

1-1-2013

The Exercise of Corporate Bond Clawbacks and Debt Renegotiation: An Empirical Analysis

Kenneth Daniels

Virginia Commonwealth University, kndaniel@vcu.edu

Fernando Diaz

Universidad Diego Portales, fernando.diaz@udp.cl

Gabriel G. Ramirez

Kennesaw State University, gramirez@kennesaw.edu

Follow this and additional works at: <http://digitalcommons.kennesaw.edu/facpubs>



Part of the [Economics Commons](#)

Recommended Citation

Kenneth Daniels, Fernando Diaz, and Gabriel G. Ramirez, "The Exercise of Corporate Bond Clawbacks and Debt Renegotiation: An Empirical Analysis," *Journal of Corporate Finance* 20, 2013, 14-21

This Article is brought to you for free and open access by DigitalCommons@Kennesaw State University. It has been accepted for inclusion in Faculty Publications by an authorized administrator of DigitalCommons@Kennesaw State University. For more information, please contact digitalcommons@kennesaw.edu.

The Exercise of Corporate Bond Clawbacks and Debt Renegotiation:

An Empirical Analysis

Kenneth N. Daniels

Virginia Commonwealth University

School of Business

Richmond, Virginia 23284-4000

Email:Kndaniel@vcu.edu

Fernando Díaz

Universidad Diego Portales

Santiago, Chile

Email: Fernando.diaz@udp.cl

Gabriel G. Ramírez***

Kennesaw State University

Michael J. Coles College of Business

Kennesaw, Georgia 30144

Email:Gramirez@kennesaw.edu

Phone:770-423-6181

*** Corresponding author: Gabriel Ramírez, Coles College of Business, Building 4, BB 411, 1000 Chastain Rd., Kennesaw, GA 30144.

Abstract

Bond clawback provisions allow the issuer to partially redeem a bond issue often within three years of issuance using proceeds only from new equity issues. We document that clawback bonds are often renegotiated and clawbacks provisions are rarely exercised. We find that the probability of exercising an option increases if the firm is large and has lower levels of debt, the issue is large and if the issue was subject of renegotiation prior to the exercised date, the workout took the form of a cash tender offer. We find that the likelihood of renegotiation of an IPOC is positively associated with the clawback provision being exercised, the issue is not rated and is less liquid and the firm is less profitable. Finally, we find that the higher yields observed on IPOCs are associated with the likelihood of the clawback provision being exercised. Yields are also associated with smaller issues, longer maturities, smaller firms, and unrated issues. We argue that the results are consistent with the view that bond clawback provisions are used strategically by firms aiming at facilitating future debt renegotiations.

The Exercise of Corporate Bond Clawbacks and Debt Renegotiation:

An Empirical Analysis

Corporate bond clawbacks (IPOCs)¹, sometimes called an equity clawbacks, grew out of the high yield debt market of the 1980s. The development of institutional investors with an appetite for high yield debt spurred by Drexel, Burham and Lambert, created the original issue high yield debt market and increased the usage of the corporate bond clawback provision (Daniels, Demissew, and Jayaraman (2009)). The clawback provision, in an IPOC, allows the debtor the option to redeem a preset fraction of the bond within a preset period at a predetermined price as long as the funds used for the debt redemption come from an equity offering.

IPOCs have three distinctive features. First, IPOCs are predominantly high yield securities. Second, as documented in this paper, corporate bond clawback provisions are rarely exercised. Third, IPOCs have a relative short redemption window which starts immediately upon issuance and usually spans for up to three years. The existence of these features raises important questions as to why and under what conditions the clawback options are exercised, and what impact it has on yields and debt renegotiations, the use of a short redemption window, and its timing among others. Extant literature on IPOCs is limited to a few papers empirically dealing why IPOCs are used (Goyal, Gollapudi, and Ogden(1998) and Daniels, Diro Ejara, and Vijayakumar (2009))². Daniels, Dias, and Ramirez (2011) develop a theoretical model which analyzes the IPOC contract and established the

¹ IPOC stands for initial public offering clawbacked.

² Daniels et. al. (2009) demonstrate that firms like issuing IPOCs because an IPOC provides access to the public debt markets and allows for the financial markets to improve the transparency of the firm during the debt issuance process.

conditions for IPOC issuance. They show that once financial distress costs become significant issuing straight debt and callable convertible debt becomes less feasible than using IPOCs. Given that firms seek to avoid bankruptcy and attempt to minimize their probability of being in financial distress, they argue that IPOC issuers seek flexibility in the financing of their capital structure and monitor their ability to renegotiate their existing debt. In such a model, cash flow volatility and the possibility of future debt renegotiations are key factors determining the use of IPOCs.

Hennesy (2004) encourages additional research on the role of renegotiation in debt contracts. While not explicitly modeled in this paper, we provide insights into the bargaining power in debt renegotiations that is gained by the issuers of IPOCs and disposition of creditors to debt renegotiation and risk sharing with the firm. Thus, this paper contributes to the literature on the role of renegotiation on contract design. Hart and Moore (1988) recognize that when cash flows are not verifiable that the possibility of renegotiation is an important factor which may have an impact on the design of the original contract³. Also, Myers (1977) and Hart and Moore (1994) imply that when debt renegotiation breaks down it generates a debt overhang which negates the ability of the firm to renegotiate with its creditors and jeopardizes the firm as an ongoing concern. We argue that exercising the clawback in an IPOCs plays a role in the renegotiation of these debt contracts.⁴

We argue that owners anticipate the possibility of renegotiation which gives a degree of flexibility in the capital structure. Hart and Moore (1998) support this view based on a dynamic

³ There is a large literature on incomplete contracts such as Aghion and Bolton (1992), Dewatripont and Tirole (1994) that recognizes complete contracts are costly to design and may not be feasible given the inability to verify contingent cash flows under different state of natures.

