



## The Impact of Inflation and Exchange Rates on Generating Power of Cash in Egypt (Panel Data Analysis)

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### Abstract

**Objective** –The objective is to study the effect of the sharp change in currency exchange rate EXR and inflation on generating power of cash GPC in light of Egyptian Accounting standards EAS in the progressing Egyptian industry setting.

**Methodology** –The methodology consists of careful examination of the numerical evidence and analysis of the changes in the relevant accounting standards and regulations. The study used numerical data from 38 non-financial firms for 5 years corresponding to 190 firm year observations during 2017-2021. The study applies the panel data method. The designated sample of firms are listed on the EGX 100, have yearly financial statements, have not discontinued during the study period, run in cash, the currency is recorded in the Egyptian pound, and have complete data. The study applies multiple regressions. It applied fixed effects, random effects, and pooled models. The study includes the dependent variables of the generating power of cash GPC. The study also includes the independent variables; exchange rates EXR and inflation rates.

**Results** –Findings indicate a significant relationship among; inflation, EXR and GPC. Findings offer new perceptions for investors and policy makers concerned with EXR and inflation.

**Research limitations/implications** –Much of the information is available. However, the time span of the study allows for tracking the impact of inflation and change in EXR on firm GPC.

**Novelty/Originality** –The originality lies in setting an accounting standard for inflation tailored for the Egyptian business environment that adapts the available accounting information to the current economic situation.

**Keywords:** Exchange rate, inflation, generating power of cash, Egypt

### 1. Introduction

The difference in price among common stocks is of great concern for; assisting corporate financial policy, comprehending the psychology of investment behavior, and locating profitable investment opportunities. However, it is inferred financial statements of firms listed in the Egyptian stock exchange depend on an accounting method built on the historical costs. When prices are in a state of consistent relative stability, the traditional accounting methods proved to be reasonably satisfactory as they evolved over the years. However, during price instability, accounting reports become misleading (Zamel et al., 2020). In light of the rapid price changes these financial statements have become outdated and inappropriate for their users. So, other accounting methods were proposed. The most important of which is the general purchasing power model, mentioned in the IAS 29 (Financial Reporting in

Hyperinflationary Economies) along with the IAS 21 (The Effect of Changes in Foreign Exchange Rates). It is worth noting that the AIS 21 shapes the path for account for operations and foreign currency transactions in financial reports. The AIS 21 shows how to translate financial statements as well.

The cabinet resolution no. 1568/2022 issued by the Egyptian government amended the Egyptian Accounting Standard EAS 13 (Effect of Change in Foreign Currency Exchange Rate), that allows companies to account for the sudden change in the currency exchange rate.

The political, legal, social, and economic environments constitute of the financial reporting function. Even though many studies were made on inflation accounting, no standard exists for adjusting the price level change reported on the financial statements.

Inflation is a raise in the general level of prices of goods and services in an economy over time. Inflation is the vanishing purchasing power of money.

Bahloul (2018) study explains that Egypt has a poor reputation of issues with its EXR and the USD. The Central Bank of Egypt confirms the Egyptian business environment has gone through numerous stages of inflation which is the decrease of the Egyptian pound EGP compared to the United States dollar USD. During the 1980s the inflation rates were relatively high but began to decrease and continued to decrease in the 1990s after the adoption of the economic reform program. In 2001 the inflation rate increased 2%. In 2008 the inflation rate increased 14%. Due to the International Monetary Fund IMF and the efforts made by the black market to put pressure on the country, on November 3, 2016, the Egyptian government floated the Egyptian currency. Consequently, there was an increase in the inflation rate. Shortly after that, the market released the EXR and decreased the EGP as a crucial step towards restoring confidence in the Egyptian economy. On January 2017 the inflation rate increased 29.5%. There was a significant decrease in inflation rates in Egypt for three years during 2018, 2019, and 2020. The Egyptian Central Agency for Public Mobilization and Statistics reported inflation rates for April 2021 4.4% while for April 2022 reached 14.9%.

Price indexes are used to anticipate the purchasing power of money for a period of time. Thus, due to the constant volatility and then sudden sharp increases in inflation rates and the exchange rate and its impact on the cash-generating power in Egypt, it is necessary to have an accounting standard for inflation tailored to the Egyptian business environment.

