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DIVIDEND POLICY IN MAINLAND CHINA AND THE US: A STUDY ON NON-FINANCIAL LISTED COMPANIES

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ABSTRACT

This paper aims to assess the common characteristics of dividend payers and non-payers in both China and the US, as well as the stability of dividend policies in each respective nation. The study addresses issues related to catering theory, signal theory, smoothing assumptions, and Fama-French hypotheses. Our analysis covers 509 non-financial firms during the period 2006-2016, comprising 419 firms from the US and 90 firms from China. The multinomial regression reveals that past dividend payouts are critical in explaining dividend policy in both the US and China. Firms that have consistently paid higher dividends in the preceding year are more likely to opt for dividend increases rather than omitting dividends, thus aligning with the dividend smoothing hypothesis. Additionally, firm size and stock market performance were found to be significantly influencing dividend payouts across different categories in both the US and China. However, US firms primarily drove dividend payouts through profitability and the dividend premium, while firm size and leverage heavily influenced Chinese dividends. Interestingly, Chinese firms appear to practice a less sticky dividend policy than US firms, implying that the role played by dividend policy in signalling and catering theories in China is less significant than in the US.

Keywords: Catering theory, dividend payout option, dividend policy, signalling theory, smoothing theory.

JEL Classification: G01, G35, O16.

INTRODUCTION

Dividend policy has a significant influence on the firm's value and is one of the most critical factors in maximising shareholder wealth (Basheer et al., 2019). Investors commonly regard dividends as an essential means of realizing investment returns. As listed companies grow and develop, they should reward a reasonable return that aligns with their right to share in the company's value-added and profit growth (Floyd et al., 2015). Interestingly, consistently paying out dividends is one of the most critical signals for the future earnings of US companies. However, this situation has become more common in China's listed companies following the 2012 and 2015 dividend policy reforms (Lin et al., 2017). For instance, according to statistics from the China Securities Regulatory Commission website, in 2010, 854 listed companies did not distribute cash dividends, accounting for 39 percent of all listed companies. In 2014, 2013, 2012, and 2011, the listed companies that abstained from dividend payments stood at 513, 450, 416, and 382, respectively, constituting 10 percent to 15 percent of the total listed companies in the market. The proportion of listed companies that do not pay dividends has significantly declined. Conversely, Baker and Weigand (2015) extrapolated several stylized facts from the literature on dividend policy, suggesting evidence of the diminishing significance of US cash dividends within an investor's overall return over time. Therefore, understanding the similarities and differences in the factors influencing the change in dividend payout strategies among Chinese and US non-financial firms remains intriguing.

Previous research has extensively examined dividend policy from various perspectives, including corporate governance (Jensen & Meckling, 1976; Rajput & Jhunjhunwala, 2020; Bakri et al., 2021), firms catering to investors' demands for dividends (Baker & Wurgler, 2004a, 2004b; Bilel & Mondher, 2021; Ham et al., 2023), asymmetric information (Ali Taher & Al-Shboul, 2023), and stability of dividends (Lintner, 1956; Kilincarslan, 2021). Despite significant efforts on dividend policy, Baker and Wurgler (2011) argue that decentralization policies still need to be revised by financial economists. Additionally, these observations primarily stem from research on corporate dividend conduct in developed capital markets. Only a restricted number of studies have examined the disparities in corporate dividend policies within diverse institutional settings, particularly in unique institutional contexts and economic environments, such as China's transition from a centrally planned economy to a market-driven one. Thus, it is questionable whether the factors impacting the dividend policy of listed companies in well-established capital markets exert a similar influence on listed firms in China. This remains unresolved, awaiting the formulation of theoretical frameworks and empirical analyses. Notably, emerging markets' nature, characteristics, and efficiency of emerging markets differ from those of developed capital markets (Al-Kuwari, 2009). As a result, some studies suggest that the effect of determinant factors on dividend choice may vary across economic studies due to significant differences between the two countries' national contexts (El-Bannan, 2020).

Dong and Liu (2016) emphasized that the catering theory demonstrates robust explanatory capability in relatively mature stock markets, such as the US. Nevertheless, they highlighted the difficulty in reaching consistent conclusions in stock markets characterised with higher ownership concentration and imperfect regulatory frameworks, as often observed in China. Furthermore, leveraging international datasets enables us to conduct additional tests of catering explanations, signalling, and smoothing. This involves analysing the distribution of dividend payments and exploring the relationship among the dividend smoothing hypothesis (Lintner, 1956), the signalling theory as applied in international economic settings (Akerlof, 1970), and the catering theory proposed by Baker and Wurgler (2004a). In accordance with the criteria established by Doddy et al. (2016), Al-Najjar and Kilincarslan (2017), and He et al. (2017), specific exclusions are implemented. The analysis specifically excludes firms with

negative book values, utility companies, and financial institutions. This decision is based on the recognition that these entities manage distinct accounting categories and adhere to disparate regulatory frameworks.

