

CORPORATE CASH HOLDINGS AND FIRM PERFORMANCE: THE ROLE OF FAMILY OWNERSHIP AND ANALYST COVERAGE IN THAI LISTED FIRMS

Punchita RUKMANEEWONG

1Faculty of Commerce and Accountancy, Chulalongkorn University, Thailand;
6784005226@student.chula.ac.th

ARTICLE HISTORY

Received: 4 June 2026

Revised: 8 June 2026

Published: 26 June 2026

ABSTRACT

This study examines the determinants and performance implications of corporate cash holdings among Thai SET-listed firms over 2017–2024. Using pooled OLS with industry and year fixed effects and firm-level clustered standard errors ($N = 3,596$; 510 firms), we test seven hypotheses across two models. For the determinants model, firm-specific characteristics (market-to-book ratio, leverage, cash flow, net working capital, and ROA) significantly drive cash holdings, while family ownership has no significant effect. Analyst coverage significantly reduces cash holdings, consistent with Chen, Harford, and Lin (2015). For the performance model, cash holdings are positively associated with Tobin's Q . No inverted U-shaped relationship is found. Family ownership does not reduce cash value in isolation but is strongly positive in the full model, indicating stewardship effects. Analyst coverage marginally enhances the marginal value of cash. The findings suggest that external monitoring complements ownership-based governance in an emerging market with concentrated family ownership.

Keywords: Corporate Cash Holdings, Family Ownership, Analyst Coverage, Firm Performance, Thailand, Emerging Markets

CITATION INFORMATION: Rukmanee Wong, P. (2026). Corporate Cash Holdings and Firm Performance: The Role of Family Ownership and Analyst Coverage in Thai Listed Firms. *Procedia of Multidisciplinary Research*, 4(6). 18.

INTRODUCTION

Corporate cash holding decisions reflect competing forces between precautionary benefits and agency costs. Opler, Pinkowitz, Stulz, and Williamson (1999) establish that firms hold cash to mitigate financial distress costs and maintain operational flexibility, while Jensen (1986) argues that excess cash exacerbates agency conflicts by enabling managers to pursue value-destroying investments.

Thailand represents a particularly relevant emerging market setting. Wiwattanakantang (2001) documents that the majority of Thai listed firms are controlled by families through pyramidal structures, creating severe Type II agency problems where controlling shareholders may expropriate minority investors. Despite the prevalence of family ownership, no prior research has systematically examined how family ownership and analyst coverage jointly affect both the determinants and performance implications of cash holdings in Thai listed firms.

This study addresses two research questions: (1) What determines corporate cash holdings, with particular attention to family ownership and analyst coverage? (2) How do cash holdings affect firm performance, and how are these effects moderated by family ownership and analyst coverage? The study contributes to the emerging-market corporate finance literature by providing systematic evidence from Thailand over 2017–2024.

LITERATURE REVIEW AND HYPOTHESES

2.1 Determinants of Cash Holdings

Opler et al. (1999) identify growth opportunities, cash flow volatility, leverage, and capital market access as primary determinants of cash holdings. Ozkan and Ozkan (2004) extend this to the UK, finding a non-linear relationship between managerial ownership and cash. Regarding family ownership, Claessens, Djankov, Fan, and Lang (2002) document that controlling families may accumulate cash to preserve discretion and avoid external monitoring (entrenchment view), while Anderson and Reeb (2003) find that family ownership is associated with superior performance (stewardship view). Chen, Harford, and Lin (2015) provide causal evidence that analyst coverage constrains excess cash accumulation through increased scrutiny. Given Thailand's Type II agency environment, we propose:

H1b: Family ownership is positively associated with cash holdings. **H1c:** Analyst coverage is negatively associated with cash holdings.

