

**“Covid-19, Cash Holding and Financial performance”  
“Applied study on Telecom Egypt”**

**Mostafa Mohamed Mostafa Elsayed**

**Supervised by  
Prof. Farid Moharam  
Professor of Financial Accounting  
Faculty of Business  
Ain Shams University**

**Abstract:**

Cash holdings play a pivotal role amid the COVID-19 attack. This shock increased liquidity risk for many firms and generated an unprecedented increase in the demand for liquidity for affected firms. In order to cope with the operational risks caused by COVID-19 and ensure that firms can smoothly survive the pandemic, managers tend to increase firms' cash holding level in the short term through bank loans or equity financing to ease the cash flow pressures. Since COVID-19 brought short-term uncertainties into operating activities, they must keep the necessary liquidity level of the firms to finance fixed costs and expenses. Holding a certain amount of cash would assist companies in maintaining liquidity for emergencies, avoiding the need for external financing. However, the financing capacity of the firms is different, so it is debatable whether the companies can raise the cash in time. This study empirically examines the

impact of Coronavirus pandemic on Telecom Egypt cash holding and consequently firm financial performance by comparing cash holding levels and the related firm performance measured by ROA, ROE and EPS before, during and after the COVID-19 pandemic in the period from 2017 to 2021. The theoretical framework related to this issue has been mentioned and a relevant literature is reviewed.

In addition, findings of the research are discussed in relation to research hypotheses concluding that the corona virus had no significant effect on Telecom Egypt cash holdings, and there is no significant relation between Telecom Egypt cash holdings and its financial performance indicators of ROA, ROE, and EPS tested via SPSS version 26.

**Key Words:** Covid 19 – Cash holding – Financial performance.

## 1. Introduction

The outbreak of COVID-19 was announced as a pandemic by the World Health Organization on 11 March 2020. The novel coronavirus influenced economies and provided challenges to firms and individuals. Fu and Shen (2020) stated that most firms decreased in performance. Many companies experienced falling share prices (Phan and Narayan, 2020). Sharp reduction in production levels alongside slow turnover led to complete stagnation in sectors, such as tourism and catering, in the first quarter of 2020. On the one hand, these enterprises, which are characterized by service, social contact, and population mobility,

are unable to carry out operations and obtain income and cash inflow. On the other hand, the necessary fixed costs, and personnel expenses drive the cash-out. A long term “cash deficit” leads to huge cash flow pressure for firms in industries seriously affected by the pandemic. The COVID-19 increased the default risk for many firms by directly affecting the firms’ stream of future cash flow and simultaneously increasing their rollover risk (Acharya and Steffen, 2020).

The COVID-19 outbreak seriously affected all economies, especially the operations and continuity of listed companies, around the world. Cash holding decisions are one of the captivating issues in the corporate finance area during the COVID-19 pandemic. Corporate liquidity management is one of the interesting issues during the COVID-19 outbreak. Cash is the most liquid asset for a firm. The availability of cash affects its liquidity and shows its ability to fulfil all of its obligations on time.

## **2. Literature review**

Lockdowns have caused a negative shock on both the demand and the supply sides. These shocks have overlapped and intensified each other, leading to disruptions in supply chains and, consequently, also to a reduction in the industrial output at an unprecedented rate (Inoue and Todo, 2019). A supply side shock has led directly to a demand side shock. Store closure and stay-at-home policies have resulted in a reduction in the purchase volumes of goods and services, with consumers, fearing or

struggling with a sharp fall in income, with a very limited consumption of industrial and luxury goods and postponed investment projects (Baldwin and Weder di Mauro, 2020). Recently, firms around the world tend to hold large amounts of cash so as to avoid uncertainty and capture growth opportunities and in addition to the negative impact and the severe disruption caused by COVID-19 all those factors led to putting the financial performance of the firms at stake.