⁴ The clawback provision may be helpful in alleviating debt overhangs because it allows an issuer to circumvent the non-refundability of debt. Like simultaneous tenders and calls (STACs), clawbacks represent a financial tool that allows the bond issuer to legally circumvent standard bond contractual features. STACs allow a firm to redeem non-refundable debt using “clean” cash (See Dhillon, Noe, and Ramírez (2001) for a detailed presentation). The legal dispute and court ruling in Macy’s STAC in 1990 practically eliminated the viability of this tool.

theory of debt where a borrower threatens to withdraw from the project and triggers renegotiation of the debt contract. Green (1987) and Wang (2000) also support the notion of a dynamic contract that allows the possibility of renegotiation which avoids bankruptcy while helping debtors and creditors share risk. Sigouin (2003) builds on the notion of risk sharing by illustrating that capital alters the terms of a financial relationship and allows creditors the latitude to increase their commitment to a debtor.⁵ In our scenario, non-conversion of the clawback provision is strategic and leads to an increased commitment from creditors. Here, relationships are extended due to the renegotiation of the IPOC, a desire for investment continuity and the need to share risk.⁶

We study corporate bonds with clawbacks issued during the period 1993-2008. We find that the clawback feature is only exercised in 5.3% of the cases. We find that the likelihood of exercising the clawback is positively associated with large firms that have less debt and less probability of financial distress and larger debt issues and that if debt renegotiations take place they are prior to the IPOC date and using a cash tender offer. We also find that not rated IPOCs that are not TRACE qualified with exercised clawbacks are more likely to be renegotiated and such workout takes the form of a tender offer. These differences persist even after accounting for credit quality, issue characteristics, and time trends using a multivariate analysis.

The rest of the paper is structured as follows. Section 2 presents data and sample characteristics. Section 3 provides multivariate analysis and empirical results. Section 4 discusses the results of the analysis.

⁵ Hart and Moore (1988) also distinguish between an incomplete contract and information asymmetry.

⁶ Sigouin (2003) notes that relationship lending in this context is not driven by asymmetric information as in Boot et. al 1991. We also note that given the average firm that uses an IPOC is a small firm that a form of relationship lending is advantageous as the firm moves through the growth cycle. However, relationship lending in corporate debt markets is driven by risk sharing rather than the degree of information asymmetry.

2. Data selection and sample construction

We first select a sample of corporate bonds with clawback provisions. We obtain all the corporate bonds reported in Fixed Income Security Database (FISD) that have a flag for clawbacks during the period 1993 to 2008. After cleaning the resulting observations, eliminating repeated observations for 144A bonds⁷, and matching with Bloomberg database and with exchange and tender offers data, the IPOC sample reduces to 3,869 bonds. We checked each bond issue with Bloomberg to find out if the clawback option was exercised. We document a scarcity of clawback exercises, just 205 of the 3,869 IPOCs were exercised representing an exercised rate of about 5.3%. Descriptive statistics for the sample split between exercised and not-exercised clawback bonds is presented in Table 1.

Table 1 about here

Panel A shows the frequency distribution of clawback bonds by year and industry classification of the issuer. The 3-year period between 1997 and 1999 represents the highest rates of clawbacks being exercised followed by the 2002 to 2005 period. Panel B shows that the financial sector and the oil machinery industries issued the most IPOCs and that they also see the highest number of clawback exercises followed by the food industry and utilities. Utilities exercised about

⁷ Securities issued in the 144A market are unregistered securities that can be subsequently registered by exchanging the unregistered security for an identical registered security. FISD keeps both records and considers the registering as an exchange. We tracked down repeated cases in FISD and consolidated them to keep the unregistered security information but consider in the analysis only registered securities. We also eliminated as part of this procedure cases in which a value of 1 was assigned by FISD to a registration_rights code. This implies the security has a clause that it needs to be registered within certain time often 180 days after issuance. However, this variable does not fully reflect all 144A registrations that take place (See Huang and Ramirez, 2010). Accordingly, we further eliminate securities for which an exchange offer occurs within 180 days of issuance.

20% of the IPOCs issued while Mining did not exercised a single clawback. Other industries with very low exercised rates are the durable goods, construction and steel.

Bond sample and issuer characteristics are presented in Table 1, Panel C. Bonds with exercised clawbacks are relatively larger (issue sizes), have higher rates, and shorter maturities than bonds whose clawbackas are not exercised. Also, clawback bonds that are exercised tend to be not rated in larger proportions than bonds that have clawbacks eventually exercised. IPOCs have a redemption that averages about 35% per issue regardless of whether they are exercised or not. Finally, the bond and issuer characteristics of our sample are comparable to the samples of previous researchers such as Daniels et. al. (2009) and Goyal et. al (1998).

