An Empirical Review on Corporate Cash Holding: Motivation, Influencing Factor and Consequence

Xiao Chang[1, #], Jianhang Liang[2, #], Xueyang Zhang[3, #, *]

*Corresponding author. Email: 626513391@qq.com

[1]School of Management, Shanghai University, Shanghai, 200444, China, 13917364815@139.com

[2]School of Business, Jiangnan University, Wuxi, 214122, China, 2693265420@qq.com

[3]International College, Jiangxi University of Finance and Economics, Nanchang, 330013, China, 626513391@qq.com

#These authors contributed to the work equally and should be regarded as co-first authors.

Abstract. With the increasing economic uncertainty over the last few years, corporate cash holdings have become a popular research topic, consequently generating extensive academic literature. This work conducts a comprehensive review of the existing literature concerning corporate cash holdings, delving into the motivations behind companies maintaining cash reserves, the factors influencing changes in their cash holdings, and the impact of such holdings on corporate entities. This article reviews and synthesizes the literature into the key perspectives on the importance of cash holdings, delineating three principal perspectives: transaction motivation, precaution motivation, and agency motivation. In addition, the research focuses on the factors for changes in corporate holdings, discovering factors including the company's financial situation, governance structure, macro policies, leverage, and industry characteristics. Finally, this paper explores the effect of cash holdings on corporations, providing an understanding of market performance, such as market value and risk-taken ability. This work shows that scholarly examinations of corporate cash holdings have methodologically advanced, encompassing diverse determinants and employing sophisticated empirical techniques, reflecting a shift towards addressing timely and globally relevant concerns. Still, future research could enhance its scope by diversifying samples, comprehensively analyzing factors in different-sized enterprises, and investigating optimal corporate cash holdings.

Keywords: cash holding, external shock, corporate governance, firm performance.

1 Introduction

The significance of cash holdings in the corporate realm has attracted notable attention in academic fields, as seen in recent scholarly investigations and reports. Sustaining a proper level of cash holdings is crucial for enterprises since it contributes to lowering capital expenses, capitalizing on investment prospects, improving market competitiveness, and raising corporate worth. A recent report by Deloitte underscored the magnitude of cash holdings among corporations, indicating that the top 1,000 non-financial companies globally are holding a staggering $2.8

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trillion in cash, with the aggregate cash holdings by all US firms estimated to be around $5 trillion.

Current economic realities emphasize the acute necessity for prudent cash-holding strategies among enterprises. Inadequate management of cash reserves can result in severe ramifications, especially in the face of unforeseen economic shocks. A quintessential example is the COVID-19 pandemic, which has wrought unprecedented financial strain on businesses globally, rendering cash holdings a key in navigating the economic tumult.

This paper provides a comprehensive literature review on corporate cash holdings. Based on existing literature, this research seeks to explore why companies hold cash, why they change their level of cash holdings, and how cash holding affects corporates.

The work begins in Section 2 with motivations for corporate cash holdings, including transaction motivation, precaution motivation, agency motivation, and external shock. Section 3 focuses on the factors for changes in corporate holdings, including the company's financial situation, governance structure, macro policies, leverage, and industry characteristics. Mainly focusing on market performance, such as market value and risk-taken ability, the paper discusses cash holding's effect on corporations in Section 4. Finally, in Section 5, potential directions for future research are discussed and the conclusion is drawn.

2 Motivations for Corporate Cash Holdings

2.1 Transaction Motivation

The transaction motivation relates to firms' need to possess adequate liquidity to accommodate routine transactions essential to continuous operations. Baumol suggested that cash reserves could serve as a conduit, allowing the company to function as a trading entity, and constructed an inventory model to validate that the demand for transactional money could be influenced by interest rates to a certain degree [1].

Ozkan empirically explores corporate cash holdings within UK firms, underscoring significant factors such as firms' growth prospects, cash flows, and liquid assets, all pivotal for facilitating day-to-day transactions and investment decisions amidst market uncertainties. Their findings illuminate the intricate dynamics involving corporate transactions and liquidity management, which are integral to understanding firms' transactional motivations for cash holdings [2].