### **Covid-19**

The essence and mechanism of the impact of uncertainty shocks on the economy- the demand and the supply sides have been widely discussed in literature (Kaplan and Violante, 2018; Bloom, 2007; Kozeniauskas et al., 2017; Orlik et al., 2012; Villaverde Guerron-Quintana et al., 2020). The uncertainty shocks are caused by random economic, political or social factors and leading to economic shocks. The economic shock can be defined as an unpredicted and sudden disturbance in the normal operation of a company, economy or society having multiple effects depending on the scale of impact. Drop (2001) also defines an economic shock; it is a sudden event in the economy or politics that has a high impact on macroeconomic variables such as production output, inflation rate, unemployment rate and the current account balance. It can vary in nature and are classified to external and internal shocks; the external shocks come from outside the company and can be stimulated by many

social, health, climate or other factors outside the economic model, whereas internal shocks arise inside the company. Those economic shocks include for example the 9/11 world trade centre (WTC) attack, oil producers’ agreements to cut production, the 2008 financial crisis, or the Covid-19 pandemic; an outbreak that has resulted in unprecedented shocks (Broekhoven et al., 2006; Fan et al., 2018; Qiu, 2020; Verikios et al., 2016).

At the firm-level, the Coronavirus negatively affect performance of the firms (Choi, 2020; Kapoor et al., 2021; Njindan Iyke, 2020; Phan & Narayan, 2020). Firms faced different problem and losses ranging from disruptions in supply, shortage of raw material, transportation problems and declined demand that may significantly affect firm’s efficiency and profitability (Bartik et al., 2020; Hagerty & Williams, 2020). The impact of a pandemic on individual enterprises (Margherita and Heikkila 2021; Wu et al., 2021; Golubeva 2021; Grima et al., 2020) or enterprises in a given industry (Kaczmarek et al., 2021; Chen et al., 2020; Khan et al., 2020). The literature on the subject also includes studies on the impact of the pandemic on the activities of the enterprises from the small and medium- sized enterprises (SME) sector (Bai et al., 2021, Markovic et al., 2021; Dai et al., 2021) or on large corporations (Margherita and Heikkila 2021). There are also studies reflecting the impact of the pandemic on the activities of listed companies (Shen et al., 2020; Devi et al., 2020; Rababah et al., 2020).

## Cash Holdings

Cash is considered the most liquid asset to help businesses be more proactive in financial decisions and reduce risks related to solvency. The decision of cash holding is vital to the survival and growth of a firm, and a growing literature has emerged recently to explain the implication and determinants on firms. In the developed economy, a recent report by Deloitte shows that there has been an increase in cash holdings over the past three decades indicating the importance of cash holdings decisions to every organization. Cash holdings became a topic of interest among academics after the introduction of the liquidity preference theory in economics and as a result of a large amount of cash reported in firms' balance sheets worldwide, the theme of corporate cash holdings has emerged as a significant field of research in the finance literature; Dittmar et al. (2003) report that large US corporations held 13% of their assets in cash, Ferreira and Vilela (2004) postulate that The Economic and Monetary Union firms (EMU) held approximately 15% of their book value of assets in cash or cash equivalents at the end of 2000, in contrast, Martínez-Sola et al. (2013) points out that in 2003, the total cash reserves of US publicly traded corporations represented around 10% of the country's annual GDP.

Despite the negative impact of COVID-19, firms with accumulated cash are better positioned to maintain investment or acquisition programs during the pandemic, especially companies

that face a higher level of business risk and related cash flow volatilities tend to hold higher levels of cash (Acharya et al., 2007; Denis & Sibilkov, 2010; Harford et al., 2008; Haushalter et al., 2007; Steijvers & Niskansen, 2013).

The demand shock of COVID-19 is likely to reduce operating earnings which restricts a firm's ability to take on debt to finance investment and prior researchers showed that borrowing capacity depends on a firm's operational cash flows (Tirolea (1997). Lian and Ma (2018) revealed that 80% of US non-financial firms' corporate debt is based on the going-concern value of cash flows from firm's operations adding that a standard borrowing constraint restricts total debt as a function of cash flows measured using operating earnings and added that the creditors are mainly concerned with EBITDA (earnings before interest, taxes, depreciation and amortization) as a key metric in issuing debt. That is why firms with accumulated cash holdings can forego debt financing and continue investing, they do not need to increase their cash for precautionary reasons and such firms do not also need to cut back on their non-cash assets or investments as compared to firms with less cash. Hence, firms with more cash keep investing during the current COVID-19, on the contrary, firms with less cash during this ongoing pandemic crisis might forgo profitable investment opportunities and cut back on their investments.

