Embedded Governance in Corporate Bond Indentures: Evidence from Brazil, 1998-2001

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Abstract

Corporate bonds have been a major source of medium and long-term financing in Brazil. We analyze how corporate bond covenants have been used to mitigated agency costs between shareholders and bondholders. Our data includes 119 corporate bond indentures issued in Brazil from 1998 to 2001. This paper analyzes whether public investors have demanded stricter terms in corporate bond indentures. When comparing to previous studies of Anderson (1999) and of Filgueira and Leal (2001), we found empirical evidence that (a) more bond issues with no indexed inflation features, but more floating rate interest features to match market needs; (b) no major changes for contingent maturity features, (c) loose covenants with respect to dividend and financing actions, and (d) tighter covenants regarding change in control and/or ownership and negative pledge. There is empirical evidence that the role of sponsor may partially mitigate risks borne by bondholders.

1. Introduction

Debt financing may lead to conflicts of interest between creditors and shareholders that can reduce the value of the firm. For example, if the firm is highly leveraged, managers may choose high-variance projects with negative net present value, because the high variance has the effect of transferring wealth from bondholders to shareholders as pointed out by Jensen and Meckling (1976). Such conflicts are limited more effectively in private loans extended by banks and institutional lenders than in publicly traded bonds.

The bond market in Brazil has rapidly developed since the "*Plano Real*" economic stabilization plan introduced in July 1994. Total corporate bond issues have raised from US$3,936 million in 1993 to US$6,160 million in 2001. The health and rapid development of this market is due to the convergence of a number of key factors. These key factors can broadly be separated into two areas: fundamental structures and market forces. Fundamental structures include primarily the stability and health of the economy, the legal and regulatory framework governing the securities markets, and the operational infrastructure required for operating securities market. Market forces are made up of the need for capital by issuers, the demand for fixed income securities by investors and the inefficient intermediation by the banking system as a source of major long-term financing.

Contrary to developed corporate bond markets, Brazil corporate bond markets lack liquidity as an exit for bondholders. For some corporate bonds, liquidity has been recorded at less than 20% of its face value per annum. For instance, the 2001 annual turnover of corporate bonds for Brasil Telecom (a major telecom company in Brazil) and for América Latina Logística (a major railway company in Brazil) were 7.4% and 19%, respectively of the total outstanding amount. To properly protect bondholders on an almost non-existing secondary market, we would expect stricter monitoring and bonding costs to mitigate conflict of interests among claimants as suggested by Jensen and Meckling (1976) and confirmed empirically by Smith and Warner (1979). Our goal is to better understand which mechanisms and covenants have been required by bondholders.

This paper analyzes 119 corporate bond indenture agreements that govern Brazilian corporate bonds issued from 1998 to 2001. When comparing to previous studies of Anderson (1999) and of Filgueira and Leal (2001), we found empirical evidence that (a) more bond issues with no indexed inflation features, but more floating rate interest features to match market needs; (b) no major changes for contingent maturity features, (c) loose covenants with respect to dividend and financing actions, and (d) tighter covenants regarding change in control and/or ownership and negative pledge. There is empirical evidence that the role of sponsor may partially mitigate risks borne by bondholders.

By comparing with previous studies and by looking at changes in market conditions, we can better design contracting conditions to match investors' needs. Financial covenants and operating covenants are uncommon to be found in bond indentures in Brazil, but quite usual in the US bond market. The industry dynamics may partially explain this pattern. For example, telecom and power companies are subject to changes in regulation, including likely mergers and tariff structure after deregulation starting in 2002.

The remainder of this paper is organized as follows. Section 2 provides some background on shareholder-bondholder conflict and agency costs. Section 3 briefs on corporate bond issues in Brazil. Section 4 describes the data and the method used to analyze bond indentures. Section 5 provides the main results of this paper. Section 6 concludes.

2. Shareholder-Bondholder Conflict and Agency Cost

Shareholders may expropriate wealth from bondholders in several ways. For example, shareholders may pay themselves dividends, or may repurchase equity claims, or may invest in high-risk projects through the issue of additional debt. Bondholders try to contain these actions by writing covenants. For example, negative covenants place direct restrictions on managerial actions, thereby constraining the manager's ability to shift wealth. While affirmative covenants indirectly influence manager's actions and provide a mechanism for the lender to shorten the maturity of the loan if the borrower's credit quality deteriorates.

