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Agency Costs or Accrual Quality: What Do Investors Care More About When Valuing A Dual Class Firm?

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Abstract

We study the effect of ownership structure on the informativeness of a firm's earnings as capitalized in stock prices and returns. We hypothesize that informativeness of earnings is decreasing in dual class ownership structure due to purported higher agency costs at dual class firms compared to their single class counterparts even though dual class firms have relatively higher accrual quality. We find evidence, consistent with our expectations, that investors care more about agency costs than the quality of accruals in evaluating the earnings of dual class firms. Specifically, we find that current annual returns of the firm are negatively associated with dual class ownership structure and that earnings informativeness and predictability are decreasing in dual class ownership of the firm.

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1. Introduction

Despite their prominence around the world, only six percent of companies in the United States have a dual class ownership structure.[1] Under this ownership scheme, a firm issues multiple classes of stock (hereafter firms issuing multiple classes of stock are referred to as dual class firms while firms issuing only single class of stock are referred to as single class firms) with differential voting and cash flow rights. For example, one class of stock might have ten votes per share compared to only one vote per share for the other class of stock. This structure results in superior voting rights for one class of shareholders vis-à-vis the other class. Typically, shares with superior voting rights are offered to the founders, their families, and the executives of the company. Shares with inferior voting rights, on the other hand, are sold to the general public. For example, after a recent stock split in April 2014, Google Incorporation has three classes of common stock outstanding. Class A share of Google has only one vote per share, Class B has ten votes per shares and Class C has no voting rights. Class B share with superior voting rights is not traded publicly and is owned by Google insiders only, controlling about 56% of the votes.

It can be argued that since dual class firm managers hold a majority of voting rights, it is virtually impossible to remove them. Single class firm managers, on the other hand, can easily be removed due to poor performance of the firm or if they take actions that are not optimal in the eyes of the stockholders. Accordingly, it is argued that single class firm managers will be more likely to "manage" earnings to meet or beat expected earnings forecasts than dual class firm managers who lack this motivation as they do not have similar control concerns. This argument would imply better quality of accruals at dual class firms (and less earnings management) relative to accrual quality at single class firms. Recent studies by Nguyen and Xu (2010), and Arugaslan et al. (2014) indicate that this is in fact the case. Dual class firms have relatively better accrual quality than single class firms. Better quality of accruals would help reduce the information asymmetry and increase the informativeness of reported earnings as well as improve the predictability of future earnings.

Dual class firms are also believed to have greater agency problems than single class firms. Finance theory states that entrenched insiders at dual class firms suffer disproportionately lower economic losses as a consequence of their sub-optimal decisions resulting in greater agency problems. Increased agency costs stem from higher information asymmetry and also imply that there would be a reduction in the informativeness of earnings.

We thank Paul Gompers, Joy Ishii, and Andrew Metrick for generously sharing their data on dual-class companies.

[1] Gompers et al. (2009) report that 6 percent of all Compustat firms have dual-class ownership structure.

Evidence from prior research also confirms higher rates of agency problems at firms with multiple classes of stock as compared to firms with only one class of stock (Gompers, Ishii, and Metrick, 2010; Masulis, Wang, and Xie, 2009).

Theory predicts a negative association between agency costs and earnings informativeness in contrast to a positive association between accrual quality and earnings informativeness. A special case of dual class firms helps us in determining what is valued more by the investors – greater agency costs of dual class firms or the higher accrual quality compared to single class firms. Dual class firms are purported to have relatively higher agency conflicts (costs) but better accrual quality than the single class firms.

In this study we examine the effect of ownership structure on the stock market's valuation of a firm's earnings as captured by earnings response coefficients (ERCs). To do this we examine the effect of ownership structure on the ERC of prior, current and future earnings of sample firms. Since the accrual quality of dual-class firms is better than the accrual quality of single class firms, it is possible that their earnings are relatively more informative to investors and viewed positively by them. On the other hand, we also believe that agency costs affect the overall information environment of the firm and therefore, should be considered to be more important by investors when valuing the firm's equity. Our results confirm that investors put more weight on higher agency costs and therefore, ERCs of our sample firms are decreasing in the dual class ownership structure.

We also examine the effect of divergence between insider voting rights and insider cash flow rights on the ERCs. We predict that firms with greater divergence between insider voting rights and cash flow rights relatively have higher agency costs and therefore, will experience reduced informativeness of earnings as reflected in earnings-returns association. We find weak evidence in support of this prediction. Firms with greater divergence have lower ERCs.

Overall, in this paper, we study the ERCs to test whether investors put relatively more weight on potential agency costs or on better accrual quality when valuing dual class companies. To our knowledge, this is the first study to do so. By analyzing the effect of ownership structure on the determination of ERCs, we not only contribute to the literature on the valuation of dual class companies, but also shed light on the earnings response process of the investors.

The results of this study help us explain why such multiple class ownership structure is not prevalent in the United States. The rest of the paper is organized as follows: Section 2 summarizes the relevant literature and motivates the hypotheses. Section 3 describes the earnings responsiveness measure used in the study and section 4 provides the sample selection process and descriptive statistics of the data. Section 5 discusses the methodology used to test the hypotheses and also presents test results. Section 6 concludes the paper.

2. Literature Review and Hypotheses Development

2.1. Ownership Structure and Firm Valuation

Corporate governance literature consists of a heated debate on the optimal ownership structure. Some researchers maintain that dual class shares encourage investment in firm-specific human capital and overall innovative activity (DeAngelo and DeAngelo (1985), Taylor and Whittred (1998)). Others argue that insiders should maintain control if it is costly to communicate information about investment opportunities or managerial performance to outside investors (Alchian and Demsetz (1972), Fama and Jensen (1983)). Consistent with these arguments, Chemmanur and Yawen (2012) show that dual class capital structure would be optimal for talented managers with high near-term uncertainty projects.

