Corporate Debt Markets

Kevin Davis

Colonial Mutual Professor of Finance
Department of Accounting and Finance
University of Melbourne

For inclusion in M.K. Lewis and R.H. Wallace (eds) The The Australian Financial System (Longman Cheshire) 1995.

1 Introduction

The 1980s were a decade of debt. The Australian private sector's net external debt grew from 6.8% to 29.2% of GDP between June 1981 and 1990, and credit granted by domestic financial institutions[1] increased by 336% (with the business share of this growing from 56 to 63%). When the credit figures are expressed as a per cent of GDP (see Table 1) the contribution of business borrowing to credit growth during the 1980s is readily apparent[2].

The borrowing binge of the 1980s has been followed in the 1990s by a spate of corporate collapses, small business bankruptcies, and a downturn in corporate debt finance. Whether those failures can be attributed to the business sector being 'overborrowed' and the downturn in debt finance simply a temporary reaction to that situation or due to some more permanent influences are questions considered in this chapter.

Another question addressed is why particular changes occurred in the types of financial instruments issued by corporate borrowers. Debt can be short or long term, fixed or floating interest rate, directed at institutional or retail investors, offer different types of security, involve various options to vary repayment schedules, etc. Significant changes have occurred in all of these dimensions: unsecured lending became more prevalent until halted by the spate of corporate failures in the late 1980s; domestic debt issues have been increasingly directed at institutional investors; debt with equity conversion options (convertible notes) has waxed and waned in importance; companies have made increasing use of derivative financial instruments to manage their assets and liabilities; securitisation of loans has grown in importance.

These choices are conditioned by the size of enterprise. Small companies do not have the market presence, nor the scale of borrowing needs, required to tap international debt markets. Nor can small companies create securities which are of sufficient liquidity and perceived freedom from default risk to issue directly to domestic investors. For them, financing by banks and other financial institutions assumes major importance[3] (although financial innovation has seen many of these forms of financing converted into marketable securities[4]). The adequacy of small firms' access to finance is a recurring issue which has been addressed by the IAC (Banks, 1991) and the Reserve Bank of Australia (1994a) and is considered below.

As company size increases, funding options widen. Wholesale markets with large issue volumes and trading based on the issuer's identity become accessible (with the aid of investment banks). Hiring specialist Treasury staff allows more complex financing techniques to be used. Banking relationships change: the funding requirements may exceed one banker's lending capacity (due to exposure limits to any one customer), so that loans must be syndicated. Special 'project financing' packages can be tailor-made to take account of the specific risks and cash flows anticipated in large scale investment projects.

There are sources of funds other than debt or loan financing. Use of finance or operating leases to fund capital equipment is one close alternative to debt[5]. Another is

the use of equity funding, either through new issues or retention of earnings, along with hybrid instruments which blur the distinction between debt and equity[6].

Such diverse funding avenues means that we must study the supply side of company finance generally. Changes in regulation, tax and other legislative requirements upon companies are important determinants of company funding decisions, as are cyclical variations in business investment. On the demand side, developments in other financial markets (such as those for public sector securities - see chapter xx) and in institutional savings arrangements (such as those for retirement provision - see chapter xx) which affect the demand for corporate debt securities need to be considered.

Consequently section 2 of this Chapter examines the data base on company finance generally. The focus is upon corporates' total borrowings - both from intermediaries (such as banks) and by issue of securities - as a component of overall financing. In subsequent sections the emphasis switches to the process of creation of corporate debt instruments and the characteristics of markets in which they are traded. Section 3 deals with new issue procedures, and the role played by financial engineering[7] in reconciling issuer preferences with investor demands. Other methods which are used to make corporate debt instruments more attractive to investors are outlined in section 4,. Subsequent sections examine specific debt instruments and markets including debentures, convertible notes and other hybrids, Eurobond and other offshore markets, and the domestic corporate bond market. Finally, the conclusion returns to the questions posed above regarding recent developments.

2 Fundamental Influences on the Growth of Corporate Debt

Corporate debt financing can be examined in at least two ways. One approach is to examine the balance sheet structure of firms, focusing upon leverage and other balance sheet ratios or income statement ratios, such as the interest - coverage ratio resulting from balance sheet choices. The alternative is to examine the flow of new securities issued. Both have advantages and disadvantages. The “stock” approach is most useful for cross section comparisons aimed at discovering the determinants of optimal capital structure. Its deficiency lies in its ability to identify the relative importance of internally versus externally generated funds (i.e. retained earnings versus security issues), nor does it provide much insight into causes of growth of particular financial markets. Consequently, it is necessary to utilise both approaches as complements - and that is the approach followed here.

As a starting point it is useful to look at the trends in corporate leverage over time. Lowe and Shuetrim((1992) have examined the average debt - asset ratio and interest coverage ratio for a large sample of Australian companies over the period 1973 - 1990, and their results show similar trends to those displayed in Table 2. Leverage increased markedly in the 1980s, with the debt - total assets ratio rising from a figure of between 0.5 - 0.55 in the 1970s to 0.66 at the end of the 1980s. The average interest coverage ratio fell substantially in the 1980s (from around 6 times at the start of the 1980s to 3 times at the end of the decade for their sample of firms). Even allowing for the higher interest rates of the latter part of the 1980s (and the element of real principal repayments in nominal interest rates), the higher ratio of interest obligations to company income suggests an increased reliance upon debt. This was also the

conclusion of EPAC (1990): the increase in corporate debt exceeded that in assets, implying an increase in the debt/equity ratio.

These trends appeared to be widespread, and not due to changes in financial structure in a subset of firms. The data in Table 2 suggest that there may have been some decline in leverage in the 1990s, and this is also indicated in the study by Mills, Morling, and Tease (1993), and in the flow of funds data discussed below.

Two other features of this data warrant attention. First, judged by international standards, Australian companies fall into the "lower leverage" category which Borio (1990) has noted distinguishes Anglo-Saxon countries from Continental Europe and Japan. Second, the upward trend in leverage found by Lowe and Shuetrim is only observed when leverage is calculated using book value rather than market value of equity. (See also Stevens, 1991).

These observations prompt some important questions. First, what are the institutional features which lead to such international differences in reliance upon debt finance by business? Second, was the increase in leverage (measured in book value terms) due to easy credit availability, to tax distortions which gave an incentive to debt finance in periods of high inflation, to a growth in investment opportunities which could not be met from retained earnings, a reaction to the increase in market value of equity (which would prompt increased issues of debt if financial managers have a target market value debt equity ratio), or due to some other factors? Third, is the apparent decline in leverage in the 1990s likely to be transitory, or a permanent reaction to some fundamental changes in tax or other institutional features?

A further set of questions relate to the composition of debt financing. One notable feature of corporate finance in Australia is the relatively slow growth of the domestic corporate debt markets (vis-a-vis other forms of corporate financing and experience overseas). Tables 3 and 4, show how the use of marketable domestic corporate debt instruments (debentures, notes etc.) has lagged well behind that of other forms of business financing[8]. Credit from intermediaries and overseas dominated in the 1980s while equity financing has been predominant in the 1990s to date.

Details of the composition of borrowings in recent years are given in Tables 5 and 6. Four major features stand out. First, only 30 per cent of borrowings are in the form of debt securities, three quarters of which are short term in nature. Second, the overseas sector is a major supplier of funds, holding three quarters of the (small amount of) long term debt on issue and providing one quarter of the funds available from loans and placements. Third, banks are a major source of financing[9], providing 40 per cent of loans and placements and being a major facilitator of credit through provision of bank bill facilities (which account for over eighty percent of the short term debt securities listed in Table 6)[10]. Fourth, there is very little direct debt based financing from domestic savers such as households.

To address the question of why there is this pattern of financing as well as the questions posed earlier (which cannot be fully answered within the scope of this

chapter) it is necessary to examine the determinants of corporate debt funding. Three major influences on corporate debt funding can be identified[11]. They are:

[a] The gap between corporate asset acquisition and internally available funds.
[b] Corporate preferences between different types of external funds - such as bank funding, equity issues, or debt securities.
[c] The preferences of lenders between corporate debt instruments and other securities available.

We consider these three influences on corporate debt markets in turn.

2.1 Corporate Asset Acquisition

Equation 1 provides a starting point. Based on the balance sheet identity of assets and liabilities, it says that gross asset acquisition (comprising financial asset purchases (dA) and gross physical investment (GI)) must equal gross saving (GS) plus incurrence of financial liabilities (dL). Here GS refers to undistributed income plus depreciation allowances, while dL refers to issues of debt and equity instruments.

$$dA + GI = GS + dL \quad (1)$$

Stated alternatively, the equation implies that incurrence of financial liabilities (dL) finances the corporate sector's deficit (GI-GS, i.e. investment minus saving) plus its acquisition of financial assets (dA)[12].

Unfortunately a consistent long run of time series data on each of the separate components of (1) is not available, creating a break in the graphs shown in Figure 1[13]. Nevertheless, some interesting trends can be observed. Up until at least the mid 1980s, corporate acquisition of financial assets (dA) grew, indicating growth in corporate gross financial liabilities outstripping growth in physical assets. That trend abated in the late 1980s and early 1990s, with companies running down holdings of financial assets as funds from internal sources (gross saving) dried up with the recession. Although some return to acquisition of financial assets has occurred since 1992/93, the ratio of financial assets/total liabilities has declined from 29.6% at June 1990 to 27.0% at June 1994[14].

Figure 1 also demonstrates an apparent growth in external equity financing in the mid 1990s, in marked contrast to its minor role in the 1970s and 1980s. While this is consistent with the rush of new company floats and rights issues by established companies in the 1990s, it should be interpreted with caution, since it is also likely to incorporate equity issues arising from dividend reinvestment schemes which became popular in the late 1980s. Since these schemes involve semi automatic reinvestment of dividend payments, “external” equity raised in this way could be interpreted as a form of retained earnings. Examining the aggregate of gross saving (effectively retained earnings plus depreciation allowances) and external equity, it is apparent that equity funding has become the dominant source of new funding for Australian companies in the middle of the 1990s.

Quite noticeably, debt finance has declined in importance in the 1990s, with Australian companies actually reducing debt outstanding in the three years ending 1993/94. This is in large part accounted for by the decline in credit granted to business by intermediaries which stagnated in the early 1990s and then began to fall.

Although business investment fell in the recession of the early 1990s, the ability of business to run down holdings of financial assets meant that this decline was more moderate than might have been expected given the decline in credit growth and the decline in business profitability and gross saving. This can be seen in Figure 2, which depicts growth in business credit (admittedly an imperfect measure of gross corporate financing) and business gross investment[15].

It would seem that in the latter half of the 1980s business credit growth surged, much more than was seemingly warranted by the strong growth in investment. Conversely, at the turn of the decade, a massive decline in business credit accompanied the investment downturn. As business investment has recovered (modestly) since 1992 there has been little evidence of any return to debt financing, with companies financing expansion by use of equity finance.

Several alternative explanations can be offered for this experience. Credit growth in the 1980s may have reflected a rearrangement of debt financing patterns towards intermediated credit, following the deregulation of the financial sector. Alternatively, credit growth may have been substituting for other non-debt sources of finance such as business savings (retained earnings[16] and depreciation) or new equity raisings. Or, lax credit assessment by lenders in the competitive environment under deregulation may have fuelled a boom in business expenditures involving both physical investment and asset purchases. Accumulating evidence of poor investment decisions by corporate Australia (and quasi-government enterprises) has elevated the "orgy of lending" explanation so that it is presently the conventional wisdom in explaining the 1980s experience. In the 1990s, there appear to be at least four factors relevant to explaining the decline in credit granted to business. First, following the disastrous bad debt experiences of the late 1980s, Australian banks tightened credit standards and adopted conservative lending policies. Second, the downgrading of bank credit ratings meant that many high credit rating corporate borrowers could raise funds directly on terms preferable to those available via bank intermediaries. Third, new bank capital adequacy requirements introduced in 1988 have been seen by many to impart a bias towards bank lending to residential property investment relative to corporate funding. Fourth, changes in the company tax system in 1987 (the introduction of dividend imputation) have reduced, if not eliminated, any tax bias towards debt finance in favour of equity finance.

Throughout the latter part of the 1980s, policy makers became increasingly concerned with 'asset price inflation', which it could be argued was a consequence of a lack of monetary restraint[17]. Between June 1984 and September 1989, asset prices (as measured by an index constructed by the Australian Treasury increased by 103% compared to an increase in the CPI over the same period of 42%[18]. (The asset price index subsequently fell by 12.5 % to its trough in March 1993). Figure 3 illustrates, using T-accounts, how a speculative price spiral in asset prices can occur in a regime

of easy credit and give rise to movements in credit magnitudes similar to those described above. Figure 3 hypothesises an initial situation in which Company X has net worth (NW) of $100 and cash assets (deposits) of $100, while Company Y also has net worth of $100 invested in land worth $100. If X, deciding that Y's land is worth $200, can obtain a bank loan of $100 to purchase it for $200, asset (land) prices increase, business cash (financial asset) holdings increase, and bank credit increases. (Note also that net borrowings (loans minus deposits) by the business sector do not increase).

Figure 3: Bank Credit and Asset Price Inflation

Panel A **Initial Situation**

Company X				Company Y				Bank			
Dep	100	NW	100	Land	100	NW	100	Asset	100	Deposit	100

Panel B **Final Situation**
after
(i)Bank lends $100 to X
(ii)X pays $200 for land to Y
(iii) Y deposits $200 in Bank

Company X				Company Y				Bank			
Land	200	NW	100	Dep	200	NW	200	Asset	100	Deposit	200
		Loan	100					Loan	100		

Constraints on such behaviour might be expected to be twofold. The first is in the need for the banking sector to hold increased cash reserves as credit expansion swells the deposit base. However, where banks provide credit to companies such as A by accepting bills of exchange, and companies such as B hold bank bills as liquid assets, the need for increased cash reserves is less apparent. In these circumstances, a credit - asset price inflation cycle can continue as long as banks are willing to provide credit on the basis of the security of inflated asset prices. The consequences of a subsequent downward revision of expectations of asset values can be readily appreciated, and bears a close resemblance to the Australian corporate and bank experience at the beginning of the 1990s.

A second constraint should occur as increased corporate borrowing (unless accompanied by equity raisings) raises financial leverage ratios. Such a signal of increasing risk did occur during the 1980s (see Table 2), but was largely offset by the boom in equity prices until the October 1987 crash. As noted earlier, when debt/equity ratios are calculated using market values rather than book values for equity, the increased leverage shown in Table 2 largely disappears.

