee

entitlements. Under a flat rate insurance scheme (or other protection schemes where employers do not contribute at all), high-risk employers are no worse off financially than employers who take steps to reduce the risk of insolvency.

The additional cost of insurance to high-risk businesses could precipitate early insolvency. If the risk rating employed by the insurer was accurate, this may be a desirable outcome since it allows greater recovery for all creditors, including employees.

A potentially major difficulty with a risk-rated insurance scheme is its administrative complexity. To be effective, premiums would somehow have to be commensurate with the likelihood of failure — and that could be difficult for commercial insurers to assess. A significant amount of red tape and administrative hurdles would also involve significant costs. Benfield Greig (1999) noted that variable premiums would require costly underwriting and administration by insurers:

> This additional expense would be incurred prior to the commencement of the scheme (in collating segmented historical data) and in managing the ongoing scheme (in actuarial pricing adjustments and decision-making regarding the appropriate classification for each policyholder).

The Insurance Council of Australia (ICA) also raised doubts about the possibility of a risk-rated employer based insurance product (Reith 2000a). In a letter to the Prime Minister dated 20 March 2000, the Chief Executive of ICA noted that:

- there were many obstacles to a sustainable insurance solution, including a lack of appropriate data;
- there is no comparative overseas model on which the industry could base its deliberations; and
- the ICA had no certainty that a viable insurance solution could be found.

Trust funds

Instead of considering new insurance schemes or government-financed funds, the same outcome — protecting employee entitlements — could potentially be achieved by the secured pooling of entitlements. This obliges employers to hold accrued employee entitlements in a trust fund, or another earmarked secure asset, to safeguard employee entitlements in case of insolvency.

Such a scheme has apparently been used in Venezuela and Japan for certain employee entitlements (ILO 1991, p. 39). The NSW Government recently considered it as an option for guaranteeing wage claims in Australia (Carr 2000).

A trust scheme is like *obliging* employees to be secured creditors. Trusts are also somewhat analogous to giving employee creditors first priority on insolvency, because a likely response of businesses will be to set aside assets quarantined for employee entitlements, so that they can seek secured credit on other assets.

Businesses might hold the assets themselves or deposit them with another body — but the employee would retain title to the assets and could assert title against the business, or the business's creditors, in case of insolvency. Such a scheme has been likened to lawyers holding clients' money in trust accounts, or indeed to the current superannuation system.

This mechanism would require legislation to establish the trusts. New trusts could be established or existing trusts (such as superannuation) could possibly be utilised. They could be either employer-based, industry-based or economy-based. However the administrative costs for employer-based funds could be high and there would be economies from industry or national trust funds. Further efficiencies could be obtained if the initiative could be tacked onto an existing mechanism.

As well as covering accrued entitlements such as annual leave and long service leave, trust funds could potentially have a contingent liability element to cover potential expenses which may only eventuate in the event of insolvency (such as pay in lieu of notice, unpaid wages and redundancy payments). Although there would be difficulties in including such unspecified amounts in advance, some formula could probably be developed.

There are likely to be administrative complexities. Although the concept appears simple — regular payments of employee entitlements into a trust fund — a few challenges might arise.

- One problem would be the provision of a mechanism to ensure payments by employers actually found their way to the trust fund at regular intervals. Random audits and substantial penalties may be an adequate method.
- Another administrative problem relates to the ability of employers being able to accurately provide for future entitlements, some of which may never eventuate. Pay in lieu and redundancy pay are contingent liabilities. If the maximum potential value of these liabilities is set aside, this would represent considerable excess provision across the economy as a whole — with implications for working capital. However, if incomplete provision is made, there may be insufficient funds to acquit employee entitlements for those businesses that actually become insolvent.

- Provisions for annual and long service leave[11], while ostensibly straightforward, involve administrative complications. For example employees' leave payments are based on current wage levels, but employers' contributions may have been made one or two years prior (and even longer in the case of long service leave). This inter-temporal problem applies to other similar mechanisms (such as superannuation) and in part relies on fund earnings to assist the process. However, it could be particularly problematic for small trust funds if employer-based funds were the favoured option.

Potentially, the biggest drawback of mandating employee entitlement trust funds would not be the administrative complexities but their impact on working/operating capital. Shaw (1999, pp. 14, 16) suggests that mandating a trust fund, at least for leave entitlements, should not impose unduly on employers, as such provision reflects current prudent commercial practice anyway. However, it is not clear how many businesses do, in fact, observe such practices. To the extent they do not, mandated trusts would significantly reduce liquidity while the trust fund assets were accumulated, with the effect that small firms in particular were closer to a current assets to liability ratio of unity (table 6.1).

The loss of working capital suggests that some businesses would be unable to pay trade creditors or bank loans. Ironically, a mechanism to protect employee entitlements in case of insolvency might actually be instrumental in triggering such an event (and costing employees their jobs).

As well, bringing forward future liabilities into a trust fund acts like a wage increase. Assuming that average unpaid employee entitlements are around $6 000 per employee, then with a 9.45 per cent interest rate (the small business overdraft rate in April 2000), this implies that the cost to business of bringing forward these liabilities is around $600 per employee per year.[12] This would tend to discourage recruitment, increasing unemployment temporarily and then lowering future wage rates until unemployment reached its old level.

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[11] Accounting for long service leave would generate its own problems. This is because employees are not eligible for any such leave if they do not stay with the business for less than 10 years, but then obtain an entitlement (of typically 3 months) instantly the 10 years have elapsed. Accordingly, at any time up until the 10 year mark, a trust account approach would have to allocate an amount equivalent to $P \times Y / 10 \times E \times w$, where P is the probability that the employee would stay with the business at least up to 10 years, Y is the number of current years service, E is the entitlement in weeks from 10 years of long service leave and w is the weekly wage rate. All of these components could vary considerably by industry.

[12] Of course, if the businesses are able to keep any interest earnings on the trust fund (rather than these being passed on to employees), the cost is less than this — it would be the interest margin (of about 2 per cent) times the average entitlements (or about $120 per employee per year).

Table 6.1 **Approximate short-run effects on liquidity of mandated trusts for employee entitlements[a]**

Size of business (employees)	*Current assets to current liabilities*	*Current assets to current liabilities after employee provisions*	*Impact on current asset to current liability ratio*
1 to 4	1.05	1.02	-0.03
5 to 9	1.04	0.99	-0.05
10 to 19	1.85	1.80	-0.05
20 to 49	1.06	0.99	-0.08
50 to 99	1.05	1.01	-0.03
100 to 199	1.27	1.22	-0.04
200 to 499	1.10	1.08	-0.02
500+	1.41	1.39	-0.03
Total	1.27	1.24	-0.03

a Average employee entitlements outstanding were estimated as around $5700 in 1999-2000 (Reith 1999). At that time, average annual wages were about $32 000. The ratio was therefore 0.178. This was then applied to the wage and salary bill of employees for each firm size grouping. (This method was preferred over applying a fixed dollar value for entitlements because small firms pay lower wage rates and entitlements should therefore be proportionately less.) The imputed value of entitlements was then subtracted from current assets and a new measure of the current ratio calculated. The current ratios shown are the weighted ones for 1994-95, but it is expected that the same general pattern would be found in current data. It should be emphasised that the table makes two critical assumptions (which partly offset each other). First, other than taking account of wage rate differentials among firm sizes, it is assumed that the average tenure is the same for workers in differently-sized firms. Second, it is assumed that none of the businesses presently make provisions for future employee entitlements. Overall, the table is likely to overstate the impacts on liquidity of mandated trusts, though it is probably a reasonable guide to the relative impact on different-sized firms.

Sources: Industry Commission and DIST 1997. Study estimates

It is important to note that such problems would mainly affect existing businesses that had not already made adequate provisions and be of short-term duration. If a trust fund scheme were a preferred policy option, it would probably require a transition period for existing businesses to build up their full trust fund quotas and to allow wage adjustment. Otherwise, the measure would precipitate higher rates of business failure and unemployment in the short run.

An alternative arrangement to trusts is the payment of most wage benefits, including leave entitlements, as part of the fortnightly wage (as is commonly done for tertiary teachers in the US). Employees would be responsible for funding leave when they took it. This approach would have similar impacts to trust funds, but far greater administrative simplicity. However, while simple, it would represent a marked shift in remuneration policy, and may have other undesirable impacts (for example, when long service leave is intended as an incentive to stay with a business).

Comparisons

The characteristics and impacts of the various options are set out in table 6.2. These suggest that the first and last options have significant drawbacks. More specifically, voluntary schemes would be undermined by adverse selection. Trusts, which do not pool risks, would be relatively costly and require phasing in to avoid large transitional impacts on employment.

Table 6.2 **Nature and impacts of different measures for protecting employee entitlements in Australia**

Impact	*Voluntary employee insurance*	*Non risk-rated government funded scheme*	*Mandatory risk-rated employer insurance*	*Trusts*
Overall monetary cost	Cost per employee very high	About $100 million per annum	Unknown but higher than option 2	Unknown but higher than options 2 and 3
Administrative costs	High	Low	High	High
Transitional requirements	None	None	None	Large
Adjustment costs	None	None	Moderate	High
Who pays?	Employees	Payroll tax and general revenue	Business	Business
Long run incidence	Employees	Probably employees (but depends on how revenue is raised)	Employees and consumers	Employees
Intermediaries	Insurers	Government	Insurers	Trusts
Who typically makes choice of coverage?	Employee	Government	Government	Government
Adverse selection	High	None	None	None
Deters risky businesses	Uncertain	No	Yes	Yes
Coverage of employees	Very partial	Full	Full	Full

The choice between the universal insurance mechanisms — a government-funded scheme or a risk-rated employer scheme — depends on the trade-offs between administrative simplicity, government budget constraints and deterring higher risk business behaviour.

A simple government-funded scheme might be favoured on the basis that:

- the overall default risk is very low; and
- the transaction costs of writing a large number of individual insurance contracts are high relative to the actuarially fair insurance premium.

Against this, the future liabilities associated with a budget-funded scheme are unknown, but are likely to be significant during downturns.

6.4 Design aspects of employee protection schemes

There are a number of ways of configuring employee protection schemes (box 6.5). The options chosen have a considerable influence on the outcomes of different employee protection models.

Box 6.5 **Issues in employee entitlements protection schemes**

- **Moral hazard** — Will employee protection schemes result in imprudent behaviour by employers or employees?
- **Capping** — Should pay-outs to affected employees be capped (by dollars, period of entitlements or per cent of entitlements)?
- **Excesses** — Should pay-outs to affected employees carry excesses (by dollars or fixed period of entitlements)?
- **Small business exemptions** — Should small businesses be exempted from making contributions to employer-financed schemes?

Moral hazard

A possible concern with schemes for protecting employee entitlements relates to moral hazard by insured employers and employees. Notably, this problem is general to all insurance proposals.

Moral hazard occurs when insurance reduces prudent behaviour. It may take a number of forms.

- Employers may care about their workers. In this case, the possibility of losses of employee entitlements associated with insolvency provides an additional reason for prudence, rather than just the risk of the loss to equity. By removing the adverse consequences of insolvency for their workers, insurance may encourage entrepreneurs to allocate funds set aside for employee entitlements to more risky ventures. In part, such behaviour can be deterred through corporations' law.
- Uninsured employees who perceive their currently solvent employer to be on the pathway to insolvency would rationally try to gain access to as many of their entitlements as possible (eg by taking a holiday). These are paid out of the returns of the business. If they are insured, employees' motivation to care about these risks is reduced, and the burden will tend to be shifted away from equity holders to insurers.

The likely severity of such moral hazard is assessed below in the section on capping payments.

Capping payments

Employee entitlement insurance schemes often cap the amount payable to an individual employee. For example, in Belgium the cap is set at roughly $45 000 per employee. In the UK, the government does not stipulate a maximum total payment per employee, but sets a cap on the weekly wage rate at which leave entitlements are paid out. The Australian scheme — the Employee Entitlements Support Scheme (EESS) — caps entitlements as follows:

- up to 29 weeks of pay;
- a maximum payment per week corresponding to an annual wage of $40 000; and
- a maximum payment to any individual employee of $20 000.

Capping along these lines may be regarded as acceptable if employee entitlement protection schemes are viewed as being part of a wider government 'safety net' to protect the less fortunate in society. In this context, the employee insurance system is not meant to provide 100 per cent coverage for all claims. Rather it is designed to provide the majority of workers caught up in insolvencies with the expectation of receiving a reasonable proportion of their accrued entitlements.

An apparent justification for capping payments is to reduce the overall cost of protection schemes. For example, Benfield Greig (1999) estimates a possible cost saving of up to 30 per cent if recoveries under a compulsory insurance scheme were capped at 10 weeks entitlements. And, in the case of a budget-funded model, it can be argued that it is a legitimate and responsible policy option for a government to

impose caps as a means of limiting its budget exposure (particularly in the absence of comprehensive data on the extent of the problem). But cost reduction is not, by itself, a good economic or social rationale for capping. Indeed, Benfield Greig argued that no cap should be imposed as 'we do not believe this would provide appropriate protection for individual employees'.[13]

Another possible rationale for capping is that it may reduce moral hazard on the part of employees. Insured employees in businesses that appear to be at risk of future insolvency have low motivation to react if the likely pay-out of their entitlements is uncapped. However, if caps are imposed, these same employees would have incentives to use up their entitlements above the capped amount, thus (potentially) transferring more of the costs of business failure onto business owners.

However, it is uncertain to what extent employees have significant discretion in using entitlements. Other than leave, most employee entitlements — unpaid wages, pay in lieu of notice and redundancy — are largely outside the control of the employee.[14] It is also unclear to what degree they are aware of the risks of business insolvency. They are not privy to the balance sheet of the business. Moreover, false rumours of incipient insolvency may, like a bank run, lead to sudden destabilising requests for leave or resignations. These could precipitate problems when there were no genuine structural problems in the business.

In any case, the goal of limiting moral hazard by employees would usually entail coinsurance, whereby the employee would bear a share of the risk. With caps, employees under the cap have zero coinsurance, while those well over it have a high level of coinsurance. Even with coinsurance the assessment of Benfield Greig (1999) was that:

> We do not see that the imposition of partial recoveries on employees would achieve any material change in the insurance risk, as the management of the risk lies principally with the employer rather than the insured employee who is, in this context, an innocent third party.

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[13] It should be noted, firstly, that the capping of *individual* employee payments does not cap the *aggregate* budget outlay, the size of which is determined principally by the number of insolvent firms. Secondly, as an instrument for constraining outlays, capping of individual entitlements places all the burden on a few individuals. Thirdly, even when a government-funded scheme comes well under budget in a particular year (as appears likely in the EESS's first year of operation in Australia), there may still be some individuals who do not receive their full entitlement.

[14] Employees could reduce their risks by leaving the business, but the extent to which this is a sensible strategy depends on their assessment of the probability of insolvency versus the likely search and other costs associated with finding another job. It should also be noted that resignation would not in itself guarantee employees receiving all of their entitlements (due to insufficient funds being available).

Notwithstanding these arguments, there may still be particular situations where the capping of specific employee entitlements could conceivably lower moral hazard. Take the case of redundancy payments for example. The owners of a struggling business looking for a way to overcome their financial plight might be able to convince their workers to accept lower wages in return for increased redundancy payments in the (likely) event of insolvency. Both the owners and the employees know that in an uncapped employee protection scheme, the costs will be picked up by the insurer. However, if redundancy payments were capped, the possibilities for such agreements would be reduced. This example serves to demonstrate the significance attached to designing capping systems, both in terms of coverage and maximum amounts.[15]

There are some other issues relevant to the desirable extent and nature of capping.

First, caps may provide less insurance than employees would wish to buy in a properly functioning insurance market. Insurance is most valued by people when it insulates them against rare adverse events that would have a significant impact. An insurance policy costing $100 for a $200 000 house that only paid $100 000 if it burns down will probably not be preferred to a $200 policy that covers the full $200 000 (Varian 1984, pp. 161–2). In effect, caps force employees to take out only partial insurance (given the likely ineffectiveness of private 'top-up' markets). If the primary intention of the government-funded insurance policy is to try to maximise the welfare gains for employees, taking into account their likely preferences for avoiding risk, no or little cap would be the most appropriate outcome.

Second, capping adds an additional nuance to the distributional consequences of a flat rate insurance system. The ultimate effect of a government-funded scheme is to tax all employees at a small, roughly identical, rate.[16] There are gainers and losers under a flat rate system compared with an 'ideal' employee-purchased risk rated insurance scheme. Under that ideal, employees in the *same* business (ie sharing the same probability of default) will pay an insurance premium that is proportional to their own at-risk entitlements. There are three cases under the flat rate system that can be compared with this ideal system (figure 6.1).

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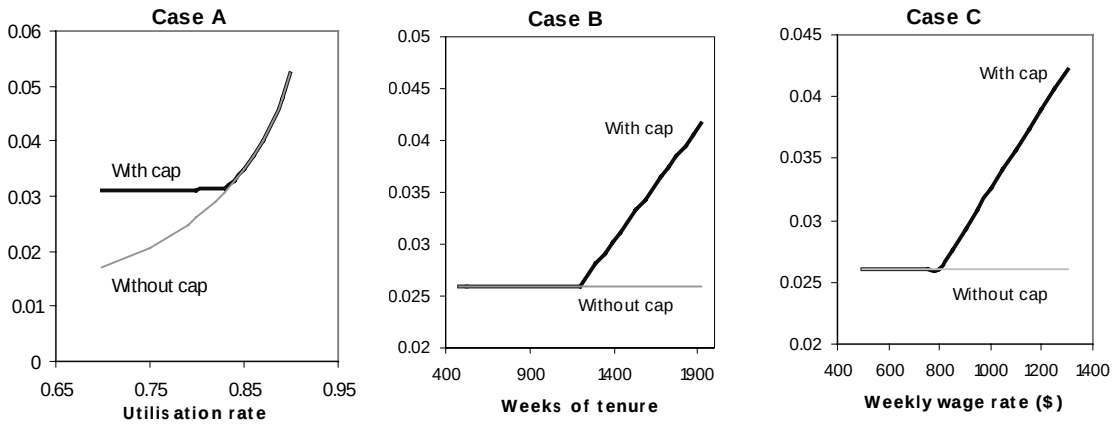
[15] Capping might conceivably lower moral hazard on the part of employers more generally. In the absence of any caps on insurance payments, employers may be more tempted to allocate funds away from employee entitlements to risky ventures. However, if insurance payments are capped, caring employers may be less inclined to risk the funds — knowing that employees are more highly exposed in the event of employer insolvency.

[16] The scheme has to be funded from tax revenue. Therefore, it acts like a tax increase relative to the counterfactual of no scheme. The Commonwealth has explicitly signalled payroll tax as the funding source for any state contribution to the scheme. The ultimate burden of payroll taxes are on wage rates. The residual funds come from general revenue, the predominant source of which are labour income taxes.

