DUAL CLASS FIRMS AND DEBT ISSUANCE

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Abstract

We examine the manner in which debt issuance by dual class firms differs from that issued by comparable single-class firms. Using the comprehensive sample of dual class firms compiled by Gompers, Ishii, and Metrick (2010), we find that dual class firms tend to borrow at lower interest rates and for longer maturities but face more covenants, especially performance based covenants. Our results are robust to corrections for the endogenous choice of dual class share structures. We also find that the returns earned by the stocks of these dual class firms have lower volatility. Our findings are consistent with the conjecture that dual class firms tend to avoid idiosyncratic risk and that with the help of performance based covenants, creditors are able to create safer lending opportunities with dual class firms than with single-class firms.

Keywords: Dual Class, Loans, Debt Covenants, Corporate Governance/Executive Compensation
JEL Classification: G32, G34

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1. INTRODUCTION

Dual class shares structures have been of considerable interest to researchers in corporate governance as they have the potential to crucially tilt the balance of power in corporations.[1] As surveyed by Adams and Ferreira (2008), this divergence between cash-flow rights and voting rights has the potential to increase or decrease a firm's value. On the one hand, dual class share structures can destroy value by encouraging the expropriation of wealth by controlling shareholders, preventing the proper functioning of the market for corporate control, and distorting investments. On the other hand, they can be beneficial if they alleviate free-rider problems and improve managerial decision making (Burkart and Lee, 2008). As such the net impact of dual class share structures appears to be more of an empirical issue. An influential contribution in this direction is that of Gompers, Ishii, and Metrick (2010) who compile an exhaustive sample of dual class firms and find that on the whole, dual class firms tend to be valued lower than their non-dual class counterparts. In addition, the results of Masulis, Wang, and Xie (2009) suggest that at least a part of this value destruction could be attributed to poorer acquisition and capital expenditure decisions by dual class firms.

Our study focusses on an important follow up question – the impact of dual class share structures on debt contracting. If the value destruction in dual class firms noted by prior studies is a direct reduction in the value of projects, it should imply lower value for the debt as well as the equity of the firm. As such, lenders would rationally be more wary of dual class firms and tend to impose tighter restrictions on them, charge them higher rates of interest, and take steps to ensure more frequent contracting. An alternate possibility is that the lower value of dual class firms is driven by suboptimal risk-taking by the decision makers of such firms. As noted by both Adams and Ferreira (2008) and Gompers, Ishii, and Metrick (2010), dual class share structures are often used by founding families to ensure their control over the firm. Further, as noted by Anderson and Reeb (2003) founding families are unique in their long investment horizons and have a special interest in the survival of the firm. Therefore, disproportionate control wielded by such owners could result in risk-averse decision making which would in turn result in a transfer of wealth from equity holders to debt holders. In such a situation, lenders would be more likely to welcome dual class firms and tend to impose fewer restrictions on them, while charging them lower rates of interest and lending to them for longer maturities. We empirically test these competing hypotheses.

We find that lenders, in fact, do impose more covenants on dual class firms. However, the greater use of covenants for dual class firms is driven entirely by performance based (i.e. income statement based) covenants. In fact, lenders impose less capital based covenants (i.e. covenants that rely on balance sheet information) on dual class firms. Moreover, after imposing more performance based covenants, lenders appear to charge dual class firms a lower interest rate as well as negotiate a longer maturity for such loans. Our evidence indicates that at least a portion of the value destruction associated with dual class firms is likely to be driven by an excessive reduction in risk for such firms. We test this conjecture using the volatility of the returns earned on the firm's stock as our proxy for idiosyncratic risk. Our preliminary evidence is consistent with this

[1] A typical dual class shares structure will have two categories or classes of shares. Typically one of them will have significantly higher voting right per share than the other while they retain similar cash flow rights. It is also common in these situations to have more than two classes of equity with different voting rights for each group. However, the implications for corporate control and governance is similar and, as is common in the literature, we use the term "dual class" to refer to any share structures where there are multiple classes of shareholders with different voting and cash flow right.

prediction and indicates that dual class firms are less risky than their single class counterparts.

We make two main contributions to the literature. First, as reviewed by Adams and Ferreira (2008), the debate on the role of dual class firms has mostly focused on the value of equity (either as abnormal returns in event studies or as measured by the market to book ratio). The findings of Gompers, Ishii, and Metrick (2010) suggest that overall dual class firms have lower value as compared to their single-class counterparts. However, the observed reduction in value could be attained in two possible ways. One possibility would be an inappropriate (from the equity holders' perspective) reduction in risk which would result in a transfer of value from equity to debt holders. Alternatively, it could be an outright reduction of firm value as a result of insiders using their position to transfer value out of the firm. Our evidence suggests that the former is the more likely explanation.