This paper begins briefly explores various dividend theories, highlighting the need for a universally applicable theory due to differing theoretical premises and contexts. It organizes the factors influencing a company's dividend policy into macro factors, company characteristics, and corporate governance. This categorization serves as the foundation for selecting variables in empirical research. The central question arises: Do the factors influencing US companies' dividend policies apply equally in China? Through a comparative analysis of US and Chinese dividend policy characteristics and influencing factors, the paper establishes a foundation for scrutinising the dividend policies of listed companies in both countries.

Furthermore, the study is contextualized within the significant dividend policy reforms that China implemented in 2012 and 2015. The China Securities Regulatory Commission's "Notice on Further Implementing the Cash Dividends of Listed Companies" on May 4, 2012, prompted these reforms, which aimed to guide listed companies in improving their dividend policies and decision-making mechanisms, enhancing transparency, and increasing shareholder returns. Before these reforms, many Chinese listed companies refrained from distributing cash dividends. Post-reform, a noticeable shift in dividend distribution practices occurred, marking a significant change in corporate governance.

The period from 2006 to 2016 is particularly relevant for several reasons. It includes China's significant dividend policy reforms, marking pivotal corporate governance and investor relations shifts. This timeframe also encompasses the 2008 Global Financial Crisis (GFC) and subsequent recovery, providing a comprehensive view of how external economic shocks influence dividend policies. Analysing this decade establishes baseline trends essential for comparing subsequent developments and understanding patterns' persistence, evolution, or disruption of due to recent events, such as the COVID-19 pandemic. The robust dataset from this period ensures consistent and reliable information, forming a solid empirical foundation for theoretical and practical contributions. Policymakers and corporate managers can leverage these historical insights to inform current strategies and navigate new economic challenges, making the study highly relevant and beneficial.

Likewise, the paper employs a multinomial logistic regression model to assess factors impacting dividend policy within a stochastic market model. It evaluates the decisions to cut, increase, or maintain dividend levels and whether to pay dividends in the current fiscal year. This approach deviates from previous studies that primarily focused on the binary decision of paying or not paying dividends. The sample includes 509 non-financial index companies (419 from the US and 90 from China) over the 2006-2016 period. This timeframe captures critical events, including the 2012 and 2015 dividend policy reforms in China and the 2008 financial crisis, providing insights into how external factors influenced dividend policies. The ten-year duration offers a substantial dataset for robust statistical analysis, facilitating the detection of persistent trends and structural shifts in dividend policies, thereby enhancing the reliability of our findings. The results contribute valuable insights to optimise dividend policies for listed companies, providing a solid foundation for both theoretical understanding and practical implementation.

The remainder of the paper is structured as follows: the subsequent section provides a concise overview of the literature review; a detailed exposition of the data and methodology follows this. Subsequently, we present the empirical findings, and finally, in the concluding section, we offer our conclusions.

LITERATURE REVIEW

Companies compensate shareholders regularly with cash dividends for several reasons. Firstly, it aligns to maximise shareholder wealth, providing investors with a tangible return on their investment. Secondly, regular cash payouts are considered a way to share in the company's profitability and value creation, enhancing shareholder satisfaction and loyalty. Financial economists have extensively debated the factors influencing dividend policy, leading to two contrasting perspectives: dividend relevance and dividend irrelevance. Empirical evidence supports the significance of dividends in driving investors' investment decisions (Kaplan & Pérez-Cavazos, 2022). Investor preferences for dividends are crucial in shaping dividend payout decisions (Rashid et al., 2013). Several theories explain the reasons behind companies' preferences for dividend payments and investors' distinct inclinations towards dividends. Among these theories are the signaling theory, smoothing hypothesis, catering theory, and Fama and French's hypotheses concerning dividend payers, accompanied by related hypotheses regarding firm characteristics. These theoretical frameworks offer insight into the complexities of dividend policies and shed light on the motivations guiding companies' decisions to pay dividends.