The study will proceed in this fashion: second is the literature review then hypothesis, third is the study methodology, fourth is the statistical result, and fifth is the conclusion followed by further studies.

## 2. Literature Review

This study was built upon the economies of scale notion that proposes huge companies have a competitive advantage over smaller ones. Large firms, have more capability of encountering competition, a better chance of renegotiating with customers and suppliers, able to keep prices higher than the competitive point, and have greater strategic variation. This theory relates profitability of the business firm to its size. The Sritharan (2015); Serrasqueiro and Nunes (2008); and García Padrón *et al.* (2005) studies, just to name a few, support the prevailing positive relation between profitability and firm size. The prior study Schmitt and Yu (2001) determines an increase in economies of scale encourages the share of trade in total production and the size of external industry trade. In addition, this study was supported by the monetary unit assumption, which proposes currency is steady in the long run and does not experience loss in its purchasing power. These are the fundamentals in which this study is built upon.

The objective is to evaluate the influence of the change in the currency exchange rate and inflation rate on the generating power of cash GPC and its components of

operating, investing, and financing cash flows. Toudas *et al.* (2022) study confirms the importance of this objective and investigates the significance of financial statements analysis subsequent to the implementation of International Accounting Standards IAS. Moreover, the study illustrates the formulation of the Cash Flow Statement. The outcomes of the study confirm that investigating the application of the cash flow adds to the appreciation of the business firm's aptitude to generate cash and cash equivalents through operations. The study of cash flows application also plays an important role towards ensuring smooth operation of the business by investments and finances made.

The Mioduchowska-Jaroszewicza (2022) study analysed the effect of cash flows from finance, operations, and investments, on the fluctuation of cash amount. Secondary data was collected from cash flow statements for a sample of non-financial institutions during 2009-2019. To examine the collected data, the study used a deterministic cash flow model where total cash flow equalled investment revenue minus investment expenditure plus operating cash flows. Findings indicated that Polish listed companies were characterized by low financial inflows, low capital expenditures and positive operating cash flow.

The Adebayo *et al.* (2015) study used the cash generating power to measure going concern of a business firm. The paper calculated numerical data gathered from yearly financial statements of Nigerian Breweries Plc. Findings revealed an insignificant negative impact of coverage of current liabilities on generating power of cash. Findings confirmed substantial direct connections of long-term debt coverage and generated power of cash as well. However, there was significant negative impact concerning interest coverage and cash generating power. Thus, earning quality was a better indicator of the magnitude of abnormality between reported earnings and operating cash flow. That is to say, information from financing and investing cash flows was crucial. Nonetheless, the fundamental reason for the presence of any business entity was its operating activity.

The previous Cheung and Wang (2023) study evaluated the likelihood of real effective exchange rates with the explanatory power of real commodity prices. It focused on the individual roles of the different commodity prices at different times. The study gathered secondary data from quarterly financial statements of four commodity-exporting countries. The study applied nominal exchange rates. Findings inferred that diverse commodity price resulted from the commodity prices, such that, the commodity price effect was non-uniform across commodity sectors and countries. In addition, commodity price effect differed over time.

Another related study was Alzoubi (2022) that investigated the interest rate, real economic activity, domestic credit, and wealth effects of the consumer price index, on the Amman Stock Exchange activity during 1991-2020. The study applied the autoregressive distributed lag (ARDL) bounds test. Findings revealed that the interest rate was an influential monetary tool to battle inflation and recession.

An additional previous related study by Asif and Frömmel (2022) analysed the effect of exchange rate on businesses in Poland, Czech Republic, Hungary, and Russia. The study controlled for likely effects of the Russian financial crisis and subprime mortgage, the turn-of-the-year effect, EU agreement, and exchange rate regimes. Findings indicated significant impact for 52% on Russian business firms and 60% for business firms in Poland, Czech Republic, and Hungary.

The Nuhu (2021) study tested the exchange rate volatility on inflation to determine if the exchange rate volatility actually had an influence on inflation in the Nigerian business environment. The study used yearly data during 1986-2019. The study applied the generalized autoregressive conditional heteroskedasticity (GARCH) and the vector error correction model (VECM) to determine the effect of exchange rate volatility on inflation. The dependent variable was the inflation rate represented by consumer price index. The independent variables were money supply (MS), export (EPT), import (IMP), and nominal exchange rate (NER). The overall findings of this

study verified that nominal exchange rate (NER) and money supply (MS) had significant positive effect on consumer price index.