While the preceding discussion focuses upon the role of corporate debt finance in explaining events of the 1980s, it is inappropriate to ignore the choice made by business between the role of debt and equity in external funding, or between external and internally generated equity funds (obtained by retention of profits rather than payment of dividends). Table 7 presents some evidence on this matter, and shows a wide variation in gearing ratios (debt/equity) across different industries. Table 8 provides a profile of an average non-financial company, and indicates some decline in leverage in the 1990s consistent with data presented earlier.

As noted earlier, when compared with the market value of equity, borrowing by Australian companies does not seem "excessive". Indeed the relative aggregate stability of the debt/market-capitalisation ratio could be interpreted as evidence of a need to borrow to maintain an optimal capital structure. In retrospect, of course, what was excessive was the unsustainable increase in equity prices (at a global level). While it is difficult to sort out cause and effect in explaining the simultaneous increases in equity values, other asset prices, corporate borrowings, and intermediary credit, the evidence is at least consistent with a story which recognises the role of lax monetary conditions - under deregulation - in allowing or fuelling an expectations-led boom.

2.2 Issuer Preferences and Options

Corporate financing decisions are affected by the institutional and regulatory environment within which business operates, as well as by characteristics of the business itself, such as its size, operating leverage etc. In this section our concern is with institutional factors, such as the structure of the taxation system and financial market regulation, and their effects upon the market for corporate debt.

Taxation

There are two ways by which taxes can affect corporate debt. First, the company tax system affects the debt-equity choice of businesses and the overall use of debt. Second, specific taxes may influence the incentives of firms to issue or investors to hold certain types of debt instruments.

A long and voluminous literature examines the impact of taxes on corporate capital structure[19]. Individual firms must balance the tax-induced differences in relative financing costs against other costs related to capital structure when choosing the mix of debt and equity finance used. Under a "classical" tax system, in which "double taxation" of dividends occurs, firms have some incentive to use debt financing. Counterbalancing that effect, too much debt increases the probability of financial distress and financing costs are raised if the market perceives that to be the case. Regardless of how individual firms are affected it seems likely that the aggregate debt-equity ratio will be affected by the structure of the tax system[20].

A further impact of the tax system comes from the treatment of capital gains. Where capital gains are taxed at a lower rate than other income, retention of income (through a low dividend payout ratio) rather than external equity financing becomes attractive.

Whereas the Australian tax system may have once biased companies towards use of debt finance (and retention of earnings), major revisions to the system in 1985 and 1987 (which were reinforced by changes to the taxation treatment of superannuation funds in 1988) have altered that. A dividend imputation system of taxation was introduced in 1987, and an explicit capital gains tax (on inflation-adjusted gains) came into effect in 1985.

The dividend imputation system of taxation has the effect of converting company tax paid (at a rate of 33% in 1994) into a withholding tax for Australian resident taxpayers. Ignoring differences in the timing of tax payments, total (company plus personal) taxation of corporate operating income is the same whether it accrues to Australian creditors (i.e. debt-holders) or to shareholders of the firm. There is no longer an aggregate tax incentive to debt finance so long as Australian resident taxpayers are the "marginal investors" who determine Australian asset yields. If, however, foreign shareholders dominate price determination in Australian equity markets, a tax distortion in favour of debt financing may still remain. This is because the Australian tax credits associated with franked dividends cannot be used to reduce ultimate tax liabilities in other jurisdictions[21].

The interaction of the Australian tax system with foreign tax systems has other effects upon Australian corporate financing choices. One such influence is the withholding tax on interest and dividend income paid to non-residents. When companies borrow overseas, the interest paid is deductible in calculating liability for Australian taxation, but the recipient of that interest is outside the Australian tax system. Withholding tax captures part of the income stream for the Australian tax authorities, and to the extent that it is a net addition internationally to taxes paid on that income reduces the attraction of that financing technique[22]. Much of the attraction of Euromarket borrowings has been the lower cost of funds arising from the tax minimisation of some holders of these "bearer" instruments.

A further interaction between international tax systems arises from dual taxation agreements whereby credit is given for tax paid in other jurisdictions. The foreign tax credits scheme operating since the early 1990s in Australia involves income accruing overseas becoming liable for Australian tax, if not "adequately" taxed in the country involved. Prior to the introduction of such a scheme, tax reduction incentives would (for example) have existed for an Australian company with subsidiaries in low tax countries to locate borrowings in Australia and ensure that as much of income as possible was accrued outside Australia - thereby minimizing tax. Under the foreign tax credits system with accruals, that income would be liable for Australian tax no matter where earned, and thus the incentive to locate borrowings in the Australian parent would be diminished.

The implication of the 1987 and 1988 changes to the Australian tax system is that any "tax driven" incentive to debt rather than equity funding has been significantly reduced, if not removed. EPAC (1990) Pender (1991) and BIE (1990) demonstrate how these change in the tax system have virtually eliminated any tax incentive to the use of debt financing. It is also worth noting that the tax treatment of business losses may still provide a disincentive to the establishment of new higher risk businesses

likely to incur losses in early years. As shown in BIE (1990), the delay in ability to utilise tax losses increases the rate of return required for such projects.

Other taxes and regulations are also important in influencing corporate financing choices. State government-imposed stamp duties on transfer of assets were once an important factor in limiting the issue of marketable debt, but this impediment has now disappeared. The need to meet prospectus requirements of the Australian Stock Exchanges (ASX) and the Australian Securities Commission (ASC) for public debt issues also imposes costs and reduces the speed with which debt issues can be made. The introduction of the Corporations Law on January 1, 1991, and changes to prospectus requirements, raised many concerns about the cost of complying with prospectus requirements and thus the efficacy of utilising funding sources involving the use of a prospectus. While the exemption from prospectus requirements for certain "wholesale" issues of securities should have aided the development of wholesale bond markets, the potential liability imposed on parties in issues requiring prospectuses, and consequent costs charged for due diligence inquiries, are generally believed to have significantly increased the costs of external capital raisings for smaller companies. However, to the extent that investor information is increased, a lowering of the risk premium contained in interest rates should provide some offset.

Developments in Banking Markets

Loans from banks and other financial intermediaries are an alternative to security issues for corporate borrowers seeking debt finance. Bank financing can be significantly different from security issues, reflecting what Fama (1985) has termed the 'inside' nature of bank debt, in contrast to the 'outside' nature of bonds and other securities. Because of their close, ongoing, contact with borrowers, banks may have more information about the status of the corporate than do participants in security markets. Bank loans in a corporate balance sheet may thus provide a 'certification' function, providing reassurance to other potential lenders.

The choice made by corporate borrowers between bank borrowing and security issues will reflect a number of factors, including corporate size, constraints imposed on management by the alternative lenders, and the relative cost and flexibility of the types of finance available. In this last respect, the changes in banking markets in the 1980s have exerted a substantial influence.

One such change was the growth in the bank accepted bill market. Although bills are short term instruments, banks have provided borrowers with longer term access to bill financing through bill acceptance facilities. Borrowers requiring longer term funding are able to 'roll over' a succession of short term bills under such a facility, creating the equivalent of a floating rate bank loan. For those borrowers unwilling to face the interest rate exposure implied by a sequence of short term financings, banks created the fixed rate bill facility whereby the bank discounted the bill at each rollover at a fixed interest rate, regardless of market interest rates, and thus bore the interest rate risk. Alternatively, borrowers preferring a more active approach to interest rate risk management could avail themselves of Forward Rate Agreements (FRAs). These tailor-made forward contracts meant that borrowers using bill rollovers, and

concerned about future interest rate movements could effectively lock-in the interest rate applying to future rollovers by buying FRAs.

The growth in bank bill financing was stimulated by a number of regulatory influences, particularly the 'tax-like' effect of Statutory Reserve Deposit (SRD) requirements on deposit-based financing by banks. In this respect bill financing was a substitute for other forms of bank lending, but had ramifications which were far wider. Since bank accepted bills are marketable instruments, with (virtually) no default risk, a large secondary market was created catering for wholesale investors. And while bills were short term paper, wholesale investors wanting longer term fixed rate investments could construct such an investment synthetically by, for example, entering an interest rate swap (paying floating, receiving fixed) in conjunction with investing in a sequence of bank bills. Thus wholesale investors had available a high credit-rated substitute for fixed rate corporate debt, while corporate borrowers could obtain fixed rate market-based funding via the fixed rate bill facilities.

With the replacement of the SRD ratio by the non-callable deposits ratio in 1989 (and the previous removal of other regulatory incentives to bill financing) bill related financing has gradually declined (from outstandings of $68 billion in 1990 to $60 billion in 1994). Whether that will provide more of an incentive to direct security issues by corporate borrowers or a growth in term lending by banks remains to be seen. For direct financing to occur, the borrower must either have a high credit ranking, be able to obtain some form of credit enhancement (e.g. by a bank guarantee), or be willing to pay (and find investors willing to accept) an interest rate incorporating a high default premium (e.g. a 'junk' bond).

Developments in corporate debt finance have also been influenced by the 1988 introduction of risk adjusted bank capital requirements. Under this approach to prudential regulation, lending to corporate borrowers requires banks to maintain a higher equity/deposit ratio than does the financing of housing loans, government securities etc. Many commentators have argued that this will have two effects. First, because of a perceived higher cost of bank equity financing vis-a-vis deposits, banks will require an increased return on corporate lending, thereby giving an incentive for firms to pursue direct financing. Second, because the regulatory requirements treat all companies equally, it has been argued that bank financing of corporations with good credit ratings will decline. The validity of those arguments have been disputed by Davis (1990) who points out that they rely on particular assumptions about the marginal cost of deposit and equity financing by banks which are unsupported. Nevertheless, such views are pervasive and many commentators have attributed the rapid growth in bank loans for housing at the expense of business lending to these effects.

2.3 Asset Holder Preferences and Options

A third factor influencing company finance is the fact that corporate issuers of debt are in competition for investors' funds with other issuers of similar instruments. Longer term fixed term deposits at banks, finance company debentures, government and semi-government securities, and securitised mortgages are among the

competition. Not only do such instruments have similar maturity and yield characteristics, some have greater marketability and enjoy higher credit standing.

Australian banks offer fixed term deposits for periods as long as four years, bringing them into competition with the shorter end of the corporate debt market. In general, however, such long term fixed deposits have not been a major source of bank funding, partly because the lack of liquidity for the investor makes them unattractive. Finance company debentures have long provided a major investment outlet for retail investors wanting longer term fixed interest rate investments, and for those companies which are bank subsidiaries, the credit risk has been perceived to be low. Until recently, the public sector securities market (see Chapter xx) was seen by many commentators as an impediment to the development of a domestic corporate bond market, because of the size of public sector financing requirements. Irrespective of whether or not that was the case, the decline in the growth rate in the late 1980s of the stock of public sector securities reduced competition from this sector. More recently, however, the development of a secondary mortgage market in Australia has introduced different instruments into the market place, and the re-emergence of public sector deficits since the start of the 1990s has again increased the supply of public sector securities.

In all of these developments, there are conflicting influences at work. Close competitors for the "investor dollar" may make it harder for corporations to tap the market. Yet, the growth in similar instruments can significantly increase the liquidity of secondary markets for securities, thereby enhancing the attractiveness of all instruments.

Also important are any constraints upon preferences of investors, and institutional developments in savings markets which alter the locus of investment decision-making. Life offices are potentially large providers of long term corporate debt finance (through holdings of mortgages and debentures), but that role was constrained during the 1960s and 1970s by the 30/20 rule and section 115 of the Income Tax Assessment Act which gave a strong tax incentive for life offices to hold government debt. That position remained until the regulations were removed in 1984; notably, at that time, the life offices began to invest more heavily in property and equity. With the strong growth in superannuation funds of the late 1980s - a state of affairs which should persist for some time - a new potential source of demand for marketable, corporate debt, packaged as wholesale instruments, has emerged. Such demand can be met either by direct issues of corporate debt intruments directed at institutional investors (as via the corporate bond market) or by the securitisation of bank business loans. Both are considered later.

3 Issue Procedures, Swaps, and Risk Management

When raising funds and managing the liability portfolios thereby created, corporate borrowers are concerned both with the expected cost of funds and with the risks created by their choice of funding technique. Borrowing at a floating rate of interest when rates are low exposes the borrower to the risk of higher borrowing costs should rates rise[23]. Similar trade-offs arise in considering the issue of debt denominated in foreign currencies.

The problem this creates is that particular funds markets which appear to provide cheap funding opportunities (either on a transitory or longer term basis) may involve the issue of financial instruments carrying risks regarded as too high for the borrower involved[24]. Here, the development of the swap market (as explained below) has been a key influence upon corporate financing, since it enables the cheap and ready separation of funding and exposure management activities. Consequently, those responsible for primary issue of debt can focus upon approaching and choosing between markets so as to minimise expected borrowing costs. Management of interest rate or exchange rate exposure thereby created can be undertaken separately[25].

In practice, few Australian corporations are large enough to approach funds markets without the aid of specialist financial institutions (although some issuers of promissory notes do so). Where debt is to be issued under the firm's own name, the services of merchant banks and/or stockbrokers will be required to place the paper with ultimate investors, absorb (for a fee) the risks associated with the issue process, and ensure that a viable secondary market is created to enhance the liquidity of the paper issued. These institutions not only have the specialist skills and contacts required, but also play a role in overcoming the information imperfections inherent in the financing process. Because their future success depends on them retaining credibility with investors, they have an incentive to ensure that issues are fairly priced.

Stockbrokers once had the dominant role to play in managing debt issues by listed companies, because of regulations imposed upon listed companies by the Australian Stock Exchanges. Investment/merchant banks, being precluded from stockbroking until the mid 1980s when corporate membership of the ASX was allowed, were thus constrained in promoting debt issues; at the same time, the small capital bases of the stockbroking partnerships may have inhibited underwriting of corporate debt issues. These restrictions seem likely to have impeded the growth of corporate debt markets[26].

3.1 The issue process and costs[27]

Issue procedures vary between markets and over time, but all represent a response to a common set of problems. These include: determining the type (and terms) of security to issue; finding and persuading investors to purchase the issue; coping with the "price" risk involved; meeting regulatory requirements for the issue of securities. Overcoming them is normally best left to specialist intermediaries. That, in turn, requires that an appropriate agreement can be structured between the various parties.