## **Financial performance**

Although corporate finance theories suggest that cash holdings can do both either improve or adversely affect corporate performance, there are only a limited and inconclusive empirical work on the relationship between cash holdings and corporate performance of companies. While some suggests a positive relationship between cash holding and firm performance (Fresard & Salva, 2010; Kalcheva & Lins, 2007), the other stream indicates a negative relationship (Huang et al., 2013; Oler & Waagelein, 2011).

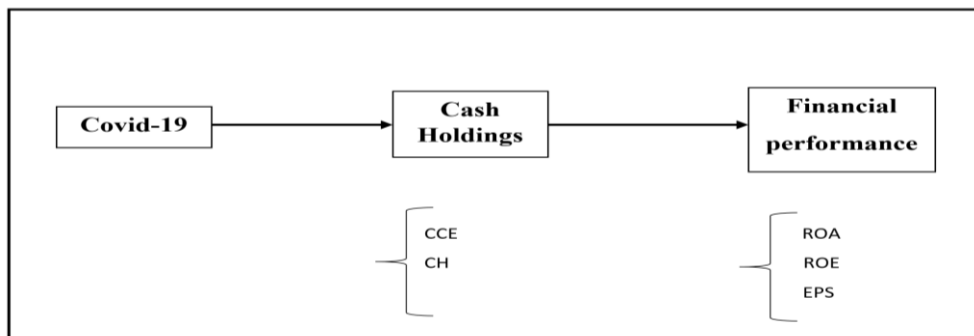
Other Scholars studied the association among cash holding, firm age and size of the firms and firm's performance (Bigelli and Sánchez-Vidal, 2012; Kipesha, 2013; Ronald Anderson and Malika Hamadi, 2016; Ben Said Hatem 2017; Guizani, 2017; Amahalu and Ezechukwu Bwatrice, 2017; Raja Muddessar Iftikhar, 2018; Vu et al., 2019). Other empirical studies have investigated the effect of cash holding on financial performance and value of firms (Martí'nez-Sola et al., 2013) Barry, Campello, Graham, and Ma (2021a) surveyed 1,050 Chief Financial Officers (CFOs) in the U.S., Europe and Asia to gather companies' internal plans, in response to COVID-19 it revealed that on average CFOs expected a 10% negative impact on their revenue growth.

Mikkelson and Partch (2003) and Fresard (2010) examine whether higher amounts of cash can hinder US corporate

performance, showing that firms that hold a large amount of cash have relatively better performance than firms that hold less cash. Similarly, Palazzo (2012) tests the relationship between US firms' cash and profits and finds a positive linkage between cash holdings and ROE. Palazzo (2012) explains this outcome in relation to the trade-off theory's precautionary motive for cash. La Rocca et al. (2019) examine the link between cash holdings and SME performance in Europe. Consistent with the precautionary motive, La Rocca et al. (2019) find a positive effect of cash holdings on performance. Further, Dimitropoulos et al. (2019) examined the relationship between firms' cash holdings and performance for SMEs and larger firms in Greece during 2003–2016 and found that cash holdings were positively related to SMEs' and large firms' performance. In the emerging market context, Abushammala and Sulaiman (2014) examined the relation between cash holdings and Jordanian listed firms' performance and finding a positive relationship between cash holdings and profitability. Also, Vijayakumaran and Atchyuthan (2017) use a sample of listed firms in Sri Lanka and found that corporate cash holdings have a positive effect on profitability. Further, Iftikhar (2017) advances the literature by studying the link between cash and firms' performance for listed firms in Pakistan and finds that corporate cash holdings are positively related to ROE. In contrast, Wang (2002) investigated the relationship between cash holdings and firms' performance using

a sample representing Japanese and Taiwanese listed firms over 1985– 1996 and found the relationship between corporate cash holdings and performance to be negative.