Delving deeper into the liquidity management practices of private firms, Bigelli and Sánchez-Vidal spotlight Italian companies, illustrating that those encountering extended cash conversion cycles — indicative of heightened liquidity needs for transaction purposes — consistently maintain more significant cash reserves [3]. This observation sheds light on the imperative role of the cash conversion cycle in liquidity management, thereby influencing firms' transaction-motivated cash-holding behaviors.

Substantiating the dialogue on cash reserves, Hall, Mateus, and Mateus offer an analysis of both privately held and publicly traded firms, examining the influence of firm-level characteristics on cash reserves [4]. Their findings subtly echo the transaction motivation as they elucidate the necessity for strategic cash management to ensure efficient transaction handling and seamless fulfillment of short-term obligations.

The work by Jiang and Lie unveils that firms actively adjust their cash holdings to closely align with target levels, thereby reflecting a transactional imperative to synchronize cash levels with the organization's operational necessities [5]. Their insights contribute to demystifying the firms' intentional efforts to optimize cash for operational efficiency and facilitate transactional activities. Over time, there's a noticeable evolution in both the content focus and methodologies employed within the transaction motivation literature. Earlier studies, like Ozkan’s, primarily emphasize empirical exploration, focusing on factors such as growth prospects, cash flows, and liquid assets within the context of UK firms. More recent contributions, however, delve deeper into specific aspects of transaction motivations, as seen in the works of Bigelli and Sánchez-Vidal. This latter study offers insights into the cash conversion cycle's role in liquidity management.

2.2 Precautionary Motivation

The Precautionary Motivation for cash holdings finds its foundation in the imperative need for firms to safeguard themselves against unexpected financial challenges and future uncertainties. It emphasizes the prudential accumulation of cash reserves to guarantee financial resilience and solvency amid economic downturns, market fluctuations, or unanticipated investment opportunities. This motivation becomes especially salient within contexts characterized by significant economic instability and restricted access to external capital. Under such conditions, cash acts as a vital financial safeguard and an indispensable buffer against future contingencies, consistent with the static trade-off theory of cash holdings [6].

Opler et al. elaborate that firms exhibiting robust growth prospects and volatile cash flows tend to maintain elevated cash-to-asset ratios [6]. This practice is strategically implemented as a precautionary measure to navigate uncertainties and capitalize on emergent investment opportunities.

Adding depth to the understanding of precautionary cash holdings, Bigelli and Sánchez-Vidal noted that private firms, particularly those with extended cash conversion cycles—a signal of increased operational uncertainty—tend to have more significant cash holdings [3]. This behavior is congruent with the financing hierarchy and trade-off theories, suggesting a strategic adoption of abundant liquidity as a shield during unpredictable financial periods.

Further extending the narrative, Hall, Mateus, and Mateus explored the cash-holding practices of firms within 20 emerging markets, identifying consistent determinants influencing cash balances across privately held and publicly traded entities. Regardless of the companies' public status, a consistent pattern emerged: firms universally resort to precautionary cash holdings as a strategic defense against impending financial uncertainties [4].

For firms intensively engaged in research and development (R&D) and exposed to heightened competition, He and Wintoki identified a tendency to accumulate cash as a calculated precautionary move. This strategy allows firms to mitigate the financial risks of innovation and intense market competition on domestic and global fronts [7].

Im, Park, and Zhao further underscored the role of environmental uncertainty in influencing corporate cash policies. Amid escalating business uncertainties, firms are noted to increase cash holdings, offering them the strategic advantage of promptly responding to emergent investment opportunities while mitigating agency conflicts and alleviating financial constraints [8].

2.3 Agency motivation

The agency's motivation for cash holdings emanates from the divergent interests between firm managers and shareholders. Specifically, the motivation encapsulates managerial tendencies to accrue excess cash to bolster personal job security, invest in favored projects, or perpetuate firm growth, often surpassing optimal levels, without necessarily enhancing shareholder value. Agency problems and governance structures substantially mold such cash-holding behaviors, occasionally facilitating wealth transfers from shareholders to managers.

The literature illuminating this motivation extensively explores the determinative role of corporate governance on cash holdings. Ozkan articulates that intertwining managerial ownership and multifarious governance components significantly sway cash holding patterns, signifying a nuanced interplay between ownership configurations and liquidity management decisions [2].