Figure 6.1 **Implicit insurance premium rates under different scenarios**

Capped and uncapped insurance



a The data shown above are illustrative and are derived from a simple model of employee entitlements. Each employee only gets leave entitlements (for example, there are no redundancy benefits). All employees are assumed to have the same characteristics except for either their tenure, wage rate or their utilisation of leave entitlements. The implicit insurance premium paid by any employee (P) is:

$P = (I + L) \times w \times t$ where I is the labour input or labour tenure (in weeks), L is leave taken, w is the wage rate (set at $800 in cases A and B) and t is the implicit tax rate on wages to fund the insurance fund (set at 0.0005 in the above graph). L can be further broken down into:

$L = u \times r \times I$ where u is the utilisation rate of leave entitlements (set at 0.8 in case B and varying from 0.99 to 0.7 in case A) and r is the rate at which leave entitlements accrue per week of full time tenure (here set at 5/48). Thus P can be re-expressed as:

$$P = I(1 + u.r) \times w \times t$$

The value of the unpaid at-risk entitlement (E), which amounts to the insured value, is:

$E = r \times I(1-u)w$ so that the premium rate (R) is:

$R = \dfrac{(1+u.r)t}{r(1-u)}$ in the absence of capping. With capping the rate is: if $r.I.(1-u)w \leq 20000$, $R = \dfrac{(1+u.r)t}{r(1-u)}$ else $R = \dfrac{I.(1+u.r)w.t}{20000}$

It is apparent that under case A (where I is fixed but u changes), R will fall as u decreases in the absence of capping. With capping it still falls, but at a lesser rate when the cap is exceeded. Under case B (where u is fixed but I changes), the premium rate is invariant up to the cap amount and then rises with increased tenure. It is also clear (case C) that the cap is more readily exceeded the higher the wage rate. So, capping also tends to discriminate against higher wage rate employees.

- *Case A*: A group of employees has the same period of employment with a business and the same overall entitlements. However, some have used up most of their entitlements while others have accumulated them for later use. Under a flat rate scheme, both types of employee make the same contribution to the scheme (through past tax payments), though their amounts of *at-risk* entitlements are very different. A worker who takes leave regularly — thus having a smaller stock of outstanding at-risk entitlements — pays a very high

premium per dollar of insured entitlements. In contrast, an employee with the same tenure who accumulates a large amount of entitlements pays a low premium to insure these at-risk amounts. However, once the at-risk entitlements exceed the cap, the premium no longer drops. So, for people of the same tenure, capping *reduces* the disparities in premium rates of the flat rate system compared to the ideal insurance system.

- *Case B*: Suppose that a group of employees have had different lengths of employment service with a business, but have all chosen to leave at risk the same *proportion* of their overall entitlements. Thus someone with 10 years tenure might have at-risk entitlements of $8 000, while an otherwise identical employee with twice the number of years of tenure has twice the value of at-risk entitlements. Under a flat rate system, the premium per dollar of insured entitlement will be the same as under a risk-rated scheme. Capping, however, raises the premium rates by people who have entitlements above $20 000 because they pay a premium for the full at-risk entitlements, but only get partial insurance. So, in this instance, capping *raises* the disparities in premium rates compared to an ideal insurance system.
- *Case C*: Suppose that a group of employees with a business are alike in all respects (length of employment service and utilisation of entitlements), except that their wage rates vary. In the absence of caps, the premium per dollar of insured entitlements is the same as under a risk rated system. However, with caps, the premium rate rises with higher wages once the cap limit is exceeded. This is because employees have effectively paid the required amount to insure for the full value of their entitlements, but can only access the capped amount. So again, in this case, capping *raises* the disparities in premium rates compared to an ideal insurance system.

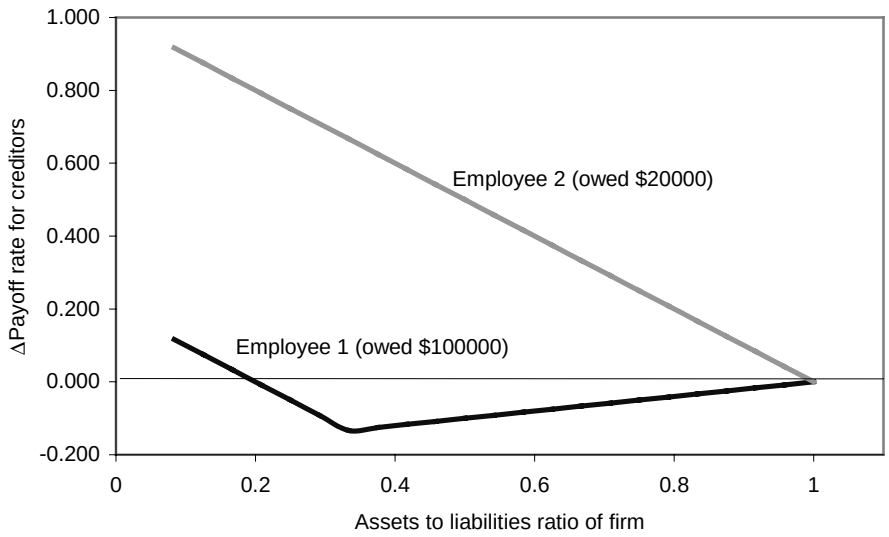
Which of the disparities matters most will depend on the extent to which the variation of at-risk entitlements among employees can be explained by differences in length of employment, wage rates and the rate of usage of entitlements.

Third, a cap may also affect the distribution of claims among competing creditors that would have proceeded under insolvency law. Take for example a business in which the only creditors are two employees with $120 000 of claims — employee 1 is owed $100 000 and employee 2 is owed $20 000. However, the business assets can only realise $60 000. Under normal insolvency law, both employees would get 50 cents in the dollar, based on the principle of equal treatment of creditors. However, supposing there is a $20 000 cap, then under the insurance arrangements, both employees initially get $20 000 each. The government, in turn, claims this money back from the administrator, leaving $20 000 to be disbursed. Since employee 2 has had all of his or her claims met, only employee 1 can claim these

assets. Accordingly, combining the effects of insurance and disbursement of the residual assets, one employee (employee 1) gets 40 cents in the dollar, while another gets 100 cents in the dollar. Capping has thus reduced the pay-off ratio by 10 cents in the dollar for one creditor and increased it by 50 cents in the dollar for another.

The difference in pay-offs between an insurance system (with capping) and the normal insolvency procedures depends on the asset to liability ratio of the business (figure 6.2). In this particular example, employee 1 is always worse off under the insurance scheme compared to normal insolvency procedures, except when the asset to liability ratio of the business is very low or unity. And employee 1 always gets a poorer pay-off than employee 2, except when the asset to liability ratio is unity.[17]

Figure 6.2 **Distribution of claims under insolvency law versus an insurance scheme with caps**



In summary, capping is a common feature of employee entitlement insurance schemes around the world. It has complex distributional and incentive effects. In the case of the Australian employee entitlements protection scheme — the EESS — it may be possible to finesse thresholds on its capping arrangements as data become available from claims.

[17] Canadian data on assets to liability ratios at the time of bankruptcy show firms with under 10 employees having a ratio of 0.33, and firms with 10 employees or more a ratio of 0.51 (Baldwin et al. 1997).

Excesses

Another option is the imposition of an excess for each employee. Redundant employees would only be able to claim when their loss exceeded some minimum threshold. This could be in the form of a dollar loss (for example, $500) or a period of foregone entitlements (for example, one or two weeks of annual leave). The general purpose of insurance companies (or an employee protection fund) imposing an excess would be to cut costs. They would do this by eliminating many claims for small dollar amounts that are costly to administer (and redundant employees might reasonably be expected to absorb themselves). As with capping, the careful selection of an appropriate excess limit could significantly reduce the overall cost of a protection scheme. For example, Benfield Greig (1999) estimates that, if employees were required to incur the first two weeks of lost entitlements, the cost of a compulsory insurance scheme would be reduced by around 15 per cent.

Apart from the obvious cost savings — to government or employer budgets — excesses may realise gains from reducing moral hazard by employees or employers, but these are likely to be small for any feasible excess. The strongest basis for excesses is, therefore, savings in transaction costs.

Small business exemptions

The Commonwealth proposals for compulsory business-funded insurance (which have not been adopted) would have exempted small businesses from any premium contributions, on the basis they are the primary source of employment growth. A rationale for selective treatment based on small business dynamism has a number of limitations.[18] It also ignores the fact that the risks of insolvency are higher amongst this group of businesses — although it is unknown what proportion of unpaid employee entitlements stem from small versus large businesses.[19]

Arguments for a small business exemption based on administrative efficiency have greater force. There are hundreds of thousands of small businesses so that the collection costs for the small premium amounts involved may well dwarf the actual revenue gathered.

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[18] Bickerdyke and Lattimore (1997) and Revesz and Lattimore (1997).

[19] In the UK there is some indirect evidence that suggests that unpaid entitlements may be a greater problem for smaller businesses. Gladstone and Lee (1995) report that 93 per cent of jobs were saved in large businesses that entered the insolvency system (with presumably positive impacts on the recovery of entitlements), whereas the comparable figure was only 30 per cent for businesses employing less than 100 employees.

A further possible argument for avoiding higher effective labour taxes on small businesses is that the usual labour market mechanism for minimising the impact of such taxes on employment is weakened. For employees with downwardly flexible wages, an effective labour tax increase (such as through payroll tax) would prompt downward wage adjustment (Nickell and Bell 1996). However, average skill and wage levels are generally lower in small businesses:

- if many employees in small business receive minimum wages, then the downward wage adjustment cannot occur, prompting businesses to cut back on employment; or
- even if wages are downwardly flexible, they may be reduced to, or below, the level of alternative benefits under social security, reducing the incentive to participate in the labour market (Lattimore 1998).[20]

On the other hand, many small businesses pay their employees wages well above the minimum wage. As such, an exemption to small business is a simple rule of thumb that would inevitably apply inappropriately to some.

6.5 Summary

Governments around the world use mechanisms to protect employee entitlements in the event of business insolvency. This reflects the fact that employees are seen as a particularly vulnerable group that often loses a significant share of its claims if a business becomes insolvent.

These mechanisms generally consist of an employee protection fund — a form of non-risk employer insurance — made up by contributions from governments, employers or employees. They have some advantages — they are easy to implement, administratively simple, involve no adjustment costs and have relatively low ongoing costs (although liabilities may be significantly higher during economic downturns). Their major weaknesses tend to be the distributional and incentive effects of the capping practices that are commonly associated with such mechanisms — though these may be amended with time as data on claims become available.

Other forms of employee protection mechanisms are potentially available and three of these were considered in this chapter. While possessing some advantages —

[20] The assumption here is also that workers in small and large businesses are relatively immobile. If they are mobile, it does not matter that one sector is not taxed. Labour would move until wage rates were equalised, and wage rates would fall for both small and large businesses, though only larger businesses bear the tax.

particularly in addressing the relative risks of different businesses — they involve some transaction costs and implementation problems.

7 Other insolvency issues

This chapter raises some other issues relating to insolvency policy, including protecting the entitlements of unsecured creditors (such as people seeking damages from the business). It also outlines some of the difficulties in designing an insolvency regime that balances the value of entrepreneurship against excessive risk taking.

7.1 Protecting other classes of unsecured creditors

Unsecured creditors, other than employees, are likely to receive small shares of outstanding claims following insolvency. The question arises as to whether anything could, and should, be done by governments to protect such unsecured creditors. As noted previously, most unsecured creditors have some ability to monitor and avoid insolvency risk, or to reduce it through diversification and insurance. Accordingly, the grounds for dealing with their risks via government action may not seem compelling. However, three involuntary groups of unsecured creditors are particularly vulnerable:

- people seeking damages for product liability (for example, food poisoning and product–related cancer);
- those affected by adverse impacts on the environment (such as problems with dam tailings and other discharges);[1] and
- to some extent, sub–contractors, especially those whose conditions mimic those of employees.

It is clear that in some cases of damages, the assets of the business concerned will be unable to cover even a fraction of the cost. This raises questions about the potential value of liability insurance and the possible extension of liability to deep–pocket lenders involved in business management — which may provide compensation mechanisms. However, as Boyer and Laffont (1995) note, like all other attempts to cover risk in circumstances of incomplete and asymmetric

[1] In some international cases — such as the 1991 *Lamford* case in Canada involving clean–up costs associated with sawmill toxic wastes — priority in the distribution of assets favoured environmental remediation (Boyer and Laffont 1995).

information, such insurance mechanisms have perverse incentive effects. In some cases, these might provide compensation funds, but also increase the likelihood of accidents. This area warrants further investigation.

7.2 Measures to reduce excessive risk taking

As noted in chapter 6, risk–rating schemes for protecting employee entitlements may not be administratively feasible, and, in any case, may still not be fully effective in deterring excessively risky behaviour. Accordingly, governments may consider implementing other legislative measures to penalise owners/directors who devise strategies to avoid paying creditors or who engage in excessively risky investments.[2] The Commonwealth has recently made legal changes to deal with the former (see section 6.2). Examples of penalty provisions relating to the latter might include the following.

- HECS–type repayments by owners/directors for a proportion of the outstanding debts owed to creditors. Currently, future income is not regarded as an asset for repaying outstanding debt — although in the case of bankrupts there may be a requirement to make compulsory contributions to the Trustee during the term of the bankruptcy.[3]
- Longer periods before owners/directors are allowed to be involved in new business ventures.

7.3 Allowing bankrupts back into business

What obstacles should be placed in the way of bankrupt business owners who wish to engage in future entrepreneurial activity? What, if any, conditions should apply when they start a new business?

Currently in Australia, bankrupts are not barred from starting up a new business during the period of their bankruptcy (usually three years). However, in practice, it can be very difficult for undischarged bankrupts to maintain a business, due to restrictions applying to their business operations. These include their duties of disclosure to suppliers regarding their bankruptcy, and the amount of credit they may obtain.

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[2] Although this raises other issues — beyond the scope of this paper — regarding the limited liability of company directors.

[3] This depends on income thresholds and the number of dependants.

While the 'standard' period of bankruptcy is three years, the provision for early discharge after 6 months is commonly used. Of the 60 per cent or so of bankrupts eligible to apply for early discharge, around half of this number actually do so.[4] The Commonwealth has foreshadowed legislation which will eliminate the early discharge provisions (Vanstone 2000).

The desirability or otherwise of early discharge has to balance two considerations:

- On the one hand, early discharge may reduce business incentives for business prudence and allow incompetent entrepreneurs to set up businesses with a high likelihood of future failure — with costs to others.
- On the other hand, business failure also creates entrepreneurial human capital by allowing people to learn from their business experiences. This capital is only useful if these entrepreneurs can apply it in subsequent ventures.

The British Government has recently attempted to balance these considerations, recommending the revision of the rules regarding the time required to discharge bankrupts (DTI 2000a). Under proposed new rules, 'honest' bankrupts (those who try but fail) will be allowed back into business after six months (rather than the current three years). They may also be given financial counselling. 'Dishonest' bankrupts (those who deliberately defraud) would be kept out for 15 years. The objectives of the British Government's proposal are to boost entrepreneurship and responsible risk–taking. The 'honest' bankrupts described in the British proposal consist of the vast majority of business bankrupts (around 90 per cent) who fail despite their best efforts and through reasons beyond their control — such as losing markets or the insolvency of a principal customer.

The British approach, does not, however, distinguish between honest entrepreneurs who have gone bankrupt due to bad luck, versus mismanagement and incompetence. Since the only basis for earlier discharge is to increase the number of high quality entrepreneurs, some filtering mechanisms may be appropriate. For example, these could involve:

- assessment by the administrator or trustee of the degree of culpability of the owner in the insolvency. Early discharge would be in proportion to the assessed level of competence. This is probably only feasible for single–owner businesses, since it may be difficult to determine competence among multiple owners and directors; or/and
- a test of business competence (for example, ability to prepare a proper business plan, an understanding of key aspects of business accounting and risk or any

[4] Inspector–General in Bankruptcy, ITSA, Canberra, pers. comm., 6 October 2000.

readily tested attribute that is correlated with subsequent management performance).

The entrepreneur could meet the costs of any test as an additional measure to deter flippant applications by the less competent.

It may be appropriate to also include provisions for *partial* repayment of outstanding debts from future business or labour income as a further mechanism to deter excess risk taking among people who might, after insolvency, qualify for early discharge. The periods of repayments and their amounts could be limited to provide some debtor protection.

The goal of any early discharge mechanism is to avoid losing valuable entrepreneurs, while at the same time deterring excessively risky behaviour and re–entry by poor entrepreneurs. The policy dilemma is to create the right filter.

Similar issues of finding the right balance and creating the right filters, also potentially arise in relation to incorporated businesses. Currently, the Corporations Law allows a Court, on application by ASIC, to prohibit a person from managing a corporation (for up to 10 years) if the person has been involved in repeated insolvencies or corporate failures. Additionally, ASIC has the power to disqualify (for up to 5 years) persons who have managed corporations that have become insolvent. This may occur if the liquidation has involved returns of no more than 50 cents in the dollar to unsecured creditors (or offences against Commonwealth law, or the misapplication of company property). It is our understanding, however, that these powers are not often used — so that 'failed' company directors can effectively start new businesses at will.

A Australian exits data

The first two tables relate to the stock of businesses in the economy. The business exits data in the remaining tables are for employing businesses only.

Table A.1 **Stock of employing businesses[a], 1991-92 to 1998-99[b]**

Year	*Number of employing businesses ('000)*
1991-92	374.9
1992-93	367.7
1993-94	415.5
1994-95	471.1
1995-96	505.0
1996-97	523.1
1997-98	540.9
1998-99	566.5

a Excludes private agricultural businesses. **b** Estimates based on latest available data. The estimates are frequently revised and the data shown for a particular year may not match those shown in earlier publications.

Sources: ABS (*Small Business in Australia*, Cat. No. 1321.0, various issues; *Small Business in Australia, Update 1997-98*, Cat. no. 1321.0.40.001).

Table A.2 **Stock of businesses economy wide, 1991-92 to 1998-99**

Year	*Incorporated businesses* [a]	*Unincorporated businesses*	*All businesses*
1991-92	200 564	693 636	894 200
1992-93	199 437	700 667	900 104
1993-94	244 216	713 515	957 731
1994-95	300 476	714 242	1 014 718
1995-96	317 870	735 187	1 053 057
1996-97	347 379	702 074	1 049 453
1997-98	356 214	735 102	1 091 316
1998-99	396 797	710 303	1 107 100

a Estimate of the number of *active* incorporated businesses rather than simply the number of those registered.
b Estimated from ABS data for employers and self employed and assuming 1.65 working proprietors per unincorporated business.

Sources: ABS (*Small Business in Australia*, Cat. No. 1321.0, various issues; *Small Business in Australia*, *Update 1997-98*, Cat. no. 1321.0.40.001; *Labour Force, Australia*, Cat. no. 6203, various issues). Study estimates.

