

FINANCIAL COVENANTS IN THE MARKETS FOR PUBLIC AND PRIVATE DEBT

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FINANCIAL COVENANTS IN THE MARKETS FOR PUBLIC AND PRIVATE DEBT

ABSTRACT

The public debt contracts surveyed in Whittred & Zimmer (1986) and Stokes & Tay (1988) were issued between 1962 and 1985 and there has been significant macroeconomic, institutional and regulatory change since that time. We analyse a sample of 36 recently issued Australian public debt contracts and document a considerable change in the “package” of financial covenants used in public debt contracts. The covenant package is now less restrictive and the types of covenants used are more heterogenous. We also survey a sample of 41 recent Australian private debt contracts. These contracts contain a greater number, variety and, collectively, more restrictive set of financial covenants than those public debt contracts we survey, supporting theory which suggests that covenant restrictive and renegotiation-flexible contracts are more suited to borrowers contracting with financial intermediaries in private debt markets. We also note differences in accounting rules associated with financial covenants used in these private debt contracts.

1 Introduction and motivation for the research

Contracting has a role in alleviating potential conflicts of interest between debtholders and shareholders. In particular, Smith and Warner's (1979) costly contracting hypothesis suggests that control of debtholder-shareholder conflicts by means of contracts can increase the value of the firm. The use of covenants in debt contracts is an integral part of controlling debtholder-shareholder conflicts¹.

Negotiating the appropriate package of covenants to be included in a loan agreement is important to the borrower and the lender. Covenants that are not appropriately restrictive or optimally designed are unlikely to control potential opportunism on the part of a borrower. On the other hand, if covenants are too restrictive, they are likely to constrain a borrower's optimal management strategies and may even trigger a default that is not warranted. Reports in the financial press regularly provide anecdotal evidence about the importance of covenants. For example, a recent report on the exposure of a major Australian bank, ANZ, to the financially troubled UK group, Marconi, states "the company was so popular that banks," including ANZ, "agreed to lend billions of pounds without requiring covenants to protect their investment".² Similarly, another report referred to an Australian company, Burns Philp, writing down the value of a business segment by A\$700 million and "placing the company in breach of its gearing and net worth covenants and sending its share price into freefall".³ Additionally, the importance of information about the nature of debt covenants and the associated accounting measurement rules to accounting researchers is well documented in the literature (for example, see Whittred & Zimmer, 1986; Cotter, 1998; Mather, 1999a). The requirement to apply the Australian equivalents of the International Financial Reporting Standards from 1 January 2005 increases the relevance of such research, as it is likely to lead to further tailoring and the renegotiation of the measurement rules in debt contracts (see, Ravlic, 2004).

Given the importance of covenants, it is not surprising that two of the most cited research papers in accounting published in Australia are those by Whittred and Zimmer (1986) "Accounting Information in the Market for Debt" (subsequently W&Z, 1986) and Stokes and

¹ Covenants are undertakings given by a borrower in a loan contract that restrict the activities of the borrower or require the borrower to take certain actions.

² *Business Australian*, 25 July 2002, p.19.

³ *Australian Financial Review*, 17 November 1997, p.19.

Tay (1988) “Restrictive Covenants and Accounting Information” (subsequently, S&T, 1988).⁴ W&Z (1986) report the results of a survey investigating the use of financial covenants⁵ in debenture, unsecured note and convertible note trust deeds⁶ and the various accounting measurement rules associated with those covenants, whilst S&T (1988) investigate a more complete sample of convertible note issues. However, the debt instruments surveyed in these papers were issued between 1962 and 1985 and there has been much macroeconomic, institutional and regulatory change since that time.⁷ Additionally, it is argued that heuristics such as covenants and their associated measurement rules may evolve in a form of economic Darwinism – that is, “harmful heuristics, like harmful mutations in nature, will die out” (Miller, 1977, p.273).⁸ Accordingly, the first objective of this paper is to survey a sample of recently issued Australian listed public debt contracts in order to make comparisons with the findings in W&Z (1986) and S&T (1988) and determine whether their reported findings are still applicable.

The Australian bank loan market is significantly larger than the public debt market in terms of both volume and value (Cotter, 1998). However, the corresponding research into the use of covenants and the associated accounting measurement rules in bank loan contracts is very limited and is severely constrained by the lack of publicly available data. Ramsay and Sidhu (1998) report the analysis of accounting and non-accounting covenants, as well as associated accounting rules, in 14 bank loan contracts and two “boilerplate” or law firm standard form contracts (subsequently R&S, 1998). Similarly, Cotter (1998) reports the results of a small questionnaire survey of senior corporate bankers, as well as a survey of the extracts of 23 bank loan contracts. While Cotter’s paper examines frequently used covenants and the restrictiveness and cross sectional variations in those covenants, her paper does not investigate the associated accounting measurement rules written into bank loan contracts. Finally, Mather (1999a) reports the results of an interview survey of forty-eight bank-loan officers eliciting similar information and also obtains information about the methods of

⁴ A study of all papers published in *Accounting and Finance* from 1973-1999 finds that W&Z (1986) is the most frequently cited in Asia Pacific journals, while S&T (1988) ranks equal second (Otchere, 2003).

⁵ We define financial covenants as those covenants that use accounting data in their formulation either as an absolute amount or as the numerator and/or denominator of a ratio.

⁶ Trust deeds associated with public debt issues are subsequently referred to as public debt contracts.

⁷ An example of changes over time in the US debt market is Mohrman (1996) who reports an increasing use of “fixed” GAAP in more recent US debt contracts. More recently, Begley and Freedman (2004) note a “dramatic” decline in the use of accounting based covenants in public lending agreements in the past 25 years.

