



RESEARCH ARTICLE

Impact of Cash Holding on Firm Value with Mediating Effect of Investment Decision

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ABSTRACT

Cash management is the most important factor for corporation, organization need to know exactly their operating expense and investment opportunity while managing their cash, high cash ratio is not good for companies as well as low cash position also a point of concern for corporation. company need to manage its cash and maintain a proper balance and tradeoff between low and high level of cash. To achieve these objective current research studies is focus on the relationship between cash holding and firm value with mediating effect of investment decision. Where cash holding is an independent variable while firm value is a dependent variable. Current study is focused on quantitative method, deductive approach and on Positivism philosophy. Fifteen years' panel data from 2009 -2023 were collected from none financial sector of PSX. Collected data were analysis through STATA software. two hypotheses and research questions were developed to be tested statistically. The result suggested that cash holding has significant and positive relationship with firm value while investment decision significantly mediate the relationship between cash holding and firm value, where R square value is 0.377 indicate that 37.7 % change come in firm value through cash holding and coefficient value of cash figure and firm value is 7.64 and p value is 0.00 show the significant and positive relationship between the two variables. Mean one unit change in cash figure will bring 7.64-unit positive change in firm value.

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Introduction

A business, organization, or Companies are willing to achieve their goals to boost their performance, while achieving the goal of the firm's cash and investment decision play an important role. (Pinkowitz et al, 2016) In order to achieve this aim, everybody in the organization desires to be able to work well together; in this situation, the firm value is raised through profit the company seeks, or the value of the company itself. Every company faces its own competition in the business world, (Kusnadi, 2011). A company, agency, or private sector can achieve positive objectives, when they improve their performance. And the success of that goal is possible when the management

accurately runs the business. Cash management simply figuring out how much cash the company has on hand, and how much they should invest or what is commonly referred to as cash holdings, the company should focus on financial accounts which are the most important aspect of running a business (Cheryta et al., 2018). If a corporation's cash holdings are sufficient or not in an extreme situation can be said to have a definite amount of liquidity (Ghazali, 2020). When the business needs to satisfy all of its operational events, the company should determine the amount of cash on hand or cash holdings at a prime point which is essential because cash is the working capital component. There are two cases for a business and

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shareholders, having too much cash on hand (excess cash holding) and having too little cash on hand (cash shortfall), both have advantages and disadvantages.

Maintaining liquidity is critical to increase the company's worth and drawing in investors. To reduce liquidity risk, the company will frequently adopt more cautious stance and strive to maintain a steady level of liquidity. Managing the amount of money, the business owns is one of them. The company's liquidity and ability to fulfill all of its obligations on schedule can be indicated by the quantity of cash on hand. What is meant by cash holding is money that is accessible for investment in tangible assets and is either distributed to investors or retained by the business. To avoid the high expenses associated with expanding corporate financing, businesses might fund investments and other commitments with cash holdings. Cash holding is cash owned by the company which is used by the company to progress fixed assets.

Each company's cash needs must be met, yet many businesses in the globalized world have more cash on hand than they require. Cash and cash equivalents make up the majority of the company's assets. Being a highly liquid asset, cash can be used immediately to support the operations and success of the business. Cash that falls within the category of current assets is referred to as cash holdings or inventories. Optimal cash holdings are funds that the business has to maintain in order to avoid experiencing more or less, and they must be supplied within a specified range. Businesses with low cash holding levels cannot survive a disaster for very long since they are unable to function because they lack the resources to purchase more expensive raw materials. According to (Maarif et al., 2019) to finance investments and other choices and avoid the high expenses of raising the company's financing, cash holdings are necessary.

In addition to the company's financial resources, growth opportunities are also essential for businesses since they present chances for expansion, which can raise the company's future worth. The company's financial structure is the most important consideration for management while operating a firm or business entity. Determining the company's cash balances, or cash holdings, is one aspect of financial management that requires accuracy. Whether or not the manager maximizes shareholder earnings determines the weakness of cash holdings. The main drawback of cash holdings, if the manager's decision is made with the interests of shareholders in mind, so they yield lower returns than other assets with the same relative risk. On the other hand, managers who disregard the interests of shareholders aim

to raise cash holdings in order to enhance the total assets under their control through the policies they put in place.