### 3. Conceptual framework



### 4. Research Methodology

#### Data and Sample

This study uses Primary data of Telecom Egypt for the time period from (2017- 2021). The source of the data used in the study involve data collected from Telecom Egypt published audited financial statements. We obtained financial information from 2017 for three reasons: First, we argued that the period from 2017 to 2019 is the relevant period to estimate Telecom Egypt pre-pandemic characteristics. Second, the COVID-19 effect was not statistically significant in the first quarter of 2020

(January to March), the measures toward COVID-19 mitigation, such as lockdown were imposed at the end of March 2020, and the impact of COVID-19 was fully reported and absorbed in 2020 financial reports. Finally, post pandemic related period is only limited to 2021 financial reports.

## **Research Design**

The research method used is the quantitative method, with a focus on descriptive statistics to analyze the primary features of the data. Then, pairwise correlation analysis via SPSS version 26 is used to examine the impact of the predictor variables on the dependent variable.

## **Variable construction and measurement**

### **Cash holdings measurement**

In line with Bates et al. (2009), Martýnez- Sola et al., 2013 and Duong et al., 2020 we use the amount of cash plus cash equivalents divided by total assets as the primary proxy of cash holdings (Cash H).

### **Corporate performance**

Performance measurements refer to the process of measuring the efficiency and effectiveness of the crucial strategic actions of firms (Neely et al., 1995) in managing their resources (Al-Matari et al., 2014). It is impossible to improve a process without measuring its performance as this determines the level of required resources. In this study and in line with previous studies

such as La Rocca and Cambrea, 2019), we use three alternative proxies to measure the dependent variable corporate performance; return on assets (ROA) and return on equity (ROE). While ROA is defined as net income (net profit) divided by year-end total assets, ROE defined as net income divided by total equity and EPS. Also, in this study as Telecom Egypt owns about 45% of Vodafone Egypt so in order to set aside the effect of Vodafone dividends distribution that amounted to 5.5 billion EGP plus extraordinary dividend of 0.5 billion EGP on Telcom Egypt net income distributed in 2019 and 2020, another reason can be traced to that fact that COVID-19 is not a financial crisis, however, the adverse effect on operating income could affect operations of firms and lead to financial distress that is why we also depend on the operating profit beside net income in both ROA and ROE so as to reflect both situations. Table 1 presents all applied variables, acronym and the measures.

**Table 1 Measures of applied variables**

| Variables                        | Acronym | Measure                                                                                             |
|----------------------------------|---------|-----------------------------------------------------------------------------------------------------|
| <b>Performance 1</b>             | ROA     | Net Profit/total assets                                                                             |
| <b>Performance 2</b>             | ROA     | Operating income/total assets                                                                       |
| <b>Performance 3</b>             | ROE     | Net Profit/total equity                                                                             |
| <b>Performance 4</b>             | ROE     | Operating income/total equity                                                                       |
| <b>Profitability</b>             | EPS     | Net income/number of outstanding shares                                                             |
| <b>Cash and cash equivalents</b> | CCE     | Cash + Banks time deposits (less than 3 months) + banks current accounts – restricted cash at banks |
| <b>Cash Holdings</b>             | Cash H  | Cash and cash equivalents/ Total assets                                                             |

## **5. Hypothesis development**

This study focuses on two distinctive hypotheses:

H1: There is a relationship between COVID-19 pandemic & Telecom Egypt’s cash holdings.

H2: There is a significant relationship between Telecom Egypt’s Cash holding and its financial performance.

Now as we start to examine the first hypothesis, we need to analyze Telecom Egypt’s cash variables prior to the corona pandemic from 2017 to 2019 and the period supposed to be affected by Covid-19 is 2020 and if so, it is also to be reflected in its statements and figures, and finally year 2021 which is considered to be the post crisis year.

### **5.1 Analysis of Telecom Egypt Cash**

#### **5.1.1 Cash**

Cash in this analysis refers to cash at year end extracted for telecom Egypt statement of cash flow for years from 2017 to 2021 reflected in figure 2.

**Figure 2 : Telecom Egypt cash analysis for the period from 2017 to 2021**



It can be concluded from the previous graph that Telecom Egypt's cash increases from the period of 2017 to 2021, however, it increases at a decreasing rate.

### **5.1.2 Cash and cash Equivalents**

Cash and cash equivalent in this section can be traced to Telecom Egypt Cash plus Banks time deposits which is less than 3 months in addition to banks current accounts deducted from it restricted cash at banks reflected in Telcom Egypt statement of financial position for years from 2017 to 2021 is shown in figure 3.