On the contrary, starting with Jensen and Meckling (1976) many researchers have argued that an ownership structure that entrenches managers will result in higher potential agency problems. Grossman and Hart (1988) and Harris and Raviv (1988) analyze security-voting structures theoretically and show that one share-one vote not only makes sure that the best management team is chosen but also maximizes firm value when only one of the parties in a control contest has significant private benefits of control.

Consistent with agency cost literature, Jarrell and Poulsen (1988) and Dann and DeAngelo (1988) report evidence that U.S. dual class recapitalizations are received poorly by the investors. Similarly, Jog, Srivastava, and Panangipalli (1996) and Mikkelson and Partch (1994) document that operating performance is worse following dual class recapitalizations in Canada and US.

More recently, Gompers et al. (2010) analyze the characteristics of a comprehensive sample of dual-class firms in the U.S. They find a negative relationship between insiders' voting rights and firm value, and a positive relationship between insiders' cash flow rights and firm value. The difference between insiders' voting rights and cash flow rights, the wedge, also has a negative impact on firm value. Their results are consistent with the hypothesis that dual class companies are more prone to moral hazard problems and higher agency costs. They conclude that dual class insiders value private benefits of control a lot more than the losses they suffer along with the remaining shareholders as a result of their poor decisions. Subsequently, Masulis et al. (2009) analyze the relationship between the wedge and private benefits of control. They find that larger wedge decreases the value of corporate cash holdings to outside investors, increases CEO compensation and the destruction of shareholder value vis-à-vis empire-building acquisitions and expenditures. Greater agency problems at dual class firms may cause higher information asymmetry and decrease the informativeness of earnings. Additionally, higher information asymmetry often leads to higher cost of equity capital (Botosan, 1997; Leuz and Verrecchia, 2000, Herrmann and Saini,

2013). From this we can infer that dual class firms have higher agency costs and greater information asymmetry relative to single class firms and, therefore, have relatively less informative and predictable earnings.

On the other hand, Nguyen and Xu (2010) and Arugaslan et al. (2014) find that dual class firms relative to single class firms have better accrual quality and tend to have less earnings management. Theory on estimation risk predicts lower forward-looking betas for the firms with better earnings quality which results in lowering the cost of equity of such firms (Klein and Bawa, 1976; Ogneva, 2012). Evidence from prior research suggests that higher accrual quality results in better valuation of firms, lower information risks and lower cost of equity capital (Francis et al., 2005; Core et al., 2008; Gray et al., 2009). Ogneva (2012) concludes that the accrual quality of a firm is a priced risk factor as reflected in the realized returns. From this we can infer that dual-class firms have better accrual quality which results in increased informativeness and predictability of earnings relative to single class firms.

2.2. Earnings Informativeness

Ever since the seminal study by Ball and Brown (1968), extant research has focused on the relationship between earnings and returns. For example, Easton and Harris (1991) find that earnings level and earnings changes simultaneously explain the annual returns. Warfield and Wild (1992) provide the evidence that accounting recognition of economic events affects the power of returns-earnings association. Likewise, Collins, Kothari, Shanken, and Sloan (1994) explain the low contemporaneous returns-earnings association found in prior research. They include future earnings variables and observe a substantial increase in the explanatory power of earnings with respect to current returns. Their results show that the lack of timeliness on the part of the accounting system is the reason for the low contemporaneous association. Overall, we can state that quality of accounting disclosures affects information environment of the firm and therefore, affects the association between returns and earnings.

The paper that is most relevant to our study is by Lundholm and Myers (2002) (hereafter LM). They investigate the extent to which firm disclosure activity affects the relationship between returns and earnings and find that corporate disclosure ratings are positively related to the amount of variation in current returns that are explained by future earnings news. They also report that past earnings are significant in explaining current returns for only firms with low levels of disclosure. The authors argue that firms make up for the lack of timeliness of current earnings by increasing their disclosure activity. Ettredge, Kwon, Smith, and Zarowin (2005, hereafter EKSZ) focus on the effect of SFAS 131 segment disclosure on the forward earnings response coefficient in the returns-earnings association. They follow the same regression model as LM (2002), but they use segment disclosure pre- and post- SFAS 131 as their disclosure metric rather than AIMR analysts' ratings. Our model is also based on a

similar regression model with the ownership structure being tested as having an effect on returns-earnings association.

In summary, prior studies on effects of ownership structure and earnings informativeness suggest the following – firstly, the ownership structure is associated with agency costs as well as accrual quality. Specifically dual class firms have relatively greater agency costs but also have relatively better accrual quality than single class firms. Secondly, agency costs and accrual quality both affect the information environment of the firm. Greater agency costs result in poor information environment while higher accrual quality results in better information environment. Thirdly, the quality of information environment is related to the informativeness and predictability of the earnings. Specifically, a poor information environment (greater agency costs) deteriorates the informativeness of earnings while a better information environment (better accrual quality) improves the informativeness of earnings. Investors' valuation of the firm puts a price on both the agency costs and the accrual quality of the firm. These conclusions lead us to an interesting question of what is valued more by the investors – the agency costs or the accrual quality of a firm?.

We expect that agency costs affect the overall information environment of the firm and hence are more dominant in the valuation of earnings. We hypothesize that with increase in agency costs, the informativeness of earnings will go down as reflected in returns of the firm. Hence, our three hypotheses based on the earnings-returns regression model in LM (2002) are as follows:

H_{1a}: Future earnings response coefficient (FERC) is decreasing in dual class ownership structure,

H_{1b}: Contemporaneous earnings response coefficient is decreasing in dual class ownership structure.