The time required to initiate an issue could be anywhere from 3 weeks in the Euromarkets to 2 months in domestic AUD market[28].

Typically, the borrower will come to an agreement with one financial institution, an investment/merchant bank or stockbroker, who will act as lead manager for the issue which can take place in a number of ways. In some overseas markets, a 'bought' deal is common, whereby one financial institution agrees to purchase the whole issue at a specified price with the intention of involving others subsequently in the marketing and distribution. In other cases, the arrangement may be signed on an indicative price for the issuer, with the final price to be determined closer to the issue date. Sometimes the choice of lead manager may result from a competitive bidding process involving several financiers (acting on behalf of a syndicate). Sometimes the borrower negotiates terms with a number of financial institutions before reaching a decision, or simply decides to use the services of a financial institution with which it has an ongoing relationship. In some cases (such as a private placement) the lead manager may act on a best endeavours basis, in other cases there may be a standby style underwriting agreement whereby underwriters agree to purchase any securities not sold.

Once the mandate has been signed, issue procedures must be determined. An important distinction is between a public issue and a private placement. The former involves an offer to the public at large to subscribe funds, and will typically involve large issue costs and the greatest regulatory requirements. Few such issues have been made in Australia in the past decade, other than by Finance Companies whose debenture issues have been directed mainly at retail investors. In a private placement the manager of the issue places the securities with a small number of institutional buyers. No prospectus is required, and the debt is rarely marketable. Between these extremes is the case of the corporate bond market, where securities are distributed by members of the syndicate to various investing clients. The existence of the securities will be made known to the general public after the debt has been placed, and marketability ensured by the lead manager.

A typical issue in the Australian (or for that matter Euro $A) corporate bond market would proceed as follows. First, the arranger (lead manager) obtains a mandate from the prospective issuer and establishes the broad parameters for the issue. These include such things as: desired issue size; treatment of oversubscriptions; term to maturity and coupon yield; type of issue (security -if any - offered, straight or convertible etc.) and likely issue price; and fees. Since some characteristics of an issue are not desired in their own right, but are adopted to exploit a market opportunity, the type of "financial engineering" which provides the desired net outcome for the borrower will also be established. (For example, an issuer of fixed rate bonds may be responding to strong demand for these securities but prefer a floating interest rate exposure. The lead manager would also arrange an interest rate swap to achieve this outcome - as is described in the following section.)

Second, the lead manager, in conjunction with the issuer, arranges a dealer group selected on the basis of selling ability and trading strength. The former characteristic is desirable for the primary issue of the security, the latter since the group is expected to make a secondary market in the securities, to enhance their marketability. Members

of the group also provide information on the state of the market, and once fees, underwriting commitments and documentation are established become members of the group.

Third, documentation which falls into three categories is prepared. One is that relating to the initial issue of the bonds including an information memorandum, and various agreements spelling out the obligations (relating to subscription, selling arrangements, and underwriting) between the issuer and the management group. A second is the documentation relating to the bond itself, and involves either a trust deed, whereby a trustee is appointed with specified powers, or (often in the Euro-markets) a fiscal agency agreement. The latter involves appointment of some agent (a bank for example) to deal with the mechanics of payments of interest and principal, but does not provide that agent with any powers to act on behalf of bond holders. In the Australian market, securities will most likely be issued in registered form and a provider of registry services such as Austraclear appointed. Both types of documentation will outline terms of the bonds such as the nature of negative pledge commitments. Finally, there is the subsidiary documentation relating to securing of credit ratings of the bonds, taxation matters, registry agreements, and any listing requirements. (Corporate bonds in Australia are not listed but most Euro $A bonds are listed, although rarely traded, on the London or Luxembourg exchanges).

The last stage in the process is the actual issue, when the dealer group responds to the issuer's decision to make the issue that day with a specific issue price at which they will sell the issue or take up any unsold paper. The bonds are then marketed to institutional investors whose interest has previously been sounded out by the dealer group at the agreed issue price. This 'primary mode' may last only ten minutes or up to several hours if the paper proves hard to place. Once the issue is fully sold, or the arranger decides that it cannot all be placed at the issue price and disbands the syndicate, a 'secondary mode' in which general trading commences begins[29]. Finally, a 'tombstone' announcement of the issue is placed in the press (and a celebration lunch is held!).

Issue fees for members of the syndicate vary, but some rough idea of magnitudes is as follows. For a five year Euro-issue, the managers/ underwriters fees would amount to around 5/8% of the issue value. The selling commission would amount to around 1 3/8% of issue value, giving fees of some 2% in total.

3.2 Swaps

The Swap market (discussed also in Chapter xx) has been one of the fastest growing financial markets both domestically and internationally since the start of the 1980s. Briefly, a swap involves an exchange of one series of cash flows for another series of cash flows which in an interest rate swap are each effectively the stream of interest payments (or receipts) on a particular "notional" loan principal. In its simplest form, one series of cash flows will be a fixed interest rate (e.g. 8% p.a.) applied to a notional principal (of say $100) for a specified period (say quarterly for one year), and the other will be a variable interest rate (such as the Bank Bill Swap Rate (BBSW) of three months previous) applied to the same principal for the same period. In a cross

currency swap (see section 6 below) the cash flows also differ in terms of currency denomination.

The swap market has proved popular for several reasons. First, it sometimes enables borrowers to reduce funding costs if credit risk premiums or regulatory and tax effects differ between markets[30]. Second, combining a swap with a sequence of short term borrowings creates a type of borrowing with a mix of market and credit risk exposure not otherwise available[31]. Third, the swap market enables fund raising decisions to be separated from interest rate and exchange rate exposure management decisions, and facilitates the practice of exposure management[32]. Of particular relevance is the effect of the swap market on increasing integration of international capital markets. Australian companies can borrow in foreign currencies, foreign companies to borrow in Australian dollars, and both can use the swap market to convert the exchange and interest rate exposures into whatever form desired.

The Australian swap market has experienced dramatic growth since the mid 1980s. In March 1994, Australian banks had outstandings of Australian dollar interest rate swaps with notional principal of $532 billion, involving a credit exposure equivalent to $14 billion of loans. 38% of outstanding swaps had less than one year to maturity, and 8% had maturities exceeding 5 years. In addition to the $532 billion of domestic currency swaps, Australian banks had outstandings of cross currency interest rate swaps with notional principal of $78 billion.[33].

Almost 100 banks and financial institutions operate in the market as market-makers, although a small number of institutions dominate the market by running a "swap book" in which they are ready to take principal positions on swaps with clients. Access to the swap market (at least at fine prices[34]) is limited to moderately large corporate borrowers, since the standard size parcel in which trading occurs is $10 million. Moreover, the rates obtained will deteriorate as the credit rating of the corporate involved declines, because of the default risk perceived by the bank counterparty. However, since only the net swap payments (which are unknown at the swap's origination, and could be positive or negative depending on interest rate movements) and not the principal amount are at risk, the margins added for default risk tend to be small. Should a customer wish to reverse a swap part way through, swap dealers will oblige by 'marking the swap to market' (calculating the value of the swap based on the future cash flows implied by current interest rates) and settling up based on that value.

4. Credit Risk and Corporate Debt

Holders of corporate debt instruments face several risks. Some are general ones depending on the interest rate formula (fixed or floating) or currency of denomination. Others are more specific. Default risk comes about because certain issuers of debt securities may default (in full or in part) on their obligations[35]. Another type of risk is 'event' risk: changes in the market's perception of a firm's default risk due to particular events will affect the market value of that firm's debt securities[36].

Since higher expected returns are demanded by investors for bearing higher risk, firms perceived to be riskier face higher costs of debt funds. Incentives thus exist for borrowers to adopt measures which lower perceptions of (current and likely future) default risk. Four types of measures can be distinguished. First, there are measures which constrain the future activities of the firm's management. Second, there are measures which alter the perceived risk of securities by providing debtors with some claim on assets or a third party if repayments are not honoured. Third, there is the provision of better information to the market. Fourth, lenders can shorten the maturity of loans made. We consider each approach in turn.

4.1 Constraints on management

Most corporate borrowings impose some form of constraint upon managerial discretion, because of the agency costs involved in debtor-creditor relationships[37]. It is, for example, well established that the issuance of corporate debt is equivalent to purchase by the firm's owners of a put option from the creditors[38]. The put option in this case is the right to put the assets of the firm to creditors (the act of default) at an exercise price equal to promised debt repayment. Since the value of that option is increased by increases in the exercise price (as would occur by taking on more debt), and by increased volatility (as would occur from increasing the business risk of the firm), creditors demand protection against such events. Protection is also demanded against actions which reduce the asset value of the firm (such as through excessive disbursements to shareholders) since these also increase the option value.

Measures to ensure such protection are typically written into the covenants established when corporate debt is issued. There is, however, always a basic tension involved. The interest of creditors is in ensuring timely repayment of amounts due, and not in performance of the firm beyond that necessary to achieve this result. To them, the cost of imposing constraints on managerial flexibility may be small, whereas management and shareholders have strong incentives to limit constraints on flexibility so as to maximise earnings.

Reflecting this tension, and in response to it, the 1980s saw (until the latter years of the decade) the development of negative pledge lending agreements. Under negative pledge financing, lenders are unsecured creditors, but seek protection through the pledge of the company not to take certain actions which would reduce the value of the lender's claim. For such a pledge to be effective, it must involve relevant constraints on the firm's activities and the firm's compliance with those constraints must be

readily observable to creditors of the firm. These requirements mean that typical covenants in a negative pledge involve four principal constraints: restrictions on gearing and limitations on issue of prior ranking securities; restrictions on disbursements to shareholders e.g. dividends; restrictions on the use of funds; and requirements that an acceptable cash flow be maintained[39].

The perceived advantage of negative pledge lending over secured lending was the greater flexibility. First, where lending was secured against specific assets the flexibility of borrowers to change their asset structure is limited. Second, trust deeds associated with a specific secured borrowing could involve covenants which impose unexpected and undesirable constraints upon managerial flexibility in later years, and which were extremely costly to renegotiate. Third, negative pledges, in contrast to mortgages, attract no publicity or stamp duty. Fourth, the negative pledge structure makes it relatively easy to accommodate new lenders, and provides more comfort for smaller creditors who rank equally with large and more powerful creditors.

As it has transpired, the perceived advantages of negative pledges have not been sustained when companies have experienced financial distress[40]. Breach of a negative pledge covenant is a breach of contract, but is also usually listed in loan documentation as an act of default. However, because the lender has no charge against specific assets, appointment of a receiver to take charge of and sell off assets is not possible. Appointment of a liquidator may involve the company trading out of difficulty, but the lender has no prior claim over other creditors. Also important has been the fact that compliance with negative pledge requirements has, for many companies been obscured by the use of complex corporate structures and use of "creative accounting". In the wake of the corporate collapses of the late 1980s and early 1990s, negative pledge lending in Australia is less common and typically involves much tighter restrictions upon borrowers than was previously the case.

4.2 Credit Enhancement

When debt is secured against specific assets the payoff to the debt holder depends upon the value of that asset as well as that of the firm. Where the value of the specific asset is highly predictable (and initially greater than the debt obligation), the credit standing of the company becomes less important. For example, mortgage finance is widely used by lower rated corporate borrowers. Financial leases, wherein the lessor retains ownership of the asset financed and can (relatively) easily regain it if necessary, are another example.

Other credit enhancement techniques also rely upon this technique of making the payoff of a debt security depend upon something other than the value of the issuing firm. One is a third party guarantee. Guarantors include parents of subsidiary companies, or governments, either as "parents" of quasi-government borrowers or under specific assistance schemes. Another technique is a letter of credit from a bank. These are typically unconditional and provide for payment by the bank in the event of non-payment of a debt by a borrower. Essentially similar, but not involving the same legal obligation for the third party, are letters of comfort, issued by a parent company indicating its awareness of a subsidiary's incurrence of a liability. The implication, if not the reality, is that the parent guarantees the borrowing. Put options also provide

credit enhancement. In this approach, debt holders have an option to sell the debt to a specified third party at a specified price.

All of the above enhance the credit status of the instrument issued, but do not change the identity of the issuer. A somewhat different method is to have a third party issue debt on behalf of the borrower. For example, bank acceptances (rather than endorsements) of bills drawn up by customers provides those borrowing customers with a marketable instrument which has the credit status of the accepting bank.

4.3 Information Provision and Ratings

Assessment of default risk relies on information about the borrower being made available to the market. Credit rating agencies such as Standard and Poor's and Moody's overseas, and, in Australia, S&P - Australian Ratings, do this. By encapsulating a wide range of information into a single grading, such services provide a low cost method for investors to assess relative credit risks. Table 9 sets out the rating categories used in Australia. Borrowing costs are related to ratings as the indicative margins shown in Table 9 indicate.

Whether the agencies lead or follow the market is another matter. Some argue that ratings simply summarise information already available to sophisticated investors, who will have priced the company's debt accordingly. But that not need mean that the ratings process is useless. The exposure of the company to the ratings process can help to provide lenders with comfort that subsequent management actions will be monitored in such a way as to inhibit actions which otherwise detract from debtholders' claims[41]. The ratings process also can provide a convenient administrative mechanism for defining eligible securities in which trustees of funds can invest.

5. Debenture Finance

While debenture is a legal catch-all term which includes unsecured notes and bonds, in common parlance it refers to secured borrowings evidenced by the issue of debenture certificates, sometimes listed and transferable on the stock exchange. The security offered can be a fixed charge over specific assets; but this impedes the company's ability to buy and sell assets. The more common type is a floating charge over the company's assets which 'crystallises' into a charge against specific assets if the borrower defaults. The advantage is that security is not tied to the value of any specific asset(s)[42].

Under the Corporations Law 1991, security issues, including debenture issues, must be accompanied by a prospectus unless certain exceptions are met. Most relevant among those exceptions are exclusions when: minimum subscription is at least $500,000, or, the offer is to less than 20 people in a 12 month period, or, the offer is to existing holders of securities, or, the investors are various wholesale or professional investors specified by the Minister in regulations[43].

As part of the change in regulatory approach, the ASC now has less of an administrative role (which involved pre-vetting of prospectuses), and more of a role as a "corporate policeman" (responsible for following up breaches of requirements). This, and a reduction in explicit guidelines on prospectus contents should have reduced the costs of making an issue by way of prospectus, as well as aiding "wholesale" issues not requiring a prospectus. However, the potential for those involved in issues to be prosecuted for failure to disclose relevant information has led to a belief that overall issue costs have increased.