⁸ However, Miller cautions that non-harmful neutral mutations may persist without necessarily having any survival value.

monitoring compliance with such covenants. However, all of these studies are characterised by very small samples or, in the case of Mather (1999a), the potential for bias inherent in an interview survey. Accordingly, the second objective of this paper is to add to the limited information available about covenants in the bank loan market by analysing a comparatively large sample of Australian bank loan (private debt) contracts.

Financial intermediaries lending in private debt markets have a comparative advantage over individual investors (who typically lend in public debt markets), or their agents, in sourcing information about the credit risk of borrowers and in facilitating initial and subsequent negotiation (Diamond, 1991). It is therefore expected that they should offer debt contracts with specifically tailored covenants and renegotiation options (see, for example, Berlin and Mester, 1992). Such covenant restrictive but renegotiation-flexible contracts are not well suited to public debt markets that are characterised by diverse and numerous investors.⁹ The relatively recent studies of Australian bank loan contracts appear to provide some empirical support for this proposition. However the relatively small samples of private debt contracts and different time periods from which the samples of public and private debt contracts are drawn has the potential to confound. Accordingly, the final objective of this paper is to compare covenant usage in public and private debt contracts negotiated in similar time periods. It is expected that private debt contracts will have a greater number and a more restrictive set of covenants than public debt contracts. We also expect to see more tailoring of the related measurement rules in private debt contracts.

The remainder of this paper is structured as follows. Section 2 discusses the data and research method. Section 3 analyses the results and section 4 provides some conclusions.

⁹ While a trustee acts on behalf of the individual investors, individual investors have to approve any course of action ensuing from a technical breach. See Mather (1999b) for a discussion of these theoretical and institutional differences.

2 Sample and research method

The Australian Stock Exchange Limited (ASX) provided a list of 39 public debt issues representing all of the corporate debt issues, excluding those made by financial institutions, outstanding at 31 December 2001. Trust deeds and other contractual documentation relating to 36 of these debt issues were obtained either directly from the companies or purchased from the ASX. As table 1 shows, 24 of these contracts relate to convertible notes and 12 relate to unsecured notes. The issue dates range from 1991 to November 2001 with the vast majority of the debt issued between 1997 and 2001. According to the ASX records, these 36 contracts represent 92% of the outstanding public corporate debt at 31 December 2001.

TABLE 1 ABOUT HERE

We also obtained access to 32 bank loan contracts through several Melbourne-based advisers who wish to remain anonymous and 9 bank loan contracts directly from Sydney-based borrowing companies. The two sets of information were screened to avoid duplication. As table 1 shows, the 41 bank loan contracts are dated between 1993 and 2000 with the vast majority dated between 1997 and 2000. We guaranteed the confidentiality of the information elicited and also undertook to report only aggregated information.¹⁰

Two databases were created for the public and private debt contract information using a classification scheme very similar to that used by Ramsay and Sidhu (1998) and was influenced by prior research (for example, Smith and Warner, 1979; W&Z 1986). All data were coded by one of the authors who also verified the subsequent data entry.

3 Results

We consider the use of financial covenants in public and private debt contracts separately and then compare observed differences between the utilisation of covenants in the public and private debt markets.

¹⁰ This is a non-random sample as are all prior Australian and other non-US surveys of private debt contracts. Accordingly, whilst bias is possible, we take some reassurance from the fact that our sample is nearly double that of previously published non-US research in this area. Given concerns about confidentiality, it was also not possible to obtain any firm specific metrics apart from industry. What we also know is that all but three of the borrowers were listed companies. The other three were all in the sub-sample of firms we had direct contact with and may be described as “large private companies”.

3.1 Financial Covenants in Public Debt Contracts

In this section we report the incidence and types of financial covenants in our sample of public debt contracts as well as the accounting measurement rules associated with these covenants. Wherever possible, we make comparisons with the results reported by W&Z (1986) and S&T (1988).

3.1.1 Incidence and Types of Financial Covenants

Table 2 summarises the incidence of financial covenants in our sample of public debt contracts as well as those reported by W&Z (1986) and S&T (1988).

TABLE 2 ABOUT HERE

Panel A of table 2 shows that the mean number of financial covenants per contract in our sample is lower than reported in W&Z (1986)¹¹ and S&T (1988). This is the case in aggregate as well as for the sub-samples of convertible notes and unsecured notes. Panel B shows that a relatively high proportion (22%) of our sample of public debt contracts does not include any financial covenants. By comparison, all of the unsecured and convertible notes in W&Z's sample have financial covenants while only three contracts, representing 5% of S&T's sample, have no financial covenants.

Table 3 shows the different types of financial covenants included in our sample of public debt contracts as well as those reported by W&Z (1986) and S&T (1988). To facilitate comparisons, the table considers the full samples as well as the sub-samples of convertible notes and unsecured notes separately.

TABLE 3 ABOUT HERE

It is apparent from table 3 that there has been a considerable change in the "package" of covenants used in public debt contracts. W&Z (1986) and S&T (1988) report a relatively homogenous array of covenants. Specifically, almost all of the older contracts have covenants restricting Total Liabilities/Total Tangible Assets (over 95% of all contracts in both samples),

¹¹ The sample examined by W&Z (1986) comprises debentures, notes and convertible notes. As there are no debentures in the present sample, our analysis and comparisons with W&Z's findings exclude debentures.

Secured Liabilities/Total Tangible Assets (over 85% of all contracts in both samples) and very few others. The others comprise two covenants restricting prior charges in W&Z's sample of unsecured note contracts and four restrictions on maximum convertible note borrowings in S&T's sample. Table 3 shows that there has been a significant reduction in the use of Total Liabilities/Total Tangible Assets (TL/TTA) and Total Secured Liabilities/Total Tangible Assets (SL/TTA) with only 28% (in each case) of the sample of recent contracts including these covenants. On the other hand, there also appears to be a greater variety of covenants in use. As can be seen from table 3, 47% of recent contracts have other restrictions on liabilities (including two contracts with a restriction on the maximum contingent liabilities/net tangible assets). Also, 17% of contracts have covenants restricting minimum interest cover as well as covenants stipulating minimum dividend cover¹², net worth and current ratios. All the aforementioned covenants require continuous compliance.