Table A.3 **Business exits by type of exit, 1994-95 and 1995-96**

Type of Exit	*1994-95*		*1995-96*	
	No.	% of total	No.	% of total
Sold	4 393	1.2	5 324	1.2
Takeover/merger	1 739	0.5	1 426	0.3
Total changes in Ownership	6 132	1.7	6 750	1.6
Liquidation/receivership	1 140	0.3	521	0.1
Other cessations[a]	14 036	3.8	19 020	4.4
Untraceable	4 436	1.2	7 710	1.8
Unknown	490	0.1	157	0.0
Total cessations	20 102	5.5	27 408	6.4
Total exits	26 234	7.2	34 158	8.0

[a] Includes business-related bankruptcies.

Sources: ABS (*Business Exits, Australia*, Cat. no. 8144.0; unpublished data).

Table A.4 **Business exits by state, 1994-95 and 1995-96[a]**

State	*Live at start*	*Changes in ownership*	*Cessations*	*Total exits*	*Changes in ownership*	*Cessations*	*Total exits*
	No.	No.	No.	No.	%	%	%
NSW	142 052	2 094	9 334	11 429	1.5	6.4	7.9
VIC	105 794	1 736	7 683	9 419	1.7	7.3	8.9
QLD	70 773	1 079	3 450	4 529	1.6	4.9	6.4
SA	28 114	448	1 143	1 592	1.5	3.9	5.4
WA	35 057	921	1 689	2 610	2.6	4.9	7.5
Other	15 515	163	455	618	1.1	3.0	4.1
Total	397 304	6 441	23 755	30 196	1.6	5.9	7.6

[a] Averages for the two years.

Sources: ABS (*Business Exits, Australia*, Cat. no. 8144.0; unpublished data).

Table A.5 **Business exits by industry, 1994-95 and 1995-96[a]**

Industry	*Live at start*	*Changes in ownership*	*Cessations*	*Total exits*	*Changes in ownership*	*Cessations*	*Total exits*
	No.	No.	No.	No	%	%	%
Mining	1 822	17	55	72	0.9	3.0	4.0
Manufacturing	38 491	708	1 775	2 483	1.8	4.6	6.5
Construction	62 623	26	3 503	3 529	0.0	5.6	5.6
Wholesale Trade	33 514	535	1 335	1 870	1.6	4.0	5.6
Retail Trade	74 466	3 237	4 131	7 368	4.3	5.5	9.9
Accommod-ation	24 065	418	1 350	1 769	1.7	5.6	7.3
Transport	22 408	347	952	1 299	1.5	4.2	5.8
Property & Business Services	90 958	716	6 619	7 335	0.8	7.3	8.1
Other Industries	48 961	439	4 037	4 476	0.9	8.2	9.1
Total all industries	397 306	6 442	23 755	30 196	1.6	6.0	7.6

[a] Averages for the two years.

Sources: ABS (*Business Exits, Australia*, Cat. no. 8144.0; unpublished data).

Table A.6 **Business exits by employment size, 1994-95 and 1995-96[a]**

Type of Exit	*Less than 20 employees*		*20 or more employees*	
	No.	% of total	No.	% of total
Sold	4 498	1.2	360	1.8
Takeover	1 444	0.4	138	0.7
Total Changes in ownership	5 942	1.6	498	2.5
Liquidation/receivership	698	0.2	132	0.7
Other cessations[b]	16 142	4.3	385	1.9
Untraceable	6 008	1.6	64	0.3
Unknown	316	0.1	7	0.0
Total cessations	23 164	6.1	588	2.9

[a] Averages for the two years. [b] Includes business-related bankruptcies.

Source: ABS (unpublished data).

Table A.7 Business exit rates by employment size and industry, 1994-95 and 1995-96[a]

Industry	*Changes in ownership*		*Cessations*		*Total exits*	
	1-19 employees	*20 or more employees*	*1-19 employees*	*20 or more employees*	*1-19 employees*	*20 or more employees*
	%	%	%	%	%	%
Mining	0.5	3.2	2.9	3.6	3.4	6.8
Manufacturing	1.8	2.1	4.8	3.1	6.6	5.2
Construction	0.0	0.1	5.6	3.7	5.7	3.8
Wholesale Trade	1.5	2.5	4.0	3.3	5.6	5.8
Retail Trade	4.3	4.5	5.6	3.7	10.0	8.1
Accommodation	1.2	6.3	6.2	0.3	7.4	6.6
Transport	1.6	0.7	4.3	3.3	5.9	4.0
Property and Business Services	0.8	0.9	7.4	3.7	8.2	4.6
Other Industries	0.9	0.3	8.5	2.7	9.4	3.0

[a] Averages for the two years.

Source: ABS (unpublished data).

Table A.8 Business exits by age, 1994-95 and 1995-96[a]

Age (years)	*Live at start*	*Changes in ownership*	*Cessations*	*Total exits*	*Changes in ownership*	*Cessations*	*Total exits*
	No.	No.	No.	No	%	%	%
< 3	166 102	3 443	12 465	15 908	2.1	7.5	9.6
3 to < 6	9 6854	1 359	5 476	6 834	1.4	5.7	7.1
6 to < 10	67 022	1 007	3 142	4 149	1.5	4.7	6.2
10+	67 329	633	2 673	3 306	0.9	4.0	4.9
Total	397 306	6 442	23 755	30 196	1.6	6.0	7.6

[a] Averages for the two years.

Source: ABS (unpublished data).

Table A.9 Business exits by employment size and age, 1994-95 and 1995-96[a]

Age group	*Size group*[b]	*Live at start*	*Changes in ownership*	*Cessations*	*Total exits*	*Changes in ownership*	*Cessations*	*Total exits*
Years	Type	No.	No.	No.	No.	%	%	%
< 3	Small	161 367	3 272	12 269	15 540	2.0	7.6	9.6
	Large	4 735	172	197	368	3.6	4.1	7.8
	Total	166 102	3 443	12 465	15 908	2.1	7.5	9.6
3 to < 6	Small	91 730	1 253	5 255	6 508	1.4	5.7	7.1
	Large	5 124	106	220	326	2.1	4.3	6.4
	Total	96 854	1 359	5 476	6 834	1.4	5.7	7.1
6 to < 10	Small	63 819	915	3 079	3 993	1.4	4.8	6.3
	Large	3 203	93	64	156	2.9	2.0	4.9
	Total	67 022	1 007	3 142	4 149	1.5	4.7	6.2
10 +	Small	60 371	504	2 564	3 068	0.8	4.2	5.1
	Large	6 958	129	109	238	1.9	1.6	3.4
	Total	67 329	633	2 673	3 306	0.9	4.0	4.9
Total	Small	377 287	5 943	23 166	29 109	1.6	6.1	7.7
	Large	20 019	498	589	1 088	2.5	2.9	5.4
	Total	397 306	6 442	23 755	30 196	1.6	6.0	7.6

[a] Averages for the two years. [b] Small businesses are classified as having 1-19 employees. Large businesses are classified as having 20 or more employees.

Source: ABS (unpublished data).

Table A.10 Business intentions for next three years (1999 to 2001) by employment size (per cent)[a]

	Locational changes			*Exit decisions*	
Size of business (employees)	*Open new locations*	*Close locations*	*Open the same business elsewhere*	*Sell the whole business*	*Close the business*
1 – 4	2.4	3.5	1.8	9.3	8.0
5 – 9	4.8	2.0	1.6	6.8	3.2
10 – 19	12.5	1.9	2.3	9.7	1.6
20 – 49	20.7	2.6	2.4	8.1	2.5
50 – 99	18.6	3.6	5.3	1.9	na
100 - 199	27.3	7.4	1.6	0.8	na
200 - 499	25.9	18.0	1.2	1.8	na
500+	19.2	20.6	3.0	3.3	na
Total	5.2	3.0	1.9	8.6	6.0

[a] Businesses surveyed in 1997-98.

Source: ABS (unpublished longitudinal survey data).

Table A.11 Business intentions for next three years (1999 to 2001) by age (per cent)[a]

Age of business (years)	Locational changes: Open new locations	Locational changes: Close locations	Locational changes: Open the same business elsewhere	Exit decisions: Sell the whole business	Exit decisions: Close the business
Less than 2	5.7	1.9	2.9	6.1	3.6
2 to less than 5	6.4	2.5	1.8	12.4	6.2
5 to less than 10	5.3	3.5	2.4	8.7	5.8
10 to less than 20	4.3	4.6	1.3	9.0	7.5
20 or more	3.8	1.8	0.8	4.9	6.3
Total	5.2	3.0	1.9	8.6	6.0

[a] Businesses surveyed in 1997-98.

Source: ABS (unpublished longitudinal survey data).

Table A.12 Business intentions for next three years (1999 to 2001) by industry (per cent)[a]

Industry	Locational changes: Open new locations	Locational changes: Close locations	Locational changes: Open same business elsewhere	Exit decisions: Sell the whole business	Exit decisions: Close the business
Mining	9.7	11.9	na	na	na
Manufacturing	7.0	3.6	2.2	5.7	5.1
Food, beverages & tobacco	7.7	2.5	na	12	na
Textiles, clothing, footwear & leather	1.9	6.5	0.9	0.2	8.8
Wood and paper products	17.6	2.5	na	16.4	3.3
Printing, publishing & recorded media	6.6	7.2	na	16.2	6.9
Petroleum, coal, chemical & associated products	13.2	5.1	4.3	4.5	na
Non-metallic mineral products	6.3	1.2	na	4.6	na
Metal products	4.3	0.7	3.5	1.2	4.6
Machinery and equipment	3.5	1.0	na	3.1	3.3
Other manufacturing	11.1	6.6	5.9	2.5	7.1
Construction	2.4	1.8	na	2.0	5.4
Wholesale trade	7.4	2.7	3.3	11.1	7.5
Retail trade	7.0	4.6	2.6	21.9	7.1
Accommodation, cafes & restaurants	2.1	1.5	0.9	16.9	na
Transport and storage	5.8	8.4	3.8	9.8	9.1
Finance and insurance	3.4	5.0	1.0	na	11.3
Property and business services	4.9	1.5	1.7	1.7	5.1
Property services	6.9	3.7	na	4.3	11.2
Business services	4.5	1.0	1.3	1.2	3.8
Cultural and recreational services	3.8	na	2.9	na	na
Personal and other services	5.6	3.9	na	9.8	7.7
Total all industries	5.2	3.0	1.9	8.6	6.0

[a] Businesses surveyed in 1997-98.

Source: ABS (unpublished longitudinal survey data).

B Overseas data

It is often difficult to make comparisons between Australia and other countries due to variations in definitions and the time periods for which data are available.

A number of different terms are used with reference to business exits — such as failure, termination, closure, death or bankruptcy. While some of these terms are used interchangeably, they can vary in the way they are defined from one country to another, and even between data collections within the same country.

The choice of definition may have a substantial impact on reported exit rates. In most countries, the definitions adopted have depended on the nature of the data available.

B.1 Entry and exit data for European countries

Cross sectional entry and exit data

Table B.1 contains entry and exit data (expressed as an average rate per year) for a number of European countries over the period 1988 to 1994 — the latest period for which such data are available at the time of writing.

The broadest definitions of entry and exit have been adopted for countries like Austria, Belgium, Finland and Italy. Denmark has the narrowest definition of entry as it includes only those new entrepreneurs starting a new enterprise. In France, Luxembourg, Portugal, Spain and Sweden, information is limited to bankruptcies.

The main data sources for table B.1 are trade registers, VAT (value added tax) registers, registers of labour and social security and central statistical offices. Each of these sources has limitations: the self employed are often not included on trade registers; the VAT register does not include enterprises below a specified turnover level; and enterprises without employees are not included on the registers of labour and social security. Moreover, not every registration identifies a ‘real’ entry and not every deregistration necessarily identifies a ‘real’ exit. The unit of analysis also differs from one country to another. In some countries it is establishments that are registered, while in others it is enterprises.

Table B.1 **Entries and exits, various European countries, 1988–1994**

	Definition of entry	*No. of entries*	*Birth rate (%)*	*Definition of exit*	*No. of exits*	*Death rate (%)*	*Net rate (%)*
Austria	Very broad	28 600	14	Very broad	24 900	12	2
Belgium	Very broad	49 300	10	Very broad	38 000	8	2
Denmark (88–93)	Narrow	15 600	8	na	na	na	na
Finland (a) (88–93)	Very broad	19 200	10	Very broad	10 100	9	1
France (88–95)	Broad	290 100	13	Narrow	50 400	2	na
Germany (West)	Broad	387 100	17	Broad	300 100	13	4
Greece	Broad	106 400	12	Average	50 600	3	na
Ireland	Average	14 400	12	Average	10 400	9	3
Italy	Very broad	289 000	7	Very broad	228 600	6	1
Luxembourg (88–95)	Very broad	2 119	11	Narrow	200	1	na
Netherlands	Average	47 000	9	average	24 600	5	4
Portugal (88–93)	Narrow	18 700	2	Narrow	1 100	1	na
Spain (88–93)	Narrow	117 800	4	Narrow	6 300	1	na
Sweden	Average	22 500	6	Narrow	13 400	3	na
United Kingdom[a]	Average	215 500	13	Average	194 400	12	1
Iceland (90–93)	Average	2 300	12	Average	2 500	13	-1
Norway (88–92)	Average	17 700	8	Average	18 600	8	0
Switzerland (90–95)	Broad	22 600	8	Broad	14 400	5	3

[a] Data may be distorted due to a break in the series.

Source: European Observatory for SMEs (*Annual Report*, various editions).

Table B.1 reveals that the birth rate varies widely. Austria and Germany have high birth rates, but the definition adopted for entry is a broad one. Belgium, Finland, Italy and Switzerland also use a broad definition for entry, but their birth rates are relatively lower. Portugal and Spain appear to have low birth rates, but each of these countries has a narrow definition of entry. Closer examination reveals that in Denmark only ‘real’ entry (that is, new entrepreneurs starting a new enterprise) are included, while in Spain and Portugal individuals and enterprises without employees are not included in the data.

In those countries which define exits only as bankruptcies (France, Luxembourg, Portugal, Spain and Sweden) the exit rate is low. It is estimated that in those countries where a distinction is possible between bankruptcies and closures, bankruptcies probably comprise only about 10 to 20 per cent of closures.

The net rate shown in the table is the difference between the birth and death rate and indicates the net growth in the number of enterprises. Net rates appear high in Germany, the Netherlands, Ireland and Switzerland (although they are still affected by definitional variation). Interestingly, countries with relatively high entry rates generally also have relatively high exit rates.

The European Commission (EC) has published more recent cross sectional data on business creations and closures in its fifth report *Enterprises in Europe* — but only for 1994–96 (see table B.2).

Table B.2 **New businesses, closures and the stock of businesses, selected EC countries, 1994–96[a] (numbers and rates[b])**

	New businesses[c]		*Closures*		*Business stock*
	'000	%	'000	%	'000
Denmark	16	6.6	na	na	244
Germany	528	Na	407	na	na
Spain	365	15.3	274	11.5	2 385
France	285	12.1	254	10.8	2 357
Italy	287	8.1	270	7.7	3 523
Netherlands	25	6.4	15	3.9	388
Portugal	96	14.7	85	13.1	651
Finland	31	14.6	23	10.8	212
Sweden	51	12.4	37	9.0	411
UK	161	11.2	170	11.8	1 441

[a] Year data refer to varies from 1994 to 1996. [b] Rates are relative to the stock of businesses. [c] Denmark: based on data held on the Business, VAT and Tax registers and uses a method developed to identify the number of genuine enterprise births and exclude those resulting from a takeover or conversion. France: rates are calculated from the SIRENE directory. A creation refers to enterprises that are newly formed or the result of a takeover (either partial or complete). Finland: enterprise births refer to administrative openings and are not synonymous with 'real' births since they include changes in legal form and ownership. An analysis conducted in 1989 showed that 80 per cent of enterprise openings were real births. Netherlands: information is integrated from a number of sources for enterprise birth rates. Birth rates of new enterprises are based on the screening of new registrations by the Chamber of Commerce. Only about 30 per cent can be accepted as pure births, with many newly registered units simply reflecting a change of ownership. Sweden: data contain only those enterprises that are new or can be classified as 'real' births. UK: based on data held on the VAT register, which covers approximately 1.5 million enterprises compared to an estimate of 2.5 million enterprises in total. Analysis of registrations between 1986–91 indicates that about 75 per cent of registrations corresponded to births.

Source: European Commission (*Enterprises in Europe*, various editions).

In all the countries analysed — with the exception of the UK — business 'births' (new businesses) exceeded business 'deaths' (closures). The EC report also provides a breakdown of new businesses and closures by industry and business size.

Time series entry and exit data

Only patchy, and often inconsistent, time series estimates of birth and death rates for European countries are available. Two differing sources of data for the same country can show very different rates. It is often difficult to reconcile these differences, since the methodology or definition used is not always provided. Part of the reason for this is the wide number of definitions that can be adopted, both within and between countries. Thus the data between countries are not usually comparable and we are able to make only broad observations.

Table B.3 shows the entry rates for selected countries based on two different sources. Thus the large differences in entry rates between countries (and, in some cases, within countries), are partially explained by differences in definition. But despite the data problems, some limited observations can be made. For most countries, entry rates increased until 1988 or 1989, with two exceptions — Italy's rate declined over the whole period, while Germany experienced continuing growth after 1989 until 1993. Apart from Germany, all countries experienced a fall in birth rates either in 1990 or 1991, or both years in some cases.

Entry rates were generally higher than exit rates up until 1990, when the gap began to narrow (table B.4). For example, by 1991 birth and death rates were almost the same in France and the UK. With the exception of France, the exit rate increased for all countries in 1991, a reflection perhaps of the depressed regional economic conditions.

B.2 Entry and exit data for the United Kingdom

There are a number of different UK data sets that can be examined to determine the number of the firms going out of business each year. However, each has its limitations and none cover all UK businesses. There have also been a number of legislative changes that have influenced the way data are collected. Thus the available data discussed in this section should not be seen as a consistent time series. This applies especially to the bankruptcy and company data.

Tables B.5 and B.6 show various measures of business exits in the UK, each of which demonstrate different patterns over time. These measures are discussed below.

Table B.3 Entry rates, various European countries, 1986–1993 (per cent)

Entry rates	*1986*	*1987*	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*
Belgium[a]	7.0	9.3	12.3	12.3	10.9			13.0
Denmark[a]	15.8	13.8	14.3	14.4	14.3			14.0
Denmark[b]	5.6 (1985)				4.9	5.8	6.0	
Finland[b]		16.6	16.7	17.2	14.4	13.0	9.2	
France[a]				13.3				14.0
France[b]		14.4	14.6	14.6	14.1	12.6	11.7	
Germany[a]	16.4	16.7	17.7	18.3	20.1	21.2		17.0
Italy[a]	8.7	8.1	7.2	6.6	6.5			7.0
Luxembourg[a]	14.4	13.3	13.3	14.4				
Netherlands[a]	11.7	12.7	13.5	14.4	14.5	14.0		12.0
Netherlands[b]	4.5 (85–87)						6.4	
Portugal[a]	9.5	11.0	12.3	10.7				12.0
Sweden[b]		5.9	6.8	6.9	6.8	5.7	5.4	
UK[a]	6.2	6.7	6.6	5.9				7.0
UK[b]		14.4	16.1	16.5	14.6	12.2	12.5	

[a] Sourced from the European Observatory for SMEs, *Annual Report*. [b] Sourced from the European Commission, *Enterprises in Europe*. See note b in table B.2 for data caveats.