As mentioned by Jensen and Meckling (1976) and Smith and Warner (1979), debt covenants can reduce the moral hazard costs associated with debt financing and thus managerial's ability to reduce the value of the debt. In addition, covenants allow lenders to shorten the debt maturity in the case of misrepresentation, for instance.

However, there is trade-off in writing covenants. On the bondholder's side, costs associated with writing covenants include monitoring and, if violated, renegotiating the debt contract. On the borrower's side, covenants may lead to under-investment and to non-optimal financial decisions. Covenants also increase the need for re-contracting. If credit quality declines, lenders will want to re-contract the terms of the loan, i.e. higher interest rates, better security, more restrictions on future activities. Likewise, if credit quality improves, borrowers will want to renegotiate the terms of the loan with either the current lender or will refinance with a new lender. There are substantial costs to this re-contracting, and thus it will only occur when the benefits to one party are substantial enough to justify the additional costs.

As suggested by Rajan and Winton (1995), short term or puttable loans serve as alternative mechanisms to control moral hazard and adverse selection cost. Both mechanisms provide

lenders greater flexibility and control than do covenants. This might especially stronger in emerging markets in which agency costs might be higher as confirmed by Anderson (1999).

In general, public corporate bonds typically have few and loose covenants. This is because bank loans have tighter covenants so their covenants can be renegotiated and waived relatively easily. The absence of monitoring by holders of public debt provides an incentive for managers to engage in actions that transfer wealth from bondholders. Consequently, bondholders demand commensurately higher yields on their public bonds to compensate them for this risk.

Another important aspect is the reputation of the company shareholders. In the absence of security and tighter covenants, investors may still feel comfortable in holding debt claims when shareholders have a reputation track record (e.g.. through reputation acquisition, Diamond (1989)) provides evidence for reputation acquisition after repeated issues. Negative pledge and covenants restrictions on change in control may be used to keep sponsor committed to lenders.

To summarize, theory suggests that there are contract features, such as covenants and maturity, which can be used to reduce the adverse selection and moral hazard costs of debt. These mechanisms are not costless to implement. However, the existence of long-term, non-puttable loans in addition to covenants and sponsor reputation suggest marginal benefits and costs of these contracting features do not equate at demand debt with no covenants.

3. Corporate Bonds in Brazil

We have a special interest in corporate bond contracts issued on the Brazilian capital market. As suggested by Smith and Warner (1979), the designing of bond contracts can mitigate agency conflicts between shareholders and bondholders. Under the costly contracting hypothesis, a careful design and, therefore, costly contracting, can mitigate these agency conflicts. However, as the market conditions change, we would expect that contracting conditions also change following changes in domestic and international economic settings.

Indeed Filgueira and Leal (2001) confirmed that contracting conditions have changed to accommodate the stabilization of the economy after 1994, when they compared their findings with those of Anderson from 1989-93. Especially with respect to (i) monetary correction, (ii) recontracting terms, and (iii) maturity terms.

However, a few factors have contributed to changes in the market for corporate bonds after 1998. First, after the devaluation of Brazilian currency (R$) against the US dollar, most companies have turned to debt capital markets to refinance their US dollar denominated debt. Second, most infrastructure companies or their holdings have turned to the bond market for debt restructuring and long-term financing for acquisitions (e.g. DOC4 acquisition of CPFL). Third, institutional investors have also turned to bonds as an alternative long-term investment opportunity.

Partially as a result of the above factors, issues on the primary bond market reached US$6.2 billion in 2001 with 41 corporate bond issues, i.e., an average issue volume of US$150 million. As noted by Sanvicente (2001), of the 210 bond issues from January 1997 to June

2001, only 73 issues come from equity listed companies. This may imply that not public companies have their shares listed.

Corporate bonds are a versatile source of long-term funding. For example, corporate bonds can be structured either as fixed or floating rate, non-convertible or convertible into equity, and secured or unsecured. In addition, corporate bonds may be customized to satisfy investor needs. Pension funds in Brazil may require bonds indexed to inflation plus a spread, while mutual funds will likely demand a market "risk free rate" (inter-bank rate) plus a spread. To compensate for higher-risk, investors may demand a quasi-equity component (participation in sales or operating profit) in the absence, for example, of security arrangements.

Brazilian corporate bonds usually include recontracting conditions. Recontracting conditions provide (a) less transaction costs, (b) possibility for both the issuer and bondholders renegotiate the terms in the indenture to reflect changes in market and the issuer's conditions. In addition, put and call provisions are generally available in the bond indentures.

