The Effect of Dual-Class on Earnings Management: A Case of Chinese Listed Companies in US

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Abstract
The dual-class share structure is a model that effectively segregates cash flow rights from control rights. Its primary purpose is to safeguard the control rights of the founding team and fortify resistance against hostile takeovers. Nonetheless, according to agency theory, the dual-class structure may intensify agency problems, potentially compelling managers to resort to heightened earnings management, either due to market pressures or pursuit of short-term profits. As a result, this research focuses on the impact of dual-class structure on earnings management. This study employs quantitative methods and conducts panel data regression analysis. The empirical findings reveal that companies with a dual-class structure exhibit a higher propensity for engaging in both accrual-based earnings management and real earnings management. Consequently, this paper contributes empirical evidence concerning the economic consequences of adopting the dual-class structure within emerging markets. In future research, it may be beneficial to contextualize the specific factors influencing the implementation of dual-class structures within a particular emerging market and explore whether there is a tendency for companies to eventually converge towards a unified structure.
Keywords：Dual-class Structure, Accrual Earnings Management, Real Earnings Management

Indroduction
Earnings reflect the financial situation of a company and serves as the standard to measure management ability. Apart from stock price, firm value, and cash flow; earnings have been reckoned to affect decisions made by investors and market reaction (Wang, 2017). Therefore, listed companies often project a strong will to implement earnings management and manipulate earnings indicators purposively (Ning, 2004; Eriandani et al., 2020).

To date, it is inconclusive if earnings management is a fraud, which denotes some challenges for supervision of accounting information quality. For regulators, researchers, and accounting practitioners, certain earnings management is not fraudulent (Magrath & Weld, 2002; Wang, 2007; Lin, 2013; Bao, 2020) while some deliberate conceal the actual situation faced by the firm. The very concept of earnings management was initially put forward by an American accountant, Schipper, who asserted that earnings management is the purposeful control of disclosing accounting information by enterprise managers based on personal interests instead of observing the objectivity principle of financial reporting (Katherine, 1989). A Canadian accountant, Scott, depicted that earnings management refers to the process of selecting a set of accounting policies in order to maximise enterprise value and profit while maintaining accounting standards (Scott, 1997). This denotes that earnings management behaviour will not exceed the supervision scope of accounting standards and unrelated to fraud. It has also been pointed out that earnings management deploys professional judgment when reporting corporate accounting information. The sole purpose for doing so is to seek abnormal gain for individuals or companies, which can substantially mislead financial reporting in user assessment and consequently affect the decisions made by stakeholders (Healy & Wahlen, 1999).

Earnings management refers to the concentrated expression of agency conflicts in listed companies. The agency theory depicts that most modern companies adopt ownership and management rights separation. This separation offers the best combination of enterprise resources and management personnel, thus bringing maximum benefits and profits to the owners (Jensen & Meckling, 1976). Simultaneously, the business model of separation of the two rights tags along risks. Operators may use their favourable position of enjoying direct management rights to seek personal gain, in which short-term speculation can damage the rights and interests of owners. Indeed, the segregation of control rights from cash flow rights can lead prominent shareholders to engage in earnings management to align outcomes with their control rights (Sun et al., 2015). In order to avoid the risk of turnover as a result of deteriorating performance, managers tend to conspire with major shareholders to conduct earnings management (Xu, 2021). Hence, the ownership structure is a factor that affects earnings management behaviour.

In contrast to the traditional one-share-one-vote ownership model, the dual-class ownership structure entails a disparity in voting rights (Wang, 2019), effectively bifurcating control rights (voting rights) from cash flow rights. In precise, it divides the company shares into shares with high voting rights and shares with high cash flow rights (Smart et al., 2008) to realise the owner's effective control over the firm (Gompers et al., 2010; Du, 2020). In April 2018, a notable development occurred as the Hong Kong Stock Exchange (HKSE) officially sanctioned the listing of companies employing the dual-class structure. Subsequently, in April 2019, the Shanghai Stock Exchange (SHSE) extended approval for listing companies featuring differential voting rights. This regulatory progression underscores the widespread acceptance and adoption of the dual-class structure.