H_{1c}: Prior period earnings response coefficient is decreasing in dual class ownership structure.

As discussed earlier, Masulis et al. (2009) find greater agency problems at the firms with greater divergence between insiders' voting rights and cash flow rights as measured by *WEDGE*. Following them we further hypothesize that firms with greater divergence between insiders' voting rights and cash flow rights (higher *WEDGE*) will experience reduced informativeness of earnings.

H_2: ERCs are decreasing in *WEDGE*.

3. Sample and Data

We document our sample selection process in Table 1. We begin with a total of 15,360 firms (92,240 firm-years) for the period 1994-2002[2] covered on Compustat-CRSP merged database. From this we delete 5,855 firms for which earnings or returns data is missing. We further truncate the data for earnings and returns at 1 percent and 99 percent that leads to deletion of 316 firms (3,771 firm-years). Finally, we delete 1,197 firms that reported merger, acquisition, or divestiture during 1994-2002.[3] All firms on final sample are classified as either dual-class or single class. Dual-class firms include all firms with multi classes of stock. Our final sample includes 448 dual-class firms (1,685 firm-years) and 7,728 single-class firms (29,176 firm-years).

----------Insert Table 1 here----------

3.1. Descriptives and Variable Definitions

Table 2 shows descriptive statistics of our sample disaggregated into dual class sample and single class sample in panel A and B respectively. We also test for difference in means between dual class sample and single class sample. Results in panel A and B show that dual class firms have higher level of earnings in all periods (E_{t-1}, E_t, and E_{t+1}) compared to their single class counterparts. The t-test of difference in means shows that mean earnings of dual class firms are significantly different (higher) than earnings of single class firms in all periods. Also, we find that returns (R_t and R_{t+1}) of dual class firms are significantly different (lower) than returns of single class firms. In addition, we also compare the average asset size (*SIZE*) and market-to-book ratio (*MKT2BK*) of the two sample firms. We find that on average dual class firms are significantly larger than single class firms based on asset size. On the contrary, dual class firms have significantly lower market-to-book ratio than single class firms. We also find that mean (median) divergence of insider voting rights over insider cash flow rights (as measured by *WEDGE*[4]) for dual class sample[5] is 0.2293 (0.2159).

----------Insert Table 2 here----------

All the variables used in the study have been defined in the Exhibit 1. We use the GIM (2009) data to determine variables *IVOTE*, *ICF* and *WEDGE* where, *IVOTE* and *ICF* measure the insider control of voting rights and cash flow rights of the firm respectively. *WEDGE* measures the divergence in insider voting and cash flow rights.

----------Insert Exhibit 1 here----------

[2] We use the Gompers et al. (2009) dual class firm sample extending over the period 1994-2002.
[3] Following EKSZ (2005), we use Compustat annual data item "AQC" and "DO" to identify firms that experienced structural changes during the data year.
[4] Refer to Exhibit 1 for variable definition.
[5] By definition *WEDGE* = 0 for all single class firms.

4. Methodology and Results

We measure the informativeness and predictability of earnings by regressing earnings over current period returns for estimating the earnings response coefficient of prior period, current period and future period earnings. Our measure of earnings informativeness and predictability is based on Collins et al. (1994) model as modified by LM (2002) which reflects how much information about earnings (past, current, and future) is capitalized into stock price (EKSZ, 2005). LM estimate the levels form of the following regression:[6]

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \varepsilon_t \quad (1)$$

where,

R_t is annual stock return measured over the period beginning nine months prior to fiscal year end and ending three months after fiscal year end. E_{t-1}, E_t and E_{t+1} represent scaled earnings available to common shareholders during prior period, current period, and realized next period.[7]

Coefficient α_1 is response coefficient of prior period earnings and hypothesized to be negative. α_2 is contemporaneous earnings response coefficient and hypothesized to be positive. α_3 is future earnings response coefficients and hypothesized to be positive as well. Future period return (R_{t+1}) is also included in the model to mitigate the errors-in-variables bias which is introduced due to the inclusion of actual future earnings as an explanatory variable of current period returns (Collins et al., 1994; EKSZ, 2005).

We start with estimation of equation (1) to determine the earnings response coefficients on past, contemporaneous and future earnings. The results of estimation are reported in Table 3. These results are consistent with prior research. Using the sample of all firms, we find that prior period earnings as well as actual future returns are negatively (significantly) associated with current returns. While contemporaneous earnings and future earnings are positively (significantly) associated with current returns. We also test model (1) separately for dual class firms sample and single class firms sample and find similar results. However, the absolute size of the regression coefficients was smaller for dual class firms sample compared to the single class sample regression. This result provides us the initial indication that earnings informativeness as reflected by earnings response coefficient(s) is decreasing in dual ownership structure which may be due to the higher agency costs prevailing at such firms. To test the effect of information environment on earnings informativeness, we re-estimate equation (1) after dividing our all firm sample into samples of small and large firms.[8]

[6] LM (2002) also include future earnings and returns for periods (t+2) and (t+3). For parsimony reasons, following EKSZ (2005), we only include earnings and returns for one future period, (t+1).
[7] Refer to Exhibit 1 for variable definitions.
[8] Larger firms in general have better disclosures and higher analyst following thereby better information environment compared to their smaller counterparts.

Following EKSZ (2005), we define large firms as those that have revenues of at least $20 million in a sample year and smaller firms as those with revenues less than $20 million in any sample year. These results are also reported in Table 3. Larger firms have bigger (absolute size) earnings response coefficients than small firms. Specifically, future earnings response coefficient is large and significant for large firms while it small and insignificant in case of small firms. This indicates that future earnings information is embedded in current returns of firms with better information environment only.

