

IMPACT OF EARNINGS QUALITY ON CORPORATE EXCESS CASH

Ibtissem Jilani *

* Laboratory of Management of Innovation and Sustainable Development (LAMIDED), University of Sousse, Sousse, Tunisia
Contact details: Laboratory of Management of Innovation and Sustainable Development (LAMIDED), University of Sousse,
Rue Khalifa El Karoui Sahloul, P. O. Box 526, Sousse 4002, Tunisia



Abstract

How to cite this paper: Jilani, I. (2025). Impact of earnings quality on corporate excess cash. *Corporate Ownership & Control*, 22(4), 21–31.
<https://doi.org/10.22495/cocv22i4art2>

Copyright © 2025 The Author

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).
<https://creativecommons.org/licenses/by/4.0/>

ISSN Online: 1810-3057

ISSN Print: 1727-9232

Received: 20.08.2025

Revised: 04.10.2025; 16.10.2025; 24.10.2025

Accepted: 21.11.2025

JEL Classification: D22, G32, G34, G35, M41

DOI: 10.22495/cocv22i4art2

This study investigates the impact of earnings quality on the value of excess cash holdings using a dataset of 95 French firms over the period 2005–2020, totaling 1,520 firm-year observations. Motivated by the inconsistent evidence on whether excess cash is valued or discounted by investors, this research explores whether the quality of financial reporting can explain such differences in valuation. Our empirical findings demonstrate a strong positive relationship between high-quality accruals and the valuation of excess liquidity. Specifically, firms with more reliable and transparent earnings information experience a higher market valuation of their excess cash, suggesting that investors associate superior earnings quality with sound financial management and efficient capital allocation. Unlike prior studies that mainly focus on U.S. data or broader international samples, this paper provides novel evidence from the French market, highlighting the critical role of earnings quality in shaping investor perceptions of corporate liquidity.

Keywords: Earnings Quality, Excess Cash Holdings, Accruals, Financial Transparency, Liquidity Valuation, Corporate Finance, Investor Confidence

Authors' individual contribution: The Author is responsible for all the contributions to the paper according to CRediT (Contributor Roles Taxonomy) standards.

Declaration of conflicting interests: The Author declares that there is no conflict of interest.

1. INTRODUCTION

In a globalized financial environment where investor decisions are heavily influenced by firms' disclosed financial information, the quality of accounting earnings has become a crucial indicator of corporate performance and future prospects (Khatib et al., 2022). The increasing reliance on transparent and accurate financial statements to assess a company's financial health has underscored the importance of how accounting data is reported and interpreted (Vitkova et al., 2024).

At the core of this assessment, financial statements, particularly the balance sheet and the income statement, serve as fundamental tools for evaluating a company's profitability, solvency, operational efficiency, and overall financial condition. These statements provide investors with essential insights into a firm's revenue streams, asset management, and its ability to meet short- and long-term financial obligations (Vitkova et al., 2024). However, the quality of these accounting

earnings, specifically the extent to which they truly reflect the company's economic reality, is increasingly scrutinized by analysts and investors alike. Accounting earnings should provide an unbiased representation of a company's financial performance. However, the flexibility inherent in accounting principles allows for managerial discretion in financial reporting, which can sometimes obscure the true economic situation of the firm (Shittu & Onifade, 2023).

Among the various components that comprise financial statements, one of the most closely examined and debated is excess liquidity, defined as cash reserves held by the firm that exceed its immediate operational needs. While excess liquidity can serve as a buffer against financial downturns and ensure operational stability, it is often perceived through a dual lens: as both an asset and a potential indicator of underutilized resources. On one hand, abundant liquidity signals financial strength and risk mitigation, suggesting that the company has ample resources to pursue new investment

opportunities, repay debt, or return capital to shareholders. On the other hand, excessive liquidity, especially when not effectively deployed or invested, may raise concerns about inefficiency in capital allocation. Investors may question why a firm is holding on to cash rather than channeling it into productive ventures that could generate higher returns. Consequently, the management and valuation of excess liquidity have become focal points for financial analysts and investors. The manner in which excess liquidity is reported, whether as a sign of fiscal prudence or missed growth opportunities, can significantly affect a company's market valuation (Mercado et al., 2025). This makes the transparency and reliability of reported financial data, particularly concerning cash reserves, critical in shaping investors' perceptions.

Furthermore, how excess liquidity is incorporated into a company's broader financial narrative, such as through earnings quality or accrual accounting, has gained increasing importance. Public disclosure of liquidity levels, in combination with the company's earnings management practices, can send powerful signals to the market about its financial strategy and future performance. Thus, beyond the absolute amount of cash reserves, the transparency of financial reporting and the use of accounting methods significantly influence how investors assess excess liquidity (Akgün & Memiş Karataş, 2021). When liquidity is accompanied by strong financial disclosures and clearly defined strategies for its utilization, it is more likely to be perceived positively by investors.

Accrual accounting plays a vital role in financial reporting by recognizing revenues and expenses when they occur rather than when cash is exchanged, offering a more accurate representation of a company's financial performance. The quality of accruals, which adjust financial statements to reflect economic transactions not immediately realized in cash, is crucial in determining the reliability and transparency of financial reporting (Ball, 2020). Discretionary accruals those subject to management judgment, are particularly significant in this context. When firms engage in earnings management through high discretionary accruals, they risk obscuring their true financial position, potentially leading to misstatements regarding excess liquidity.

For investors who rely on financial statements to assess a company's true financial health, the transparency of accruals is essential. High levels of discretionary accruals, indicating earnings manipulation or financial engineering, raise concerns about the reliability of reported results and the efficiency with which the firm manages its resources, including excess liquidity. Conversely, lower levels of discretionary accruals, signifying more reliable and transparent financial reporting, enhance the perceived value of excess liquidity by reassuring investors that the company's resources are effectively utilized and that reported earnings accurately reflect financial reality.

In this framework, the value of excess liquidity is closely tied to the quality of accounting earnings. When financial reports are transparent and accurately depict a company's economic reality, investors, who perceive it as a resource that can be effectively used for future growth, acquisitions, or shareholder returns, view excess liquidity favorably. However, when earnings are managed through high accruals, the same liquidity may be seen as a liability

or an indicator of inefficiency, thereby reducing its perceived value. Thus, the relationship between earnings quality and excess liquidity valuation becomes particularly relevant in understanding how financial markets respond to corporate cash holdings (Denis & Wang, 2024).