Taking Facebook as an example, based on Facebook prospectus, Zuckerberg owns 28.4% of ordinary shares but 56.9% of voting rights. This approach protects the control of the founder over the company, while concurrently preventing it from deviating from its original direction after several financing rounds. Other companies that practice the same structure are Alibaba, Grab, Google, and Sea Inc., to name a few. Dual-class ownership enables companies to balance their financing needs and control rights, simultaneously augmenting the extent of

detachment between ownership and control. Hence this study aims to study the relationship between dual-class structure and earnings management.

The remainder of this paper is organized as follows. The subsequent section provides an in-depth exploration of the existing body of literature, delineating the formulated hypotheses slated for evaluation and examination. Then, we define the methodological approach and empirical model. The concluding segment encapsulates the attained findings and imparts the research's ultimate conclusions.

Related Research and Hypothesis Development
Agency Theory

The agency theory was introduced by Alchian and Demsetz in 1972 and subsequently expanded upon by Jensen and Meckling in 1976. It has emerged as a cornerstone in the realm of corporate governance, playing a pivotal role in shaping the field's discourse.

The agency theory upholds that when the interests of the principal and agent are incompatible without any practical way to supervise the behaviour of the agent, the agent has the potential to engage in opportunistic behavior that may diverge from the principal's interests (Jensen & Meckling, 1976). To date, companies gave begun separating ownership and management rights, which results in owners (shareholders) not directly participating in company management, but managed by professional managers (boards of directors). Due to the separation between ownership (shareholders) and control (management), conflicts of interest are common (Jensen & Meckling, 1976). The appointed agent (board of directors) is allowed to make operational decisions on behalf of the principal (shareholder). As the objectives and interests of the board of directors and other internal and external stakeholders differ, they may be inclined to display opportunistic behaviour in their interests rather than in the interests of the principal. Simply put, both the principal and the agent wish to realise their respective interests. Here, the agency theory depicts that the principal reduces agency costs as much as possible. Agency costs include all supervision costs, constraint costs, and residual losses incurred to solve agency issues (Jensen & Meckling, 1976). In resolving conflicts of interest and reducing agency costs, corporate governance is a viable mechanism that balances the interests of stakeholder and operators (Zeng, 2021). Good corporate governance effectively mitigates corporate earnings management behaviour (Su, 2006).

Earnings Management

Scott (1997) asserted that earnings management is the consequence of multiple accounting policies. He added that corporate managers should be autonomous in implementing accounting policies that maximise corporate value and earnings management. According to Schipper (1989), earnings management is a form of fraud whereby the management intentionally intervene in the financial statement for the benefit of the company or for personal gain. Healy and Wahlen (1999) associated earnings management with professional judgment when preparing financial reports and structuring transactions to alter financial statements. The goal here is to conceal the actual operating conditions of the company to mislead decisions made by stakeholders. From the stance of the management, stakeholders cannot detect earnings management behaviour as managers have non-public information that external investors do not have access to asymmetric information. Martin et al., (2002) depicted that earnings management is an act or phenomenon that hovers between accurate and fraudulent financial information.

Capital market pressures can increase the earnings management behaviour among managers by implementing certain accounting policies and estimates to achieve short-term disclosure goals (Bhojraj et al., 2005). As noted by Burgstahler and Dichev (1997) and further emphasized by Wu et al. (2016), companies resort to earnings management as a means to evade the disclosure of losses. Managers alter financial statements, increase profits via earnings management, as well as convey the good performance and growth prospects of the company to the external world in order to attract external financing and improve stock price (Teoh et al., 1998a). According to Teoh et al., (1998b, 1998c), abnormal accrual behaviour is displayed by managers to increase reported earnings before IPO and seasoned equity offerings. Alhadab et al. (2015) discovered that firms utilize earnings management as a strategy to enhance their reported earnings specifically within the year of their initial public offering (IPO). However, after successful financing, the company's reported revenue would decrease in a significant manner (Teoh et al., 1998a).

Dual-class Structure
The dual-class structure has been a subject of controversy for an extended duration. The prevailing norm in corporate practice entails companies adhering to the equity structure of one-share-one-vote. Grossman and Hart (1988) and Harris and Raviv (1988) said that one-share-one-vote is in the interest of securities holders and is the most democratic ownership structure. In the single-class system, the same number of shares represents equal cash flow and voting rights; the more shares shareholders hold, the greater their rights.