----------Insert Table 3 here----------

Our goal is to examine the effect of ownership structure on the informativeness and predictability of the earnings. Therefore, next, we estimate equation (1) using pooled data of dual-class and single-class firms while controlling for the ownership structure and test for the effect of ownership structure on the informativeness of the earnings. For this, we add to equation (1) an indicator variable (*DUAL*) indicating the ownership structure of the sample firm and the interaction terms for the interaction of prior period, current period and future earnings with the type of ownership structure. This results in estimation of following two regression equations:

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \beta_0 DUAL + \beta_1 (DUAL * E_{t-1}) + \beta_2 (DUAL * E_t) + \beta_3 (DUAL * E_{t+1}) + \beta_4 (DUAL * R_{t+1}) + \varepsilon_t \quad (2)$$

where,

DUAL = 1 if sample firm is a dual class firm during the sample year; and = 0 if otherwise. Returns and earnings variables are defined as earlier in equation (1).

We estimate equation (2) in order to test the effect of dual class ownership structure on the earnings response coefficients. Specifically, we estimate equation (2) to test hypotheses H_{1a}, H_{1b} and H_{1c}. This helps us to determine if dual-class ownership structure mitigates the informativeness of earnings as capitalized in stock prices (current annual returns). In this equation we are interested in interaction of *DUAL* with three earnings variables, namely, E_{t-1}, E_t and E_{t+1}. If the coefficients on the three interaction terms (β_1, β_2 and β_3) are significant and opposite in sign to that of the coefficients on the three individual earnings variables (α_1, α_2 and α_3) respectively, then we can conclude that dual class ownership structure has a mitigating effect on the informativeness of the earnings. Results are shown in Table 4. With all firms data, we find that coefficient on future earnings (E_{t+1}) is positive and significant confirming the positive association between future earnings and current returns. However, the coefficient on the interaction term (*DUAL* * E_{t+1}) is negative and significant. This result supports our hypothesis H_{2a} that the positive association between future earnings and current returns is mitigated due to dual class ownership structure. Therefore, we can conclude that future earnings response coefficient indicating the informativeness and predictability of future

earnings is decreasing in dual class ownership structure. If the sample is disaggregated into small and large firms based on revenue, we find that this result is stronger and significant for large firms but not for small firms.

----------Insert Table 4 here----------

Similarly, we also find that for all firms current earnings (E_t) have a positive and significant association with current returns consistent with prior literature. However this association is mitigated due to dual class ownership structure because the coefficient (-0.1911) on interaction term ($DUAL * E_t$) is negative but not significant (p-value = 0.1448). Therefore, we don't find significant support for our hypothesis H_{2b} that informativeness of current earnings is decreasing in dual class ownerships structure. After disaggregating the sample into small and large firms based on revenue, we find that the coefficient on interaction term is significant (p-value = 0.0865) for small firms sample but not for large firms sample (p-value = 0.1612). From this we can conclude that small firms with dual class ownership structure experience a decrease in informativeness of contemporaneous earnings.

We also check for effect of ownership structure on the informativeness of prior period earnings. Using all firms sample we find the support in favor of hypothesis H_{2c}. The coefficient on E_{t-1} is negative and significant (p-value < .0001) while the coefficient on the interaction term ($DUAL * E_{t-1}$) is positive and marginally significant (p-value = 0.0890). Therefore, we can conclude that the informativeness of prior period earnings is decreasing in dual class ownership structure.

Overall, from results of equation (2) we can conclude that earnings informativeness is decreasing (rather than increasing) in dual class ownership structure. This can be attributed to the higher agency costs prevailing at the firms with dual class ownership structure. Dual class firms have higher accrual quality compared to their single class counterparts but it does not help increase the informativeness of earnings. In other words, higher accrual quality does not result in higher returns when the agency costs at a firm are high.

5. Additional Tests

In previous section we show that ERCs are decreasing in the dual class ownership structure. In this section, we do some additional tests by varying our main model. Firstly, we control for the divergence between insiders' voting rights and cash flow rights. Later we also control for firm characteristics that affect the timeliness, variability and predictability of the earnings and therefore, may affect the returns of the firm.

5.1 Divergence of Insiders' Voting Rights and Cash Flow Rights

Greater divergence of insiders' voting and cash flow rights as measured by excess of insiders' voting rights over the cash flow rights (*WEDGE*) is associated with higher agency conflicts (Masulis et al., 2009) but is also associated with higher accrual quality (Nguyen and

Xu, 2010). Therefore, we further test for the effect of divergence in voting and cash flow rights of the insiders on the earnings informativeness using the dual class sample. Specifically we use following model to test this effect:

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \beta_0 WEDGE + \beta_1 (WEDGE * E_{t-1}) + \beta_2 (WEDGE * E_t) + \beta_3 (WEDGE * E_{t+1}) + \beta_4 (WEDGE * R_{t+1}) + \varepsilon_t \quad (3)$$

where all variables are defined as in equation (1) and (2) and *WEDGE* is defined as excess of insiders' voting rights over the insiders' cash flow rights.

