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The Impact of Organizational Characteristics on Corporate Cash Holdings: Evidence from Saudi Arabia During COVID-19 Period

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Abstract: The article investigates the level and financial determinants of corporate cash holdings in the kingdom of Saudi Arabia during the COVID-19 period, at the beginning we reviewed the academic accounting literature to develop the theoretical framework of corporate cash holdings in terms of definition, motivations, and theories, then to conduct our empirical study we use a sample consisted of the largest 50 corporations listed in the Saudi stock market, going further, the corporate cash holdings mean was 14.96% during the study period, the article's results prove empirically a positive relation between corporate cash holdings, leverage, and ownership concentration among the sample corporations. and a negative relationship between corporate cash holdings, corporate size, cash flow, growth opportunities, working capital, and dividends, finally, the article results will add to the academic accounting literature and help researchers and corporations' management to understand the financial determinants, motivates, theories and the optimal amount of corporate cash holdings based on scientific evidence.

Keywords: Cash Holdings, Agency theory, Leverage, Working Capital and Dividends

1 Introduction

Corporate cash holdings are receiving increasing attention in the academic accounting literature, especially in emerging economies such as the kingdom of Saudi Arabia, where the academic interest lies in the fact that corporations accumulate significant amounts of cash in their statement of financial position, and the financial report is the outcome of the accounting process during the fiscal year and the link between the corporation's management and stakeholders [1].

In the context of international crises, especially the crisis of Corona Virus (COVID 19) pandemic, which has resulted in radical changes leading to unprecedented effects on business organizations. [2]

In all over the world, COVID 19 has created uncertainty and panic situation in almost all areas of life. Not only financial position of all countries has been badly affected but also internal and external social lives have also disturbed badly.[3] it's considered as an annual summary of the performance of the corporation's operations and activities to clarify the financial position, business results, cash flows, and how to exploit the available economic resources, the financial report is also the essence of the agency and the board of directors' level of efficiency and effectiveness in managing the corporation in front of shareholders and other stakeholder groups, but cash and equivalents considered a big question mark according to the high volume and percentage of it recently, but it's better to reinvest cash from stockholders' perspective.

Recently, there have been fundamental changes in the exchange rate of some local currencies against the US dollar for several reasons, the most important reasons of countries' tendency to voluntarily liberalize the exchange rate of their local currency, weak economic performance, or political crises, which pay stakeholders' attention to the element of cash and its equivalent as one of the elements in the statement of financial position in terms of the impact of the change in the exchange rate and, accordingly, inflation rates on the value of cash, thus, the Academic accounting literature has paid considerable interest to this fact.

On the other side, under inefficient markets, it is useful to understand the relationship between corporate organizational characteristics and non-earning assets, to assess the corporate policies, and to reach the balance between profit ratios and cash. Therefore, corporate

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liquidity provides a method to finance investments far from raising external resources, which contain information and transaction costs. Moreover, the corporate cash holdings provide a buffer against financial distress costs when the corporations face obstacles to generating cash, both in time and volume, from another side, the increase in corporate cash holdings implies many costs: agency costs and tax disadvantages. Going further, the trade-off theory in the literature governs the corporations which need to compare benefits and costs of cash holding to reach the desired level, while many academic articles have been done to identify cash holdings determinants [4,5].

In terms of motivations, Corporations hold cash mainly for the transaction, speculative and precautionary purposes, where cash balances help corporations perform (day-to-day) activities or transactional needs, apart from these corporations may also hold cash for meeting unexpected expenses as well as for speculative purposes [6]. Growing corporations are likely to hold high amounts of cash due to reducing external financing costs, corporations may also want to hold a higher amount of cash for speculative purposes as new opportunities.

From above, this article aims to pinpoint the organizational characteristics impacting the corporate cash holdings of Saudi corporations during the COVID-19 period, it contributes to the academic accounting literature in the context of the Saudi environment, especially that of Saudi nonfinancial corporations listed in the Saudi Stock market, Till now -to researchers' knowledge - no academic accounting studies have been performed on the Saudi market during this period, thus, The article continuous as follows: part two reviews accounting and finance literature, focusing on corporate cash holdings' determinants and hypotheses development. Part three develops the research model, part four Results, and part five Conclusions.