Despite the growing body of literature on earnings quality and cash holdings, few studies have explicitly examined how the quality of reported earnings shapes investors' valuation of excess liquidity. Prior research has largely focused either on the determinants of cash holdings (e.g., agency theory, precautionary motives) or on the valuation effects of cash without considering the mediating role of financial reporting quality. This omission leaves an important empirical and theoretical gap concerning how accounting transparency influences market perceptions of corporate liquidity. Moreover, most evidence comes from the U.S. or broad international samples, often overlooking institutional contexts such as France, where legal origins, ownership concentration, and reporting standards may differently shape investors' interpretation of financial information. Addressing this gap enhances understanding of how earnings quality can mitigate information asymmetry and influence liquidity valuation in a civil-law setting. By integrating earnings quality, signaling theory, and liquidity valuation, this study contributes to the literature by providing empirical evidence from the French market, which has been relatively underexplored in this context.

This study aims to explore the relationship between accounting transparency, as measured through accruals, value relevance, and the valuation of excess liquidity. Specifically, it seeks to answer the following research question:

RQ: How does the transparency of financial reporting, as reflected in the level of discretionary accruals, influence investors' perceptions of a company's excess liquidity?

This paper makes several contributions to the existing literature. First, it examines how earnings quality, specifically the level of discretionary accruals, impacts the market perception of a company's excess liquidity (Al-Haddad & Al-Ghoul, 2025). While prior research has focused on the impact of earnings management on firm valuation, few studies have explicitly investigated how accruals affect liquidity valuation. By addressing this gap, the study provides empirical insights into how high-quality earnings characterized by low discretionary accruals may signal efficient liquidity management.

Second, the paper emphasizes accounting transparency as a critical determinant of how excess liquidity is valued by investors. Transparent financial reporting reduces information asymmetry, enabling investors to make more informed decisions about a company's financial health and future prospects.

Third, the study focuses on the French institutional and regulatory environment, which presents distinctive conditions for analyzing the interplay between earnings quality and excess liquidity valuation. France's civil law tradition, rigorous investor protection measures, and the mandatory adoption of International Financial Reporting Standards (IFRS) for listed firms create a unique setting in which accounting standards, governance mechanisms, and reporting transparency converge to shape market interpretation. Empirical

evidence shows that, in the French context, mandatory IFRS adoption significantly improves earnings quality by reducing discretionary accruals, both in accruals-based and real earnings management (Abdallah et al., 2024). Furthermore, studies indicate that IFRS adoption enhances stock liquidity and diminishes information asymmetry effects that are notably strengthened when combined with high audit quality (e.g., engagement of Big 4 auditors), thereby reinforcing the reliability of financial reporting. Lastly, the concentrated ownership structure commonly found in French firms tends to limit the effectiveness of board independence as a governance mechanism, amplifying the roles of reporting standards and external audits in informing investor assessments. This France-specific context deepens the empirical relevance of our findings and provides valuable implications for regulators, practitioners, and scholars in similar legal-economic frameworks.

Based on a sample of French companies listed between 2005 and 2020 on the SBF 120 index, this study applies signaling theory to demonstrate how firms use financial reports to communicate internal characteristics to investors, thereby reducing information asymmetry. The findings suggest that high-quality accounting earnings characterized by low discretionary accruals send positive signals to the market, enhancing the perceived value of excess liquidity. Conversely, high accruals indicate potential earnings manipulation, leading investors to devalue excess liquidity due to concerns about inefficient resource management or financial distress.

The remainder of this article is structured as follows. Section 2 presents the literature review and develops the hypothesis. Section 3 outlines the sample, data collection, and model specifications. Section 4 discusses the results, and Section 5 concludes the paper.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Earnings quality in the literature

Recent research has continued to underscore the critical role of accruals in determining the quality of earnings (Toumeh et al., 2020). Earnings quality refers to the degree to which reported earnings reflect the underlying economic performance of a company, as opposed to being influenced by accounting choices such as accruals (Afiezan et al., 2020). A key finding in the literature is that discretionary accruals, or those manipulated by management, can degrade earnings quality by inflating or deflating earnings based on managerial objectives (Healy & Wahlen, 1999). In contrast, non-discretionary accruals reflect business operations and are thus considered more reliable.

Recent studies confirm the relationship between high discretionary accruals and low earnings quality. For instance, some researchers find that earnings manipulation through accruals remains a common practice, especially among firms aiming to meet analyst expectations. Similarly, Li (2020) reports that companies with higher discretionary accruals are perceived as less transparent and face greater challenges in capital markets. High-quality earnings, on the other hand, align with low discretionary accruals, which improves investor confidence and results in more accurate firm valuations.

The level of accruals in financial statements is influenced by multiple internal and external factors. Firm size, financial distress, corporate governance, and industry-specific factors all play a significant role in determining accrual levels. Recent studies continue to support earlier findings regarding the effect of firm size on accruals. Some researchers argue that larger firms, with more stable cash flows and greater scrutiny from regulators, are likely to have lower discretionary accruals, as they face higher costs of earnings manipulation. Moreover, companies in financial distress or with volatile cash flows tend to engage in more aggressive earnings management through higher accruals to smooth earnings or meet financial covenants (Cohen & Zarowin, 2010). The role of corporate governance remains significant in moderating the level of discretionary accruals. Strong governance mechanisms, such as independent audit committees and effective board oversight, reduce the likelihood of accrual manipulation. Research by Chada and Varadharajan (2024) supports this, showing that firms with robust governance practices report lower levels of discretionary accruals, leading to more reliable financial statements.

Accruals, by their nature, introduce subjectivity into financial statements, which can reduce financial transparency. Transparency refers to the degree to which financial information accurately reflects a company's economic condition without managerial bias. Studies have shown that high discretionary accruals can significantly reduce transparency, as they introduce the possibility of earnings manipulation, leading to information asymmetry between managers and investors. Furthermore, empirical research suggests that firms with higher discretionary accruals experience a higher cost of capital due to the increased perceived risk by investors (Hribar et al., 2022).

Given the significant impact of accruals on financial transparency, investor confidence, and corporate valuation, it is essential to further explore the link between accrual quality and the perception of excess liquidity. In the next section, we develop hypotheses regarding how discretionary accruals influence the valuation of excess liquidity in firms and its implications for investor decision-making.

Another component of earnings quality that is no less important than accruals is the value relevance of accounting information. The quality of accounting earnings is essential in financial markets as it shapes investors' perceptions and decision-making. A key component of earnings quality is value relevance, which refers to the ability of financial information to explain stock prices and returns. At the same time, excess liquidity, defined as cash holdings exceeding the necessary amount for operational and investment needs, can be interpreted either as a strategic asset or as an indication of inefficient resource allocation. This section explores the relationship between the value relevance of earnings and the valuation of excess liquidity, analyzing how financial reporting quality impacts investors' assessments of cash holdings.