Prior to 1 July 1996, ASX Listing Rule 2E covered trust deeds for loan securities and rules (12A) to (12G) dealt with unsecured notes including convertible notes. There was a requirement to limit both liabilities and secured liabilities. Specifically, part of the rules stated that:

“A Trust Deed governing the issue of loan securities and executed on or after 1st July 1979 shall contain provisions to the following effect

(12A) A limitation on all liabilities that the borrowing company and its subsidiaries may incur or allow to subsist.

(12B) A limitation on all secured liabilities that the borrowing company and its subsidiaries may incur or allow to subsist.”

Hence, the high incidence of covenants restricting TL/TTA and SL/TTA in pre-July 1996 public debt contracts is not surprising. As part of a project to simplify listing rules, the ASX deleted Listing Rule 2E in its entirety and the simplified post-July 1996 rules have no such limitations or financial covenants. This gave the lawyers and other parties writing post-July 1996 contracts greater discretion as to whether to include financial covenants in these contracts as well as the types of covenants to be included. This helps to explain the reduction

¹² This is surprising as Mather (1999a) observes that, in comparison to the US, covenants that directly restrict dividend policy are used far less frequently in Australia (and the UK). The suggested explanation is the relatively strong legislative provisions prohibiting dividend payments from capital in Australia and the UK (for example, s.254(1) of the *Corporations Act 2001* in Australia). On the other hand, Solomon, Schwartz and Bauman (1988) suggest that legal restrictions on dividend payments from capital in the US are relatively liberal and that the diversity of provisions between States, as well as different interpretations of terminology, compounds the problem.

in the mean number of covenants used in recent public debt contracts and in particular the reduction in the use of TL/TTA and SL/TTA, the increase in the proportion of contracts with no covenants as well the greater variety of covenants being used.

3.1. 2 Restrictiveness of Covenants

We choose the main leverage covenant (TL/TTA) that features commonly in our samples of public and private debt contracts as well as in W&Z (1986) and S&T (1988), and use the limit imposed on TL/TTA in debt contracts as a proxy for restrictiveness. Restrictiveness of covenants in a debt contract is an interaction of a number of factors (for example, the number and type of covenants, the underlying measurement rules, the limit placed on each covenant as well as the slack imposed on each covenant at the time of contract negotiation). Nevertheless, as in S&T (1988) and Cotter (1998), in table 4 we use the limit on the leverage covenant as a practical proxy for restrictiveness.

TABLE 4 ABOUT HERE

Table 4 shows that the limits imposed in the covenants in old public debt contracts are fairly concentrated between 79% and 60% with a mean limit of 73.2% (W&Z, 1986) and 70.9% (S&T, 1988).¹³ A partial explanation may be that these contracts typically follow the British model with limitations on both TL/TTA and SL/TTA of 60% and 40%, respectively (W&Z, 1986, p.22). This “60/40” heuristic may have had a residual influence when setting covenant limits.¹⁴ In contrast, the limits in our sample of public debt contracts appear to be less restrictive with a mean TL/TTA of 82.2% and the distribution is skewed towards the higher (less restrictive) limits. This is consistent with a reduction in the restrictiveness of covenants both in terms of their number and the limits imposed in them.

3.1.3 Measurement Rules and Definitions

This section provides information on the definitions and measurement rules found in our sample of public debt contracts.

¹³ As indicated in footnote 6, all analysis and comparisons with W&Z’s findings exclude debentures. Had they been included in the analysis, the clustering of the limit would have been even more marked as all of the limits of the covenant in their sample of debentures range between 60% and 66.7%, with the majority being 60%.

¹⁴ For example, through “boilerplate” or standard form contracts used by law firms.

General

The base accounting information set (prior to specific adjustments and tailoring) to be used when calculating financial covenants may be prepared on the basis of the GAAP in force at the reporting date (rolling GAAP) or the GAAP in force when the contracts were negotiated (frozen GAAP). In instances where our sample of public debt contracts explicitly specify the GAAP to be used, rolling GAAP was identified in all but one instance. As will be seen when we consider some specific definitions, in most other cases the definition of key terms such as “total assets” and “total liabilities” refer either to the last or to the next consolidated balance sheet, hence it is clear that, *de facto*, the rules are predicated on rolling GAAP. The widespread use of rolling GAAP is also found by W&Z (1986). This contrasts with research in the US public debt market, where Mohrman (1996) finds an increasing use of fixed GAAP in public debt contracts. The use of rolling GAAP in Australia means that new (or revisions to) accounting standards may cause breaches of covenants not anticipated at the time of contract negotiation.

We find that covenant calculations are based on the consolidated financial statements of the group comprising the borrowing company and all its subsidiaries. This is explicitly specified in most public debt contracts but, given the use of rolling GAAP, is implied in all other cases. This is consistent with S&T (1988) but not entirely consistent with W&Z (1986), who report that the concept of the group is the borrower and its guarantors in the case of debentures and unsecured notes but not convertible notes. S&T (1988, p.69) point out that the narrower definition of the group reported by W&Z (1986) for the more senior debt is the result of a pre-1981 listing rule which followed the Companies Act.

Assets

In our sample of public debt contracts, the term total assets (often as a precursor to total tangible assets) is widely used in financial covenants limiting borrowings. Unlike W&Z (1986), who find less stringent definitions of total tangible assets in convertible note contracts in comparison to those in debenture and unsecured note contracts, we find no discernible difference between the definitions in the convertible note contracts and unsecured note contracts.

A typical definition of total assets in our sample of public debt contracts is:

“Total Assets means on any date the aggregate of all assets for the time being of the company and entities it controls as would be disclosed in the next consolidated balance sheet prepared after that date calculated as at that date.”