**Figure 3 : Telecom Egypt cash and cash equivalent analysis for the period from 2017 to 2021**

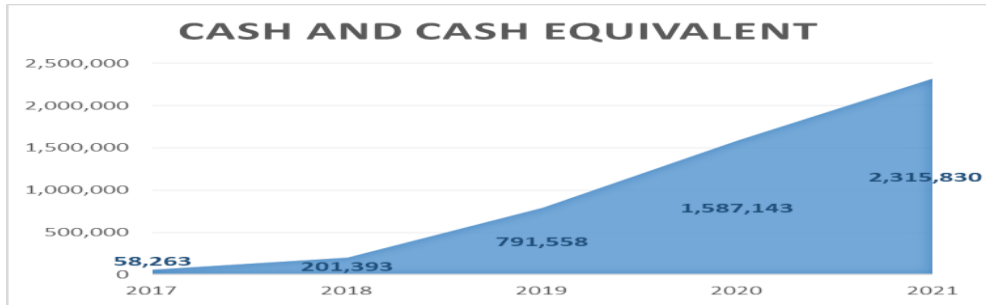


Figure 3 reflects the increase in Telecom Egypt’s cash and cash equivalent item through 2017 to 2021. The base year 2017 is the lowest in value, cash and cash equivalent jumped high in years 2018 and 2019 and the increase is at an increasing rate, as for years from 2020 it increases too with respect to previous year (2019), however, the percentage of increase started to decline reflected in percentage of change in cash and cash equivalent in years 2020 and 2021.

### 5.1.3 Cash Holdings

In this part Cash holdings refer to Telecom Egypt Cash and cash equivalents derived from its Balance sheet divided by Telecom Egypt’s Total assets for the period from 2017 to 2021 and it is reflected in figure 4.

**Figure 4 : Telecom Egypt cash holdings analysis for the period from 2017 to 2021**

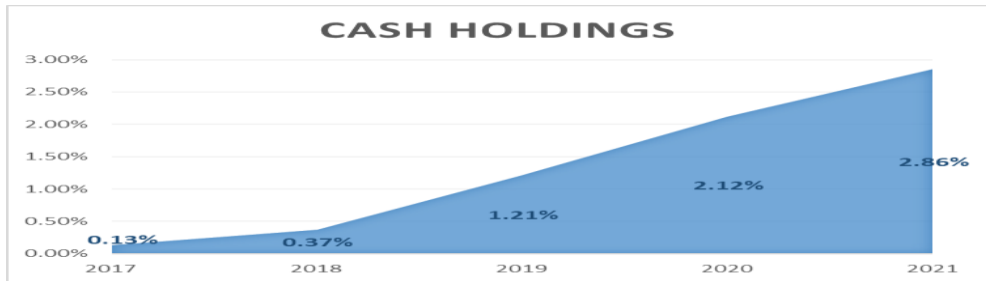


Figure 4 illustrates the increase in Telecom Egypt’s cash holdings variable through 2017 to 2021. It can be concluded that cash holdings are affected with cash and cash equivalent item and follow the same pattern of change as cash and cash equivalent goes also for cash holdings. The base year 2017 is also the lowest in value, there is a jump in cash holdings in years 2018 and 2019 where the increase is at an increasing rate, as for years from 2020 it increases too with respect to previous year (2019), however, the percentage of increase started to decline reflected in percentage of change in cash holdings in years 2020 and 2021.

Back to our hypothesis; H1: There is a relationship between COVID-19 pandemic & Telecom Egypt’s cash holdings. Throughout the previous related cash analysis, it can be noted that year 2020 – the concerned year with the pandemic- witnessed an increase in cash, cash and cash equivalent and cash holdings compared to previous years and also continue to

increase in the following year- 2021. The summary of increase is in table 5.

**Table 2 : Telecom Egypt cash, cash and cash equivalent and cash holdings percentage of increase in 2020**

| Variable | Cash | Cash and cash equivalent | Cash Holdings |
|----------|------|--------------------------|---------------|
| 2020     | 124% | 101%                     | 75%           |

This all provides the required support for rejecting the anticipated hypothesis (H1) of the research and that Covid-19 outbreak did not have significant effect on Telecom Egypt’s cash holdings.