We also contribute to our understanding of the relationship between dual class shares structures and debt. As such, our paper is most closely related to that of Dey, Nikolaev, and Wang (2015) who focus on the manner in which debt can be used to alleviate the conflict between controlling and minority shareholders in dual class firms. Our results complement theirs by focusing on the terms of issuance of debt (rather than the choice of the level of debt or the kind of debt issued) in more detail. Similar to them, we find that debt issuance by dual class firms is associated with a greater use of performance based covenants. However, we extend their analysis to the other primary aspects of debt issuance, namely the interest spread and the maturity of the loan. We find that dual class firms in fact pay lower interest costs and typically borrow for longer maturities than do their single class counterparts. Our findings provide a more detailed picture of the process of borrowing for dual class firms.

The remainder of the paper is organized as follows. Section 2 discusses the related literature and develops our hypotheses. Section 3 describes our data. Section 4 provides a discussion of our results and section 5 concludes.

2. PRIOR RESEARCH AND HYPOTHESES

Recent empirical research on dual class firms has highlighted the potential for value destruction that can be a consequence of certain shareholders wielding power that is disproportionately higher than their cash flow rights (Gomper, Ishii, and Metrick, 2010; Masulis, Wang, and Xie, 2009). Their findings are similar in spirit to those of Shleifer and Vishny (1997) and Johnson, La Porta, Lopez-de-Silanes, and Shleifer (2000) who have noted that insiders who control the firm but do not have high cash flow ownership are prone to expropriating value from the firm at the expense of other contributors of capital. The implications of such expropriation for debt issuance have been examined in an international setting by Lin, Ma, Malatesta, and Xuan (2011) who consider a number of governance variables. They find that the impact of such governance issues on bank loans is strongest when firms are family controlled, especially when the CEO is from the controlling family. Further, they find that the impact on bank loans is at least partially mitigated in the presence of stronger laws and institutions. The presence of a wedge between cash-flow and voting rights appears to exacerbate the controlling shareholders incentives to expropriate the minority shareholders as well as lenders.

The most obvious interpretation of these findings in our context would be that lenders ought to be careful in lending to firms with dual class share structures for fear of such expropriation at the hands of the controlling shareholders. Similarly, shorter loan maturity and a greater use of restrictive covenants have been shown to be the other tools that are commonly used by lenders to control credit risk when lending to borrowers who are more likely to default on their obligations (Ortiz-Molina and Penas, 2008; Bradley and Roberts, 2015). In light of the above discussion we have our three main hypotheses as follows:

Hypothesis 1: Lenders will charge dual class firms a higher interest cost than comparable firms that have only a single class of equity.

Hypothesis 2: Lenders will contract for loans of a shorter maturity with dual class firms than they will with comparable firms that have only a single class of equity.

Hypothesis 3: Lenders will impose more conditions on dual class firms in the form of restrictive covenants than on comparable firms that have only a single class of equity.

As noted by John, Litov, and Yeung (2008), expropriation by dominant shareholders, as discussed above, is not the only channel through which controlling shareholders could reduce firm value. An alternative channel lies in the controlling shareholders' approach to risk. One possibility is that the controlling shareholders could indulge in excessive risk-taking to the detriment of debt holders. Such activities would generate similar predictions to the three hypotheses above. However, a different possibility arises in situations where controlling shareholders have significant undiversified investment in the firm. In such cases, they could end up taking suboptimal (rather than excessive) amounts of risk. An implication is that for such firms the interests of the controlling shareholders would be aligned with those of the debt holders (and conflict with those of minority shareholders).

The possibility of controlling shareholders forcing suboptimal levels of risk has also come up in the literature on family firms and the connection is especially relevant for dual class firms. As noted by Gompers, Ishii, and Metrick (2010), founding families are known for using dual class share structures. This agrees with the observation of Anderson and Reeb (2003) that founding families are unique in their focus on the long term and often have a clear objective of keeping the firm in the family for generations. As such, dual class share structures can be attractive to such firms – not as a means of extracting value at the expense of minority shareholders but more as a means of ensuring the family's ongoing control over the firm. For such firms the survival of the firm – which would imply meeting all obligations related to borrowing – could take on an additional importance, possibly at the expense of maximizing the value of equity. If this logic lies at the root of the observed reduction in the value of dual class firms and their less productive investment

decisions (Gomper, Ishii, and Metrick, 2010; Masulis, Wang, and Xie, 2009) then these firms should be regarded favourably by lenders. More specifically, we would then expect dual class firms to pay lower interest costs, be less restricted by covenants and contract for longer maturities.

This alternative interpretation of how dual class share structures could affect the contract between lender and borrower is especially important in the context of the restrictive covenants that accompany the loan. As noted by Christensen and Nikolaev (2012) and Dey, Nikolaev, and Wang (2015) covenants could, in general, be classified as performance based covenants and capital based covenants. Performance based covenants are those that are largely based on the income statement and are designed to monitor the performance of the firm, transferring control to the lenders if any pre-set norms are not met. These retain their importance in dual class firms where the management places a greater importance on survival as opposed to value maximization. In fact, it could be argued that these covenants are even more important for dual class firms where the controlling insiders could shield themselves from the discipline exerted by the market for corporate control. In contrast, capital based covenants are based on the balance sheet, and ensure that sufficient capital be maintained in order to control for the conflicts of interest between equity holders and debt holders. To the extent that dual class firms are already very sensitive to the issue of firm survival, these capital based covenants could assume lesser importance than performance based ones. In sum, we have two additional hypotheses with respect to the usage of covenants.