The literature also highlights the interaction between agency motivations and firms' diversification strategies. Tong delineates that diversification often correlates with diminished cash values, especially in firms characterized by weak governance frameworks [9]. This observation is pivotal, as it implicates agency conflicts in the firm's cash holding calculations.

On the global front, Chen et al. examine Chinese firms, shedding light on the evolved dynamics between corporate governance and cash holdings in the post-reform era. Their findings intimate a discernible enhancement in alignment between minority and controlling shareholders' interests, underscoring the potential of refined governance standards to mitigate agency conflicts and influence firms' liquidity strategies [10].

Moreover, the literature documents intriguing behaviors in firms facing external takeover threats. As explored by Jiang and Lie, firms that are defensively postured against external takeover bids often exhibit sluggish adjustments to their cash holdings, possibly reflecting managerial hesitancy to relinquish excess cash reserves [5].

Providing a complementary perspective, Anderson and Hamadi interrogate traditional notions linking augmented cash holdings with managerial rent-seeking behaviors, particularly within the context of firms in environments characterized by subdued investor protection [11]. Their empirical lens, focused on Belgian firms, unveils that dominant shareholders may strategically amass cash as a precaution, thereby blurring the boundaries between precautionary and agency motivations for holding cash.

Furthermore, Dudley and Zhang discern a tangible positive correlation between the levels of trust within national environments and the volume of corporate cash holdings [12]. This observation furnishes an agency-theoretical explanation for variegated cash-holding behaviors observed across distinct institutional landscapes.

Adding complexity to the narrative, the literature identifies the influence of economic uncertainty, especially policy unpredictability, on cash-holding behaviors through an agency lens. For instance, Javadi et al. document a negative correlation between economic policy uncertainty and firms' cash reserves. This finding suggests that firms strategically minimize cash holdings as a mechanism to navigate and mitigate agency conflicts in atmospheres laden with policy volatility [13].

2.4 External shock

The external (environmental) motivation for holding cash delineates firms' strategic financial behaviors in response to unexpected and exogenous economic events. Such events, encompassing economic recessions, financial crises, geopolitical tensions, natural disasters, and pandemics, invariably infuse marketplaces with volatility and uncertainty, necessitating strategic cash-holding behaviors to buffer against the resultant economic tumult.

The empirical landscape is rife with studies examining the relationship between external shocks and corporate cash holdings. Javadi et al. document a negative correlation between economic policy uncertainty and cash holdings among non-U.S. firms, suggesting that companies strategically reduce cash holdings to mitigate agency problems amid policy uncertainties [13]. Further contributing to this dialogue, Lee et al. explore the nexus between cash flows, oil price uncertainty, and geopolitical risks. They empirically deduce that firms tend to augment their cash holdings as a risk-mitigation strategy against the financial volatilities engendered by oil price dynamics and geopolitical instabilities [14].

Additionally, Han and Wang probe the influence of monetary policy uncertainty on corporate cash holdings, unearthing a positive correlation between the two within the context of Chinese firms [15]. This suggests that uncertain monetary policy landscapes compel firms to bolster their cash reserves as a risk-aversion strategy.

In the context of the COVID-19 pandemic, a seminal event with significant financial implications, Bae and Kang observe an increased propensity among firms—particularly those whose operations are not conducive to remote work—to elevate their cash reserves as a defensive strategy against the financial uncertainties induced by the pandemic [16]. Concurrently, Ntantamis and Zhou elucidate how firms in G-7 countries adjusted their dividends and share repurchases in response to the pandemic, with increased cash reserves serving as a protective financial buffer [17].

Examining the Chinese corporate landscape, He et al. note an increased inclination among firms to accumulate cash reserves as a precautionary response to the pandemic's operational and financial uncertainties ushered in. This strategic liquidity build-up is interpreted as a proactive measure to forestall potential liquidity crises engendered by the pandemic [18].

Furthermore, Xu et al. engage with the dynamics of corporate financialization and investor sentiment during periods characterized by adverse external shocks. Their findings accentuate investors' skepticism towards corporate financialization amid crises, underlining the imperative for firms to navigate cautiously through financialization risks during economically buoyant periods and underscore the importance of financial flexibility and robust governance structures during crises [19].