Dividend Smoothing Hypothesis (Lintner's Model)

The dividend smoothing hypothesis, introduced by Lintner (1956), posits that firms aim to maintain stable dividend payouts, adjusting them gradually to avoid erratic changes, and reflecting a long-term target payout ratio. Lintner's seminal study observed that US companies consistently maintained dividend payments despite temporary earnings shocks, attributing this stability to investors' preferences for companies with a steady dividend policy. Companies prioritize dividend stability to signal financial health and predictability to investors. As a result, managers often hesitate to cut dividends, doing so only when necessary. Firms adjust dividends incrementally in response to permanent changes in earnings rather than temporary fluctuations, ensuring a consistent dividend policy over time. This approach helps mitigate investor uncertainty and aligns with the preference for predictable and reliable income streams, reinforcing the importance of managerial discretion in dividend policy decisions. Previous research, including studies by Kamat and Kamat (2013), Al-Najjar and Kilincarslan (2017), and Andres and Hofbaur (2017) has explored dividend smoothing by examining how changes in dividends correlate with earnings fluctuations. These surveys and empirical evidence indicate that smoothing has a positive and significant influence on dividend policy, with current dividend payouts serving as indicators of future dividend levels. Consequently, it is hypothesized that:

H_1: Firms' payout option is positively related to past dividends.

The Signalling Theory

The theory of dividends as nods in signalling theory stems from Akerlof's (1970) seminal work on asymmetric information. It suggests that changes in dividend policies convey crucial information about a company's potential profitability to investors. Building on this foundation, Miller and Rock (1985) further explored how dividend decisions can indicate a firm's current and future earnings outlook,

thereby enhancing the informational content of dividends. According to signalling theory, there exists a direct correlation between the level of asymmetric information and a firm's dividend policy. Companies facing greater information asymmetry are more inclined to adjust their dividends strategically to signal their financial health and future prospects. Bhattacharya (1979) and Miller and Rock (1985) highlighted that modifications in dividend policy often reflect anticipated shifts in future cash flows. This theory posits that firms increase dividends to signal strong forthcoming performance, while a decrease may suggest potential financial challenges. Consequently, dividends serve as a means for companies to communicate their confidence in maintaining future earnings, thereby reducing uncertainty among investors and bolstering the market's perception of the firm's value.

Ali Taher and Al-Shboul (2023), Seth and Mahenthiran (2022), Abdulkadir et al. (2015), and Baker and Wurgler (2011) assert that investors interpret an uptick in dividends as a positive indicator of performance, thereby substantiating the relevance of dividend signalling theory. Conversely, Abdulkadir et al. (2016) contend that certain dividend policies entail considerable costs. These costs, coupled with signalling mechanisms, mean that only high-caliber companies can effectively utilize dividend payments to communicate valuable insights about future earnings prospects to financial markets. This notion aligns with Al-Malkawi's (2007) assertion that signalling information incurs costs, rendering it impractical for quality firms to emulate due to associated expenses. In summary, through empirical evidence, the information content of dividends is mixed, some studies support signal theory, while others are the opposite. Following this line of agreement, we hypothesized that:

H_2: Firms' payout option is positively related to firm profitability.

Catering Theory of Dividends

Baker and Wurgler (2004a, b) proposed the catering theory of dividends and suggested that a company's decision regarding its dividend policy is influenced by investor demand. Companies modify their dividend policies to accommodate changing investor preferences. Managers are more inclined to start or increase dividends when investors favor dividend-paying stocks, thereby enhancing the firm's stock price. On the other hand, when investors prefer non-dividend-paying stocks, firms may choose to reduce or omit dividends. This theory challenges the market efficiency assumption of the dividend irrelevance proof by positing that managers respond to investor sentiment. Essentially, catering theory asserts that managers provide what investors currently desire, aligning dividend policies with market demand to maximize shareholder value. The formal model of this theory emphasizes the trade-offs in catering decisions, provides testable predictions, and demonstrates how the prevailing investor appetite for dividends influences managers' decisions, leading to strategic adjustments in dividend payments based on market conditions.

A lot of research studies have looked at dividend changes (Takmaz et al., 2021; Brady et al., 2018; Banerjee, 2018; and Anouar & Aubert, 2016) and share buybacks (Hameed & Xie, 2019; Jiang et al., 2013; Kulchania, 2013) and found that the catering theory is true. In addition, Kumar et al. (2018) pointed out that catering theory has a significant impact on corporate finance and asset prices. As a result, we hypothesise that dividend premium and dividend policy have a positive relationship.

H_3: Firms' payout option is positively related to the dividend premium.