3. Empirical Analysis

3.1. Renegotiation dynamics and IPOCs

We examine the dynamics of IPOC renegotiations, where renegotiation is defined as an issue undergoing an exchange or tender offer as reported in FISD database. In an exchange offer, often debt is offered in exchange for the old debt and in a tender offer, cash is offered in exchange. This allows us to look into the relation between renegotiation and the expiration of the clawback provision. Table 2 summarizes this analysis.

Table 2 about here

The total number IPOC issues eventually undergoing a renegotiation in our sample is 859. The sample of exercised clawbacks is 205. Issues with exercised clawbacks have higher offering

yields and are rated in greater proportion than those that renegotiate (differences in means and proportions are significant at least at the 10% level). They do not appear to be statistically different in terms of issue size or maturity.

Issues with exercised clawbacks also undergo renegotiations and in our sample, there are 86 cases of an exercised clawback provision whose IPOC underwent a renegotiation. Our results also show that 75.90% of not-exercised IPOCs and 88.37% of the exercised IPOCs went into renegotiation in the form of a tender offer. Also, 45.29% of the not-exercised IPOCs and 62.79% of the exercised IPOCs enter into renegotiation before the expiration of the clawback option. These proportions are statistically different from each other at the 5% level. It is also possible that a renegotiation fails and it is retried, or that modifications need to be made to an offer, or that additional subsequent exchange or tender offers are made to complete the full extinguishment of the debt contract. The average number of renegotiations per not-exercised IPOCs is 1.08 times and for exercised IPOCs is 1.01 times. These group means are statistically different at the 10% level. The totality of these results suggest that the clawback is a strategic tool used by the firm which significantly increases the chances of debt renegotiations and more importantly the renegotiation of debt before the IPOC clawback expiration further illustrates its strategic use.

3.2. Multivariate Analysis

In this section, we provide an empirical investigation of whether firm, issue, or market characteristics are determinants of the exercise of bond clawbacks. We investigate the relation between exercising bond clawbacks and renegotiation of the bond issues. We also estimate the relationship between similar factors and offering yields using OLS regressions.

The relationships are expressed in the following manner:

$$\text{Clawback exercise} = f(\text{credit quality, issue and issuer characteristics}) \quad (3.1)$$

$$\text{Renegotiation} = f(\text{Claw exercise, credit quality, issue and issuer characteristics}) \quad (3.2)$$

$$\text{Offering Yields} = f(\text{Claw exercise, credit quality, issue characteristics, controls}) \quad (3.3)$$

CREDIT QUALITY is a vector that represents a set of variables capturing the credit risk of the issue. We rely on credit ratings to proxy for credit quality as it is the only information provided in the database.⁸ We proxy for credit quality with a set of two variables: a dummy variable to indicate whether a firm is rated by a credit agency (NOTRATED). We also used another specification to capture credit quality: Drating that captures the categorical structure of the S&P ratings where an AAA rating is represented by the value of 1, a AA rating by a value of 2, and so for with a value of 22 for a D rating. Results are similar to those used NOTRATED and thus are not reported in table form. For equation (3.2) we also use a dummy variable that indicates whether a firm is in financial distress (FD). FD is computed estimating an Altman Z-score and classifying the firm as being in financial distress if the Z-score is lower than 1.80. ISSUE CHARACTERISTICS is a vector of variables capturing the contract terms of each issue and include the log of the maturity and the log of the issue amount. ISSUER CHARACTERISTICS is a vector of variables capturing the nature and type of issuers and includes factors such as the log of total assets (SIZE), the log of the sales turnover ratio (LOG_ST) to capture solvency, leverage (DEBTRATIO), and the log of return on equity (LOG_ROE). We also use a dummy variable (TRACE_D) that takes the value of one if the bond is TRACE-qualified to capture the liquidity/transparency level of the issue and a dummy variable (RENEGO) that captures whether a bond issue was renegotiated.

The testable form for the exercise of clawbacks equation (3.1) is:

$$\text{Prob. (Claw1_EX)} = \Lambda[\mathbf{a}_0 + \mathbf{b}_1(\text{notrated}) + \mathbf{b}_2(\text{RTA}) + \mathbf{b}_3(\text{RTP}) + \mathbf{b}_4(\text{REA}) + \mathbf{b}_5(\log_size) + \mathbf{b}_6(\log_mat) + \mathbf{b}_7(\log_roe) + \mathbf{b}_8(\log_st) + \mathbf{b}_9(\text{trace_d}) + \mathbf{b}_{10}(\text{debratio}) + \mathbf{b}_{11}(\text{size}) + \mathbf{b}_{11-26}(\mathbf{D94} - \mathbf{D08})]. (3.4)$$

We use the CLAW_EX dummy to capture the propensity to of a bond clawback to be exercised. Our main interest is focused on the renegotiation dummy and firm financial characteristics on the propensity to exercise the bond clawback. We expect that the renegotiation dummy will be positively related to the likelihood of a clawback to be exercised and firm characteristics related to its ability to issue equity to be positively associated with the likelihood of a clawback to be exercised. Also we expect that IPOCs require higher yields on the debt, even after controlling for credit quality and firm and issue characteristics.