Unlike single-class structure, dual-class structure enables shares to be divided into different types with each share having multiple voting rights. Rydqvist (1992) highlighted that companies employing a dual-class structure possess two distinct categories of residual income securities, each endowed with varying voting privileges. As elucidated by Smart and Zutter (2003) and additionally underscored by Hauser et al. (2004), the dual-class structure effectively partitions cash flow rights from voting rights. Specifically, the cash flow rights per share remain uniform while the voting rights exhibit disparity. Francis et al., (2005) listed the two types of shares in a company with dual-class; superior shares (high voting rights) and inferior shares (low voting rights) with similar cash flow rights for the two share types. As Hossain (2019) indicated, a dual-class company has several kinds of shares, each with its own rights (voting & cash flow) and restrictions. A superior share in a company with dual-class structure has more voting rights than an inferior share by two- to ten-fold higher. Shares with high voting rights are often not publicly traded; if traded, it is subject to stringent restrictions. A distinguishing attribute of the dual-class structure is the distinct segregation of cash flow rights from voting rights. In contrast to single-class companies, dual-class entities distribute shares with varying voting rights, thereby affording pre-IPO shareholders the opportunity to optimize company value in the event of future acquisitions (Arugaslan et al., 2010). Wang and Yang (2015) ascertained that prior to the disclosure of earnings marked by a notable level of information asymmetry, the high-voting shares within listed companies can enhance price efficiency. This circumstance also creates avenues for seasoned external investors to acquire voting rights and engage in regulatory participation.

Insiders, often encompassing founders and managers of startups, have the capacity to acquire shares endowed with multiple voting rights within a dual-class company. Conversely, external investors, including the public, are granted shares with conventional or restricted voting rights. The dual-class structure permits insiders to uphold a level of control that exceeds their

ownership stake in the company, achieved through a configuration that confers voting rights in favor of these insiders (Yan, 2021).

An additional facet of the dual-class structure involves empowering founders or insiders to maintain control, thus affording them the latitude to pursue long-term visions or strategies without being encumbered by immediate repercussions (Winden, 2018; Hossain, 2019). As posited by Jordan et al. (2016), dual-class companies experience diminished short-term market pressures, concurrently gaining increased prospects for growth such as heightened sales growth and intensified research and development (R&D) endeavors. This configuration of the dual-class structure assists managers in orienting their attention towards enduring corporate objectives and decisions, while concurrently sidestepping the constraints of short-term market demands. Arugaslan et al., (2010) depicted that if managers want to retain uncontroversial control and diversify to reduce costs related to poor IPO diversification, the dual-class listing is appropriate. As Li et al., (2018) noted, managers prefer the dual-class structure to keep control over their wealth and spread its risks.

Lastly, the dual-class structure contributes to the enhancement of market competitiveness by broadening the array of securities extended to investors and bolstering their appeal to potential issuers (Huang et al., 2020). It minimises owners' overall risk costs by providing external investors diversified portfolios (Howell, 2014).

Dual-class and Earnings Management
While numerous companies in the current market adhere to the conventional one-share-one-vote paradigm, a noticeable surge in the count of dual-class entities is discernible, paralleling the relaxation of listing constraints in several countries. Distinguishing itself from the one-share-one-vote model, the dual-class structure involves the issuance of two distinct types of stocks, each endowed with disparate voting rights: superior and inferior shares. Superior shares command high voting rights accompanied by relatively diminished cash flow rights, whereas inferior shares hold high cash flow rights juxtaposed with low voting rights (Du, 2020; Wang, 2019). Conventionally, the adoption of the dual-class structure serves the purpose of safeguarding the control vested in founders or managerial entities. With rapid company progress and after many rounds of financing have introduced massive number of shareholders, the proportion of founders' shares is diluted and a hostile takeover or seizure of control is likely to occur. To assure that a company can continue to progress based on the established route, as well as improve both management and corporate governance efficiency; a company may adopt the dual-class structure to give founders or managers more control (Ma, 2020).

Given its deviation from the prevalent shares structure system of one-share-one-vote, the dual-class structure offers founders various advantages. When the equity is too concentrated, it will lead to the entrenchment effect. Controllers may use their control rights due to the voting rights in pursuit of private interests, thus sacrificing company interests (Fan & Wong, 2002; Yu, 2018). Companies with high equity concentrations are more likely to have insider control; meaning shareholders' oversight is weakened and speculation is possible, including earnings management (Hettler & Forst, 2019; Huang, 2021).