Reasons to issue corporate bonds vary from company to company. However, reasons include the purchase of assets including new fixed assets or entire businesses, repayment of obligations, raising of temporary or permanent capital, and the meeting of unexpected needs. This shows corporate bond flexibility when comparing to other sources of funding in Brazil, notably, BNDES – the domestic development bank – which aims mainly at new fixed assets financing (e.g. expansion, modernization, but not acquisitions). Notably, repayments of current liabilities account for most uses of funds coming from corporate bond issues[i].

Corporate bond security arrangements may be broadly separated into secured and unsecured. Security arrangements for secured bonds include mortgage, liens on assets, pledge of shares in addition to pledge on securities. Floating lien secured bonds are limited to any left over asset which has not been prior~~l~~y given as a security to other senior lender. Unsecured and subordinated bonds have also become usual practice as shown in Table 1.

Table 1: Security Arrangements for Corporate Bond Issues in Brazil, 1995-2001

Year	No. of Issues	Secured (US$ million)	Floating Lien (US$ million)	Unsecured (US$ million)	Subordinated (US$ million)	Total (US$ million)	Average (US$ million)
1995	78	313 (4%)	611 (8%)	- (0%)	6,916 (88%)	7,840 (100%)	100
1996	88	1,060 (14%)	1,172 (15%)	116 (2%)	5,268 (69%)	7,617 (100%)	86
1997	62	378 (4%)	776 (9%)	- (0%)	7,885 (87%)	9,038 (100%)	145
1998	61	1,817 (25%)	603 (8%)	126 (2%)	4,645 (65%)	7,191 (100%)	117
1999	38	779 (15%)	816 (16%)	1,141 (22%)	2,338 (46%)	5,074 (100%)	133
2000	42	1,115 (24%)	1,036 (22%)	678 (14%)	1,888 (40%)	4,718 (100%)	112
2001	41	1,882 (31%)	721 (12%)	1,724 (28%)	1,832 (30%)	6,160 (100%)	150

Source: SND - Sistema Nacional de Debêntures (www.debentures.com.br)

Companies which want to issue bonds on the Brazilian capital markets are required to comply with Law number 6404 and its amendments. Specifically, the articles 52 through 74 deal with bond issues, of which the main articles are described as follows:

- Article 58: defines security arrangements, and establishes seniority according to issuing date, i.e., prior bond issues have priority over new ones;
- Article 59: sets terms to be included in the bond indenture and shareholders' approval requirements;

- Article 60: states the maximum issue amount. Bond issues cannot exceed equity subscription amount. However, issues may exceed provided that (i) secured bonds do not exceed 80% of the company assets and/or other guarantee provided by third-parties, (ii) floating lien and unsecured bond issue do not exceed 70% of asset book value less any debt or guarantee provided to other parties. Of course, subordinated bonds have no issuing volume limit.
- Article 231: sets forth that any acquisition, merger or spin-off require bondholders' approval (i.e., at least 50% approval from the present bondholders in the bondholders meeting of which 10% of bondholders presence is required to vote).

The demand for fixed income securities has mainly relied on institutional investors and mutual funds. As a response to a higher demand from institutional investors (e.g. pension funds), the regulatory agency has introduced new resolutions as follows. Resolution #2829 of March 29, 2001 published by the National Monetary Council has introduced limits for pension funds. Specifically, pension funds have been limited to 30% of medium to high-risk bonds (non-investment grades). As an effort to provide transparency, Resolution #2922 of January 17, 2002 establishes the bonds need to obtain rating from at least two rating agencies.

4. Data and Method

4.1. Data

The sample consists of 119 corporate bond indentures issued in Brazil from January 1998 to December 2001. During these four years, 182 bonds were filed at the local Securities and Exchange Commission ("*Comissão de Valores Mobiliários - CVM*"). Of these 182 indentures filed at *CVM*, we excluded issues of leasing companies (18 issues), and issues of special purpose companies (20 issues), limiting our sample to corporate bonds. In addition, twenty-five (25) issues were not included, since their indentures were not available at the time of our analysis. We consider that each issue may be composed of one or more series (tranches) which differ in terms of pricing structure, for instance. This has resulted in eight additional issues to our sample.

Annex A provides basic information for each corporate bond indentured included in our sample.

4.1 Method

To analyze how corporate bond indenture conditions follow changes in market conditions, we follow Filgueira and Leal (2001) in assuming that each trial in reading a bond conditions follows a binomial random variable. The basic assumption is that, in each trial (reading a bond indenture), a certain event of interest can occur, or fail to occur. Their respective probabilities are denoted by p and $(1-p)$, and they are not assumed to change from trial to trial. Another implicit assumption includes independence of trials.