Consistent with W&Z (1986) and S&T (1988), the majority of contracts with a covenant limiting debt require intangible assets to be deducted from total assets for the purposes of calculating the covenant. There are two common approaches to defining intangible assets. The first, is a relatively detailed definition such as:

“Intangible assets means aggregate current book value of goodwill, patents, trade marks, preliminary expenses, future income tax benefits and other items of a like nature of the consolidated group which in the opinion of the auditor should be regarded as intangible assets having regard to current accounting practices.”

The second is a relatively concise definition such as:

“Intangible assets means all items which in the opinion of the auditor should be regarded as intangible assets according to current accounting practice in Australia.”

Two thirds of contracts containing a definition of intangible assets include a reference to “in the opinion of the auditor” in relation to the identification of intangible assets to be excluded in the computation of total tangible assets. Once again, this is broadly consistent with the findings in the earlier research where, for example, S&T (1988) report that 54% of contracts make reference to the auditor’s role in the identification of intangibles.

There are two main areas where the measurement rules in our sample differ from those reported by W&Z (1986) and S&T (1988). First, we find no systematic requirement to deduct provisions for losses, depreciation, bad and doubtful debts and unearned income from total assets. Second, only, 21% of our sample of public debt contracts specify an independent valuation rule in support of asset revaluations as opposed to, for example, S&T (1988) who report that 84% of their contracts have such a requirement.

In an unusual provision, one public debt contract in our sample allows for a breach of a covenant to be rectified by the company presenting the trustee with a business plan that may include an election to have total assets revalued. The valuer is to be selected jointly by the trustee and the company, and the revalued total assets may be used to recalculate the covenants so breached. Except in the aforementioned case of a covenant breach, that contract does not require revaluations to be supported by an independent valuation.

Most recent public debt contracts are silent on the subject of asset revaluations and hence it is assumed that, by default, GAAP prevails. AASB1010 and AAS10 “Accounting for the Revaluation of Non-Current Assets”, which were in force during our survey period, do not require independent valuations to support asset revaluations. However, the specific provisions of AASB1010 and AAS10 are likely to restrict, but not necessarily eliminate, a

borrower's ability to use directors' valuations to avoid breaches of covenants. Moreover, in all cases the financial statements are audited which is itself a form of independent valuation.

Liabilities

In our sample of public debt contracts, the terms total liabilities or total external liabilities are widely used in financial covenants limiting borrowings. A typical definition is:

“Total external liabilities means on any date the aggregate of all liabilities of the company and entities it controls as would be disclosed in the next consolidated balance sheet prepared after that date calculated as at that date.”

Most of the contracts are silent on the subject of contingent liabilities and hence GAAP prevails. Two contracts specify that contingent liabilities should be added to liabilities for the purposes of the covenant and one of these explicitly refers to those arising from the use of derivatives. On the other hand, three contracts explicitly specify that contingent liabilities are not to be added to the liabilities in the consolidated balance sheet for these purposes. W&Z (1986) and S&T (1988) report similar variation across contracts but report a larger proportion of contracts requiring either the inclusion or exclusion of contingent liabilities. Similar to the prior surveys, the public debt contracts in our sample were largely silent on the subject of leases.

Earnings

Our sample of public debt contracts does not devote much attention to the measurement of earnings. The exceptions are the six contracts containing an interest cover covenant where earnings before interest and tax (EBIT) is defined. A typical definition of EBIT is:

“EBIT means in relation to each financial year, based on applicable accounting standards, the consolidated operating profit of the group plus the aggregate of gross interest paid or payable to all creditors, financing charges paid or payable under finance leases and income tax paid or payable less interest received.”

In two instances, there is also a requirement to add back depreciation and amortisation to EBIT (EBITDA) and in one instance, a requirement to add back operating lease expenses. Interest, for the purposes of the denominator of the interest cover ratio, is typically all interest paid or payable to all creditors including all charges under finance leases. This is generally consistent with W&Z (1986) except that they do not report any adjustments for charges under

finance leases.¹⁵ This is explained by the absence of a requirement to capitalise finance leases until AAS17 and AASB1008 “Accounting for Leases” required that finance leases be capitalised by lessees for reporting periods ending on 1 January 1988 and for later periods. Until that date, a choice between the capitalisation and expense methods of accounting for finance leases was available. The sample of contracts surveyed by S&T (1988) does not include any interest cover covenants.

Auditors’ adjustments

W&Z (1986, p30) report “without exception the auditor was empowered to make such adjustments to the definition of total tangible assets, total liabilities and net profit as he/she deemed appropriate”. S&T (1988) support this observation. For example, they report that 89% of the contracts in their sample give auditors the discretionary power to adjust the number for “total external liabilities” utilised in financial covenants.¹⁶ In contrast only 25% of our sample of public debt contracts (or 32% of those with covenants) give auditors any discretion and, where discretion is written into the contract, it is largely confined to the identification of intangible assets. This is not so much a power to adjust but, in substance, a requirement that intangible assets are to be those included in the audited financial statements. Only 3 contracts also give auditors discretionary powers in any other areas. A possible explanation is the introduction of the AASB accounting standards in 1984 and the considerable decline in audit qualifications for non-observance of accounting standards over time. For example, Ryan, Heazlewood and Andrew (1980) report audit qualifications in 17% of annual reports surveyed in 1978-79 of which 82% related to the non-observance of accounting standards. In contrast, a similar survey in 1998 finds that 0.67% of the reports surveyed are qualified (Heazlewood and Ryan, 1999) reflecting the fact that, following the passage of the *Companies and Securities Legislation (Miscellaneous Amendments) Act* 1983, the accounting standards made by the AASB effectively became black letter law. This suggests a reduction in the need to allow for disagreements on appropriate accounting treatments between borrowers and their auditors.

¹⁵ All of the covenants on interest cover were in W&Z’s sub-sample of debentures. None of the other contracts contained covenants on interest cover.