In a dual-class company, shareholders have unequal voting rights and cash flow rights, thus resulting in a higher degree of corporate control and ownership separation. In this case, agency conflict becomes more significant. An increased level of separation between these two rights corresponds to a heightened extent of earnings management, consequently leading to diminished accounting information credibility (Du, 2020). However, Nguyen (2010)

claimed that dual-class structure enriches internal governance structure and relieves the pressure on shareholders' financial reporting. These lower the motivation of the management to manage earnings. Notably, the body of research concerning the relationship between the dual-class structure and earnings management remains constrained.

The dual-class structure represents a distinctive ownership arrangement, diverging from the uniformity of both shares and rights. Shares issued under the dual-class structure have different cash flow and voting rights. Most companies would seek financing in order to secure more capital during their development, but one unpleasant consequence from this refers to diluted equity. The dual-class structure, nonetheless, resolves this concern as it enables a company to obtain capital while safeguarding the control of the founder or management over the company (Lu, 2020). However, dual ownership may lead to more severe agency conflicts. Insider control can be easily formed in dual-equity companies as a result of separate cash flow rights and voting rights, thus encouraging them to run their businesses for their own benefit (Forst et al., 2016). The dual-class structure undermines the quality of accounting information and encroaches upon the interests of external shareholders (Du, 2020). Yu and Xu (2018) asserted that dual-class companies attempt to minimise the transmission of corporate information to investors and cover up their actual performance via earnings management to realise private interests. Therefore, the following is hypothesised:

H1: Dual-class structure exhibits a positive correlation with accrual-based earnings management.

H2: Dual-class structure exhibits a positive correlation with real earnings management.

Research Methodology
Research Sample and Data
In recent years, dual-class companies have been sought after due to their unique advantages in equity structure, which has garnered the attention of all parties. In accordance with the findings of Baran et al. (2020), the dual-class structure was embraced by 22.7% of companies listed in the US in 2019, marking a notable increase from the 12.2% observed in 2009. Nevertheless, due to its divergence from the conventional one-vote-one-share structure, numerous countries previously prohibited companies employing the dual-class structure from securing listings on the open market. In the US where the capital market is highly developed and near perfect, many companies seeking to adopt dual ownership had listed in the US, including companies from China. Statistics compiled by Liu et al., (2019) on foreign companies listed in the US from 2002 to 2012 showed that China was also a major source of foreign companies listed there, accounting for 59.6% of foreign companies. Therefore, the choice of Chinese companies listed in the US is representative to study the dual equity system employed by the Chinese companies. In 2018 and 2019, the stock exchanges in Hong Kong, China, and the Chinese mainland allowed dual-class companies to list. However, only three dual-class companies were listed in mainland China, and 17 dual-class companies were listed in Hong Kong. The sample size for this empirical study is too small. Given the central focus of this current study on dual-class structures, Chinese companies enlisted on US exchanges have been chosen as the subject of research, thereby ensuring the attainment of a substantial sample size.

This paper's sample encompasses a total of 693 observations spanning the years 2017 to 2021, corresponding to a cohort of 226 Chinese companies listed on US exchanges. Within this group, there are 105 companies employing the dual-class structure and 121 adopting the single-class structure. It is noteworthy that the sample selection criteria do not restrict the

inclusion solely to companies demonstrating both accrual earnings management and real earnings management, thereby ensuring minimal survival bias.

Measurement of Earnings Management
Earnings management pertains to the portrayal of a company's genuine economic condition through the selection of accounting policies that adhere to accounting standards without transgressing them. Its purpose is to mislead external investors to believe that the business climate of the company is indeed favourable (Healy & Wahlen, 1999). The two types of earnings management refer to accrual-based earnings management and real-based earnings management.