As our goal is to examine whether there is any significant statistical change on the indenture conditions between 1998-2001 period and prior to 1998. The total number of trials corresponds to the number of bond indentures in our sample (n = 119 bond indentures). By obtaining the frequency of occurrence for each bond indenture condition, we analyze whether

at a 95% confidence interval we could reject the null hypothesis of whether conditions have been kept the same.

Following Anderson (1999), we classified the indenture conditions according to their remuneration, contingent maturity, dividend covenants, investment covenants and financing covenants. The results are compared with those of Anderson and Filgueira and Leal (2001).

5. Analyses of Bond Indentures

We analyze bond indentures in terms of (i) monetary correction features, (ii) contingent maturity features, and (iii) covenants regarding dividend, investment and financing actions. In this section, we present the analyses of bond indentures issued from January 1998 to December 2001. We then compare each result with those obtained by Anderson (1999) - January 1989 to December 1993, and those Filgueira and Leal (2001) - July 1994 to December 1997. The results are summarized in Tables 2, 3, 4 and 5.

5.1. Monetary Correction Features

As for monetary correction features, we would expect that less frequency of bond indexed to inflation as the economy has been stable. Filgueira and Leal (2001) have confirmed this fact when compared to Anderson (1999) findings over a high inflation period.

As depicted in Table 3, we reject the null hypothesis that the level of indexed bonds has been kept the same. Indeed, less indexed bonds to inflation have been decreasing from 88% in 1989-1993 to 32% in 1998-2001. The same would apply to foreign-denominated bonds.

The inter-bank rate (known as "CDI") has become the benchmark for the mutual fund industry. Therefore, we would expect that floating interest would become more popular among bond issues. This is confirmed by the increase of a higher frequency of floating interest bond issues, raising from 9% for the 1989-1993 period to 65% for 1998-2001 period. On the other hand, the frequency of fixed interest bond issues has statistically been lower for two successive periods. This result is consistent with lower use of indexed bonds, since the fixed interest rate is usually used in combination with monetary correction.

Table 2: Indenture Features Regarding Monetary Correction and Fixed vs. Floating Rates

Type of Covenant	Sample Frequency			Statistical Tests (95% confidence interval)	
	89-93(*1) (n=50)	94-97(*2) (n=96)	98-01(*3) (n=119)	Comparing 1998-2001 with 1989-93	Comparing 1998-2001 with 1994-97
A. Monetary Correction					
No indexation	0%	41%	68%	Greater	Greater
Indexed to inflation	88%	59%	32%	Smaller	Smaller
Indexed to foreign exchange rate variation	12%	0%	0%	Smaller	Equal
B. Remunerative Interest					
No remunerative interest	36%	3%	3%	Smaller	Equal
Fixed interest	56%	57%	33%	Smaller	Smaller
Floating interest	7%	5%	17%	Greater	Greater
Floating interest added to fixed interest	2%	34%	48%	Greater	Greater

Source: (*1) Anderson (1999) for sample from January 1989 to December 1993; (*2) Filgueira and Leal (2001) for sample from July 1994 to December 1993; (*3) our analysis for sample from January 1998 to December 2001.

5.2 Contingent Maturity Features

The changes in contingent maturity are presented in Table 3. Anderson (1999)'s hypothesis is that recontracting reduces agency costs as the newly negotiated conditions would update its terms to reflect any perception on risk. The frequency of scheduled recontracting decreased from 66% in 1989-1993 to 26% in July/1994-1997 and 29% in 1998-2001, indicating that economic stability, reducing risks and agency costs do recontracting less frequent.

As for call provision, issuing company would have an option to prepay its bonds prior to maturity under certain conditions. The frequency of call provision increased from 60% in 1989-1993 to 98% in July/1994-1997, however, it decreased to 85% in 1998-2001. An interesting analysis would include put options for bondholders.

Table 3: Evolution of Contingent Maturity Features from 1989-2001.

Type of Covenant	Sample Frequency			Statistical Tests (95% confidence interval)	
	89-93(*1) (n=50)	94-97(*2) (n=96)	98-01(*3) (n=119)	Comparing 1998-2001 with 1989-93	Comparing 1998-2001 with 1994-97
No contingent maturity	18%	1%	8%	Smaller	Greater
Scheduled recontracting	66%	26%	29%	Smaller	Equal
Call provision	60%	98%	85%	Greater	Smaller
Call provision and scheduled recontracting	61%	25%	24%	Smaller	Equal
Call provision or scheduled recontracting	82%	99%	90%	Greater	Smaller

Source: (*1) Anderson (1999) for sample from January 1989 to December 1993; (*2) Filgueira and Leal (2001) for sample from July 1994 to December 1993; (*3) our analysis for sample from January 1998 to December 2001.