While it is too early to identify trends under the new legislation, it was previously normal to have public issues (requiring a prospectus under old legislation) underwritten, at a cost of between 0.75 and 2 per cent. Other costs include advertising and legal expenses. Depending on the type of issue and its size, total costs (as a percentage of the issue amount) are in the order of 2 to 4 per cent, offset, to greater or lesser degree, by the interest rate which must be paid.

Issues of debentures, never a major avenue of corporate borrowing, declined in the 1970s. Public issues during the 1980's were largely limited to Finance Companies, for which they have been the major source of funds. Finance Companies typically offer a range of maturities, different frequencies of interest payments, require a (relatively small) minimum subscription, and offer both debenture stock and unsecured notes. One reason for the decline in debenture issues was volatile and high interest rates which made long term fixed rate bonds seem an expensive source of finance. Compliance costs involved in issuing prospectuses may have also contributed to the decline, while the long lasting restrictions imposed by trusts deeds (see Whittred and Zimmer, 1986) are also significant.

6. Overseas Debt Markets

Australian companies have made greater use of overseas debt markets than of domestic public debt markets. In some cases, the existence of overseas subsidiaries has made use of the local bond market a natural method for raising external finance for capital requirements of those operations. In many cases however, Australian companies have been attracted to issue in those markets because of lower perceived borrowing costs. Such *international* bond issues have taken two major forms, although the advent of *global* bond issues[44] is tending to blur the distinction between those forms. One form of international bond financing, referred to as *foreign* bond financing (and discussed in section 6.3 below) is where issues are made into a specific market such as the US or Japan. The other is *Eurobond* financing, where bonds are issued into a number of markets outside the currency of denomination of the issue[45]. Australian companies have issued Eurobonds denominated in Australian dollars, US dollars and other currencies. Since the principle difference for Australian companies between $A Eurobond issues and $US (or other currency) Eurobond issues lies in management of the exchange rate exposure so created (and which is discussed below), the following discussion focuses upon the $A Eurobond market.

It should be noted that $A Foreign and $A Eurobonds are also issued by non-Australian entities (for reasons discussed below). Table 10 indicates the changing volume of international $A bond issues (showing a decline since the peak years of the late 1980s), as well as external (international) bond issues by Australian issuers. Since the "other currencies" category of issues by Australian companies includes (and is predominantly) $A, it is apparent that foreign issuers have (except for 1993) dominated the $A International Bond markets.

6.1 The Australian Dollar ($A) Eurobond Market

The birth of the $A Eurobond market can be traced to an issue in 1976 by the Australian Industry Development Corporation (AIDC). Few other issues occurred until 1983. Thereafter the market expanded rapidly until at the end of 1988 there were 515 issues outstanding, of which around 40% were by Australian entities. The market has shrunk since then, as new issues have declined in number and existing issues have matured. The number and value of new issues is shown in Table 11 which also gives some indication of the variety of instruments issued. Although there has been a number of issues other than 'straight' (fixed rate) bonds, the $A Eurobond market has involved less variety than most other Euromarkets.

A $A Eurobond is a debt instrument, denominated in $A, issued outside Australia (e.g. the UK), and marketed to non-Australian investors. They can be issued by non-Australian residents. Indeed over 50% of issues have been by this group (for reasons discussed below), although as Table 12 indicates, the proportion varies markedly over time.

Eurobonds are bought, like domestically issued bonds, by international fund managers. Some demand is on behalf of wealthy clients' accounts, and bonds have often been issued in denominations of $A 1,000 to $A 10,000. The size of an issue has

typically been between $A 50 million to $A 100 million, over which range economies in issue costs and marketing are achieved. To tap that market, and to structure the issue, the services of investment banks are used as managers, underwriters and sellers of the issue. Because of the nature of the investors, only well-known companies can access the market.

Traditionally, issues in the Euromarket have been by way of a negotiated underwriting arrangement, although alternative procedures have become more common[46]. In this arrangement, a borrower negotiates with a lead manager - an investment bank who takes responsibility for arranging a syndicate to underwrite, manage and sell the issue. Through the underwriting process, the risk that the issue may not sell completely at the price initially set is passed to the underwriters (for a fee), and the syndication process enables a sharing of that risk among members of the syndicate. Syndication also broadens the access to the investing market through the distribution networks of syndicate members, although it should be noted that relative roles of different members in underwriting and selling can vary.

6.2 Attractions of the Euromarkets

Bond issues in the Euromarket have been attractive to Australian corporates for several reasons. First, a wider investor group can be tapped, including the oft-mentioned "Belgian dentists" - a term used to refer to retail investors for whom the bearer nature of Eurobonds holds the attraction of enabling income tax to be avoided. To the extent that interest paid on Eurobonds is effectively free of tax at the investor-level, the yields offered on those securities would be expected to be lower than the (taxable) yields paid in the domestic Australian market. In practice, however, the yield differentials are not as large as might be expected, reflecting the fact that the volume of issues is sufficiently great to arbitrage away tax distortions at the margin. Competition amongst issuers bids up the rate paid so that tax evaders get a healthy margin for the risks they are running. Nevertheless, some arbitrage opportunities may remain - although discovering them is not necessarily simple. One reason is that it is important to compare like with like, and many Eurobonds are not "straight" bonds, since they can involve such features as call options which affect their yield. Eurobonds also pay interest annually (compared to half-yearly in domestic markets) and quote annual interest on a 360 day year basis.

To the extent that some part of the demand for Euro-issues is tax driven, it is important that the zero-taxpaying status of end-investors is not offset by other tax imposts. This could occur if withholding tax were applied by the Australian government, and some concerns over temporary changes in policy occurred in this regard in 1986. However, provided Eurobond issues are widely distributed (and meet several other criteria) interest payments are exempt from withholding tax.

Investor demand for $A Eurobonds, has also at times been attributed to the high nominal yields (in $A terms) available to investors. High rates of depreciation of the $A would have been necessary to offset that benefit to an investor concerned ultimately with returns in a foreign currency. Of course, significant depreciation has occurred at times. This is simply the converse to the problem faced by Australians

who were tempted to borrow in foreign currencies in the first half of the 1980s by relatively low foreign interest rates.

Also important is the fact that Euro issues can avoid Australian prospectus requirements, provided they are not seen as being aimed at Australian investors. Consequently (and also relevant for preventing liability to withholding tax), Euro issues by Australian companies have restrictions preventing sale to Australian residents - particularly within the first six months of the bond's life.

A further attraction of the Euromarkets is the flexibility they offer issuers in terms of currency denomination, maturity terms, and innovative characteristics of issues. On the downside, however, only well-known issuers are able to raise funds in the market, minimum volumes required are around $25 million, and the funds from a bond issue are raised and received at one time, which may not be at an optimal time to approach the market or may not exactly match funding patterns. *Medium Term Note* programs, whereby issuers establish a facility with a panel of investment banks which enables notes to be issued at different time during the life of the facility overcome these latter problems and have grown in popularity since the early 1980s.

Because of the importance of the issuer's name, few purely Australian non-financial companies approach the $A Eurobond market directly. The predominant Australian issuers are Government authorities, financial corporations, and Australian subsidiaries of multinational corporations - in fact the same ones which dominate the Australian Corporate Bond Market. For other corporates, the benefits of the $A-Eurobond market lies in the possibility of lowering funding costs by cross currency interest rate swap transactions in a market made possible by non-Australian issuers of $A Eurobonds. (In what follows it is assumed that the swap transaction occurs directly between two parties, whereas in practice both parties invariably deal independently with banks which run swap books and act as principals.)

That process works as follows. Paradoxically, because of European investors' demand for $A assets, well known European entities such as German banks often have a comparative advantage at raising $A fixed rate funds. Less well known Australian companies can access funding in other currencies, such as $US, at either fixed or floating rate, through bank loans or the capital markets. Suppose that 'German Bank' can raise $A fixed rate funding at 12% p.a., that 'Aust. Co.' can raise $US floating rate funding at LIBOR+ 1.0% p.a., and that currently the exchange rate is $A 1.00 = $US 0.80. German Bank borrows $A 100, and Aust. Co. borrows $US 80, (both with annual interest payments) and they enter a swap (of the same maturity as that of both borrowings) with the following conditions. First, they exchange principal amounts[47], and agree to reexchange them at maturity at the current exchange rate (regardless of what the spot rate is at that time). Second, on each interest date, German Bank pays $US(LIBOR+0.5)80 to Aust. Co. and receives $A 12.50 in return.

The total outcome of these transactions is as follows. German Bank, on each interest date is a net payer of LIBOR+0.5% applied to $US 80, and receives a net $A 0.50, which at the current exchange rate is equivalent to 0.5% applied to $US 80. It thus has effective interest payments approximately equivalent to LIBOR applied to $US 80[48]. On maturity, it will be a net payer of $US 80, since the $A 100 received under the

swap offsets the $A 100 repayment of loan principal. It thus has achieved the equivalent of a $US 80 loan at an interest rate of (approximately) LIBOR. For the Australian company, an similar examination of the cash flows shows that it pays an effective interest rate of around 13% on $A 100.

Several points follow from this example. First, the Australian company may have been able to achieve lower funding costs, resulting from the effective arbitraging of tax and regulatory differences between international markets[49]. Second, Australian companies benefit not from issuing $A securities, but by issuing $US securities and entering swaps. Thus, access to foreign currency funding, either from domestic and overseas banks, or from overseas capital markets is important. In this respect, the large increase in foreign borrowings shown earlier in Table 3, does not necessarily indicate an increase in forex exposure of Australian business - since much of it has been swapped, or otherwise hedged, into Australian dollars. Third, with this route available for raising $A funds, the need for a domestic bond market may have been obviated.

6.3 The US Corporate Bond Market and the Rule 144A Market

Although Australian companies are able to make foreign bond issues into a number of capital markets, the size of the US bond market and the central position of the $US currency have meant that this market has attracted most interest. Many Australian companies, including Australian banks, have raised funds in the US public debt markets, although the need to comply with the U.S Securities and Exchange Commission disclosure requirements has been a deterring factor. Other companies have utilised the US private placement market.

Australian companies which at mid 1994 had securities on issue in the US debt market included all of the major banks as well as a number of non financial companies such as Amcor and Boral. Amcor, for example, was guarantor of bond issues by overseas subsidiaries as follows:

Borrower:	Sunclipse Inc.	Twinpak Inc.
Amount :	$US 125 million	$US 75 million
Coupon:	6 3/4%	6 3/8%
Maturity:	2003	2000

Boral had in place a $US 250 million non underwritten private placement facility whereby issues of notes with maturities between 9 months and 30 years, at interest rates (fixed or floating) determined by negotiation, could be made through a two placement agency arrangement. At mid 1994, $US 175 million of notes were outstanding.

In the 1990s, an alternative to traditional private placements or public issuance of debt securities in the Euromarkets or Foreign bond markets has emerged for Australian companies wishing to raise debt offshore. Private placements into the U.S. capital markets have now become feasible following the adoption in April 1990 of Rule 144A by the Securities and Exchange Commission (SEC) in that country.

Rule 144A allows for private placements to be freely traded amongst certain categories of institutional investors, and has enabled securities firms to underwrite and distribute debt securities to institutional clients in a manner not dissimilar from public debt issues. A major objective in the adoption of Rule 144A was to increase the attractiveness of the US capital market to foreign issuers, who found the registration, accounting and legal requirements of public bond issues inhibiting, and the costs (arising from low liquidity and restrictive covenants) of the private placement market excessive. To date, only a handful of Australian companies, including AGL, CSR, Qantas, and Telstra have utilised this market.

7 Convertible Bonds, Converting Preference Shares and Other Hybrids

One of the major developments in corporate finance in the 1980s and 1990s has been the growing use of financial engineering to create "hybrid" securities which combine features of both debt and equity. Some hybrids, such as convertible bonds, have a long history, but newer innovations include converting preference shares (discussed below) and share market linked bonds (discussed in Chapter xx).

7.1 Convertible Bonds

A convertible bond is a debt security which can be converted, at the option of the holder, at some specified date(s), into equity in the issuing company. Convertible bonds are typically issued with lower coupon interest rates than "straight" bonds with otherwise similar characteristics, but that does not necessarily make them a cheap source of corporate funding. The difference in the coupon rates reflects the value of the option (to purchase equity at a price equal to the market value of the bond) granted by the company to the holder of a convertible bond.

Most convertible bond issues provide several "windows" of time during which conversion is allowed. This significantly complicates the analysis of convertibles, but the essential issues can be understood by considering a convertible with only one conversion date. At that conversion date, the holder of the bond is faced with the choice either of not converting, and thus keeping what then becomes a conventional bond (which may also be due to mature at that date), or converting, and thus obtaining one share for each bond previously held. (The conversion ratio is typically one for one.) Conversion thus makes sense if the conventional bond component of the convertible has a market value less than the share price which will prevail after conversion. The "profit" or "intrinsic value" obtained on conversion is the excess of the share price over the conventional bond value. Since conversion is optional, the intrinsic value when the conventional bond value exceeds the share price is zero. Prior to the conversion date, the option component of the bond will have a value in excess of the intrinsic value. Known as the time value of the option, this excess reflects the benefit to the option holder arising from the asymmetric effect of future possible changes in the share price on the expiry date value of the convertible.

Convertible bond prices behave quite differently to conventional bond prices, because of the option embedded in them[50]. The prices of conventional bonds will not, in general, be affected by movements in the share price of the issuing company - unless they herald a changing possibility of default on the bond. In contrast, increases in the issuing company's share price increase the value of the option component of a convertible bond, and will thus increase the bond's value. This effect is most noticeable when the share price is very high compared to the conversion value, when the option value (which is then virtually all intrinsic value) increases dollar for dollar with the share price. By contrast, at low share prices where the intrinsic value is zero, the only increase in the option value when the share price increases is through an increased time value. Changes in market interest rates will, as with conventional bonds, lead to an inverse movement in market price, but the precise relationship is complicated by the effect of interest rate changes on the option embedded in the bond.

The National Australia Bank issue outlined in Table 13 illustrates the often complex conversion arrangements. In that case conversion is limited to a seventeen day period in three of the years prior to the notes' expiry. This multiplicity of conversion dates is one of the factors which makes valuing convertible notes a much more complex procedure than our simple illustration above indicates.

