Share Class Structures and Asset Transactions: Canadian Evidence

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ABSTRACT

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Few researchers focus on how share class structures affect corporate decisions, particularly asset transactions. With a hand-collected sample of 1632 asset transactions by TSX- and TSX-V-listed purchasers, we first test whether the relative transaction values differ for single- and dual-class buyers, and then examine how the degree of dual class structures influences the relative transaction values with a subsample of 82 transactions involving only dual-class buyers. We also explore whether the relative value of asset purchases depends on three characteristics of dual-class purchasers. Our empirical evidence shows that the relative transaction value for a dual-class purchaser is significantly larger only when a subsample of family-controlled buyers is used, and that a higher degree of dual class structure corresponds to a larger relative transaction value. We find that the relative transaction values for family-controlled, dual-class purchasers are greater than those for nonfamily-controlled ones, that a higher family ownership leads to a bigger relative transaction value, and that the relative value for dual-class buyers who have more than one family member on the board is smaller.

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1. Introduction

Only a small number of previous studies mention the relation between corporate share class structures and asset transactions, and the majority of these studies, such as DeAngelo and DeAngelo (1985) and Bethel, Liebeskind, and Opler (1998), just qualitatively explore the area. Moreover, even fewer researchers focus on this relation in the Canadian market. Thus, this study fills these gaps in the literature by constructing a quantitative and empirical analysis using Canadian data.

In order to demonstrate the effect of share class structures on asset transactions, we firstly examine the values of transactions for single- and dual-class purchasers. We use the relative values of transactions, which are obtained by dividing the Canadian dollar values of the transactions by the total assets of the purchasers, as the dependent variable, and employ a binary variable (*ClassDummy*) which distinguishes dual-class firms from single-class ones and an index (*DualClassDegree*) which represents the degree of dual class structure as the two main explanatory variables.

Furthermore, inspired by the findings of DeAngelo and DeAngelo (1985) and McVey, Draho, and Stanley (2005) that family involvement is common among dual-class firms, we explore the relation between relative transaction values and family involvement for dual-class purchasers. Herein three variables, including family ownership (*FamilyOwnership*) and two dummy variables (*FamilyDummy* and *DirectorDummy*) which respectively indicate whether the purchaser is family-controlled and whether it has more than one family member as a director on its board, are used as the major independent variables.

Firm-level control variables include the purchaser's transaction history, ROA, EPS, stock return, and leverage. Competition in the industry and industry leverage are considered as industry-level controls, and GDP growth rate is included to control for macroeconomic effects.

Using SDC Platinum, Factiva, SEDAR, and WRDS, we build a full sample of 1,632 asset transactions with TSX- or TSX Venture-listed purchasers, and a subsample of 82 transactions involving dual-class buyers.

In the first part of the thesis, we utilize the full sample to test whether the relative transaction values differ for single- and dual-class purchasers. We find that the estimated

coefficients of the variable *ClassDummy* are statistically insignificant at conventional levels. To examine the possible influence of family involvement, we create four subsamples based on whether purchasers are family-controlled or not and whether the threshold used to identify family-controlled firms is 5% or 10%. We find that all the estimated coefficients for the variable *ClassDummy* are significantly positive using the subsample of family-controlled buyers when either threshold is employed, which suggests that the relative transaction value for a family-controlled, dual-class purchaser is larger than that for a family-controlled, single-class purchaser. This relation does not hold for the subsample of nonfamily-controlled buyers. Thus, the absence of a relation between the relative value of transactions and whether the buyer is single- or dual-class in the full sample may be attributed to the much larger sample size for nonfamily-controlled versus family-controlled purchasers. The above results demonstrate that dual class structures are useful for families to exert their control on corporate decision making, such as asset purchases.

In examining how the degree of dual class structures affects the relative transaction values, we use the subsample of 82 transactions and find that all the estimated coefficients of *DualClassDegree* are significantly positive after dealing with the problem of using the particular index as a proxy of the degree of dual class structure. This means that a higher degree of dual class structure leads to a larger relative transactions value.

We also employ this subsample to test whether the relative value of asset purchases depends upon whether the dual-class buyer is family-controlled, the value of family ownership, and whether the dual-class buyer has two or more family-related directors. The results show that all the estimated coefficients of *FamilyDummy* and *FamilyOwnership* are significantly positive, while those of *DirectorDummy* are always negative. From these results, we can conclude that the relative value of transactions for family-controlled dual-class purchasers is greater than that for nonfamily-controlled ones, that a higher family ownership contributes to a bigger relative transaction value, and that the relative value for dual-class purchasers who have more than one family members on the board is smaller.

The remainder of the thesis proceeds as follows: Section 2 reviews the related literature. Sections 3, 4, and 5 describe our sample, variables, and data, respectively. Section 6 discusses the regression frameworks used to examine the relative values of transactions for single- and dual-class buyers, and presents and discusses the results. Section 7 further examines the relation

between relative values and family involvement for dual-class buyers. Section 8 concludes the thesis.

2. Literature Review

2.1 Previous studies dealing with dual-class firms

DeAngelo and DeAngelo (1985) define dual classes of common stock as those with identical cash flows, but different per-share voting rights. Yiu, Lu, Bruton, and Hoskisson (2007) hold that dual classes of stock have both a cash flow and a control dimension. Ben-Nasr, Boubakri, and Cosset (2012) state that, like pyramids, cross-holdings, and multiple control chains, dual-class stock is an ownership leveraging device. While pyramids are more common throughout the world than dual-class shares (La Porta *et al*., 1999), dual-class firms are frequent in Brazil, Canada, Denmark, Finland, Germany, Italy, Norway, Korea, Mexico, Sweden, and Switzerland. A smaller proportion of listed firms have a dual-class structure in Australia, Chile, France, Hong-Kong, South Africa, the U.K., and the U.S. (Nenova, 2003). To illustrate, Faccio and Lang (2002) report that dual-class shares are employed by 66%, 51%, and 41% of the firms in Sweden, Switzerland, and Italy, respectively.

In a typical dual-class firms, owners hold a minority (majority) interest in the cash flows (voting) rights associated with the common shares (DeAngelo and DeAngelo, 1985; Bebchuk and Weisbach, 2010; McGuire, Wang, and Wilson, 2014). This finding is consistent with the conclusion of Yurtoglu (2003) that the use of dual-class stock arrangements can result in majority control through a relatively small direct investment by the core owner elite. Nenova (2003) asserts that dual-class firms report significant control premiums, which indicates that dual-class ownership structures protect private control benefits (Smart and Zutter, 2003). Doidge (2004) and DeAngelo and DeAngelo (1985) also demonstrate that private benefits are higher in firms with dual-class shares compared to firms with a one share-one vote rule. Thus, control can be enhanced with mechanisms such as dual-class shares and pyramids (Lins, 2003). Thus, the empirical evidence supports the conjecture that control rights often exceed that indicated by ownership through the use of governance mechanisms such as pyramid ownership structures,

cross-holdings, and the presence of dual-class shares (Lubatkin, Ling, and Schulze, 2007; Giannetti and Laeven, 2009).

However, Faccio and Lang (2002) argue that dual-class shares and pyramids only enhance the control of the largest shareholders, and Stulz (2005) claims that the dominant owners are able to take advantage of these mechanisms to secure control of a large number of corporations. Hoskisson *et al.* (2005) also report that large owners extract the benefits of control at the expense of minority owners through the use of dual-class equity. This divergence between control and ownership is a manifestation of the agency conflict between controlling and minority shareholders (Villalonga and Amit, 2009; King and Segal, 2009; Aguilera and Jackson, 2010). Amoako-Adu, Baulkaran, and Smith (2011) also treat the greater transfer of wealth from outside shareholders to controlling shareholders as a reflection of the bigger agency problems and costs associated with dual class structures.

A number of previous studies account for the existence of dual-class stock in their empirical work. Most of this research employs a dummy variable which equals one if a firm utilizes dual-class shares with differential voting rights, and zero otherwise.[1] McGuire, Wang, and Wilson (2014) also use the difference between the voting rights and cash flow rights of insiders, and Masulis, Wang, and Xie (2009) also include the ratio of voting rights of insiders over their cash flow rights. Francis, Schipper, and Vincent (2005) define the superior class as the common stock with the larger voting rights per share, and create variables including superior voting rights per share and inferior voting rights per share.