We also investigate the decision to renegotiate debt and the factors which drive the propensity to renegotiate. The empirical form for the renegotiation equation (3.2) is:

$$\text{Prob. (Renegotiation)} = \Lambda[\mathbf{a}_0 + \mathbf{b}_1(\text{Claw_EX}) + \mathbf{b}_2(\text{notrated}) + \mathbf{b}_3(\text{FD}) + \mathbf{b}_4(\text{size}) + \mathbf{b}_5(\text{debratio}) + \mathbf{b}_6(\log_roe) + \mathbf{b}_7(\log_st) + \mathbf{b}_8(\log_mat) + \mathbf{b}_9(\log_size) + \mathbf{b}_{10}(\text{trace_d}) + \mathbf{b}_{11} - \mathbf{b}_{13}(\text{renego}) + \mathbf{b}_{14-29}(\mathbf{D94} - \mathbf{D08})]. (3.5)$$

In the probit regression the dependent variable is DRENEG which is a dummy variable that takes the value of one if the bond issue is renegotiated. An issue is considered renegotiated if it is reported in the FISD database as being subject to an exchange or tender offer. Similarly, we use the bond and issuer fundamentals as controls for the propensity to renegotiate. From our model predictions and implications from the model, we expect a positive relation between DRENEG and the CLAW_EX dummy.

We now turn our attention to the investigation of the IPOC yield.

We use a multivariate analysis to estimate the determinants of the yield. The functional form for the yield equation is:

$$\begin{aligned} \text{YIELD} = & \mathbf{a}_0 + \mathbf{b}_1(\text{Claw_EX}) + \mathbf{b}_2(\text{notrated}) + \mathbf{b}_3(\log_size) + \mathbf{b}_4(\log_mat) + \\ & \mathbf{b}_5(size) + \mathbf{b}_6(\text{debratio}) + \mathbf{b}_7(\log_roe) + \mathbf{b}_8(\log_st) + \mathbf{b}_9(FD) + \mathbf{b}_{10}(wacc) \\ & + \mathbf{b}_{11}(\text{risk_premium}) + \mathbf{b}_{12-27}(\mathbf{D94-D08}) + \mathbf{w}_i . \end{aligned} \quad (3.5)$$

YIELD is the initial offering yield as reported in FISD database. All independent variables as defined previously. We control for time trends using year dummies noted by D94-D08. We control for industry concentration using an OLS estimation accounting for clustering by industry.

We infer that the initial offering yield is determined by the fundamentals of the bond and issuer along with credit quality. The variable of particular interest to us is CLAW_EX. While this variable is not known at the time of the bond issuance, it is used to capture the investor's expectations that the firm will exercised the bond clawback and will renegotiate the issue. From our model predictions and implications, we expect a positive relationship between the CLAW_EX and YIELD. From existing studies such as Daniels et. al (2009), we expect the size of the issue to be negatively related to YIELD. From existing theory of contracting, we expect a negative relationship between size of the issue and yield. We also expect yields to be negatively related to the size of the firm, ROE, maturity and issue amount, and positively related to leverage (DEBTRATIO) and the issue not being rated (NOTRATED).

3.3. The likelihood of an exercised bond clawback

Table 3 presents the results of the exercised clawback probit regression (Equation 3.4).

Table 3 about here

We find a significant positive relationship between a clawback being exercised and the bond issue being subject of renegotiation sometimes between issuance and call date. We find that our results are significant after controlling for the financial distress of the firm. We find that firm size or any of the firm characteristics do not have a significant effect on the probabilities of renegotiation the bond issue.

An examination of the issue characteristics shows that the size of the issue (*log_size*) has positive but statistically insignificant coefficient and maturity (*log_mat*) has a significant and positive coefficient at the 10% level. Our result for maturity suggests that bonds with longer maturities may be more likely candidates for renegotiation.

3.4. Relation between exercising a bond clawback and renegotiation of IPOC debt contracts

In estimating equation 3.5, we use 4 models to isolate the effects of multicollinearity between the size and maturity of the issue and the firm size (model 2), to introduce the effects of secondary market transparency for bonds via TRACE system (model 3) and to use interaction variables between being rated and firm size (dropping the *SIZE* variable) and introducing a set of dummy variables to capture renegotiation prior to the IPOC expiration date and whether the renegotiation took the form of an exchange offer or tender offer (model 4). Table 4 presents results of these estimations for the debt renegotiation equation 3.5.

Table 4 about here

After controlling for credit quality and issue characteristics, the likelihood of renegotiation of the contract is positively and significantly associated with issuing the clawback being exercised as

shown by the positive and significant coefficients for the CLAW_EX variable in all four estimations (models).

The remaining results for the effects of issue characteristics and credit risk are consistent with theory. Borrowers that are not rated are more likely to renegotiate their debt. The likelihood of debt renegotiation is positively affected by the maturity of the issue (as indicated by the positive and significant coefficient for log_mat in model 4 only) but not associated with the size of the issue (as indicated by the insignificant coefficient for log_size in any of the 4 models). Results from model 4 confirm the results from Table 2 regarding tender offers prior to the IPOC expiration date.

3.5. Impact of expectations about exercising the bond clawback on IPOC yields

The estimation of equation 3.6 is done using three models to capture the basic specification in equation 3.6 (model 1), to introduce a dummy FD to capture the probability of financial distress from a z_score model (model 2), and to add a variable that captures the firm risk (WACC) and the marketwide equity premium, RISK_PREMIUM, (model 3). Table 5 presents the results of the YIELD regression (Equation 3.6).