2 Academic Accounting Literature Review and Hypotheses Development

2.1 Background of Corporate Cash Holdings

The academic accounting literature offers several perspectives tried to understand the level of cash and its equivalents held by corporations, these perspectives are illustrated within agency theory, stakeholders theory, trade-off theory, arbitrage theory Legitimacy theory, and pecking order theory, going further, in corporate finance literature, the direct relation between corporate cash holdings and corporate value has become an interesting issue, after many researchers focused on factors influencing the corporate cash holdings [3,6] where Accounting literature have agreed on the concept of cash holdings as the amount of cash and its equivalents (short-term, highly liquid investment) related to the total economic resources available to the corporation which disclosed in the statement of financial position, Basically, the corporation's strategy in determining the cash holdings ratio plays an essential role in achieving the economic health for the corporation by establishing a state of balance between short-term cash obligations and available cash, and There are three benefits to hold cash: Reducing the cost of external financing, Avoiding financial failure in the short term and ability to involve in the future investment opportunitie [5, 7].

Many motives have been identified to explain corporate cash holdings [8]. one major motive is the agency, which shows a positive relationship between corporate cash holdings and agency problems. According to the agency motive, the literature argues that socially responsible corporations tend to have agency conflicts because corporations work on satisfying different categories of stakeholders at the same time, which leads to higher cash holdings, on other side, Cash holdings help corporations meet not only (day - to – day) events or transactions but help corporations meet emergency cases that may arise from unexpected issues and also help them take on opportunities that may appear [6]. Also, cash holdings help corporations to take advantage of investment opportunities without having to bear significant transaction costs through either equity or debt issues, although corporate cash holdings may also present opportunities for corporations to invest in suboptimal projects and empire-building, However, a trade-off theory determines a corporation's optimum cash holding between the benefits and costs of having short-term or liquid assets to reach optimal cash holdings. However, the direct relationship between corporate value and cash holdings has not been the subject of studies till now [7].

2.2 Determinants of Corporate Cash Holdings

Corporate Cash holdings are an activity to withstand a certain volume of cash and its equivalents, this article followed [10]. so it can be measured as follow: CCHs = Log (Cash and its Equivalents)

The academic accounting literature provides several perspectives in an attempt to determine the cash and equivalents held by corporations, the determinants selected from the empirical and theoretical accounting literature are examined in their effect on corporate cash holdings.

2.2.1 Corporate Size

Corporate size is the total available economic resources, and according to the agency theory, the cash holdings rate increases agency problems [5]. Where the high percentage of cash holdings requires a logical explanation about the motives of corporation's manager to keep this high percentage of cash in front of stockholders, going further, large-sized corporations have investment opportunities and characterized by a huge daily operational volume, and therefore need to keep cash at high rates [11]. also, The inability of small-sized corporations to obtain financial facilities easily from banks or financial institutions as a result of increased borrowing restrictions, And this pushes it to form Financial Slack from cash and its equivalents, in addition to the high cost of external financing, Based on Trade-off theory, transaction costs are exposed to significant economies of scale since the corporation is big, as big corporations issue external financing and able to allocate the cost items of the external financing according to a large fund [5]. the Size would impact the overall cost of external financing, since the big the corporation, the greater its negotiation upper hand with the financing institutions, however, small corporations are not as diversified, so, small corporations are more tended to hold cash and equivalents, and have a disproportionate cash holdings levels compared to their operations. Empirical literature shows a positive impact of Corporate Size on corporate cash holdings [10]. where another part of the literature shows a negative impact [4,11,12,13]. but [7] proved that there is no relation, Corporate Size can be measured by the natural logarithm of assets, Thus, the following hypothesis can be formulated:

H.1 "Corporate Size hurts the level of corporate cash holdings".