¹⁶ They report that auditors also had the discretion to adjust the numbers for “total tangible assets” and “shareholders’ funds”.

3.2 Financial Covenants in Private Debt Contracts

In this section we report the incidence and types of financial covenants in our sample of 41 private debt contracts as well as the accounting measurement rules associated with these covenants. Wherever possible, we make comparisons with the two prior surveys of Australian private debt contracts (Cotter, 1998 and R&S, 1998).¹⁷

3.2.1 Incidence and Types of Financial Covenants

Our sample of 41 private debt contracts has a mean of 3.2 financial covenants per contract. This is broadly similar to the comparable mean number of financial covenants per contract (3.3) in the R&S (1998) sample. Five contracts (12.2%) contain no financial covenants. Table 5 shows the different types of covenants in our sample of private debt contracts.

TABLE 5 ABOUT HERE

Table 5 shows that interest cover covenants are commonly used in private debt contracts with 78% of the contracts surveyed including such a covenant. Most contracts have some restriction on liabilities with maximum Total Liabilities/Total Tangible Assets (TL/TTA) and Total Secured Liabilities/Total Tangible Assets (SL/TTA) being the most common (42% and 22% of contracts, respectively). Private debt contracts also commonly include covenants requiring minimum current ratios (46%) as well as a minimum net worth (49%). Additionally, there are numerous other types of covenants such as maximum turnover ratios, minimum net profit and restrictions on contingent liabilities, operating lease rentals and capital expenditure. However, the absence of covenants based on cash flow information is rather surprising given that the preparation of cash flow statements has been mandatory in Australia since AAS28 and AASB1026 “Statement of Cash Flows” became operative for reporting periods that ended on or after 30 June 1992.

¹⁷ As indicated earlier, Cotter does not identify the complete set of financial covenants found in her sample of 23 debt contracts and, given the focus of her paper, does not report any associated measurement rules. Additionally, the R&S (1998) sample comprises 14 contracts and two “boilerplate” or law firm standard form contracts and they do not report any aggregated statistics. Statistics such as the mean number of financial covenants per contract in the R&S (1998) sample cited in this paper were calculated by us. The limited sample size means that any such statistics need to be interpreted with caution.

These findings are generally consistent with those reported by Cotter (1998) and R&S (1998). However, the minimum current ratio is employed less frequently in their samples of private debt contracts than in our sample.¹⁸

3.2.2 Restrictiveness of Covenants

As noted in section 3.1.2, the limit imposed on the leverage covenant (TL/TTA) is employed as a practical proxy for restrictiveness. The mean limit on this covenant in our sample of private debt contracts is 75.2%. The comparable mean limit in Cotter's sample is 67%. R&S (1998) report typical limits on TL/TTA of 60% or 70%. Accordingly, the limits in our sample appear to be less restrictive than those reported in prior Australian research.

3.2.3 Measurement Rules and Definitions

This section provides information on the definitions and measurement rules found in our sample of private debt contracts.

General

Similar to our findings on public debt contracts, 36 of the 41 private debt contracts explicitly specify rolling GAAP and, while the other 5 contracts are silent, in each case it is implicit in the definitions of specific financial covenants and underlying accounting terms that rolling GAAP is to be used. Covenant calculations are based on the consolidated financial statements of the group comprising the borrowing company and all its subsidiaries. This is explicitly specified in all but three private debt contracts but, given the use of rolling GAAP, is implied in all other cases and is consistent with R&S (1998).

Assets

The term total assets (often as a precursor to total tangible assets) is widely used in financial covenants limiting borrowings in our sample of private debt contracts. In all but two contracts with a covenant limiting borrowings, intangible assets are required to be deducted from total assets for the purposes of calculating the covenant. One of the exceptions explicitly includes intangibles, such as goodwill and brand names, in its definition of "group total assets" but specifies that the lender has the right to "review" any new revaluations of

¹⁸ However, Cotter's survey of senior bank lenders suggests that the current ratio is a commonly used financial covenant.

these intangibles. It is not clear what would happen in the event of a disagreement. Most contracts contain a detailed list of specific types of intangible assets to be deducted together with a general requirement to deduct intangible assets—that is, the requirement to deduct intangible assets is not limited to the specific intangible assets identified.

With one exception, all private debt contracts explicitly or implicitly permit asset revaluations. The one exception rules out any asset revaluations after the loan has been approved. The vast majority of private debt contracts that specifically mention asset revaluation also specify an independent valuation.

Liabilities

The terms total liabilities or total external liabilities are widely used in financial covenants limiting borrowings in our sample of private debt contracts. The definitions in our sample are based on the liabilities included in the consolidated balance sheet and, therefore, are based on GAAP. However, consistent with R&S (1998), the definition of total liabilities typically includes all contingent liabilities. Additionally, there is evidence of a significant degree of tailoring, which results in considerable variation between contracts. The inclusion or exclusion of convertible securities to be redeemed in the short term, the exclusion of certain categories of junior debt, and the inclusion or (largely) the exclusion of operating leases are examples of such variations.

Earnings

As discussed in section 3.2.1, an interest cover covenant is the most commonly used covenant in our sample of private debt contracts and therefore attention is paid to the measurement of earnings. While the definitions of earnings are typically based on EBITDA, most contracts require other adjustments that make the resulting interest cover covenant more restrictive. The most common variation to EBITDA is to eliminate the effect of any abnormal and extraordinary items. An example of a more conservative approach is a contract that defines EBIT as profit before tax after adding back depreciation, amortisation and interest, and also requires the deduction of unrealised gains on revaluation as well as gains from abnormal and extraordinary items. As the contract is silent on losses on revaluation as well as abnormal and extraordinary losses it is not even handed in its treatment of gains and losses. Interest, for the purposes of calculating the denominator of the interest cover ratio, is typically all interest paid or payable to all creditors including all charges under finance leases. Once again, there is considerable variation with finance lease charges being excluded in a few instances but operating lease charges being included in a number of other cases.