5.3 Dividend, Investment and Financing Covenants

In developing hypotheses, we would be interested in investigating how recent changes in market conditions have affected bond indenture design with respect to negative covenants, regarding dividend, investment and financing actions.

As for dividend covenants, we have found empirical evidence that there has been a higher frequency of bond issues with no dividend covenants (see Table 4). This might not be surprising if we take into account that most companies have not been listed on stock exchange, and thus, no minimum dividend payment is required as noted by Sanvicente (2001).

Other results include frequencies on: (a) no dividends permitted when in arrears on payments to bond holders decreased from 68% in 1989-1993 and 70% in July/1994-1997 to 46% in 1998-2001, (b) on dividends as function of financial statement variables and/or restriction on cash flows to related parties have been very low in all periods. These results indicate that bondholders may not have been adequately protected.[ii]

Table 4: Evolution of Dividend Covenants from 1989-2001.

Type of Covenant	Sample Frequency			Statistical Tests (95% confidence interval)	
	89-93(*1) (n=50)	94-97(*2) (n=96)	98-01(*3) (n=119)	Comparing 98-01 with 89-93	Comparing 98-01 with 94-97
None	32%	27%	48%	Greater	Greater
No dividends permitted when in arrears on payments to bond holders	68%	70%	46%	Smaller	Smaller
Restriction on dividends as a function of financial statement variables	8%	4%	5%	Equal	Equal
Other restrictions on cash flows to related parties	2%	10%	3%	Equal	Smaller

Source: (*1) Anderson (1999) for sample from January 1989 to December 1993; (*2) Filgueira and Leal (2001) for sample from July 1994 to December 1993; (*3) our analysis for sample from January 1998 to December 2001.

When we compare investment covenants relative to previous work, we notice notably two major changes (a) a higher frequency of accelerated maturity in event of change of ownership and/or control, and (b) a higher frequency of prohibition on alienation of capital assets. They are both statistically significant as shown in Table 5.

As previously stressed, recent issuers include mostly companies in infrastructure and in oil and gas sectors, in addition to recently-privatized companies or their holdings. Notably, these companies' ownership structure has its exposure limit (e.g. being a guarantor for bond issues). For example, pension funds and private equity funds are not allowed to provide guarantee arrangements for their investee companies. To compensate for lack of corporate guarantee arrangements, issuers could offer bondholders (i) negative pledge, and (ii) accelerated maturity in the event of change in control and/or ownership.

Table 5: Evolution of Investment Covenants from 1989-2001.

Type of Covenant	Sample Frequency			Statistical Tests (95% confidence interval)	
	89-93(*1) (n=50)	94-97(*2) (n=96)	98-01(*3) (n=119)	Comparing 98-01 with 89-93	Comparing 98-01 with 94-97
None	52%	29%	33%	Smaller	Equal
Maintain insurance on properties	32%	36%	29%	Equal	Equal
Prohibition of operations beyond corporate objective	28%	38%	30%	Equal	Equal
Constrained or targeted investment	8%	13%	4%	Equal	Smaller
Accelerated maturity in event of change in ownership and/or control	10%	20%	28%	Greater	Greater
Secured debt	12%	32%	19%	Greater	Smaller
Prohibition on alienation of capital assets	4%	5%	17%	Greater	Greater
Conduct affairs in diligent manner and/observe regulations or standards	8%	7%	0%	Smaller	Smaller

Source: (*1) Anderson (1999) for sample from January 1989 to December 1993; (*2) Filgueira and Leal (2001) for sample from July 1994 to December 1993; (*3) our analysis for sample from January 1998 to December 2001.

Corporate bonds in Brazil have been characterized by low use of financial covenants as confirmed by Table 6. The frequency of no financing covenants has particularly increased over the 1998-2001 when compared to previous period (1994-1997). Third-party guarantees on debt, secured debt have particularly been less applied when compared to previous period. The use of negative pledge in the previous Table may partially explain this trend.

Table 6: Evolution of Financing Covenants from 1989-2001.