## 5.2 Analysis of Telecom Egypt Financial performance

### 5.2.1 Operating Profit

Operating profit in this analysis is extracted from telecom Egypt income statement for years from 2017 to 2021 and is reflected in figure 5.

**Figure 5 : Telecom Egypt operating profit for the period from 2017 to 2021**

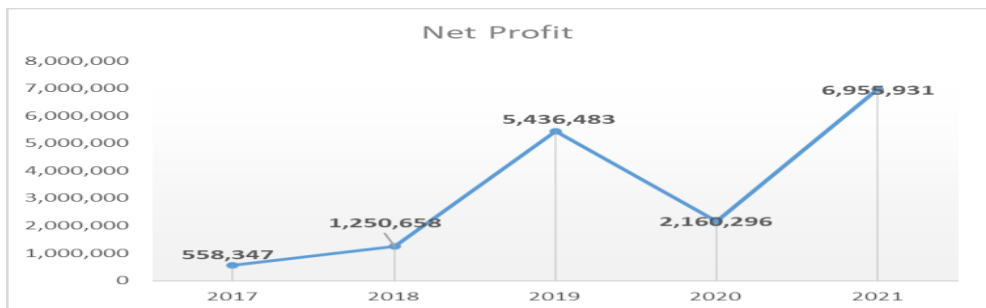


Analyzing Telecom Egypt’s operating profit in the concerned period reflects a sharp decline in 2019 compared to an increase before and after. Telecom Egypt’s operating profit for the intended interval is shown in figure 4.4. A 72 % increase in operating profit in 2018 is followed by a sharp decrease of 75% in 2019, however in 2020 there is a major jump followed by another increase in 2021.

### 5.2.2 Net Profit

Net profit refers to net profit for the year figures taken from Telecom Egypt income statement for the period from 2017 to 2021 and is demonstrated in figure 6.

**Figure 6 : Telecom Egypt Net profit for the period from 2017 to 2021**



In 2018 Telecom Egypt witnessed an increase in net profit compared with our base year 2017. Despite the fact that operating profit in 2019 as previously mentioned fell sharply, net profit in the same year had a major jump this can be attributed to the fact that Telecom Egypt investment in Vodafone pays off in

2019 and also 2020, however this huge jump was followed by a 60% decline in 2020 and finally Telecom Egypt had another major increase in net profit 2021.

### 5.2.3 Return on assets

ROA is one of the major profitability measures that is used to provide useful insights into the financial well-being and performance of the business as it reflects how much profit a company can generate from its assets and measuring how efficient a company's management is in generating profit from their economic resources or total assets on their balance sheet.

ROA is expressed as a percentage and is calculated by dividing net income by total assets. where the higher the number, the more productive and efficient management is in utilizing economic resources, the more efficient a firm's management is at managing its resources to generate profits.

**Figure 7 : Telecom Egypt ROA for the period from 2017 to 2021- Operating profit**



#### 5.2.4 Return on equity

Return on equity (ROE) is another measure of financial performance and is considered a gauge of a company's profitability and how efficient it is in generating profits.

ROE is also expressed as a percentage and is calculated by dividing net income by shareholders' equity. The higher the ROE, the more efficient a firm's management is at generating income and growth from its equity financing.

**Figure 8 : Telecom Egypt ROE for the period from 2017 to 2021- Operating profit**



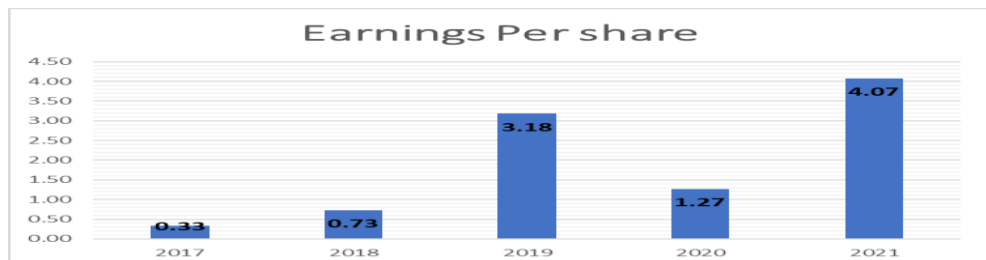
#### 5.2.5 Earnings per share

The earnings per share figure can help investors gain an idea of a company's financial performance and it is sometimes known as the bottom line of a firm's worth. A higher EPS means a company is profitable enough to pay out more money to its shareholders.