Fama and French's Characteristics of a Dividend Payer and Dividend Policy

Fama and French's Characteristics of a Dividend Payer and Dividend Policy (2001) identified several factors influencing firms' decisions regarding dividend payouts. They found that firms with larger scale, low leverage, higher profits, and fewer investment opportunities are more inclined to pay dividends. Their theory posits that factors such as firm size, investment opportunities, and profitability influence a firm's dividend payout decisions. Firms that enjoy higher profitability and have limited investment opportunities typically allocate a greater share of their earnings towards dividends. Conversely, firms with significant growth prospects prefer to reinvest their earnings to support future expansion, often resulting in lower dividend payments or none at all. The characteristics of dividend payers have been extensively examined, as supported by studies such as those by Adan and Omagwa (2018), Mat et al. (2017), Al-Najjar and Kilincarslan (2016), and Banyi and Kahle (2014), which assert the significance of profitability, size, growth, and investment prospects in influencing dividend disbursements. Consistent with previous research, larger firms tend to have a greater propensity to distribute dividends compared to smaller ones. Hence, it is hypothesized that:

H_4: Firms' payout option is positively related to size.

It is contended that growth opportunities can serve as a significant determinant of dividend payout (Abdulfatah et al., 2022; Hartono & Raya, 2021; and Yarram and Dollery, 2015). Evidence shows that firms with higher investment opportunities need more funds to finance their growth and thus, retain more earnings by paying low dividends. Therefore, we hypothesize that a negative relationship between the firm's investment opportunities and its dividend policy.

H_5: Firms' payout option is negatively related to investment opportunities.

Another variable employed in the research by Fama and French (2001) to explain dividend policy is leverage. High leverage firms must secure additional funds through internal channels (retained earnings) or external financing avenues (equity or debt) to meet their debt obligations. Nonetheless, entities with elevated leverage ratios are inclined to sustain lower dividend payout ratios to mitigate transaction expenses associated with external financing. Therefore, we assume that:

H_6: Firms' payout option is negatively related to leverage.

Other Firm Characteristics and Dividend Policy

Apart from the characteristics of dividend-paying firms highlighted by Fama and French (2001), traditional dividend determinants, including historical dividend payments, leverage, and cash flow are also frequently employed to analyse dividend policies. Cash flow describes the amount of cash generated from the profit or cash consumption of an investment, asset or business over a given-period. The free cash flow hypothesis, introduced by Jensen (1986), proposes that companies utilise dividends to reduce agency costs arising from conflicts of interest between managers and shareholders. As a result, there is evidence indicating that cash flow has a significant influence on dividend policy, with higher cash flows colliding with higher dividend payouts (Singh & Misra, 2019; Islam, 2018; and Mat et al., 2017). Nevertheless, Omar and Rizuan (2014) highlighted a negative correlation between dividends and cash flows. Based on empirical findings indicating firms' preference for retaining cash flows to bolster business operations rather than distributing dividends, we formulated the hypothesis that:

H_7: Firms' payout option is positively related to cash flow.

Based on the aforementioned studies on dividend policies, gaps remain. While previous research has examined these factors individually and in various combinations, our study aims to fill a specific gap by comparing the dividend policies of non-financial listed companies in two distinct economic and regulatory environments: the United States and China. The US, with its mature market-driven economy and well-established corporate governance practices, contrasts sharply with China's transitional economy and evolving regulatory landscape. By juxtaposing these two countries, our study reveals how different economic, cultural, and institutional factors influence corporate payout decisions, providing insights yet to be fully captured in the existing literature. Furthermore, we use a multinomial logistic regression model to evaluate how these factors influence decisions regarding whether to reducing, increasing, or maintaining dividend levels, rather than concentrating solely on the binary decision of paying dividends. This methodology enables a more comprehensive examination of dividend policy dynamics. It encompasses a broader spectrum of corporate behaviours, providing actionable insights for policymakers and corporate managers across various economic environments.

DATA AND METHODOLOGY

We sourced all secondary data from annual reports as of December 31, 2016, using DataStream and WorldScope. To mitigate the impact of equity division and subsequent, this study focuses on non-financial index constituents listed in Shanghai Stock Exchange (SSE) and New York Stock Exchange (NYSE), utilising dividend per share data and stock annual financial data from 2006 to 2016 as samples. DataStream and cbrates.com primarily provided the data. To ensure data efficiency and reliability, this study's sample excludes utility companies, entities with negative book values, and financial institutions. Justification for these exclusions stems from the distinct accounting categories and regulatory standards adhered to by these entities compared to non-financial firms (Fama & French, 2001; He et al., 2017).