The Van Cauwenberge *et al.* (2021) paper investigated the role of trade. It suggested a cohesive approach for clarifying and evaluating exchange rate coverage. The study evaluated data during 2011-2015. Findings indicated diverse sets of companies existed according to exchange rate coverage. In addition, findings inferred selling to and purchasing from diverse foreign markets was a way for firms to reduce exchange rate exposure under varying market conditions.

The Ferri *et al.* (2020) study was another previous literature that examined the various connections of cash flows of different management departments of the business firm and economic performance. It evaluated 71 listed firms in Italy during 2008-2017. The study used the multiple regression and correlation analyses to confirm if cash flow alternatives perhaps reliably forecast future cash flow. It was inferred investments flow along with cash generation managed to explain a great deal of inconsistency of operating income made throughout prior periods. The investments movements turned out to be the finest for identifying the best moneymaking companies in the medium-long term.

Prior studies related to the recognition of the influence of the inflation rate on the business environment, as well as, the relation between the inflation rate and the exchange rate in-turn the impact on the business environment was vital to the study on hand.

The Konchitchki (2011) was an earlier study that confirmed the influence of inflation was not acknowledged through insignificant financial statements. The study proposed that, effects of inflation had economic consequences. The study results concluded that unrecognized inflation gains and losses helped predict future cash flows.

Another supporter was the Michael *et al.* (2017) paper that stated local stock markets adjust slowly to local inflation fluctuations. This study pointed out that investors earned considerably lower real returns on local stocks when there was an increase in the local rate of inflation. However, investors earned considerably higher real returns on foreign stocks and local bonds. Due to the late reaction of updating the response of inflation expectations, sticky long-run nominal discount rate was the only option available for the local stock market investors. This rate was likely to be low when inflation was high. This study concluded if inflation was adequately persistent, small amounts of stickiness in inflation expectations serve to match the real stock return certainty resulting from inflation in the data.

Yet another supporter was the Besnik *et al.* (2016) proceeding study that aimed to determine if a fixed or flexible exchange rate was a preferable shock-absorbing tool and had a significant role in inflationary performance. The study evaluated a sample of companies in the Western Balkan countries to identify the impact of inflation and exchange rates. It was evident from the study that exchange rates prevailed as the primary cause of inflation. Findings showed the steady exchange rate had an important impact in retaining price constancy in emerging economies.

Also, Abdul *et al.* (2014) study sought to identify the causal relationship between firms listed on the Karachi Stock Exchange KSE 100 index KSE100: IND and exchange rate EXR, exports EXPT, consumer price index CPI, imports IMP, and interest rate IR in Pakistan. The study used the multiple regression models. Findings specified that IMP consumed a substantial positive association with KSE100: IND. However, IR, CPI, EXR, and EXPT were dissimilar with KSE100: IND. According to the Granger Causality examination some observations were made. First, Uni-directional causality occurred among EXR, IMP, and KSE100: IND. Second, bi-directional causality occurred between IR and KSE100: IND. Lastly, no causality occurred among CPI, EXPT and KSEI.

Similarly, the Jansen *et al.* (2021) paper dealt with how a company's activity affected its stock price. The study applied the dividend growth model to join a company's value generating proficiencies to its share price. The study attempted to

demonstrate that a company's profits were a portion of its worth through the accounting association with profits and dividends. Findings proved there was a positive relationship between cash flow growths plus stock returns. The company investment events explained less than operating events. Findings inferred \$1 capitalized in the stock market raised to \$9.85 during the sample period. In addition, \$1 financed in the long-short cash flow growth portfolio rose to \$15.30 as well.

Likewise, the previous study of Naumoski & Juhasz (2019) inspected the effect of business firm operations and inflation on the business firm cash holdings. The study used numerical data from financial reports of listed non-financial institutions. The study sample consisted of 868 non-financial firms located in 10 South-East European countries during 2006 - 2015. The study applied a panel regression model. Outcomes approved that both operating cycle and inflation encouraged change in firm cash holdings.