2.2.2 Leverage

leverage is one of the most important financial measurements that look at how much capital comes from debt and assesses the corporation's ability to meet its obligations, so, Leverage means the extent of the corporation's dependence on borrowing from financial and banking institutions, and the degree of reliance in financing its assets from sources with fixed interest, whether loans or bonds and other external financing methods [14]. corporations generally prefer to finance their investments through internal sources of financing over external sources, Also, the cash holding is considered a safety factor in the case of instability in the future operational performance to meet the cash requirements for leverage, in addition to the corporation's preference to pay its obligations over the profit distribution, Moreover, Profitable and highly leveraged corporations tend to hold more cash and its equivalents in hand to avoid any future financial distress [11]. The leverage ratio is important due to corporations rely on a mix of debt and equity in financing their activities, and knowing the amount of debt held by a corporation is useful in assessing whether it can pay off its obligations as they come due, Empirical literature shows a positive impact of leverage on corporate cash holdings [4,7,8,11]. Where another part of the literature shows a negative impact [12,15] based on the tendency of corporations to invest all the economic resources available to them, including cash to meet leverage's obligations, Leverage can be measured by Debt-to-Equity Ratio which equals total liabilities over total shareholders' equity, Thus, the following hypothesis can be formulated:

H.2 "Leverage has a positive impact on the level of corporate cash holdings".

2.2.3 Working Capital

Corporations use working capital in case of cash shortage due to the rapid convertibility of inventory and receivables into cash, this means that working capital is an alternative for cash. Therefore, the relationship between liquid assets and working capital would be negative based on trade-off theory [5]. Empirical literature shows a positive impact of working capital on corporate cash holdings [2,11]. where another part of the literature shows a negative impact [4,13,14]. Working capital is represented by the difference between cash equivalents, current assets, and current liabilities divided by assets, the working capital ratio equals working capital to net assets Thus, the following hypothesis can be formulated:

H.3 "Working Capital has a negative impact on the level of corporate cash holdings"

2.2.4 Cash Flow

Corporations choose internal financing sources over outside sources due to information asymmetry issues [5]. Where, legitimacy theory explains that when a corporation's activities generate high cash flow levels, it will then fund other profitable plans, pay off debts, distribute dividends, and accumulate cash as a normal result, so, the relation between cash holdings and cash flow would be positive, Empirical literature shows a positive impact of cash flow on corporate cash holdings [4,14]. where another part of the literature shows a negative impact [11,15]. based on that the cash flow rate encourages the corporation's manager to be assured of its ability to generate cash in the future and therefore there is no justification for holding a high percentage of cash. but [7] proved that there is no relation, Cash flow is represented by the sum of net operating income and depreciation related to net assets. Thus, the following hypothesis can be formulated:

H.4 "Cash Flow has a negative impact on the level of corporate cash holdings".

2.2.5 Growth Opportunities

Based on agency, corporations with restricted opportunities are more likely to meet discretionary management risk, since in the face of insufficient growth directors are disposed to accumulate cash and equivalents to benefit from their discretionary power and to then reinvest them in non-profitable plans related to their experience and career [5]. Empirical literature shows a positive impact of Growth Opportunities on corporate cash holdings [11] based on Management's desire to make maximum use of future growth opportunities, whereas another part of the literature shows a negative impact [9,13,15]. in addition, [13] proved that there is no relation, Growth opportunities are measured by Tobin's Q, which is calculated by dividing the market value (MV) of equity plus net financial debt over net book value (NBV) of the corporation's total assets, Thus, the following hypothesis can be formulated:

H.5 "Growth opportunities have a negative impact on the level of corporate cash holdings".

2.2.6 Ownership Concentration

According to agency theory, the volume of stockholders' concentration can significantly influence the corporation's financial decisions, especially related to cash holdings and it lies on the degree of risk acceptance, Empirical literature shows a positive impact of Ownership Concentration on corporate cash holdings [4, 14, 16]. Where another part of the literature shows a negative impact [9]. so, ownership concentration can be measured by the percentage of stocks owned by the five largest stockholders, thus, the following hypothesis can be formulated:

H.6 "Ownership Concentration has a positive impact on the level of corporate cash holdings"

2.2.7 Dividend

Based on legitimacy theory, Dividend-paying corporations have less difficulty raising funds since they have the choice of canceling or reducing their dividends [5]. Dividend reductions are assumed to be linked with low costs and, so, dividend-paying corporations are less likely to hold cash compared to corporations that don't, Therefore, they are not required to hold cash, Empirical literature shows a positive impact of dividends on corporate cash holdings [4,14]. Where another part of the literature shows a negative impact [11, 12,15,17]. and dividend ratio can be measured by total distributed dividends over total assets. Thus, the following hypothesis can be formulated:

H.7 "Dividend distribution has a negative impact on the level of corporate cash holdings".