Hypothesis 3A: Lenders will impose fewer conditions on dual class firms in the form of capital based covenants than on comparable firms that have only a single class of equity.

Hypothesis 3B: Lenders will impose more conditions on dual class firms in the form of performance based covenants than on comparable firms that have only a single class of equity.

3. DATA

We begin with a comprehensive list of dual-class companies that Gompers, Ishii, and Metrick (2010) construct from the universe of U.S. public firms from 1994–2002.[2] As discussed by Gomper, Ishii, and Metrick (2010) and Masulis, Wang, and Xie (2009) this dataset is an exhaustive one that includes all public US firms. We merge in firm characteristics for these firms from Compustat. We then merge this data with the Dealscan database using the Dealscan – Compustat linking file provided by Michael Roberts.[3] The sample of loans recorded in Dealscan for these firms is described in Table 1. Dealscan reports loans at the "package" and the "facility" level. A facility represents the smallest unit or tranche of a loan. Multiple such facilities which are entered into at the same time are referred to as a package. However, covenants are only reported at the package level. Moreover, all facilities that are part of a single package are in some sense part of the same contract. Therefore, as noted by Murfin (2012), facilities within a package are not independent and carrying out the analysis at a facility level (with the assumption that they are independent observations) would result in a large and spurious inflation in the significance of all tests. With this in mind, our entire analysis is carried out at the package level. As can be seen from Table 1, our sample consists of 7,400 packages obtained from 6,802 firms.

At this point we would like to note that even analyzing at the package level does not guarantee independence of observations. Specifically, as pointed out by Roberts (2015), it is entirely possible that several of the packages represent renegotiations of the same deal and as such have a strong dependency. However, as further noted by Roberts (2015) eliminating such a bias would require manual collection of data for each transaction in order to establish its independence. In this study we focus on a large sample approach and as such, we note this weakness. In addition, as can be seen from Table 1, our sample has over 6.800 distinct firms for the 7,400 packages implying that most of our sample consists of contracts by distinct firms and therefore are free of this bias. As a result we expect that the magnitude of this problem to be small.

Table 1. Sample description

The table reports the number of loan packages and the number of firms for each year in the sample. The basic unit of observation for the Dealscan database is a "facility". However, a number of facilities that are established at the same time are grouped together as a "package". As noted by Murfin (2012), facilities within a package are hardly independent and continuing our analysis at the facility level would spuriously inflate significance. As such the package is our unit of observations for this paper.

Year	*Firms*	*Packages*
1994	302	319
1995	713	775
1996	980	1088
1997	901	988
1998	792	858
1999	698	766
2000	766	820
2001	853	912
2002	797	874
Total	6802	7400

4. RESULTS

4.1 Univariate tests

In this section we report our univariate and multivariate tests. Since the three most important terms in a loan contract are the interest spread, the maturity, and the restrictive covenants, we focus on these three variables. The interest spread is provided by the Dealscan database as measured as a spread over equivalent LIBOR. The maturity is provided in months. Finally, in order to measure the scope of the restrictive covenants, we follow Bradley and Roberts (2015) and construct an index of the intensity of covenant usage. Similar to them, we group covenants into six groups: secured, dividend, financial, asset sweep, debt sweep, and equity sweep. The covenant intensity index takes on a value of between 0 and 6 depending on the number of these covenants that are

[2] We thank Andrew Metrick for making this data publicly available.
[3] We thank Michael Roberts for making this file publicly available. The file is available at his website at http://finance.wharton.upenn.edu/~mrrobert/styled-9/styled-12/index.html and is based on the procedure described in Chava and Roberts (2008).

actually present in a particular loan package. Thus, a package that has all six kinds of covenants will have a covenant intensity score of six and one that has none of the six will have a score of zero. As pointed out by Bradley and Roberts (2015), this approach has a small disadvantage in implicitly assuming that the impact of the different groups of covenants is similar. However, it has the significant advantage of avoiding any subjective judgements and is well suited to a large sample study such as this one.

In Table 2, we report the univariate differences between dual class and non-dual class firms in terms of the aforementioned three variables. The significance levels for a t-test of means and a Wilcoxon test for the overall central point of the distribution are also reported. As can be seen dual class firms typically pay a lower interest spread for their loans and borrow for longer maturities than do their non-dual class counterparts. These findings appear to indicate that lenders consider dual class firms to be better potential borrowers than non-dual class firms. However, the comparison for covenants shows that lenders also typically require them to agree to more extensive covenants. These last findings are at odds with the previous two in that they suggest that lenders consider dual class firms more and not less risky than non-dual class firms. Overall, these preliminary results indicate that the lending relationship for dual class firms is more nuanced than a straightforward increase or decrease in the potential for conflicts between lender and borrower. In the following tests we attempt to establish the robustness of these results and arrive at a feasible interpretation for them.