Correspondingly, the prior Wang *et al.* (2014) study argued that at the market level when there was inflation, firms tended to modify and improve their cash holding schemes towards alterations in purchasing power. Not only that, but the same study explained that at the firm level, the firm operations similarly stimulated the business cash holding approach. Business firms regulated their cash holding approaches according to variations inside and outside the business setting. The study examined these foreseen relationships by means of firms registered in China's stock market during 1998–2009. The empirical outcomes specified a major negative link between cash holdings and the customer price index CPI.

The above literature presented diverse studies prepared on several corporate contexts of different countries (USA, India, Pakistan, Sir Lanka, Russia, UK, Amman, Nigeria, Italy, and some Western Balkan countries). The study aims to detect different variables that affect the firm GPC in the emerging Egyptian business environment during the sharp increase in price taking place ever since November 2016.

According to a modest review of literature, it has come to our attention that no study has been made that evaluates the relationship among EXR, inflation rate and the GPC in the emerging Egyptian business environment. Also, there is no exclusive Egyptian accounting standard related to inflation. The following question arises:

Q- Do inflation and EXR impact the GPC in the Egyptian business environment?

At this point, we generate the succeeding hypothesis:

- H1: a significant impact occurs among inflation, EXR, and GPC in the Egyptian business environment.
- H2: a significant impact occurs between inflation and GPC in the Egyptian business environment.
- H3: a significant impact occurs between EXR and GPC in the Egyptian business environment.

### 3. Methodology

This study evaluates the influence of the sharp change in the currency EXR and inflation on the GPC in the progressing Egyptian industry setting. The study uses numerical data from 38 non-financial firms for 5 years corresponding to 190 firm year observations during 2017-2021. It applies the panel data method. The designated sample of firms are listed on the EGX 100, have yearly financial statements, have not been discontinued during the study period, run in cash, the currency is recorded in the Egyptian Pound EGP, and have complete data. The study applies multiple regressions. The study includes the dependent variable GPC retrieved from cash flow statements. The study also includes the independent variables; EXR and inflation rates from the Central Bank of Egypt, World Bank and the International Monetary Fund IMF. The generating power of cash GPC Y1 is represented by (operating cash flow OCF Y2 / operating cash flow OCF Y2 + investing cash flow ICF Y3 + financing cash flow FCF Y4)

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from the cash flow statements. The independent variables; exchange rates EXR X1 and inflation rates IR is represented by (inflation consumer price ICP X2 and inflation gross domestic product deflator IGDPD X3). The study measures a 5% standard error not 1% or 10%. To investigate the relationship between the independent variables (X1, X2, and X3) and the dependent variables (Y1, Y2, Y3, and Y4), three multiple regression models pooled, fixed effect, and random effect are used.

- Step one: the Fixed Effect and Pooled models are evaluated by F-test. If prob (0.0000) is less than 5% the Fixed Effect model is best. If prob (0.0000) is more than 5% the pooled model is best.
- Step two: in case the Pooled model is best from step two do not continue.
- Step three: in case the preference goes to the Fixed Effect model from step two, it is evaluated along with the Random Effect model by using the Hausman test. If there is proof that prob (0.0000) is less than 5% priority goes to Fixed Effect model. If there is proof prob (0.0000) is more than 5% the Random Effect model is preferred. The foundation is:

$$y_{it} = \alpha_{oi} + \beta_{it} X_{it} + E_{it} \tag{1}$$

y<sub>it</sub>: dependent variable, accompanied by unit i, over period t  
 α<sub>oi</sub>: fixed term for sample i  
 β<sub>it</sub> X<sub>it</sub>: independent variable and slope  
 E<sub>it</sub>: random error

This statistical analysis is to identify which of the Random Effect, Pooled, Fixed Effect models is most likely to demonstrate the influence of the exchange rate and inflation rates represented by (inflation consumer price ICP and inflation gross domestic product deflator IGDPD) on the generating power of cash GPC represented by (operating cash flow OCF / operating cash flow OCF + investing cash flow ICF + financing cash flow FCF).

The results of these models are shown in the following table:

**Table 1.**  
EXR (X1) and ICP (X2) on GPC (Y1) F-test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.897405	(37,150)	0.6401

From the above Table 1, the Fixed Effects and Pooled models are first evaluated with F-test. Table 1 results indicate prob. of F-test = 0.6401 that is greater than 5%. Thus, the Pooled model is used to identify the relation between (X1 + X2) and Y1 using multiple regression.