Dual-class structures are associated with particular shareholders and employees. DeAngelo and DeAngelo (1985) observe substantial family involvement in many dual-class firms, and McVey, Draho, and Stanley (2005) report that a dual-class structure is more prevalent among family-controlled firms. Dual-class shares provide the founder or heir with additional means to pursue their goals (La Porta *et al.*, 1999; Anderson, Duru, and Reeb, 2009; Srinidhi, He, and Firth, 2014). On the other hand, Ruback (1988) shows that dual-class exchange offers can induce outside shareholders to exchange their shares for limited voting shares. However, Masulis, Wang, and Xie (2009) hold that corporate cash holdings are worth less to outside shareholders for

[1] This includes Smart and Zutter (2003), Ali, Chen, and Radhakrishnan (2007), Smart, Thirumalai, and Zutter (2008), Zhao and Chen (2008), King and Segal (2009), Gompers, Ishii, and Metrick (2010), Masulis, Pham, and Zein (2011), Anderson, Reeb, and Zhao (2012), Ryngaert and Thomas (2012), Larcker, So, and Wang (2013), Knyazeva, Knyazeva, and Masulis (2013) and McGuire, Wang, and Wilson (2014).

dual-class companies with a wider divergence between insider voting and cash flow rights. Furthermore, DeAngelo and DeAngelo (1985) find that managers of dual-class firms may be more likely to retain voting control when it is costly for them to provide external shareholders with information. Partch (1987) claims that common stocks with limited voting rights change managerial incentives. Some types of CEO turnover are less frequent for dual share class structures (Smart, Thirumalai, and Zutter, 2008). Masulis, Wang, and Xie (2009) demonstrate that as the divergence between insider voting and cash flow rights widens, CEOs receive higher compensation and managers make shareholder value-destroying acquisitions more often. This suggests that dual-class ownership entrenches managers and allows them to perform at a suboptimal level (McGuire, Wang, and Wilson, 2014).

Firm performance can be influenced by a dual-class ownership structure. Jarrell and Poulsen (1988) report significant, negative abnormal stock price returns at the announcement of the dual-class recapitalization. McVey, Droho, and Stanley (2005) and Niu (2008) think that this structure is associated with weaker corporate governance. Wang (2006) finds that earnings of firms with dual-class equity structures are less informative than those of firms with single-class equity structures. The findings of Ali, Chen, and Radhakrishnan (2007) suggest that family firms without dual-class shares, rather than family firms with dual-class shares, are primarily responsible for family firms exhibiting better disclosure practices and better disclosure-related consequences as compared to non-family firms. Smart, Thirumalai, and Zutter (2008) find that dual-class firms trade at lower prices than do single-class firms, and that when duals unify their share classes there are statistically and economically significant value gains. Villalonga and Amit (2009), Masulis, Pham, and Zein (2011) and McGuire, Wang, and Wilson (2014) report a negative impact of dual-class stock on firm value. Similarly, Gompers, Ishii, and Metrick (2010) provide evidence that firm value is increasing (decreasing) in the cash-flow (voting) rights of insiders. In contrast, Francis, Schipper, and Vincent (2005) argue that the net effect of dual-class structures is to reduce the credibility of earnings and enhance the salience of dividends as measures of performance. Srinidhi, He, and Firth (2014) propose that a family which has greater voting rights through dual-class shares, has greater incentives to increase firm value. Canadian firms with dual-class shares are valued at a discount to widely held firms while cross-listed firms with dual-class shares exhibit a permanent increase in valuation (King and Segal, 2009).

Kryzanowski and Zhang (1992) find no anomalous abnormal returns or beta nonstationarity associated with the ex-dates for dual-class-creating stock splits.

2.2 Previous studies dealing with asset transactions

The central prediction of the model of Hege, Lovo, and Slovin (2009) is that there are large gains in wealth for both buyers and sellers in equity-based asset sales. Warusawitharana (2008) reports that purchases and sales of operating assets by firms generated $162 billion for shareholders over the past 20 years, and that corporate asset purchases and sales are consistent with efficient investment decisions.

The previous literature reports various incentives to buy assets. King (2007) provides evidence that firms attempt to prevent certain threats such as strategic maneuvering and postcontractual opportunism by buying certain firm assets. For instance, the Conservation Fund prevented the threat of strategic maneuvering in the future by acquiring the development use rights from International Paper (Coccia, 2004). Managers buy assets due to profit and reputational incentives (Dasgupta, Prat, and Verardo, 2011). Demski, Lin, and Sappington (2008) argue that voluntary certification, which permits the owner of a high-value asset to sell the asset at a price that reflects its true (high) value rather than at a (lower) price that reflects the expected value of all uncertified assets, provides useful information to asset buyers.

Coval and Stafford (2007) report that the abnormal returns of stocks with asset purchases are positive, especially for acquirers of state-owned assets (Vayanos and Woolley, 2013; Borisova, John, and Salotti, 2013; Borisova and Cowan, 2014). Sengul and Gimeno (2013) find that a firm which either buys fixed assets or adds to the value of existing fixed assets incurs capital expenditures which are expected to create future benefits. Kurt and Hulland (2013) provide the example of a firm that builds new facilities and buys new machinery to increase its production capacity. Peterson, Kushwaha, and Kumar (2015) conjecture that firms with promotional focuses are likely to be interested in taking some financial risks that might lead to greater gains, such as taking out a loan to purchase an asset that might increase in value instead of merely saving the money in a low-interest savings account.

The forces in the acquisition market can potentially offset a buying firm's abilities to exploit information disadvantages in the selling firm's managers (Bergh, Johnson, and Dewitt, 2008). Competition among buyers can result in a price run-up by inducing buyers to purchase assets at a loss to prevent competitors from purchasing at lower prices (Bond and Leitner, 2014).

Firms typically purchase tangible assets more frequently than intangible assets (Teece, 1998; Barth *et al.*, 2001) with cash, shares, and hybrid deals as the modes of payment (Slovin, Sushka, and Polonchek, 2005; Brauer, Gallen, and Wiersema, 2012). Synthetic leases, which defer cash outflows in comparison to traditional leases, are an alternative way of financing asset purchases (Zechman, 2010). Asset purchases potentially have stock and flow effects where stock effects are persistent changes in prices that result from movements along demand curves for treasury securities of each maturity, and flow effects are the response of prices to the ongoing purchases (D'Amico and King, 2013). Due to any impairment of liquidity and functioning, flow effects may lead to sluggish price discovery.

Some authors argue that firms may benefit from selling assets. Potential shareholder gains from asset sales include: the benefit from using the proceeds of sale to finance any remaining positive, but unfunded, NPV projects of the firm (Hite *et al.*, 1987) to improve its bargaining position and/or reduce its dependence on external financing (Slovin *et al.,* 2005; King, 2007; Hege, Lovo, Slovin, and Sushka, 2009; and House and Masatlioglu, 2015) or to purchase undervalued assets (He, 2009). If the sell-off process allows firms to optimally adjust their capacity and reallocate their assets to their most efficient and productive uses, then their market-derived value would benefit (John and Ofek, 1995; Yang, 2008).

Mulherin and Boone (2000) find a mean abnormal return of 2.60 percent for a sample of 370 divestitures. Clayton and Reisel (2013) and Borisova, John, and Salotti (2013) report equity and debt excess returns associated with asset sales. Significant gains generated by cash sales typically accrue only to sellers (Hege, Lovo, and Slovin, 2009). While selling the assets to an independent owner generates a more competitive value for the asset, it also lowers the expected costs for future input supplies driven by additional upstream competition (De Fontenay and Gans, 2008). Slovin *et al.* (2005) claim that a seller can convey information about the value of the relevant asset by divesting an operating asset for buyer equity. Bates (2005) asserts that asset sales rarely result in an immediate reduction in assets, but often substantially increase liquidity

for the divesting firm. This means that distressed firms can sell off relatively tangible and less productive assets to raise cash to stave off bankruptcy (Eckbo and Thorburn, 2008), and that borrowers can de-lever by paying off some or all of their existing debt to relax the extent of their credit rationing (Acharya and Viswanathan, 2011).

Williamson (1988) and Shleifer and Vishny (1992) argue that firms, whose assets cannot be readily redeployed by firms outside of the industry, are likely to experience lower liquidation values or "fire-sale" discounts in cash auctions for asset sales, especially when its industry also is in financial distress (Kiyotaki and Moore, 1997). Coval and Stafford (2007) report negative abnormal returns for stocks predicted to face fire sales. Bergh, Johnson, and Dewitt (2008) and Greenwood, Landier, and Thesmar (2012) argue that it occurs because managers may be reluctant to sell potentially important assets to a rival when the specialized uses of certain types of assets create a thin resale market that reduces the number of potential buyers for an auction or sell-off. Cheung *et al.* (2009) demonstrate that the normal asset sales by Hong Kong firms to related parties are completed at unfavorable prices compared to similar deals at arm's-length. Private firms that restructure via asset sales have significantly lower returns reflected by changes in operating cash flows (Guo, Hotchkiss, and Song, 2011). Due to the substantial taxes associated with asset sales, shareholders only gain the after-corporate-tax proceeds from the sale (Erickson and Wang, 2007). Cross-signaling can be a leading concern during asset sales when the agent possesses multidimensional private information (He, 2009).