Table 5 about here

The focus of our attention in these regressions is on the CLAW_EX dummy variable which is expected to capture the possible impact of exercising the clawback provision on yields. Its coefficient ranges between 90 to 92 basis points and is significant at 1% level. Assuming that both issuers and investors are rational utility maximizing decision makers, the economic significance of the higher cost of capital indicates that issuers do not view this cost as prohibitive in return for the flexibility

available to them. The dummy variables representing credit rating have signs consistent with theory. The positive coefficient for the NOTRATED dummy indicates that yields are higher for issues that are not rated by a rating agency.

An examination of the individual coefficients shows that the size of the issue (*log_size*) has negative coefficients in all the regressions. Maturity (*log_mat*) also has negative and significant coefficients in all regressions. For brevity and space concerns, coefficients for year dummies are not reported in the table. The proxy for financial distress is not statistically significant at standard levels. The two variables to capture firm risk and market valuation of equity risk premium are significant at the 1% level.

In conclusion, we present evidence consistent with the idea that firms that have very low probability of exercising the clawback provision should also have lower yields and that yields on IPOCs are associated, as expected, with the firm risk and market wide equity premium. In addition, firm and issue characteristics affect the pricing of IPOCs in accordance with theory.

4. Conclusion

The prevalence of IPOCs as an important source of capital for firms poses some interesting dilemmas for corporate managers and analyst of corporate bond markets. Why do firms rely on such an expensive source of corporate finance and rarely use the clawback option associated with IPOCs? In this paper, we presented an empirical analysis of the exercise and renegotiation of corporate bond clawbacks. We find that the clawback provision is rarely exercised and that IPOCs are more often renegotiated than exercised. The results of multivariate analysis indicate that the probability of a clawback provision is positively associated with the size of the firm and the bond issue, and negatively associated with the firm's leverage and the liquidity/transparency of the bond issue. We

also find that the probability of renegotiation is positively associated with the clawback provision being exercised and the issue not being rated and the issue amount, and negatively associated the profitability and leverage of the firm. Also, yields are higher and positively associated with the clawback provision being exercised and the issue not being rated and negatively associated with the issue size and maturity and firm size. Also, our ancillary analysis shows that a greater percentage of exchange offers occur before the expiration of the IPOC clawback which further strengthens our inference about the strategic use of IPOC clawbacks.

References

- Aghion, P., and P. Bolton, 1992. "An 'Incomplete Contracts' Approach to Financial Contracting," *Review of Economic Studies*, 59, 473-494.
- Bhattacharya, Sudipto, (1979), Imperfect Information, Dividend Policy, and "The Bird in the Hand" Fallacy, *Bell Journal of Economics*, 10, issue 1, p. 259-270,.
- Brennan, M., and Kraus, A., 1987 . " Efficient Financing under Asymmetric Information", *Journal of Finance*, 42, 1225-1243.
- Constantinides, G., and Grundy, B., 1989. "Optimal investment in Stock Repurchases and Financing as Signals", *Review of Financial Studies*, 2, 445-465.
- Davydenko, S.A. and I.A. Strebulaev., 2007 "Strategic Actions and Credit Spreads: An Empirical Investigation", *Journal of Finance*, 62, 2633-2671.
- Daniels, Kenneth, Diro Ejara, Demissew, and Vijayakumar, Jayaraman, 2009. "An empirical analysis of the determinants and pricing of corporate bond clawbacks," *Journal of Corporate Finance*, Vol. 15(4), 431-446.
- Daniels, Kenneth, Diaz, Fernando, and Ramirez, Gabriel, 2011, *The Existence of Corporate Bonds Clawbacks (IPOCs): Theory and Evidence*, working paper, Kennesaw State University.
- DeAngelo, Harry and Masulis, Ronald W., 1980, Optimal Capital Structure Under Corporate and Personal Taxation, *Journal of Financial Economics*, Vol. 8, No. 1, pp. 3-27.
- Dewatripont, Mathias & Tirole, Jean, 1994. "A Theory of Debt and Equity: Diversity of Securities and Manager-Shareholder Congruence," *The Quarterly Journal of Economics*, MIT Press, Vol. 109(4), 1027-54.
- Dhillon, Upinder S., Noe, Thomas H. and Ramirez, Gabriel G., 2001, "Bond Calls, Credible Commitment, and Equity Dilution: A Theoretical and Clinical Analysis Of Simultaneous Tender and Call (STAC) Offers", *Journal of Financial Economics* Vol. 60 (2-3), 573-611.
- Fluck 1998, "Optimal Financial Contracting: Debt versus Outside Equity", *Review of Financial Studies*, Vol.11, No. 2, 383-418.
- Gertner, Robert, and David Scharfstein 1991, A theory of workouts and the effects of reorganization law, *Journal of Finance*, 46, 1189-1222.
- Green 1987, "Lending and the Smoothing of Uninsurable Income" in E. Prescott and N. Wallace eds., *Contractual Arrangements for Inter-temporal Trade* (Minneapolis:University of Minnesota Press, 1987), 3-25.
- Goyal, Vidhan K., Gollapudi, Neela and Ogden, Joseph P., 1998. "A Corporate Bond Innovation of the 90s: The Clawback Provision in High-Yield Debt." *Journal of Corporate Finance*, 4, 301-320