Sources: European Observatory for SMEs (*Annual Report*, various editions). European Commission (*Enterprises in Europe*, various editions).

Table B.4 Exit rates, various European countries, 1986–1992 (per cent)

Exit rates	*1986*	*1987*	*1988*	*1989*	*1990*	*1991*	*1992*
Denmark[a]	10.6	8.6	14.8	13.2	13.2		
Finland[b]		12.0	11.6	11.7	12.8	14.7[c]	
Finland[b]		2.3	2.0	2.1	2.6	4.5	
France[b]		12.5	13.7	13.6	13.3	12.8	
Italy[a]	4.0	3.2	3.0	3.2	3.0	8.1	
Netherlands[a]	5.7	5.8	6.3	6.1	6.3	6.6	
Portugal[a]	9.6	10.0	8.6	9.8			
Sweden[b]		1.7	1.6	1.9	2.6	4.7	
UK[a]	4.9	6.6	6.5	5.9			
UK[b]		11.7	11.5	11.3	11.2	11.9	12.5

[a] Sourced from the European Observatory for SMEs, *Annual Report*. [b] Sourced from European Commission, *Enterprises in Europe*. Finland enterprise deaths are not synonymous with 'real' deaths since they include changes in legal form and ownership. An analysis conducted in 1989 showed that 73 per cent of closures were real deaths. The death rates calculated for France are 'real' rates. Sweden exits are bankruptcies. The UK exits are VAT deregistrations. An analysis of these for 1986–91 shows that the average annual death rate was estimated to be in the range 7 to 9 per cent compared with 12 per cent for deregistrations. [c]Eurostat estimate.

Sources: European Observatory for SMEs (*Annual Report*, various editions). European Commission (*Enterprises in Europe*, various editions).

Table B.5 **UK entries and exits[a], 1966 to 1991**

	VAT deregistrations		*Compulsory liquidations*		*Company deregistrations*	*Individual bankruptcies*	*Exits from self employment*	
	'000	%	No.	Per 1000	%	No.	'000	%
1966			934	1.9	2.0	4 062		
1967			1 230	2.5	3.5	4 386		
1968			1 108	2.4	7.8	4 298		
1969			1 181	2.5	5.0	4 772		
1970			1 269	2.6	4.6	5 087		
1971			1 166	2.4	4.2	4 793		
1972			1 150	2.1	4.9	4 337		
1973			1 080	1.9	5.6	3 917		
1974			1 395	2.3	3.5	5 718		
1975			2 287	3.6	5.2	7 271		
1976			2 511	3.9	5.3	7 207		
1977			2 425	3.7	5.9	4 485		
1978			2 265	3.4	3.6	3 902		
1979			2 065	2.9	3.4	3 500		
1980	142	11	2 935	3.9	3.5	4 038		
1981	120	9	2 771	3.5	3.5	5 151		
1982	145	11	3 745	4.5	6.3	5 700		
1983	145	11	4 807	5.6	5.0	7 032		
1984	152	11	5 260	5.8	5.6	8 229	180	7
1985	163	11	5 761	6.1	6.0	6 778	257	9
1986	165	11	5 204	5.3	8.0	7 155	305	11
1987	169	11	4 116	4.1	7.4	7 427	235	8
1988	172	11	3 667	3.5	10.7	8 507	297	9
1989	176	11	4 020	3.7	7.5	9 365	314	9
1990	184	11	5 977	5.4	9.0	13 987	422	12
1991	203	12	8 368	7.4	10.0	25 640	487	15

a VAT deregistrations are normalised by the stock of businesses registered for VAT in the base year. Compulsory liquidations data and company deregistrations are normalised by the stock of companies in the base year. Exits from self-employment are normalised by the total number of individuals who were self-employed.

Source: Storey (1994).

VAT deregistrations

All trading businesses with turnover more than a specified sales figure are required to register for VAT (about 60 per cent of businesses).

It is sometimes assumed that those businesses that deregister are those that fail and die. But this is not always the case as there are a number of situations where a firm

may deregister for VAT without going out of business. These include the takeover of the business by another firm, changes in legal status, or where the business falls below the VAT exemption limit. For example, in 1987 only 58 per cent of those businesses deregistering did so because the trader went out of business.

There has been a steady increase in the absolute numbers of VAT deregistrations. However, when this is normalised by the stock of businesses registered for VAT, the deregistration rate remained relatively constant at around 11 per cent over the period shown in tables B.5 and B.6.

Table B.6 **UK entries and exits[a], 1992 to 1999**

	VAT deregistrations		*Compulsory liquidations*		*Company deregistrations* [b]	*Individual bankruptcies*
	'000	%	No.	Per 1000	%	No
1992			9 734	8.5		36 794
1993			8 244	8.4		36 703
1994	188.1	12	6 597	8.3		30 739
1995	173.2	11	5 519	5.6	13	26 319
1996	165.1	10	5 080	4.5	10	26 271
1997	164.5	10	4 735	4.2	8.7	24 441
1998	155.9	9	5 216	4.0	11.1	24 549
1999			5 209	3.9		

[a] VAT deregistrations are normalised by the stock of businesses registered for VAT in the base year. Compulsory liquidations and company deregistrations are normalised by the stock of companies in the base year. [b] Percentage of removals from the UK Companies house register (net of restorations) to active register for the financial year (ie 1995 is 1994-95 and so on).

Sources: UK Department of Trade and Industry, *Statistical Press Release P/99/703.* UK Insolvency Service, *Our Statistics* (http://www.insolvency.gov.uk, accessed on 13 April 2000). Companies House, *Key Statistics* (http://www.companieshouse.gov.uk/summary.keystats.htlm, accessed on 13 April 2000).

Compulsory liquidations

The data for compulsory liquidations relate only to limited companies registered for VAT — which comprise about one–fifth of all UK businesses. In this case a liquidator is appointed under the Companies Act to sell the assets of the business and distribute the proceeds to creditors according to the priorities laid down in the Act. The pattern of compulsory liquidations appears to correspond broadly to the business cycle. However, liquidation rates for individual years may be subject to error due to periodic 'purges' of files to eliminate dead companies (thus figures relating to the stock of companies trading at any time are suspect).

Company deregistrations

This measure relates to all companies that are no longer on the Companies Register. The rate rose fairly steadily in the 1980s and 1990s, with few exceptions. There is a need for caution in interpreting the data due to definitional changes and to periodic purges of dead companies (which do not have regard to when the company actually ceased to operate). Accordingly, as with compulsory liquidations, calculations of 'failure' rates in individual years are subject to error.

Individual bankruptcies

In the UK, the term bankruptcy applies only to individuals declared bankrupt in a court of law. These individuals are not allowed to be in business as company directors until their debts are repaid in full and they are formally discharged by a court of law. Since many bankruptcies are associated with business debt, some researchers consider that this provides an approximation of entrepreneurial failure.

The data on individual bankruptcies shown in tables B.5 and B.6 have not been normalised because the total numbers 'at risk' are not known. The data show that the number of individual bankruptcies have grown fairly steadily over the period to 1995 before declining in more recent years.

Exits from self-employment

Persons exiting from self-employment could be regarded as owners of businesses which are no longer trading. The numbers in this category are far greater than any of the other measures shown in table B.5.

Exits from self-employment are normalised by the total number of individuals who are self-employed. Around 15 per cent of all self-employed persons (487 000 persons) exited from self-employment in 1991. The exit rate averaged around 9 per cent in the second half of the 1980s, but then rose sharply in 1990 and 1991 (probably due to the recessionary conditions in the early 1990s).

B.3 Entry and exit data for the United States

US entry and exit data are set out in table B.7. The table uses data covering various narrowly defined exit categories, including business failures, business bankruptcies and terminations.

A business failure in the US is defined as an enterprise that ceases operations with a financial loss to one or more creditors. The data represent businesses that are no longer on Dun & Bradstreet Corporation's list of active businesses during their latest survey due to failure or the filing of a bankruptcy petition. However there are limitations with these data. Not all firms (especially those with no employees), are listed with Dun & Bradstreet — and not all firms closing are reported as having an outstanding debt to a creditor. Thus, the definition of business failure is much narrower than that for terminations, which are businesses ceasing to report employment.

Table B.7 **US entries and exits[a], 1983 to 1993**

	1983	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*1991*	*1992*	*1993*
Business exits											
Business bankruptcies ('000)	61.6	63.4	70.6	79.9	81.5	62.8	62.4	63.9	70.6	69.8	61.8
Business failures ('000)		52.1	57.3	61.6	61.2	57.1	50.4	60.4	87.3	97.1	85.9
Business terminations ('000)	716.9	685.6	754.1	814.6	730.8	769.5	837.4	844.1	820.4	819.3	802.7
Bankruptcy rate[a] (%)	0.41	0.39	0.42	0.46	0.45	0.33	.032	0.32	0.34	0.33	0.29
Failure rate[a] (%)		0.32	0.34	0.35	0.33	0.30	0.26	0.30	0.42	0.46	0.40
Exit rate[a] (%)	4.7	4.2	4.4	4.7	4.0	4.1	4.3	4.2	4.0	3.9	3.7
Business entries											
New firms ('000)	633	691	715	725	748	733	745	769	726	737	780
N & S firms[b] ('000)	804	855	881	900	911	886	897	815	864	875	916
New firm rate[a] (%)	4.2	4.3	4.2	4.1	4.1	3.9	3.8	3.8	3.5	3.5	3.6
N & S firm rate[a] (%)	5.3	5.3	5.2	5.1	5.0	4.7	4.6	4.5	4.2	4.1	4.3

[a] Business bankruptcies, business failures, business terminations, new firms and N&S firms are all normalised by total non-farm businesses tax returns. [b] N & S means 'new' and 'successor' firms. New firms represent applications for new account numbers, while successors are existing firms taken over by new or existing firms.

Source: SBA (1994).

Another source of exit data for the US is state employment security collections. If a firm has employees, it is required to file quarterly income tax withholdings for each employee and pay both unemployment insurance and the employer's share of social security taxes. The respective state Employment Security Agency can identify firm terminations from the non-receipt of tax payments.

In the US, business bankruptcy is a legal recognition that a business is insolvent — that is, it cannot satisfy its creditors or discharge its liabilities. The company must either restructure or completely liquidate. US business bankruptcy data are more likely to include self-employed persons and new, very small firms than are business failure data.

The data show that for each year the number of businesses that fail or apply to the bankruptcy court is small in comparison with those that just close their doors (terminations). The number of terminations is over ten times greater than the number of business failures or bankruptcies.

Business failures go up in times of recession and down in boom times. For example, nearly 100 000 businesses failed in the US in 1991 compared to 71 000 in 1995. Generally, failures lag the level of economic activity. This means they do not start to rise until well into the economic downturn.

Looking at trends over time, the US bankruptcy rated declined steadily from a high of 0.46 per cent in 1986 to record low of 0.29 per cent in 1993. While the failure rate and exit rate also peaked in 1986 (at 0.35 per cent and 4.7 per cent respectively) the failure rate has remained at a higher rate during the early 1990s compared to the exit rate which declined over the period. Up until 1990, the number of reported business bankruptcies exceeded the number of reported business failures. However, with an improved coverage by Dun & Bradstreet, the situation has reversed from 1991 onwards.

More recent US business entry and exit data are available from the February 2000 Presidential report to the Congress (table B.8). While the number of business failures has increased, the failure rate has trended downwards through the 1990s.

B.4 Entry and exit data for Japan

Data on Japanese business entries and exits (as well as analysis and comment) are available from Government 'White Papers' on small and medium enterprises (SMEs). These papers are produced annually — the latest is for the year 2000 — although the coverage of exit and birth data varies.

Business start-up rates have been trending downward in Japan for a number of years and recently have fallen below business closure rates (figure B.1).

Table B.8 **US entries and exits, 1990 to 1998**

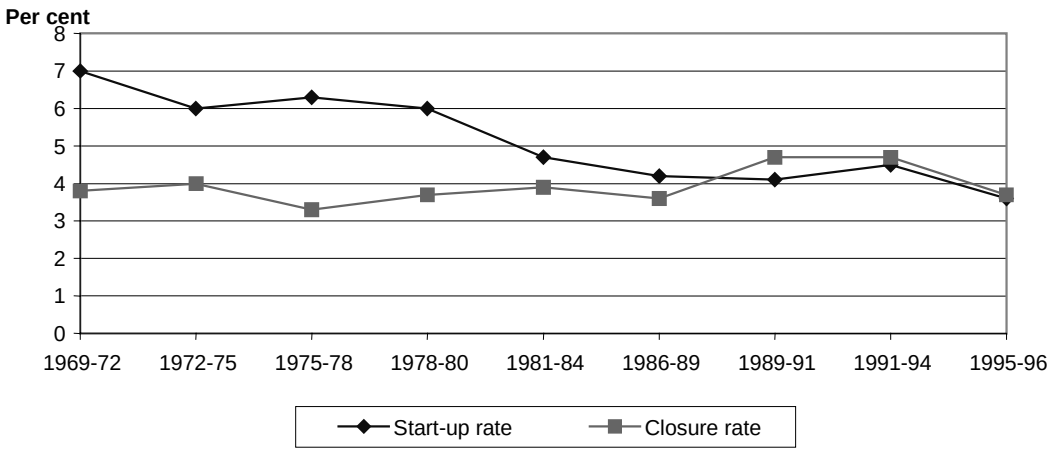
	Index of net business formation (1967=100)	*Number of new business incorporations*	*Number of business failures*	*Business failure rate (per 10 000 listed enterprises)*	*Current liabilities of failed businesses ($US million)*
1990	120.7	647 366	60 747	74	56 130.1
1991	115.2	628 604	88 140	107	96 825.3
1992	116.3	666 800	97 069	110	94 317.5
1993	121.1	706 537	86 135	109	47 755.5
1994	125.5	741 778	71 558	86	28 977.9
1995	na	766 988	71 128	82	37 283.6
1996	na	786 482	71 931	80	29 568.7
1997	na	798 779	83 384	88	37 436.9
1998[a]	na	766 631	na	na	23 804.0

[a] Estimate bases on 9 months data.

Source: CEA (2000).

Figure B.1 **Trends in Japanese start-up and closure rates[a], 1969–72 to 1995–96**

All industries[b], yearly averages



[a] The start-up rate is defined as the number of businesses established in the period between the date of the previous survey and the current survey as a proportion of the number of businesses in the previous survey(s). The closure rate is the start-up rate less the rate of increase. [b] Agriculture, forestry and fishing excluded.

Source: MITI (1998).

Bankruptcy data for Japan cover bankrupt enterprises with liabilities of 10 million yen or more. The steep decline in the number of bankruptcies (and the bankruptcy rate) from 1986 over the ensuing four years (table B.9) was reported as being due to:

- improving business conditions as a result of increased domestic demand;
- easier fund raising resulting from low interest rates and easing monetary policy; and
- a smoother cash flow due to increased solvency, caused by a steep rise in land prices.

Since 1991 there been a rise in the bankruptcy rate, but the increase has been less than the record levels reached in the mid-1980s.

Table B.9 **Business bankruptcies in Japan, 1972 to 1994 (selected years)**

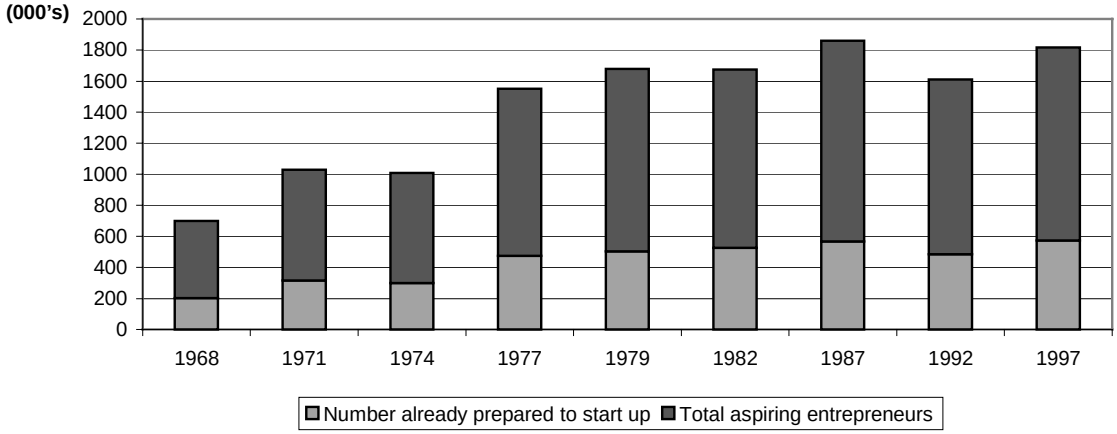
	1972	*1975*	*1978*	*1981*	*1986*
Bankruptcies (No.)	7 139	12 606	15 875	17 610	17 476
Industry SMEs[a] (No.)	5 083 270	5 358 012	5 814 882	6 229 572	6 448 123
Industry large enterprises[a] (No.)	30 453	31 288 5	34 439	39 499	46 218
Total enterprises[a](No.)	5 113 723	389 300	5 849 321	6 269 071	6 494 341
Bankruptcy rate (%)	0.14	0.23	0.27	0.28	0.27
	1989	*1991*	*1993*	*1994*	
Number of bankruptcies	7 234	10 723	14 564	14 061	
Industry SMEs[a]	6 571 942	6 484 296	6 469 167	6 470 532	
Industry large enterprises[a]	50 304	57 445	62 813	61 448	
Total enterprises[a]	6 622 246	6 541 741	6 531 980	6 531 980	
Bankruptcy rate	0.11	0.16	0.22	0.22	

[a] Refers to non-primary private enterprises.

Source: MITI (1999).

One innovative measure collected by the Japanese Management and Co-ordination agency is data on aspiring entrepreneurs. While only the raw data are available, there are some signs of a tapering-off of would-be entrepreneurs since the peak attained in the late-1980s (figure B.2).

Figure B.2 **Trends in aspiring Japanese entrepreneurs, 1968 to 1997 (selected years)**



[a] Aspiring entrepreneurs are employed persons who indicated in the survey that they wished to work for themselves.

Source: MITI (1999).

B.5 Entry and exit data for Canada

Statistics Canada compiles a data base, the Longitudinal Employment Analysis Program or 'LEAP', that includes all employers in Canada (both incorporated and unincorporated). About the only significant omission from this data base are self-employed or partnerships whose principals do not draw salaries. The longitudinal nature of LEAP allows relatively accurate measurement of business entry and exit, although some effort is required to distinguish real business births and deaths from reorganisations.[1]

Another source of data on business exits and births is Statistics Canada's *Employment Dynamics* series (table B.10). This data base is derived from Canadian tax records and includes, amongst other factors, data on:

- 'continuously identified firms' (a firm is continuously identified if it is on the tax register for two consecutive years);
- newly identified firms (the firm appears in the final but not the first of the two years); and
- 'no longer identified firms' (the firm appears on the first of the two years but not the second).