Asset purchases and sales may also benefit certain third parties. Yang (2008) notes that traders improve efficiency in the industry by moving resources from less to more productive firms. Calomiris, Fisman, and Wang (2010) report that the benefits to firms from increased privatization are contingent on government asset sales being accompanied by broader economic liberalization. Vig (2013) finds that secured creditors have the right to take over management of the secured assets or even the business itself and the secured creditors can sell off the secured assets to recover the obligations.

Empirical studies take asset purchases or sales into account in various ways. Bergh, Johnson, and Dewitt (2008) create a dummy variable equal to 1 for spin-offs and 0 for sell-offs. Eckbo and Thorburn (2008) include the binary variable with a value of 1 if the report indicates significant pre-filing asset sales, and 0 otherwise. Brauer, Gallen, and Wiersema (2012) employ

three dummy variables to capture the payment mode; specifically, a cash deal dummy variable equal to 1 for cash payments and 0 otherwise, a share deal dummy variable equal to 1 for stock payments and 0 otherwise, and a hybrid deal dummy variable equal to 1 for both cash and stock payments and 0 otherwise. In contrast, Maksimovic and Philips (2001) and Yang (2008) define the rate of asset sales as the percentage of plants that change ownership in the industry. Guo, Hotchkiss, and Song (2011) create a variable to measure the level of asset sales which is the total value of asset sales during the 3-year period after completion of the buyout divided by post-buyout capital. Ryngaert and Thomas (2012) use the dollar amount of the assets bought or sold directly.

Asset transactions can be influenced by different factors. Dasgupta, Prat, and Verarado (2011) find that a manager of a buyer with a positive signal who trades after a sequence of buys is even more willing to buy the asset, even if it results in an overpayment. Caballero and Simsek (2013) hold that the aggregate amount of new purchases by banks depends on their demand for assets net of the supply of legacy assets.

Sellers consider if the expected returns from reinvestment of the proceeds from asset sales exceed their required rates of return (Filatotchev and Toms, 2006). The timing of foreclosed asset sales is determined by current and expected levels of potential buyer wealth (Brown, Ciochetti, and Riddiough, 2006). Asset sales are higher in expansion years, and peak when the economy moves from recession to expansion (Yang, 2008). The liquidation price plays a crucial role in determining the extent of asset sales or de-levering (Acharya and Viswanathan, 2011). The likelihood of its asset sales increases with a firm's bankruptcy (Benmelech and Bergman, 2011), and higher unexplained valuations in an industry (Maksimovic, Philips, and Yang, 2013) for both public and private firms. Asset sales are also driven by firm fundamentals and initial conditions (Maksimovic, Philips, and Yang, 2013). Return on assets and size strongly predict when firms purchase or sell assets (Warusawitharana, 2008; Li, Lundholm, and Minnis, 2013). Firms with rising (falling) productivity buy (sell) assets and industries in which firms have less persistent and more volatile productivity experience greater asset reallocations (Yang, 2008).

Most of the small number of studies that focus on the relationship between share class structures and asset transactions report that a dual class structure does affect corporate decisions concerning asset sales. DeAngelo and DeAngelo (1985) find that managers may hold stock which

carries a reduced vote in board elections because such shares carry voting rights in other major corporate transactions such as mergers and asset sales. Bethel, Liebeskind, and Opler (1998) claim that adopting defensive mechanisms (including dual-class share structures and ESOPs) repel activist investors by diminishing the voting power of blockholders. In turn, this may prevent large investors from using proxy contests or otherwise exercising their voting power to pressure managers to change corporate policy or to enact strategic decisions such as asset divestitures.

Hanson and Song (1996) find that managers with a strong preference for shares with superior voting rights make unrelated asset acquisitions to diversify their employment risk. Hu and Black (2007) argue that a dual-class common share structure can make it easier for firms to make long-term, positive NPV investments with unobservable payoffs. In contrast, Dimitrov and Jain (2006) find higher past growth rates in sales and assets for dual-class firms, consistent with the conclusion of Lauterbach and Yafeh (2011) that the asset growth rates of dual-class firms tend to be higher, on average, than single-class firms.

3. Sample

We begin by capturing all 7,553 asset transactions with TSX- or TSX Venture-listed purchasers from January 1, 2000 to July 13, 2015.[2] After adding five additional transactions identified from a Factiva search and deleting transactions with blank transaction values, the initial sample is reduced to 5,262 asset transactions of which 3,002 have a completed deal status. Taking unusual features of financial firms into account, we delete transactions by these special asset purchasers. This reduces the sample to 2,338 transactions. Then we delete transactions with no values for total assets for the purchasers and those for which information concerning the buyer's class structure or family participation is unavailable in SEDAR. We then search for values for various control variables for this sample in SDC Platinum, WRDS, World Bank Open Data and so on. Our final sample consists of 1,632 asset transactions including 82 with dual-class purchasers.

4. Variables

[2] This is 4.45% of the 169,718 asset transactions included in SDC Platinum for this time period.

4.1 Dependent and independent variables

The dependent variable examined herein is the relative value of asset transactions (*AssetTranRatio*), which is obtained by dividing the Canadian dollar value of the transaction by the purchaser's total assets.

Depending upon the hypothesis being tested, the major independent variable is either *ClassDummy* or *DualClassDegree*. The former is a dummy variable which is equal to 1 if the asset purchaser is dual-class and 0 if not. The latter is similar to that used by Masulis, Wang, and Xie (2009) and it reflects the degree of the dual class structure that is calculated as follows:

$$\text{DualClassDegree} = \frac{A * a + B * b + C * c + D * d + \cdots}{A + B + C + D + \cdots}$$

where A, B, C, and D denote the number of Class A, B, C, and D common shares respectively, and a, b, c, and d represent the number of voting rights for each Class A, B, C, and D common share. As we subsequently discuss below, this metric can provide counter-intuitive rankings if a share structure includes shares with no voting rights.

Based on the findings of DeAngelo and DeAngelo (1985) and McVey, Draho, and Stanley (2005) that family involvement is prevalent among dual-class firms, we use three variables, *FamilyDummy*, *FamilyOwnership*, and *DirectorDummy*, to indicate family participation as shareholders and on the board of directors. *FamilyDummy* is a dummy variable which is equal to 1 if the purchaser is family-controlled and 0 otherwise. According to Muñoz-Bullón and Sanchez-Bueno (2011), a firm whose family ownership exceeds a threshold can be considered as family-controlled, and 5% and 10% are used herein as the threshold. *FamilyOwnership* is the percentage of the total number of outstanding common shares held by family shareholders. *DirectorDummy* is a dummy variable which is equal to 1 if the buyer has two or more directors who are related family members on the board and 0 otherwise.

4.2 Control variables

We draw our control variables from those used in previous studies (e.g., Dagupta, Prat, and Verarado, 2011; Yang, 2008; and Warusawitharana, 2008). *Sequence1* is a dummy variable which is equal to 1 if the purchaser traded after a sequence of buys in the sample period and 0

otherwise. *Sequence2* is the number of buys in the same period before this particular transaction. *ROA*, *EPS*, and *StockReturn* are return on assets during the last 12 months, earnings per share during the last 12 months and the stock return from 4 weeks to 1 week prior to the asset purchase announcement. *Leverage* is the book value of debt divided by the book value of total assets at the end of the last 12 months to capture the purchaser's ability to pay debt. We include three variables to control for industry-level effects. *IndParticipant* is the number of firms which belong to the same industry as the purchaser. *IndConcentration* is the value of the Herfindahl Index calculated based on the market share of the top five firms in the same industry as the purchaser to reflect industry concentration. This index is given by:

$$\text{IndConcentration} = \text{Share}_1^2 + \text{Share}_2^2 + \text{Share}_3^2 + \text{Share}_4^2 + \text{Share}_5^2$$

where Share_1, Share_2, Share_3, Share_4, and Share_5 denote market share of each of the top 5 firms, and market share of one particular firm is calculated as its sales divided by the sum of the sales of all firms in the same industry. *IndLeverage* is the average value of the leverage ratios of all firms in the same industry as the purchaser. *GDPGrowth* is included to control for macroeconomic effects. *GDPGrowth* is the percentage change of real GDP compared to that for the previous year for the country in which the headquarters of the purchaser are located. We employ 2-, 3-, and 4-digit SIC codes for all of the industry-level control variables. For instance, the variable *IndParticipant2* is created using the 2-digit SIC code, and *IndParticipant3* and *IndParticipant4* are created using 3- and 4-digit SIC codes, respectively. The method is the same for variables *IndConcentration* and *IndLeverage*.