Table 2. Univariate tests

*This table reports the means and medians for our primary dependent variables for the subsamples of dual class and single class firms as well as the differences between the two subsamples for each variable. The outcome of a parametric t-test for the difference in means and the nonparametric Wilcoxon test for the difference in the distribution are reported as follows: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.*

	Mean	***Median***	***Difference of means***	***Difference of medians***
			(Dual - Single)	(Dual - Single)
Interest spread				
Single class	197.65	185	-14.22***	-10***
Dual class	183.43	175		
Maturity				
Single class	37.46	36	7.34***	0.5***
Dual class	44.80	36.5		
Covenants				
Single class	2.67	2	0.16**	0*
Dual class	2.84	2		

4.2. Multivariate tests

In Table 3, we report the results for OLS regressions with interest spread, maturity, and covenant intensity as the dependent variables of interest. The main predictor variable, dual, takes a value of 1 for dual class firms and a value of 0 for non-dual class firms. We control for the following firm level and deal level effects. The size of the firm is measured by the market value of equity plus the book value of assets minus the book value of equity as provided by Compustat. Credit risk is measured by Altman's (1968) Z-score. The market to book ratio for assets is measured as the size of the firm (as described above) divided by the book value of the firm. Assets maturity is measured as described by Stohs and Mauer (1996). Asset tangibility is measured by the ratio of net property, plant and equipment to total assets. We also control for leverage measured as the total debt to equity ratio and the return on assets (computed as the ratio of operating income before depreciation to total assets). The size of the loan package is obtained from Dealscan. We also include two deal – level indicator variables. The first of these is, Revolver, is an indicator variable that equals one if the package includes a revolving credit facility. The other, Termloan, is an indicator variable that equals one if the package includes a term loan and zero otherwise. The regressions are run both with and without year fixed effects.

Panel A of Table 3 reports the results for the interest spread. We find a negative and statistically significant relation between the use of dual class share structures and the interest spread. Based on these results, dual class firms appear to pay between 9 and 16 basis points lower in interest rates for the average loan. Several researchers (see, e.g., Goss and Roberts, 2011) have pointed out that the distribution of interest spread could be skewed and in such situations the log of the interest spread could give a more representative picture. We rerun our test with this alternate specification of the dependent variable. The results are reported in the last column of Table 3, Panel A. Our conclusions remain qualitatively unchanged. Our results overall indicate that lenders anticipate less problems in dual class firms than they do for non-dual class ones. However, as discussed earlier, the interest spread is just one key part of the lending contact. We now turn to two other key elements of the lending contract – the loan maturity and the usage of restrictive covenants.

In Panel B of Table 3 we report the results from regressing the maturity of the loan contract on the dual class indicator and control variables. We observe a robust, positive and statistically significant relation between the dual indicator variable and the maturity of the loan. On average, dual class firms appear to borrow for maturities that are 7 to 8 months longer than loans made to firms with a single class of equity. As before, our results indicate that this conclusion is robust to controlling for year fixed effects as well as a logarithmic specification for the dependent variable. In Panel C of Table 3 we report similar regressions with covenant intensity as the dependent variable. We find a weaker but positive relationship between the use of covenants and the dual indicator. Although the coefficient estimate is significant in only three of the four specifications the magnitude is economically meaningful – our results indicate that loans taken by dual class firms have an average covenant intensity that is higher by about 0.12 to 0.16. This finding is at odds with the earlier ones with respect to interest spread and maturity. It suggests that although dual class firms are able to borrow for

longer maturities and at a lower interest cost, they are subjected to more restrictive covenants. Overall our results are mixed with respect to our three primary hypotheses. We do find some support for our third hypothesis in the form of a greater use of covenants for loans made to dual class firms, suggesting that lenders perceive greater risk in lending to these firms. However, our results with respect to the interest spread and maturity of these loans suggest the opposite.

Table 3. The effect of dual class share structures on interest spread, maturity, and covenants

*This table reports results for OLS regressions with the dual class dummy (dual) as the independent variable. The dependent variable in panel A is interest spread above LIBOR (allindrawn) with log of spread used for the last column. The dependent variable in panel B is maturity measured in months with a log of maturity used for the last column. The dependent variable in panel C is covenant intensity measured as a count of the number of covenants (out of six) that are included in the particular loan package. All variables are described in the Appendix. Heteroscedasticity-adjusted (White) standard errors are used in calculation of t-statistics that are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.*