Cash holding is one of the most major financial issue represented in accounting and financial elements that affect costs and returns (Brown & Petersen, 2013). In order to achieve the optimal cash holding at which the utmost benefits can be grasped is the primary goal of cash management. Cash holding enables a company to cut down risks to the lowest feasible level in terms of opportunity and agency costs, conduct its daily operations, react to emergencies, and take advantage of short-term market opportunities (Arslan et al., 2006). Conversely, cash holding maintain the stability of the business process and reduces the likelihood of experiencing financial difficulties brought on by insufficient cash flow generation to meet obligations. Thereby preventing or lowering the costs of capital expenditures or asset liquidation. Cash holdings are associated with numerous bold expenses like opportunity and agency cost, associated with shareholders (Brown & Petersen, 2013). If companies want to increase the business value by optimizing returns and lowering of expenses, businesses need to focus both on cost-reduction strategies and increasing profits when it comes to the ideal cash levels (Dittmar & Smith, 2007). The purpose of this study is to examine cash levels and their direct and indirect effects on business value as a result of investment decisions. Base on introduction two research questions were developed

Q1: Does cash holding has any relationship with firm value?

Q2: Does investment decision significantly mediate the relationship between cash holding and firm value?

In a research paper, Xu and Li (2023), investors receive a signal of bad governance or lack of manager's incompetency for growth, if excess cash is present in the Balance sheet of the firm. This bad signal leads to the reduction on the value of the firm. In another paper, Yu and Y. (2020). discovered a positive relation between cash holdings and firm value as cash holdings gives firms an ample space to invest in high-risk project profitable projects. They assert the importance of holding enough cash on hand, as it leads to value creation.

Jiang et all (2024) in their paper, examined the avenues that cause agency problems and inefficiencies for the firms that hold extra cash holdings. Unnecessary cash holdings lead to the promote over employment by creating management positions, though it is strategic advantage for the firms. Huang, Wang, and Q (2019) studied the complex interaction between cash holdings and

investment decisions and ultimate effects on firm value. After a thorough analysis, they result discovered a positive relation between cash and firm cost, investment in projects.

The relation between cash holdings, strategic investment decisions and the value of the firm was researched by [Chen, Li, and Wu \(2022\)](#). The researchers analyzed the firms having large cash volumes are free to make investment decisions in line with their expansion objectives, ultimately affecting value. [Xu and Li \(2023\)](#) did a thorough analysis of investment choices mediation effect on cash holdings and company value. The study indicated the investment decisions mediate the process of cash conversion to firm value. When firm have ideal levels of cash, firms can invest in value-bearing projects, yield more value to the firm. The focus of the discussion was on the effectiveness of investment decisions in utilizing cash for creating value. Firms having ample resources available are able to invest better, amplifying firm value.

[Loncan et al \(2014\)](#) analyzed the trivial relationship between cash holdings, firm value as well as investment efficiency. The research discovered that companies with higher cash reserves are in better position to make wise investments, ultimately increasing the firm value. The study emphasized the importance of using cash holdings wisely in order to optimize investment efficiency.

[Li and Zhang's \(2022\)](#) studied the effect of investment on the relation between cash holding and firm performance. The study provided another evidence of cash holdings, acting as source of profit hunting projects and role of wise investment decisions in elevating value. They analyzed the role of investment decisions' mediating roles under various economic environments and industrial settings. They found that the relevant industry factors and the state of the economy affect their impact of cash holdings on firm value with moderating role of investment decisions.

[Ameer and R. \(2012\)](#) studied the direct effect of cash holdings on firm value. Their research uncovered that the companies with substantial cash reserves are beneficial to firm's value only when firms invest in projects having high rates of return and acting as a safeguard against market swings. The findings highlighted the relationship between cash holdings and firm value. this shows that the liquidity plays a vital role in planning process.

[Liu and Xu's \(2022\)](#) studied the effect of cash holdings on investment choices that ultimately enhance firm value. The researchers discovered that companies with high cash reserves on their Balance sheet are in a

better position to make investments that increase value of the firm, which raises the worth for the shareholders.

[Khan et, al \(2023\)](#) investigated the relationship between cash holdings and firm value and the role of investment decisions in controlling it. The results of their study revealed that having optimum cash on hand helps investors to make decent investment choices, which elevate the value of the company. This research revealed the importance of making wise investment decisions when investing savings to boost company success.

[Lai, X et, al \(2025\)](#) studied the investment efficiency and its role in examining the relationship between cash holdings and firm performance. Their research supported the view that the cash holding can improve the firm performance only if it is accompanied by the investment efficiency. Efficient management of investment and cash is vital to elevate business value.