5. Data

5.1 Data sources

A summary description of the data sources used herein is provided in Table 1. Value of the asset-purchase transactions and the total assets of the purchasers are obtained from SDC Platinum, and from Factiva when unavailable in SDC Platinum. Information about a firm's class structure, including whether it is single- or dual-class, number of common shares in each class, and number of voting rights for each common share, are manually collected from the "Voting securities and principal holders of voting securities" section in the Proxy Circulars available on

the website, System for Electronic Document Analysis and Retrieval (SEDAR). Information about family shareholders, their holdings and directorships are obtained manually from either the "Voting securities and principal holders of voting securities" or "Election of directors" section of the Proxy Circulars available at the SEDAR website.

The variables, *Sequence1* and *Sequence2*, are derived from the obtained sample and from examining the history of each firm. Values for other control variables, such as *ROA*, *EPS*, *StockReturn*, and *Leverage*, are obtained from SDC Platinum. Data on industry participants, industry concentration, and industry leverage is obtained from Compustat Monthly Updates available through Wharton Research Data Services (WRDS). GDP growth rates of various countries are obtained generally from World Bank Open Data. Exceptions include the 2015 rates for Canada and the U.S. which are the averages of Economist Intelligence Unit (EIU) forecast, International Monetary Fund (IMF) forecast, and United Nations (UN) forecast; and 2009 GDP growth rate for Guernsey which comes from the Guernsey Economic Overview 2013.

5.2 Summary statistics

Table 2 presents three panels of descriptive information for our sample of firms. Panel A classifies transactions in both the full sample and the subsamples based on various criteria. Panels B and C report summary statistics (means, medians, standard deviations, and maximum and minimum values) for variables in the two samples separately.

In Panel A for the full sample, 789 and 848 of the transactions are for purchasers listed respectively on the TSX and TSX Venture, 389 transactions involve buyers that are cross-listed in the U.S., and 644 transactions involve purchasers who traded before their particular transactions. For the subsample of 82 dual-class purchasers, the majority of transactions involve buyers who are listed in the TSX. Furthermore, 38 of these buyers are family-controlled, have more than one family-related director on their boards, and did not trade prior to the asset transactions. In addition, 96.34% of the dual-class purchasers are headquartered in Canada as are 96.26% of the single-class buyers.

Panel B reports that the mean relative transaction value is 0.7952 for all 1,632 transactions, and that the mean number of previous transactions is 0.8817. Panel C reports on the

82 transactions in which only dual-class buyers participated. The variable *AssetTranRatio* has a mean value of 0.2411 with a maximum and minimum value of 5.3934 and 0.0005, respectively. The index reflecting the degree of dual class structure is 2.7130 on average. The percentage of the total number of outstanding common shares held by family shareholders is 13.06%. The average number of previous transactions is 1.6829, nearly twice as many as for the full sample.

6. Examination of the relative values of transactions for single- and dual-class purchasers

In this section, we not only examine whether the relative value of asset purchases depends upon whether the purchaser is single- or dual-class, but also explore whether the degree of the dual class structure influences the relative transaction value.

6.1 Methodology

To test whether the relative value of asset purchases depends upon whether the purchaser is single- or dual-class, we examine the sign and significance of the β_1 estimate from the following regression:

$$\begin{aligned}\text{AssetTranRatio} &= \beta_0 + \beta_1 * \text{ClassDummy}_i + \beta_2 * \text{Sequence1}_i + \beta_3 * \text{Sequence2}_i + \beta_4 \\ &* \text{ROA}_i + \beta_5 * \text{Leverage}_i + \beta_6 * \text{IndParticipant}_i + \beta_7 * \text{IndConcentration}_i \\ &+ \beta_8 * \text{IndLeverage}_i + \beta_9 * \text{GDPGrowth}_i + \varepsilon_i\end{aligned} \quad (1)$$

where all the variables are as previously defined (also see Table 1).

Similarly, the effect of the degree of dual class structure on the relative value of transactions is reflected in the γ_1 estimate from the following regression:

$$\text{AssetTranRatio} = \gamma_0 + \gamma_1 * \text{DualClassDegree}_i + \gamma_2 * \text{Sequence1}_i + \gamma_3 * \text{Sequence2}_i + \gamma_4 * \text{ROA}_i + \gamma_5 * \text{Leverage}_i + \gamma_6 * \text{IndParticipant}_i + \gamma_7 * \text{IndConcentration}_i + \gamma_8 * \text{IndLeverage}_i + \gamma_9 * \text{GDPGrowth}_i + \epsilon_i \quad (2)$$

where the variable *ClassDummy* in model (1) is replaced by *DualClassDegree*, and all the other variables remain unchanged.

6.2 Empirical results

We first test whether the relative transaction values differ for single- and dual-class asset purchasers for the full sample of 1,632 asset transactions by estimating equation (1) for various combinations of firm-level, industry-level, and macro economy-level control variables. Based on the results summarized in Table 3, we observe that the estimated coefficients of our major independent variable *ClassDummy* are not statistically significant at conventional levels. In contrast, the estimated coefficients of many of the control variables such as *ROA* and *Leverage* are always significant. This result suggests that no significant differences exist in the relative transaction values of single- and dual-class purchasers.

However, we cannot conclude that the relative values of the transactions are not significantly different for all types of single- and dual-class buyers because the relative transaction values may differ when we account for family involvement. To examine this possibility, we create four subsamples based on whether purchasers are family-controlled or not and whether the threshold used to identify family-controlled firms is 5% or 10%. Based on the results summarized in Panel A of Table 4 for the subsample of family-controlled buyers based on a 5% threshold, we find that all of the estimated coefficients for the variable *ClassDummy* are significantly positive and relative constant across the various formulations of equation (1). Thus, the relative transaction value for a family-controlled dual-class purchaser is significantly larger than that for a family-controlled single-class purchaser. Furthermore, the estimated coefficients of control variables such as *IndLeverage4* and *GDPGrowth* are statistically significant in all the regressions, which implies that both industry leverage and GDP growth are negatively associated

with the relative value of asset transactions. More specifically in column (2), if industry leverage increases by one standard deviation, the relative transaction value will decrease by 0.333 standard deviation. The relationship between the relative values of asset purchases and the *ClassDummy* is robust to the threshold used to determine if the buyer is family controlled. The estimated coefficient using a 10% threshold that is reported in Panel B of Table 4 is consistently positive and significant.

Regression results using a sample of nonfamily-controlled purchasers based on thresholds of 5% and 10% are reported in Panel C and D, respectively. In both panels, we find no significant relation between the dependent variable *AssetTranRatio* and our main explanatory variable *ClassDummy*. However, the control variable *ROA* continues to be always negatively related to the relative value of the transaction, and number of participants in the same industry is significantly and positively associated with *AssetTranRatio*. We surmise that the lack of a significant relation in the full sample between the relative value of a transaction and whether the buyer is single- or dual-class is probably due to the much larger sample size for nonfamily-controlled versus family-controlled purchasers.

These findings suggest that a dual class share structure is a more effective tool or mechanism for families to consolidate their power on corporate management, particularly in terms of growth through asset purchases. These findings not only support the findings that the dual class share structure affects corporate decisions dealing with asset transactions of DeAngelo and DeAngelo (1985), and Bethel, Liebeskind, and Opler (1998), but also are not inconsistent with the conjecture of Srinidhi, He, and Firth (2014) that a family with greater voting rights through holdings of dual-class shares has greater incentives to influence corporate management.

We continue by examining the association between the degree of the dual class structure, *DualClassDegree*, and the relative transaction value, *AssetTranRatio*, for a sample of 82 asset purchase transactions confined to dual-class purchasers. Based on the regression results summarized in Table 5, all the signs of the coefficients of variable *DualClassDegree* are positive. The estimated coefficients become insignificant when the three industry controls (*IndParticipant*, *IndConcentration* and *IndLeverage*) are measured at the 3- and not 4-digit SIC level.

The change in the significance of the estimated coefficients of *DualClassDegree* could be due to a problem of using this particular variable as a proxy of the degree of dual class structure

when a firm's share structure includes a class with no voting rights. To illustrate, suppose Firm X has 100 Class A shares with 0 voting rights per share and 100 Class B shares with 10 voting rights per share, while Firm Y has 100 Class A shares with 1 vote per share and 100 Class B shares with 10 votes per share. The values of *DualClassDegree* for Firm X and Y are 5 and 5.5, respectively. It is obvious that Firm X with a lower value of *DualClassDegree* has a much higher degree of dual class structure from a voting-rights perspective than Firm Y. To test the effect of this potential problem on our results, we use a subsample where all asset purchasers only have share classes with at least one vote per share.