Panel A. Interest spread

	allindrawn	***allindrawn***	***allindrawn***	***allindrawn***	***logspread***
dual	-14.22***	-9.619**	-16.93***	-11.42**	-0.0768**
	(-2.67)	(-2.09)	(-3.29)	(-2.54)	(-2.44)
dealamount		-35.20***		-34.12***	-0.265***
		(-7.21)		(-6.81)	(-7.04)
size		18.42		-0.905	0.0521
		(1.10)		(-0.05)	(0.40)
zscore		-11.83***		-10.56***	-0.0605***
		(-8.37)		(-7.69)	(-8.33)
revolver		-24.53***		-19.56***	-0.129***
		(-8.67)		(-6.93)	(-7.00)
termloan		68.71***		66.26***	0.246***
		(6.40)		(6.26)	(5.56)
mbassets		-3.188***		-1.781**	-0.0166***
		(-3.87)		(-2.14)	(-2.92)
assetmaturity		-0.0399		-0.0214	6.74e-05
		(-0.31)		(-0.17)	(0.15)
ppeassets		-40.87***		-36.56***	-0.261***
		(-6.27)		(-5.67)	(-6.92)
leverage		0.1320***		0.0989***	0.0009***
		(20.31)		(12.56)	(22.65)
roa		-200.0***		-203.1***	-1.106***
		(-9.84)		(-10.17)	(-10.32)
Constant	197.7***	279.9***	197.9***	272.0***	5.534***
	(131.16)	(64.78)	(133.60)	(63.46)	(213.88)
Observations	7,400	7,400	7,400	7,400	7,400
R-squared	0.001	0.208	0.001	0.199	0.193
Number of year	NO	NO	YES	YES	NO

Panel B. Maturity

	maturity	***maturity***	***maturity***	***maturity***	***logmaturity***
dual	7.339***	7.512***	7.995***	8.045***	0.180***
	(6.38)	(6.58)	(7.21)	(7.32)	(5.70)
dealamount		0.729		0.571	-0.0117
		(1.27)		(1.03)	(-0.67)
size		-8.002*		-3.547	-0.169
		(-1.86)		(-0.93)	(-1.18)
zscore		-0.0863		-0.357*	0.00180
		(-0.46)		(-1.95)	(0.29)
revolver		3.438***		2.205***	0.197***
		(6.57)		(4.31)	(11.49)
termloan		13.71***		14.29***	0.362***
		(7.47)		(7.79)	(8.25)
mbassets		0.197		-0.110	-0.00138
		(1.03)		(-0.69)	(-0.22)
assetmaturity		0.00301		-0.000581	-8.28e-05
		(0.20)		(-0.04)	(-0.15)
ppeassets		7.943***		6.825***	0.230***
		(6.76)		(5.95)	(6.24)
leverage		0.0262***		0.0306***	0.0009***
		(13.50)		(17.00)	(13.62)
roa		17.95***		18.20***	0.573***
		(7.69)		(8.04)	(7.23)
Constant	37.46***	30.11***	37.41***	31.98***	3.162***
	(142.58)	(41.05)	(146.15)	(45.83)	(131.07)
Observations	7,303	7,303	7,303	7,303	7,303
R-squared	0.008	0.051	0.010	0.049	0.054
Year Fixed effects	NO	NO	YES	YES	NO

Panel C. Covenant intensity

	covint	***covint***	***covint***	***covint***
dual	0.164** (2.06)	0.143* (1.88)	0.133* (1.69)	0.123 (1.63)
dealamount		-0.150*** (-2.77)		-0.148*** (-2.67)
size		-0.249 (-0.68)		-0.339 (-0.90)
zscore		-0.0816*** (-5.12)		-0.0730*** (-4.64)
revolver		-0.742*** (-17.27)		-0.701*** (-16.26)
termloan		-0.191* (-1.82)		-0.212** (-2.04)
mbassets		-0.0224* (-1.76)		-0.0157 (-1.24)
assetmaturity		-0.000999 (-1.31)		-0.000893 (-1.13)
ppeassets		-0.493*** (-5.49)		-0.450*** (-5.04)
leverage		0.0025*** (20.19)		0.0022*** (15.87)
roa		0.558*** (3.09)		0.536*** (3.01)
Constant	2.673*** (128.70)	3.406*** (56.68)	2.676*** (129.71)	3.350*** (56.04)
Observations	7,400	7,400	7,400	7,400
R-squared	0.001	0.059	0.000	0.052
Number of year	NO	NO	YES	YES

Table 4. The effect of dual class share structures on performance and capital based covenants

*This table reports results for OLS regressions with the number of capital based (first four columns – c_cov) and performance based (last four columns – p_cov) covenants as the dependent variable and the dual class dummy (dual) as the independent variable. All variables are described in the Appendix. Heteroscedasticity-adjusted (White) standard errors are used in calculation of t-statistics that are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.*