Initially, the sample consisted of 989 non-financial index constituents listed in both capital markets. However, after eliminating samples with missing variables, the final sample comprised 509 companies (419 from the US and 90 from China), totalling 5599 firm-year observations. The difference in the number of firms (419 in the US and 90 in China) reflects the varying sizes and maturity levels of the two markets. This variation is critical in our analysis because it ensures meaningful comparisons and accounts for market-specific factors. The larger sample size from the US serves as a robust benchmark against which practices in the emerging Chinese market can be evaluated. The specific numbers of 419 US firms and 90 Chinese firms were determined based on fixed criteria in the DataStream database, ensuring consistent filtering over the study period. This selection criterion ensures a representative sample of non-financial firms in each market, reflecting the true actual composition of the markets and facilitating accurate comparisons. By maintaining consistent criteria, the study avoids biases arising from unequal sample selection, thereby enhancing the reliability of the findings.

Following Fama and French (2001) and Baker and Wurgler (2004b), this study employs a logit model to estimate the probability of a firm being a dividend payer. Multivariate or multinomial logistic regression (MLOGIT) looks at situations with more than two outcome levels in addition to the two-valued dependent variables that are usually looked at in logistic regression. In addressing our research inquiries, we utilise MLOGIT to analyse dividend-related issues with multiple outcome levels, including cutting, increasing, maintaining, and omitting dividends. The Price-Earnings Ratio Momentum (PREM) serves as a proxy for the catering theory implied by Baker and Wurgler (2004a,

b). Additionally, this study employs Return on Assets (ROA) as a proxy for signalling theory in understanding firms' decisions to distribute dividends based on the approach outlined by Kajola and Adewumi (2015). Thus, this study directly applies the general multinomial logistic model represented by the following equation.

$$\text{Ln}\frac{pr(DIV = j)}{pr(DIV = k)} = \propto_0 + \beta_1 PREM_{it} + \beta_2 ROA_{it} + \beta_3 SIZE_{it} + \beta_4 CF_{it} + \beta_5 INV_{it} + \beta_6 PYDPS_{it-1}$$
$$+ \beta_7 LEV_{it} + SMP_{it} + \beta_9 INT_{it} + \varepsilon_{it}$$
$$j = 1, 2, 3 \tag{1}$$

where 1 represents a cut in dividends, 2 signifies an increase in dividends, 3 denotes maintaining dividends, 4 represents omitting dividends, j represents different outcome levels encompassing 1, 3, and 4; while k denotes the base outcome (outcome level 2).

i. DIV denotes the various options for dividend payouts.
ii. PREM signifies the dividend premium, calculated as the average market-to-book ratio of dividend-paying and non-dividend-paying entities.
iii. ROA serves as a measure of the firm's profitability, calculated as net earnings divided by total assets.
iv. SIZE denotes the firm's size, which is represented by the natural logarithm of its total assets.
v. CF represents the firm's cash flow derived from operational activities, precisely the net cash flow from operating activities.
vi. INV denotes the firm's investment opportunities, quantified by the market-to-book ratio.
vii. PDIV denotes dividends paid out in the previous year.
viii. LEV represents the firm's indebtedness, calculated as total debt divided by total assets.
ix. SMP denotes the stock market's performance, measured by the Index Share Price.
x. The Central Bank establishes the overnight policy rate, INT, which serves as an indicator of the prevailing economic conditions.

The dependent variable in the model represents firms dividend payout decisions, categorized into four outcome levels: PAYOPT=1 indicating a reduction in dividends, PAYOPT=2 indicating an increase in dividends, PAYOPT=3 indicating maintenance of dividends, and PAYOPT=4 indicating omission of dividends. Considering the multinomial nature of the dependent variable, multinomial logistic regression was utilised to explore the variables elucidating payout policies in both the US and China markets. The explanatory variables encompass cash flow (CF), interest rates (INT), investment opportunities (INV), leverage (LEV), past dividend payouts (PDIV), dividend premium (PREM), profitability (ROA), firm size (SIZE), and stock market performance (SMP). Subsequently, the significance of the coefficients related to dividend payout choices was assessed.

RESULTS AND DISCUSSION

Multicollinearity Analysis and Tests for Model Fit

The heterogeneous and multicollinear regression hypotheses were tested through pairwise correlation coefficients and variance expansion factors (VIF). The results in Table 1 indicate the highest correlation between SIZE and CF in both the US (0.63) Smoo and China (0.51). Paired correlation analysis suggests that when the coefficient level is below 0.7, it is unlikely to result in multicollinearity (Bryman & Cramer, 1997). According to Abdulhafedh (2017), VIF values not exceeding 10, and tolerance values

below 0.1 indicate the absence of multicollinearity between the model variables. The subsequent analysis presented in Table 2 confirms the absence of multicollinearity, as all values are below 1.00 and VIF values do not exceed 10.