Based on the regression results reported in Table 6 for this subsample, we observe that all the estimated coefficients of *DualClassDegree* are significantly positive. The control variables such as *Sequence2* and *IndLeverage* explain the response variable well, and all the regressions are significant. This result illustrates that for dual-class purchasers, a higher degree of dual class structure leads to a larger relative value of asset transactions. The response variable will increase by 0.732 standard deviation when *DualClassDegree* increases by one standard deviation in column (1).

We also use an alternative method to examine the variable *DualClassDegree* as a proxy of the degree of dual class structure. We add an interactive term *DualClassDegree*VoteDummy* in equation (2) using the full sample, where *VoteDummy* is a dummy variable which is 1 if one of the share classes has no votes per share and 0 otherwise. Based on untabulated results, we find that the estimated coefficients of *DualClassDegree* are always statistically significant, which is consistent with the results in Table 6, while those of the interactive variable are not significant.

7. Relation between relative transaction values and family involvement for dual-class purchasers

Various studies report that family involvement plays an important role in the operations of dual-class firms. Thus, in this section, we focus on the relation between relative value of asset purchases by dual-class buyers and family participation as shareholders and as members of boards of directors.

7.1 Methodology

To test whether the relative value of asset purchases depends upon whether the dual-class purchaser is family-controlled, value of family ownership, and whether the dual-class purchaser has two or more family-related directors, respectively, we examine the sign and significance of the estimates for β_1, β_2 and β_3 from the following regression based on the assumption that the relationships are linear:

$$\begin{aligned}\text{AssetTranRatio} &= \beta_0 + \beta_1 * \text{FamilyDummy}_i + \beta_2 * \text{FamilyOwnership}_i + \beta_3 \\ &* \text{DirectorDummy}_i + \beta_4 * \text{Sequence1}_i + \beta_5 * \text{Sequence2}_i + \beta_6 * \text{ROA}_i \\ &+ \beta_7 * \text{Leverage}_i + \beta_8 * \text{IndParticipant}_i + \beta_9 * \text{IndConcentration}_i + \beta_{10} \\ &* \text{IndLeverage}_i + \beta_{11} * \text{GDPGrowth}_i + \varepsilon_i\end{aligned} \tag{3}$$

where all the variables are as previously defined (also see Table 1).

7.2 Empirical results

Since there are no dual-class purchasers with family ownership between 5% and 10% for this test, we can use either threshold to identify family-controlled firms. However, due to the high correlation between the *FamilyDummy* and *FamilyOwnership*, we examine the separate effects of these two variables for the 82 transactions by dual-class buyers.

Based on Table 7, all estimated coefficients of *FamilyDummy* are significantly positive, and those for *DirectorDummy* are significantly negative. These results imply that the relative value of asset transactions for family-controlled dual-class purchasers is greater than that for nonfamily-controlled ones, and that the relative transaction value for dual-class purchasers who have two or more family members on the board of directors is smaller than the value for those who have less than two family members on the board of directors. This result can be attributed to possible contradiction among family members on the board, such as sibling rivalry.

Based on Table 8, all of the estimated coefficients of *FamilyOwnership* are positive and statistically significant, and those for *DirectorDummy* remain significantly negative. This implies that a higher family ownership contributes to a bigger relative transaction value, and the value will increase by 0.741 standard deviation if family ownership increases by one standard deviation in column (1).

8. Conclusion

We focus first on whether the relative transaction values differ for single- and dual-class purchasers. No significant differences are revealed at conventional levels. Taking family involvement into account and using 5% and 10% as the threshold for identifying family-controlled firms, we find that the relative transaction value for a family-controlled dual-class purchaser is significantly greater than that for a family-controlled single-class buyer, and that this relation does not hold among nonfamily-controlled asset purchasers. These findings demonstrate that dual class share structures assist family shareholders in improving their control over corporate decision making, such as asset purchases.

However, when the examination is only of dual-class asset purchasers, the degree of dual class share structure has a significantly positive effect on the relative transaction value, which suggests that asset purchasers with higher degrees of dual class structures, on average, participate in asset transactions with larger relative transaction values.

We conclude our analyses with an examination of the effects of three aspects of family involvement on the relative transaction values for dual-class buyers. We find that the relative value of asset transactions for family-controlled dual-class purchasers is significantly larger than that for nonfamily-controlled ones, that dual-class purchasers with higher family ownership are often engaged in transactions with larger relative values, and that the relative transaction values for dual-class buyers with more than one family member on the board of directors is smaller.

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Appendix

Table 1. Summary description of variables

This table lists the definition, calculation method, and data source for each variable.

Variable	Description	Source
AssetTranRatio	Value of the asset transaction divided by the purchaser's total assets.	SDC Platinum and Factiva
ClassDummy	A dummy variable which is equal to 1 if the purchaser is dual-class and 0 if not.	SEDAR
DualClassDegree	$$\text{DualClassDegree} = \frac{A*a + B*b + C*c + D*d + \cdots}{A + B + C + D + \cdots}$$ where A, B, C, and D denote the number of Class A, B, C, and D common shares respectively, and a, b, c, and d represent the number of voting rights for each Class A, B, C, and D common share. This index reflects the degree of dual class structure.	SEDAR
FamilyDummy	A dummy variable which is equal to 1 if the purchaser is family-controlled and 0 if not.	SEDAR
FamilyOwnership	The percentage of the total number of outstanding common shares held by family shareholders.	SEDAR
DirectorDummy	A dummy variable which is equal to 1 if the purchaser has 2 or more directors who are related family members on its board of directors and 0 if not.	SEDAR
Sequence1	A dummy variable which is equal to 1 if the purchaser traded after a sequence of buys and 0 if not.	–
Sequence2	Number of buys before this particular transaction.	–
ROA	Purchaser's net income for the last 12 months divided by the purchaser's total assets for the same period.	SDC Platinum
EPS	Purchaser earnings per share for the last 12 months.	SDC Platinum
StockReturn	The percentage change of the closing stock price for the purchaser from 4 weeks to 1 week prior to the purchase announcement.	SDC Platinum
Leverage	Purchaser's total liabilities for the last 12 months divided by the purchaser's total assets for the same period.	SDC Platinum
IndParticipant	Number of firms which belong to the same industry as the purchaser.	WRDS
IndConcentration	$$\text{IndConcentration} = \text{Share}_1^2 + \text{Share}_2^2 + \text{Share}_3^2 + \text{Share}_4^2 + \text{Share}_5^2$$ where Share_i denotes market share of the top 5 firms, calculated as its sales divided by the sum of the sales of all the firms in the same industry as the purchaser.	WRDS
IndLeverage	Average value of the leverage ratios of all firms in the same industry as the purchaser.	WRDS
GDPGrowth	The percentage change of real GDP compared to the previous year for the country in which the purchaser is headquartered.	World Bank Open Data, EIU, IMF, UN, and Guernsey Economic Overview 2013

Table 2. Summary statistics
This table presents three panels of descriptive information for the sample of firms.

Table2, Panel A: This panel classifies transactions in both the full sample and the subsample based on various criteria.

Criteria	Number of transactions in samples of			
	1632 transactions		82 transactions	
Listing venue of purchaser				
TSX	789		74	
TSX Venture	848		11	
Cross-listed in the U.S.	389		33	
Dummy variable	1	0	1	0
ClassDummy	82	1550	–	–
FamilyDummy	–	–	38	44
DirectorDummy	–	–	38	44
Sequence1	644	988	44	38

Table 2, Panel B: This panel reports summary statistics (means, medians, standard deviations, and maximum and minimum values) for variables in the full sample of 1,632 asset transactions.

Variable	Mean	Median	Standard deviation	Max.	Min.	Number of transactions
AssetTranRatio	0.7952	0.0825	6.4698	221.7391	0.0001	1632
Sequence2	0.8817	0	1.6721	13	0	1632
ROA	-0.2203	-0.0188	0.9427	4.5000	-20.0000	1632
EPS	-0.0641	-0.0160	4.6002	23.7123	-153.6986	1580
StockReturn	0.0015	-0.0058	0.1880	1.1528	-0.7436	1412
Leverage	0.3246	0.3175	0.2247	0.9853	0.0061	1512
IndParticipant2	229.3553	56	257.9173	1054	1	1545
IndParticipant3	179.0736	38	213.4694	909	1	1290
IndParticipant4	191.5396	96	180.4213	621	1	858
IndConcentration2	0.2147	0.1042	0.2121	1.0000	0.0085	1545
IndConcentration3	0.2333	0.1620	0.2105	1.0000	0.0162	1290
IndConcentration4	0.2004	0.1460	0.1847	1.0000	0.0162	858
IndLeverage2	0.3104	0.3409	0.1591	0.8932	0.0064	1506
IndLeverage3	0.3229	0.3452	0.1593	0.8948	0.0064	1224
IndLeverage4	0.3986	0.3748	0.1437	0.9701	0.0490	790
GDPGrowth	0.0203	0.0253	0.0175	0.0677	-0.0431	1632

Table 2, Panel C: This panel reports summary statistics (means, medians, standard deviations, and maximum and minimum values) for variables in the subsample of 82 asset transactions.