	c_cov	***c_cov***	***c_cov***	***c_cov***	***p_cov***	***p_cov***	***p_cov***	***p_cov***
dual	-0.183*** (-6.70)	-0.161*** (-6.08)	-0.159*** (-5.99)	-0.142*** (-5.50)	0.380*** (7.68)	0.351*** (7.33)	0.365*** (7.44)	0.341*** (7.14)
dealamount		-0.0492*** (-3.36)		-0.0558*** (-3.99)		-0.0649*** (-2.90)		-0.0632*** (-2.79)
size		-0.324*** (-4.38)		-0.172** (-2.10)		0.0521 (0.28)		0.00501 (0.03)
zscore		0.0452*** (7.26)		0.0344*** (5.94)		-0.0511*** (-5.33)		-0.0463*** (-4.89)
revolver		0.158*** (9.55)		0.109*** (6.69)		-0.333*** (-13.27)		-0.308*** (-12.31)
termloan		0.113*** (2.85)		0.132*** (3.46)		-0.215*** (-3.77)		-0.222*** (-3.93)
mbassets		0.0327*** (6.62)		0.0216*** (4.93)		-0.0234*** (-3.15)		-0.0199*** (-2.68)
assetmaturity		6.80e-05 (0.11)		-9.63e-05 (-0.16)		-0.000217 (-0.63)		-0.000116 (-0.35)
ppeassets		0.157*** (4.43)		0.115*** (3.30)		-0.382*** (-7.07)		-0.360*** (-6.70)
leverage		-0.0006*** (-16.08)		-0.0003*** (-8.61)		0.0016*** (17.89)		0.0014*** (15.28)
roa		-0.766*** (-8.91)		-0.744*** (-9.08)		1.604*** (13.44)		1.589*** (13.43)
Constant	0.602*** (71.44)	0.441*** (20.86)	0.600*** (74.26)	0.512*** (24.85)	1.568*** (126.30)	1.839*** (52.84)	1.569*** (127.12)	1.807*** (51.97)
Observations	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400
R-squared	0.005	0.050	0.004	0.037	0.009	0.067	0.009	0.064
Year Fixed Effects	NO	NO	YES	YES	NO	NO	YES	YES

We explore the role of covenants further in Table 4. Following Christensen and Nikolaev (2012) and Dey, Nikolaev, and Wang (2015) we construct two new measures of covenant intensity. Performance based covenants (p_cov) rely on information from the income statement and are largely designed to monitor the ongoing performance of the firm in the form of tripwires that trigger when the firm's performance falls below a critical level. In contrast, capital based covenants (c_cov) are based on information from the balance sheet and are designed to ensure that the conflicts of interest such as those outlined by Myers

(1977) and Myers and Majluf (1984) are mitigated. As discussed earlier, loans made to dual class firms are more likely to need performance based rather than capital based covenants. Our conjecture is strongly supported by the results in Table 4. We observe a robust positive and significant relation between the dual indicator variable and the use of performance based covenants and an equally robust and negative relation between the dual indicator and capital based covenants. Similar to Dey, Nikolaev, and Wang (2015), our results indicate that lenders are likely to use more performance based covenants and less capital based covenants when they lend to dual class firms.

Our results thus far indicate a possible relation between the use of dual class share structures by firms and the interest spread, loan maturity, and restrictive covenants associated with lending to such firms. A possible concern arises from the potential endogeneity inherent in the OLS specifications. First, the three dependent variables could influence each other. Thus, a loan with a short maturity and multiple restrictive covenants (both of which we have shown to be dependent on the use of dual class share structures) would, ceteris paribus, be associated with a lower interest spread. As such, our specifications could suffer from an omitted variable bias such that the dual indicator variable could be correlated with error term. Second, as noted by Gompers, Ishii, and Metrick (2010), the use of dual class share structures is itself a choice and as such the dual indicator variable is endogenous for this reason as well. With these two issues in mind we use a two stage least squares regression to re-estimate the results reported in Tables 3 and 4 after correcting for endogeneity.[4] The pitfalls in selecting good instruments for dual class status are described by Gompers, Ishii, and Metrick (2010) – any variable related to firm performance that could make the control of a firm more attractive is also likely to change the valuation and the attractiveness of the firm as a potential borrower. Gompers, Ishii and Metrick (2010) note that the decision to use a dual class share structure is taken very early in a firm's history. Similar to them we use the following instruments: an indicator for being in the media industry at the IPO year; the percentile ranking of the IPO-year sales of the firm relative to other firms with the same IPO year; the percentile ranking of the IPO-year profits of the firm relative to other firms in the same IPO year; the percentage of all Compustat firms located in the same metropolitan or micropolitan statistical area (MSA) as the firm in the year of the firm's IPO; the percentage of all Compustat sales by firms located in the same MSA as a firm in the year of the firm's IPO. In addition, the three relations estimated in Table 3 are for the same sample of loans. As a result, there may be additional improvements in efficiency that we could get from estimating them as system of equations using three stage least squares. The results of the two stage least squares estimation are reported in Panel A of Table 5 and those from the three stage least squares estimation are reported in Panel B of Table 5.[5] As can be seen, our conclusions from the OLS regressions do not change.

Thus far our results indicate that lenders to dual class firms insist on tougher restrictions through covenants, in particular, performance based covenants. However, after imposing these restrictions, they then appear to lend for longer maturities and at lower interest spreads to these firms than they do to their single-class counterparts. Our interpretation of these findings is that the power wielded by holders of the superior class of shares results in two possibilities. First, it raises the possibility of their taking actions to the detriment of lenders. Second, many of the holders of the superior class of stock could be the controlling shareholders with incentives to reduce the risk of the firm and focus on long term survival. The lenders appear to control the first effect by imposing more performance based covenants. Having given themselves that assurance, they are then able to respond to the second effect by lowering interest spreads and raising maturities. If our interpretation is correct, then the lower interest spread and higher maturity of these loans will be driven by risk-averse policies adopted by the controlling shareholders.