- Hart and Moore, 1988. Incomplete Contracts and Renegotiation, *Econometrics*, 56, pages, 755-785.
- Hart and Moore, 1994. "A Theory of Debt Based on the Inalienability of Human Capital", *Quarterly Journal of Economics*, 109, 841-79.
- Hennessy, Christopher, 2004. "Tobin's Q, Debt Overhang, and Investment", *Journal of Finance*, Vol. LIX, No. 4, 1717-1742.
- Huang, Rongbing, and Gabriel Ramirez, 2010. Speed of Issuance, Lender Specialization, and the Rise of the 144A Debt Market, *Financial Management*, 643-673.
- John, Kose, 1993, Managing financial distress and valuing distressed securities: A survey and a research agenda, *Financial Management* 22, 60-78.
- Myers, S., 1977. "Determinants of Corporate Borrowing", *Journal of Financial Economics*, 5, 147-75.
- Myers, Stewart and Nicholal S. Majluf, 1984, "Corporate Financing and Investment Decisions when Firms have Information that Investors Do Not Have", *Journal of Financial Economics*, Vol. 13, No. 2, pp. 187-221.
- Ross, Stephen A. ,1977, "The Determination of Financial Structure: The Incentive-Signalling Approach," *Bell Journal of Economics*, The RAND Corporation, vol. 8(1), pages 23-40, Spring.
- Sigouin, 2003. "Investment Decisions, Financial Flows, and Self-Enforcing Contracts" *International Economic Review*, 4, 1359-1382.
- Stein, J.C., 1992. "Convertible Bonds as Backdoor Equity Financing", *Journal of Financial Economics*, 32, 3-21.
- Stulz, ReneM., 1990, "Managerial discretion and optimal financing policies," *Journal of Financial Economics*, Elsevier, vol. 26(1), pages 3-27, July.
- Wang C., 2000. Renegotiation-Proof Dynamic Contracts with Private Information, " *Review of Economic Dynamics*, 3, 396-422.
- Wruck, Karen, 1990, Financial distress, reorganization, and organizational efficiency, *Journal of Financial Economics* 27 (2), 419-444.

Table 1

IPOCs Bonds Sample

Panel A: Chronological distribution of IPOCs exercised (E) vs IPOCs non-exercised (NE)

	Non-Exercised	Exercised
1993	102	6
1994	79	4
1995	81	8
1996	166	10
1997	405	15
1998	651	5
1999	399	13
2000	181	14
2001	180	11
2002	201	20
2003	280	42
2004	397	28
2005	322	19
2006	174	10
2007	38	0
<u>2008</u>	<u>8</u>	<u>0</u>
Total	3,664	205

Table 1-Continued**IPOCs Bonds Sample****Panel B: Industry distribution of IPOCs**

Industry	Non-Exercised	Exercised	Total
Automobiles	83	8	91
Chemicals	135	7	142
Clothing	72	3	75
Construction	126	5	131
Consumers	44	4	48
Durable goods	117	2	119
Fabric product	40	3	43
Financials	237	14	251
Food	113	10	123
Machinery	183	14	197
Mining	40	0	40
Oil	182	16	198
Others	1,836	89	1,925
Retail	81	9	190
Steel	93	3	96
Transportation	129	7	136
Utilities	53	11	64
Total	3,664	205	3,869

Table 1 -Continued

IPOCs Bonds Sample and Contract Characteristics

Panel C: This table presents contract term characteristics of a sample of bond clawbacks (IPOCs) issued during the period 1993-2008. The table compares the contract features on exercised clawback bond to non-exercised clawback bonds. Data is obtained from FISD database.

	Non-Exercised	Exercised	t-test value for difference in group means
Number of issues	3,664	205	
Coupon rate of issue	9.49%	10.17%	3.70***
Average amount per issue (millions)	\$245.41	\$302.92	3.43**
Maturity in years	8.76	8.36	3.42***
Not Rated	45.74%	57.56%	3.32***
Clawback percentage for redemption	35.00	35.14	0.36

Table 2**Contract Characteristics of IPOCs undergoing renegotiations and exercised clawback provisions**

This table presents contract term characteristics of a sample of bond clawbacks (IPOCs) issued during the period 1993-2008 that underwent debt renegotiations and exercise of the clawback provision. Data for renegotiations are obtained from FISD database and data for exercised clawbacks are obtained from Bloomberg.

	Renegotiated IPOCs	Clawbacks exercised	t-test value for difference in group means
Number of issues	859	205	
Offering yield	9.33%	10.17%	4.33 ^{***}
Average amount per issue (millions)	\$296.97	\$302.92	0.27
Maturity in years	8.31	8.36	0.36
Rated issues	19.09%	26.34%	2.31 [*]
Issues that went into renegotiation in the form of an exchange or tender offer before the expiration date of the clawback option as percentage of total in sample	859 100%	86 41.95%	
Average number of renegotiation offers made for an issue	1.08	1.01	1.90 [*]
Proportion of renegotiations that took form of a tender offer	75.90%	88.37%	(a) ^{**}
Proportion of renegotiations that took place prior to the IPOC expiration date	45.29%	62.79%	(a) ^{***}