[1] This is accomplished by 'labour tracking' to identify those births and deaths that simply reflect reorganisations (Baldwin et al. 2000).

Table B.10 **Canadian business births and exits, 1984 to 1996**

	Stock of businesses[a]	*Business start-ups*[b]	*Business exits*[c]	*Entry rate*	*Exit rate*
	No.	No.	No.	Per 1000	Per 1000
1984	638 351	147 635	120 216	231	188
1985	663 366	151 781	122 620	229	185
1986	691 576	149 446	123 571	216	179
1987	717 091	155 187	123 931	216	173
1988	742 352	153 982	129 926	207	175
1989	772 667	152 646	142 549	198	184
1990	775 340	139 903	149 973	180	193
1991	779 970	136 086	135 273	174	173
1992	782 436	136 280	133 617	174	171
1993	786 817	140 055	131 902	178	168
1994	789 955	142 213	136 917	180	173
1995	789 135	145 893	143 033	185	181
1996	808 766	147 030	126 262	182	156

[a] Continuously identified firms. [b] Newly identified firms. [c] No longer identified firms.

Source: Statistics Canada (*Employment Dynamics*, various years).

In all years except 1990, Canadian business start-ups have exceeded exits over the period shown in table B.10. However, differences in business start-ups and exits (and their corresponding rates) have tended to diminish since 1989.

C Australian bankruptcy data

Table C.1 **Number of bankruptcies: total, business-related[a] and non-business related, Australia, 1928-29 to 1998-99**

	Total bankruptcies	*Business -related bankruptcies*	*Non-business bankruptcies*	*Imputed[b] business bankruptcies*	*Imputed[b] non-business bankruptcies*
1928-29	1089			611	478
1929-30	1425			800	625
1930-31	1846			1036	810
1931-32	1204			676	528
1932-33	959			538	421
1933-34	983			552	431
1934-35	803			451	352
1935-36	841			472	369
1936-37	880			494	386
1937-38	868			487	381
1938-39	940			528	412
1939-40	909			510	399
1940-41	701			394	307
1941-42	505			284	221
1942-43	308			173	135
1943-44	172			97	75
1944-45	128			72	56
1945-46	114			64	50
1946-47	206			116	90
1947-48	271			152	119
1948-49	302			170	132
1949-50	333			187	146
1950-51	308			173	135
1951-52	382			214	168
1952-53	636			357	279
1953-54	687			386	301
1954-55	769			432	337

Table continued…

Table C.1 **Number of bankruptcies: total, business-related[a] and non-business related, Australia, 1928-29 to 1998-99 (cont.)**

	Total bankruptcies	*Business -related bankruptcies*	*Non-business bankruptcies*	*Imputed[b] business bankruptcies*	*Imputed[b] non-business bankruptcies*
1955-56	871			489	382
1956-57	1200			674	526
1957-58	1357			762	595
1958-59	1603			900	703
1959-60	1949			1094	855
1960-61	2004			1125	879
1961-62	2239			1257	982
1962-63	2371			1331	1040
1963-64	2392			1343	1049
1964-65	2453			1377	1076
1965-66	2384			1339	1045
1966-67	2284			1282	1002
1967-68	2350			1319	1031
1968-69	2302			1293	1009
1969-70	2236			1255	981
1970-71	2428			1363	1065
1971-72	2684			1507	1177
1972-73	2554	1434	1120		
1973-74	1705	1031	674		
1974-75	2061	1252	809		
1975-76	1900	1243	657		
1976-77	2196	1270	926		
1977-78	3134	1752	1383		
1978-79	3857	1986	1871		
1979-80	4979	2530	2449		
1980-81	5154	2408	2746		
1981-82	4575	2003	2505		
1982-83	5156	2385	2864		
1983-84	4909	2477	2589		
1984-85	4664	1879	2752		
1985-86	5581	1921	3624		
1986-87	7534	2446	4993		
1987-88	8124	2259	5865		
1988-89	7082	2088	4994		
1989-90	8493	2947	5546		
1990-91	13091	4203	8888		
1991-92	16880	5387	11493		
1992-93	14777	4796	9981		
1993-94	14028	4335	9693		
1994-95	14130	3998	10132		

Table continued…

Table C.1 Number of bankruptcies: total, business-related[a] and non-business related, Australia, 1928-29 to 1998-99 (cont.)

	Total bankruptcies	*Business -related bankruptcies*	*Non-business bankruptcies*	*Imputed[b] business bankruptcies*	*Imputed[b] non-business bankruptcies*
1995-96	17362	4773	12589		
1996-97	21830	5191	16639		
1997-98	24408	4854	19554		
1998-99	26376	5905	20471		

[a] A business-related bankruptcy is where an individual's bankruptcy is directly related to his or her proprietary interest in a business or company. [b] Prior to 1972-73 the numbers of business and non-business bankruptcies have been imputed from the total bankruptcies data. The same percentage change in total bankruptcies is applied to the number of business-related bankruptcies in the proceeding year for data prior to 1972-73. The number of non-business related bankruptcies are calculated as a residual.

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.2 Business-related bankruptcies by state, 1990-91 to 1998-99

	1990-91	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*1997-98*	*1998-99*
	No.	No.	No.	No.	No.	No.	No.	No.	No.
NSW	1003	1409	1380	1294	1197	1530	1509	1433	1922
ACT	147	140	100	92	84	86	119	126	172
VIC	1177	1795	1576	1270	1065	948	1032	920	1071
QLD	738	794	704	810	870	1451	1431	1352	1678
SA	484	508	398	379	334	347	415	358	397
NT	41	39	27	12	19	11	36	45	3
WA	470	559	475	360	313	275	516	473	492
TAS	143	143	136	118	116	125	133	137	170
Total	4203	5387	4796	4335	3998	4773	5191	4844	5905

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.3 Business-related bankruptcies by state as a proportion of all business-related bankruptcies, 1990-91 to 1998-99

	1990-91	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*1997-98*	*1998-99*
	%	%	%	%	%	%	%	%	%
NSW	23.9	26.2	28.8	29.9	29.9	32.1	29.1	29.6	32.5
ACT	3.5	2.6	2.1	2.1	2.1	1.8	2.3	2.6	2.9
VIC	28.0	33.3	32.9	29.3	26.6	19.9	19.9	19.0	18.1
QLD	17.6	14.7	14.7	18.7	21.8	30.4	27.6	27.9	28.4
SA	11.5	9.4	8.3	8.7	8.4	7.3	8.0	7.4	6.7
NT	1.0	0.7	0.6	0.3	0.5	0.2	0.7	0.9	0.1
WA	11.2	10.4	9.9	8.3	7.8	5.8	9.9	9.8	8.3
TAS	3.4	2.7	2.8	2.7	2.9	2.6	2.6	2.8	2.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.4 **Number of business-related bankruptcies by occupation, 1972-73 to 1997-98[a]**

	72-73	*73-74*	*74-75*	*75-76*	*76-77*	*77-78*
Professional, technical & related workers	54	51	50	64	44	65
Administrative, executive & managerial workers	147	158	215	216	275	297
Sales workers	556	388	472	484	434	660
Farmers, fishermen & related workers	155	96	80	73	66	88
Miners & related workers	13	9	7	25	15	16
Workers in transport & communications	243	157	161	166	158	226
Tradespersons, production process workers, labourers	425	338	435	361	389	581
Service, sport & recreation workers	65	44	32	49	41	52
Members of armed services	0	0	0	0	0	2
Occupation inadequately or not stated	27	19	45	52	76	59
Persons not in remunerative employment[b]	0	0	9	0	4	0
Total	1685	1260	1506	1490	1502	2046
	78-79	*79-80*	*80-81*	*81-82*	*82-83*	*83-84*
Professional, technical & related workers	82	77	93	73	94	119
Administrative, executive & managerial workers	359	570	408	493	383	406
Sales workers	714	1033	1005	949	786	851
Farmers, fishermen & related workers	101	82	82	88	95	125
Miners & related workers	12	13	8	20	15	18
Workers in transport & communications	361	364	353	307	240	305
Tradespersons, production process workers, labourers	601	690	636	525	615	643
Service, sport & recreation workers	71	98	84	86	86	129
Members of armed services	0	0	1	1	0	0
Occupation inadequately or not stated	130	205	49	269	266	102
Persons not in remunerative employment[b]	9	26	10	126	0	0
Total	2440	3158	2729	2937	2580	2698

Table continued...

Table C.4 **Number of business-related bankruptcies by occupation, 1972-73 to 1997-98[a] (cont.)**

	84-85	*85-86*	*86-87*	*87-88*	*88-89*	*89-90*
Professional, technical & related workers	128	120	126	142	131	144
Administrative, executive & managerial workers	332	271	454	495	519	674
Sales workers	604	660	1545	1434	1371	1101
Farmers, fishermen & related workers	106	149	168	203	132	133
Miners & related workers	11	22	12	14	6	13
Workers in transport & communications	207	180	311	251	182	199
Tradespersons, production process workers, labourers	539	538	687	658	518	496
Service, sport & recreation workers	108	136	77	105	91	115
Members of armed services	2	0	0	1	0	4
Occupation inadequately or not stated	97	255	142	544	106	669
Persons not in remunerative employment[b]	0	0	0	0	0	0
Total	2134	2331	3522	3847	3056	3548
	90-91	*91-92*	*92-93*	*93-94*	*94-95*	*95-96*
Professional, technical & related workers	152	194	269	267	229	295
Administrative, executive & managerial workers	1001	1018	952	845	713	750
Sales workers	2074	1794	1738	1387	1305	1334
Farmers, fishermen & related workers	105	169	171	134	105	76
Miners & related workers	11	16	11	5	3	5
Workers in transport & communications	279	333	322	246	219	229
Tradespersons, production process workers, labourers	561	531	767	757	716	898
Service, sport & recreation workers	147	207	234	222	220	262
Members of armed services	3	3	3	0	4	5
Occupation inadequately or not stated	215	442	403	266	316	446
Persons not in remunerative employment[b]	0	0	0	0	0	0
Total	4548	4707	4870	4129	3830	4300

Table continued…

Table C.4 **Number of business-related bankruptcies by occupation, 1972-73 to 1997-98[a] (cont.)**

	96-97	*97-98*
Professional, technical & related workers	316	359
Administrative, executive & managerial workers	427	1537
Sales workers	668	674
Farmers, fishermen & related workers	95	109
Miners & related workers	9	17
Workers in transport & communications	253	274
Tradespersons, production process workers, labourers	687	734
Service, sport & recreation workers	276	316
Members of armed services	0	47
Occupation inadequately or not stated	570	912
Persons not in remunerative employment[b]	831	1105
Total	4132	6084

[a] 1998-99 occupational data are not reconcilable with data in previous years and are therefore not included in the table.

[b] Includes pensioners and persons engaged in home duties.

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.5 **Business-related bankruptcies by occupation as a proportion of all business-related bankruptcies, 1972-73 to 1997-98[a] (per cent)**

	1972-73	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*
Professional, technical & related workers	3.2	4.0	3.3	4.3	2.9	3.2
Administrative, executive & managerial workers	8.7	12.6	14.2	14.5	18.3	14.5
Sales workers	33.0	30.8	31.3	32.5	28.9	32.3
Farmers, fishermen & related workers	9.2	7.6	5.3	4.9	4.4	4.3
Miners & related workers	0.8	0.7	0.5	1.7	1.0	0.8
Workers in transport & communications	14.4	12.5	10.7	11.1	10.5	11.0
Tradespersons, production process workers, labourers	25.2	26.8	28.9	24.2	25.9	28.4
Service, sport & recreation workers	3.9	3.5	2.1	3.3	2.7	2.5
Members of armed services	0.0	0.0	0.0	0.0	0.0	0.1
Occupation inadequately or not stated	1.6	1.5	3.0	3.5	5.1	2.9
Persons not in remunerative employment[b]	0.0	0.0	0.6	0.0	0.3	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table C.5 **Business-related bankruptcies by occupation as a proportion of all business-related bankruptcies, 1972-73 to 1997-98[a] (per cent) (cont.)**

	1978-79	*1979-80*	*1980-81*	*1981-82*	*1982-83*	*1983-84*
Professional, technical & related workers	3.4	2.4	3.4	2.5	3.6	4.4
Administrative, executive & managerial workers	14.7	18.1	14.9	16.8	14.8	15.1
Sales workers	29.3	32.7	36.8	32.3	30.5	31.5
Farmers, fishermen & related workers	4.1	2.6	3.0	3.0	3.7	4.6
Miners & related workers	0.5	0.4	0.3	0.7	0.6	0.7
Workers in transport & communications	14.8	11.5	12.9	10.5	9.3	11.3
Tradespersons, production process workers, labourers	24.6	21.8	23.3	17.9	23.8	23.8
Service, sport & recreation workers	2.9	3.1	3.1	2.9	3.3	4.8
Members of armed forces	0.0	0.0	0.0	0.0	0.0	0.0
Occupation inadequately or not stated	5.3	6.5	1.8	9.2	10.3	3.8
Persons not in remunerative employment[b]	0.4	0.8	0.4	4.3	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
	1984-85	*1985-86*	*1986-87*	*1987-88*	*1988-89*	*1989-90*
Professional, technical & related workers	6.0	5.1	3.6	3.7	4.3	4.1
Administrative, executive & managerial workers	15.5	11.6	12.9	12.8	17.0	18.9
Sales workers	28.3	28.3	43.9	37.3	44.9	31.0
Farmers, fishermen & related workers	5.0	6.4	4.8	5.3	4.3	3.7
Miners & related workers	0.5	0.9	0.3	0.4	0.2	0.4
Workers in transport & communications	9.7	7.7	8.8	6.5	6.0	5.6
Tradespersons, production process workers, labourers	25.3	23.1	19.5	17.1	17.0	14.0
Service, sport & recreation workers	5.1	5.8	2.2	2.7	3.0	3.2
Members of armed services	0.1	0.0	0.0	0.0	0.0	0.1
Occupation inadequately or not stated	4.5	10.9	4.0	14.1	3.5	18.9
Persons not in remunerative employment[b]	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table C.5 **Business-related bankruptcies by occupation as a proportion of all business-related bankruptcies, 1972-73 to 1997-98[a] (per cent) (cont.)**

	1990-91	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*
Professional, technical & related workers	3.3	4.1	5.5	6.5	6.0	6.9
Administrative, executive & managerial workers	22.0	21.6	19.6	20.5	18.6	17.5
Sales workers	45.6	38.1	35.7	33.6	34.1	31.1
Farmers, fishermen & related workers	2.3	3.6	3.5	3.2	2.7	1.8
Miners & related workers	0.2	0.3	0.2	0.1	0.1	0.1
Workers in transport & communications	6.1	7.1	6.6	6.0	5.7	5.3
Tradespersons, production process workers, labourers	12.3	11.3	15.7	18.3	18.7	20.8
Service, sport & recreation workers	3.2	4.4	4.8	5.4	5.7	6.1
Members of armed services	0.1	0.1	0.1	0.0	0.1	0.1
Occupation inadequately or not stated	4.7	9.4	8.3	6.4	8.3	10.4
Persons not in remunerative employment[b]	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

	1996-97	*1997-98*
Professional, technical & related workers	7.6	5.9
Administrative, executive & managerial workers	10.3	25.3
Sales workers	16.2	11.1
Farmers, fishermen & related workers	2.3	1.8
Miners & related workers	0.2	0.3
Workers in transport & communications	6.1	4.5
Tradespersons, production process workers, labourers	16.6	12.1
Service, sport & recreation workers	6.7	5.2
Members of armed services	0.0	0.8
Occupation inadequately or not stated	13.8	15.0
Persons not in remunerative employment[b]	20.1	18.2
Total	100.0	100.0

[a] 1998-99 occupational data are not reconcilable with data in previous years and are therefore not included in the table.

[b] Persons not engaged in any remunerative employment includes pensioners and persons engaged in home duties.

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.6 Age profile of business bankrupts, 1990-91 to 1998-99

	<25	*25-34*	*35-44*	*45-54*	*>54*	*Total*
	No.	No.	No.	No.	No.	No.
1990-91	254	1 774	2 163	1 127	454	5 772
1991-92	209	2 202	3 003	1 757	548	7 719
1992-93	178	1 600	2 415	1 589	558	6 340
1993-94	87	1 319	1 640	1 263	462	4 771
1994-95	111	1 082	1 471	1 178	432	4 274
1995-96	153	1 040	1 574	1 231	529	4 527
1996-97	165	1 321	1 597	1 250	606	4 939
1997-98	252	1 547	1 936	1 548	604	5 887
1998-99	234	1 487	1 929	1 421	644	5 715

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.7 Age profile of business bankrupts as a proportion of all business-related bankruptcies, 1990-91 to 1998-99

	<25	*25-34*	*35-44*	*45-54*	*>54*	*Total*
	%	%	%	%	%	%
1990-91	4.4	30.7	37.5	19.5	7.9	100.0
1991-92	2.7	28.5	38.9	22.8	7.1	100.0
1992-93	2.8	25.2	38.1	25.1	8.8	100.0
1993-94	1.8	27.6	34.4	26.5	9.7	100.0
1994-95	2.6	25.3	34.4	27.6	10.1	100.0
1995-96	3.4	23.0	34.8	27.2	11.7	100.0
1996-97	3.3	26.7	32.3	25.3	12.3	100.0
1997-98	4.3	26.3	32.9	26.3	10.3	100.0
1998-99	4.1	26.0	33.8	24.9	11.3	100.0

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.8 Major causes[a] of business bankruptcy, 1972-73 to 1998-99

	1972-73	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*
Lack of capital	256	272	322	265	238	419
Lack of business ability	420	304	338	314	372	464
Failure to keep records	11	13	14	78	14	15
Economic conditions	304	176	238	245	282	405
Seasonal conditions	71	30	30	27	20	20
Excessive interest	47	25	33	35	56	71
Inability to collect debts	60	36	52	48	28	53
Excessive drawings	118	54	69	65	79	111
Gambling or speculations	20	11	11	15	16	17
Personal reasons	71	72	67	77	83	89
Other reasons	56	38	78	74	82	88
Total	1434	1031	1252	1243	1270	1752

Table C.8 **Major causes[a] of business bankruptcy, 1972-73 to 1998-99 (cont.)**

	1978-79	*1979-80*	*1980-81*	*1981-82*	*1982-83*	*1983-84*
Lack of capital	405	606	471	350	366	327
Lack of business ability	512	609	664	622	746	814
Failure to keep records	9	14	18	30	30	25
Economic conditions	527	774	538	517	589	585
Seasonal conditions	17	30	27	27	45	64
Excessive interest	113	92	206	74	111	110
Inability to collect debts	33	47	63	61	57	74
Excessive drawings	146	137	140	89	109	108
Gambling or speculations	19	16	16	15	21	13
Personal reasons	105	98	133	106	125	150
Other reasons	100	107	132	112	186	207
Total	1986	2530	2408	2003	2385	2477
	1984-85	*1985-86*	*1986-87*	*1987-88*	*1988-89*	*1989-90*
Lack of capital	349	326	354	530	491	610
Lack of business ability	588	425	619	559	489	822
Failure to keep records	30	32	75	42	26	14
Economic conditions	340	380	508	351	240	592
Seasonal conditions	29	54	53	45	30	61
Excessive interest	68	80	157	142	95	202
Inability to collect debts	72	73	82	60	76	133
Excessive drawings	91	99	99	113	129	83
Gambling or speculations	17	18	17	21	15	21
Personal reasons	91	138	180	149	121	289
Other reasons	224	296	318	276	465	498
Total	1899	1921	2462	2288	2177	2948
	1990-91	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*
Lack of capital	534	533	558	324	365	434
Lack of business ability	963	1025	680	847	775	791
Failure to keep records	34	27	44	46	57	35
Economic conditions	1233	1730	1709	1281	1005	1258
Seasonal conditions	57	60	56	30	54	69
Excessive interest	267	295	254	173	188	420
Inability to collect debts	120	145	116	245	133	174
Excessive drawings	102	118	140	117	203	191
Gambling or speculations	26	16	27	23	30	16
Personal reasons	279	244	284	318	353	425
Other reasons	588	1194	928	931	835	960
Total	4203	5387	4796	4335	3998	4773

Table C.8 Major causes[a] of business bankruptcy, 1972-73 to 1998-99 (cont.)