Table 1

Pairwise Correlation Coefficients

	DP	PREM	ROA	CF	SIZE	INV	PDIV	LEV	SMP	INT
United States										
DIV	1.00									
PREM	−0.01	1.00								
ROA	0.06	0.00	1.00							
CF	0.16	−0.01	−0.10	1.00						
SIZE	0.31	−0.01	−0.18	0.60	1.00					
INV	−0.02	−0.03	0.01	0.00	−0.02	1.00				
PDIV	0.21	−0.01	−0.05	0.17	0.25	−0.01	1.00			
LEV	0.01	−0.01	0.01	0.00	−0.01	0.00	0.00	1.00		
SMP	0.02	−0.28	−0.05	0.02	0.04	0.01	0.05	−0.03	1.00	
INT	−0.04	−0.27	0.05	−0.04	−0.10	0.01	−0.14	−0.03	0.01	1.00
The Republic of China										
DIV	1.00									
PREM	0.46	1.00								
ROA	0.00	−0.02	1.00							
CF	0.14	0.09	−0.14	1.00						
SIZE	0.41	0.18	−0.11	0.51	1.00					
INV	−0.09	−0.03	−0.01	−0.11	−0.25	1.00				
PDIV	0.31	0.16	−0.10	0.10	0.31	−0.09	1.00			
LEV	−0.01	−0.02	−0.09	0.04	0.32	0.04	−0.16	1.00		
SMP	−0.12	0.17	−0.01	−0.04	−0.18	0.08	−0.07	−0.05	1.00	
INT	−0.44	−0.09	0.06	−0.12	−0.26	0.03	−0.24	−0.02	0.29	1.00

Note: DIV represents dividends payout options; dividend premium (*PREM*); size (*SIZE*); profitability (*ROA*); investment opportunity (*INV*); past dividend (*PDIV*); leverage (*LEV*); cash flow (*CF*); overnigh policy rate (*INT*); and stock market performance (*SMP*);

Table 2

Multicollinearity Tests for Multinomial Logit Model

Variables	Variance Inflation Factors (*VIF*)		Tolerance Value	
	US	China	US	China
PREM	1.15	1.77	0.87	0.57
ROA	1.04	1.04	0.96	0.96
CF	1.65	1.42	0.61	0.70
SIZE	1.77	2.11	0.57	0.47
INV	1.00	1.09	1.00	0.91
PDIV	1.09	1.28	0.92	0.78
LEV	1.00	1.31	1.00	0.77
SMP	1.18	1.18	0.85	0.85
OPR	1.13	1.38	0.88	0.75
Mean *VIF*	1.22	1.44	−	−

The goodness-of-fit test is utilized to identify potential model misspecification and evaluate model adequacy. Therefore, Table 3 presents several diagnostic tools for assessing the goodness of fit. According to Abdulhafedh (2017), the likelihood ratio (LR) statistic test assesses the impact of independent variables on the outcome. A statistically significant LR statistic for the overall model (p<0.05) indicates that independent variables have contributed to predicting the outcome. Table 3 shows

that the likelihood ratio χ^2 statistics for all economies are statistically significant at the 1 percent level, suggesting a significantly better fit of the model. Subsequently, the multinomial model's specification was then evaluated by testing the independence of irrelevant alternatives (IIA) assumption, in accordance with the methodologies outlined by McFadden et al. (1976) and Hausman (1978). The Hausman test results show significant differences in payout options among the four alternatives in both the US and China, validating the multinomial model's applicability in this study. Moreover, the Percentage of Correct Prediction (PCP) is being utilized to showcase the model's predictive predictive power and its precision in classifying the outcomes of the dependent variable. Statistical findings in Table 4 reveal PCPs of 76.03 percent for the US and 87.88% for China, surpassing the 50 percent minimum threshold specified by Gelman and Hill (2007) for predictive accuracy.

Table 3

Hausman and McFadden tests (Hausman test IIA)

Tests	Results	
	US	China
Cut	1.00	1.00
Increase	1.00	0.99
Maintain	*MLOG2*	*MLOG2*
Omit	1.00	1.00
Base Outcome	2	4

Note: A significant test is evidence against H_0.