The impact of cash holdings on the quality of investment decisions is inspect by [Theissen et, al \(2023\)](#). Companies that have larger cash holding also typically make better investments, which raises the firm value. The research points out the importance of cash holdings towards improving overall investment quality and decision-making processes.

H1: Cash holding has positive effect on Firm value.

H2: Investment decision significantly mediate the relationship between cash holding and firm value.

Method and Materials

According to Bhatti, Saad, and Gbedabo (2019), ([As cited by Ur Reham et Al., 2025](#)) all types of research must have a clearly defined methodology. Since, in light of the literature review and hypotheses developed to be tested statistically, and keeping in view the various financial factors, the current research is based on a quantitative study. Current study is based on Positivism philosophy and deductive approach were used in. The deductive approach refers to testing the existence theory and hypothesis developed through statistical testing and observation. The deductive approach is used in research where one wishes to learn what other people have done, and create and test the hypothesis, according to [Jevnaker and Olaisen \(2022\)](#).

Fifteen years' panel data from 2009 - 2023 has been collected both from the website of PSX stock exchange and annual reports of companies listed in stock exchange. Current study is based on secondary data and were collected from 70 none financial sectors and company

listed in PSX stock exchange. To test the relationship between cash holding and firm value with mediating role of investment decision.

Finding

Table 1. Descriptive Statistic

Variable	Mean	Std. Dev.	Min	Max
Cash figure	1.29	5.26	6.18	6.71
Gav	5.47	1.66	-3.23	2.14
Fv	3.59	7.00	2.28	5.43

Cash figure has mean value of 1.29 minimum and maximum value are respectively 6.18 and 6.71 indicating a low deviation between the two values, similarly growth an assets value represents high average among the all variables that is 5.47, while firm value which is dependent variable in current study has mean value of 3.59.

Table 2. Pearson Correlation

	Cash Figure	GAV	FV
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Table 3.

Source	SS	Df	MS	Number of obs =	1,035
				F(8, 1026)	= 77.89
Model	1.92E+24	1	2.39E+23	Prob > F	= 0.000
Residual	3.15E+24	1,026	3.07E+21	R-squared	= 0.3779
				Adj R-squared	= 0.373
Total	5.07E+24	1,034	4.90E+21	Root MSE	= 5.50E+10

Value of firm	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]
Cash figure	7.640349	0.3406809	22.43	0.00	6.971838 8.30886
_cons	3.01E+10	5.76E+09	5.23	0	1.88E+10 4.14E+10

In first regression the firm value is consider a dependent variable and cash figure which is proxy for cash holding is consider an independent variable. First regression gives us two output the inner model and outer model in outer model the significant p value 0.000 indicate that H0 is rejected and at least one of the variable has significant relationship with firm value. Means that cash figure has a significant relationship with firm value. And the adjusted R square value are 0.373 suggested that 37.3% change come in dependent variable due to independent variable and the remaining are due to other factor which are not the part of

Cash Figure	1	0.4969	0.5988
GAV	0.4969	1	0.5244
FV	0.5988	0.5244	1

The relationship between firm value and cash figure is 0.5988 show a positive and significant relationship between the two variables and indicate that increase in cash figure will bring positive change in firm value. similarly, the correlation among firm value and growth in assets value which is proxy for investment decision and are mediating variable in current study, is positive that is 0.5244 suggesting that change in one variable will bring positive change in another variable and the relationship is statistically significant. The relationship between cash figure and GAV are also positive and significant and the relationship are 0.4969 between these two variables.

Regression

Regression (1)

In this regression result Firm Value is use as the dependent variable while, cash holding, is used an independent variable.

current study, the inner model or second table show the individual effect of independent variable on dependent variable. The coefficient value of cash figure is 7.640 show a positive and p value 0.00 show significant relationship with firm value. means that one unit increased in cash figure will bring 7.640 unit change in firm value.

Mediation analysis

Under this regression investment decision which is measure by GAV as a dependent variable and all other are explanatory variables.

Table 4.

Gav	Co ef.	St d. E rr	t	P>t	[95% Conf. Interval]	
Cash figure	.85	.10	7.88	0.000	.6420699	1.067936
_cons	4.94	2.30	2.15	0.032	4.25e+08	9.46e+09

In above regression model GAV consider dependent variable which is mediating variable in current study and cash figure consider an independent variable. The coefficient of Cashfigure 0.85 show a positive and p value 0.000 show a significant relationship between cash figure and GAV. Means that one unit increased in cash figure will bring 0.85 unit change in GAV.