	1996-97	*1997-98*	*1998-99*
Lack of capital	518	518	578
Lack of business ability	555	569	721
Failure to keep records	88	111	106
Economic conditions	755	720	867
Seasonal conditions	102	92	92
Excessive interest	382	520	405
Inability to collect debts	158	128	172
Excessive drawings	136	198	188
Gambling or speculations	28	94	88
Personal reasons	459	na	Na
Other reasons	2 010	1 896	2 688
Total	5 191	4 844	5 905

[a] The categories are defined in more detail, where available, as follows: **Lack of capital** as lack of sufficient working capital; **lack of business ability,** acumen, training or experience resulting in such matters as underquoting, mistakes in estimating, lack of supervision and failure to assess potential of business or to detect misrepresentations; **failure to keep records** as a failure to keep proper books of account and costing records; **economic conditions** affecting industry, including competition and price cutting, credit restrictions, falls in prices, high cost of repairs and maintenance of equipment and changes in the character of business location (eg by-pass roads); **seasonal conditions** including floods and drought**; excessive interest** payments on hire purchase and loan monies and capital losses on repayments**; inability to collect debts** due to disputes, faulty work or bad debts; **excessive drawings** including failure to provide for taxation, either personal or wage tax deductions; **personal reasons** including ill health of self or dependants, domestic discord and other personal reasons.

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.9 Major causes[a] of business bankruptcy, as a proportion of all business-related bankruptcies, 1972-73 to 1998-99

	1972-73	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*
	%	%	%	%	%	%
Lack of capital	17.9	26.4	25.7	21.3	18.7	23.9
Lack of business ability	29.3	29.5	27.0	25.3	29.3	26.5
Failure to keep records	0.8	1.3	1.1	6.3	1.1	0.9
Economic conditions	21.2	17.1	19.0	19.7	22.2	23.1
Seasonal conditions	5.0	2.9	2.4	2.2	1.6	1.1
Excessive interest	3.3	2.4	2.6	2.8	4.4	4.1
Inability to collect debts	4.2	3.5	4.2	3.9	2.2	3.0
Excessive drawings	8.2	5.2	5.5	5.2	6.2	6.3
Gambling or speculations	1.4	1.1	0.9	1.2	1.3	1.0
Personal reasons	5.0	7.0	5.4	6.2	6.5	5.1
Other reasons	3.9	3.7	6.2	6.0	6.5	5.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table C.9 **Major causes[a] of business bankruptcy, as a proportion of all business-related bankruptcies, 1972-73 to 1998-99 (cont.)**

	1978-79	*1979-80*	*1980-81*	*1981-82*	*1982-83*	*1983-84*
	%	%	%	%	%	%
Lack of capital	20.4	24.0	19.6	17.5	15.3	13.2
Lack of business ability	25.8	24.1	27.6	31.1	31.3	32.9
Failure to keep records	0.5	0.6	0.7	1.5	1.3	1.0
Economic conditions	26.5	30.6	22.3	25.8	24.7	23.6
Seasonal conditions	0.9	1.2	1.1	1.3	1.9	2.6
Excessive interest	5.7	3.6	8.6	3.7	4.7	4.4
Inability to collect debts	1.7	1.9	2.6	3.0	2.4	3.0
Excessive drawings	7.4	5.4	5.8	4.4	4.6	4.4
Gambling or speculations	1.0	0.6	0.7	0.7	0.9	0.5
Personal reasons	5.3	3.9	5.5	5.3	5.2	6.1
Other reasons	5.0	4.2	5.5	5.6	7.8	8.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
	1984-85	*1985-86*	*1986-87*	*1987-88*	*1988-89*	*1989-90*
Lack of capital	18.4	17.0	14.4	23.2	22.6	20.7
Lack of business ability	31.0	22.1	25.1	24.4	22.5	27.9
Failure to keep records	1.6	1.7	3.0	1.8	1.2	0.5
Economic conditions	17.9	19.8	20.6	15.3	11.0	20.1
Seasonal conditions	1.5	2.8	2.2	2.0	1.4	2.1
Excessive interest	3.6	4.2	6.4	6.2	4.4	6.9
Inability to collect debts	3.8	3.8	3.3	2.6	3.5	4.5
Excessive drawings	4.8	5.2	4.0	4.9	5.9	2.8
Gambling or speculations	0.9	0.9	0.7	0.9	0.7	0.7
Personal reasons	4.8	7.2	7.3	6.5	5.6	9.8
Other reasons	11.8	15.4	12.9	12.1	21.4	16.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
	1990-91	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*
Lack of capital	12.7	9.9	11.6	7.5	9.1	9.1
Lack of business ability	22.9	19.0	14.2	19.5	19.4	16.6
Failure to keep records	0.8	0.5	0.9	1.1	1.4	0.7
Economic conditions	29.3	32.1	35.6	29.6	25.1	26.4
Seasonal conditions	1.4	1.1	1.2	0.7	1.4	1.4
Excessive interest	6.4	5.5	5.3	4.0	4.7	8.8
Inability to collect debts	2.9	2.7	2.4	5.7	3.3	3.6
Excessive drawings	2.4	2.2	2.9	2.7	5.1	4.0
Gambling or speculations	0.6	0.3	0.6	0.5	0.8	0.3
Personal reasons	6.6	4.5	5.9	7.3	8.8	8.9
Other reasons	14.0	22.2	19.3	21.5	20.9	20.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table C.9 Major causes[a] of business bankruptcy, as a proportion of all business-related bankruptcies, 1972-73 to 1998-99 (cont.)

	1996-97	*1997-98*	*1998-99*
	%	%	%
Lack of capital	10.0	10.7	9.7
Lack of business ability	10.7	11.7	12.2
Failure to keep records	1.7	2.3	2.1
Economic conditions	14.5	14.9	14.7
Seasonal conditions	2.0	1.9	1.9
Excessive interest	7.4	10.7	6.8
Inability to collect debts	3.0	2.6	3.5
Excessive drawings	2.6	4.1	3.8
Gambling or speculations	0.5	1.9	1.8
Personal reasons	8.8	na	Na
Other reasons	38.7	39.1	45.5
Total	100.0	100.0	100.0

a See note (a) in table C.8 for a description of the causes.

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.10 Major causes[a] of business bankruptcy by age, 1998-99

	<25	*25-34*	*35-44*	*45-54*	*>54*
	No.	No.	No.	No.	No.
Lack of capital	21	142	159	95	53
Lack of business ability	21	165	200	107	50
Failure to keep records	5	43	30	22	5
Economic conditions	16	146	248	212	87
Seasonal conditions	6	18	34	15	10
Excessive interest	28	123	116	64	36
Inability to collect debts	4	37	55	41	20
Excessive drawings	4	23	55	54	22
Gambling or speculations	7	27	25	17	8
Personal reasons	68	307	328	227	108
Other reasons	54	456	679	567	245
Total	234	1 487	1 929	1 421	644

a See note (a) in table C.8 for a description of the causes.

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.11 **Major causes[a] of business bankruptcy by age as a proportion of all business-related bankruptcies, 1998-99**

	<25	*25-34*	*35-44*	*45-54*	*>54*
	%	%	%	%	%
Lack of capital	9.0	9.5	8.2	6.7	8.2
Lack of business ability	9.0	11.1	10.4	7.5	7.8
Failure to keep records	2.1	2.9	1.6	1.5	0.8
Economic conditions	6.8	9.8	12.9	14.9	13.5
Seasonal conditions	2.6	1.2	1.8	1.1	1.6
Excessive interest	12.0	8.3	6.0	4.5	5.6
Inability to collect debts	1.7	2.5	2.9	2.9	3.1
Excessive drawings	1.7	1.5	2.9	3.8	3.4
Gambling or speculations	3.0	1.8	1.3	1.2	1.2
Personal reasons	29.1	20.6	17.0	16.0	16.8
Other reasons	23.1	30.7	35.2	39.9	38.0
Total	100.0	100.0	100.0	100.0	100.0

a See note (a) in table C.8 for a description of the causes.

Source: Annual reports of the Inspector-General in Bankruptcy.

Table C.12 **Frequency of 'stress sales' by industry, 1991-92 to 1995-96**

Industry	*Stress sales*					
	1991-92	1992-93	1993-94	1994-95	1995-96	5 year average
	No.	No.	No.	No.	No.	No.
Agriculture, forestry & fishing	12	14	10	6	11	1.9
Mining	6	6	3	2	8	4.5
Manufacturing	96	82	88	68	66	3.7
Construction	7	5	3	2	1	0.3
Wholesale trade	35	22	26	18	19	1.4
Retail trade	27	26	22	18	8	0.6
Accommodation, cafes & restaurants	33	36	36	17	19	2.0
Transport & storage	13	8	8	5	21	1.8
Finance & insurance	5	1	0	0	1	0.2
Property & business services	63	85	71	49	32	2.6
Education	0	0	0	1	2	0.4
Health & community services	4	6	7	3	3	0.4
Cultural & recreational services	12	6	13	1	4	1.4
Personal & other services	1	2	1	1	7	0.7
Total	314	299	288	191	202	1.2

Source: Ernst & Young (Annual Survey of Stress Sales, various years).

Table C.13 **Frequency of 'stress sales' per 1000 establishments, by industry, 1991-92 to 1995-96**[a]

Industry	*1991-92*	*1992-93*	*1993-94*	*1994-95*	*1995-96*	*5 yr average*
	Number per 1000					
Agriculture, forestry & fishing	2.4	2.8	2	0.7	1.4	1.9
Mining	3.9	3.9	1.9	2.5	10.1	4.5
Manufacturing	3.6	3.1	3.3	4.3	4.2	3.7
Construction	0.5	0.4	0.2	0.2	0.1	0.3
Wholesale trade	1.6	1	1.2	1.5	1.6	1.4
Retail trade	0.6	0.6	0.5	1	0.5	0.6
Accommodation, cafes & restaurants	1.8	1.9	1.9	2.1	2.3	2
Transport & storage	1.3	0.8	0.8	1.2	4.9	1.8
Finance & insurance	0.4	0.1	0	0	0.4	0.2
Property & business services	2.2	3	2.5	3.2	2.1	2.6
Education	0	0		0.7	1.5	0.4
Health & community services	0.2	0.4	0.4	0.4	0.4	0.4
Cultural & recreational services	1.9	1	2.1	0.4	1.5	1.4
Personal and other services	0.1	0.2	0.1	0.4	2.6	0.7
Total	1.3	1.3	1.2	1.2	1.2	1.2

[a] Data on the number of corporate entities employing at least 5 people within each ANZSIC division as at June 1995 was obtained from the ABS and applied to the data for 1994-95 and 1995-96. The relative 'failure' rates were previously calculated by reference to **all** businesses employing at least 5 persons, whether corporate or not. The number of establishments in each respective division shown in the 1995 report were 5629, 1064, 24 550, 13 748, 16 134, 39 578, 19 016, 6979, 12 047, 28 947, 10 915, 22 512, 6143, and 4337. Care should, therefore, be taken when comparing the 1994-95 and 1995-96 rates with earlier years.

Source: Ernst & Young (Annual Survey of Stress Sales, various years).

Table C.14 **Frequency of 'stress sales' by region, 1991-92 to 1995-96**

	1991-92	*1992-93*	*1993-94*	*1994-95*	*1995-96*
	No.	No.	No.	No.	No.
NSW/ACT	83	134	132	58	80
QLD	77	54	49	45	44
SA/NT	27	28	24	7	11
VIC/TAS	106	73	75	73	56
WA	21	10	8	8	11
Total	314	299	288	191	202

Source: Ernst & Young (Annual Survey of Stress Sales, various years).

Table C.15 **Frequency of 'stress sales' by region as a proportion of all 'stress sales', 1991-92 to 1995-96**

	1991-92	*1992-93*	*1993-94*	*1994-95*	*1995-96*
	%	%	%	%	%
NSW/ACT	26	45	46	30	40
QLD	25	18	17	24	22
SA/NT	8	9	8	4	5
VIC/TAS	34	24	26	38	28
WA	7	4	3	4	5
Total	100	100	100	100	100

Source: Ernst & Young (Annual Survey of Stress Sales, various years).

D Modelling bankruptcy

Bankruptcies climbed by a trend rate of 0.7 per cent per annum from 1963-64 to 1988-89. But in the years to 1991-92, they grew by a trend rate of about 30 per cent per annum — many times the previous rate. They then stabilised at this new higher rate for the rest of the 1990s. Why did this dramatic increase occur? Is this episode unique in the historical record, and what does it suggest about the factors that underlie business failures? This appendix attempts to answer these questions.

We start by discussing how to define the bankruptcy rate, and then consider the time series behaviour of bankruptcies and the bankruptcy rate. Some of the economic factors that may have been responsible for the fluctuations in rates are then reviewed. But simple correlations are not persuasive by themselves. To decide which of the many culprits might be responsible for recent increases in bankruptcy rates, multiple regression analysis is used. This helps identify how any particular variable affects bankruptcy, holding all other variables constant.

Most analyses of business failure have looked at prediction of failure at the enterprise level — and in particular the influence of certain financial and accounting ratios on the likelihood of failure. This appendix looks at failure from a different perspective — the *aggregate* pattern of business-related bankruptcies from the 1950s to 1998-99.[1]

[1] A principal data source for some of the important possible explanatory variables is the Australian National Accounts. However, over the last few years the way in which these accounts have been prepared — especially in relation to unincorporated enterprises — has been changed. The approach taken in this exercise was to splice the latest few years onto the historical data. Splicing can lead to data errors, especially when data revisions and the conceptual underpinnings of the accounts have changed. This should be borne in mind in the analysis that follows. Notably, however, the regression results appear stable, suggestive that any data errors are probably modest.

D.1 Can a bankruptcy *rate* be defined?

Looking at the *number* of bankruptcies by itself may be misleading. Over the long run, Australia's population, economy and number of entrepreneurs has grown — so that the number of bankruptcies would be expected to grow also, without this necessarily indicating any effective change in the incidence of bankruptcy.

A business-related bankruptcy relates to the bankruptcy of a full or part owner of an unincorporated business. Ideally then, estimating the bankruptcy rate requires data on the full number of owners with an interest in an unincorporated business. However, it is difficult to find appropriate measures of the stock of relevant entrepreneurs to construct such a bankruptcy rate. In the absence of an accurate measure of this ideal, we investigated a variety of ways of expressing a bankruptcy rate as the ratio of bankruptcies to:

- the number of self-employed (or own account workers) and employers[2] in the economy recorded by the ABS in its Labour Force Survey. These data do *not* include employers in companies, where liquidation, not bankruptcy, is the mode of exit — they relate only to unincorporated enterprises. In that sense the data appear to be ideal for normalising bankruptcy numbers. However, the data still suffer some limitations. First, the definition excludes people who may be exposed to bankruptcy through their business ownership, but whose main source of labour income is another job. Second, the Labour Force Survey records the number of people in jobs, not the number of jobs held by people. Thus the survey will count a person who owns and operates several businesses as one employer, though the probability of bankruptcy may well increase with multiple ownership. Thirdly, some historical data were spliced, so that older data may be somewhat unreliable:
  - the number of individual taxpayers with income directly derived from business (excluding property income and other subsidiary income) plus the number of partners in partnership arrangements (from Australian Tax Office taxation statistics data); and
  - the stock of real capital employed in unincorporated enterprises. This may be a useful as a denominator in a bankruptcy rate. First, it may be related to the number of owners (although over the longer run there is likely to be trend

[2] The ABS definition of employer is a person who works in their own *unincorporated* business with employees. Similarly an own-account worker refers only to an own account worker in an unincorporated enterprise. People who work in a company they own (with or without other employees) are recorded as employees in the ABS Labour Force Survey.

growth in the capital to entrepreneur ratio). Second, one reason for looking at a bankruptcy rate rather than bankruptcy levels is to control for growth in the unincorporated economy — and the real capital stock of unincorporated enterprises is one measure for doing this.

To be useful, a measure of the bankruptcy rate should provide a quick picture of whether the incidence of bankruptcy as a business phenomenon has risen. All the measures suggest that there has been a rising incidence. Implicit as well in the construction of such a rate is some sort of link between bankruptcy and the numerator. For example, as the number of entrepreneurs rises, all other things being equal, there should be an increase in the number of bankruptcies.

Overall, we found that the first measure — the ratio of bankruptcies to the number of employers and self-employed — was the most stable and conceptually appealing measure.[3] This measure is used in the statistical analysis throughout this appendix.

D.2 The behaviour of bankruptcies over time

The time series behaviour of the bankruptcy rate is interesting in its own right — it indicates the long run behaviour of the bankruptcy rate. It is also important in a modelling context since it is important to distinguish stationary from non-stationary variables.[4]

Trends and volatility

Simple descriptive statistics (table D.1 and figure D.1) suggest that the bankruptcy rate is highly volatile and that, at times, it has trended up or down significantly.

- The bankruptcy *rate* (measured as the ratio of business-related bankruptcies to entrepreneurs) is highly variable (with the maximum value being about 40 times greater than the minimum rate over the period from 1928-29 to 1998-99).
- Bankruptcy rates have tended to climb relatively strongly since the end of the Second World War (by around 4 per cent per annum), but more modestly over the longer run. Bankruptcy rates followed a generally declining trend over the period from 1928-29 to 1950-51.

[3] Employers and self-employed cover most owners of unincorporated enterprises and so are the group exposed to the risk of business bankruptcy.

[4] For example, it is well known that high, but utterly spurious, correlations will often occur between difference stationary (DS) or so-called order of integration one, I(1), variables. This means that they have to be first differenced to make them stationary.

- The *number* of bankruptcies is much more volatile and strongly trending than the *number* of entrepreneurs — that is, variations in the bankruptcy rate over the short to medium term are primarily due to variations in the number of bankruptcies, rather than to the number of entrepreneurs.