Accrual earnings management (ACC)
Accrual earnings management involves concealing a company's factual state by leveraging accounting policies and estimations to the extent permissible within standards (Dechow et al., 1996). Following Dechow (1994), the modified Jones model (1991) is applied in this study, as expressed in the following:

$$TA_{it} = NI_{it} - CFO_{it}$$

$$TA_{it} = \beta_1 \frac{1}{A_{it-1}} + \beta_2 \frac{\triangle REV_{it}}{A_{it-1}} + \beta_3 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it}$$

$$NDA_{it} = \beta_1 \frac{1}{A_{it-1}} + \beta_2 \frac{\triangle REV_{it} - \triangle REC_{it}}{A_{it-1}} + \beta_3 \frac{PPE_{it}}{A_{it-1}}$$

$$DA_{it} = TA_{it} - NDA_{it}$$

$TA_{i,t}$ refers to total accrual items, which equals the operating income minus the operating cash flows reported in the statement of cash flows of firm i in year t; $A_{i,t-1}$ is the total assets at year t-1; $\Delta REV_{i,t}$ denotes the operating income in year t minus operating income in year t-1; $\Delta REC_{i,t}$ refers to the ending accounts receivable in year t less ending accounts receivable in year t-1; and $PPE_{i,t}$ signifies the fixed assets of firm i in year t.

Real Earnings Management (REM)
Real earnings management is a process where a company intervenes in financial information by adjusting, reorganising or changing its operations, investments or financing in a timely and deliberate manner (Ibrahim et al., 2011). Referring to Cohen et al., (2008) and Roychowdhury (2006), this study measures real earnings management using abnormal cash flows from operating activities (Ab_CFO), abnormal discretionary expenses (Ab_DIS), and abnormal production costs (Ab_PROD).

$$\frac{CFO_{i,t}}{A_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{A_{i,t-1}} + \beta_2 \frac{S_{i,t}}{A_{i,t-1}} + \beta_3 \frac{\triangle S_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t}$$

$$\frac{PROD_{i,t}}{A_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{A_{i,t-1}} + \beta_2 \frac{S_{i,t}}{A_{i,t-1}} + \beta_3 \frac{\triangle S_{i,t}}{A_{i,t-1}} + \beta_4 \frac{\triangle S_{i,t-1}}{A_{i,t-1}} + \varepsilon_{i,t}$$

$$\frac{DIS_{i,t}}{A_{i,t}} = \beta_0 + \beta_1 \frac{1}{A_{i,t-1}} + \beta_2 \frac{S_{i,t-1}}{A_{i,t-1}} + \varepsilon_{i,t}$$

Next, the three parts are summed to obtain a proxy REM as follows:

$$REM_{i,t} = Ab\_PROD_{i,t} - Ab\_CFO_{i,t} - Ab\_DIS_{i,t}$$

$CFO_{i,t}$ denotes the standard operation cash flow of firm i in year t; $A_{i,t-1}$ is the total assets at year t-1; $S_{i,t}$ refers to the sales revenue in year t; $\Delta S_{i,t}$ signifies the sales revenue in year t minus

sales revenue in year t-1; $PROD_{i,t}$ consists of the cost of selling products and the change of inventory in year t; $\Delta S_{i,t-1}$ represents the sales revenue in year t-1 minus sales revenue in year t-2; and $DIS_{i,t}$ is the sum of sales expense and management expense in year t.

Empirical Model
In this study, the software package STATA is employed for data tabulation. Our analytical approach encompasses both descriptive and inferential statistics, involving correlation analysis and linear regression analysis, to thoroughly examine the data. So our empirical model presents as follows:

$$ACC_{i,t} = \beta_0 + \beta_1 DUAL_{i,t} + \beta_2 FSIZE_{i,t} + \beta_3 GROW_{i,t} + \beta_4 LEV_{i,t} + \beta_5 ROA_{i,t} + \varepsilon_{i,t} \tag{1}$$

$$REM_{i,t} = \beta_0 + \beta_1 DUAL_{i,t} + \beta_2 FSIZE_{i,t} + \beta_3 GROW_{i,t} + \beta_4 LEV_{i,t} + \beta_5 ROA_{i,t} + \varepsilon_{i,t} \tag{2}$$

where:
i represents firm i and t represents year t;
$ACC_{i,t}$ represents accrual-based earnings management;
$REM_{i,t}$ represents real earnings management;
$FSIZE_{i,t}$, $GROW_{i,t}$, $LEV_{i,t}$, $ROA_{i,t}$ are control variables.