Results of estimation of equation (3) are reported in table 5. Using all firms sample we find that informativeness of prior period earnings (E_{t-1}) and contemporaneous earnings (E_t) is decreasing in excess of insiders' voting and cash flow rights. Coefficient on E_{t-1} is negative and significant (p-value < .0001) while coefficient on the interaction term (*WEDGE* * E_{t-1}) is positive and significant (p-value = 0.0143) indicating that negative association between prior period earnings and current annual returns is decreasing in greater divergence of insiders' voting and cash flow rights. Similarly, coefficient on E_t is positive and significant (p-value < .0001) while coefficient on the interaction term (*WEDGE* * E_t) is negative and marginally significant (p-value = 0.0910) indicating that positive association between current earnings and current annual returns is decreasing in the divergence of insiders' voting and cash flow rights. We do not find any significance on the effect of *WEDGE* on informativeness of future earnings of the firm. The coefficient on the interaction term (*WEDGE* * E_{t+1}) is negative (as expected) but not statistically significant (p-value = 0.3482). Within the dual-class sample we do not find any significant effect of *WEDGE* on the informativeness of earnings in all periods. Overall, these results provide marginal support to the hypothesis that investors weigh in the higher agency costs more than the higher accrual quality at dual class firms in pricing the stock.

We further analyze the effect of insiders' voting rights and insiders' cash flow rights on the association between earnings and returns. Specifically, we estimate following equation (5) using the dual class sample firms only:

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \beta_0 IVOTE + \beta_1 (IVOTE * E_{t-1}) + \beta_2 (IVOTE * E_t) + \beta_3 (IVOTE * E_{t+1}) + \beta_4 (IVOTE * R_{t+1}) + \gamma_0 ICF + \gamma_1 (ICF * E_{t-1}) + \gamma_2 (ICF * E_t) + \gamma_3 (ICF * E_{t+1}) + \varepsilon_t \quad (4)$$

These results are reported in table 6. We don't find any significant effect of insider voting and cash flow rights on the association between earnings and returns except the marginal decreasing effect of insiders' voting rights on the association between prior period earnings and returns (p-value = 0.0984).

----------Insert Table 6 here----------

5.2 Effects of Firm Characteristics

Prior literature shows that several firm characteristics like growth, risk, earnings persistence, information environment and presence of an accounting loss are related to the ERC (LM, 2002). These factors affect the association between returns and earnings by influencing the timeliness, variability and predictability of earnings. For example, when earnings are timelier, returns will have a stronger association with current earnings and a weaker association with future earnings (EKSZ, 2005). Therefore, we control for earnings growth, earnings persistence, timeliness of earnings, variability of earnings and information environment of the firm. We use market-to-book ratio (*MKT2BK*) to proxy for the earnings growth. Following EKSZ (2005), we use a dummy variable, *LOSS*, to proxy for earnings persistence. *LOSS* equals 1 if next-year earnings are negative and 0 otherwise. Future positive earnings are more predictable and are likely to be more persistent than future negative earnings. Based on EKSZ (2005) and Basu (1997), we control for timeliness of earnings, using a dummy variable for the *SIGN* of the current period returns. *SIGN* equals 1 for negative returns and 0 otherwise. Variability of earnings affects the predictability of earnings. We control for earnings variability using a dummy variable *EARN_VAR*, that equals 1 if the standard deviation of earnings before interest and taxes (EBIT) (scaled by total assets) over the preceding five years is above our sample median, and 0 otherwise. Lastly, we control for information environment of the firm using *SIZE* of the firm measured as the natural log of the total market capitalization at the end of each year. Specifically, we estimate equation (5) for each control variable (*CTRL*):

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \beta_1 DUAL + \beta_2 (DUAL * E_{t-1}) + \beta_3 (DUAL * E_t) + \beta_4 (DUAL * E_{t+1}) + \beta_5 (DUAL * R_{t+1}) + \gamma_1 (CTRL) + \gamma_2 (CTRL * E_{t-1}) + \gamma_3 (CTRL * E_t) + \gamma_4 (CTRL * E_{t+1}) + \varepsilon_t \quad (5)$$

where *CTRL* equals the control variables and other variables are as defined earlier. We estimate equation (5) five times, each time with one of the five control variables.

The results of estimation are reported in Table 7. We find that earnings persistence firm size (*SIZE*) significantly influences coefficients on past, current and future earnings. Timeliness of earnings as measured by *SIGN* significantly influences coefficient on both past and current earnings. Earnings persistence (*LOSS*) significantly influences coefficients on current and future earnings while firm growth (*MKT2BK*) only influences the coefficient on future earnings. The coefficient on future returns is significantly influenced by earnings

persistence (*LOSS*), timeliness of earnings (*SIGN*) and earnings variability (*EARN_VAR*). Nonetheless, the coefficient on $DUAL*E_{t+1}$ remains significantly negative for all models further emphasizing our main results that the predictability of future earnings, as indicated by future ERC, is decreasing in dual class ownership. Similarly, the coefficient on $DUAL*E_{t-1}$ also remains significantly positive for models with *MKT2BK*, *SIGN* and *SIZE* as control variables indicating that ERC on past earnings is decreasing in dual class ownership. Overall, we find that the predictability of future earnings is decreasing in dual class ownership structure owing to greater agency costs.

6. Conclusion

On one hand, dual class firms have been found to report accruals of higher quality than single class firms, but on the other, dual class firms are perceived to have greater agency costs. Given these conflicting characteristics, we examine the effect of ownership structure on a firm's annual stock returns. In particular, we seek to determine the relative influence of agency costs vis-à-vis accrual quality in investors' valuation of common stock. We analyze the relationship between 1-year prior, current, and 1-year post earnings on annual stock returns of dual class firms vis-à-vis their single class counterparts.

We find that ERCs of past, current and future earnings are decreasing in the dual class ownership. Even after controlling for firm characteristics, we find that future ERC is decreasing in dual class ownership. In sum, our results indicate that the dual class ownership structure has a mitigating effect on the informativeness of a firm's earnings. Hence, we conclude that investors weigh the negative effect of agency conflict more heavily than the positive effect of higher accrual quality when valuing the stock of a dual class firm. However, we would caution the readers in generalizing these finding for single class firms.