Type of Covenant	Sample Frequency			Statistical Tests (95% confidence interval)	
	89-93(*1) (n=50)	94-97(*2) (n=96)	98-01(*3) (n=119)	Comparing 98-01 with 89-93	Comparing 98-01 with 94-97
None	80%	31%	72%	Equal	Greater
Restrictions on additional debt	4%	16%	16%	Greater	Equal
Third-party guarantees on debt	16%	24%	11%	Equal	Smaller
Secured or privileged seniority debt	14%	16%	10%	Equal	Equal
Right of exchange for new debt issues	4%	44%	3%	Equal	Smaller

Source: (*1) Anderson (1999) for sample from January 1989 to December 1993; (*2) Filgueira and Leal (2001) for sample from July 1994 to December 1993; (*3) our analysis for sample from January 1998 to December 2001.

Our results may be summarized as follows: (a) more bond issues with no indexed inflation features, but more floating rate interest features to match market needs; (b) no major changes for contingent maturity features, (c) loose covenants with respect to dividend and financing actions, and (d) more tighter covenants regarding change in control and/or ownership and negative pledge.

6. Final Remarks

Although, we have found empirical evidence that there have been more loose covenants with respect to dividend and financing actions, bondholders have demanded corporate governance features in bond indentures. Financing covenants regarding negative pledge and accelerated maturity in the event of change in control may partially mitigate risk borne by bondholders. However, recent cases of default (Enron of the US, and BCP Telecom of Brazil) in the bond capital market may have signaled to bondholders that we may need more than just reliance on sponsors.

Governance issues in Brazil related to bonds may represent research opportunities. A few examples may include (a) the inclusion of financial covenants and operating covenants as usual in some Eurobond issues, (b) the role of a trustee in supervising the company performance, and (c) the role of liquidity.

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APPENDIX A. Sample of Bond Indentures from 1998 to 2001