Earnings per share (EPS) is calculated by determining a company's net income and allocating that to each outstanding share of common stock. Net income is the income available to all shareholders after a company's costs and expenses are accounted for.

Investors may also look for trends in a company's EPS growth over time to get a better idea of how profitable a company has been, how steadily earnings have grown, and the potential for future performance. A company with a steadily increasing EPS figure is considered to be a more reliable investment than one whose EPS is on the decline or varies substantially. Figure 11 represents Telecom Egypt's EPS for the concerned period.

**Figure 9 : Telecom Egypt EPS for the period from 2017 to 2021**



It is to concluded that Telecom Egypt's EPS keeps going up from 2017 to 2019, however, it declined in 2020 relatively to 2019 but returns up and jumps again in 2021.

### 5.2.6 Correlation testing

In order to examine the second hypothesis, correlation analysis has to be done via SPSS version 26 so as firstly to

quantify the strength between the independent variable (Cash holdings) and the three dependent variables representing financial performance (ROA, ROE and EPS) and assessing the significance of the relation.

From  $n=3$  one can already calculate meaningful  $Cis$ , however, with increasing sample size the correlation coefficient will "collect" more information.

There is no problem having a small sample size. The assumptions about the scale of the variables, their linear correlation and homogeneous, normal errors must be reasonable. The only difficult thing is to see or recognize possibly relevant deviations from these assumptions with small samples. But this does not invalidate the test, because the test remains valid under these assumptions. Table 8 summarizes the correlation strength between the independent variable and the dependent ones.

**Table 3 : Person correlation between the independent variable cash holdings and the dependent variable financial performance**

| Field | Pearson Correlation Coefficient | P-value (Sig.) |
|-------|---------------------------------|----------------|
| ROA   | 0.377                           | 0.531          |
| ROE   | 0.51                            | 0.38           |
| EPS   | 0.755                           | 0.14           |

$N = 5$ ,  $*p < 0.05$ ,  $**p < 0.01$

Table 4.8 reflects that there is a weak and insignificant relation between Cash holdings and ROA ( $r=0.37$ ), a moderate insignificant relation between cash holdings and ROE ( $r=0.5$ ) and a strong insignificant one between cash holdings and EPS ( $r=0.75$ ). All of the 3 correlations exhibit insignificant relation ( $p > 0.05$ ).

Since that among the three dependent variables, only one proved to have strong correlation with the independent variable Cash Holdings, however this relation turns out to be insignificant, therefore, undergoing a further regression analysis is irrelevant and hence, it is to be concluded that H2 is rejected and there is no significant relation between Telecom Egypt cash holdings and its financial performance.

## 6. Conclusion and Recommendations

### Conclusion

Cash holding level has always been an important research topic in the field of corporate finance as it plays a significant role in the operation of enterprises. In this period of COVID-19 outbreak, sudden financial crises occur from time to time across enterprises due to the associated economic shutdowns in some industries, imbalance of market supply and demand, and sudden cash gap of enterprises, among others. At the firm-level, cash flow disruption is the most fatal factor that would directly lead to bankruptcy. From the perspective of the supply chain, the business reputation between enterprises will be greatly affected

due to the uncontrollable bad debts. The cash flow from operational activities would shrink as well. In response to the COVID-19 pandemic, the increased cost of pandemic prevention will also become an important source of cash flow pressure. Management must raise the level of cash holdings in order to ensure that the company can survive during the tough times and cope with the rising rigid costs. However, unsystematic risks, such as excessive mergers and acquisitions, have reduced enterprise credit capacity, leading to difficulties to maintain cash holding level and liquidity.