2.2 Cash Holdings and Firm Performance

Martínez-Sola, García-Teruel, and Martínez-Solano (2013) document a non-linear (inverted U-shaped) relationship between cash and firm value. Dittmar and Mahrt-Smith (2007) demonstrate that governance quality moderates the cash-performance relationship. Pinkowitz and Williamson (2004) find that cash creates less value in family-controlled firms due to expropriation risk. Chen et al. (2015) and Yu (2008) show that analyst monitoring enhances the marginal value of cash by constraining managerial discretion. We propose:

H2a: Cash holdings positively affect Tobin's Q. **H2b:** The cash-performance relationship is inverted U-shaped. **H2c:** Family ownership reduces the marginal value of cash. **H2d:** Analyst coverage increases the marginal value of cash.

METHODOLOGY

3.1 Sample and Data

The sample covers SET-listed firms over 2017–2024, yielding an eight-year unbalanced panel. Financial sector firms, property funds, REITs, warrants, unit trusts, and rights offerings are excluded, leaving a firm universe of 763 securities. Of these, 665 are classified as family-owned (FAMILY = 1) and 98 as non-family. The total panel comprises 6,105 firm-year observations; after listwise deletion the regression sample is 3,596 firm-year observations across 510 unique firms. Financial data are from SETSMART; market data and analyst coverage are from Datastream. Market capitalisation and CAPEX from Datastream are reported in thousands of Thai Baht and multiplied by 1,000 prior to ratio computation to ensure unit consistency with SETSMART financial statement data.

3.2 Family Ownership Classification

FAMILY is a binary indicator equal to 1 if an individual or family group (same surname) holds $\geq 20\%$ of shares, directly or in aggregate, and 0 otherwise. Classification follows six sequential steps: (1) direct individual holding $\geq 20\%$ (or $\geq 10\%$ if confirmed as founder/CEO/Chairman); (2) surname aggregation within top-10 shareholders; (3) BOD cross-check via SETSMART; (4) entity verification — Thai NVDR holders and foreign entities coded FAMILY = 0, Thai juristic entities traced via DBD Warehouse; (5) DBD director name cross-reference; and (6) widely held classification for unresolved cases. The procedure prioritises automated data filters to minimise manual verification, which was required for 253 firms through DBD Warehouse.

3.3 Variables and Models

Cash Holdings (CASH) = cash and cash equivalents / total assets. Tobin's Q = (market equity + book debt) / total assets. Controls follow Opler et al. (1999): market-to-book (MB), leverage (LEV), cash flow (CF), firm size (SIZE), net working capital (NWC), dividend dummy (DIV), return on assets (ROA), and capital expenditure (CAPEX). All continuous variables are winsorized at the 1st–99th percentiles; 48 observations with CASH > 1 are dropped as data entry errors.

Model 1 (cash determinants): $CASH_{it} = \beta_0 + \beta_1 FAMILY_{it} + \beta_2 ANALYST_{it} + \beta_3 MB_{it} + \beta_4 LEV_{it} + \beta_5 CF_{it} + \beta_6 SIZE_{it} + \beta_7 NWC_{it} + \beta_8 DIV_{it} + \beta_9 ROA_{it} + \beta_{10} CAPEX_{it} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it}$

Model 2 (cash-performance): $Q_{it} = \alpha_0 + \alpha_1 CASH_{it} + \alpha_2 CASH^2_{it} + \alpha_3 FAMILY_{it} + \alpha_4 ANALYST_{it} + \alpha_5 (CASH \times FAMILY)_{it} + \alpha_6 (CASH \times ANALYST)_{it} + \text{Controls} + \text{Industry FE} + \text{Year FE} + v_{it}$.