3 Research Model

This section presents the regression model that we estimated to analyze the determinants of corporate cash holdings for our total sample by estimating the following equation:

$$CCHs_{i,t} = \alpha + \beta 1\ CS_{i,t} + \beta 2\ LEV_{i,t} + \beta 3\ WC_{i,t} + \beta 4\ CF_{i,t} + \beta 5\ GOs_{i,t} + \beta 6\ OC_{i,t} + \beta 7\ DIV_{i,t} + \varepsilon_{i,t}$$

Where,

Corporate Cash Holdings (CCHs) = Cash it's its equivalent / Net assets.

Corporate Size (CS) = Natural Logarithm of total assets

Leverage (LEV) = Total liabilities / Total shareholders' equity

Working Capital (WC) = Cash-Current assets-current liabilities / Total assets

Cash Flow (CF) = depreciation + Earnings before interest /Total assets

Growth Opportunities (GOs) =Tobin's Q; MV (Equity+ Liabilities) / BV (Equity + Liabilities)

Ownership Concentration (OC) = Stock percentage owned by the five largest stockholders

Dividend (DIV) =Total distributed dividends / Total assets.

4 Results

4.1 Descriptive Statistics

Our data were collected from the financial reports published by the Saudi stock market, and we will provide descriptive statistics for our sample. On average, the corporations in our sample hold 14.96% of their assets in the shape of cash and its equivalents, where corporate cash holding' median is 1% with a standard deviation of 0.133333, which shows that some corporations hold a big volume of cash and its equivalents, from another side, cash flow represents 22% of assets (median is 21% with standard deviation 0.05951); corporate size means is 1263.32 billion (median is 970.5 with standard deviation 985.4183); dividends mean is 2.61% (median is 2% with standard deviation 0.024075); gross opportunities mean is 1.09 (median is 2.35 with standard deviation 0.090208), leverage mean is 42.51% (median is 39% with standard deviation 0.162042); ownership Concentration mean is 21.82% (median is 18.5% with standard deviation 0.159819), working capital mean is 39.71% (median is 38%% with standard deviation 0.118068).

Table (1): Shows the Mean and Medium.

	CCHS	CF	CS	DIV	GOS	LEV	OC	WC
Mean	0.149	0.22	1263	0.02	1.09	0.42	0.21	0.39
Median	0.1	0.21	970	0.02	1.06	0.39	0.18	0.38
Maximum	0.87	0.36	5492	0.09	1.55	0.85	0.91	0.74
Minimum	0.02	0.08	250	0	1.01	0.18	0.04	0.18
Std. Dev.	0.133	0.05	985	0.02	0.09	0.16	0.15	0.11
Skewness	3.25	0.01	1.95	1.27	2.13	0.72	1.77	0.76
Kurtosis	15.3	2.83	8.12	3.77	9.02	2.75	7.07	3.07
Jarque	812	0.12	173	29.4	227	8.96	121	9.66
Probab.	0	0.94	0	0	0	0.01	0	0.007
Sum	14.9	22	1263	2.61	109	42.5	21.8	39.7
Sq. Dev.	1.75	0.35	9613	0.05	0.80	2.59	2.52	1.38
Observ.	100	100	100	100	100	100	100	100

Going further, Table 2 present the correlation coefficients, This matrix illustrate that all the explanatory variables are correlated with the explained variable (with a risk of error below 1%), The positive correlation coefficient appears between corporate cash holdings and (leverage 0.027, ownership concentration 0.001), from another side, the negative correlation coefficient appears between corporate cash holdings and (corporate size -0.102, working capital -0.058, cash flow -0.010, growth opportunities – 0.040, dividends -0.263)

Table (2): Present the correlation coefficients.