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TABLE 1
Sample Selection

Sample Selection Criteria	Number of firms	Number of Firm-Years
Number of observations available from CRSP-COMPUSTAT merged database for fiscal years 1994-2002	15,360	92,240
Less: Observations with E_{t-1}, E_t, E_{t+1}, R_t, or R_{t+1} data missing[a]	(5,855)	(43,055)
Less: Extreme observations truncated at 1% and 99% for E_{t-1}, E_t, E_{t+1}, R_t, or R_{t+1}	(316)	(3,771)
Final Sample	9,189[c]	45,414

Dual-class firm Observations	448	3,075
Single-class firm Observations	7,728	42,340

[a] Current returns are regressed on prior earnings, current earnings, future earnings, and future returns for the period 1994-2002. So, earnings and return data are required for 2003 to estimate the models for the year 2002. Additionally, 1993 earnings are required for E_{t-1} to estimate models for 1994.

[b] We use Compustat annual data item "AQC" and "DO" to determine the firms that experienced structural changes following Ettredge, Kwon, Smith and Zarowin (2005).

[c] Total number of firms in final sample is not equal to sum of dual class firms and single class firms because some of the dual class firms in the overall sample may have unified their shares into single class or alternatively, some single class firms may have restructured into dual classes of stock during the sample period.

TABLE 2
Descriptive Statistics

Panel A: Dual-class Firms

Variables[a]	Mean	Median	Min.	Max.	Std.Error
R_t	0.0795*	0.0000	-0.8576	3.3333	0.0126
E_{t-1}	0.0333***	0.0696	-1.1159	0.3464	0.0042
E_t	0.0333***	0.0696	-1.0243	0.4304	0.0048
E_{t+1}	0.0393***	0.0722	-1.0870	0.5823	0.0053
R_{t+1}	0.1205***	0.0351	-0.8760	3.6488	0.0134
SIZE	5.3227***	5.3565	0.2280	11.5743	0.0447
MKT2BOOK	2.7280***	1.5812	0.0990	115.8362	0.1273
WEDGE	0.2293	0.2159	-0.3077	0.9716	0.0050

Panel B: Single-class Firms

Variables[a]	Mean	Median	Min.	Max.	Std. Error
R_t	0.1012	0.0250	-0.8619	3.4516	0.0033
E_{t-1}	0.0035	0.0446	-1.1180	0.3446	0.0009
E_t	0.0104	0.0514	-1.1196	0.4297	0.0009
E_{t+1}	0.0174	0.0534	-1.1169	0.5864	0.0010

R_{t+1}	0.1738	0.0776	-0.8797	4.0300	0.0038
SIZE	4.8156	4.5989	-1.6490	13.2988	0.0115
MKT2BOOK	4.9053	1.7110	0.0231	10473.9600	0.5450
WEDGE	N/A				

*, **, *** Mean of dual class firms is significantly different from mean of single class firms at the 10 percent, 5 percent, and 1 percent levels, respectively.

[a] See Exhibit 1 for variable definitions.

TABLE 3
Regression Results for Equation (1)

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \varepsilon_t \quad (1)$$

Variables	**All Firms**	**Dual-Class Firms**	**Single-Class Firms**	**Small Firms[a]**	**Large Firms[a]**
	Coefficient (p-value)[b]	Coefficient (p-value)[b]	Coefficient (p-value)[b]	Coefficient (p-value)[b]	Coefficient (p-value)[b]
Intercept	0.1035***	0.0721***	0.1054***	0.0602***	0.0942***
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
E_{t-1}	-0.6880***	-0.5231***	-0.6986***	-0.6084***	-0.6607***
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
E_t	0.6713***	0.4989***	0.6901***	0.6828***	0.6710***
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
E_{t+1}	0.6302***	0.3288***	0.6600***	-0.0359	0.9223***
	(<.0001)	(0.0033)	(<.0001)	(0.6093)	(<.0001)
R_{t+1}	-0.1140***	-0.0370	-0.1177***	-0.1052***	-0.1226***
	(<.0001)	(0.2697)	(<.0001)	(<.0001)	(<.0001)
Number of Observations	30,861	1,685	29,176	6,894	23,967
Adjusted-R^2	8.65%	5.66%	8.94%	4.12%	12.20%

*, **, *** Significant at the 10 percent, 5 percent, and 1 percent levels, respectively.

[a]Small firms have revenue of less than $20 million while large firms have revenue of at least $20 million in a sample year.

[b]p-values are based on White's (1980) heteroscedasticity consistent variance covariance matrix.

TABLE 4
Regression Results for Equation (2) and (3)

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \beta_1 DUAL + \varepsilon_t \quad (2)$$

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \beta_1 DUAL + \beta_2 (DUAL * E_{t-1}) + \beta_3 (DUAL * E_t) + \beta_4 (DUAL * E_{t+1}) + \beta_5 (DUAL * R_{t+1}) + \varepsilon_t \quad (3)$$