Value relevance is a fundamental characteristic of high-quality financial reporting. Studies by Ohlson (1995) and Barth et al. (2001) emphasize that earnings and book values should exhibit a strong correlation with stock prices if they are truly informative. The reliability and timeliness of earnings information enhance its value relevance, reducing information asymmetry.

2.2. Earning quality and value of excess cash holding

Excess liquidity, defined as cash or liquid assets exceeding a company's immediate operational needs, has been a subject of significant debate in corporate finance literature (Sari & Sedana, 2020). While it offers financial flexibility and serves as a cushion against operational or financial risks, its value depends on several factors, such as industry characteristics, corporate governance, and prevailing market conditions. Understanding excess liquidity is crucial due to its dual nature: on one hand, it can enhance a firm's resilience and its ability to seize growth opportunities; on the other, if not properly utilized, it can signal inefficiency. This literature review examines recent studies exploring the relationship between excess liquidity and firm value.

Understanding the relationship between accruals and excess liquidity is essential because accurate financial reporting (facilitated by quality accruals) could significantly influence how investors perceive a firm's liquidity and its utilization. This relationship ultimately impacts the valuation of the firm's excess liquidity.

The role of accruals in improving transparency is particularly significant when firms hold excess liquidity. Investors may view high levels of cash reserves as either a strategic asset or a sign of inefficiency. When accruals are high quality, they provide investors with better insight into how liquidity is being managed and whether it is being allocated towards value-enhancing activities (Barth et al., 2001). For example, firms with high-quality accruals are better able to signal to investors that they can deploy their excess liquidity for profitable investments or strategic goals, thus increasing the perceived value of their cash reserves (Chaurey et al., 2024).

Accruals can have both positive and negative effects on firm value, which is essential in understanding how they might influence the value of excess liquidity (Kothari et al., 2025). On the positive side, accurate accruals help to reveal the firm's true financial condition, which may alleviate concerns about excess liquidity being wasted or mismanaged. Graham (2022) found that firms with reliable accruals are more likely to have liquidity reserves perceived as strategically deployed, which increases investor confidence and improves their valuation. The transparent depiction of operational performance helps to align market perceptions with the firm's actual financial capacity, resulting in a more favorable valuation of excess liquidity.

However, poor-quality accruals can distort financial reporting and create confusion about the real liquidity needs of the firm. According to Dechow et al. (2022), inaccurate or manipulated accruals might signal potential financial distress or inefficient liquidity management, which can lower the perceived value of excess liquidity. If investors cannot accurately assess how excess liquidity is being utilized due to unreliable financial statements, they might discount the firm's cash holdings, assuming that they are being wasted or not deployed efficiently.

The relationship between accruals and excess liquidity is further complicated by agency theory, which addresses conflicts between managers and shareholders. When firms hold excessive liquidity,

managers may have the incentive to use it inefficiently, which can increase agency costs (Jensen & Meckling, 1976). However, high-quality accruals mitigate these agency problems by providing clearer financial signals to investors. Alia et al. (2020) argue that firms with reliable accruals reduce the information asymmetry between managers and shareholders, which decreases the likelihood of managers misappropriating excess liquidity.

In contrast, poor accrual management can exacerbate agency problems by concealing how cash reserves are being utilized, leading to investor distrust and a lower market valuation of excess liquidity. High-quality accruals reduce these agency costs, ensuring that excess liquidity is viewed as a resource being allocated efficiently to maximize shareholder wealth, rather than being left idle or misused.

The agency costs related to excess liquidity remain a significant concern. Chen (2024) found that firms with high liquidity are more likely to make inefficient investments, which can reduce their long-term value. This issue is particularly pronounced in firms with weak governance structures, where managers may make decisions that do not align with shareholders' interests, given their discretionary control over cash reserves.

According to signaling theory (Spence, 1973), companies use financial reports to convey their true financial condition to the market. These signals are particularly crucial in the context of excess liquidity, as investors seek indicators of the company's future growth prospects, capital allocation strategies, and overall financial health (Horton, 2021). High-quality financial reporting, characterized by low discretionary accruals, enhances transparency, reduces information asymmetry, and provides a clearer picture of how excess liquidity is managed. Conversely, high accruals, often interpreted as evidence of earnings management or financial manipulation, raise doubts about a company's financial integrity and the efficiency of its liquidity management.

Bates et al. (2009) found that firms with excess liquidity often face a liquidity discount, especially if the cash is not deployed in growth opportunities. More recent studies, like Xie et al. (2022), suggest that high liquidity can signal inefficiency to investors, particularly when the funds are not utilized in capital expenditures or strategic initiatives. Li (2020) further highlights how firms use excess liquidity as a buffer against financial distress, which proves especially valuable during economic downturns or periods of uncertainty.

Wang (2022) argues that firms with strong governance structures are better able to allocate excess liquidity efficiently, leading to higher firm value. For example, firms with independent boards and active monitoring mechanisms tend to invest their cash in growth opportunities or debt reduction rather than wasteful projects. Conversely, weak governance can lead to mismanagement of liquidity, resulting in a value discount.

Kadima (2024) emphasizes that governance structures play a critical role in preventing the misuse of cash holdings. Their research suggests that when firms have robust governance systems, they are more likely to invest excess liquidity in ways that benefit shareholders, such as paying down debt or investing in profitable projects. The presence of executive compensation schemes tied to firm performance may also align

management's interests with those of shareholders, reducing agency costs and enhancing firm value. In the post-pandemic era, many firms have accumulated unprecedented levels of excess liquidity, partly as a response to the uncertain economic environment. Research by Hagenberg et al. (2021) shows that firms with higher liquidity have been better able to navigate disruptions and maintain stability during crises. At the same time, however, excessive cash holdings are increasingly seen as a potential sign of inefficiency in the market, especially when firms are not using their cash to invest in growth or shareholder returns. Finally, recent studies underscore the role of liquidity in mitigating financial distress. Chada and Varadharajan (2024) suggest that firms with excess liquidity are more resilient during financial crises or economic downturns, as they are less likely to face liquidity shortages. These firms can avoid expensive and dilutive external financing, thereby enhancing their value by signaling stability and reducing financial risk.

Given the theoretical background and empirical evidence from recent literature, it is reasonable to hypothesize that the quality of accruals affects the market valuation of excess liquidity. High-quality accruals enhance the transparency of financial reporting and reduce the risk of agency problems, thereby improving investor confidence in how excess liquidity is being managed. As a result, firms with higher-quality accruals are expected to see a higher market valuation of their excess liquidity, compared to firms with lower-quality accruals. Thus, we can formulate the following hypothesis:

H1: There is a positive relationship between the presence of good quality accruals and the value of excess cash holdings.