Many Australian companies have used convertible notes as a source of funding. Between 1970 and 1992 there were 159 separate series of convertible notes issued in the domestic AUD market[51], with 14 companies making two or more issues[52]. Because convertible notes provide the holder with the option to obtain equity, the method of their issue is constrained by the Australian Stock Exchange's listing rule 3E(6). With some minor exceptions, this precludes equity issues in any year in excess of 10 per cent of the outstanding stock of equity, unless the issue is a pro-rata one to existing shareholders. Consequently, most convertible note issues have been by way of a rights issue to existing shareholders[53], although a significant number have involved private placements.

ASX regulations also influence the nature of protection afforded to investors in convertible note issues. In order for debt securities (under which category convertibles fall) to be listed on the exchange, a Trust Deed must be in place which limits, to some degree, the issuing company's borrowings etc.. Given the quasi-equity nature of the securities, the restrictions are relatively moderate. Also in view of the security afforded by their quasi-equity nature, recent convertible issues have, almost without exception, involved unsecured notes.

Where purchasers of convertible notes require perhaps most protection is in preventing their potential stake in the company from dilution. With a fixed conversion ratio (number of bonds per share), bonus (and some rights) share issues by the company would reduce the value of the conversion option, unless convertible holders were also provided with entitlement to additional shares. Thus, all convertible note issues allow for holders to participate at conversion in all bonus or rights issues which have occurred during the convertible's tenure.

Australian tax legislation has influenced the structure of convertible note issues through the determination of conditions required for convertible debt interest to be tax deductible[54]. These conditions include that: the option to convert is exercisable only by the note holder; the earliest exercise date must be within two years of issue date; the latest conversion date must be within ten years; interest payable in all periods is (generally) the same; and the conversion price must exceed both the par value of the share and 90 per cent of the market value of the share when the notes are to be offered for subscription.

The popularity of convertible notes has varied markedly over time, as shown by the distribution of new issues given in Table 14. There were 82 series of notes quoted on the Australian Stock Exchange in mid 1988, when they accounted for around 2 per cent of total capitalisation at that time. In early 1994, there were 41 series of notes (and 8 convertible preference shares) quoted, with the fall in number reflecting both the maturing and/or conversion of notes on issue and delisting of a number of issuing

companies (through failure or takeover). Many of Australia's largest companies are among past issuers, but a number of smaller companies have also made issues. Characteristics of the convertible note market by Australian companies is reflected in the following data extracted from a sample covering most convertible notes listed on the ASX at any time during 1988 -1990[55]. The sample consisted of 92 issues, but full information was not readily available for all issues. The average size of issues can be seen in Table 15, from which it can be noticed that the market provides access to 'quasi-debt' funds for smaller issue amounts than is normal in the straight bond markets. While holdings of some issues are concentrated in a small number of hands, smaller investors also participate.

Table 15 also shows the maturity distribution of issues. It is apparent that the average maturity is significantly longer than that of straight debt issues in either the domestic or offshore straight debt markets. This reflects the 'quasi-equity' nature of the instrument, and the effective maturity of the bond component may be much shorter by virtue of note holders exercising their conversion option.

The popularity of convertibles has waxed and waned, as shown in Table 14. There were few issues during the years 1982 through 1985, reflecting the relatively high long term interest rates prevailing at that time. Convertibles enjoyed a resurgence of popularity between 1986 and 1998, but the introduction of dividend imputation in 1987 wiped out the 'double taxation' of dividends which had previously made convertibles attractive as a form of 'quasi-equity' financing which avoided that double taxation until conversion occurred. Corporate debt financing through convertible issues slowed significantly in the early years of the 1990s as a result, and was also influenced by uncertainties over the potential capital gains tax treatment of shares obtained on conversion.

Both of these impediments to the market are likely to have less significance in coming years. The "unfranked" nature of convertible note interest does not necessarily make such securities unattractive. Indeed it can be an advantage to companies unwilling to increase use of straight debt finance but with income streams which cannot be paid out as franked dividends to equity holders. While the capital gains tax treatment of notes (as amended in the late 1980s) still discriminates against purchases of notes relative to simultaneous purchases of equity, this disadvantage may be relatively small in a low inflation environment[56].

7.2 Converting Preference Shares

While there has been some apparent increase in the use of convertible notes since the early years of the 1990s, the increasing interest among corporate financiers in exploiting advantages of "hybrid" financing vehicles has been primarily directed towards a new type of security known as converting preference shares. Initially issued by ANZ Bank in 1991, there had been fifteen issues by the end of 1994, with issuers including Metway Bank, Westpac, Coles Myers, TNT, GWA, News Corporation. Most issues have been for significant amounts vis a vis the issuer's market capitalisation[57], making them many times larger than typical "straight" debt issues.

Converting preference shares (cps) resemble convertible debt, except for two significant characteristics. First, conversion is mandatory. Second, the conversion ratio is unknown in advance. Each cps converts into a fixed value of ordinary shares on the specified conversion date at the share price prevailing then (although most recent issues provide for a fixed conversion ratio if the conversion date share price exceeds a pre-specified value[58]). Thus, to investors, cps look very similar to a debt (or preference share) security since they promise a fixed rate of return until conversion when the investor receives the repayment of the promised capital amount (albeit in the form of marketable shares rather than cash).

However, to interpret cps in this fashion is to ignore the fact that the issuing company achieves a permanent increase in its equity base from the cps issue. Rather, they are a hybrid security, best interpreted as equivalent to a straight equity issue plus creation of a swap contract between "old" and "new" shareholders in the firm[59] . New shareholders receive a stream of fixed preference dividends and give up the stream of ordinary dividends and capital gains to which they are entitled on the new share issued. (Under this interpretation, settlement of the swap takes place at the conversion date, by way of an adjustment to the number of ordinary shares of on issue to new shareholders).

CPS have proved popular in Australia, because they overcome a number of market imperfections, thereby providing a potentially cost effective vehicle for corporate fund raising. Some of those imperfections are peculiar to Australia and to the specific circumstances of the issuer. They include the absence of a significant corporate debt market, the inclusion of cps in calculation of capital adequacy requirements for banks, and the nature of the Australian dividend imputation tax system, which helps explain why a preference share instrument is attractive in Australia.

However, there are more general issues involved - most noticeably the possibility of asymmetry of information between managers and the marketplace. Where management has superior information, the swap they enter on behalf of the old shareholders will have a positive NPV, thereby reducing the cost to old shareholders of the new equity issue. Put slightly differently, issuing cps enables permanent equity capital to be raised, but defers the determination of the dilution factor until the cps conversion date. Because cps are a relatively low risk security from the perspective of investors, they may provide an attractive method of fund raising for companies in need of equity finance in situations where significant information asymmetries exist. In contrast to a straight debt issue, agency problems associated with the creation of a class of cps holders appear relatively slight. In Australia, converting preference shares thus appear to have become a source of funding which ranks high in the "pecking order" of securities[60], and whose development may have been one contributing factor to the slow development of the market for corporate bonds.

8. The Australian Corporate Bond/Medium Term Note Market

In January 1988 a new security, the "corporate bond", or unsecured note was introduced into the Australian market. Shell Australia issued $150 million of three year notes, with a coupon yield of 12.5%, directed at wholesale investors, and

Austrade issued half that amount of inscribed stock with similar terms. Two years earlier, in 1986, mortgage backed securities (MBS) entered the Australian market with an issue by FANMAC. While less than half of the MBS market involves securitisation of commercial (rather than residential) mortgages, such assets are close substitutes for corporate bonds in investors' portfolios. Consequently, they are both included as part of the Medium Term Note market.

Since then, issues of medium term notes have grown, although the market has not shown the expansion hoped for by its proponents, and a relatively small proportion of the issues have been notes of trading companies. Government corporations have issued inscribed stock, sixteen organisations (at June 1994) were issuers of asset backed securities, finance companies have issued debentures, and banks have issued transferable certificates of deposits into this market. In those latter cases, the instruments differ, by virtue of denomination and issue procedure, from the retail market instruments previously (and still) offered. In the early 1990s a new development was the introduction of foreign issuers (typically sovereign or supra-national bodies) into the AUD market through the medium of "global bond" issues.

Corporate Bonds are (generally) unsecured notes, issued by private placement to large professional investors. They can be issued with a fixed coupon yield, or as floating rate notes (FRNs) which are issued with a coupon set at a specified margin over some market indicator rate such as BBSW. During 1993 and 1994 FRNs became particularly popular[61]. Some (primarily public sector bodies) have also issued inflation indexed bonds (see Chapter XX).

Individual notes are in large denominations ($0.5 or $1.0 million for example), and the minimum size of issue tends to be around $50 million. Smaller issues have occurred but can be relatively more costly because of fixed costs in the issue process and because investors will demand higher yield compensation for the lack of secondary market liquidity implied by small amounts on issue. Notably, several of the smaller issues have been debenture issues by finance companies which are part of a larger offering divided into several maturities, and for which there have been subsequent issues of the same stock. In this way, secondary market liquidity is achieved while the demands upon the primary market (and the receipt of funds) are spread over time. In recent years, the scale of issues has tended to increase, so that of the issues listed in Table 16, only 4 were for less than $100 million, with 6 being for $100-250 million, 15 for $250-500 million, and 5 for $500-1,000 million.

Secondary market trading of medium term notes occurs via the professional market, and indicative bid/offer prices are quoted by brokers on screens on Reuters and other electronic information services. Part of the obligation taken on by investment banks when managing a primary issue in the market is to ensure that a secondary market exists. Indicative secondary market prices quoted for issues typically involve a bid - offer spread of around five basis points. Professionals in the market tend to use the equivalent maturity NSW Treasury Corporation yield as the benchmark with which yields on other medium term notes are compared. While spreads over NSW T Corp vary from time to time, bonds of a borrower with an AAA rating may trade at a yield of 30 basis points, and those of an A rated borrower at 90 basis points over NSW T Corp paper.

Between January 1988 and September 1990, there were 58 issues into the medium term note market, totalling $8,407 million. There were 21 separate issuers, of whom only a small number were non-financial corporations. Finance companies have been major issuers (often in the form of separate issues of relatively small amounts of the same stock), as have banks who have issued large amounts of transferable certificates of deposit. All but a few issuers have had at least a AA- rating from S&P-Australian Ratings, and there is a significant yield spread between issues with different ratings[62]. Unlike some overseas markets, there has been no development of domestic 'high yield' or junk bond market, where issues are made of debt with a relatively high default premium.

Since that time, the market has shown relatively little growth, particularly when the focus is upon private sector non-financial corporations. At the end of 1994, for example, the SBC Corporate Bond Index[63] contained 21 securities issued by 13 issuers. The bulk of the issues were by banks and government authorities (such as AOTC, FAC, etc.), with the only private non-financial issuers being BHP and Shell.

Since the late 1980s, the market for securitised issues has grown significantly, although growth has been intermittent. At June 30, 1994 there were 58 individual issues at a face value totalling $6.9 billion. FANMAC dominates the market with around a 44% share, in 23 series of issues, although that dominance is declining as more and more issuers become involved. Issues are rated with 97 percent of new issues of $1.8 bill. in 1993-94 having an AA rating or better. Table 17 demonstrates the composition of the market by nature of asset backing.

The stop/start growth of the corporate bond market has been attributed to a variety of influences by various commentators. The decline in the size of the Public Sector Borrowing Requirement (PSBR) in the late 1980s was seen as removing a constraint upon private sector borrowing which stimulated the market. Under the view that 'crowding out' of the private sector occurs when governments engage in deficit financing, declines in the PSBR would have induced increased private sector borrowing of which financing via the corporate bond market is a part. Also, with the decline in supply of tradeable public sector securities, scope existed for the development of alternative instruments. This argument suggests that the slowdown in market growth since the early 1990s can be traced in part to the reemergence of large public sector borrowing requirements.

Another influence sometimes mentioned, is the growth in the volume of institutional investment funds, arising from the expansion of superannuation. While many of these institutions have focused upon equities and property investments, fixed interest securities form part of a balanced portfolio.

A third influence is the introduction of capital adequacy requirements upon Australian banks, which many commentators believe discriminate against bank funding of corporate borrowers which have high credit ratings. If this were the case, a logical consequence would be to see prime corporates directly approaching the markets in their own name, rather than using bank funding. In fact, the dominant issuers into the medium term note market have been the banks themselves, who see the long term

fixed rate funding as a useful way to achieve an appropriately balanced liability structure.

Several commentators attributed the early market growth to a greater difficulty in getting Euromarket funding, and it is certainly true that the volume of issues of $A Eurobonds has fallen since its peak in the first half of 1987. But that could reflect changing issuer preferences for domestic versus offshore debt, rather than a decline in demand by offshore investors for $A denominated debt. Certainly, there was little evidence of an increase in yields in the $A Euromarket relative to domestic markets[64], which would be expected to accompany a change in issuer preferences. The combination of a decline in demand by offshore investors for $A denominated securities, with issuer indifference about issuing domestically or offshore, appears more consistent with the evidence.

Overall, however, the Australian corporate bond market has not grown with the speed which was expected at the time of its first issues, and corporate borrowers have made relatively little use of the market to date. The decline in overall asset acquisition by business during the recession of the early 1990s and the subsequent emphasis on equity funding provide part of the explanation, and it remains to be seen if this market will prove popular when corporate borrowing returns to fashion.

9. Conclusion

This chapter commenced by asking some questions about Australian corporate debt markets. Why have corporate borrowers largely eschewed domestic bond markets? Were there lax standards in credit assessment by Australian lenders in the 1980s? What changes have occurred in borrowing instruments, and why?

Some answers have been provided in previous sections. Euromarkets and bank financing have provided low cost alternatives to domestic issues of securities, which have been inhibited by a number of institutional factors. Among these were prospectus requirements, absence of an active secondary debt market, lack of public credit rankings (until the 1980s), and savings and investment patterns (influenced by regulation) not conducive to the creation of an investor market for bonds not already served by public sector issuers.

Many of these factors have diminished in importance. Secondary securities markets have grown markedly since the mid 1980s; savings patterns are changing with more funds now under the control of investment managers, for whom traded debt securities play an important role in portfolio construction and management; methods of credit assessment which assist the valuation of traded securities have developed outside the banking sector - the reputation of which for screening borrowers has been badly tarnished by the experience of the late 1980s.