Table D.1 **Trend growth rates in the business bankruptcy rate, Australia, 1928-29 to 1998-99[a]**

	Self-employed and employers	*Business-related bankruptcies*	*Bankruptcy rate*
	(%)	(%)	(%)
1928-29 to 1938-40	0.6%	-5.3%	-5.9%
1938-39 to 1944-45	-3.8%	-36.2%	-32.4%
1944-45 to 1963-64	1.1%	16.6%	15.5%
1963-64 to 1988-89	2.1%	2.9%	0.7%
1988-89 to 1998-99	0.8%	6.7%	5.9%
1928-29 to 1998-99	1.3%	4.3%	3.1%
1928-29 to 1950-51	0.1%	-9.9%	-10.0%
1950-51 to 1998-99	1.5%	5.3%	3.7%

a Trend growth rates were calculated by regressing the logged values of the relevant variables against a time trend using OLS.

Is the bankruptcy rate statistically 'stationary'?

The standard test for unit roots — the Augmented Dickey-Fuller test — implies that the bankruptcy rate[5] is a non-stationary process (table D.2). These tests suggest that the best simple representation of the bankruptcy rate in the longer run (from the late 1920s to 1998-99) is a random walk without drift:$\log(BB/N)_t = \log(BB/N)_{t-1} + \varepsilon_t$.

On the other hand, over some shorter periods (for example, the post-war period) it appears that the series behaves like a random walk *with* drift:

$$\log(BB/N)_t = \underset{(2.7)}{0.066} + \log(BB/N)_{t-1} + \varepsilon_t \quad \text{for 1945-46 to 1998-99}$$

where the figure in parentheses is the t statistic.

[5] We define this as log (BB/N) where BB is the number of business bankruptcies and N is the number of self-employed and employers.

Figure D.1 **Business-related bankruptcies, Australia 1928-29 to 1998-99**

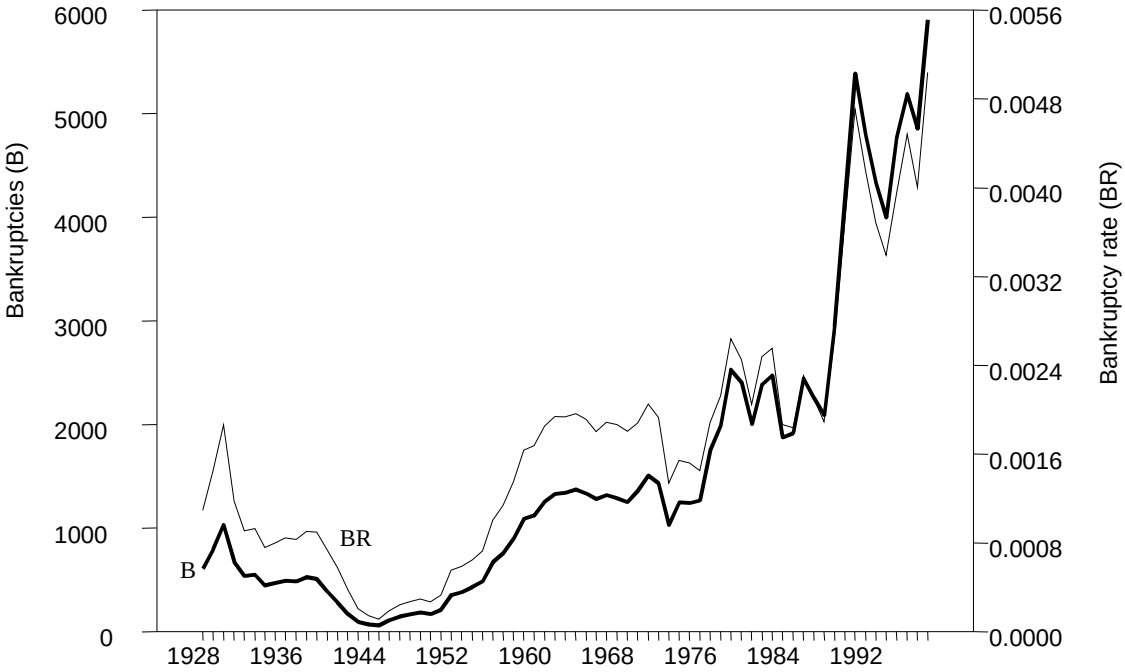


Table D.2 **Augmented Dickey Fuller tests of a unit root in the bankruptcy rate[a]**

Lag length	*ADF t value*	*Joint test of a unit root and no constant*
1928-29 to 1998-99		
0	-0.382 (-2.89)	0.439 (4.71)
1	-0.985 (-2.89)	0.594 (4.71)
1958-59 to 1998-99		
0	-1.108 (-2.93)	1.702 (4.86)
1	-1.232 (-2.93)	1.610 (4.86)

a The ADF test was calculated using the URADF procedure in RATS. Tests for the presence of a unit root depend on including sufficient lags of the relevant differenced series so that the residuals are white noise. The appropriate number of lagged differences was determined using the BIC criterion (1 lag appropriate) and the Lagrange Multiplier test (0 lags appropriate). The figures in parentheses are critical values of the tests at the 5 per cent level.

However, this is untenable as a *long run* characterisation of the bankruptcy rate. Over the very long run a permanent upward drift in the bankruptcy rate would yield the absurd result that the rate would exceed unity, with all businesses failing within a year! The appearance of drift over this shorter period may represent adjustment after the anomalous impact of the (Second World) war years on businesses. It is not apparent over the period from 1958-59 to 1998-99.

It is possible that other (non difference-stationary) processes could yield equally satisfactory explanations of the observed data. For example:

- I(0) and trend stationary (TS) processes can appear to be a difference stationary (DS) process if there is a structural break in the time series. This was tested by including a dummy for the war years (1939-40 to 1945-46). We found that the t statistic on the lagged bankruptcy rate was higher, but not sufficiently so to clearly reject the unit root hypothesis.[6]
- It is hard to distinguish a TS process with high autocorrelation from a DS process. Unit root tests lack power — these tests will routinely be unable to reject the null of a DS process when the real data generating process is a TS process with long memory. Unit root tests stack the odds in favour of a unit root because the null is a unit root, and at conventional significance levels the test inevitably requires very strong evidence of a non-unit root process in order to reject the null. But is a unit root the appropriate null? We conducted a test along the lines advocated by Kwiatowski, Phillips, Schmidt & Shin (1992) which poses trend stationarity as the null and a unit root as the alternative. Using the full period from 1928-29, the null of trend stationarity could not be rejected. However, it could be rejected for the period from 1958-59 to 1998-99. In all cases the null of the bankruptcy variable being stationary around a level could be rejected.

Overall, the evidence suggests that the bankruptcy rate can best be characterised as a DS process, but it is possible that it is a highly persistent TS process.

Regardless, the univariate analysis suggests high levels of persistence of shocks to the bankruptcy rate. Shocks to the bankruptcy rate tend to persist — if the rate reaches a high or low level then it tends to stay at that level rather than converge on some stable long run value. This is a somewhat surprising result since we expected that there would be forces in the economy that would force high bankruptcy rates down over time and low rates up (extra businesses would enter). For example, new, more exposed, businesses might be reluctant to enter the market or business owners might be more prudent in their decisions if the bankruptcy rate were high, making it fall subsequently. The explanation for this pattern may be that a permanent increase in some other variable(s) has increased the long run value of the bankruptcy rate. Some likely suspects are examined later.

[6] Since the null could not be rejected, the bias engendered through the selection of the breakpoint after the examination of the data can be ignored.

D.3 Possible factors affecting the bankruptcy rate

Bankruptcies in a broad context

Bankruptcies are just one 'extreme' form of exit, applying only to unincorporated enterprises that are insolvent. Such businesses may exit prior to insolvency. Moreover, insolvent businesses can, to a limited practical extent, avoid bankruptcy even when insolvent.

To understand the factors that may influence bankruptcy it is useful to consider entrepreneurs' broader choices for exit. Any voluntary[7] decision to exit (regardless of form of that exit) depends on whether $E(U(R_{bus}))< E(U(R))$ where:

- $E(U(R_{bus}))$ is the expected utility to the business owner of the present value of returns to the existing business (including the value of any non-pecuniary benefits and costs such as lifestyle benefits, control of one's own company, the stigma of possible bankruptcy); and
- $E(U(R))$ is the expected utility of alternative returns on the assets tied up in the business (including the owner's human capital).

For example, the decision at any time to continue trading of a solvent business will depend on:

- the returns to entrepreneurship relative to wages paid to employees;
- $E(U(R_{bus}))$ relative to offers from other entrepreneurs;
- entrepreneurial returns relative to pension levels (thus affecting retirement decisions); and
- the prospect of *future* insolvency. The prospect of future insolvency (and probable bankruptcy) may precipitate earlier exit to avoid some of the costs of bankruptcy. These costs include:
  - the additional dilution of a debtor's assets once the position of insolvency is realised and the process of bankruptcy initiated;
  - the legal and accountancy costs of undertaking bankruptcy;
  - the social costs; and
  - the likely lowered return from alternative forms of employment (noting that the expected wage rate and the probability of getting a job in a recession — a

[7] Noting that in some cases, such as the death of the owner, exit of even a solvent business is involuntary.

period when insolvencies rise — is lower than the probability of getting and retaining one by seeking employment prior to a recession).

However, once a business is in severe financial difficulty there are much weaker opportunities to avoid bankruptcy. This is because the decision to continue trading may be made by others (creditor petitions if the business is insolvent) and partly because the projected returns to entrepreneurship are now very low, if not negative.

The implication of the likely negative value of expected entrepreneurial returns for a near-bankrupt firm is that any shifts in employer wages, pensions or other returns outside of the firm are unlikely to have any additional impact on the decision to declare bankruptcy. Accordingly, while a variable such as the ratio of average entrepreneurial returns to wages and salaries may be useful in predicting the frequency of voluntary exits of reasonably solvent firms, it is unlikely to have much value in predicting the frequency of bankruptcies.

The fact that the prospect of future insolvency may precipitate early exit of a solvent firm may also have implications for the impact of macroeconomic variables on the frequency of bankruptcies. The frequency of bankruptcies should, theoretically, be more affected by unanticipated changes in macroeconomic variables than anticipated ones.[8]

Three broad sets of variables appear likely to affect the bankruptcy rate (figure D.2).

Labour and demographic variables

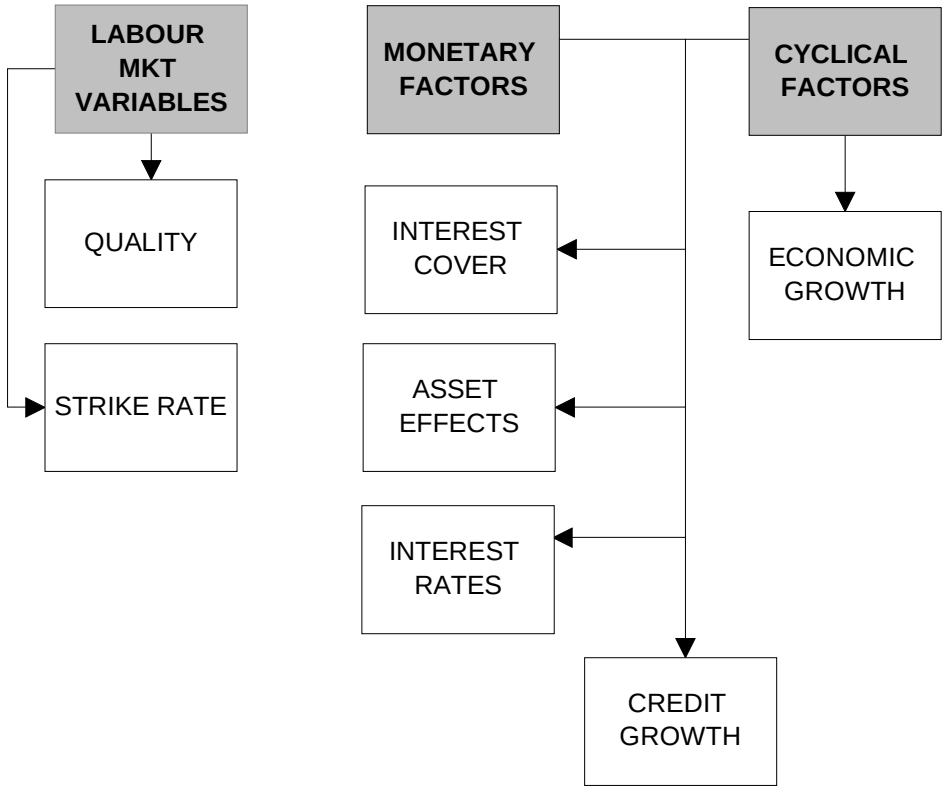
Entrepreneurial quality

Entrepreneurs vary in quality. Poorer quality entrepreneurs are more likely to go bankrupt. However, quality is hard to observe. One possible measure is the ratio of non-entrepreneurial employment to entrepreneurs (QUAL= log [NE/E] where E is the number of entrepreneurs and NE is other employment). As the number of people who are entrepreneurs expand relative to the employed, quality may fall *at the margin.* However, over the last decades entrepreneurs have accounted for a

[8] Why would anticipated changes be likely to still have an impact on bankruptcy? First, some owners may be myopic. While they could have used publicly available information to forecast some future event (say a recession) and avoid a costly bankruptcy by exiting earlier, they do not for some reason, collect or process the relevant information. Second, it is not rational to always act on uncertain expectations in the face of asymmetric costs (Hendry 1995, p. 202ff). For example, I may expect recession next year, but I know that (a) this is an unreliable forecast and (b) the costs of being under or over my forecast by the same magnitude have different cost implications.

diminishing share of the employed labour force — so that, if anything quality may have risen. It seems unlikely that quality has played a major role in the general rise in bankruptcy rates.

Figure D.2 **Macroeconomic factors affecting the bankruptcy rate**



Trends in entrepreneurship

A measure of entrepreneurship is changes in the number of employers and self-employed. Increases in the number of entrepreneurs tend to raise the proportion of inexperienced new business owners — who face a higher likelihood of failure.

Accordingly, there may be a link between short run trends in the number of entrepreneurs (as a proxy for inexperience) and changes in the bankruptcy rate. There is evidence of a weak positive association between trend rates of growth in bankruptcy rates and the contemporaneous and lagged growth of entrepreneurship (table D.3). This link is strong and statistically significant if the data from 1928-29 to 1998-99 are used, but is weaker and not statistically significant in the post-Second World War period.

Table D.3 **Correlation between changes in bankruptcy rates and changes in entrepreneurship**

	0	*Lag 1*	*lag 2*	*Lag 3*	*Lag 4*	*Lag 5*	*Ljung-Box Q-Statistics (lags 1 to 5)*
1928-29 to 1998-99	0.026	0.440	0.445	0.378	0.079	0.072	41.0
1949-50 to 1998-99	-0.254	0.175	0.021	0.036	-0.099	0.139	3.4

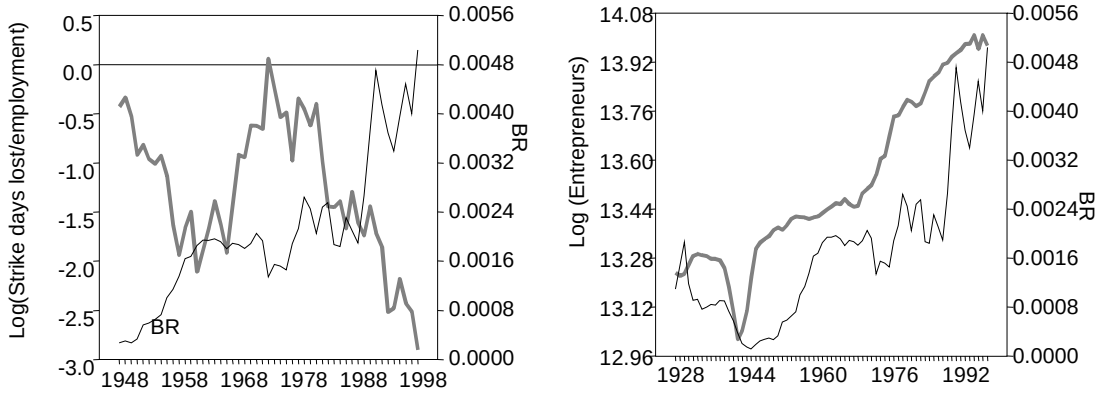
The coexistence of apparently vigorous entrepreneurship and rising bankruptcy rates supports the contention that there may be an 'inexperience' effect. An interesting auxiliary question is whether bankruptcy has adverse effects on entry by, and the stock of, entrepreneurs. There is evidence of such a reversed line of causation — lags of bankruptcy affect growth rates in entrepreneurship negatively.[9] Accordingly, there is evidence that increases in entrepreneurship increases the bankruptcy rate, and that in turn reduces future entry by entrepreneurs.

Strike activity

Strike activity (measured as days lost per employee) has, at times, had large impacts on firm and industrial performance, both in the firms and industries directly affected and in suppliers and customers of these industries (figure D.3). Small cash-flow dependent firms are vulnerable to failure from strike activity, especially when strikes are enduring. However, strike activity appears to have moderated in the last few decades from the high levels seen in the 1970s. It is not a strong candidate as an explanator for the general upward shift in bankruptcy rates (and proved insignificant in regression models).

[9] Using the sample from 1928-29 to 1998-99, the cross correlations between Δ log N and lags 1 to 5 of Δ log BR are -0.17; -0.13; -0.28; -0.26 and -0.14. The Q statistic testing the joint significance of these correlations is 16.0 or highly significant. However, *for this period* there is also a strong (and statistically significant) positive set of correlations between Δ log BR and lags of Δ log N. However, if the post-war sample (from 1948-49 to 1998-99) is used there is no statistically significant relationship between changes in bankruptcy rates and lags in Δ log N. On the other hand, there is a significant and negative relationship between Δ log N and lagged changes in bankruptcy rates. Granger-Sims causality tests (including the Geweke-Meese-Dent variation) suggested that the causal links between bankruptcy and entrepreneurship could run both ways.