MB is excluded from Model 2 due to its high correlation with Tobin's Q ($r = 0.857$). Both models use firm-level clustered standard errors following Petersen (2009), confirmed by Breusch-Pagan test: $\chi^2(1) = 887.36$, $p < 0.001$. Firm-level fixed effects are intentionally excluded from the primary specification for two reasons. First, family ownership classification is based on fiscal year-end shareholder data, making FAMILY effectively time-invariant across the panel; firm FE would absorb all between-firm variation in this variable, making identification impossible and introducing attenuation bias — a well-documented limitation when governance variables are slow-moving or time-invariant (Himmelberg, Hubbard, & Palia, 1999; Zhou, 2001). Second, several prominent studies in this literature, including Opler et al. (1999) and Chen, Harford, and Lin (2015), adopt pooled OLS with industry and year fixed effects as the primary specification for the

same reason. Pooled OLS with industry and year fixed effects therefore remains the appropriate benchmark.

RESEARCH RESULTS

4.1 Descriptive Statistics and Univariate Analysis

Table 1 reports descriptive statistics after winsorization. Thai listed firms hold a mean 20.15% of total assets in cash above developed-market norms consistent with precautionary demand in an underdeveloped capital market. Tobin's Q averages 1.278. Family ownership covers 87.07% of firm-years. Analyst coverage is low (mean 2.10), reflecting Thailand's developing capital market. Univariate tests show cash holdings do not differ significantly between family and non-family firms ($p = 0.931$), providing preliminary evidence against H1b. Non-family firms are larger (16.79 vs 15.45, $p < 0.001$) and attract more analysts (4.69 vs 1.66, $p < 0.001$). Family firms exhibit higher Tobin's Q (1.308 vs 1.116, $p < 0.001$) and ROA (4.93 vs 3.62, $p < 0.001$).

Table 1 Descriptive Statistics (After Winsorizing at 1st–99th Percentile, N = 3,596)

Variable	N	Mean	Std. Dev.	Min	Max	Unit
Cash Holdings	4,011	0.20	0.181	0.00	0.99	% of TA
Tobin's Q	3,611	1.27	0.981	0.29	5.87	Times
Family Ownership	6,011	0.87	0.331	0.00	1.00	Dummy
Analyst Coverage	4,111	2.09	4.841	0.00	27.0	Count
Market-to-Book	3,611	1.93	1.911	0.26	11.0	Times
Leverage	4,011	0.26	0.201	0.00	0.70	% of TA
Cash Flow	4,011	0.06	0.091	-0.21	0.34	% of TA
Firm Size	4,011	15.6	1.581	9.05	21.9	ln(THB)
Net Working Capital	4,011	0.17	0.231	-0.36	0.75	% of TA
Return on Assets	4,111	4.74	7.111	-21.9	26.8	%
Capital Expenditure	4,011	0.00	0.001	0.00	0.02	% of TA

Note: % of TA = ratio to total assets; Times = market multiple; Dummy = 0/1; Count = number of analysts; ln(THB) = natural log of total assets; % = percentage.

4.2 Correlation Analysis

Table 2 presents the Pearson pairwise correlation matrix. Cash Holdings is negatively correlated with Leverage ($r = -0.503$) and positively with Net Working Capital ($r = 0.532$), consistent with precautionary motive theory. Market-to-Book and Tobin's Q are highly correlated ($r = 0.857$) as both incorporate market capitalisation, motivating the exclusion of MB from Model 2 to avoid multicollinearity. Analyst Coverage and Firm Size correlate at $r = 0.638$, reflecting that larger firms attract more analyst following. No pair of independent variables in Model 1 exceeds $r = 0.65$; mean VIF = 1.70, confirming the absence of severe multicollinearity.