Variable	Mean	Median	Standard deviation	Max.	Min.	Number of transactions
AssetTranRatio	0.2411	0.0443	0.7594	5.3934	0.0005	82
DualClassDegree	2.7130	1.1296	3.2072	10.9221	0.0403	82
FamilyOwnership	0.1306	0.0067	0.1812	0.8127	0	82
Sequence2	1.6829	1	2.6428	12	0	82
ROA	-0.0471	0.0520	0.5465	0.2576	-4.4857	82
EPS	1.0502	0.7553	1.3805	4.9925	-2.2890	82
StockReturn	0.0164	0.0076	0.1019	0.3749	-0.1923	55
Leverage	0.5078	0.5272	0.1673	0.8750	0.1000	82
IndParticipant2	230.4568	188	254.0158	976	1	81
IndParticipant3	93.0141	38	163.7255	828	1	71
IndParticipant4	44.3538	27	70.2456	377	5	65
IndConcentration2	0.1033	0.0472	0.1390	1.0000	0.0122	81
IndConcentration3	0.1511	0.0841	0.1477	1.0000	0.0197	71
IndConcentration4	0.1896	0.1885	0.1173	0.6881	0.0370	65
IndLeverage2	0.4446	0.4702	0.1221	0.6285	0.0692	71
IndLeverage3	0.4323	0.4244	0.1406	0.7144	0.0692	55
IndLeverage4	0.5110	0.4892	0.1801	0.9658	0.1995	51
GDPGrowth	0.0233	0.0253	0.0178	0.0512	-0.0271	82

Table 3. This table shows the results of whether the relative transaction values differ for single- and dual-class asset purchasers for the full sample of 1,632 asset transactions.

A full sample of 1632 asset transactions													
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
ClassDummy	-0.583	-0.418	-0.397	-0.571	-0.554	0.153	0.144	-0.512	-0.519	0.150	0.141	-0.563	-0.569
	(-0.8)	(-0.57)	(-0.54)	(-0.61)	(-0.59)	(0.83)	(0.78)	(-0.5)	(-0.51)	(0.81)	(0.76)	(-0.55)	(-0.55)
Sequence1		-0.159		-0.385		-0.073		-0.139		-0.069		-0.110	
		(-0.47)		(-1.01)		(-0.81)		(-0.32)		(-0.76)		(-0.25)	
Sequence2			-0.051		-0.065		-0.046*		-0.037		-0.046*		-0.029
			(-0.53)		(-0.62)		(-1.88)		(-0.27)		(-1.85)		(-0.22)
ROA		-1.009***	-1.007***	-1.009***	-1.013***	-0.277**	-0.267**	-0.755**	-0.754**	-0.278**	-0.267**	-0.755**	-0.755**
		(-3.94)	(-3.93)	(-3.60)	(-3.61)	(-2.40)	(-2.32)	(-2.41)	(-2.41)	(-2.41)	(-2.32)	(-2.41)	(-2.41)
EPS				-0.006	-0.007								
				(-0.15)	(-0.18)								
StockReturn				-0.411	-0.423								
				(-0.4)	(-0.42)								
Leverage		0.807	0.795	1.344	1.276	-0.414*	-0.424*	2.305*	2.292*	-0.418*	-0.427*	2.212*	2.202*
		(1.08)	(1.07)	(1.58)	(1.51)	(-1.69)	(-1.73)	(1.94)	(1.93)	(-1.70)	(-1.75)	(1.86)	(1.85)
IndParticipant3								-0.001	-0.001			-0.001	-0.001
								(-0.61)	(-0.59)			(-0.74)	(-0.72)
IndParticipant4						0.001***	0.001***			0.001***	0.001***		
						(2.68)	(2.70)			(2.65)	(2.67)		
IndConcentration3								-0.490	-0.483			-0.589	-0.584
								(-0.32)	(-0.31)			(-0.38)	(-0.38)
IndConcentration4						0.135	0.099			0.132	0.097		
						(0.37)	(0.27)			(0.36)	(0.27)		
IndLeverage3								-3.134*	-3.116*			-3.264*	-3.250*
								(-1.69)	(-1.68)			(-1.76)	(-1.75)
IndLeverage4						-0.082	-0.051			-0.087	-0.057		
						(-0.22)	(-0.14)			(-0.24)	(-0.16)		
GDPGrowth										1.601	1.479	15.981	16.025

										(0.57)	(0.53)	(1.28)	(1.28)
F Value	0.63	4.22***	4.23***	2.75**	2.64**	3.67***	4.10***	1.90*	1.90*	3.25***	3.62***	1.87*	1.87*
Adj R-Sq	-0.0002	0.0085	0.0085	0.0082	0.0077	0.0241	0.0278	0.0055	0.0055	0.0232	0.0269	0.0061	0.0061
Observations	1632	1512	1512	1265	1265	759	759	1135	1135	759	759	1135	1135

Note: The values of the t-statistics are reported in the parentheses below the coefficient estimates.
*, ** and *** indicate significance at the 0.1, 0.05 and 0.01 levels, respectively.

Table 4. This table reports the results of whether the relative transaction values differ for single- and dual-class asset purchasers for the four subsamples based on whether purchasers are family-controlled or not and whether the threshold used to identify family-controlled firms is 5% or 10%.

Table 4, Panel A: This panel shows the results for the subsample of family-controlled buyers based on a 5% threshold.

A sample of asset transactions by family-controlled purchasers (5% as the threshold)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ClassDummy	0.223*	0.528**	0.519**	0.670***	0.674***	0.576**	0.569**	0.700***	0.710***
	(1.93)	(2.26)	(2.21)	(2.77)	(2.76)	(2.50)	(2.44)	(2.95)	(2.95)
Sequence1		-0.151		-0.069		-0.160		-0.088	
		(-0.93)		(-0.41)		(-0.99)		(-0.53)	
Sequence2			-0.027		-0.006		-0.022		-0.004
			(-0.76)		(-0.17)		(-0.65)		(-0.11)
ROA		0.457	0.458			0.356	0.352		
		(1.19)	(1.19)			(0.94)	(0.92)		
EPS				-0.144	-0.150			-0.130	-0.142
				(-1.34)	(-1.38)			(-1.23)	(-1.33)
Leverage		-0.389	-0.469	-0.297	-0.333	-0.334	-0.424	-0.251	-0.297
		(-0.82)	(-1.01)	(-0.63)	(-0.71)	(-0.72)	(-0.93)	(-0.54)	(-0.65)
IndParticipant4		-0.001	-0.001	-0.001	-0.001	-0.001*	-0.001*	-0.001	-0.001
		(-1.53)	(-1.47)	(-1.29)	(-1.27)	(-1.73)	(-1.66)	(-1.52)	(-1.49)
IndConcentration4		-0.590	-0.522	-0.767	-0.728	-0.671	-0.583	-0.826	-0.771
		(-0.87)	(-0.78)	(-1.13)	(-1.08)	(-1.01)	(-0.89)	(-1.24)	(-1.17)
IndLeverage4		-1.705**	-1.579**	-1.410**	-1.352*	-1.900***	-1.772***	-1.635**	-1.558**
		(-2.59)	(-2.39)	(-2.02)	(-1.97)	(-2.90)	(-2.69)	(-2.35)	(-2.29)
GDPGrowth						-9.473*	-9.130*	-9.725**	-9.561*
						(-1.93)	(-1.85)	(-2.00)	(-1.97)
F Value	3.74*	2.86**	2.81**	2.92***	2.90***	3.05***	2.96***	3.16***	3.11***
Adj R-Sq	0.0182	0.1341	0.1311	0.1381	0.1365	0.1636	0.1574	0.1705	0.1675
Observations	149	85	85	85	85	85	85	85	85

Note: The values of the t-statistics are reported in the parentheses below the coefficient estimates.
*, ** and *** indicate significance at the 0.1, 0.05 and 0.01 levels, respectively.

Table 4, Panel B: This panel shows the results for the subsample of family-controlled buyers based on a 10% threshold.