Auditors' adjustments

Notwithstanding the reliance on audited financial statements and the elements thereof, only one of the contracts in our sample of private debt contracts gives auditors the discretionary power to adjust the definitions or measurement rules associated with financial covenants. This exception provides the auditor with the discretionary right to adjust total liabilities.

3.3 Comparison of Financial Covenants in Public and Private Debt Contracts

In this section we examine the use of financial covenants in public and private debt markets by comparing covenant usage in our samples of public and private debt contracts negotiated in similar time periods.

3.3.1 Incidence and Types of Financial Covenants

The mean number of financial covenants in the sample of public debt contracts is 1.5, which is considerably lower than the 3.5 observed in the sample of private debt contracts. A relatively high proportion (22%) of our sample of public debt contracts does not contain any financial covenants whereas for private debt contracts the proportion (12.2%) is much lower. The number of covenants in a debt contract is only part of what makes a set of covenants restrictive. The limits imposed in the covenants is also a key factor in determining the restrictiveness of a covenant package. However, *ceteris paribus*, it is reasonable to assume that the greater the number of financial covenants in a debt contract, the more restrictive the package of covenants is likely to be.

A comparison of the types of financial covenants used in recent public and private debt contracts is shown in table 6.

TABLE 6 ABOUT HERE

Apart from the greater number of financial covenants used in private debt contracts, there are other interesting cross-sectional differences between recent private and public debt contracts. Interest cover covenants are commonly used in private debt contracts with 78% of the contracts surveyed including such a covenant. This is in sharp contrast to public debt contracts, where only 17% of our sample includes such a covenant. Private debt contracts also commonly include covenants requiring minimum working capital ratios as well as a minimum net worth. Such covenants are far less prevalent in our sample of public debt contracts. Additionally, there are numerous other types of covenants in private debt contracts, such as maximum turnover ratios, minimum net profit, restrictions on contingent liabilities, and operating lease rentals, and others, that are not found in public debt contracts. It is

therefore apparent that there is a greater variety of financial covenants used in Australian private debt contracts than in public debt contracts.

3.3. 2 Restrictiveness of Covenants

As noted earlier, the limit imposed on the leverage covenant (TL/TTA) is employed as a practical proxy for restrictiveness. This is shown for our sample of public and private debt contracts in table 7.

TABLE 7 ABOUT HERE

It is apparent from table 7 that the limits imposed in recent public debt contracts (a mean TL/TTA of 82.2%) appear to be less restrictive than those in private debt contracts (mean limit of 75.2%). Additionally, the distribution of limits in public debt contracts is skewed towards being less restrictive compared to those in private debt contracts.

Taken together, the greater number and variety of covenants used as well as the observed limits placed on the main leverage covenant suggest that covenants in private debt contracts are more restrictive than those found in public debt contracts, which is consistent with the institutional differences between the two debt markets. The use of restrictive covenants is appropriate for financial intermediaries lending in private debt markets because they have a comparative advantage in credit analysis as well as negotiating and renegotiating contracts. Restrictive contracts with options to renegotiate are not well suited to public debt markets that are characterised by diverse and numerous investors.¹⁹

3.3.3 Measurement Rules and Definitions

While there are broad similarities between the definitions and measurement rules found in our samples of public and private debt contracts, this section discusses some of the main differences.

First, while the asset definitions in private debt contracts are in substance broadly similar to those in our sample of public debt contracts, they tend to be more explicit, particularly in relation to the intangibles to be deducted from total assets. Most contracts contain a detailed list of specific types of intangible assets to be deducted together with a general requirement to deduct intangible assets.

¹⁹ As indicated earlier, while a trustee acts on behalf of individual investors, individual investors have to approve all outcomes of any renegotiation which is costly.

Second, unlike public debt contracts, the majority of private debt contracts that specifically mention asset revaluation require the valuation to be independent.

Third, in our sample of private debt contracts there is considerably more evidence of GAAP being tailored when defining liabilities compared to public debt contracts.

Fourth, most of the private debt contracts contain interest cover covenants and, therefore, pay attention to the measurement of earnings with a particular emphasis on tailoring that make the covenants more restrictive. In contrast, our sample of public debt contracts did not devote much attention to the measurement of earnings.

Finally, all but one of the contracts in our sample of private debt contracts do not give auditors the discretionary power to adjust the definitions or measurement rules associated with financial covenants, although there is a universal reliance on audited financial statements and the elements thereof. In contrast, 25% of our sample of public debt contracts give auditors some discretion, albeit largely confined to the identification of intangible assets. A possible explanation is that the extent of tailoring of definitions and associated measurement rules evident in private debt contracts precludes the need to also give auditors the discretion to adjust.

3.4 Industry Comparison of the Incidence of Financial Covenants

It is possible that the observed differences between the “package” of financial covenants in the old and recent public debt contracts, as well as the recent public and private debt contracts, is driven by cross sectional variations in the industries of the borrowing firms. The sample sizes limit the scope of any industry analyses that may be conducted. Nevertheless, we partition our samples of public and private debt contracts as well as those presented in W&Z (1986) and S&T (1988) into industry sectors in order to observe any cross sectional variations in the incidence of covenants in these contracts. The Global Industry Classification Standard (GICS), which has been adopted by the ASX, is used for this purpose.²⁰

TABLES 8 AND 9 ABOUT HERE

An industry comparison of the incidence of financial covenants in our sample of recent public debt contracts and the samples in W&Z (1986) and S&T (1988) is shown in table 8. It can be seen that the mean number of covenants per contract in our sample of contracts is consistently lower than those reported by W&Z (1986) and S&T (1988) across all

²⁰ Industry information available in W&Z (1986) and S&T (1988) is used to reclassify their samples into GICS sectors. See table 8 for more detail.

comparable industry sectors. Table 9 provides a similar comparison of the incidence of financial covenants in our samples of recent public and private debt contracts. Once again it can be seen that the mean number of covenants per contract in our sample of public debt contracts is consistently lower than those in private debt contracts across all comparable industry sectors. Whilst the industry cell sizes require this conclusion to be interpreted with caution, it appears to be unlikely that the observed differences between the “package” of financial covenants in the old and recent public debt contracts, as well as the recent public and private debt contracts, is driven by industry variations.