	CCHs	CS	LEV	WC	CF	GOs	OC	DIV
CCHs	1	-0.10	0.027	-0.05	-0.01	-0.04	0.001	-.263**
CS	-0.102	1	-0.111	0.047	-0.06	-.31**	0.022	-.35**
LEV	0.027	-0.11	1	0.130	.198*	0.049	0.067	0.005

WC	-0.058	0.047	0.130	1	0.141	-0.048	0.132	0.06
CF	-0.010	-0.06	.198*	0.141	1	-.30**	-0.167	-.22*
GOs	-0.040	-.31**	0.049	-0.04	-.30**	1	0.083	.208*
OC	0.001	0.022	0.067	0.132	-0.16	0.08	1	0.09
DIV	-.263**	-.35**	0.005	0.065	-.22*	.208*	0.091	1
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

4.2 Regression Results

Table 3 shows the results by three methods: OLS, fixed effects, and random effects, the variables in the regression models: corporate cash holdings, corporate size, leverage, working capital, Cash flow, growth opportunities, ownership concentration, and Dividend. Our table shows that the coefficient corporate size is significantly negative using all methods. This result confirms hypothesis H.1 following stakeholders' theory and the arbitrage theory, the large-sized corporations tend to hold less amount cash to avoid the explanation toward stakeholders, Although, the table shows that the coefficient leverage is significantly positive using two methods (OLS and random effects). This result confirms hypothesis H.2 followed by the pecking order theory, Where, the table shows that the coefficient of working capital is significantly negative using all methods. This result confirms hypothesis H.3 following stakeholders' theory, Further, the table shows that the coefficient cash flow is significantly negative using two methods (OLS and random effects). This result confirms hypothesis H.4 following the pecking order theory, moreover, the table shows that the coefficient growth opportunities are significantly negative using two methods (OLS and random effects). This result confirms the hypothesis H.5 followed by agency theory, then, the table shows that the coefficient ownership concentration is significantly positive using all methods, this result confirms the hypothesis H.6 followed by agency theory, finally, the table shows that the coefficient dividends is significantly negative using all methods. This result confirms hypothesis H.7 following the trade-off theory.

Table (3): Shows the results by three methods.

VARIABLE	OLS	FIXED EFFECTS	RANDOM EFFECTS
CS	-0.00003 **	-0.0001	-0.00003 *
LEV	0.01973	-0.1595	0.01449
WC	-0.0148	-0.0178	-0.01691
CF	-0.25302	0.3040	-0.21254
GOS	-0.0004	0.0003	-0.00025
OC	0.0150	0.0238	0.01762
DIV	-2.0868 ***	-0.8828	-1.98369 ***
Constant	0.294 ***	0.260	0.283 **
Observation	100	100	100
R-squared	0.126194	0.678053	0.099317
F-Test	1.617 (0.05)*		
Hausman Test	1.514 (0.98)		
***The correlation is significant at the 0.01 level. **The correlation is significant at the 0.05 level. * The correlation is significant at the 0.1 level.			

5 Conclusions

This article investigates the level and financial determinants of corporate cash holdings in the kingdom of Saudi Arabia during the COVID-19 period, at the beginning we reviewed the academic accounting literature to develop the theoretical framework of corporate cash holdings in terms of definition, motivations, and theories such as agency theory, stakeholders theory, legitimacy theory, trade-off theory, arbitrage theory, and pecking order theory, then to conduct our empirical study we use a sample consisted of the largest 50 corporations listed and operating in the Saudi stock market, going further, the corporate cash holdings mean was 14.96% during the study period, the article's results prove empirically a positive relation between corporate cash holdings, leverage, and ownership concentration among the sample corporations, and a negative relation between corporate cash holdings, corporate size, cash flow, growth opportunities, working capital and dividends. Finally, the article results will add to the academic accounting literature and help researchers as well as corporations' management to understand determinants motivates theories, and the optimal amount of corporate cash holdings based on scientific evidence.

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