ISSUER	INDUSTRY	REGISTER DATE	MONTHS TO ORIGINAL MATURITY	CONVERTIBILITY	VOLUME (R$)
Cia Paulista de Adm. de Ativos - CPA	Holding	mar-98	18	Straight	2.000.000.000
VICUNHA SIDERURGIA SA	Steel	mar-01	27	Straight	1.997.800.000
NOVAMARLIM PETRÓLEO S.A.	Oil	dez-01	84	Straight	1.800.000.000
DRAFT II PARTICIPAÇÕES SA	Other	mai-00	36	Straight	1.300.000.000
TELE NORTE LESTE PARTICIPAÇÕES S/A	Telecomunication	jul-01	60	Straight	1.300.000.000
BRASIL TELECOM PARTICIPAÇÕES SA	Telecomunication	jul-00	72	Convertible	1.095.000.000
Itau Rent Adm. e Participações S.A	Holding	abr-98	96	Straight	1.000.000.000
CIA PETROLIFERA MARLIM	Oil	mar-01	60	Straight	1.000.000.000
COMPANHIA PAULISTA DE FORÇA DE LUZ - CPFL	Energy	jul-01	84	Straight	890.000.000
Serra da Mesa Energia SA	Energy	jan-98	120	Convertible	874.863.000
Eletropaulo Metropolitana-Eletricidade de São Paulo	Energy	dez-98	30	Straight	800.000.000
Bradesplan Participações S.A	Holding	mar-99	84	Straight	800.000.000
ELETROPAULO METR.ELETR.SP. SA	Energy	jul-00	36	Straight	700.000.000
BRADESPLAN PARTICIPAÇÕES SA	Holding	dez-00	84	Straight	700.000.000
MRS LOGÍSTICA S/A	Transportation	dez-01	60	Straight	700.000.000
Light Serv de Eletricidade S.A.	Energy	nov-99	36	Straight	650.000.000
CIA ENERG MINAS GERAIS - CEMIG	Energy	dez-01	96	Straight	625.000.000
COPENE PETROQUIMICA DO NORDESTE SA	Chemical	dez-01	60	Straight	625.000.000
TELEMAR PARTICIPAÇÕES S/A	Telecomunication	jul-00	60	Straight	620.000.000
Cia Saneamento Basico De SP	Water	mar-99	60	Straight	500.000.000
BCP S/A	Telecomunication	fev-00	60	Straight	500.000.000
Casa Anglo Brasileira S.A	Retail	nov-98	36	Convertible	420.000.000
Usinas Siderurgica De Mg S.A	Steel	jun-99	96	Straight	400.000.000
CERJ - Cia. De Eletricidade do Rio de Janeiro	Energy	fev-99	60	Convertible	360.000.000
Atl Algar Telecom Leste S.A	Telecomunication	jun-99	120	Straight	350.000.000
Globo Cabo S.A.	TV	dez-99	96	Convertible	350.000.000
MACHADINHO ENERGÉTICA SA	Energy	mar-01	144	Straight	320.000.000
Acesita S.A.	Steel	dez-99	48	Straight	300.000.000
CIA SANEAMENTO BASICO ESTADO DE SÃO PAULO	Water	jun-01	72	Straight	300.000.000
Cia Bras Distribuição	Retail	set-99	60	Convertible	297.000.000
EBE-EMP BANDEIRANTE ENERGIA SA	Energy	fev-00	36	Convertible	280.000.000
INEPAR SA IND E CONSTRUCOES	Heavy industries	abr-01	60	Convertible	270.000.000
AES SUL DISTRIBUIDORA GAÚCHA DE ENERGIA SA	Energy	mar-01	36	Straight	250.000.000
ALIUM PARTICIPAÇÕES SA	Other	out-01	36	Straight	240.000.000
NOVAMARLIM PETROLEO SA	Oil	dez-01	45	Convertible	235.300.000
CESP CIA ENERGETICA SAO PAULO	Energy	jul-01	30	Straight	230.000.000
BSE SA	Telecomunication	jan-01	60	Straight	220.000.000
TELEPAR CELULAR SA	Telecomunication	dez-00	36	Straight	200.000.000
TELPE CELULAR S.A.	Telecomunication	dez-00	36	Straight	200.000.000
GLOBO CABO S/A	TV	fev-01	36	Straight	200.000.000
Companhia Energética Mercosul	Energy	mar-99	168	Straight	180.000.000
Paranapanema S.A.	Mining	out-99	102	Convertible	180.000.000
LATAS DE ALUMINIO SA	Other	abr-00	36	Straight	180.000.000
Iochpe-Maxion S.A	Heavy industries	out-98	84	Convertible	176.967.900
Cia. Brasileira de Distribuição	Retail	ago-98	60	Convesíveis	175.000.000
CESP - Cia. Energética de São Paulo	Energy	fev-99	24	Straight	170.016.000
ITÁ ENERGÉTICA SA	Energy	mar-01	156	Straight	168.000.000
SANTISTA ALIMENTOS S/A	Food	fev-00	36	Straight	160.000.000
Globo Cabo S.A	TV	dez-98	96	Straight	150.000.000
Light Serv De Eletricidade S.A	Energy	ago-99	131	Straight	150.000.000
Ikpc Inds Klabin Papel Cel S.A.	Pulp and paper	nov-99	60	Straight	150.000.000
CIA ENERGETICA MARANHAO	Energy	jun-01	60	Straight	150.000.000
COMPANHIA DE CONCESSÕES RODOVIÁRIAS	Other	dez-00	36	Straight	135.000.000
Light - Serviços de Eletricidade S.A.	Energy	mar-98	144	Straight	130.000.000
CIA ENERGETICA DE BRASILIA	Energy	out-01	60	Straight	130.000.000
CIA ELET EST BAHIA - COELBA	Energy	ago-00	36	Straight	120.000.000
Santos Brasil S.A	Other	dez-98	132	Convertible	110.000.000
Ripasa S.A Celulose e Papel	Pulp and paper	dez-98	36	Convertible	105.000.000
Prh9 Produções S.A	Other	abr-99	24	Convertible	100.000.000
MRS LOGÍSTICA SA	Transportation	out-00	60	Straight	100.000.000
VICUNHA NORDESTE SA IND TEXTIL	Textile	nov-00	36	Straight	100.000.000
USINAS SIDERURGICAS DE MG SA	Steel	fev-01	36	Straight	100.000.000
CIA RIOGRANDENSE DE SANEAMENTO	Water	set-01	36	Straight	100.000.000
Vicunha Nordeste S.A Ind Textil	Textile	jul-99	36	Convertible	90.000.000
COSERN - CIA ENERGÉTICA DO RN	Water	abr-00	36	Straight	90.000.000
Cia Força e Luz Cataguazes-Leopoldina	Energy	out-98	96	Convertible	86.565.250
RODONORTE CONCESSIONÁRIA S/A	Other	nov-01	108	Straight	85.000.000
Concessionária da Rodovia Osório	Other	ago-98	109	Straight	78.000.000
Cia Suzano Papel Celulose	Pulp and paper	jun-99	36	Straight	75.000.000
UHESC SA	Energy	dez-00	144	Straight	75.000.000

APPENDIX A. Sample of Bond Indentures from 1998 to 2001 (Cont.)