Figure D.3 **Labour variables**



Income and economic activity variables

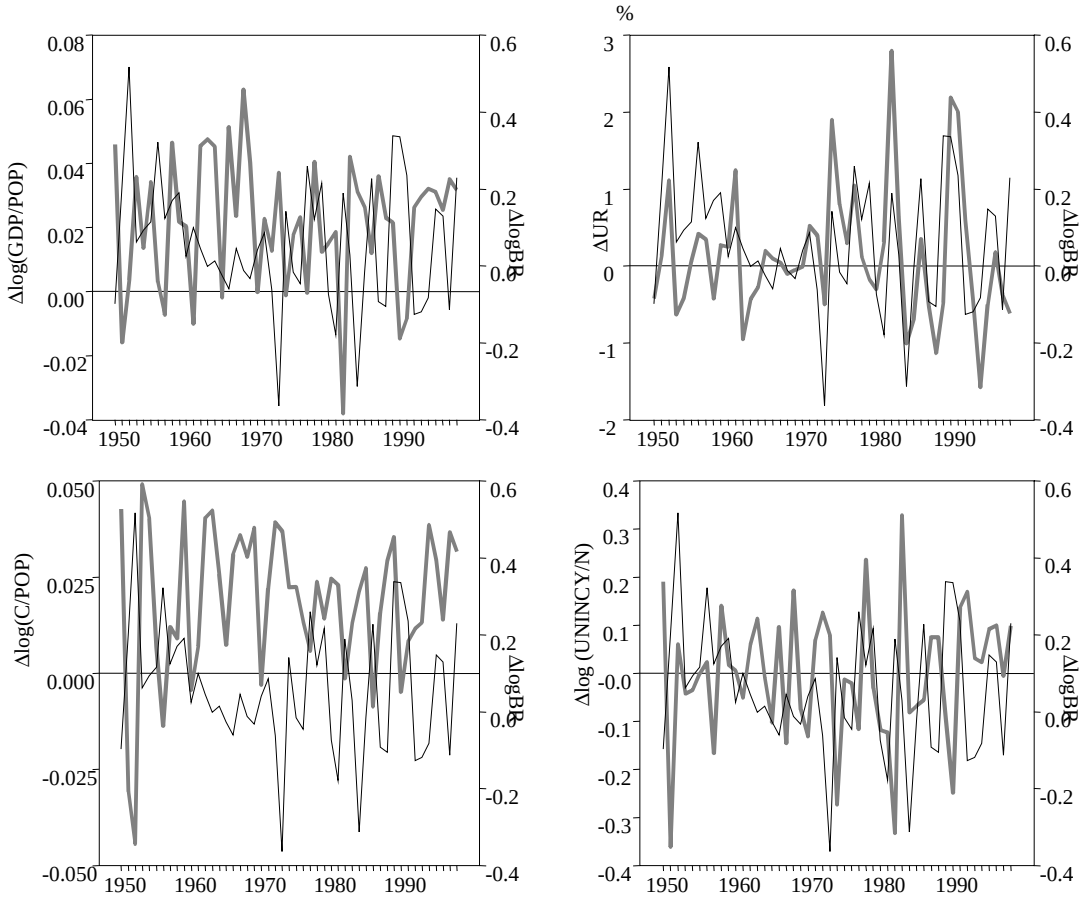
A number of variables were examined to assess cyclical impacts on bankruptcy rates (figure D.4). These are described below.

- Changes in log real per capita GDP.
- Changes in log real per capita consumption. This was included because smaller, bankruptcy-prone firms may be more dominant in industries selling non-tradeable final consumption goods and services. The consumption variable was found to have less powerful explanatory power (in terms of simple correlations with changes in bankruptcy rates) than the GDP variable.
- Changes in log real unincorporated income per entrepreneur. There was a strong negative correlation between lagged changes in this income measure and changes in bankruptcy rates. However, we also found a positive connection between lagged changes in bankruptcy rates and the income measure. This is consistent with our earlier hypothesis about the impact of bankruptcy on entrepreneurship. Higher bankruptcy rates may drive out existing entrepreneurs (and stem flows in of budding entrepreneurs), while creating bigger and more profitable markets for those remaining. If nothing else, this curious pattern of causality means that simultaneity biases may arise when modelling bankruptcy.
- Changes in the unemployment rate. Contemporaneous unemployment changes are a measure of cyclical demand shocks and also the capacity of firms[10] to weather such shocks. There is a positive correlation with changes in the bankruptcy rate. Over longer lags, however, there is some evidence that

[10] Firms will often try to hoard skilled labour in a downturn if they have the financial strength to do so. When they lack that capacity to do so, they are both exposed to greater likelihood of failure and will tend to retrench more staff.

unemployment rates may actually decrease the bankruptcy *rate* by encouraging net flows into self-employment. This occurs through two routes: the incumbent self-employed who might be thinking of shifting to paid employment see weaker opportunities and remain self-employed, while some unemployed people shift into self-employment.

Figure D.4 **Income and economic activity**[a]



[a] The light line denotes the change in the bankruptcy rate in each graph.

So far, it has been assumed that an economic downturn will have the same impact on bankruptcies regardless of when the last downturn occurred. However, it has been claimed that recessions tend to generate the exit of the most inefficient firms and that the remaining firms are more efficient and resilient. Under this interpretation, recessions are like flu bouts, raising the immunity of the surviving incumbents to new epidemics (downturns). We measured the possibility of an 'immunising' impact from recessions by generating a variable that counted the number of years after the last recession (measured as a fall in per capita real GDP). So the recession in 1977-78 (19 years after the previous recession) may have a bigger impact on bankruptcy rates than the 1982-83 recession (just four years later).

However, regression analysis did not find strong evidence for this immunising effect.

Also, it is possible that positive shifts in economic activity and demand have different absolute impacts over time on bankruptcies as negative shifts of the same magnitude.[11] Some simple bivariate models suggested the possibility of bigger and more protracted effects from downturns than upturns but the results were not robust. Different choices of the cyclical variable made large differences to the outcome, so that in the final regression mode, downturns and upturns are not distinguished.

Financial variables

High interest rates are nominated by bankrupts as major contributing causes to business failure. Higher interest rates (figure D.5) will tend to be associated with reduced business income because of both increased debt burdens and because of knock-on effects on economy-wide demand. However, the effects of financial variables, such as interest rates and the associated availability of credit, involve some subtleties.

First, at times, *nominal* interest rates have been very high, but *real* after-tax rates have been small or negative. In effect, businesses holding debt during high inflation times enjoyed a capital gain as inflation whittled away the value of outstanding debt. In theory, this would make firms less vulnerable to bankruptcy. A variable measuring this capital gain[12] proved to be highly negatively correlated with bankruptcy.

Second, Australian banks have been subject to varying levels of regulatory oversight, with the effect that lending to businesses was sometimes rationed. Arguably, with strong rationing, only the best firms were given access to credit. It seems likely that these sorts of credit constraints would have *decreased* the bankruptcy rate. However, over time, the amount of rationing has slowly relaxed. As regulatory credit constraints were relaxed, this would have led to credit being made available to businesses that are more marginal. It would also imply that some highly leveraged firms were more exposed to interest rate increases. At a time of tighter monetary policy and slackening demand, highly leveraged firms will have less cash flow for working capital requirements and face some difficulty in

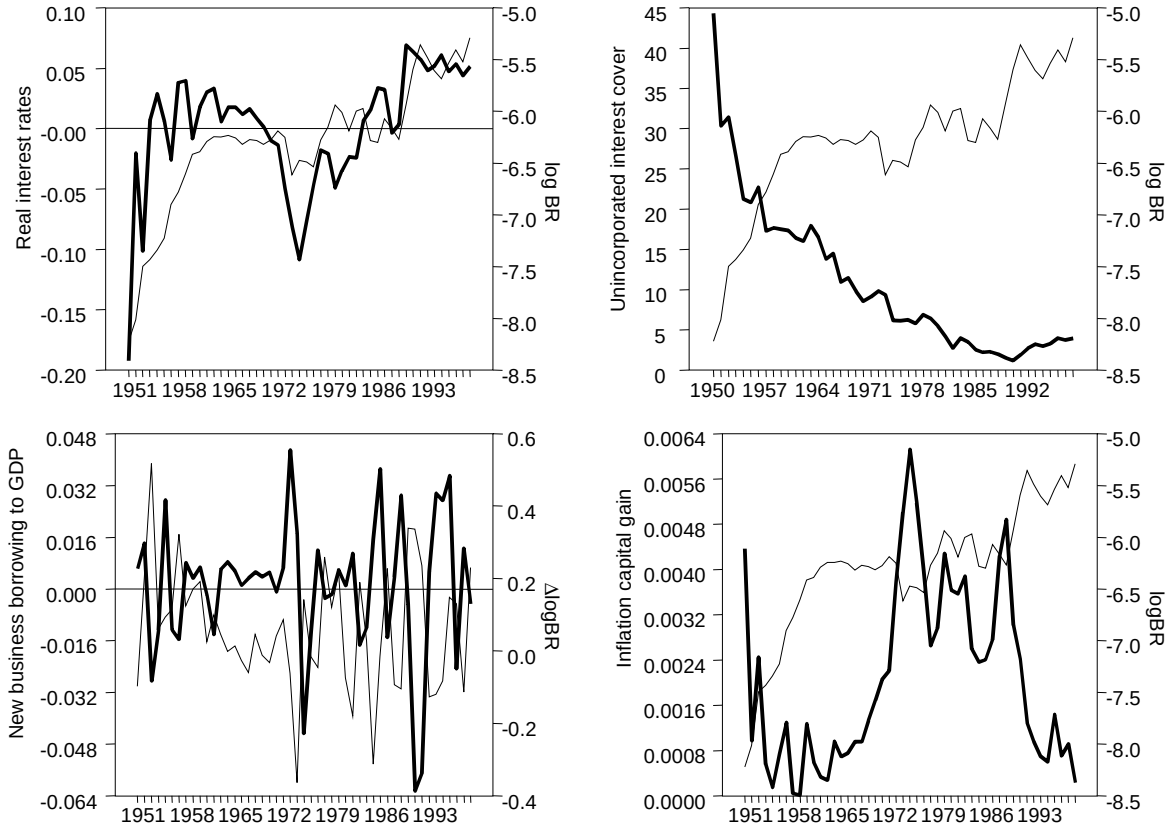
[11] We estimated models in which we regressed the change in the bankruptcy rate on the lagged level of the bankruptcy rate and various positive and negative cyclical variables (such as the positive and negative components of GDP or consumption growth).

[12] The real capital gain (CGAIN) was measured as inflation multiplied by real unincorporated debt divided by the number of entrepreneurs.

persuading any financial institution to add to their debt. Such firms are likely to be much more vulnerable to bankruptcy. The effect of generally falling interest rate cover —the consequence of easier credit availability — was consequently tested in the regressions. Decreasing interest cover appears to increase bankruptcy rates.

Third, over the short run, credit availability can vary significantly. Positive shifts in credit availability will be expected to have two short run negative effects on the bankruptcy rate. Increases in credit (new borrowings by business) allow some businesses to avoid cash flows that might otherwise threaten insolvency. As well, increased credit availability tends to be associated with more buoyant economic times, so further capturing the economic cycle's effects on bankruptcy.

Figure D.5 **Financial variables**[a]



[a] The light lines represent the bankruptcy variable.

Another possible financial variable of potential interest when considering insolvency risk is collateral availability, since collateral can be used as a basis for increased borrowings to tide over cash flow problems. A major source of collateral for small businesses is housing. Consequently, a variable that measured the nominal

increase in housing prices was considered.[13] It had the predicted negative effect on bankruptcy rates, but was also highly correlated with Δ log (GDP/POP) and was not included in the final model.

D.4 Model results

Modelling started with a general specification that was reduced to the one shown in table D.4. This suggests that:

- increases in real GDP per capita reduce the bankruptcy rate;
- lagged capital gains from the effect of inflation on debt reduce the bankruptcy rate;
- increases in interest cover (the ratio of unincorporated income to interest payments by unincorporated interest payments) reduces the bankruptcy rate. This variable captures the combined effect of a generally increasing exposure of businesses to debt (with large increases in the ratio of the stock of debt to unincorporated income) and changing interest rates;
- increases in new business borrowing to nominal GDP (the short-run credit availability variable) are associated with a decrease in the bankruptcy rate; and
- increases in the bankruptcy rate tend to reduce the growth in the bankruptcy rate in the following year. The lagged bankruptcy rate can be interpreted as an error correction term (since it represents log (bankruptcies) - log(entrepreneurs)). The regression of the log of bankruptcies (not the rate) on the log of entrepreneurs, interest cover and capital gains can be interpreted as a long run relationship between bankruptcy and its determinants. The residuals of this regression I(0) suggest that these variables are co-integrated. This implies that the specification used in table D.4 is balanced (that is, orders of integration on the left and right hand side are matched).

The model suggests that the important influences that have driven up bankruptcies rates since the Second World War have been:

- declining interest cover (particularly important in explaining the rise from 1950-51 to 1970-71); and
- the disappearance of capital gains associated with the interaction of inflation on debt, combined with the effects of the deep recession in the early 1990s (particularly important in explaining the rise in bankruptcies from the late 1980s

[13] Unfortunately, a long time series on house prices is not available. However, the national accounts item — real estate transfer expenses — is highly correlated with housing prices and serves as a useful proxy. The data were used in log difference form.

to 1998-99. Note, however, that an alternative explanation is that of high real after tax interest rates (which rose steeply in the early 1990s). This is because the capital gain variable and real after-tax interest rates are highly (negatively) correlated. The capital gain variable was used in the model because it had greater overall explanatory power. This underlines some of the difficult problems of interpreting the genuine underlying determinants of aggregate bankruptcy rates.

It should be noted, however, that a significant share of the expansion remains unexplained.

A series of diagnostic tests were applied to the model to test the standard assumptions about normal homoscedastic, non-serially correlated residuals (tables D.5 and D.6). These suggested that these assumptions could be justified. The RESET test suggested no evidence of functional form mis-specification, while a Chow test of parameter instability (and estimates of recursive coefficients and residuals) suggested that the model was stable over time.[14] The model appears to forecast reasonably well out of sample (figure D.6).

Since interest cover and new borrowing are variables that are partly determined by the choices of unincorporated enterprises, it may be that there is exogeneity bias in the ordinary least squares (OLS) regression in table D.4. In order to test this, instrumental variable (IV) estimation was undertaken. The instruments selected (mainly lags of the relevant variables) appeared to be valid instruments (as suggested by the Sargan test). The resulting IV estimation suggested that OLS was not biased (as suggested by the Hausman test).

We also tested the degree to which bankruptcy rates were more responsive to ‘surprises’ in macroeconomic variables rather than anticipated changes. The evidence is equivocal. On the one hand, it appears that bankruptcy rates are more responsive to surprises in changes in $\Delta\log(GDP/POP)$ than expected $\Delta\log(GDP/POP)$. But the opposite is true for interest cover. In any case, once the imprecision in the estimates is accounted for, the hypothesis that the impact effects for the GDP, interest cover and borrowing variables is the same for predicted and unpredictable changes cannot be rejected.[15]

[14] With the exception that the one step Chow test suggested a peak in residuals in 1989-90. Other tests, such as the breakpoint Chow and forecast Chow tests, suggested no parameter instability.

[15] Again instrumental variable estimation was undertaken to deal with the biases engendered by using auxiliary regressions to form expectations.

Table D.4 **Model results (1950-51 to 1998-99)**

	OLS		*IV*	
	Coefficient	*White's t statistic*	*Coefficient*	*t statistic*
Constant	-1.22	-3.6	-1.60	-3.0
$CGAIN_{t-1}$	-53.8	-4.1	-64.0	-3.5
INTCOVER	-0.0147	-3.6	-0.0207	-2.7
BR_{t-1}	-0.249	-4.1	-0.324	-3.2
Δ log (GDP/POP)	-1.82	-2.5	-1.97	-1.7
$(LEND_t-LEND_{t-1})/NGDP_{t-1}$	-3.78	-5.9	-2.68	-1.5
N	49		49	
R^2	0.574		0.541	
SE	0.116		0.12	
Chow stability test with break at 70-71 (F6,37)	0.24			
Hausman exogeneity test result is Chi-Squared(6)			1.24	
Sargan instrument validity test Chi-Squared(4)			4.92	

Table D.5 **Basic diagnostic tests on the OLS model**

DESCRIPTION	*VALUE*	*P-VALUE*	*LM F*	*LMF P-VALUE*
NORMALITY TEST	0.33	0.85		
HET: E^2 ON YHAT	0.46	0.50	0.40	0.53
HET: E^2 ON YHAT^2	0.18	0.67	0.15	0.70
HET: E^2 ON LOG(YHAT^2)	0.04	0.83	0.04	0.85
HET: E^2 ON X (B-P-G TEST)	3.72	0.16	1.69	0.20
RESET2 F TEST	0.30	0.59		
RESET3 F TEST	0.08	0.78		
HET-ARCH: E^2 ON LAG(E^2)	2.20	0.14	1.97	0.17
HET-ARCH:E^2 ON 4 LAGS OF (E^2)	5.33	0.26	1.18	0.34

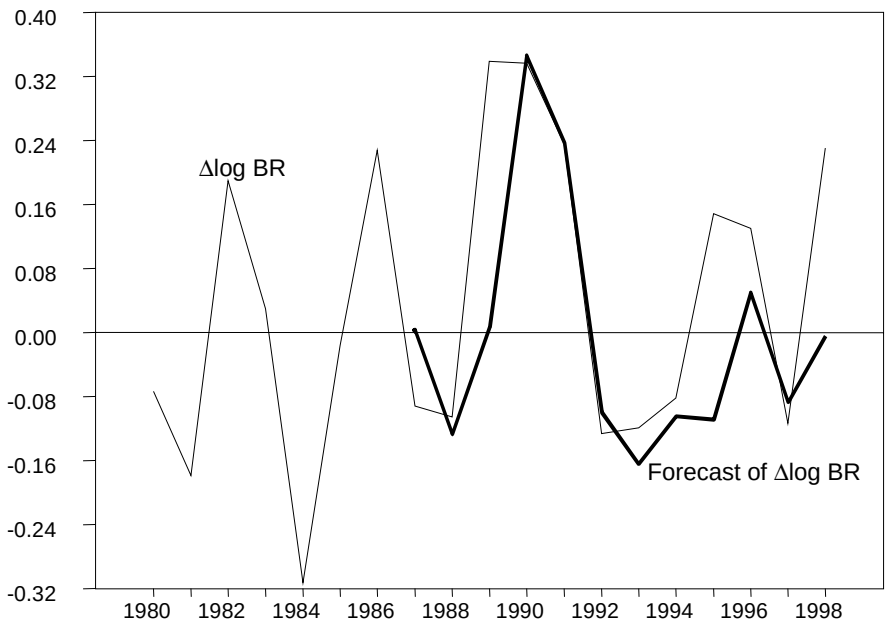
[a] The normality test is the Jarque-Bera test. The HET tests are tests for heteroscedasticity, while the HET-ARCH tests are for autoregressive conditional heteroscedasticity.

Table D.6 **Asymptotic t tests of serial correlation in the equation residuals[a]**

Lag	*Lag RHO*	*LM T STAT*	*P VAL*	*LM F*	*LMF P-VAL*	*JOINT EQ RHO*
1	-0.088	0.6	0.55	0.31	0.58	-0.02
2	-0.176	1.2	0.25	1.17	0.29	-0.25
3	0.050	1.1	0.27	1.03	0.32	-0.03
4	-0.098	1.1	0.27	1.06	0.31	-0.12
5	-0.346	2.2	0.03	4.58	0.04	-0.36

a These results are asymptotically valid with the lagged dependent variable. The joint Chi squared test of the significance of autocorrelated errors (significance value of 0.24) and the associated joint F test (significance value of 0.34) do not reject the null of no autocorrelation.

Figure D.6 **Actual and forecasts of Δlog(BR) using the model[a]**



a These are the one-step-ahead forecasts based on the model being estimated to the preceding period.

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