A sample of asset transactions by family-controlled purchasers (10% as the threshold)					
	(1)	(2)	(3)	(4)	(5)
ClassDummy	0.228*	0.521**	0.507**	0.582**	0.569**
	(1.87)	(2.09)	(2.02)	(2.36)	(2.28)
Sequence1		-0.146		-0.153	
		(-0.84)		(-0.89)	
Sequence2			-0.025		-0.020
			(-0.68)		(-0.55)
ROA		0.458	0.458	0.348	0.341
		(1.15)	(1.14)	(0.88)	(0.85)
Leverage		-0.391	-0.467	-0.322	-0.407
		(-0.79)	(-0.96)	(-0.66)	(-0.85)
IndParticipant4		-0.001	-0.001	-0.001*	-0.001*
		(-1.5)	(-1.49)	(-1.68)	(-1.67)
IndConcentration4		-0.631	-0.583	-0.768	-0.705
		(-0.81)	(-0.75)	(-1)	(-0.92)
IndLeverage4		-1.810**	-1.687**	-2.031***	-1.910***
		(-2.57)	(-2.39)	(-2.89)	(-2.70)
GDPGrowth				-9.584*	-9.262*
				(-1.85)	(-1.77)
F Value	3.51*	2.69**	2.65**	2.86***	2.78***
Adj R-Sq	0.0184	0.1319	0.1291	0.1604	0.1546
Observations	135	79	79	79	79

Note: The values of the t-statistics are reported in the parentheses below the coefficient estimates.
*, ** and *** indicate significance at the 0.1, 0.05 and 0.01 levels, respectively.

Table 4, Panel C: This panel shows the results for the subsample of nonfamily-controlled buyers based on a 5% threshold.

A sample of asset transactions by nonfamily-controlled purchasers (5% as the threshold)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ClassDummy	-0.740	-0.145	-0.152	-0.703	-0.710	-0.148	-0.154	-0.751	-0.757
	(-0.71)	(-0.58)	(-0.61)	(-0.52)	(-0.52)	(-0.6)	(-0.62)	(-0.55)	(-0.55)
Sequence1		-0.063		-0.131		-0.056		-0.096	
		(-0.63)		(-0.27)		(-0.56)		(-0.2)	
Sequence2			-0.047*		-0.040		-0.045		-0.030
			(-1.66)		(-0.26)		(-1.6)		(-0.2)
ROA		-0.314**	-0.304**	-0.763**	-0.763**	-0.315***	-0.305**	-0.764**	-0.764**
		(-2.58)	(-2.50)	(-2.30)	(-2.30)	(-2.59)	(-2.51)	(-2.31)	(-2.31)
Leverage		-0.452*	-0.457*	2.569*	2.563*	-0.458*	-0.461*	2.471*	2.466*
		(-1.67)	(-1.69)	(1.96)	(1.95)	(-1.69)	(-1.70)	(1.88)	(1.88)
IndParticipant3				-0.001	-0.001			-0.001	-0.001
				(-0.54)	(-0.52)			(-0.68)	(-0.66)
IndParticipant4		0.001***	0.001***			0.001***	0.001***		
		(2.96)	(2.98)			(2.90)	(2.92)		
IndConcentration3				-0.423	-0.416			-0.564	-0.560
				(-0.25)	(-0.25)			(-0.33)	(-0.33)
IndConcentration4		0.249	0.215			0.241	0.208		
		(0.62)	(0.54)			(0.6)	(0.52)		
IndLeverage3				-3.293	-3.282			-3.476*	-3.468*
				(-1.62)	(-1.61)			(-1.71)	(-1.70)
IndLeverage4		0.137	0.155			0.122	0.141		
		(0.34)	(0.39)			(0.3)	(0.35)		
GDPGrowth						2.509	2.316	18.528	18.551
						(0.81)	(0.75)	(1.35)	(1.36)
F Value	0.51	3.88***	4.23***	1.78*	1.78*	3.47***	3.77***	1.79*	1.79*
Adj R-Sq	-0.0003	0.0291	0.0325	0.0053	0.0053	0.0286	0.0318	0.0061	0.0061
Observations	1482	674	674	1033	1033	674	674	1033	1033

Note: The values of the t-statistics are reported in the parentheses below the coefficient estimates.
*, ** and *** indicate significance at the 0.1, 0.05 and 0.01 levels, respectively.

Table 4, Panel D: This panel shows the results for the subsample of nonfamily-controlled buyers based on a 10% threshold.

A sample of asset transactions by nonfamily-controlled purchasers (10% as the threshold)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ClassDummy	-0.747	-0.143	-0.150	-0.693	-0.700	-0.146	-0.153	-0.737	-0.742
	(-0.72)	(-0.58)	(-0.61)	(-0.51)	(-0.52)	(-0.59)	(-0.62)	(-0.54)	(-0.55)
Sequence1		-0.060		-0.131		-0.053		-0.097	
		(-0.61)		(-0.28)		(-0.54)		(-0.21)	
Sequence2			-0.046*		-0.038		-0.045		-0.029
			(-1.65)		(-0.25)		(-1.59)		(-0.19)
ROA		-0.315***	-0.305**	-0.757**	-0.757**	-0.317***	-0.307**	-0.758**	-0.758**
		(-2.60)	(-2.52)	(-2.31)	(-2.30)	(-2.61)	(-2.53)	(-2.31)	(-2.31)
Leverage		-0.449*	-0.454*	2.521*	2.514*	-0.454*	-0.458*	2.423*	2.417*
		(-1.66)	(-1.69)	(1.94)	(1.94)	(-1.68)	(-1.70)	(1.86)	(1.86)
IndParticipant3				-0.001	-0.001			-0.001	-0.001
				(-0.55)	(-0.53)			(-0.68)	(-0.67)
IndParticipant4		0.001***	0.001***			0.001***	0.001***		
		(2.97)	(2.98)			(2.91)	(2.92)		
IndConcentration3				-0.423	-0.416			-0.556	-0.551
				(-0.26)	(-0.25)			(-0.33)	(-0.33)
IndConcentration4		0.237	0.202			0.230	0.196		
		(0.6)	(0.51)			(0.58)	(0.5)		
IndLeverage3				-3.251	-3.241			-3.435*	-3.427*
				(-1.63)	(-1.62)			(-1.71)	(-1.71)
IndLeverage4		0.132	0.150			0.118	0.136		
		(0.33)	(0.38)			(0.3)	(0.34)		
GDPGrowth						2.440	2.246	18.163	18.189
						(0.79)	(0.73)	(1.34)	(1.34)
F Value	0.52	3.91***	4.26***	1.79*	1.79*	3.50***	3.79***	1.79*	1.79*
Adj R-Sq	-0.0003	0.0291	0.0325	0.0052	0.0052	0.0286	0.0318	0.0060	0.0060
Observations	1497	680	680	1045	1045	680	680	1045	1045

Note: The values of the t-statistics are reported in the parentheses below the coefficient estimates.
*, ** and *** indicate significance at the 0.1, 0.05 and 0.01 levels, respectively.

Table 5. This table presents the results when examining the association between the degree of the dual class structure and the relative transaction value for a sample of 82 asset purchase transactions confined to dual-class purchasers.

A sample of 82 asset transactions by dual-class purchasers								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DualClassDegree	0.060**	0.115**	0.119***	0.040	0.046	0.133***	0.147***	0.050
	(2.35)	(2.68)	(2.76)	(0.92)	(1.02)	(3.01)	(3.27)	(1.17)
Sequence1		-0.093		-0.055		-0.173		-0.117
		(-0.38)		(-0.24)		(-0.69)		(-0.5)
Sequence2			-0.073		-0.054		-0.154	
			(-0.71)		(-0.52)		(-1.39)	
ROA		-0.230	-0.228	-0.181	-0.186	-0.305	-0.325	-0.239
		(-1.17)	(-1.17)	(-0.91)	(-0.94)	(-1.52)	(-1.64)	(-1.2)
Leverage		-0.480	-0.470	-0.579	-0.614	-0.636	-0.661	-0.501
		(-0.57)	(-0.56)	(-0.67)	(-0.71)	(-0.75)	(-0.8)	(-0.59)
IndParticipant3				-0.001*	-0.001*			-0.001*
				(-1.84)	(-1.84)			(-1.80)
IndParticipant4		-0.002	-0.002			-0.003	-0.003*	
		(-1.15)	(-1.18)			(-1.51)	(-1.68)	
IndConcentration3				-3.666*	-3.550*			-4.259**
				(-2.01)	(-1.94)			(-2.32)
IndConcentration4		0.124	0.172			-0.065	-0.022	
		(0.11)	(0.15)			(-0.06)	(-0.02)	
IndLeverage3				-2.940**	-2.741**			-3.329***
				(-2.44)	(-2.15)			(-2.75)
IndLeverage4		-2.450***	-2.342***			-2.488***	-2.274***	
		(-3.10)	(-2.90)			(-3.18)	(-2.89)	
GDPGrowth						-10.167	-13.244*	-10.743
						(-1.44)	(-1.79)	(-1.56)
F Value	5.54**	2.89**	2.97**	2.54**	2.58**	2.85**	3.13***	2.59**
Adj R-Sq	0.0531	0.2093	0.2158	0.1663	0.1701	0.2286	0.2540	0.1908
Observations	82	51	51	55	55	51	51	55

Note: The values of the t-statistics are reported in the parentheses below the coefficient estimates.
*, ** and *** indicate significance at the 0.1, 0.05 and 0.01 levels, respectively.