Empirical Results
Descriptive Statistics
Table 1 presents the descriptive statistics of the variables employed in the statistical analysis. Covering the period from 2017 to 2021, the table provides insights into the average, standard deviation, as well as the minimum and maximum values of the variables under scrutiny in our study.

Table 1
Descriptive statistics for the independent and the control variables

VarName	Mean	SD	Min	Max
ACC	0.1772	0.2502	0.0000	2.0873
REM	0.3710	0.4802	0.0002	4.9175
dual	0.4408	0.4967	0.0000	1.0000
LEV	0.5453	0.7327	0.0000	10.1841
FSIZE	2.5476	0.9275	0.1389	5.4272
GROW	-0.3871	0.7016	-2.7602	3.8212
ROA	-1.2630	0.5414	-3.1724	0.9121

Note: Dual is a dummy indicator, taking the value 1 if the company employs a dual-class structure and 0 if it does not. LEV, FSIZE, GROW, ROA are control variables. LEV represents the asset-liability ratio, computed as the quotient of total debt divided by total assets. FSIZE denotes firm size, which is the natural logarithm of total assets. ROA signifies the return on assets, determined by dividing operating income or earnings before interest and taxes (EBIT) by total assets.
As indicated in Table 1, the mean value for accrual earnings management is 0.1772, with a maximum of 2.0873 and a minimum that approximates 0. These statistics suggest significant

variation in the extent of accrual earnings management within the sampled companies. Likewise, the mean value of real earnings management stands at 0.3710, ranging from a minimum that is nearly 0 to a maximum of 4.9175. These figures underscore discernible disparities in the degree of real earnings management across distinct companies. It is notable that the values for accrual earnings management generally fall below those for real earnings management, implying a potential inclination among companies towards the adoption of real earnings management strategies.

The average value of LEV is 0.5453, the maximum value is 10.1841, and the minimum value is close to 0, indicating that there are great differences in the debt situation between sample companies. Companies with high debt ratios will bear greater debt repayment pressure and they will bear greater risks. The average firm size is 2.5476, the minimum value is 0.1389, and the maximum value is 5.4272. It can be seen that the size of the sample companies is relatively average. The average value of growth is -0.3871, indicating that the growth of the sample companies as a whole is low. The average ROA is -1.2630, the minimum is -3.1724, and the maximum is 0.9121. It can be seen that the return on assets of some companies is abnormal, and the future development of companies is not very optimistic.

The mean value for leverage (LEV) is 0.5453, ranging from a minimum that is near 0 to a maximum of 10.1841, underscoring substantial disparities in the debt positions across the sample companies. Companies with higher debt ratios bear elevated pressures related to debt repayment and face amplified risk levels. The average firm size (FSIZE) is 2.5476, with the minimum at 0.1389 and the maximum at 5.4272. This suggests that the sizes of the sample companies are relatively moderate. The mean value for growth (GROW) is -0.3871, indicating an overall low growth trajectory among the sample companies. The average ROA is -1.2630, with a minimum of -3.1724 and a maximum of 0.9121. It is evident that the return on assets for certain companies is abnormal, indicating less promising prospects for their future development.

Correlation Analysis
In this paper, the Person correlation analysis of variables is carried out before regression. According to the results of correlation analysis, the relationship and significance between variables and explained variables can be preliminarily inferred, so as to carry out regression analysis of subsequent models.

Table 2
Correlation among variables in regression

	ACC	REM	dual	LEV	FSIZE	GROW	ROA
ACC	1.000						
REM	0.318***	1.000					
dual	0.007	0.130***	1.000				
LEV	0.173***	0.019	0.107***	1.000			
FSIZE	-0.238***	-0.056	0.288***	-0.021	1.000		
GROW	0.246***	0.240***	0.029	0.007	0.008	1.000	
ROA	0.258***	-0.009	0.125**	0.193***	-0.116*	0.122*	1.000

With:
* Significant coefficient at 10%.
** Significant coefficient at 5%.