ISSUER	INDUSTRY	REGISTER DATE	MONTHS TO ORIGINAL MATURITY	CONVERTIBILITY	VOLUME (R$)
Easypar S.A	Other	nov-98	108	Straight	70.000.000
SA IND E COMERCIO CHAPECO	Food	mai-01	60	Convertible	68.596.000
ELEKTRO ELETR. E SERVIÇOS SA	Energy	out-00	60	Straight	62.500.000
Petroflex Industria e Comércio S.A	Chemical	jan-99	36	Straight	60.000.000
La Fonte Participacoes S.A	Holding	abr-99	60	Convertible	60.000.000
FIBRA DUPONT SUDAMERICA SA	Textile	out-00	36	Straight	60.000.000
PETROFLEX IND E COM SA	Chemical	dez-00	36	Straight	60.000.000
ALL AMÉRICA LATINA LOGÍSTICA DO BRASIL SA	Transportation	mai-00	24	Straight	58.000.000
SANEAMENTO DE GOIÁS S/A - SANEAGO	Water	dez-01	60	Straight	58.000.000
Kepler Weber S.A	Other	jun-99	90	Straight	56.300.000
Al-car Empreendimentos e Participações S.A	Other	dez-98	114	Straight	55.000.000
Bicicletas Caloi SA	Consumer goods	jan-98	60	Convertible	50.000.000
Procid Participações e Negócios S.A	Holding	fev-99	60	Straight	50.000.000
CONSTRUTORA SULTEPA SA	Construction	fev-00	40	Straight	50.000.000
PARQUE TEMATICO PLAYCENTER SA	Leisure	jul-00	60	Straight	50.000.000
SUPERVIA TRANSPORTE FERROVIARIOS SA	Transportation	fev-01	36	Straight	50.000.000
GAFISA SA	Construction	abr-01	36	Straight	50.000.000
BNDES Participações S.A. - BNDESPAR	Holding	mar-98	36	Straight	44.000.000
Substação Eletrometrô S.A	Other	set-98	120	Straight	44.000.000
Inepar Energia S.A	Energy	nov-98	48	Convertible	41.107.500
Cecrisa Revestimentos Cerâmicos S.A	Construction	mai-98	72	Convertible	36.000.000
Bompreço S.A. Supermercado do NE	Retail	out-99	156	Convertible	35.000.000
Adubos Trevo S.A - Grupo Trevo	Fertilizers	abr-99	96	Straight	34.250.000
Vasco da Gama Licenciamentos S.A	Other	abr-98	120	Convertible	34.000.000
Inepar-Fem Equipamentos e Montagens S.A	Heavy industries	nov-98	48	Convertible	33.999.700
Companhia Riograndense de Saneamento	Water	fev-98	36	Straight	30.000.000
Vega Engenharia Ambiental S.A	Other	nov-98	96	Convertible	30.000.000
Cia Lorenz	Food	dez-98	72	Convertible	28.959.000
Soci. de Abastec. de Água e Saneamento S.A	Water	mar-98	36	Straight	25.000.000
Cia. Brasileira de Distribuição	Retail	ago-98	60	Straight	25.000.000
Cejen Cargos Transporte de São Francisco	Transportation	nov-98	48	Convertible	25.000.000
Investmobile S.A	Other	fev-99	60	Straight	22.000.000
Método Engenharia S.A	Construction	nov-98	60	Straight	21.525.000
Cia. Industrial Itaunense	Other	jan-99	72	Straight	20.000.000
Encomind Agroindustrial S.A.	Other	nov-99	64	Straight	20.000.000
SULABENTURES SA	Holding	fev-00	36	Straight	16.793.946
Procid Participações e Negócios S.A	Holding	ago-98	60	Straight	10.000.000
CEL Participações S.A.	Holding	mar-98	84	Straight	9.095.260
Serra Azul Water Park S/A	Leisure	jul-98	24	Straight	8.000.000
Nordeste Química Participações SA	Chemical	jan-98	36	Straight	6.600.000
Cia Textil do Nordeste - CTN	Textile	jan-98	48	Convertible	5.000.000

Endnotes

[i] As noted in Sistema Nacional de Debêntures data base available at www.debentures.com.br. The data has not been included in the paper due to size limit.

[ii] About these weaker dividend covenants, Anderson (1999) state a hypothesis is that the lack of external capital availability in Brazil originates a natural incentive to retain profits in order to reinvest in the companies.