Table 6. This table presents the results of examining the association between the degree of the dual class structure and the relative transaction value when excluding purchasers who have certain shares with no votes per share.

A sample of asset transactions by dual-class purchasers (Exclude purchasers who have certain shares with no votes per share)												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
DualClassDegree	0.294***	0.326***	0.248***	0.274***	0.222***	0.240***	0.294***	0.338***	0.259***	0.308***	0.238***	0.280***
	(3.53)	(3.87)	(3.47)	(3.82)	(2.95)	(2.98)	(3.48)	(4.01)	(3.68)	(4.46)	(3.22)	(3.56)
Sequence1	-0.554		-0.609*		-0.655		-0.562		-0.649*		-0.721*	
	(-1.4)		(-1.81)		(-1.67)		(-1.4)		(-1.96)		(-1.88)	
Sequence2		-0.324*		-0.333**		-0.291		-0.377**		-0.428***		-0.397**
		(-1.94)		(-2.33)		(-1.66)		(-2.18)		(-3.04)		(-2.29)
ROA	-0.459*	-0.471*	-0.295	-0.311	-0.325	-0.365	-0.516*	-0.581**	-0.416	-0.490**	-0.448	-0.538**
	(-1.84)	(-1.95)	(-1.18)	(-1.28)	(-1.25)	(-1.4)	(-1.90)	(-2.24)	(-1.62)	(-2.04)	(-1.7)	(-2.07)
Leverage	-2.047	-1.803	-1.732	-1.466	-1.817	-1.735	-2.164	-2.026	-1.650	-1.310	-1.675	-1.547
	(-1.63)	(-1.51)	(-1.5)	(-1.31)	(-1.45)	(-1.38)	(-1.68)	(-1.68)	(-1.45)	(-1.24)	(-1.37)	(-1.3)
IndParticipant2			0.001	0.001					0.001	0.001		
			(0.44)	(0.44)					(1.02)	(1.39)		
IndParticipant3					-0.001	-0.001					0.001	0.001
					(-0.59)	(-0.62)					(-0.04)	(0.15)
IndParticipant4	-0.002	-0.002					-0.002	-0.002				
	(-0.77)	(-0.75)					(-0.72)	(-0.68)				
IndLeverage2			-4.198**	-3.892**					-3.788**	-3.313**		
			(-2.58)	(-2.50)					(-2.35)	(-2.24)		
IndLeverage3					-3.875**	-3.009*					-4.045**	-3.034*
					(-2.45)	(-1.92)					(-2.63)	(-2.05)
IndLeverage4	-3.006***	-2.835***					-2.789**	-2.395**				
	(-3.00)	(-2.92)					(-2.59)	(-2.30)				
GDPGrowth							-10.406	-19.732	-23.951	-34.835**	-26.793	-35.095*
							(-0.59)	(-1.14)	(-1.55)	(-2.32)	(-1.59)	(-2.05)
F Value	3.41**	3.93***	2.92**	3.42***	2.87**	2.86**	2.90**	3.59***	2.95**	4.09***	2.96**	3.35**
Adj R-Sq	0.3256	0.3692	0.2280	0.2715	0.2539	0.2532	0.3068	0.3770	0.2594	0.3568	0.2935	0.3324
Observations	31	31	40	40	34	34	31	31	40	40	34	34

Note: The values of the t-statistics are reported in the parentheses below the coefficient estimates.
*, ** and *** indicate significance at the 0.1, 0.05 and 0.01 levels, respectively.

Table 7. This table reveals the results of regressing *FamilyDummy* and *DirectorDummy* on relative transaction values for a sample of 82 asset purchase transactions confined to dual-class purchasers.

A sample of 82 asset transactions by dual-class purchasers					
	(1)	(2)	(3)	(4)	(5)
FamilyDummy	0.916***	0.819***	0.817**	0.865***	0.853***
	(2.75)	(2.70)	(2.68)	(2.91)	(2.87)
DirectorDummy	-0.633*	-0.596*	-0.590*	-0.693**	-0.672**
	(-1.70)	(-1.95)	(-1.94)	(-2.30)	(-2.24)
Sequence1	0.102	0.104		0.062	
	(0.41)	(0.46)		(0.28)	
Sequence2			0.038		-0.001
			(0.4)		(-0.01)
ROA	-0.188	-0.197	-0.194	-0.239	-0.236
	(-0.99)	(-1.04)	(-1.02)	(-1.28)	(-1.27)
Leverage		-0.410	-0.421	-0.142	-0.146
		(-0.48)	(-0.49)	(-0.17)	(-0.17)
IndParticipant3		-0.001	-0.001	-0.001	-0.001
		(-1.39)	(-1.39)	(-1.37)	(-1.37)
IndParticipant4	-0.001				
	(-0.54)				
IndConcentration3		-2.767*	-2.804*	-3.581**	-3.662**
		(-1.68)	(-1.71)	(-2.15)	(-2.20)
IndConcentration4	-0.285				
	(-0.26)				
IndLeverage3		-2.805***	-2.869***	-3.375***	-3.381***
		(-2.76)	(-2.78)	(-3.26)	(-3.25)
IndLeverage4	-1.876**				
	(-2.44)				
GDPGrowth				-12.022*	-12.228*
				(-1.87)	(-1.86)
F Value	2.96**	3.38***	3.37***	3.55***	3.54***
Adj R-Sq	0.2150	0.2607	0.2597	0.2986	0.2973
Observations	51	55	55	55	55

Note: The values of the t-statistics are reported in the parentheses below the coefficient estimates.

*, ** and *** indicate significance at the 0.1, 0.05 and 0.01 levels, respectively.

Table 8. This table reports the results of regressing *FamilyOwnership* and *DirectorDummy* on the relative transaction values for a sample of 82 asset purchase transactions confined to dual-class purchasers.

A sample of 82 asset transactions by dual-class purchasers							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
FamilyOwnership	3.107***	3.234***	3.587***	3.591***	3.187***	3.270***	3.267***
	(8.58)	(8.94)	(6.93)	(6.97)	(8.44)	(6.41)	(6.43)
DirectorDummy	-0.421***	-0.489***	-0.691***	-0.677***	-0.371**	-0.597***	-0.572**
	(-3.03)	(-3.46)	(-2.92)	(-2.88)	(-2.18)	(-2.76)	(-2.67)
Sequence1	-0.012	-0.031	0.007			0.024	
	(-0.1)	(-0.25)	(0.04)			(0.14)	
Sequence2				-0.048	-0.035		-0.040
				(-0.59)	(-0.6)		(-0.54)
ROA	-0.245**	-0.253**	-0.269*	-0.269*	-0.221*	-0.251*	-0.250*
	(-2.04)	(-2.15)	(-1.86)	(-1.87)	(-1.72)	(-1.73)	(-1.73)
Leverage	-0.333	-0.108			-0.060	0.234	0.231
	(-0.78)	(-0.25)			(-0.12)	(0.36)	(0.35)
IndParticipant2	0.001	0.001			0.001		
	(1.23)	(1.61)			(1.15)		
IndParticipant3						0.001	0.001
						(-0.24)	(-0.22)
IndParticipant4			0.001	-0.001			
			(-0.33)	(-0.44)			
IndConcentration2	0.384	0.425					
	(0.72)	(0.81)					
IndConcentration3						-0.900	-1.009
						(-0.64)	(-0.72)
IndConcentration4			0.315	0.233			
			(0.38)	(0.28)			
IndLeverage2					-0.841		
					(-1.24)		
IndLeverage3						-1.360	-1.306
						(-1.51)	(-1.45)
IndLeverage4			-0.282	-0.203			
			(-0.44)	(-0.31)			
GDPGrowth		-7.343*	-7.967	-8.994*	-6.656	-9.797*	-10.523**
		(-1.90)	(-1.54)	(-1.68)	(-1.57)	(-1.94)	(-2.04)
F Value	11.76***	11.11***	9.01***	9.13***	10.27***	8.77***	8.85***
Adj R-Sq	0.4849	0.5027	0.5618	0.5653	0.5144	0.5643	0.5669
Observations	81	81	51	51	71	55	55

Note: The values of the t-statistics are reported in the parentheses below the coefficient estimates.

*, ** and *** indicate significance at the 0.1, 0.05 and 0.01 levels, respectively.