*** Significant coefficient at 1%.

As depicted in Table 2, nearly all correlation coefficients remain below 0.75, a threshold established by Kennedy (1985). From this level, collinearity becomes more and more prominent. No multicollinearity problem is found in our model. The correlation analysis reveals a positive correlation coefficient between dual-class and real earnings management (REM) aligning with the anticipated hypothesis. Among the control variables, LEV is positively correlated with ACC, indicating that the asset-liability ratio may aggravate accrual earnings management. The correlation coefficient between FSIZE and ACC is negative, which shows that the company size is inversely related to accrual-based earnings management. Growth (GROW) demonstrates a positive correlation with the coefficients of ACC and REM indicating that heightened company growth corresponds to increased propensity for managers to engage in earnings management for self-interested purposes. The positive correlation coefficient between ROA and ACC suggests that the return on assets and earnings management exhibit synchronous changes, with a high return on assets potentially fostering the occurrence of earnings management.

Results of the Multivariate Analyses
Equations (2) and (3) are employed to investigate the influence of the dual-class structure on earnings management. The outcomes of the multivariate analyses for equations (2) and (3), utilizing the absolute value of discretionary accruals as the dependent variable, are presented in Table 3.

Table 3
The effect of dual-class structure on earnings management

	ACC	REM
dual	0.2401**	0.4772**
	(2.1148)	(2.4147)
LEV	0.0371**	-0.1273***
	(2.0860)	(-4.1156)
FSIZE	0.0328	0.0903
	(0.7874)	(1.2463)
GROW	0.0001**	0.0002***
	(2.2557)	(3.0140)
ROA	-0.0240***	-0.0069
	(-3.0376)	(-0.5018)
_cons	-0.0415	-0.0234
	(-0.3408)	(-0.1105)
N	693	693
R^2	0.0431	0.0703

With:
* Significant coefficient at 10%.
** Significant coefficient at 5%.
*** Significant coefficient at 1%.

As shown in Table 3, the regression coefficient betwween dual-class and ACC is 0.2401, exhibiting a statistically significant positive correlation at the 5% significance level. Additionally, the regression coefficient between dual-class and REM stands at 0.4772, signifying a statistically significant positive relationship at the 5% significance level. These regression findings align with the predictions outlined in Hypothesis 1 and Hypothesis 2, corroborating the notion that the adoption of the dual-class structure stimulates companies to engage in earnings management. This outcome concurs with prior research conducted by Hettler (2019) and Huang (2021). Among the control variables, LEV is positively correlated with ACC, which is consistent with the conclusion of Anagnostopoulou & Tsekrekos (2017). Financial institutions tend to put pressure on the company according to its debt level, thus forcing the management to repay the debt and pay interest. In this study, debt financing strengthens the accrual earnings management. LEV is negatively correlated with REM, which shows that in companies with real earnings management, debt level may not necessarily enhance earnings management level. The correlation coefficients between GROW and ACC and REM are positive, which shows that growth companies are more inclined to manage earnings. These findings are in harmony with the conclusions drawn by Madhogarhia et al. (2009) and Lee et al. (2006). The rapid development of a company needs more capital. It is important to send good news to creditors when meeting debt financing needs and seeking more incentives for earnings management to avoid income decline. However, companies with slow progress have less motivation for earnings management.

Conclusion

Using Chinese companies listed in the United States as the study's sample, this research investigates the correlation between the dual-class structure and earnings management. The outcomes indicate that companies adopting dual-class structure tend to engage in both accrual-based and real earnings management. Within a company characterized by dual-class structure, the company's shares are segmented into two categories: high voting rights and low voting rights. Despite the uniformity of cash flow rights per share, shareholders possessing high voting rights wield significant influence over the company's daily operations (Smart and Zutter, 2003). The adoption of the dual-class structure, however, is driven by intentions to safeguard the rights and interests of founders or management, prevent erosion of their control rights, deter hostile takeovers (DeAngelo & DeAngelo, 1985), mitigate the challenges posed by funding shortages, and contribute to the positive influence on the long-term and sustainable advancement of companies. At the same time, however, the dual-class structure will also lead the internal managers to try to reduce the transmission of the company's special information to investors through earnings management, hide the private interests of control rights and hide the real financial situation of the enterprise from the outside world.

This study has contributed to the advancement of knowledge regarding earnings management within China and offered fresh empirical insights that could inform emerging economies, including China, in their consideration of adopting the dual-class structure. Taking China as an example, there are some problems in the current capital market, such as incomplete supervision system and imperfect protection measures for small and medium-sized investors. Therefore, it becomes imperative to enhance the transparency of the capital market, bolster the regulatory framework, and elevate the competitiveness of the capital market.

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