The policy of cash holdings has been studied extensively in recent decades, and continues to be the focus of many studies. Cash holding levels in firms are increasing globally. Our study is a small contribution towards the growing literature in this field in our attempt to investigate the relationship between Covid-19 and cash holdings in one side and the significance of the relationship between cash holdings and firm performance on another side both applied on Telecom Egypt over the period 2017 to 2021.

Our study found that the COVID-19 outbreak has no significant negative impact on Telecom Egypt cash holdings. There is a significant increase in cash holdings in 2020 by 75 %. The pandemic has no negative impact on the production, operation, and sales which is eventually reflected in the unexpectedly positive return rate despite of the strict quarantine

measures limit consumptions and productions, sending a negative signal to managers and its stakeholders.

The financial constraints made the operation even harder in the pandemic (COVID-19). Compared with the SARS pandemic of 2003, the development of transportation infrastructure increased the speed of population flow, which led to a faster spread of COVID-19. The pandemic exerted great downward pressure on Egypt’s macroeconomy. From the perspective of COVID-19 pandemic prevention, the quarantine measures across Egypt effectively hindered the spread of the pandemic. However, the production and consumption are limited at the same time, leading to a sluggish market and declining performance of many companies specifically in the first quarter of 2020. Despite the COVID-19 repercussions, Egypt’s information and communication technology (ICT) sector grew by 15.2 percent in 2020, becoming the most growing among other sectors. The sector’s share in Egypt’s GDP rose to EGP 108 billion in FY 2019/2020 (4.4 percent), up from EGP 93.5 billion (3.8 percent) in FY 2018/2019. The ICT sector’s exports increased in 2020 to \$4.1 billion, up from \$3.6 billion in 2019 (growing by 13 percent). Investments in the sector rose by 35 percent to EGP 48.1 billion, up from EGP 35.4 billion in FY 2018/2019, 1,336 ICT companies have been founded with a total capital of EGP 1.34 billion.

Concerning digital transformation efforts, the report said that 34 digital governmental services have been provided through Egypt’s Digital Platform, which was established in July. 544,400 Egyptians have subscribed to the platform thus far. The platform helped them to obtain the governmental services they need via mobile phone applications, postal offices, communication centres and service centres. It added that 472 requests have been submitted on the platform to receive governmental services.

Fortunately, Telecom Egypt is also an exception as cash holdings and financial performance was not affected, conversely, Telecom Egypt managed well its cash holdings at an increasing level and maintained and kept realizing net profit through the related period.

## **Recommendations**

Practically, the findings of the study are useful for all those firms that maintain an ideal cash reserve. Attempts should be made by managers to boost company’s value through external funding, motivate manager through bonus share and incentives, so that company’s performance can be enhanced taking into account that conflict of interests is considered essential factor of corporate cash holdings.

In Egypt firms are heavily dependent on cash for their investment and precautionary needs, so it is imperative that the government must take steps to keep the economy stable so that firms will tend to invest more and hold less cash and ensure lower interest

rates to increase access to finance for all types of firms. This will lower the cash dependency of firms as reduction in cash holdings results in pressure to perform better and permits managers to invest in projects that boost company performance.

As for cost control, enterprises should change to the cost leadership strategy as soon as possible and reduce the daily operating costs to get liquidity. The strict control of cash cost, especially, will help enterprises overcome the shortage of cash flow.

Companies should expand financing sources appropriately. Based on the pecking order theory, the cost of equity capital will be lower than the cost of equity financing due to the tax shield effect of debt capital, which becomes the preference of the management. In the case of the COVID-19 pandemic, however, the sources and scale of debt financing will be limited by the lenders, and there may be insufficient and untimely financing. Therefore, managers should communicate with shareholders in time to obtain cash flow support, and then maintain a high level of cash holdings to cope with sudden risks.

Managers should be aware that the efficiency and the profitability of the firm can be boost only through hygienic work environment and ensuring minimum human contact which finally reduce the impact of global pandemic of COVID-19. Also, they should pay attention to the changing environment outside and adjust their business strategies in time. It is vital to make the

production and operation meet the consumption trend of “post-pandemic era,” to promptly restore the operation.

Finally, as from the investors point of view, they should correctly view the fluctuation of returns during the COVID-19 pandemic and accordingly control the risks associated with their financial assets.

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