Table 2 Pearson Correlation Matrix (Pairwise, N = 3,596)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Cash	1.00										
(2) Tobin's Q	0.181	1.00									
(3) Family	0.00	0.07	1.00								
(4) Analyst	-0.041	0.24	-0.211	1.00							

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(5) MB	0.06	0.85	0.06	0.28	1.0						
(6) LEV	-0.50	-0.11	-0.0	0.17	0.05	1.0					
(7) CF	0.25	0.30	0.03	0.08	0.21	-0.24	1.0				
(8) Size	-0.20	-0.05	-0.29	0.63	0.03	0.41	-0.04	1.0			
(9) NWC	0.53	0.0	-0.04	-0.06	-0.15	-0.53	0.0	-0.22	1.0		
(10) DIV	0.15	0.13	-0.04	0.23	0.06	-0.18	0.19	0.25	0.25	1.0	
(11) ROA	0.21	0.29	0.06	0.10	0.16	-0.20	0.46	0.04	0.22	0.42	1.0

Note: * $p < 0.05$ (pairwise). (1) Cash Holdings, (2) Tobin's Q, (3) Family Ownership, (4) Analyst Coverage, (5) Market-to-Book, (6) Leverage, (7) Cash Flow, (8) Firm Size, (9) Net Working Capital, (10) Dividend Dummy, (11) Return on Assets. CAPEX excluded for space; full matrix available on request. MB–Tobin's Q $r = 0.857$; MB excluded from Model 2 to avoid multicollinearity.

4.3 Regression Results: Determinants of Cash Holdings (Model 1)

Table 2 presents Model 1 results. H1a is partially supported: MB, LEV, CF, NWC, and ROA are significant in predicted directions. SIZE is positive and insignificant; CAPEX and DIV are insignificant with clustered SE. Family ownership (H1b) is insignificant (coef. = -0.0026 , $p = 0.858$), indicating that neither entrenchment nor stewardship dominates through ownership structure alone. Analyst coverage (H1c) is negative and significant (coef. = -0.0026 , $p = 0.044$), confirming that analyst scrutiny constrains cash accumulation consistent with Chen et al. (2015).

Table 5 Determinants of Cash Holdings (Model 1, Clustered SE at Firm Level)

Variable	Pred.	H1a Coef. (SE)		H1b Coef. (SE)		H1c Coef. (SE)
		Coef.	(SE)	Coef.	(SE)	Coef. (SE)
Family Ownership	(+)	—	—	-0.0026	(0.0145)	—
Analyst Coverage	(-)	—	—	—	—	-0.0026** (0.0013)
Market-to-Book	(+)	0.0074***	(0.0021)	0.0074***	(0.0021)	0.0091*** (0.0023)
Leverage	(-)	-0.1966***	(0.0290)	-0.1959***	(0.0292)	-0.2006*** (0.0293)
Cash Flow	(+)	0.3554***	(0.0474)	0.3557***	(0.0474)	0.3646*** (0.0476)
Firm Size	(-)	0.0046	(0.0034)	0.0044	(0.0037)	0.0111** (0.0050)
Net Working Capital	(-)	0.3836***	(0.0314)	0.3836***	(0.0314)	0.3910*** (0.0309)
Dividend Dummy	(-)	-0.0137	(0.0099)	-0.0135	(0.0099)	-0.0134 (0.0098)
Return on Assets	(+)	-0.0022***	(0.0007)	-0.0021***	(0.0007)	-0.0023*** (0.0007)
Capital Expenditure	(+)	0.7171	(1.4384)	0.7075	(1.4417)	1.0821 (1.4460)
Observations		3,596		3,596		3,596
R-squared		0.4354		0.4354		0.4379
Industry & Year FE		YES		YES		YES

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Robust SE clustered at firm level. Dependent variable = Cash Holdings (ratio). N = 3,596 (510 unique firms).