Variable	All Firms		Small Firms[a]		Large Firms[a]	
	Coeff. (p-value)[b]	Coeff. (p-value)[b]	Coeff. (p-value)[b]	Coeff. (p-value)[b]	Coeff. (p-value)[b]	Coeff. (p-value)[b]
Intercept	0.1055*** (<.0001)	0.1054*** (<.0001)	0.0606*** (<.0001)	0.0617*** (<.0001)	0.0971*** (<.0001)	0.0945*** (<.0001)
E_{t-1}	-0.6861*** (<.0001)	-0.6986*** (<.0001)	-0.6084*** (<.0001)	-0.6115*** (<.0001)	-0.6579*** (<.0001)	-0.6693*** (<.0001)
E_t	0.6716*** (<.0001)	0.6901*** (<.0001)	0.6824*** (<.0001)	0.6991*** (<.0001)	0.6711*** (<.0001)	0.7060*** (<.0001)
E_{t+1}	0.6310*** (<.0001)	0.6600*** (<.0001)	-0.0361 (0.6067)	-0.0347 (0.6283)	0.9233*** (<.0001)	0.9919*** (<.0001)
R_{t+1}	-0.1143*** (<.0001)	-0.1177*** (<.0001)	-0.1054*** (<.0001)	-0.1059*** (<.0001)	-0.1229*** (<.0001)	-0.1292*** (<.0001)
DUAL	-0.0362*** (0.0049)	-0.0333** (0.0238)	-0.0219 (0.7167)	-0.0937 (0.1011)	-0.0466*** (0.0009)	-0.0279* (0.0682)
*DUAL** E_{t-1}	-	0.1755* (0.0890)	-	0.1910 (0.5836)	-	0.1700 (0.1192)
*DUAL** E_t	-	-0.1911 (0.1448)	-	-0.8925* (0.0865)	-	-0.1930 (0.1612)
*DUAL** E_{t+1}	-	-0.3312*** (0.0049)	-	0.0396 (0.9082)	-	-0.6019*** (<.0001)
*DUAL** R_{t+1}	-	0.0807** (0.0179)	-	0.0379 (0.7017)	-	0.0992*** (0.0059)
Number of Observations	30,861	30,861	6,894	6,894	23,967	23,967
Adjusted-R^2	8.66%	8.79%	4.11%	4.15%	12.24%	12.62%

*, **, *** Significant at the 10 percent, 5 percent, and 1 percent levels, respectively.

[a]Small firms have revenue of less than $20 million while large firms have revenue of at least $20 million in a sample year.

[b]p-values are based on White's (1980) heteroscedasticity consistent variance covariance matrix.

TABLE 5
Regression Results for Equation (4)

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \beta_1 WEDGE + \beta_2 (WEDGE * E_{t-1}) + \beta_3 (WEDGE * E_t) + \beta_4 (WEDGE * E_{t+1}) + \beta_5 (WEDGE * R_{t+1}) + \varepsilon_t \quad (4)$$

Variable	Predicted Sign	All Firms	Dual-Class Firms
		Coefficient (p-value)[a]	Coefficient (p-value)[a]
Intercept		0.1042*** (<.0001)	0.0624*** (0.0029)
E_{t-1}	-	-0.6971*** (<.0001)	-0.6317*** (<.0001)
E_t	+	0.6821*** (<.0001)	0.5666*** (0.0010)
E_{t+1}	+	0.6401*** (<.0001)	0.2195 (0.1318)
R_{t+1}	-	-0.1156*** (<.0001)	-0.0299 (0.4954)
WEDGE	-	-0.04273 (0.3837)	0.0685 (0.3319)
*WEDGE** E_{t-1}	+	0.6238** (0.0143)	0.5287 (0.1239)
*WEDGE** E_t	-	-0.7538* (0.0910)	-0.4811 (0.4709)
*WEDGE** E_{t+1}	-	-0.3439 (0.3482)	0.7222 (0.1346)
*WEDGE** R_{t+1}	+	0.1372 (0.2701)	-0.0892 (0.5752)
Number of Observations		30,814	1,638
Adjusted-R^2		8.70%	5.93%

*, **, *** Significant at the 10 percent, 5 percent, and 1 percent levels, respectively.

[a]p-values are based on White's (1980) heteroscedasticity consistent variance covariance matrix.

TABLE 6
Regression Results for Equation (5) using dual-class firms sample

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \beta_0 IVOTE + \beta_1 (IVOTE * E_{t-1}) + \beta_2 (IVOTE * E_t) + \beta_3 (IVOTE * E_{t+1}) + \beta_4 (IVOTE * R_{t+1}) + \gamma_0 ICF + \gamma_1 (ICF * E_{t-1}) + \gamma_2 (ICF * E_t) + \gamma_3 (ICF * E_{t+1}) + \varepsilon_t \quad (5)$$

Variable	**(1)** Coefficient (p-value)	**(2)** Coefficient (p-value)	**(3)** Coefficient (p-value)
Intercept	0.0800**	0.0927***	0.0862**
	(0.0378)	(0.0033)	(0.0286)
E_{t-1}	-0.8566***	-0.6349***	-0.8724***
	(0.0047)	(0.0049)	(0.0053)
E_t	0.2449	0.2413	0.2531
	(0.4644)	(0.3864)	(0.4506)
E_{t+1}	0.3743	0.5251**	0.4169
	(0.1761)	(0.0204)	(0.1375)
R_{t+1}	0.0124	-0.0109	0.0131
	(0.8664)	(0.8661)	(0.8609)
IVOTE	-0.0056		0.0470
	(0.9231)		(0.5186)
IVOTE * E_{t-1}	0.5720		0.6738*
	(0.1568)		(0.0984)
IVOTE * E_t	0.3207		-0.1089
	(0.4599)		(0.8679)
IVOTE * E_{t+1}	0.0061		0.5120
	(0.9870)		(0.3010)
IVOTE * R_{t+1}	-0.0961		-0.1108
	(0.3934)		(0.4980)
ICF		-0.0449	-0.0991
		(0.5203)	(0.2548)
ICF * E_{t-1}		0.3683	-0.0954
		(0.4209)	(0.8193)
ICF * E_t		0.4799	0.6376
		(0.3246)	(0.3635)
ICF * E_{t+1}		-0.3682	-0.8551
		(0.3769)	(0.1057)
ICF * R_{t+1}		-0.0946	0.0103
		(0.4741)	(0.9579)
Number of Observations	1638	1638	1638
Adjusted-R^2	6.00%	5.77%	6.03%

*, **, *** Significant at the 10 percent, 5 percent, and 1 percent levels, respectively.