Normality Test

To check wither, the data is normal and have no normality issue Skewness and Kurtosis test is applying to check the normality of data

[Skewness/Kurtosis tests for Normality]

Table 5

Variable	joint -	
	Obs	Pr(Skewness)
	Pr(Kurtosis)	adj chi2(2) Prob>chi2
Residuals	1,035 0.7783	0.8727 0.10 0.9489

Larger p- value of Skewness from 0.05 that is 0.8727 indicate Skewness of the data is not importantly different from what is it expected in normal distribution. also p-value of Kurtosis = 0.7783 is more than 0.05 so high p-value indicate that the kurtosis of data is not importantly difference from what is it expected in the normal distribution. Thus the data is normal. Similarly, joint chi squared is 0.9489 is also more than 0.05 so I can conclude that there is no importantly deviation from normality in data and the data is normally distributed.

Table 6. Direct, indirect and Total Effect of Mediation

Variable	Direct Effect	Indirect Effect (Coff of GAV* Coff of IVs in first regression)	Total Effect (D.E + IE)
cash figure	3.88	0.6630	4.5430

Direct Effects show the immediate influence of each independent variable on **fv**, controlling for the mediator **gav**. Indirect Effects show how each independent variable influences **fv** through the mediating variable **gav**. Total Effects combine the direct + indirect effects to represent overall impact of each independent variable on **fv through mediation GAV**.

Cash figure 3.88 means that rise in cash figure is linked with raised positive change in firm value, holding **GAV** constant. Cash figure 0.6630 the positive indirect effect proposes that **cash figure** positively affects **FV** through **GAV**. Cash figure 4.5430 the total effect of **cash figure** on **fv** is positive, proposing an overall increase in **fv** with an increase in **cash figure**.

Check Robustness and Significance

Table 7. Summary of Bootstrapped Indirect Effects

IVs	Mean Indirect Effect / Bootstrap Coefficient	CI
Cash figure	0.66, 95%	[0.20, 1.20]

The bootstrapped confidences intervals help assess the stability and significance of the indirect effects, providing a robust estimation of their influence. Cash figure show significant effect between IV that is cash figure and DV that is FV evidence from CI [0.20, 1.20].

Significant Indirect Effects:

Cash figure: CI [0.20, 1.20] (Significant)

Conclusion and Recommendation

The summary analysis of financial factors of various company listed in stock exchange used panel data, collected for the period of fifteen years from 2009 -2023 from 70 non- financial sectors mention in PSX, to find relationship among Cash holding and firm value with direct and indirect effect of mediating variable, whereas

Cash holding is used as an independent variable, and firm value is dependent variable. And cash holding is measure Cash figure and mediating variable is investment decision and measure through GAV growth an assets value. The study had set 2 research questions, and two hypotheses. The findings across different regression models conclude the following result and provide the answer to the research questions and hypothesis that was established at the beginning of the study.

The firm value has direct and significant result with cash holding that is explained through cash figure in current study. Meanwhile investment decision that is used as a mediating variable in current research study, the relationship of cash holding and firm value significantly mediating, the finding of the study is aligned with the hypothesis where the relationship between firm value and cash holding predicted significant. So the above finding will accept our both research questions and hypothesis H1 and H2. The result of [Lai, X et, al \(2025\)](#) justified the current result. As per as theoretical justification is concern Miller or model are aligned with the result who suggested that the firm value and profitability needed to be increased by addition financing when the cash level decrease from lower level, while if the cash is exceed the upper level the excess cash will be invest to increase the value of the firm, when focused on the upper and lower level of cash holding.

Recommendation

For companies:

- Increased liquidity management practices to guarantee enough short-term resources for operational and strategic wants, as higher liquidity positively improves firm value.
- Assign liquid assets to fruitful investment opportunities, rather than holding surplus idle cash, meanwhile effective investment decisions magnify the progressive impact of liquidity on the value of the firm.
- Structure investment policy should be developed that arrange high-return projects and capital budgeting techniques.
- Regularly check liquidity ratios, guaranteeing an optimal level that supports both operational steadiness and long-term value formation.
- Assimilate liquidity planning with strategic investment planning to make the most of the mediating benefits of investment decisions.
- Avoid under or over investment, by conducting progressive investment feasibility valuations to line up liquidity with firm value.

For Investors

- When assessing potential investment consider a firm's liquidity position as a key meter, as higher liquidity is related with superior firm value.
- Evaluate the excellence of a firm's investment decisions, since firms that effectively change liquidity into profitable investments more expected to generate higher earnings.

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