4 Conclusions

We document a considerable change in the “package” of financial covenants being used in recent public debt contracts. The covenant package is now less restrictive and the types of covenants used are more heterogeneous. Additionally, there appear to be some systematic differences between the accounting rules associated with covenants in our sample of public debt contracts and those reported by W&Z (1986) and S&T (1988). Contributing to these changes are a significant change in an ASX listing rule in 1986 and the introduction of several accounting standards. It is likely that the requirement to apply the Australian equivalents of the International Financial Reporting Standards from 1 January 2005 will lead to further tailoring of the measurement rules in debt contracts.

The results of our survey of private debt contracts are generally consistent with the earlier surveys of private debt contracts conducted by Cotter (1998) and R&S (1998). However, in our sample the minimum current ratio covenant is employed more frequently and the comparable mean limit on TL/TTA appears to be less restrictive. Additionally, there is evidence of a significant degree of tailoring of measurement rules resulting in considerable variation between contracts.

In comparison to our sample of recent public debt contracts, private debt contracts contain a greater number, variety and, collectively, more restrictive set of financial covenants. We also document differences in accounting rules associated with financial covenants used in these contracts. Tailoring of the definition of liabilities and earnings in private debt contracts make them more restrictive compared to the definitions in public debt contracts. Our findings support theory, which suggests that covenant restrictive and renegotiation-flexible contracts are more suited to borrowers contracting with financial intermediaries in private debt markets rather than public debt markets that are characterised by diverse and numerous investors.

A survey of managers of Fortune 500 firms in the US found that covenants are considered to be a major issue in financing decisions (Pinegar and Wilbricht, 1989). Accordingly, the

information elicited about the incidence of covenants, as well as associated definitions and measurement rules, is of potential interest to financial managers. Related to the above, Day and Taylor (1997) show the important role negotiation plays in private debt contracting and also assert that financial covenants are “frequently the most contentious element in documentation”. Given the lack of publicly available information about the contractual terms of private debt contracts, the information reported here should be of interest to demand side stakeholders such as corporate treasurers and their advisers involved in negotiating terms in private debt contracts.

Our results also have implications for accounting researchers who use simple measures, such as leverage, as proxies for the impact of debt covenants as independent variables in accounting policy choice research or, more commonly, as control variables in other empirical research. The changes we note in public debt contracts over the past 20-30 years, together with the extent of variation in covenants and measurement rules found in our sample of private debt contracts suggest that researchers need to exercise great care when designing such proxies.

Finally, our results have pedagogical implications. A number of leading text books in the areas of corporate finance as well as accounting theory (for example, Bishop et al, 2004, p331; Henderson et al, 2004, p422) discuss the results of W&Z (1986) and, in the absence of more recent information on public debt contracts, suggest they are still descriptive. The current research will hopefully help to rectify the lack of up-to-date information on debt contracts.

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Table 1 Sample of Debt Contracts

Public Debt Contracts		Private Debt Contracts	
Type		Type	
Convertible notes	24	Loan	5
Unsecured notes	12	Overdraft	10
		Credit facility	26
Total	36	Total	41
Date of issue		Date of issue	
1991-1993	2	1993-1994	3
1994-1996	5	1995-1996	5
1997-1999	20	1997-1998	23
2000-2001	9	1998-	10
Total	36	Total	41
Size		Size	
>\$100 million	9	>\$50 million	16
\$50-\$99.99 million	4	\$49.99-\$15 million	12
<\$49.99 million	23	\$5-\$14.99 million	13
Total	36	Total	41
		Lender	
		Big four bank	32
		Foreign bank	9
		Total	41

Table 2 Incidence of Financial Covenants in Public Debt Contracts

	Current Sample		W&Z (1986¹)	S&T (1988)
	Number of Contracts	Mean number of financial covenants per contract	Mean number of financial covenants per contract	Mean number of financial covenants per contract
<i>Panel A: Covenants per debt contract</i>				
All contracts	36	1.5	1.9	1.9
Convertible notes	24	1.5	1.9	1.9
Unsecured notes	12	1.6	2	NA
<i>Panel B: Contracts with no covenants</i>				
	No.	%	%	%
All contracts	8	22	0	5
Convertible notes	7	29	0	5
Unsecured notes	1	8	0	NA

Note: ¹ Convertible notes and unsecured notes only.

Table 3 Financial Covenants in Public Debt Contracts

<i>Panel A-Full sample (n=36)</i>	Current Sample		W&Z (1986)¹	S&T (1988)
	No.	%	%	%
Type of covenant				
Maximum total liabilities/total tangible assets (TL/TTA)	10 ²	28	96	95
Maximum secured liabilities/total tangible assets (SL/TTA)	10 ²	28	87	86
Other restrictions on liabilities	17 ³	47	0	4
Minimum interest cover ratio	6	17	0	0
Minimum dividend cover	3	8	0	0
Minimum current ratio	2	6	0	0
Minimum net worth	1	3	0	0
Prior charges	0	0	9	0
Miscellaneous	1	3	0	0
<i>Panel B-Convertible notes (n=24)</i>				
Maximum TL/TTA	6	25	100	95
Maximum SL/TTA	6	25	87	86
Other restrictions on liabilities	9	38	0	4
Minimum interest cover ratio	6	25	0	0
Minimum dividend cover	3	13	0	0
Minimum current ratio	2	8	0	0
Minimum net worth	0	0	0	0
Prior charges	0	0	0	0
<i>Panel C-Unsecured notes (n=12)</i>				
Maximum TL/TTA	4	33	88	-
Maximum SL/TTA	4	33	88	-
Other restrictions on liabilities	8	67	0	-
Minimum interest cover ratio	0	0	0	-
Minimum dividend cover	0	0	0	-
Minimum current ratio	0	0	0	-
Minimum net worth	1	13	0	-
Prior charges	0	0	25	-
Miscellaneous	1	13	0	0

Notes: ¹ Convertible notes and unsecured notes only.