While a decline in the "status" of banks could be expected to encourage use of direct financing techniques by Australian companies, the avalanche of defaults by business borrowers at the beginning of the 1990s hindered growth in those markets. The well publicised crashes of prominent Australian entrepreneurs and collapses of state banks and financial institutions are generally believed to have reduced Australian access to

Euromarkets, and nervousness of domestic investors can be expected to retard domestic corporate debt raisings by all but the "bluest-chip" companies for some time.

Also relevant to future development of the corporate debt markets are ongoing developments in other financial markets. Throughout the 1980s, bank bill acceptances provided (in many respects) a substitute for a corporate debt market. Now that the regulations which prompted growth of that technique have largely disappeared, bill financing has stagnated. Other forms of bank-based securitisation (such as loan sales) seem likely to grow in importance, and the market for direct issues of corporate debt continues to threaten to gain in significance.

Similarly, the incentives for corporations to issue debt rather than equity have also changed. Under the dividend imputation system, the tax incentives for preferring debt to equity have been reduced - although debt securities still possess characteristics which make them valuable components of a firm's liability structure.

What seems likely is that Australian corporations will rely increasingly upon the issue of hybrid financial instruments which utilise recent developments in financial engineering to exploit tax, regulatory, and market opportunities to maximise value for shareholders. Such developments involve a blurring of the debt-equity distinction as has been observed overseas (Federal Reserve Bank of Boston, 1989), and increase the interrelationships between corporate debt markets and derivative markets (such as for futures, swaps and options). Should this be the case, the difficulties already involved in analysing corporate debt markets without encroaching onto the territory of other chapters in this book will be markedly increased.

Table 1
Credit by Sector
(% of GDP)

	1980	1990	1994
Housing	18	20	30
Other Personal	10	12	10
Other (mainly Business)	26	58	46
Total	54	90	86

Source : Stevens (1991), Reserve Bank of Australia Bulletin

Table 2
Debt Financing Characteristics
Australian Listed Companies[a]

Year	Debt/Equity[b] (percent)		Long Term/Total Debt (percent)		Interest Cover (times)	
	Average	Median	Average	Median	Average	Median
1982	54	38	63	40	3.1	3.7
1983	60	37	67	43	2.8	3.0
1984	57	33	69	34	3.4	3.2
1985	64	43	73	37	3.2	3.6
1986	89	43	76	51	3.0	3.0
1987	84	31	77	34	2.6	3.0
1988	94	41	73	48	2.7	2.9
1989	93	47	76	48	2.5	2.5
1990	83	31	74	36	2.4	1.6
1991	89	30	75	35	1.8	1.4
1992	93	29	77	45	1.7	1.5
1993	83	27	76	48	2.7	1.7

[a] All Company Sample, excluding banking and finance, insurance and property trusts. Companies included in the sample vary over time.
[b] Book value of equity

Source: Australian Stock Exchange Stock Exchange and Profitability Study (various issues), Vol 12.

Table 3
Business Debt Outstanding

June	Credit from Intermediaries[a] $bill	Debentures Notes etc[b]. $bill	Overeas Debt[c] $bill	Credit &Borrowings (ratio to GDP	Overseas Debt (ratio to GDP)
1978	25.8	3.1	4.9	0.30	0.05
1979	30.1	3.4	5.6	0.31	0.05
1980	35.6	4.0	5.0	0.32	0.04
1981	42.9	4.6	6.8	0.34	0.05
1982	52.3	5.1	12.3	0.36	0.08
1983	60.1	5.1	18.2	0.38	0.11
1984	67.9	5.2	21.2	0.38	0.11
1985	81.9	5.3	28.5	0.40	0.13
1986	106.0	5.1	34.6	0.46	0.14
1987	131.4	5.4	37.5	0.52	0.14
1988	173.1	6.4	40.9	0.60	0.14
1989	192.8	n.a.	48.6	n.a.	0.15
1990	213.5	n.a.	49.6	n.a.	0.14
1991[d]	215.2	23.1[d]	51.0	0.63	0.14[d]
1992	217.0	24.2	49.3	0.62	0.13
1993	204.0	24.3	50.3	0.56	0.12
1994	193.0	19.1	42.5	0.50	0.10

Source: Reserve Bank of Australia Bulletin. ABS Cat No. 5232.0

a. Credit - other (mainly business) Table D4.

b. Prior to 1989:Private Non-Finance Sector Liabilities: Sources of Debt Finance: Corporate Debentures, Notes and Deposits, Table D6 - publication ceased.
1991 onwards: Table 4 ABS Cat No 5232.0 : Promisory Notes and Long-Term Debt Securities

c Gross External Debt, non-official, trading enterprises -private, Table H

d Break in series

Table 4
Financial Liabilities of Private Corporate Trading Enterprises
$billion

Year ending June	Loans and Placements	Bills of Exchange	Promissory Notes	Long Term Debt Securities	Equity	Other financial claims	Total
1990	158.3	46.8	9.0	12.1	185.1	24.6	435.8
1991	164.1	48.0	11.2	11.9	187.8	25.2	448.1
1992	150.1	47.1	13.4	10.8	212.9	22.9	457.1
1993	145.0	44.0	13.4	10.9	236.1	28.1	476.0
1994	138.8	45.1	9.2	9.9	289.4	30.0	522.3

Source: ABS **Australian National Accounts: Financial Accounts**, Cat No 5232.0 Table 4

Table 5
Composition of outstanding borrowing
Private Corporate Trading Enterprises
(per cent of total)

	Loans and Placements from				Debt Securities				
	Banks	Non-Bank DTIs	Other domestic	Rest of World	Short Term held by		Long Term held by		Total
June					domestic	overseas	domestic	overseas	$bill.
1990	25.20	22.80	5.60	16.40	19.30	5.40	1.60	3.80	226.2
1991	29.40	20.00	5.50	14.90	18.70	6.50	1.30	3.70	235.1
1992	28.70	18.20	4.90	16.10	19.60	7.40	1.10	4.00	221.1
1993	29.00	16.90	4.80	17.60	18.40	8.10	1.20	4.00	213.1
1994	31.30	16.80	4.60	15.70	20.80	5.90	1.10	5.80	202.9

a Assumes distribution of domestic/overseas holding of total of bank accepted bills applies to bills drawn by private corporate trading enterprises.
Source: ABS **Australian National Accounts: Financial Accounts**, Cat No 5232.0 Tables 1,30,31

Table 6
Lending to Australian Business
June 1994

	Loans	Bills[a] and Promissory Notes	Loans, Bills and Promissory Notes
Private corporate trading enterprises	7%	3%	6%
Banks	43%	23%	37%
Non Bank DTIs	23%	9%	19%
Life Offices & Superannuation Funds	2%	19%	6%
Other financial Institutions	4%	14%	7%
Government Sector	0%	8%	3%
Rest of World	21%	22%	22%
Households& unincorporated business	0%	2%	1%
Total	100%	100%	100%

Source: ABS Cat No 5232.0 June 1994, Tables 29,30,31

a The distribution of bill holdings issued by corporates is assumed to be the same as the distribution of total holdings.

Table 7
Australian Listed Companies
Debt/Equity Ratios[a] - Selected Industry Groups

Industry Group	1990	1993
Solid Fuels	34.1	39.6
Oil and Gas	89.8	96.0
Alcohol and Tobacco	118.0	117.3
Food and Household Goods	95.8	99.6
Engineering	61.1	67.8
Transport	122.9	112.9
Banking and Finance	1236.1	1147.6

Source: ASX Stock Exchange and Profitability Study 1994, p 1.19

a. Calculated by dividing all interest bearing debt, excluding convertible securities, by ordinary equity.

Table 8
Liability Profile of an Average Australian Company[a]

Liability Category	Percent of Assets	
	1990	1993
Shareholders Funds		
Ordinary shares	38.3	40.9
Preference capital	0.2	-
Convertible Notes	3.1	1.7
	41.6	42.6
Minority Interests	3.1	8.7

Current Liabilities				
Bank overdraft		0.9		0.7
Trade Creditors	7.8		7.7	
Tax Provisions		1.8		1.7
Debt due one year	8.3		6.6	
Other current liabilities		6.1		7.1
		24.9		23.8
Deferred Liabilities				
Long term Debt	24.1		23.9	
Other Deferred Liabilities	6.2		6.0	
		100.0		100.0

[a] Calculated as an average from the all-company sample, excluding banking and finance, insurance and property trusts.

Source: Australian Stock Exchange 1994 Stock Exchange and Profitability Study, Summary Report p 2.60.

Table 9
Australian Corporate Ratings
April 1994

Rating	Capacity to pay interest and repay principle in a timely manner	Example	Indicative margin[a]
AAA	Extremely strong	Telstra	15
AA+	Very strong	Shell Aust.	
AA	" "	Lend Lease	25
AA-	" "	Coles Myer	
A+	Strong	CRA	
A	"	BHP	35
A-	"	Santos	
BBB+	Adequate	Southcorp	
BBB	"	Burns Philp	45
BBB-	"	Pasminco	
BB+	Uncertainties or adverse	Foster's	
BB	conditions could lead to		
BB-	indaequate capacity to pay		
B+	Adverse conditions likely		
B	to impair capacity ot pay	Ansett	
B-			
CCC	Vulnerability to default		
C	High risk of default		
D	Default		

(a) Indicative margin (basis points) over BBSW for a corporate issuer of a 3 year floating rate note, as at March 1994. (Source: private communication, ANZ Bank).

Source: S&P-Australian Ratings Monthly Ratings Bulletin, 1 April 1994.

Table 10
International Bond Issues ($US bil)

Year	86	87	88	89	90	91	92	93
International Issues in $A	**3.4**	**8.8**	**8.1**	**6.7**	**5.2**	**4.4**	**4.9**	**3.5**
External Bond Issues by Australian Issuers								
Total in all currencies	**10.0**	**6.9**	**7.3**	**7.2**	**3.5**	**4.1**	**4.8**	**9.5**
USD	5.4	1.7	1.9	2.2	0.3	1.3	1.8	5.8
Yen	0.6	1.0	1.1	1.5	0.9	0.7	0.2	0.2
SF	1.3	0.7	0.7	0.2	0.0	0.0	0.1	0.1
DM	0.7	0.3	0.3	0.2	0.0	0.0	0.1	0.0
Pound	0.3	1.6	0.5	0.5	0.5	0.2	0.3	0.3
Other	1.6	1.6	2.7	2.7	1.8	1.9	2.2	3.1

Source: Financial Market Trends OECD)

Table 11
$A Eurobond issues - types ($A mill)

Year	Fixed rate	Zero Coupon	Fixed rate adjustable	Floating Rate	Equity related	Total	Number of issues	Aver-age size
1983	240					240		
1984	361					361	10	36
1985	4343		60		75	4478	91	49
1986	3954	469				4423	91	49
1987	10828	484	225	700	500	12736	193	66
1988	9356	54		635	450	10495	155	72
1989	6144	292		118		6555	115	57
1990*	6295	2720				9015	85	106
1991	5100	900				6000	58	103
1992	6350	200				6520	54	121
1993	4970					4970	39	127
1994	10060			100		10160	105	97

Sources: D Asteraki and M Cohen "Australian Dollar" Chapter 1 in Euromoney International Capital Markets 1989, Euromoney Publications.
ANZMcCaughans Fixed Interest Markets.
Euromoney (various issues)
Commonwealth Bank of Australia (private communication)

* The zero coupon issue figures for 1990 refer to face value, rather than issue price. They thus increase the average size of the issue, relative to cash received for the issue.

Table 12
Nationality of Euro $A Issuers
Number of Issues
Half yearly: 1985 - 1990

Year	Australian	Other	Total
1985	50	39	89
1986	23	69	92
1987	64	137	201
1988	61	75	136
1989	54	61	115
1990	55	30	85
1991	46	12	58
1992	36	18	54
1993	36	3	39
1994	76	29	105

Source: Commonwealth Bank of Australia.

Table 13
Convertible Note Details
NATIONAL AUSTRALIA BANK LIMITED

CONVERTIBLE NOTE DETAILS

Number of Notes	:	26,574,873
Issue Price and Date	:	340 cents, July 1984
Interest Rate	:	10%, 34 cents per note p.a. Interest is payable on March 31 and September 30
Maturity Date	:	September 30, 1993
Participation in Issues	:	Cash Issues : Full participation. Bonus Issues: Allotment on conversion
Conversion	:	1:1.2, June 1-18, 1989, 1991 and 1993

Source: D. Mackey & H. Guiner "Assessment of Major Convertible Note Securities". "McCaughan, Dyson, Capel, Cure December 1987.

Table 14
The Convertible Note Market

Number of New Issues

Period	Average Issues per year
1972-75	4
1976-80	4
1981-82	17
1983-85	5
1986-89	17
1990-92	2

Source: Database compiled by David Barrow, Department of Accounting and Finance, University of Melbourne

Table 15
The Convertible Note Market

Size Distribution of listed issues (1988-90)

Size Range ($m)	Number of Issues
<10	23
10-20	15
20-50	18
50-100	12
100-200	5
200-500	1
500-1000	1
>1000	1

Maturity Distribution of Listed Issues (1988-90)

Years to Maturity	Number of Issues
<5	11
5-10	27
10-15	33

Source: Personal Investment (various issues); Australian Financial Review (various issues).