3. RESEARCH METHODOLOGY

3.1. Sample and data collection

The initial sample consists of all French listed firms from the Continuous Assisted Quotation (CAC) All Tradable index during the period 2005–2020, which totals 400 firms. Following prior literature, we exclude financial firms (Standard Industrial

Classification (SIC) codes 6000–6999) and regulated utilities (SIC codes 4900–4999) due to the specific characteristics of the structure of their assets and liabilities and the nature of their accruals (Houcine, 2017). As per Bond and Meghir (1994), we further exclude firms that do not have sufficient data for five consecutive years. After applying these screening criteria, the final sample comprises 95 firms, representing a total of 1,239 firm-year observations. These firms span a variety of industries, including manufacturing, consumer goods, energy, services, and technology, providing broad and representative coverage of the French listed market. Accounting and financial data are collected from Worldscope.

3.2. Measures of the variables

3.2.1. Earnings quality measure

Accruals

To investigate the effect of earnings quality on the value of excess cash, we consider an accounting-based proxy, namely, accruals quality (AQ). We are interested in AQ as a measure of the earnings quality, as accruals are estimators of future cash flows and provide information about the activities of the company.

To estimate AQ, we use the measure derived from Dechow and Dichev (2002) and modified by McNichols (2002), which relies on evidence that earnings that are more closely related to cash flows are more desirable, and their model takes into account the expected accruals given a specific cash flow stream.

The Dechow and Dichev's (2002) model is a regression of working capital accruals on lagged, current, and future cash flows plus the change in revenues and property, plant, and equipment (PPE). The following model is estimated cross-sectionally in each industry-year with a minimum of eight observations per year in any industry (Mansali et al., 2019) using ordinary least squares (OLS) regression. Industry is defined according to Campbell's (1996) industry classification of 11 groups.

$$WCA_t = \alpha_{0,i} + \beta_1 CFO_{t-1} + \beta_2 CFO_t + \beta_3 CFO_{t+1} + \varepsilon_t \quad (1)$$

with:

$$WCA_t = (\Delta CA_t - \Delta Cash_t) - (\Delta CL_t - \Delta STD_t) - Dept \quad (2)$$

where,

- WCA_t = working capital accruals;
- CA_t = current assets;
- $Cash_t$ = cash equivalents;
- CL_t = current liabilities;
- STD_t = short-term debt;
- $Dept$ = depreciation expense;
- Δ = variation between t and $t - 1$;
- CFO_{t-1} = cash flow from operations at $t - 1$;
- CFO_t = cash flow from operations at t ;
- CFO_{t+1} = cash flow from operations at $t + 1$;
- ε_t = accrual estimation error.

$AQ_{i,t} = -\sigma\gamma_{i,t}$ is calculated over a five-year window from $t - 4$ to t . The value of $AQ_{i,t}$ shows that the earnings are reliable.

Value relevance measure

Value relevance (VR) is often measured using regression models, with stock price (or stock returns) as the dependent variable and financial accounting figures (e.g., earnings, book value) as independent variables. The most common model used is Ohlson's (1995) model, which is expressed as:

$$P_t = \alpha + \beta_1 BVPS_t + \beta_2 EPS_t + \varepsilon_t \quad (3)$$

where, P_t = price return at time t ; EPS_t = change in earnings per share; $BVPS_t$ = book value per share; α , β_1 , β_2 = regression coefficients; and ε_t = error term.

Alternatively, when using stock returns instead of prices, the model is:

$$R_t = \alpha + \beta_1 \Delta EPS_t + \beta_2 BVPS_t + \varepsilon_t \quad (4)$$

where, R_t = stock return at time t .

The higher the explanatory power (measured by R^2) of these regressions, the more value-relevant the accounting information is.

3.2.2. Value of excess cash

According to the study by Dittmar and Mahrt-Smith (2007), excess cash is defined as cash reserves

$$V_{i,t} = \beta_0 + \beta_1 EXCASH_{i,t} + \beta_2 AQ_{i,t} * EXCASH_{i,t} + \beta_3 AQ_{i,t} + \beta_4 EBIT_{i,t} + \beta_5 \Delta EBIT_{i,t} + \Delta EBIT_{i,t+1} + \beta_7 I_{i,t} + \beta_8 \Delta I_{i,t} + \beta_9 \Delta I_{i,t+1} + \beta_{10} DIVD_{i,t} + \beta_{11} \Delta DIVD_{i,t} + \beta_{12} \Delta DIVD_{i,t+1} + \beta_{13} \Delta V_{i,t+1} + \varepsilon_{i,t} \quad (5)$$

where, $EBIT$ — earnings before interest and taxes, I — interest expenses, $DIVD$ — dividend payout.

Following prior research (Aroui & Pijourlet, 2017), we measure V_i as the market value of equity

$$\ln(Cash_{i,t}) = \gamma_0 + \gamma_1 SalesGrowth_{i,t} + \gamma_2 Size_{i,t} + \gamma_3 FCF_{i,t} + \gamma_4 NWC_{i,t} + \gamma_5 IndustrySigma_{i,t} + \gamma_6 RD_{i,t} + \gamma_7 DIVD_{i,t} + \gamma_8 Leverage_{i,t} + \gamma_9 Capex_{i,t} + \varepsilon_{i,t} \quad (6)$$

where,

- $\ln(Cash)$ is the natural logarithm of cash and cash equivalents scaled by total assets;
- $SalesGrowth$ is the sales growth over the past 3 years;
- $Size$ is the logarithm of total assets;
- FCF is operating income minus interest and taxes on total assets;
- NWC is current assets minus current liabilities and cash scaled by total assets;
- $Industry_Sigma$ is the industry average of the standard deviation over the previous 10 years of cash flow to total assets;
- $Leverage$ is the ratio of total debt to total assets;
- $Capex$ is the ratio of capital expenditures to total assets.

3.2.3. Control variables

We included several variables in our model to control for factors that may influence the value of excess cash holdings. Following (Aroui & Pijourlet, 2017), we retained $EBIT$, I , $DIVD$, and net assets (NA). Additionally, ΔX_t and ΔX_{t+1} represent the past one-year change and the future one-year change in the variable ΔX_i , respectively. All variables are scaled by lagged total assets to prevent the heteroscedasticity problem (Fonseka et al., 2012), and consistent with prior studies, all variables are winsorized at the 1st and 99th percentiles.

exceeding the amount necessary for operations and investments. Opler et al. (1999) developed an empirical model to estimate the optimal level of liquidity a company requires for its operational activities and investment opportunities. Later, Ferrary (2010) proposed a regression model, similar to that used by Sarhan et al. (2019), to assess the value of excess liquidity. This model includes control variables representing factors likely to affect investors' expectations regarding the use of excess liquidity held.

plus the book value of total debt. $EXCASH$ measures the value of excess cash using the residuals of the following model (Galbreath, 2016).