² W&Z (1986) and S&T (1988) restate a few covenants defined as a multiple of shareholders' funds in terms of TTA. For ease of comparison, we have done the same in one instance.

³These include total liabilities/net tangible assets (3), total liabilities/total assets (4) and various dollar caps on debt or debt issues (4).

Table 4 Comparison of the Restrictiveness (Limit) of the Main Leverage Covenant in Public Debt Contracts

	Number ¹	Mean Limit	Distribution of Limit				
			>90%	89% - 80%	79% - 70%	69% - 60%	<60%
Current Sample	13	82.2%	24%	46%	15%	15%	0
W & Z (1986) ²	22	73.2%	0	32%	36%	32%	0
S & T (1988)	55	70.9%	0	15%	53%	32%	0

Notes: ¹ Number of contracts that included the most common leverage covenant TL/TTA or something such as TL/NTA that could be converted to TL/TTA.

² Convertible notes and unsecured notes only.

Table 5 Financial Covenants in Private Debt Contacts

Type of covenant	No.	%
<i>Liabilities</i>		
Maximum TL/TTA	17	42
Maximum SL/TTA	9	22
Other restrictions on liabilities	14 ¹	34
<i>Earnings related</i>		
Minimum interest cover ratio	32	78
Minimum dividend cover ratio	6	15
Minimum net profit	2	5
<i>Working capital</i>		
Minimum current ratio	19	46
Maximum accounts receivable turnover (days)	2 ²	5
Maximum turnover ratios-other (days)	2 ²	5
<i>Other</i>		
Minimum net worth	20	49
Miscellaneous	4 ³	10

Notes: ¹ These include total liabilities/net tangible assets (4), total liabilities/total assets (3), minimum shareholders' funds/TTA (2), maximum contingent liabilities/net tangible assets (2) and minimum debt service ratio (2).

² One contract had two covenants in this category.

³ A sum of eight covenants in four contracts. These include a maximum variance of expenses (compared to budget), maximum annual capital expenditure, maximum exposure to group entities and a maximum operating lease rental.

Table 6 Comparison of Covenants Utilised in Private and Public Debt Contracts

	Private Debt Contracts	Public Debt Contracts
Type of covenant	%	%
<i>Liabilities</i>		
Maximum TL/TTA	42	28
Maximum SL/TTA	22	28
Other restrictions on liabilities	34	47
<i>Earnings related</i>		
Minimum interest cover ratio	78	17
Minimum dividend cover ratio	15	8
Minimum net profit	5	0
<i>Working capital</i>		
Minimum current ratio	46	6
Maximum accounts receivable turnover (days)	5	0
Maximum turnover ratios-other (days)	5	0
<i>Other</i>		
Minimum net worth	49	3
Miscellaneous	10	3

Table 7 Comparison of the Restrictiveness (Limit) of the Main Leverage Covenant in Debt Contracts

	Number ¹	Mean Limit	Distribution of Limit				
			>90%	89% - 80%	79% - 70%	69% - 60%	<60%
Public debt – current sample	13	82.2%	24%	46%	15%	15%	0
Private debt – current sample	21	75.2%	13%	22%	57%	4%	4%

Note: ¹ Number of contracts that includes the most common leverage covenant TL/TTA or something such as TL/NTA that could be converted to TL/TTA.

Table 8 Incidence of Financial Covenants in Public Debt Contracts: Industry Comparison

Industry Sector)	Classification (GICS)	Current Sample		W&Z (1986) ¹		S&T (1988) ²	
		Number of Contracts	Mean number of financial covenants per contract	Number of Contracts	Mean number of financial covenants per contract	Number of Contracts	Mean number of financial covenants per contract
Materials		4	1.5	2	1	3	2
Industrials		3	1	5	2	30	2
Consumer discretionary		9	1.3	7	2	14	2.2
Consumer staples		9	1.7	6	1.8	6	2.16
Health care		2	2	-	-	-	-
Financials ³		4	2.2	2	2.5	2	2.5
Information technology		3	1				-
Telecommunication services		1	2				-
Utilities		1	0				-
Unclassified ⁴				1	2		-

Notes: ¹ Derived from table 2 and the appendix in W&Z (1986).

² Derived from tables 1 and 2 in S&T (1988).

³ While financial institutions are excluded from the sample, the ASX industry sector includes a range of real estate related activities.

⁴ The appendix in W&Z (1986) does not provide industry information in respect of one firm.

Table 9 Incidence of Covenants Utilised in Private and Public Debt Contracts: Industry Comparison

Industry Sector)	Classification (GICS)	Public Debt Contracts		Private Debt Contracts	
		Number of Contracts	Mean number of financial covenants per contract	Number of Contracts	Mean number of financial covenants per contract
Materials		4	1.5	-	-
Industrials		3	1	18	3.6
Consumer discretionary/staples ¹		18	1.5	12	3.6
Health care		2	2	1	0
Financials ²		4	2.2	3	2.3
Information technology		3	1	4	3.3
Telecommunication services		1	2	-	-
Utilities/Energy ¹		1	0	3	2

Note: ¹ These categories are merged as we do not have sufficient information about certain firms in the private debt sample to make a more precise classification.

² While financial institutions are excluded from the sample, this ASX industry sector includes a range of real estate related activities.