

The Effect of Cash Flow Volatility on the Incentives for Cash Holdings: The Moderating Role of COVID-19 Pandemic¹

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INTRODUCTION

Preserving liquidity is a crucial aspect of the financial management of business entities and has been the subject of numerous studies (Honda and Uesugi, 2022). As per Keynes (1936), business entities retain cash driven by four motivations: transactional, precautionary, tax, and agency. Among these, the precautionary motive assumes significance when the cash flows of the business entity are at heightened risk (Opler et al., 1999) or when the business entity has restricted access to external financial resources (Almeida et al., 2004). Crises that induce volatility in cash flow and restrict the company's access to extra-organizational financial resources are among the key factors that amplify the precautionary motives for cash retention (Melgarejo and Stephen, 2023). An instance of this can be seen in the outbreak of the COVID-19 pandemic in early 2020 (Honda and Uesugi, 2022; He et al., 2022; Chang et al, 2023; and Bae and Kang, 2023).

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The COVID-19 crisis has garnered considerable attention from researchers due to its extensive impact and severe economic repercussions. However, the majority of the empirical evidence about the financial implications of COVID-19 is associated with developed countries, with limited evidence concerning emerging markets such as the Iranian capital market. In light of the above, this research aims to examine the influence of cash flow volatility on the level of cash holdings and to investigate the moderating effect of the spread of the COVID-19 pandemic on this relationship.

MATERIALS AND METHODS

The Rahvard Navin database and reports published on the Codal website were utilized for data collection, and Stata software was employed for data analysis and model fitting. The research hypotheses were tested using a regression model with the generalized least squares (GLS) estimator, and to control for specific characteristics of business units that remain constant over time and across industries, year and industry-specific effects were also controlled. To manage the effect of heteroscedasticity and the potential correlation of the residual values of the models in measuring the standard error of the coefficients, cluster correction has been applied at the firm level. Furthermore, in the supplementary analysis, the research hypotheses were tested using an alternative definition for measuring the cash holdings ratio and also employing the panel data approach.

In this research, the statistical population includes all the firms listed on the Tehran Stock Exchange from 2011 to 2022, whose fiscal year-end corresponds to the end of the solar year and they do not change their fiscal year in the aforementioned period. Due to the specific nature of the activities of insurance companies, banks, and financial investments, holdings, and leasing; Observations of this group of industries have been left out. In addition, because the dependent variable of the research models is related to the future period; other observations of 2022 have been lost and the effective period has been reduced to 2011-2021. In the end, to control the effect of outlier observations, the continuous variables of the research in the first and last percentiles have been winsorized. By applying the above conditions to obtain a set of homogeneous observations, our

sample comprises 163 firms (1793 firm-years), which are categorized into 11 industries.

RESULTS AND DISCUSSION

The outcomes of this study, which highlight the positive influence of cash flow volatility on the level of cash holdings, are aligned with the findings of Lozano and Yaman (2020), Honda and Uesugi (2022), Foroghi and Farzadi (2013), and Afyoni and Hashemi (2016). The results indicate that the COVID-19 outbreak, by stimulating the precautionary motives of business entities, has resulted in them retaining more cash. These findings are in line with those of He et al. (2022), Honda and Uesugi (2022), Zhou et al. (2022), and Chung et al. (2023). Furthermore, the results indicated that the COVID-19 outbreak was able to amplify the positive impact of cash flow turbulence on the level of cash retention. These recent findings are consistent with the results of Honda and Uesugi (2022).

CONCLUSION

One of the main tasks of managers is to determine the optimal structure of assets in different economic and financial conditions. In this context, one of the key decisions of managers is determining the amount of cash that should be kept by the firm (Rasaian et al., 2019). Although business units keep cash for various reasons, keeping cash with precautionary motives and in the conditions of crises has been more noticed by researchers. In this regard, the current research examines the effect of business unit cash flow turbulence and the spread of COVID-19 as two internal and external factors, respectively, on the level of cash retention and the moderating effect of the COVID-19 outbreak on the relationship between cash flow turbulence and the level of cash retention. Criticized and analyzed. This research contributes to the development of the existing literature in three ways: First, this research complements the current literature regarding the effect of cash flow uncertainty on the maintenance of cash assets. From the second point of view, this research enriches the existing literature regarding the intensification of precautionary motives caused by the spread of COVID-19 on the cash management of business

units. Thirdly, the results of this research, by highlighting the role of the COVID-19 crisis and emphasizing its importance in intensifying financial pressures on business units, provide guidelines for policymakers at micro and macro levels to face similar crises.

Keywords: COVID-19, Cash Holdings, Cash Flow Volatility, Precautionary Motives.

JEL Classification: G31, G32.

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