4. RESULTS AND DISCUSSIONS

4.1. Descriptive statistics

Table 1 presents descriptive statistics for key variables used in the study, including dependent, independent, and control variables. For the dependent variable excess cash, the mean value is 0.049, with a standard deviation of 0.0548, indicating that, on average, firms hold a small amount of excess liquidity, though some firms maintain negative excess cash, suggesting potential financial constraints or inefficient cash management. Regarding the independent variable, accruals quality (AQ), the negative mean value of -0.0421 suggests that, on average, firms report negative accruals, which may indicate conservative accounting practices or earnings management. The standard deviation of 0.0362 shows that there is some variation in accruals quality across firms.

For the control variable $EBIT$, the wide range from -0.1142 to 40.404 and the high standard deviation of 2.7126 reflect significant differences in firms' profitability, with some firms generating substantial earnings while others operate at a loss. Similarly, the variable $DIVD$ has a mean of 0.0175, with a standard deviation of 0.0259, indicating that while some firms distribute dividends regularly, others either distribute very little or none at all, possibly due to reinvestment strategies or financial constraints.

Overall, these statistics highlight substantial variability across firms in terms of cash holdings, earnings quality, profitability, and dividend policies, which may have important implications for financial decision-making and firm value.

Table 1. Summary statistics

Variable	N	Min	Max	Mean	Std. dev.
V_{it}	1519	0.0018	1.7897	0.2858	0.1261
CASH	1519	0	0.4567	0.13188	0.0636
EXCASH	1519	-0.1731	0.3032	0.049	0.0548
Independent variables					
Accruals quality (AQ)	1519	-0.1749	-0.0036	-0.0421	0.0361
Value relevance (VR)	1519	0.0100	1	0.8030	0.2473
Control variables					
EBIT	1519	-0.1142	40.404	0.3625	2.7126
I	1519	0.0001	0.0400	0.0125	0.0157
DIVID	1519	0	0.3568	0.0175	0.0259
$\Delta EBIT_t$	1519	-0.1669	16.335	0.0001	1.4931
$\Delta EBIT_{t+1}$	1519	-0.1638	40.297	-0.0001	0.1234
ΔI_t	1519	-0.0000	0.0010	0.0001	0.0001
ΔI_{t+1}	1519	-0.0001	0.0004	-0.0001	0.0005
$\Delta DIVD_t$	1519	-0.1840	0.1945	-0.0006	0.0172
$\Delta DIVD_{t+1}$	1519	-0.1840	0.1945	-0.0006	0.0172
ΔNA_t	1519	0.2657	0.3232	0.0515	0.1587
ΔNA_{t+1}	1519	0.1969	0.5601	0.0657	0.1578
ΔV_{it+1}	1519	-0.9854	0.1258	1.4298	0.4879

Note: See Table A.1 (Appendix) for variables' definitions.

4.2. Pearson correlation matrix

Before testing *H1*, we checked for the absence of the multicollinearity problem between the independent variables. Table A.2 (see Appendix) presents the Pearson correlation matrix between the variables used in the empirical regressions. We note that the coefficients vary between 0.001 and 0.6987. The average variance inflation factor (VIF) value was 1.39, well below the level of 10 (Neter, 1986), which allowed us to confirm the absence of the multicollinearity problem.

4.3. Ordinary least squares regression

Table 2 presents OLS regression results examining the relationship between excess cash, accounting quality (AQ), and value relevance (VR). The results indicate that excess cash alone does not have a significant effect on firm value. However, when interacted with accounting quality, the impact becomes strongly positive (9.420, $p < 0.01$), suggesting that firms with better financial reporting can use excess cash more efficiently. Similarly, the interaction between value relevance and excess cash is positive (1.533, $p < 0.1$), indicating that firms with more informative financial statements benefit more from excess cash holdings. These findings highlight the crucial role of financial reporting in shaping the value of corporate liquidity.

Regarding control variables, interest expenses (*I*) has mixed effects, showing a positive and significant relationship in Model 1 but a negative and significant impact in Model 2. This suggests that investment decisions might enhance firm value under certain conditions but could also signal inefficiencies when excessive. Dividends (*DIVID*) show a weakly positive effect in Model 1 but turn significantly negative in Model 2 (-0.951 , $p < 0.01$), implying that higher dividend payouts might limit firms' reinvestment capacity. Finally, future changes in firm value (ΔV_{t+1}) are negatively significant in both models, indicating that firms experiencing declining value may struggle to leverage excess cash effectively.

Table 2. Effect of earning quality on the value of excess cash holding

Variables	Model 1	Model 2
EXCASH	-0.00122 (0.00764)	0.805 (0.752)
AQ	3.757*** (0.156)	
(AQ * EXCASH)	9.420*** (0.288)	
VR		0.674* (0.385)
(VR * EXCASH)		1.533* (0.917)
EBIT	-0.00323 (0.00264)	-0.00536 (0.00893)
I	0.0864*** (0.0326)	-0.554*** (0.149)
DIVID	0.259* (0.146)	-0.951*** (0.211)
$\Delta EBIT_t$	-0.000287 (0.00266)	0.00976 (0.0130)
$\Delta EBIT_{t+1}$	-0.0053*** (0.0020)	-0.000998 (0.00462)
ΔI_t	-0.0390 (0.0383)	-0.160 (0.199)
ΔI_{t+1}	0.0584 (0.0703)	-0.0144 (0.0574)
$\Delta DIVD_t$	1.533*** (0.465)	3.300 (2.456)
$\Delta DIVD_{t+1}$	1.339*** (0.469)	10.60*** (1.931)
ΔV_{t+1}	-0.239*** (0.0135)	-0.0241** (0.00950)
ΔNA_t	0.6738** (0.524)	0.119 (0.108)
ΔNA_{t+1}	0.5560*** (4.944)	-0.213*** (0.0667)
Constant	0.373*** (0.0101)	0.417 (0.331)
Observations	1519	1519
Number of identification numbers (ID)	95	95
R-squared	0.2400	0.2449
Year/industry fixed effects	YES	YES

Note: The *p*-values are reported in parentheses. ***, **, * illustrate the significance level of the variable at 1%, 5%, and 10%, respectively.