We provide a preliminary test for this conjecture in Table 6 by regressing the standard deviation of the stock's returns on the dual class indicator variable. The standard deviation data is obtained from the Center for Research in Security Prices (CRSP).[6] We control for industry fixed effects using the Fama French 48-industry classification as well as for the following firm level variables that could be associated with the stock's volatility: size, leverage, R&D expenditure scaled by sales, capital expenditure scaled by sales, and advertising expenditure scaled by sales. Our results indicate that dual class firms exhibit significantly lower idiosyncratic risk as measured by stock price volatility than do comparable single-class firms. Overall, these results are supportive of our conjecture that the average dual class firms tends to focus more on survival and lower risk than a comparable single-class firm.

[4] Ideally, it would have been desirable for us to include these "omitted variables" as endogenous predictor variables in our instrumental variable regressions. However, since interest spread, covenant intensity, and maturity are negotiated jointly, it is very difficult to think of any instrument that will be correlated with one but not the others. Nor does the empirical literature provide much guidance in this matter. As a result, we are forced to adopt the less powerful approach of excluding these variables and correcting for the endogeneity of the indicator for dual class firms.

[5] As noted by Adams, Almeida, and Ferreira (2009), the standard 2SLS estimates are consistent even though the endogenous variable in question is binary (i.e. we are implicitly using the linear probability model in the first stage with its attendant problems). As they go on to discuss, other assumptions about the error distributions could be made, leading to alternative maximum likelihood estimation techniques.

[6] CRSP reports the annual standard deviation of returns for stocks subject to there being sufficient data – defined as at least eighty percent of the observations – available. As a result of this stringent requirement we lose a number of observations for the results in Table 6, largely for the smaller firms in our sample.

Table 5. Endogeneity corrections

*This table reports final stage results for instrumental variable regressions with the dual class dummy (dual) as the endogenous predictor variable. The dependent variables are as in Tables 3 and 4. Panel A reports results for the two stage least squares regression and panel B for the three stage least squares regression. Results are reported for allindrawn (without the log transformation) in panel A and the log specifications for interest spread in panel B. They remain qualitatively the same when using the other specification in either panel. All variables are described in the Appendix. Heteroscedasticity-adjusted standard errors are used in calculation of t-statistics that are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.*

Panel A. 2SLS

	allindrawn	***covint***	***p_cov***	***c_cov***	***maturity***
dual	-172.3*** (-8.78)	1.295*** (4.60)	2.364*** (12.55)	-1.750*** (-13.27)	47.57*** (12.00)
dealamount	-34.40*** (-15.12)	-0.167*** (-5.10)	-0.0967*** (-4.42)	-0.0252* (-1.65)	0.327 (0.71)
size	24.85** (2.45)	-0.253* (-1.73)	-0.00177 (-0.02)	-0.270*** (-3.96)	-8.811*** (-4.29)
zscore	-11.62*** (-11.77)	-0.0851*** (-6.00)	-0.0543*** (-5.72)	0.0466*** (7.02)	-0.138 (-0.69)
revolver	-25.66*** (-8.71)	-0.731*** (-17.28)	-0.327*** (-11.55)	0.152*** (7.70)	3.544*** (5.93)
termloan	75.08*** (10.43)	-0.237** (-2.29)	-0.280*** (-4.05)	0.164*** (3.40)	12.83*** (8.73)
mbassets	-3.838*** (-4.79)	-0.0193* (-1.68)	-0.0158** (-2.06)	0.0260*** (4.83)	0.318* (1.96)
assetmaturity	-0.0637 (-0.69)	-0.00112 (-0.85)	-0.000309 (-0.35)	-0.000121 (-0.20)	0.00155 (0.08)
ppeassets	-47.43*** (-7.29)	-0.431*** (-4.61)	-0.272*** (-4.36)	0.0726* (1.66)	9.827*** (7.45)
leverage	0.1170 (0.75)	0.0026 (1.16)	0.0018 (1.17)	-0.0007 (-0.69)	0.0295 (0.94)
roa	-193.9*** (-14.60)	0.529*** (2.78)	1.529*** (11.99)	-0.702*** (-7.86)	16.69*** (6.21)
Constant	295.4*** (71.81)	3.305*** (55.97)	1.657*** (41.96)	0.589*** (21.29)	26.51*** (31.73)
Observations	7,231	7,231	7,231	7,231	7,143