A review of contemporary scholarship reveals an empirical shift towards examining the effects of multifaceted external shocks on corporate cash holdings, with a discernible focus on economic, policy-related, geopolitical, and health-related shocks. Furthermore, the literature increasingly engages with the intricate interplay between various external shocks and their cumulative impact on corporate cash holdings, adding depth and complexity to the analysis.

3 Factors for changes in Corporate Cash Holdings

3.1 Financial situation of the firm

In finance, cash holdings refer to the amount of cash a company has on hand and can be used to make payments at any time. Many factors can affect a company's cash holding level. These factors include the size of the company, the financial structure of the company, the liquidity needs of the company, and the investment opportunities of the company. Kling proposed that the reduction of corporate credit lines will prompt companies to hold more cash [20].

3.2 Corporate Governance

A suitable corporate governance mechanism can effectively manage cash holdings, ensure its alignment with the company's financial and operational strategies, and reduce agency costs, improving governance effectiveness. On the other hand, cash holdings can also impact corporate governance. For example, if a company experiences cash flow problems, it may cause shareholder interests to suffer, leading to governance issues. Therefore, cash holdings are also an essential factor in corporate governance.

In conclusion, there is a close relationship between cash holdings and corporate governance. Companies should establish reasonable financial systems and internal regulatory mechanisms to achieve scientifically efficient cash-holding decisions and ensure the company's financial stability and development.

Venkiteshwaran thought that Small companies with limited financial resources hold excess cash, while large companies adjust their cash reserves more slowly [21]. In addition, small companies make up more than three-quarters of the gap in their target cash levels each year, while large companies only make up slightly more than half of the gap within one year. Finally, the author concluded that despite the time lag in adjusting cash to the optimal level, typical companies in the sample would take prompt action.

3.3 Macroeconomic policies

Macroeconomic policies can affect the level of cash holdings in enterprises. For example, tight economic policies may lead to economic recession and increased uncertainty, which may boost the willingness and demand for cash holdings. Conversely, when economic policies are excessively relaxed, rapid economic growth may lead to inflation or financial crises, which may prompt companies to reduce cash holdings. Secondly, different economic policies have different impacts on different groups and industries, so cash holdings in different companies or groups may vary with changes in economic policies.

Yang et al. proposed that cash holdings are believed to alleviate the adverse effects of tight monetary policy on enterprises, especially in the case of underdeveloped financial markets, where this mitigating effect is more pronounced [22]. In addition, when monetary policy is tightened, cash holdings can improve the investment efficiency of enterprises. This means that companies with sufficient cash can better cope with the challenges brought by monetary policy tightening and use this cash for more effective investment.

3.4 Leverage

A company can improve its cash flow management efficiency by using leverage appropriately. For example, a company can borrow money or issue bonds to raise funds to support daily operations or investment projects. In this case, leverage can increase a company's cash flow, but it also increases debt burden and financial risks. Companies need to appropriately control leverage levels and make reasonable arrangements for cash holdings to ensure sufficient cash flow and the ability to repay debts on time. Both leverage and cash holding can be seen as tools for enterprise risk management. By using leverage, a company can amplify its operating scale and returns, but it also increases debt risk and uncertainty. Cash holding can provide liquidity risk and credit risk protection for enterprises to ensure they can respond to unexpected events and repay debts. Therefore, companies need to weigh the risks and returns of leverage and cash holding to develop appropriate risk management strategies. What is more, a company's financial structure is determined by its capital structure, which includes debt and equity financing. When using leverage, companies need to pay attention to the risks and costs of debt financing, as well as the impact of debt-to-equity ratios. At the same time, cash holding is also influenced by the company's financial structure. For example, companies with high debt ratios may need more cash reserves to meet debt repayment obligations.

Guney et al. argue that when a company's leverage ratio is low, i.e. when the company has less debt, there is a negative correlation between cash holdings and the leverage ratio [23]. This is because, during this stage, companies typically opt to use more financial leverage to expand their business and may use cash to increase investment or repay debt, thereby reducing cash holdings. However, as the leverage ratio increases, i.e. as the company's debt increases, companies may choose to hold more cash to reduce financial risks. The purpose of this approach is to prevent potential cash flow breaks or financial crises due to increased debt. In this case, there is a positive correlation between cash holdings and the leverage ratio. This non-monotonic relationship is also described as a 'U-shaped' relationship, where cash holdings decrease first and then increase as the leverage ratio increases.