4.4 Regression Results: Cash Holdings and Firm Performance (Model 2)

Table 3 reports Model 2 results. Cash holdings are positively and significantly associated with Tobin's Q in the linear specification (H2a: coef. = 0.6762, $p < 0.001$), supporting the precautionary motive. The squared cash term is negative but insignificant (H2b: coef. = -0.3434 , $p = 0.526$), providing no statistical support for a quadratic relationship. The absence of an inverted U-shape is itself informative: it suggests that Thai listed firms have not yet reached an excessive cash threshold at which agency costs begin to outweigh precautionary benefits. Given Thailand's underdeveloped capital markets and limited access to external financing, cash continues to generate net precautionary value across the entire observed range every additional unit of cash still contributes positively to firm value within this sample. This has a direct policy implication: regulators in emerging markets with constrained capital access should be cautious about discouraging corporate liquidity buffers, as firms may rationally require higher cash cushions than those observed in developed markets. Cash $\times$ Family is positive but insignificant in isolation (H2c: coef. = 0.6034, $p = 0.133$) yet becomes strongly significant in the full model (0.9225, $p = 0.003$), indicating stewardship rather than entrenchment effects. Cash $\times$ Analyst is positive and marginally significant (H2d: coef. = 0.0969, $p = 0.071$), strengthened to $p = 0.032$ in the full model, consistent with analyst monitoring enhancing cash value. An important technical note on the full model: when interaction terms (Cash $\times$ Family and Cash $\times$ Analyst) are introduced, the standalone coefficients for Cash Holdings (-0.0940) and Family Ownership (-0.0896) become negative and insignificant. This is a standard statistical property of interaction models, not evidence of a sign reversal. The standalone coefficient on Cash Holdings in the full model represents the effect of cash when both FAMILY = 0 and ANALYST = 0 — a combination that characterises only a small subset of the sample. The economically meaningful effect of cash on firm value must therefore be evaluated at representative values of the moderating variables using the full linear combination: $\alpha_1 + \alpha_5 \text{FAMILY} + \alpha_6 \text{ANALYST}$. At sample means (FAMILY = 0.87, ANALYST = 2.10), the implied marginal value of cash is $-0.0940 + 0.9225(0.87) + 0.1144(2.10) = 0.967$, which is positive and consistent with H2a. Future research should visualise these conditional effects using marginal effects plots across the distribution of analyst coverage and family ownership to provide richer insight into the heterogeneity of cash value across firm types.

Table 5 Cash Holdings and Firm Performance (Model 2, Clustered SE at Firm Level)

Variable	H2a Coef.	(SE)	H2b Coef.	(SE)	Full Coef.	(SE)
Cash Holdings	0.6762***	(0.1730)	0.9077**	(0.3824)	-0.0940	(0.4192)
Cash Holdings ²	—	—	-0.3434	(0.5407)	-0.3431	(0.5429)
Family Ownership	0.0643	(0.0793)	0.0654	(0.0793)	-0.0896	(0.0999)
Analyst Coverage	0.0794***	(0.0105)	0.0794***	(0.0105)	0.0601***	(0.0106)
Cash $\times$ Family	—	—	—	—	0.9225***	(0.3118)
Cash $\times$ Analyst	—	—	—	—	0.1144**	(0.0533)
Leverage	0.3476**	(0.1705)	0.3648**	(0.1715)	0.3637**	(0.1719)
Cash Flow	1.1813***	(0.2433)	1.1750***	(0.2414)	1.1166***	(0.2407)
Firm Size	-0.2326***	(0.0325)	-0.2340***	(0.0328)	-0.2272***	(0.0316)
Net Working Capital	-0.2763*	(0.1452)	-0.2776*	(0.1451)	-0.2541*	(0.1440)

Variable	H2a Coef.	(SE)	H2b Coef.	(SE)	Full Coef.	(SE)
Return on Assets	0.0314***	(0.0056)	0.0314***	(0.0056)	0.0311***	(0.0056)
Capital Expenditure	27.302**	(13.046)	26.849**	(12.980)	28.766**	(12.896)
Observations	3,596		3,596		3,596	
R-squared	0.3470		0.3472		0.3552	

Note: *** p<0.01, ** p<0.05, * p<0.10. Robust SE clustered at firm level. Dependent variable = Tobin's Q. MB excluded (r = 0.857 with Tobin's Q). Industry and Year FE included in all specifications.