(a) represents p-value for Z-statistic of test of difference of proportions

* p<0.05, ** p<0.01, *** p<0.001

Table 3**Probability of Exercised IPOCS**

This table presents the results of a probit estimation of the probability of an exercised IPOC controlling for credit quality, contract terms and firm fundamentals. The dependent variable is a dummy that takes the value of 1 if an IPOC is exercised and 0 if it is not exercised. The independent variables are credit quality as captured by a dummy for not rated issues (Not Rated), Large is dummy variable that takes the value of 1 if total assets are higher than the sample median, Small is dummy variable that takes the value of 1 if total assets are less than the sample median, the natural log of the issue amount at offering (Log_size); the natural log of the number of years to maturity of the issue (Log_mat); Tender_offer_after is a dummy that takes the value of 1 if the tender offer is after the IPOC date, Tender_offer_prior is a dummy that takes the value of 1 if the tender offer is before the IPOC date, Exchange_offer_after is a dummy that takes the value of 1 if the exchange offer is after the IPOC date, LOGROE is the log of the return on equity for the firm, DEBTRATIO reflects the leverage of the firm, SIZE reflects the total assets of the firm, LOGST is the log of the sales turnover ratio, TRACE is a dummy variable that takes the value of 1 if the firm has a secondary market activity and 0 otherwise, The period of estimation is from 1993 to 2008.

	Model 1	Model 2	Model 3	Model 4
<u>Credit Quality</u>				
NotRated	0.144 (0.083)			
Large*notrated			0.345* (0.142)	0.290* (0.139)
Large*rated			0.155 (0.133)	0.109 (0.134)
Small*notrated			0.006 (0.169)	-0.005 (0.174)
<u>Issue Characteristics</u>				
Log_mat				-0.352 (0.248)
Log_size				0.226*** (0.053)
<u>Issuer Characteristics</u>				
Tender_offer_after	0.277 (0.174)	0.260 (0.178)	0.237 (0.166)	0.246 (0.170)
Tender_offer_prior	0.660*** (0.155)	0.671*** (0.163)	0.615*** (0.159)	0.601*** (0.159)
Exchange_offer_after	0.199 (0.421)	0.247 (0.436)	0.253 (0.437)	0.229 (0.444)
SIZE	0.106* (0.053)	0.095 (0.055)		
DEBTRATIO	-0.430* (0.211)	-0.418* (0.209)	-0.409 (0.210)	-0.495** (0.191)

Table 3-Continued

Probability of Exercised IPOCS

This table presents the results of a probit estimation of the probability of an exercised IPOC controlling for credit quality, contract terms and firm fundamentals. The dependent variable is a dummy that takes the value of 1 if an IPOC is exercised and 0 if it is not exercised. The independent variables are credit quality as captured by a dummy for not rated issues (Not Rated), Large is dummy variable that takes the value of 1 if total assets are higher than the sample median, Small is dummy variable that takes the value of 1 if total assets are less than the sample median,

the natural log of the issue amount at offering (Log_size); the natural log of the number of years to maturity of the issue (Log_mat); Tender_offer_after is a dummy that takes the value of 1 if the tender offer is after the IPOC date, Tender_offer_prior is a dummy that takes the value of 1 if the tender offer is before the IPOC date, Exchange_offer_after is a dummy that takes the value of 1 if the exchange offer is after the IPOC date, LOGROE is the log of the return on equity for the firm, DEBT_RATIO reflects the leverage of the firm, SIZE reflects the total assets of the firm, LOGST is the log of the sales turnover ratio, TRACE is a dummy variable that takes the value of 1 if the firm has a secondary market activity and 0 otherwise, The period of estimation is from 1993 to 2008.

	Model 1	Model 2	Model 3	Model 4
<u>Issuer Characteristics</u>				
LOGROE	0.027 (0.027)	0.030 (0.028)	0.024 (0.027)	0.013 (0.026)
LOGST	-0.066 (0.055)	-0.068 (0.058)	-0.034 (0.040)	-0.056 (0.040)
TRACE		-0.425** (0.159)	-0.422** (0.160)	-0.393* (0.166)
constant	-1.653*** (0.460)	-1.549** (0.472)	-1.168** (0.438)	-2.862** (0.895)
Year dummies	Yes	Yes	Yes	Yes
RSQUARE	0.099	0.1058	0.1098	0.1188
N	2056	2056	2056	2053

* p<0.05, ** p<0.01, *** p<0.001

Table 4
Probability of Renegotiation and Exercised IPOC

This table presents the results of a probit estimation of the probability of renegotiation and an exercised IPOC controlling for credit quality and contract terms. The dependent variable is a dummy that takes the value of 1 if the issue was renegotiated via an exchange/tender offer as reported in FISD. The independent variables are credit quality as captured by a dummy for not rated issues (NotRated), Large is dummy variable that takes the value of 1 if total assets are higher than the sample median, Small is dummy variable that takes the value of 1 if total assets are less than the sample median, the natural log of the issue amount at offering (Log_size); the natural log of the number of years to maturity of the issue (Log_mat); LOGROE is the log of the return on equity for the firm, DEBT_RATIO reflects the leverage of the firm, SIZE reflects the total assets of the firm, FD is dummy variable that takes the value of 1 if the firm is in financial distress and 0 otherwise, LOGST is the log of the sales turnover ratio, TRACE is a dummy variable that takes the value of 1 if the firm has a secondary market activity and 0 otherwise, WACC is the weighted average of capital, RISK_PREM is the equity risk premium, and CLAW_EX is the a dummy variable that takes the value of 1 if the clawback bond is exercised and 0 otherwise. The period of estimation is from 1993 to 2008.