3.5 Industry Characteristics

Companies in rapidly growing industries may require more cash to support their expansion plans and investment opportunities. These companies may hold more cash as a contingency measure and resort to leverage strategies to obtain additional funds when necessary.

Compared to mature industries, emerging industries may require more funds for research and development, marketing, and expansion. Due to the higher risks involved, these companies may choose to use higher leverage ratios and maintain more extensive cash reserves to face potential difficulties and challenges.

Some industries have distinct cyclical characteristics, such as commodity industries, manufacturing industries, and the real estate industry. In these industries, companies need to focus on changes in the economic cycle and market demand and adjust their financial strategies accordingly. For example, during economic downturns, companies may adopt conservative financial strategies, reduce leverage usage, and increase cash reserves to respond to market uncertainty.

Differences in industry profit margins exist, which can affect a company's cash holding levels. For example, companies in high-profit margin industries may have more internal funds available for investment and expansion, while companies in low-profit margin industries may require more external financing to support their operations and development.

Li and Luo discovered a notable surge in cash reserves among companies within the healthcare and technology sectors [24]. This increase was particularly evident in the case of firms with more uncertain cash flows, financially restricted enterprises, firms engaged in research and development activities, less efficient companies, and those with lower levels of institutional ownership and larger board sizes.

4 Cash Holdings's effect on corporations

4.1 Effect on firm value and performance

Cash holdings can significantly impact a company, particularly concerning its market value and performance. A study conducted by Martínez-Sola, C., García-Teruel, P. J., & Martínez-Solano, P. examined the influence of cash holdings on the value of a sample of US industrial firms between 2001 and 2007. The research aimed to empirically determine if there is an optimal cash level that maximizes a company's value [25]. Additionally, the study investigated whether deviations from this optimal cash level hurt a firm's value. The study's findings revealed a concave relationship between cash holdings and a company's value, confirming the existence of an optimal level of cash holding. Notably, the analysis showed that deviations above and below this optimal cash holding level decrease the firm's value. Furthermore, the study underscored the substantial impact of governance on a company's value, highlighting that in poorly governed firms, $1.00 of cash is valued by the market at only $0.42 to $0.88, depending on the governance measure. The result emphasizes the critical role of governance in shaping the relationship between cash holdings and firm value.

In the study by RM Iftikhar, an examination of panel data encompassing firms listed on the Karachi Stock Exchange (KSE) from 2010 to 2014 was carried out [26]. The primary objective was to unravel the factors influencing these firms' cash holdings and ascertain whether cash reserves are intricately linked to corporate performance and intrinsic values. The findings of this research brought to light several critical insights. First and foremost, it emerged that firms had displayed a notable propensity to augment their cash reserves. This upward trend was primarily attributed to the mounting uncertainty associated with cash flows, suggesting a proactive response by firms to contend with financial unpredictability.

Moreover, the study unveiled a compelling positive correlation between the magnitude of cash holdings and the returns generated on assets, particularly when substantial investment opportunities abounded. This implied that firms endowed with significant investment prospects could derive tangible benefits from their policy of maintaining higher cash reserves, ultimately enhancing their financial performance. However, the research also issued a word of caution concerning the enduring ramifications of an exceedingly conservative approach to liquidity management. Over the long term, there was an intimation that such a policy may erode a firm's capacity to generate profit from its asset base.

Doan, T. conducted a thorough analysis focused on the influence of cash holding ratios on the performance of companies listed in Vietnam during the period spanning from 2008 to 2018. The research outcomes disclosed that the proportion of cash holdings had a favorable impact on the performance of these firms [27]. It also establishes that effective state capital management enhances overall firm performance. The findings of this study offer a dependable foundation for financial managers, providing valuable insights to guide their decisions regarding cash holdings to improve the overall performance of their firms.

4.2 Effect on the firm's risk-taken

Furthermore, the extent of a firm's cash reserves can significantly influence its capacity to manage risk. According to a study conducted by Yang, X., Han, L., Li, W., Yin, X., & Tian, L., tightening monetary policy tends to reduce corporate investment, but having substantial cash holdings can help mitigate these adverse effects [22]. This cash-buffering effect is particularly noteworthy for financially constrained firms, non-state-owned enterprises (non-SOEs), and companies in less developed financial markets. In essence, cash reserves play a crucial role in dampening the impact of tighter monetary policies on investment, especially for firms facing financial constraints or operating in less developed financial environments.