4.4. Robustness tests

As a further robustness check, we investigate whether the quality of earnings, proxied by the degree of earnings smoothing, moderates the relationship between excess cash holdings and firm value. The analysis uses Tobin's *Q* as the dependent variable to capture market valuation.

In this specification, we include the variable *Lissage*, which represents earnings smoothing computed using the Eckel (1981) index — the ratio of the standard deviation of net income to that of operating cash flows, both scaled by sales. Lower values of the index reflect greater smoothing, and therefore lower earnings quality.

The regression results show a negative and statistically significant coefficient on *Lissage* (-0.0532, $p < 0.10$), indicating that firms exhibiting more earnings smoothing tend to have lower market valuations. This is consistent with the view that earnings smoothing reflects reduced transparency and credibility in financial reporting.

The coefficient on *EXCASH* is positive but not statistically significant (0.252), suggesting that excess cash on its own may not be consistently valued by the market when ignoring earnings quality. However, the interaction term between *Lissage* and *EXCASH* is positive and statistically significant (0.186, $p < 0.05$). This finding reveals a key insight: the value that the market attributes to excess cash holdings increases when earnings are less smoothed, i.e., when earnings quality is higher.

In other words, while smoothed earnings (low quality) are associated with lower firm value overall, the marginal value of excess cash becomes greater when earnings are reported more transparently. This suggests that earnings quality acts as a confidence channel through which excess cash translates into firm value. When investors trust the financial reporting, they are more likely to believe that excess liquidity will be used efficiently and not hoarded or misused by management.

Table 3. Robustness analysis

<i>Variables</i>	<i>Tobin'Q</i>
<i>Lissage</i>	-0.0532* (0.0311)
<i>EXCASH</i>	0.252 (0.175)
(<i>Lissage</i> * <i>EXCASH</i>)	0.186** (0.0741)
<i>EBIT</i>	-0.00513 (0.00982)
<i>I</i>	0.0898 (0.121)
<i>DIVD</i>	9.038*** (0.541)
$\Delta EBIT_t$	0.0124 (0.00940)
$\Delta EBIT_{t+1}$	-0.000287 (0.00266)
ΔI_t	-0.281** (0.135)
ΔI_{t+1}	0.0584 (0.0703)
$\Delta DIVD_t$	0.250 (1.857)
$\Delta DIVD_{t+1}$	-0.508 (1.887)
Constant	0.502*** (0.107)
Observations	1,514
Number of ID	95

Note: The *p*-values are reported in parentheses. ***, **, and * illustrate the significance level of the variable at 1%, 5%, and 10%, respectively.

4.5. Discussion

This study demonstrates that high-quality accounting earnings, reflected in low discretionary accruals, positively influence investors' valuation of

excess liquidity in French-listed firms. Nevertheless, some disputable issues deserve attention. First, while a strong association is observed, the direction of causality cannot be firmly established. Firms with efficiently managed cash holdings may inherently report higher-quality earnings, suggesting potential endogeneity. Future research could employ instrumental variables or natural experiments to better address causality.

Second, the analysis is based on 95 French firms from 2005 to 2020. Although representative of the French market, the findings may not generalize to countries with different legal, governance, or market environments. Cross-country or sector-specific studies could assess the robustness of these results under alternative institutional contexts.

Finally, the measurement of earnings quality through discretionary accruals and excess liquidity based on cash above operational needs has inherent limitations. Alternative measures, including real earnings management indicators or liquidity adjusted for firm-specific investment opportunities, could refine these insights. Moreover, investor perception of excess liquidity may vary with industry conditions, macroeconomic shocks, or firm strategies not fully captured in this study. These considerations suggest that while earnings quality provides important signaling about liquidity, market responses are context-dependent.

5. CONCLUSION

This study highlights the positive impact of earnings quality on the valuation of excess cash holdings. Our empirical results suggest that firms with high-quality earnings are more likely to have their excess cash perceived as a value-enhancing resource rather than a potential source of agency conflicts. Transparent and reliable financial reporting reduces information asymmetry, reassures investors about managerial intentions, and increases market confidence in the efficient allocation of cash reserves. These findings align with recent research showing that financial statement quality is a key determinant of how investors price corporate liquidity, emphasizing the governance role of accounting quality, especially in environments with substantial cash holdings and high managerial discretion.

Despite these contributions, the study has some limitations. The analysis is based on 95 French listed firms, which may limit the generalizability of the results to other institutional or regulatory contexts. Moreover, the measurement of earnings quality through discretionary accruals and excess liquidity based on cash above operational needs may not capture all dimensions of these constructs. Finally, while the study identifies a strong association, the direction of causality between earnings quality and liquidity valuation cannot be definitively established.

Future research could address these limitations by exploring the moderating role of country-level governance mechanisms, audit quality, or institutional factors in the relationship between earnings quality and liquidity valuation. Another promising direction involves investigating whether the informativeness of earnings affects investor reactions differently during periods of economic uncertainty or liquidity shocks, such as those

observed during the COVID-19 pandemic. Furthermore, developing theoretical models that integrate both financial reporting quality and cash policy decisions could enhance understanding of optimal liquidity strategies under asymmetric information.

Overall, this study underscores the importance of accounting transparency and high-quality financial reporting in shaping investor perceptions of corporate liquidity, offering valuable implications for regulators, practitioners, and scholars in similar institutional environments.