Table 16
Australian Corporate Bonds
Issues rated by S&P Australian Ratings: April 1994

Issuer Type	Number of		Type of Issue				
	Issuers	Issues	TCDs[1]	Bonds[2]	Subordinated Bonds	FRENS[3]	Global Bonds
Banks	8	15	7	6	1	1	
Government	3	3		3			
Authorities							
Overseas	5	6					6
NBFIs	3	3		3			
Corporates	3	3		3			

1. Transferable Certificates of Deposit
2. Includes: Inscribed Stock, Medium Term Notes, Unsecured Notes
3. Floating Rate Extendible Subordinated Notes

Source: Standard & Poor's Monthly Bulletin: Australia and New Zealand, 1 April 1994

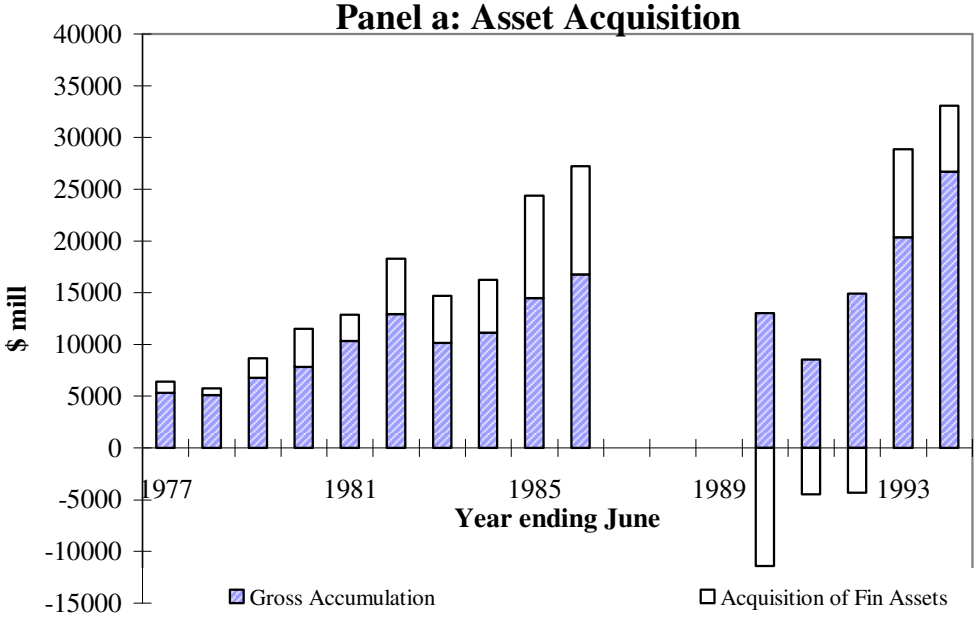
Table 17
Australian Securitised Issues
June 1994

Asset Backing Type	(% of total)
Residential Mortgages	67.1
Residential & Commercial Mortgages	18.0
Government debt	1.7
Credit Card Receivables	4.0
Commercial debt	8.1
Asset-backed securities	1.1

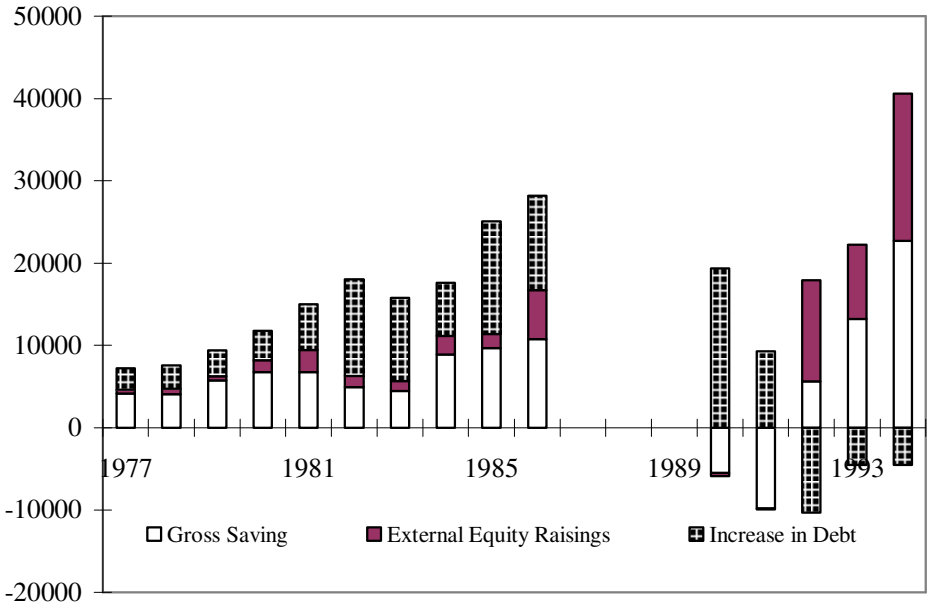
Instrument Type	(% of total)
Fixed rate bonds	46.5
Floating rate bonds	37.0
Commercial paper	15.5
Promissory notes	1.0

Source: Coopers & Lybrand (1994)

Figure 1: Asset Acquisition and Financing
Private Corporate Trading Enterprises
Panel a: Asset Acquisition



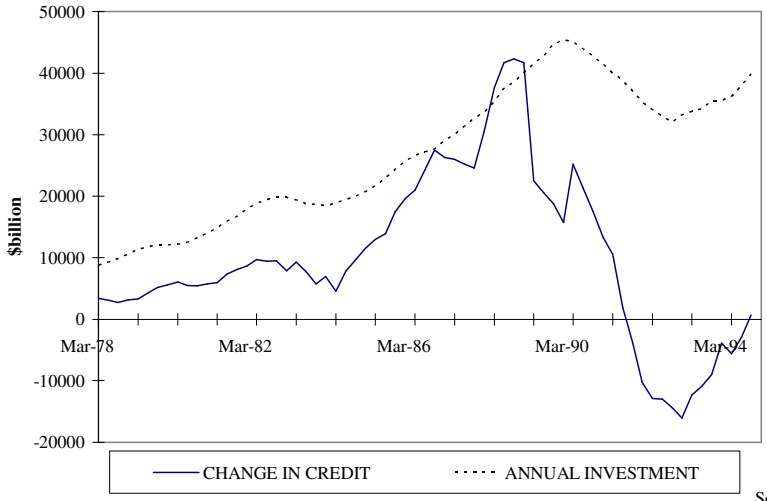
Panel b: Sources of Funds



Sources: 1977-1986: Reserve Bank Bulletin: Flow of Funds Supplement
1990 - : ABS Cat No 5232.0

(a) Reliable data is not available for the period 1986/7 to 1988/9 and is thus excluded from this figure

Figure 2. Business Credit and Investment



Change in credit is the change on four quarters earlier of "other (mainly business) credit". Annual Investment is the sum of private equipment and non-dwelling construction expenditure (current prices) for the last four quarters.

Source:
Credit: Reserve Bank of Australia Bulletin
Investment: ABS Cat No 5206.0

ENDNOTES

[1] Credit is defined as bank bills outstanding plus loans and advances by banks and non-bank financial institutions whose liabilities are included in broad money. It thus excludes financing provided by life office and pension funds as well as direct financing techniques such as issues of promissory notes, debentures and corporate bonds.

[2] Long term direct debt financing by corporates (e.g. issues of debentures and bonds) is excluded from Table 1, but although it stagnated, its small volume means that its inclusion would not significantly alter the general picture.

[3] For 1991, estimates of the percentage of small firms using particular major sources of finance are: bank overdraft 73.5%; bank term loan 28.5%; bank bills 19.5%; bank leasing finance 22.1%; finance company leasing finance 21.6%. (Banks, 1991, Table 7.1).

[4] Bank acceptances of bills and more recently securitisation of mortgages are prime examples of this practice in Australia. In the USA, commercial loan sales, whereby bank loans to commercial customers are sold (with or without recourse) to investors have also become an important component of the capital markets. (See Becketti and Morris, 1987).

[5] The value of goods financed by new finance leases is around one quarter of gross business fixed investment. Finance leases involve the lessee assuming obligations to make regular lease payments and an exposure to the end of lease market value of the item being financed. In this respect, the costs and risks are of the same nature as are involved in borrowing and purchasing the item in question

[6] One example of such a security is the Converting Preference Share, which is analysed in Davis (1994). Analysis of the trend towards a blurring of distinctions between debt and equity can be found in Federal Reserve Bank of Boston (1989).

[7] Finnerty (1988) provides a useful survey of financial engineering and corporate finance. See also Marshall and Bansal (1993).

[8] The series used in Table 3 for debentures, notes etc., is not completely comparable before and after the break in the series, making the table at best a rough guide to trends. Note also that the external debt series is for gross external debt (i.e. ignoring financial assets held overseas), and includes some of the borrowings also listed under debentures, notes etc..

[9] The role of banks in the funding process is deemphasised by treating holders of bank accepted bills (rather than the bank acceptors) as the suppliers of funds in Table 4.

[10] When a longer historical perspective is adopted, a marked decline in the use of debenture finance and issuance of notes can be observed from the 1950s onwards.

[11] These determinants are neither independent nor exogenous, since the level of corporate asset acquisition, determination of the internal financing ratio, choice amongst external financing sources, and the relative cost of alternative sources are all simultaneously determined throug ha market process reflecting investor and issuer preferences. Nevertheless the decomposition used in the text provides a useful framework for analysing developments.

[12] The role of financial leases as a method of financing acquisition of physical assets muddies the picture presented in equation 1. But under revised Australian accounting conventions in operation since 1988, acquisition of equipment via financial lease means that lease obligations are recorded as a liability and the equipment financed recorded as an asset.

[13] The Reserve Bank flow of funds estimates ceased publication with the 1988/89 estimates (which can be found in the November 1989 Reserve Bank Bulletin), but complete data on the composition of

financial transactions by private corporate trading enterprises has not been published. Full year data from the new flow of funds estimates produced by the Australian Bureau of Statistics are available only for 1990/91 and subsequent years.

[14] This decline is accounted for primarily by a stabilisation in total financial assets held and a significant growth in equity financing. (Financial assets held as a ratio of non equity liabilities remained stable at around 50 per cent).

[15] A similar figure can be found in Hinton (1991).

[16] In the latter part of the 1980s, dividend pay out ratios increased in response to the introduction of the imputation system of taxation, and this could be expected to reduce business saving. In future years the statistical distinction between gross saving and incurrence of financial liabilities may become increasingly muddied by further introduction of dividend reinvestment schemes. Unless the figures are adjusted, an increase in dividend payout rates would lead to a decline in gross saving, while reinvestment of those funds by shareholders under dividend reinvestment schemes would see an equivalent increase in incurrence of financial liabilities.

[17] An analysis of Australia's asset price inflation can be found in Urbanski (1990).

[18] The index includes prices of housing, commercial properties, and equities. See Callen (1991) for information on a similar index constructed by the Reserve Bank of Australia.

[19] See the Symposium in the Journal of Economic Perspectives 1988, 2.

[20] This was demonstrated by Miller (1977)

[21] See Van Horne, Wachowicz, Davis and Lawriwsky (1994) chapter 15 for a discussion of these issues.

[22] Interest on Eurobonds escapes the withholding tax net, because an exemption is given for widely distributed bonds. See Lewis and Davis (1987, chapter 10).

[23] More specifically, if the borrower expects yields to fall by more than is implied by the shape of the yield curve, the expected borrowing cost is lower than for a fixed rate borrowing. The reason is that the fixed rate borrowing involves an equivalent cost to a sequence of floating rate borrowings at the forward interest rates implied in the yield curve. It should be noted that variable borrowing costs need not increase the overall exposure of a company to interest rate fluctuations. The company may, for example, have operating profits which are positively correlated with the level of interest rates, so that a variable interest rate borrowing may serve to reduce overall exposure.

[24] The foreign currency borrowing by Australian firms in the mid 1980s is a classic case. See Lewis and Polasek (1990).

[25] It goes without saying that this is only true if proper procedures are in place to manage the exposures so created.

[26] Skully (1987) Chapter 12 discusses the nature of the impediment to non broking firms underwriting and managing security issues by listed companies.

[27] The following discussion focuses upon public issues of debt securities. In some markets, such as the US, the *private placement* market is also a significant source of debt finance for companies. The role and structure of this market is analysed and outlined in Carey, Prowse, Rea and Udell (1993a, 1993b).

[28] A detailed timetable of 9 weeks for establishing a Euro MTN programme (which involves greater complexity than a bond issue) is given in Ball (1994)

[29] Different responses to a shortfall in investor demand occur in different markets. Typically in the Euromarkets, syndicate members may discount the price at which securities are sold to investors even in

primary mode. In the U.S. domestic market (but becoming more prevalent in the euromarkets), the syndicate members are normally bound by an agreement not to discount their selling price on their quota (in order to sell it) until the lead manager disbands the syndicate

[30] If, for example, floating rate funding is relatively cheaper than fixed rate funding which the borrower wants, a cheaper 'synthetic' fixed rate loan can be created by borrowing floating and entering a swap in which a fixed rate stream is received in exchange for a floating rate stream.

[31] This is the 'completion of markets' argument of Arak, Estrella, Goodman and Silver (1988). Wall (1989) provides an alternative argument based upon the effect which such transactions have in overcoming agency costs. (See note 37 for a definition of agency costs).

[32] Kuprianov (1994) provides a survey of the role of interest rate swaps in corporate financial management.

[33] See Reserve Bank (1994b) for further information.

[34] As a rough guide, a bank client wanting a three year swap for a principal amount of $500,000 could expect to pay an extra 10-15 basis points as the fixed rate payer, and receive 10-15 basis points less as the floating rate receiver.

[35] Default is interpreted here to include delay in payment. Because of the time value of money, such delays involve losses for the holder of debt, unless adequate compensation is paid for the gap between the due and the actual payment date.

[36] Event risk differs from default risk in the following way. Default risk refers to the probability, based on information available to date, that the firm may default on its obligations. Event risk refers to the fact that future unpredictable events (such as a significant oil price rise, or a change in government tax policies) might cause a change in default risk. Default risk essentially involves an assessment of risk arising from all possible events, whereas event risk involves the determination of specific events which may have a major influence on default risk.

[37] Agency costs arise from the 'principal-agent' relationship established between borrower (agent) and lender (principal). 'Rational' lenders will anticipate that future actions of borrowers will be in their own interest, and thus inconsistent with the interests of lenders. Consequently, lending rates will incorporate a premium for these expected adverse effects, unless borrowers can establish mechanisms constraining their own future behaviour which reassure lenders that such adverse effects will not occur. The resource costs of those mechanisms are the agency costs

[38] See, for example, Cox and Rubinstein (1985).

[39] Hardy (1993) provides an overview of recent provisions contained in negative pledge agreements.

[40] See Goddard (1990), Allan (1990), Gray (1990) for more detailed discussion of negative pledge lending. These articles also discuss the implications of the Supreme Court decision in the Bond Brewing Holdings Limited v National Australia Bank Limited case for the rights of lenders and borrowers under negative pledge arrangements and the future usage of negative pledge arrangements.

[41] See Wakeman (1984) for an analysis of the role of ratings agencies.

[42] The market value of an asset against which there is a fixed charge may turn out to be less than the value of the claim, in which case debenture holders rank equally with other creditors in pursuing the residual value of their claim.

[43] See Banks, 1991, Appendix G for more detailed information.