Khair, W. M., Diantimala, Y., & Yusmita, F. employed 315 manufacturing companies listed on the Indonesia Stock Exchange as samples for the 2017-2021 period. Proved that cash holding affects overinvestment positively and significantly implies that higher cash holdings inspire managers to overinvestment [28]. The result indicates that higher cash holding might decrease the firm's risk-taken ability.

4.3 Effect on the firm's stock returns

Rashed & Ghoniem investigated the correlation between cash holdings and stock returns within the small and medium-sized enterprise (SME) sector [29]. The research focused on 24 SMEs listed on the Egyptian Nile Exchange, excluding companies providing services. The dataset encompassed 96 data points spanning from 2016 to 2019. Using panel data analysis and comparing the results through ordinary least squares and the generalized method of moments, the study's findings highlighted a statistically significant negative influence of cash holdings on stock returns in SMEs operating on the Egyptian Nile Exchange. Furthermore, the evidence suggested that companies with higher cash reserves had a broader spectrum of investment options but experienced lower returns on their stocks. The research lent support to the principles of agency theory, proposing that an increase in cash holdings often led to managerial exploitation of cash resources for personal gain, resulting in elevated agency costs, diminished investment efficiency, and, consequently, lower stock returns. The findings emphasized the trade-off between risk and return associated with the use of cash holdings to finance operational activities and explore alternative investment opportunities.

5 Conclusion

This literature review explores the importance of cash holdings in corporate financial management, elucidating its significance in promoting financial flexibility, reducing capital costs, and dealing with economic uncertainties. The discussion begins with an exploration of the core motivations for cash holdings in Section 2, advancing to an analysis of the factors prompting changes in cash holdings in Section 3 and culminating in a discourse on the impact of cash holdings on firms in Section 4.

Methodologically, scholarly inquiries into the motivations for corporate cash holdings have evolved, broadening to consider a myriad of firm-specific and macroeconomic determinants. Furthermore, they have adopted advanced empirical techniques to scrutinize the drivers and implications of cash holdings. The inclusion of these active elements introduces a layer of complexity and immediacy to the discourse on cash-holding motivations, signifying a shift towards addressing concerns that are not only timely but also of global relevance.

Despite these advances, there's room for improvement in the existing body of literature. Future research could benefit from incorporating a more diverse and representative sample of firms from various geographical locations and industries, as current studies predominantly focus on firms from developed markets or specific sectors like R&D-intensive firms. Additionally, the literature could further probe into the transaction motivations of firms during different economic cycles, providing a more comprehensive understanding of transaction motivation dynamics under varying economic conditions; the literature on agency motivations for cash holding exhibits a lack of consensus on the motivation's precise role in influencing corporate cash management practices, thus beckoning further scholarly exploration. At last, a conspicuous absence of longitudinal studies examining the long-term implications of external shocks on corporate cash policies is evident, signifying an area ripe for future research.

Comprehensively analyzing the factors that affect cash holdings by enterprises requires a future study on different sizes of enterprises with different governance structures and industries, with the model to be continuously corrected. In addition, attention should be paid to the impact of different suppliers and customers on the scale of enterprise cash holdings.

Current research on cash holding effects on firms mainly focuses on market performance. At present, the literature on the impact of corporate cash holding has been extensive, but there still needs to be more research on how to determine the optimal level of corporate cash holding. It is hoped that more literature can study this content in future studies.

Through comparison, this paper finds that foreign research analyzing cash holdings by companies places greater emphasis on empirical analysis and has produced rich theoretical and practical results. At the same time, there are few empirical analysis papers on this topic in China. As China implements the socialist market economy, there are many differences in the economic environment compared to the West. With the continuous development of capital markets and international trade, foreign research evidence will undoubtedly provide a theoretical foundation for domestic research. Compared to foreign countries, China needs to improve its management rules, legal systems, and market conditions, which will have a significant impact on companies' cash-holding decisions. Therefore, future research can focus on analyzing China's national conditions and continuously correcting the cash-holding decision factor model. In another perspective, empirical research in China can be a feasible research direction.

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