REFERENCES

- Afiezian, A., Wijaya, G., Priscilia, P., & Claudia, C. (2020). The effect of free cash flow, company size, profitability and liquidity on debt policy for manufacturing companies listed on IDX in 2016–2019 periods. *Budapest International Research and Critics Institute-Journal*, 3(4), 4005–4018. <https://doi.org/10.33258/birci.v3i4.1502>
- Akgün, A. I., & Memiş Karataş, A. (2021). Investigating the relationship between working capital management and business performance: Evidence from the 2008 financial crisis of EU-28. *International Journal of Managerial Finance*, 17(4), 545–567. <https://doi.org/10.1108/IJMF-08-2019-0294>
- Al-Haddad, L., & Al-Ghoul, S. (2025). The impact of earnings quality on corporate cash holdings: Evidence from an emerging economy. *Journal of Financial Reporting and Accounting*, 23(4), 1730–1744. <https://doi.org/10.1108/JFRA-09-2022-0321>
- Alia, M. A., Abdeljawad, I., & Yaaqbeh, M. (2020). Depressing earnings management in Palestinian corporations: The role of audit quality, audit committee, and accounting conservatism. *International Journal of Revenue Management*, 11(3), 213–236. <https://doi.org/10.1504/IJRM.2020.109419>
- Arouri, M., & Pijourlet, G. (2017). CSR performance and the value of cash holdings: International evidence. *Journal of Business Ethics*, 140(2), 263–284. <https://doi.org/10.1007/s10551-015-2658-5>
- Ball, I. (2020). Reflections on public financial management in the COVID-19 pandemic. *Journal of Accounting & Organizational Change*, 16(4), 655–662. <https://doi.org/10.1108/JAOC-10-2020-0160>
- Barth, M. E., Beaver, W. H., & Landsman, W. R. (2001). The relevance of the value relevance literature for financial accounting standard setting: Another view. *Journal of Accounting and Economics*, 31(1–3), 77–104. [https://doi.org/10.1016/S0165-4101\(01\)00019-2](https://doi.org/10.1016/S0165-4101(01)00019-2)
- Bates, T. W., Kahle, K. M., & Stulz, R. M. (2009). Why do U. S. firms hold so much more cash than they used to? *Journal of Finance*, 64(5), 1985–2021. <https://doi.org/10.1111/j.1540-6261.2009.01492.x>
- Bond, S., & Meghir, C. (1994). Dynamic investment models and the firm's financial policy. *The Review of Economic Studies*, 61(2), 197–222. <https://doi.org/10.2307/2297978>
- Campbell, S. V. (1996). Predicting bankruptcy reorganization for closely held firms. *Accounting Horizons*, 10(3), 12–25.
- Chada, S., & Varadharajan, G. (2024). Earnings quality, institutional investors and corporate cash holdings: Evidence from India. *International Journal of Managerial Finance*, 20(1), 247–277. <https://doi.org/10.1108/IJMF-05-2022-0224>
- Chaurey, R., Kim, R., & Krishna, P. (2024). *Liquidity shocks and firm exports: Evidence from cash shortages during India's demonetization* (NBER Working Paper No. 33142). National Bureau of Economic Research (NBER). <https://doi.org/10.3386/w33142>
- Chen, J. (2024). The impact of IFRS 15 on revenue and earnings quality: Evidence from China. *Asian Review of Accounting*. Advance online publication. <https://doi.org/10.1108/ARA-07-2024-0220>
- Cohen, D. A., & Zarowin, P. (2010). Accrual-based and real earnings management activities around seasoned equity offerings. *Journal of Accounting and Economics*, 50(1), 2–19. <https://doi.org/10.1016/j.jacceco.2010.01.002>
- Dechow, P. M., & Dichev, I. D. (2002). The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review*, 77(s-1), 35–59. <https://doi.org/10.2308/accr.2002.77.s-1.35>
- Dechow, P. M., Larson, C. R., & Resutck, R. J. (2022). The effect of accrual heterogeneity on accrual quality inferences. *The Accounting Review*, 97(5), 245–273. <https://doi.org/10.2308/TAR-2019-0200>
- Denis, D. J., & Wang, L. (2024). Corporate cash holdings. In D. J. Denis (Ed.), *Handbook of corporate finance* (pp. 223–248). Edward Elgar Publishing. <https://doi.org/10.4337/9781800373891.00012>
- Dittmar, A., & Mahrt-Smith, J. (2007). Corporate governance and the value of cash holdings. *Journal of Financial Economics*, 83(3), 599–634. <https://doi.org/10.1016/j.jfineco.2005.12.006>
- Eckel, N. (1981). The income smoothing hypothesis revisited. *Abacus*, 17(1), 28–40. <https://doi.org/10.1111/j.1467-6281.1981.tb00099.x>
- Ferrary, M. (2010). Syndication of venture capital investment: The art of resource pooling. *Entrepreneurship Theory and Practice*, 34(5), 885–908. <https://doi.org/10.1111/j.1540-6520.2009.00356.x>
- Fonseka, M. M., Garcia Ramos, C., & Tian, G. L. (2012). The most appropriate sustainable growth rate model for managers and researchers. *Journal of Applied Business Research*, 28(3), 481–500. <https://doi.org/10.19030/jabr.v28i3.6963>
- Galbreath, J. (2016). When do board and management resources complement each other? A study of effects on corporate social responsibility. *Journal of Business Ethics*, 136(2), 281–292. <https://doi.org/10.1007/s10551-014-2519-7>
- Graham, J. R. (2022). Presidential address: Corporate finance and reality. *The Journal of Finance*, 77(4), 1975–2049. <https://doi.org/10.1111/jofi.13161>
- Hagenberg, T. C., Miller, B. P., Sharma, A., & Yohn, T. L. (2021). *The impact of an SEC-induced increase to stock liquidity on voluntary disclosure*. <https://doi.org/10.2139/ssrn.3761177>
- Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, 13(4), 365–383. <https://doi.org/10.2308/acch.1999.13.4.365>
- Horton, A. (2021). Liquid home? Financialisation of the built environment in the UK's “hotel-style” care homes. *Transactions of the Institute of British Geographers*, 46(1), 179–192. <https://doi.org/10.1111/tran.12410>
- Houcine, A. (2017). The effect of financial reporting quality on corporate investment efficiency: Evidence from the Tunisian stock market. *Research in International Business and Finance*, 42, 321–337. <https://doi.org/10.1016/j.ribaf.2017.07.066>
- Hribar, P., Mergenthaler, R., Roeschley, A., Young, S., & Zhao, C. X. (2022). Do managers issue more voluntary disclosure when GAAP limits their reporting discretion in financial statements? *Journal of Accounting Research*, 60(1), 299–351. <https://doi.org/10.1111/1475-679X.12401>

- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323-329. <https://www.jstor.org/stable/1818789>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Kadima, M. J. (2024). *Working capital management, firm size and stock liquidity of firms at Nairobi Securities Exchange, Kenya* [Doctoral dissertation, College of Human Resource Development (COHRED)]. <https://localhost/xmlui/handle/123456789/6514>
- Khatib, S. F. A., Abdullah, D. F., Hendrawaty, E., & Elamer, A. A. (2022). A bibliometric analysis of cash holdings literature: Current status, development, and agenda for future research. *Management Review Quarterly*, 72(3), 707-744. <https://doi.org/10.1007/s11301-021-00213-0>
- Kothari, S. P., Schonberger, B., Wasley, C., & Xiao, J. J. (2025). The first half-century of empirical capital markets research in accounting in pictures. *Review of Accounting Studies*, 30, 3111-3176. <https://doi.org/10.1007/s11142-025-09887-3>
- Li, Y. (2020). Liquidity regulation and financial stability. *Macroeconomic Dynamics*, 24(5), 1240-1263. <https://doi.org/10.1017/S1365100518000834>
- Mansali, H., Derouiche, I., & Jemai, K. (2019). Accruals quality, financial constraints, and corporate cash holdings. *Managerial Finance*, 45(8), 1129-1145. <https://doi.org/10.1108/MF-12-2018-0621>
- McNichols, M. F. (2002). Discussion of the quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review*, 77(s-1), 61-69. <https://doi.org/10.2308/accr.2002.77.s-1.61>
- Mercado, F., Rubio, S., & Scapin, M. (2025). The role of accounting quality during mutual fund fire sales. *European Accounting Review*, 34(1), 251-277. <https://doi.org/10.1080/09638180.2023.2241884>
- Ohlson, J. A. (1995). Earnings, book values and dividends in equity valuation. *Contemporary Accounting Research*, 11(2), 661-687. <https://doi.org/10.1111/j.1911-3846.1995.tb00461.x>
- 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. [https://doi.org/10.1016/S0304-405X\(99\)00003-3](https://doi.org/10.1016/S0304-405X(99)00003-3)
- Sarhan, A. A., Ntim, C. G., & Al-Najjar, B. (2019). Board diversity, corporate governance, corporate performance, and executive pay. *International Journal of Finance & Economics*, 24(2), 761-786. <https://doi.org/10.1002/ijfe.1690>
- Sari, I. A. G. D. M., & Sedana, I. B. P. (2020). Profitability and liquidity on firm value and capital structure as intervening variable. *International research journal of management, IT and Social Sciences*, 7(1), 116-127. <https://doi.org/10.21744/irjmis.v7n1.828>
- Shittu, S. A., & Onifade, H. O. (2023). Capital structure and earnings management practices: Empirical analysis in Sub-Sahara Africa. *Journal of Finance and Accounting*, 11(5), 155-163. <https://doi.org/10.11648/j.jfa.20231105.12>
- Spence, M. (1973). Job market signaling. *The Quarterly Journal of Economics*, 87(3), 355-374. <https://doi.org/10.2307/1882010>
- Toume, A. A., Yahya, S., & Amran, A. (2020). Surplus free cash flow, stock market segmentations and earnings management: The moderating role of independent audit committee. *Global Business Review*, 24(6), 1353-1382. <https://doi.org/10.1177/0972150920934069>
- Vitkova, V., Kyriazis, D., Asimakopoulou, P., & Sudarsanam, S. (2024). *Specialist shareholder activists and their impact on campaign win and target firm value*. <https://doi.org/10.2139/ssrn.4906981>
- Wang, X. L. (2022). La marchandisation dans un secteur associatif étatiste-corporatiste: Le cas de Hong Kong [Marketization in a statist-corporatist nonprofit sector: The case of Hong Kong]. *International Review of Administrative Sciences*, 88(2), 391-409. <https://doi.org/10.3917/risa.882.0391>
- Wang, Z., Akbar, M., & Akbar, A. (2020). The interplay between working capital management and a firm's financial performance across the corporate life cycle. *Sustainability*, 12(4), Article 1661. <https://doi.org/10.3390/su12041661>
- Xie, X., Zhang, J., Zong, S., & Liu, L.-L. (2024). Real and accrual-based earnings management during COVID-19 pandemic. *Pan-Pacific Journal of Business Research*, 15(2), 1-21. <https://iacademicresearch.org/index.php/volume-15-no-2-fall-2024/real-and-accrual-based-earnings-management-during-covid-19-pandemic>

APPENDIX

Table A.1. Variables' definitions

Variable	Definition	Measure
V_{it}	Firm's value	Market capitalization + Total liabilities
AQ	Accruals quality	-
VR	Value relevance	-
$Cash$	Cash held	Cash and cash equivalents / Total assets
$EXCASH$	Excess cash	Actual cash - Predicted optimal cash
$EBIT$	Earnings before interest and taxes	Net result before interest and taxes
I	Interest expenses	-
$DIVID$	Dividend payout	Dividend paid / Total assets
NA	Net assets	Assets total assets - Cash and cash equivalents
ΔX_i	Past 1-year change of variable X_{it}	-
ΔX_{i+1}	Future 1-year change of variable X_{it}	-

Table A.2. Pearson matrix

Variable	AQ	VR	EBIT	I	DIVID	$\Delta EBIT_t$	$\Delta EBIT_{t+1}$	ΔI_t	ΔI_{t+1}	$\Delta DIVD_t$	$\Delta DIVD_{t+1}$	ΔNA_t	ΔNA_{t+1}	ΔV_{t+1}
AQ	1.0000													
VR	0.5795*	1.0000												
EBIT	0.4652*	0.1258*	1.0000											
I	0.3212*	-0.2752*	-0.4678*	1.0000										
DIVID	-0.0444	-0.0462	-0.0921*	0.0688*	1.0000									
$\Delta EBIT_t$	-0.0205	-0.0134	-0.0260	-0.0613*	0.1500*	1.0000								
$\Delta EBIT_{t+1}$	-0.0392	-0.0130	-0.0264	0.0673*	-0.0202	-0.0258	1.0000							
ΔI_t	-0.0180	0.0033	0.0103	0.0419	-0.0581*	0.0233	0.6501*	1.0000						
ΔI_{t+1}	0.0088	-0.0718*	0.0097	0.0386	0.1026*	0.0831*	-0.0580*	-0.0897*	1.0000					
$\Delta DIVD_t$	-0.0181	-0.0201	-0.0135	0.0077*	-0.0011	0.0021	0.2752*	0.2038*	-0.0115	1.0000				
$\Delta DIVD_{t+1}$	-0.0181	-0.0201	0.0077	-0.0135	0.0011	0.0021	0.2752*	-0.2038*	0.0115	-0.2038*	1.0000			
ΔNA_t	-0.0211	-0.0183	-0.0024	-0.0057	-0.0111	0.0050	0.1152*	0.2962*	-0.0063	0.5533*	-0.5533*	1.0000		
ΔNA_{t+1}	0.0211	0.0183	0.0024	0.0057	0.0111*	-0.0050	-0.1152*	0.2962*	-0.0063	0.5533*	-0.5533*	0.0258	1.0000	
ΔV_{t+1}	0.0205	0.0190	-0.0064	-0.0213	0.0322	-0.0221	0.1037*	0.0556	-0.2540*	0.0429	-0.0429	0.0338	0.0042	1.0000
VIF		1.67	1.39	1.65	1.08	1.07	1.26	1.06	1.52	1.13	1.2	1.57	1.18	1.04

Note: * Indicates statistical significance at the 10% threshold, which is statistical significance at the 5% level.