Panel B. 3SLS

	logspread	***covint***	***maturity***	***logspread***	***covint***	***maturity***
dual	-1.795*** (-12.76)	1.439*** (5.06)	44.51*** (11.50)	-1.320*** (-10.63)	1.225*** (4.34)	47.57*** (12.01)
dealamount				-0.257*** (-17.90)	-0.168*** (-5.15)	0.327 (0.71)
size				0.107* (1.67)	-0.269* (-1.84)	-8.811*** (-4.30)
zscore				-0.0620*** (-9.86)	-0.0859*** (-6.00)	-0.138 (-0.69)
revolver				-0.137*** (-7.34)	-0.738*** (-17.37)	3.544*** (5.94)
termloan				0.290*** (6.31)	-0.216** (-2.06)	12.83*** (8.74)
mbassets				-0.0218*** (-4.29)	-0.0175 (-1.52)	0.318** (1.96)
assetmaturity				-0.000144 (-0.25)	-0.00118 (-0.89)	0.00155 (0.08)
ppeassets				-0.323*** (-7.82)	-0.439*** (-4.68)	9.827*** (7.46)
leverage				0.0007 (0.76)	0.0026 (1.15)	0.0295 (0.94)
roa				-1.038*** (-12.35)	0.520*** (2.72)	16.69*** (6.22)
Constant	5.188*** (345.61)	2.589*** (85.40)	34.53*** (83.65)	5.657*** (216.27)	3.328*** (55.98)	26.51*** (31.76)
Observations	7,143	7,143	7,143	7,143	7,143	7,143

Table 6. Dual class firms and stock price volatility

*This table reports results for OLS regressions with the annual standard deviation of stock price returns (sdevv) as reported by CRSP as the dependent variable. The dual class dummy (dual) is the predictor variable. All variables are described in the Appendix. Heteroscedasticity-adjusted (White) standard errors are used in calculation of t-statistics that are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.*

	sdevv	***sdevv***	***sdevv***
dual	-0.00337*** (-4.21)	-0.00306*** (-3.75)	-0.00385*** (-3.79)
size		-0.00337** (-2.03)	-0.00385* (-1.89)
leverage		0.000782*** (4.28)	0.000903*** (6.98)
rndsale		0.0241*** (2.72)	0.0194*** (3.64)
capsale		0.000548 (0.70)	0.000933 (0.88)
adsale		-0.00533 (-0.65)	0.00585 (0.56)
Constant	0.0297*** (101.90)	0.0285*** (70.18)	0.0284*** (74.46)
Observations	3,405	3,405	3,405
R-squared	0.003	0.021	0.023
Industry fixed effects			YES

5. CONCLUSION

In this paper we explore the contracting between dual class firms and lenders using information from the loan contracts available from Dealscan. Our results suggest that lenders impose significantly more performance – based covenants on dual class firms at the time of borrowing. However, they also charge dual class firms relatively lower interest rates and typically lend to them for longer maturities. Our evidence provides a fresh perspective on the growing literature that examines the impact of dual class shares structures. As noted by Adams and Ferreira (2008), the debate about the use of dual class share structures has largely been framed in terms of whether they are value enhancing mechanisms or value reducing ones. However, even when stock prices or returns indicate that dual class share structures lower value, we are still left with unanswered questions. Do they destroy value for both shareholders and debt holders? Or could they be transferring value from shareholders to debt holders? By examining the contracting between dual class firms and lenders we begin to answer some of these questions. The fact that lenders impose more covenants and yet lend at lower rates suggests that the role of dual class shares is more nuanced. Our findings suggest that the impact of dual class share structures cannot be dismissed as outright value destruction. At least one major goal of the controlling shareholders of dual class firms appears to be that of lower risk and this raises the possibility that dual class firms could be especially attractive clients for lenders. We look forward to future research to further distinguish between different kinds of dual class shareholders and the impact of dual class share structures in different situations.

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APPENDIX. Variable description

Variable	*Description*
Dependent variables	
allindrawn	The amount the borrower pays in basis points over LIBOR as provided by the Dealscan database
logspread	Natural logarithm of all indrawn
maturity	Loan maturity in months
logmaturity	Natural logarithm of maturity
covint	The number of covenants (between 0 and 6) associated with the package as described by Roberts (2004).
c_cov	The number of capital based covenants as described by Dey, Nikolaev and Wang (2015)
p_cov	The number of performance based covenants as described by Dey, Nikolaev and Wang (2015)
sdevv	Standard deviation of stock returns from CRSP
Predictor and control variables	
dual	An indicator variable taking the value of one if a firm is a dual class firm.
dealamount	Total amount committed in the deal.
size	Market value of fir assets measured as total net assets plus the market value of equity minus the book value of equity.
zscore	Altman z-score
revolver	An indicator variable taking the value of one if the loan is a revolving credit, zero otherwise.
termloan	An indicator variable taking the value of one if the loan is a term loan and zero otherwise
mbassets	Market to book value of the firm assets
assetmaturity	Defined as $\frac{\text{CA}}{CA+PPE} * \frac{\text{CA}}{COGS} + \frac{\text{PPE}}{CA+PPE} * \frac{\text{PPE}}{Depriciation}$ where, CA is the current assets of a firm, PPE is the net property, plant and equipment, COGS is the cost of goods sold, and Deprecation is the depreciation and amortization expense.
ppeassets	The ratio of net PPE to total assets
leverage	Firm debt as a percent of equity
roa	Firm return on assets