4.5 Summary of Hypothesis Testing

Table 5 Summary of Hypothesis Testing Results

Hypothesis	Prediction	Key Coef. (p)	Result	Conclusion	Interpretation
H1a: Controls → Cash	Mixed	Various	Mixed	Partial	MB, LEV, CF, NWC, ROA significant; SIZE unexpected (+)
H1b: Family → Cash	(+)	−0.0026 (0.858)	Not sig.	Not Supported	Family ownership has no effect on cash levels
H1c: Analyst → Cash	(−)	−0.0026** (0.044)	Neg. sig.	Supported	Analyst coverage reduces cash; robust to clustered SE
H2a: Cash → Q	(+)	0.6762*** (<0.001)	Pos. sig.	Supported	Cash positively affects Tobin's Q
H2b: Cash ² (inv. U)	Cash ² (−)	−0.3434 (0.526)	Not sig.	Not Supported	Turning point 132% of assets; implausible
H2c: Cash×Famil	(−)	0.6034 (0.133); 0.9225*** full	Mixed	Not Supported (standalone)	Stewardship effect in full model
H2d: Cash×Analyst	(+)	0.0969* (0.071)	Pos. sig.*	Partial	Analyst monitoring enhances marginal cash value

Note: *** p<0.01, ** p<0.05, * p<0.10. All models: Pooled OLS, Industry & Year FE, firm-level clustered SE. N = 3,596 (510 firms). Thai SET, 2017–2024.

DISCUSSION AND CONCLUSION

This study provides systematic evidence on corporate cash holding behaviour in Thailand, an emerging market with concentrated family ownership and developing institutional infrastructure. Three findings stand out.

First, analyst coverage is the primary governance mechanism constraining cash accumulation among Thai listed firms (H1c supported), consistent with Chen, Harford, and Lin (2015). This extends the analyst-cash nexus to an emerging market setting, demonstrating its applicability beyond the United States. Each additional analyst reduces cash holdings by approximately 0.26 percentage points of total assets, a meaningful economic effect given the low mean analyst coverage of 2.10 in the sample.

Second, family ownership has no significant effect on cash levels (H1b not supported), contrary to the entrenchment predictions of Claessens et al. (2002) and Wiwattanakantang (2001). This null finding suggests that Thai family firms do not systematically accumulate excess cash for private benefit extraction through the ownership channel alone, and that the stewardship and entrenchment effects offset each other at the level of cash holdings determination.

Third, while family ownership does not reduce the marginal value of cash in standalone specifications (H2c), it is strongly positive and significant in the full model (coef. = 0.9225, p = 0.003), indicating that Thai family firms deploy cash in value-enhancing ways consistent with stewardship theory (Anderson & Reeb, 2003). This finding is particularly noteworthy in light of

the Thai institutional context. Wiwattanakantang (2001) documented entrenchment behavior among Thai family firms in the aftermath of the 1997 Asian Financial Crisis a period of severe capital market stress where controlling shareholders may have prioritised private benefit extraction over value creation. However, the present study covers 2017–2024, a structurally different environment characterised by more developed governance infrastructure, greater analyst scrutiny, and stricter SET disclosure requirements. This temporal difference may explain the divergence in findings: as institutional quality improved, Thai family owners appear to have transitioned toward stewardship behaviour. Furthermore, the COVID-19 pandemic (2020–2021) within the sample period likely served as a natural stress test of family stewardship. Evidence from other markets suggests that family-controlled firms exhibited greater financial resilience and more conservative cash deployment during the pandemic (Villalonga & Amit, 2006), and our positive Cash $\times$ Family result is consistent with investors rewarding this prudent cash management during periods of uncertainty. Analyst coverage also enhances the marginal value of cash (H2d partially supported), reinforcing the complementary role of external monitoring alongside ownership-based governance.