	Model 1	Model 2	Model 3	Model 4
<u>Control</u>				
CLAW_EX	0.414* (0.181)	0.407* (0.180)	0.355* (0.180)	
<u>Credit Quality</u>				
NotRated	0.580*** (0.108)	0.576*** (0.110)	0.529*** (0.108)	
FD	1.086 (0.630)	1.086 (0.632)	0.918 (0.580)	
Large*NotRated				0.290* (0.139)
Large*Rated				0.109 (0.134)
Small*NotRated				-0.005 (0.174)
<u>Issue Characteristics</u>				
Log_mat		0.044 (0.153)	0.197 (0.169)	-0.352 (0.248)
Log_size		0.059 (0.066)	0.072 (0.064)	0.226*** (0.053)
<u>Issuer Characteristics</u>				
SIZE	0.012 (0.046)	-0.006 (0.050)	-0.022 (0.052)	
DEBT_RATIO	-0.097 (0.099)	-0.116 (0.105)	-0.112 (0.118)	-0.495** (0.191)
LOGROE	-0.050* (0.024)	-0.054* (0.022)	-0.053* (0.022)	0.013 (0.026)
LOGST	0.013 (0.051)	0.017 (0.052)	0.012 (0.053)	-0.056 (0.040)

Table 4 - continuation**Probability of Renegotiation and Exercised IPOC**

This table presents the results of a probit estimation of the probability of renegotiation and an exercised IPOC controlling for credit quality and contract terms. The dependent variable is a dummy that takes the value of 1 if the issue was renegotiated via an exchange/tender offer as reported in FISD. The independent variables are credit quality as captured by a dummy for not rated issues (NotRated), Large is dummy variable that takes the value of 1 if total assets are higher than the sample median, Small is dummy variable that takes the value of 1 if total assets are less than the sample median, the natural log of the issue amount at offering (Log_size); the natural log of the number of years to maturity of the issue (Log_mat); LOGROE is the log of the return on equity for the firm, DEBT_RATIO reflects the leverage of the firm, SIZE reflects the total assets of the firm, FD is dummy variable that takes the value of 1 if the firm is in financial distress and 0 otherwise, LOGST is the log of the sales turnover ratio, TRACE is a dummy variable that takes the value of 1 if the firm has a secondary market activity and 0 otherwise, WACC is the weighted average of capital, RISK_PREM is the equity risk premium, and CLAW_EX is the a dummy variable that takes the value of 1 if the clawback bond is exercised and 0 otherwise. The period of estimation is from 1993 to 2008.

	Model 1	Model 2	Model 3	Model 4
<u>Issuer Characteristics</u>				
TRACE			-0.510*** (0.122)	-0.393* (0.166)
Tender_offer_after				0.246 (0.170)
Tender_offer_prior				0.601*** (0.159)
Exchange_offer_after				0.229 (0.444)
constant	-5.695*** (0.284)	-6.368*** (0.820)	-6.597*** (0.786)	-2.862** (0.895)
Year dummies	Yes	Yes	Yes	Yes
RSQUARE	0.1931	0.1935	0.2062	0.2065
N	2056	2053	2053	2053

* p<0.05, ** p<0.01, *** p<0.001

Table 5
Yields and Exercised IPOCs

This table presents the results of an OLS estimation of the relation between security yields and an exercised IPOC clawback option controlling for credit quality and contract terms. The dependent variable is the offering yield as reported in FISD. The independent variables are credit quality as captured by a dummy for not rated issues (NotRated), FD is a dummy variable for financial distress, the natural log of the issue amount at offering (Log_size); the natural log of the number of years to maturity of the issue (Log_mat); LOGROE is the log of the return on equity for the firm, DEBTRATIO reflects the leverage of the firm, SIZE reflects the total assets of the firm, LOGST is the log of the sales turnover ratio, WACC is the weighted average of capital, RISK_PREM is the equity risk premium, CLAW_EX is the a dummy variable that takes the value of 1 if the clawback bond is exercised and 0 otherwise. The period of estimation is from 1993 to 2008.

	Model1	Model2	Model3
<u>Control</u>			
CLAW_EX	1.028*** (0.275)	1.027*** (0.277)	0.943*** (0.230)
<u>Credit Quality</u>			
NotRated	0.631*** (0.122)	0.630*** (0.122)	0.565*** (0.160)
FD		-0.176 (0.733)	-0.354 (0.740)
<u>Issue Characteristics</u>			
Log_size	-0.648* (0.245)	-0.648* (0.246)	-0.546* (0.223)
Log_mat	-2.368*** (0.312)	-2.370*** (0.311)	-2.175*** (0.290)
<u>Issuer Characteristics</u>			
SIZE	-0.336*** (0.067)	-0.334*** (0.069)	-0.342*** (0.065)
DEBTRATIO	0.064 (0.111)	0.066 (0.113)	-0.005 (0.157)
LOGROE	-0.017 (0.042)	-0.016 (0.043)	0.043 (0.041)
LOGST	0.227* (0.100)	0.225* (0.103)	0.177 (0.096)
WACC			0.258*** (0.046)
RISK_PREM			-0.246*** (0.049)
constant	23.626*** (2.834)	23.623*** (2.840)	21.729*** (2.479)
Year dummies	Yes	Yes	Yes
RSQUARE	0.211	0.211	0.234
N	2069	2069	1739

* p<0.05, ** p<0.01, *** p<0.001