[a]p-values are based on White's (1980) heteroscedasticity consistent variance covariance matrix.

TABLE 7

Regression results for Equation (6) using all firms sample

$$R_t = \alpha_0 + \alpha_1 E_{t-1} + \alpha_2 E_t + \alpha_3 E_{t+1} + \alpha_4 R_{t+1} + \beta_1 DUAL + \beta_2 (DUAL * E_{t-1}) + \beta_3 (DUAL * E_t) + \beta_4 (DUAL * E_{t+1}) + \beta_5 (DUAL * R_{t+1}) + \gamma_1 (CTRL) + \gamma_2 (CTRL * E_{t-1}) + \gamma_3 (CTRL * E_t) + \gamma_4 (CTRL * E_{t+1}) + \varepsilon_t \quad (6)$$

Variable	**MKT2BK**	**LOSS**	**SIGN**	**EARN_VAR**	**SIZE**
	(p-value)	**(p-value)**	**(p-value)**	**(p-value)**	**(p-value)**
Intercept	0.1042***	-0.0425***	0.4741***	0.0983***	-0.0265***
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(.0029)
E_{t-1}	-0.7023***	-0.6176***	-0.7096***	-0.6970***	-0.3343
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
E_t	0.7077***	0.6698***	0.0489	0.7603***	0.8278***
	(<.0001)	(<.0001)	(.3710)	(<.0001)	(<.0001)
E_{t+1}	0.6962***	2.6266***	0.2528***	0.6788***	0.0800
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.3572)
R_{t+1}	-0.1213***	-0.1722***	-0.1028***	-0.1461***	-0.1049***
	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
DUAL	-0.0324**	-0.1129***	-0.0117	-0.0306**	-0.0438***
	(.0289)	(<.0001)	(.2797)	(.0385)	(.0029)
*DUAL** E_{t-1}	0.1744*	0.0103	0.2305***	0.1659	0.2222**
	(.0958)	(.9302)	(.0087)	(.1139)	(.0303)

(continued on next page)

Variable	**MKT2BK (p-value)**	**LOSS (p-value)**	**SIGN (p-value)**	**EARN_VAR (p-value)**	**SIZE (p-value)**
DUAL E_t*	-0.1756	-0.0666	-0.1206	-0.1516	-0.0814
	(.1796)	(.6120)	(.2258)	(.2433)	(.5333)
DUAL E_{t+1}*	-0.3725***	-0.4293***	-0.1694*	-0.3743***	-0.4582***
	(.0018)	(0.0004)	(.0588)	(.0016)	(.0002)
DUAL R_{t+1}*	0.0788**	0.0752**	0.0495*	0.0742**	0.0775**
	(.0246)	(.0347)	(.0616)	(.0329)	(.0262)
CTRL	0.0002*	-0.1065***	-0.7606***	-0.0206**	0.0274***
	(.0670)	(<.0001)	(<.0001)	(.0102)	(<.0001)
*CTRL * E_{t-1}*	0.0005	0.0313	0.7012***	0.0066	-0.1187***
	(.8517)	(.6191)	(<.0001)	(.9213)	(<.0001)
*CTRL * E_t*	0.0001	-0.1572**	0.2544***	-0.1198	-0.0495**
	(.9563)	(.0232)	(<.0001)	(.1041)	(.0344)
*CTRL * E_{t+1}*	-0.0022**	-3.1032***	0.0132	0.0307	0.1565***
	(.0129)	(<.0001)	(.7944)	(.6751)	(<.0001)
*CTRL * R_{t+1}*	0.0003	0.0427***	0.0693***	0.0511***	-0.0021
	(.1589)	(.0003)	(<.0001)	(<.0001)	(.5691)
Number of Observations	30,222	30,222	30,222	30,222	30,222
Adjusted R^2	9.12%	18.66%	50.15%	9.10%	10.48%

EXHIBIT 1

Variable Definitions

Variable	Definition
R_{it}	is the buy-and-hold returns for the year *t*, measured over the12-month period starting three months after year *t-1* fiscal year-end using the monthly share price data adjusted for the dividends.
E_{it}	is the income before extraordinary items available to common shareholders (Compustat annual item "IBCOM") in year *t*, scaled by market value of equity three months after year *t-1* fiscal year-end; where market value of equity = (closing price x number of shares outstanding) is determined using CRSP monthly stock data.
$E_{i,t-1}$	is the income before extraordinary items available to common shareholders in the year preceding year *t*, scaled by market value of equity three months after year *t-1* fiscal year-end.
$E_{i,t+1}$	is the income before extraordinary items available to common shareholders in the year following year *t*, scaled by market value of equity three months after year *t-1* fiscal year-end.
$R_{i,t+1}$	is the buy-and-hold returns for the year *t+1*, measured over the12-month period starting three months after year *t* fiscal year-end using the monthly share price data adjusted for the dividends.
DUAL	= 1 if dual class firm; else = 0.
WEDGE	Difference between percentage of voting rights (*IVOTE*) and percentage of cash flow rights (*ICF*) controlled by insiders. A measure of excess control rights of the insiders.
IVOTE	Total percentage of firm's voting rights controlled by insiders (officers and directors) across classes.
ICF	Total percentage of firm's cash flow rights controlled by insiders.
SIZE	is the natural logarithm of the market value of equity at the end of the fiscal year, i.e., = log(Compustat annual item "PRCC" x Compustat annual item "CSHO")
MKT2BK	is the ratio of market value of equity to book value of common equity at the end of fiscal year; where book value of equity is Compustat annual item "CEQ".