These findings have implications for investors, regulators, and researchers. For investors, analyst coverage serves as a meaningful signal of cash management discipline in Thai firms. For regulators, strengthening the analyst research infrastructure may complement formal investor protection mechanisms. For researchers, the evidence underscores the importance of disentangling ownership structure from external monitoring when studying cash management in concentrated-ownership environments. Several limitations should be acknowledged. First, while pooled OLS with industry and year fixed effects is appropriate given the time-invariant nature of FAMILY, future research could employ alternative identification strategies such as 2SLS with lagged analyst coverage or brokerage-closure instruments (following Chen, Harford, & Lin, 2015) to more rigorously establish the causal effect of analyst monitoring on cash accumulation. Second, marginal effects plots showing the conditional value of cash across different levels of analyst coverage and family ownership would provide richer visualisation of the interaction effects documented here. Third, sub-period analysis separating pre-COVID (2017–2019) from post-COVID (2020–2024) windows would help identify whether the stewardship effects of family ownership were concentrated during the pandemic stress period.

REFERENCES

- Almeida, H., Campello, M., & Weisbach, M. S. (2004). The cash flow sensitivity of cash. *Journal of Finance*, 59(4), 1777–1804.
- Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 58(3), 1301–1328.
- Chen, T., Harford, J., & Lin, C. (2015). Do analysts matter for governance? Evidence from natural experiments. *Journal of Financial Economics*, 115(2), 383–410.
- Claessens, S., Djankov, S., Fan, J. P., & Lang, L. H. (2002). Disentangling the incentive and entrenchment effects of large shareholdings. *Journal of Finance*, 57(6), 2741–2771.
- De Oliveira, M. A., & Santos, R. L. (2020). Corporate governance and cash holdings: Evidence from Brazil. *Emerging Markets Review*, 42, 100668.
- Dittmar, A., & Mahrt-Smith, J. (2007). Corporate governance and the value of cash holdings. *Journal of Financial Economics*, 83(3), 599–634.

- Faulkender, M., & Wang, R. (2006). Corporate financial policy and the value of cash. *Journal of Finance*, 61(4), 1957–1990.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323–329.
- Martínez-Sola, C., García-Teruel, P. J., & Martínez-Solano, P. (2013). Corporate cash holding and firm value. *Applied Economics*, 45(2), 161–170.
- Moolchandani, K., & Kar, A. K. (2022). Cash holdings and firm value: Empirical evidence from India. *IIMB Management Review*, 34(1), 51–63.
- Opler, T., Pinkowitz, L., Stulz, R., & Williamson, R. (1999). The determinants and implications of corporate cash holdings. *Journal of Financial Economics*, 52(1), 3–46.
- Ozkan, A., & Ozkan, N. (2004). Corporate cash holdings: An empirical investigation of UK companies. *Journal of Banking & Finance*, 28(9), 2103–2134.
- Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies*, 22(1), 435–480.
- Pinkowitz, L., & Williamson, R. (2004). What is the market value of a dollar of corporate cash? *Journal of Applied Corporate Finance*, 17(3), 74–81.
- Pinkowitz, L., Stulz, R., & Williamson, R. (2006). Does the contribution of corporate cash holdings and dividends to firm value depend on governance? *Journal of Finance*, 61(6), 2725–2751.
- Silpachai, K., Siengthai, S., & Levermore, R. (2024). Corporate governance, information asymmetry and firm performance: Evidence from Thailand. *Cogent Economics & Finance*, 12(1), 2379583.
- Thompson, S. B. (2011). Simple formulas for standard errors that cluster by both firm and time. *Journal of Financial Economics*, 99(1), 1–10.
- Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value? *Journal of Financial Economics*, 80(2), 385–417.
- Wiwattanakantang, Y. (2001). Controlling shareholders and corporate value: Evidence from Thailand. *Pacific-Basin Finance Journal*, 9(4), 323–362.
- Yu, F. (2008). Analyst coverage and earnings management. *Journal of Financial Economics*, 88(2), 245–271.

Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Conflicts of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.



Copyright: © 2026 by the authors. This is a fully open-access article distributed under the terms of the Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0).