[44] Global bond issues involve, as the name suggests, issues which are spread across many markets (including that of the currency of issue and domicile of the issuer) and can be traded, settled and registered across those markets. OECD (1994) provides more information.

[45] Benzie (1992) provides a useful summary table of differences between domestic, foreign and euro bonds.

[46] One such technique is the competitive underwriting deal, in which syndicates bid for the write to manage, underwrite and sell an issue. Another techniques is the "bought" deal, whereby the lead manager purchases the entire issue which is then sold (at a higher price) into the market.

[47] The exchange at this stage is unnecessary, because the principal amounts can be independently converted at the spot rate to yield the same amount.

[48] The relationship is only exact if the exchange rate does not change. Changes in the exchange rate mean that $A 0.50 is no longer equivalent to 0.5% of $US 80, so that the funding costs of German Bank are not completely fixed.

[49] Note however, that this process should mean that at the margin there are no further arbitrage gains to be made. A less than perfectly elastic supply of investors in $A Eurobonds means that Eurobond yields will be bid up until, at the margin, the cost of funding via the Euromarket equals that domestically.

[50] This has lead several authors (see e.g. Brennan and Schwartz, 1986) to argue that convertibles can be an efficient form of raising finance when investors have imperfect information about the firm's prospects. While "straight" debt holders will be concerned that unanticipated increases in the risk of the company will effectively transfer wealth from debtholders to shareholders, the potential equity stake of a convertible may allay this concern.

[51] Some Australian companies have made convertible security issues into overseas markets. For example, in 1991 a US subsidiary of Southcorp issued USD 60 mill of 7.5% guaranteed convertible bonds which mature in 1998 and which can be converted into 21,132,712 ordinary shares in Southcorp at a USD conversion price based on an AUD price of $3.70 converted in USD at the fixed exchange rate of AUD 1 = USD 0.7673514.

[52] These estimates are based on a convertible note database compiled by David Barrow at the University of Melbourne.

[53] Moreover, the rights issues have generally been non-renounceable thus precluding the trading of rights.

[54] Interest on convertible borrowings made after 1 January 1976 (when a change in legislation took effect) is available as a tax deduction, providing the conditions set down in Section 82SA of the Income Tax Assessment Act are satisfied.

[55] The sample contains all convertible notes listed in reports on the convertible note market by ANZ McCaughans and by A.C. Goode, together with convertible notes listed in the Australian Stock Exchange Journal (Personal Investment).

[56] On conversion of notes into shares, the investor is liable to tax on the difference between the market value of the shares and the par value of the notes. Capital gains on subsequent sale of the shares takes the conversion date share price as the base for indexation. Compared to initially purchasing shares, the investor loses some part of the indexation benefit and pays tax on some part of capital gains at the conversion date rather than all at sale date.

[57] The ANZ issue, for example, was for $600 million which was equal to approximately 16% of ANZ's market capitalisation at the time.

[58] In most cases, this base value is set sufficiently high so as to make this feature of limited relevance.

[59] This interpretation is discussed in Davis (1994).

[60] See Myers (1984).

[61] See BZW(1993) for examples, discussion of the structure of FRN issues and pricing formulae.

[62] A regression of issue yields between January 1988 and September 1990. as a basis point margin over NSW T Corp stock, (MARGIN) on issue size (VOLUME) and credit ratings, entered as dummy variables using A- as the control, yielded the following results.

Variable	Coefficient	t Statistic	Variable	Coefficient	t Statistic
Constant	80.0	12.7	AA-	-16.6	-2.47
AAA	-45.2	12.7	A+	-17.8	-2.45
AA+	-33.9	-6.12	A	-32.4	-3.66
AA	-21.5	-4.2	Volume	-7.2	-5.65

$R^2 = 0.77$ s = 8.85 D-W = 1.91

To interpret these results note, for example, that the coefficient of -45.2 on AAA indicates that a triple A rated borrower will be able to issue the same volume at 45.2 basis points lower than an A minus borrower and will have an issue margin over the NSW T-Corp of 34.8 (= 80.0 + -45.2).

[63] The SBC corporate bond index provides a benchmark portfolio for investors in such securities. For further discussion of bond indexes see Chapter xx.

[64] A comparison was made of issue yields on five year $A Eurobonds made by the same issuers in 1986 or 1987 and in 1989 or 1990. (Seven cases were identified where the same Australian organisation had made a $A Eurobond issue in both periods.) No obvious change in yields relative to the contemporaneous five year Treasury Bond yield, between the two periods was evident.

REFERENCES

AFMA (1994) Dealing Handbook, Australian Financial Markets Association, Sydney

Allan D E (1990) 'Negative Pledge Lending - Dead or Alive? How to Re-invent the Mortgage' Journal of International Banking Law, 5, 8, 330-359

Arak M, Estrella A, Goodman L, and A. Silver, (1988) "Interest Rate Swaps: An Alternative Explanation" Financial Management Summer, pp. l2-l8.

Ball M., (1994) " The US MTN Windfall" Corporate Finance, November 1994, 18-23.

Banks (1991) Availability of Capital, Report No 18, 9 December, Industry Commission, AGPS Canberra.

Barry, R., and C. Standish (1989), 'Domestic Sources of Long Term Corporate Debt' in R. Bruce, B. McKern, I. Pollard, and M. Skully (eds.), Handbook of Australian Corporate Finance, 3rd Edition, (Sydney, Butterworths), 227-255.

Becketti, S. and Morris, C. (1987) "Loan Sales : Another Step in the Evolution of the Short Term Credit Market". Federal Reserve Bank of Kansas City Economic Review, November, 22-31.

Benzie R., (1002) "The Development of the International Bond Market" BIS Economic Papers, No 32, Bank For International Settlements, Basle.

B.I.E. (1990) "Does the Australian tax system favour company debt?" Bureau of Industry Economics Business income taxation paper 4, AGPS Canberra

Borio C (1990) "Leverage and Financing of Non-Financial Companies: An International Perspective" BIS Economic Papers, No 27, May. (Bank for International Settlements, Basle).

Brennan, M. and E. Schwartz, (1986) 'The Case for Convertibles' in J. M. Stern, and D. H. Chew Jr. (eds) The Revolution in Corporate Finance, (Oxford, Basil Blackwell), 163-171

BZW (1993a) Floating Rate Bonds, A Market Analysis, Barclays de Zoete Wedd Australia Limited, Sydney.

BZW (1993b) Guide to Index Linked Securities-2nd Edition, Barclays de Zoete Wedd Australia Limited, Sydney.

Callen T (1991) "Estimates of Private Sector Wealth" Research Discussion Paper 9109, Reserve Bank of Australia

Carey M., Prowse S., Rea J., and G. Udell, (1993a) "Recent Developments in the Market for Privately Placed Debt" Federal Reserve Bulletin February.

Carey M., Prowse S., Rea J. and Udell G., (1993b) "Recent Developments in the Market for Privately Placed Debt: A New Look" Financial Markets, Institutions and Instruments, 2, (3).

Chase AMP Bank Australian Fixed Interest Securities Directory, undated.

Clare R, Tulpule A, Ferry N and A Purtill (1991) "Developments in Private Debt" pp 23-44 in EPAC The Surge in Australia's Private Debt: Causes, Consequences, Outlook Economic Planning Advisory Council Background Paper No. 14., June (Canberra, AGPS)

Coopers and Lybrand (Securities Limited) (1994) Survey of Australian Securitised Issues as at 30 June 1994,

Cox J. and M Rubinstein (1985) Options Markets Prentice Hall, Englewood Cliffs, N.J..

Credaro R (1990) "Australian Fixed Interest Markets: Recent Developments and Outlook" The Macquarie Irregular, Number 7 (Macquarie Bank)

CS First Boston Australia (1989), 'The Australian Fixed Income Market: 5. Mortgage Backed Securities' C S First Boston Australia, Fixed Income Research, June.

CS First Boston Australia, (1988) 'The Corporate Bond Market - Credit Considerations' C S First Boston Australia, Fixed Income Research, September.

Davis K (1994) “Converting Preference Shares: An Australian Capital Structure Innovation” Department of Accounting and Finance, University of Melbourne

Davis K T (1990) "Bank Pricing and Risk Adjusted Capital Requirements" Australian Journal of Management, 15, 2, December, 243-360.

EPAC (1990) "Trends in Corporate Debt" EPAC Council Paper No 41, AGPS Canberra

Fama E (1985) "What's Different about Banks?" Journal of Monetary Economics 15,1, January, 29-39.

Federal Reserve Bank of Boston (1989) Are The Distinctions between Debt and Equity Disappearing?, Conference Series No 33, Federal Reserve Bank of Boston.

Finnerty J D, (1988) 'Financial Engineering in Corporate Finance: An Overview' Financial Management, 17,4, Winter, 14-33

Goddard I (1990) 'Negative Pledges: Prospects for the Future' Australian Corporate Treasurer, August, 2-4.

Gray K (1990) 'The end of negative pledge lending' Asiamoney, 6, April

Green J "Macquarie Liability Index" The Australian Corporate Treasurer, April 1993, 10-14.

Hammond, G. (1987)"Recent Developments in the Swap Market", Bank of England Quarterly Bulletin, February, pp. 66-79.

Hansen G "Accessing the domestic corporate bond market" The Australian Corporate Treasurer, February 1992, 2-6

Hardy M "Outlook for the medium-size corporate in the Australian capital markets", The Australian Corporate Treasurer, February 1993, 2-4

Hight K (1991) "Australia's corporate credit crunch" The Australian Corporate Treasurer, August, 2-6.

Hinton T (1991) "Credit Growth, the Economy and Monetary Policy" in EPAC The Surge in Australia's Private Debt: Causes, Consequences, Outlook Background Paper No. 14, June.

Kuprianov (1994) " The Role of Interest Rate Swaps in Corporate Finance" Federal Reserve Bank of Richmond Economic Quarterly, 80, 3, Summer, 49-68.

Lempriere, R. (1988) 'The emerging Medium Term Corporate Debt Market' Australian Corporate Treasurer, December, 1-4.

Levy R "Raising capital by converting preference shares" The Australian Corporate Treasurer, August 1993, 8-10

Lewis M.K. and M Polasek (1990) "Whither the Balance of Payments?" Australian Economic Review, 3, 91, Spring, 5-16

Lewis, M.K. and Davis, K.T. (1987) Domestic and International Banking, Philip Allen, Cambridge.

Lowe P. and G Shuetrim (1992) "The Evolution of Corporate Financial Structure: 1973 - 1990" Reserve Bank of Australia Research Discussion Paper 9216.

Mackey, D. and H. Giurner, (1987) Assessment of Major Convertible Note Securities , (McCaughan Dyson Capel Cure Limited, December)

Marshall J. F., and V. K. Bansal, (1993) Financial Engineering Kolb Publishing, Miami.

McCaughan Dyson Capel Cure Limited (1988) The Fixed Interest Market in Australia, (Melbourne)

Miller, M. (1977) 'Debt and Taxes', Journal of Finance, 32, May, 261-278.

Mills K., Morling S., and Tease W., (1993) 'Balance Seet Restructuring and Investment' Reserve Bank of Australia Research Discussion Paper 9308.

Norton W.E., (1989) "Australian Debt and Equity Markets: Looking Back and Forward" Reserve Bank of Australia Bulletin, February, 24-30

OECD (1994) "The Rise of Global Bonds" Financial Market Trends, 58, June, 55-62. OECD, Paris.

Pender H (1991) "Does a Tax Bias Toward Corporate Use of Debt Finance Remain?" Issues in Business Finance, EPAC Background Paper No. 15, July.

Reserve Bank of Australia (1994a) "Bank Lending to Small Business" Reserve Bank of Australia Bulletin, April 1994, 29-37.

Reserve Bank of Australia (1994b) “Australian Banks’ Activities in the Derivatives Markets: Products and Risk-Management Practices” Reserve Bank of Australia Bulletin, September 1994, 1-8.

Shuetrim G., Lowe P. and S Morling (1993) “The Determinants of Corporate Leverage: A Panel Data Analysis” Reserve Bank of Australia Research Discussion Paper 9313.

Skully M (1987) Merchant Banking in Australia, Oxford University Press, Melbourne.

Smith, C. W. Jr., C. W. Smithson, and L. M. Wakeman. (1986) 'The Evolving Market for Swaps' in J. M. Stern, and D. H. Chew Jr. (eds) The Revolution in Corporate Finance, (Oxford, Basil Blackwell), 252-264

Smith, C., Smithson, C. and Wakeman, L. (1988) "The Market for Interest Rate Swaps" Financial Management, 17,No 4, Winter, 34-44.

Stevens G (1991) "The Rise in Private Debt in the 1980s: Why Did It Happen, And Will It Continue in the 1990s?" pp 45-63 in EPAC The Surge in Australia's Private Debt: Causes, Consequences, Outlook Economic Planning Advisory Council Background Paper No. 14., June (Canberra, AGPS)

Targett G (1989) "Negative Pledge lending - Tightening the Rules" Decisions (National Australia Bank), 1,3, October, 24-26

Turnbull, S. (1987) "Swaps : A Zero Sum Game": Financial Management, Spring, 15-21.

Urbanski (1990) "Asset Price Inflation" Treasury Research Paper No. 1, The Treasury, Canberra, December.

Van Horne, J., Davis, K., Nicol, R. and Wright, K. (1990) Financial Management and Policy in Australia 3rd edition, Prentice Hall, Sydney.

Wakeman, L. (1986) "The Real Function of Bond Rating Agencies" pp 17-20 in Stern and Chew, op cit. (Also in M. Jensen and C. Smith (eds)The Modern Theory of Corporate Finance, McGraw Hill, 1984).

Wall L. D., (1989) "Interest Rate Swaps in an Agency Theoretic Model With Uncertain Interest Rates," Journal of Banking and Finance 13, 2, May, 261-270

Wall, L. D. and J.J. Pringle, (1988) "Interest Rate Swaps: A Review of the Issues",Federal Reserve Bank of Atlanta, November/December, 22-41

Whittred, G., and I. Zimmer, 'Accounting Information in the Market for Debt', Accounting and Finance, 26 (November 1986), 19-34

Williams M “Re-evaluating borrowing requirements and raising finance” The Australian Corporate Treasurer, June 1992,2-6

Willis, J. (1989) "The AGC Mint Series Bond Issue" The Australian Corporate Treasurer, October, 3-6