Hausman test IIA, H_0: Odds (Outcome-J vs Outcome-K) are independent of another alternative.

Table 4

Tests for Goodness of fit (Multinomial Model)

Tests	Test of Model Fit	
	US	China
Number of Observations	4609	990
Number of Outcome Values	4	4
Base Outcome	2	4
$LR\ chi^2$	821.09	535.64
Prob> chi^2	0.00	0.00
Wald Test	613.06	264.07
Prob> chi^2	0.00	0.00
Expectation-Prediction Evaluation (Percentage of Correct Prediction)	76.03%	87.88%

Multinomial Logistic Regression Analysis

The findings presented in Table 5 reveal significant negative coefficients for past dividends across all payout categories for US firms, whereas these coefficients are positive and significant for all payout categories in China. This suggests that US firms exhibit a higher inclination to increase dividends than cutting, maintaining, or omitting dividends, whereas Chinese firms are more inclined to cut, increase, or maintain dividends rather than omit them, mainly when previous year dividend payouts were high. This observation aligns with previous studies conducted by Dewasiri et al. (2018), Bostanci et al. (2018), Al-Kayed (2017), Rane and Raju (2016), and Abdulkadir et al. (2015), which have found that higher past dividend payments are associated with a greater propensity to distribute dividends.

Furthermore, the regression results in Table 5 indicate a significant negative coefficient of firm size across all dividend payout categories in China, indicating decisions to cut, increase, or maintain dividends relative to omitting dividends. In contrast, in the US, the sole significantly negative coefficient for firm size is associated with the choice to omit dividends compared to increasing them. This suggests that larger Chinese firms tend to favour cutting, increasing, or maintaining dividend levels over omitting dividends, while larger US firms exhibit a greater tendency to increase dividends instead of abstaining from dividend payments entirely. This finding aligns with the findings of Fama and French (2001), who highlighted the inclination of larger firms toward dividend distribution. It is also consistent with Al-Najjar and Kilincarslan (2018) in Turkey, He et al. (2017) across twenty-nine countries, Pontoh (2017) in Indonesia, and Yarram and Dollery (2015) in Australia, all of whom observed that larger firms are more disposed to offering higher dividends compared to their smaller counterparts.

Table 5

Multinomial Logit Model for Dividend Payout Option

Explanatory Variables	US (Base Outcome = 2)			China (Base Outcome = 4)		
	(1) Cut	(2) Maint	(3) Omit	(1) Cut	(2) Maint	(3) Omit
Constant	−0.90	0.26	8.06***	−12.38***	−8.99***	−7.01***
PREM	1.10***	0.30***	0.15**	0.01	−0.16	−0.23
ROA	−0.70***	−0.29***	−0.53***	0.35	0.19	−0.18
CF	−0.01	−0.07***	−0.05**	−0.05	−0.08	−0.06
SIZE	−0.09	−0.05	−0.48***	0.66***	0.63***	0.49***
INV	0.02	−0.12	0.08	−0.02	0.02	0.00
PDIV	−0.37**	−0.09*	−0.91***	1.63***	1.25***	1.39***
LEV	0.20	−0.08	−0.01	−2.19***	−3.36***	−2.11***
SMP	1.13**	0.53**	0.18	0.53*	−0.21	0.31
OPR	−0.08	−0.01	−0.01	0.02	−0.03	−0.06
Loglikelihood X^2			821.09***			535.64***
Number of Observation	4,609	4,609	4,609	990	990	990

Note: The asterisks of ***, **, and * indicate the significance level at 1%, 5%, and 10%, respectively.

In addition to this, Table 5 shows that stock market performance appears to exhibit positive significance in both the US and China across various dividends payout choices: specifically, the decision to cut or maintain dividends relative to increasing dividends in the US and the decision to cut dividends relative to increasing dividends in China. This implies that when the stock market is performing well, US firms tend to have a higher propensity to increase their dividend payouts rather than merely cut or maintain them, while Chinese firms are more likely to cut dividends rather than omit them. This is consistent with Walkup (2016), which argues that US companies are more inclined to cut dividends than increase dividends as market uncertainty increases. Similarly, Liu et al. (2018) found that economic downturns lead Chinese companies to be reluctant about distributing dividends. Furthermore, the regression results show that the leverage coefficient is statistically and negatively significant only in China across all dividend payout categories. As a result, Chinese firms with higher levels of indebtedness tend to exhibit a greater inclination to omit dividends rather than opt for cutting, increasing, or maintaining dividend levels throughout the study period. He et al. (2017) noted that financially constrained firms are more inclined to distribute cash dividends, which aligns with this intriguing finding.

If increasing dividends is the base case, Table 5 shows that US companies with higher dividend premiums are more likely to cut, maintain, or omit dividends instead of increasing them. This finding offers partial support for the catering theory, suggesting that US firms are more inclined to maintain

dividend levels to cater to investor demands (Neves, 2018; Kumar et al., 2017; Wang et al., 2016). Furthermore, the regression findings suggest that highly profitable US firms tended to increase dividend payouts rather than reduce, maintain, or omit them during the study period. This preference aligns with the signalling mechanism in which US firms increase dividends in response to high profitability. Prior studies (Al-Najjar & Kilincarslan, 2018; He et al., 2017; Pontoh, 2017; and Banerjee, 2016) support this observation, which aligns with the characteristics of dividend payers outlined by Fama and French (2001).

Conversely, contrasting insights emerged when considering omitting dividends as the base outcome in China. The empirical findings reveal that variables such as dividend premium, profitability, cash flow, investment opportunities, and interest rate are statistically insignificant in explaining dividend payout choices. This observation aligns with Kargar and Ahmadi (2013) that cash flow was not a statistically significant determinant of the Tehran Stock Exchange dividend policy. However, Dewasiri et al. (2019) reported significant correlations between past dividends, investment opportunities, profitability, and dividend premium, contrasting with our findings. Therefore, the overall results do not conclusively support signalling, catering, and free cash flow theories.

CONCLUSION AND IMPLICATIONS

This study analyses the common characteristics of dividend-paying and non-paying companies in China and the US. It also investigates their decisions regarding dividend payouts using a sample of 419 US non-financial index firms and 90 Chinese non-financial index firms spanning from 2006 to 2016. Utilizing the multinomial logistic model, we predict the dividend-paying ability of firms. The empirical findings shed light on the inconsistent support for some dividend theories across the US and China. Specifically, US firms that have previously paid higher dividends are more inclined to increase dividends rather than cut, maintain, or abstain from dividend payments. In contrast, Chinese firms are more prone to adjust their dividend payouts through cutting, increasing, or maintaining dividend payout levels rather than omitting dividends when past dividend payments were high. This suggests that Lintner's (1956) dividend smoothing hypothesis holds true in the US and China during the study period, as past dividends emerge as a significant determinant in current dividend decisions.

Moreover, we identify several cross-sectional determinants, such as firm size and stock market performance, that are statistically significant in dividend payout decisions across different categories in both the US and China. During the study period, the decision on dividend payout depended not only on smoothing dividends or increasing them to signal financial strength, but also on firm-specific characteristics. Our analysis reveals that profitability, size, leverage, and stock market performance significantly influence the likelihood of firms distributing dividends. Larger US firms with higher profitability and cash flow levels exhibit a greater propensity to increase dividends, supporting the signaling hypothesis. Conversely, larger and lower-leveraged Chinese firms are hesitant to omit dividends, benefiting from greater financial flexibility and lower debt obligations. This aligns with Fama and French (2001), who noted that larger firms with greater profitability and fewer growth opportunities tend to prioritize dividend payments.

Additionally, past dividends and firm size are identified as crucial factors influencing the decision to omit dividends rather than increase them, suggesting that firms adjust their dividend policies by preceding dividends to strengthen financial stability and conserve capital. Furthermore, the study identifies differences between US and Chinese dividend policies. In the US, profitability and dividend

premium primarily influence dividend payout, while leverage heavily influences Chinese firms' dividend decisions. These factors suggest that Chinese firms have less sticky dividend policies than their US counterparts, implying a diminished role of dividend policy in signalling and catering theories in China compared to the US market.

Since dividend payments represent a means of rewarding shareholders, understanding the factors influencing alternative payout decisions offers valuable insights for current and prospective US and China investors. Furthermore, the findings from this study are significant for researchers conducting similar investigations. However, it is essential to acknowledge the limitations of this study. First, it focuses solely on non-financial firms with significant market capitalization in the US and China. Future research may aim to include a broader sample of listed companies to enhance the generalizability of the findings. Moreover, future research could extend the sample to encompass the COVID-19 pandemic crisis, allowing for an examination of how the pandemic moderates factors that influence company dividend policies. This broader analysis would offer valuable insights into the impact of external shocks on dividend policies and illuminate the distinguishing features of firms that pay dividends versus those that do not. By studying these dynamics, researchers can evaluate the resilience of current findings under varied economic conditions and construct more sophisticated models that incorporate crisis-induced financial behaviours.

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