**Table 2.**  
EXR (X1) and IGDPD (X3) on GPC (Y1) F-test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.896822	(37,150)	0.6410

Table 2 results above indicate prob. of F-test = 0.6410 that is greater than 5%. Thus, the pooled model is used to identify the relation between (X1 + X3) and Y1 using multiple regression as well.

**Table 3.**  
The results of the estimated models for the relationship between the independent variables and Y<sub>1</sub>

Random Model	Fixed Effects Model	Pooled Model			Independent Variable	Dependent
		P-value	Coefficient	Note		
+	+	0.0007	898.2766	+	X <sub>1</sub>	Multiple Regression Y <sub>1</sub>
NS	NS	0.1500	---	NS	X <sub>2</sub>	Multiple Regression Y <sub>1</sub>
NS	NS	0.3628	---	NS	X <sub>1</sub>	Multiple Regression Y <sub>1</sub>



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NS	NS	0.6100	---	NS	X <sub>3</sub>	Multiple Regression
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\*NS represents non-significant impact

Results from Table 3 above which presents the relation between (X<sub>1</sub>+ X<sub>2</sub>) and (X<sub>1</sub>+ X<sub>3</sub>) on Y<sub>1</sub> show a significant relation between X<sub>1</sub> prob 0.0007 < 0.05 and Y<sub>1</sub>. According to the coef = 898.3 the relationship is positive. There is non-significant relation between X<sub>2</sub> prob 0.1500 > 0.05 and Y<sub>1</sub>. There is a non-significant relation between X<sub>1</sub> prob 0.3628 > 0.05 and Y<sub>1</sub>. There is a non-significant relation between X<sub>3</sub> prob 0.6100 > 0.05 Y<sub>1</sub>. Thus, there exists a significant positive relation between X<sub>1</sub> and Y<sub>1</sub> only. These results confirm the Besnik *et al.* (2016) study that proves steady exchange rate has an important impact in retaining price constancy in emerging economies.

Evaluating the impact of EXR (X<sub>1</sub>), ICP (X<sub>2</sub>), and IGDPD (X<sub>3</sub>) on OCF (Y<sub>2</sub>)

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.432984	(37,150)	0.0000

Table 4 results indicate prob. of F-test = 0.0000 that is less than 5%. Thus, the Fixed Effect model is used to identify the relation between (X<sub>1</sub> + X<sub>2</sub>) and Y<sub>2</sub> using multiple regression.

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	2	1.0000

The Random Effect and Fixed Effect models are compared with the Hausman test. The outcomes of Table 5 above show the prob. of the Hausman test = 1.000 which is greater than 5%. So, the Random Effect model is used to identify the relationship between the (X<sub>1</sub> + X<sub>2</sub>) and Y<sub>2</sub>.

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.410207	(37,150)	0.0000

Table 6 results indicate prob. of F-test = 0.0000 that is less than 5%. Thus, Fixed Effect model identifies the relation between (X<sub>1</sub> + X<sub>3</sub>) and Y<sub>2</sub> using multiple regression.

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	2	1.0000

The Fixed Effect and Random Effect models are compared using Hausman test. From Table 7 above, the result implies that the Random Effect model is preferred because prob (1.0000) is more than 5%. So, the Random Effect model is used to identify the relation between (X<sub>1</sub>+ X<sub>3</sub>) and Y<sub>2</sub> using the multiple regression.

Random Model			Fixed Effects Model	Pooled Model	Independent Variable	Dependent Variable
P-value	Coefficient	Note				
0.000	-2.305	-	-	-	X <sub>1</sub>	Multiple Regression Y <sub>2</sub>
0.000	12546262	+	+	+	X <sub>2</sub>	Multiple Regression Y <sub>2</sub>
0.003 3	-8.59	-	-	-	X <sub>1</sub>	Multiple Regression Y <sub>2</sub>
0.0114	90800	+	+	+	X <sub>3</sub>	Multiple Regression Y <sub>2</sub>

**Table 4.** EXR (X<sub>1</sub>) and ICP (X<sub>2</sub>) on OCF (Y<sub>2</sub>) F-test

**Table 5.** EXR (X<sub>1</sub>) and ICP (X<sub>2</sub>) on OCF (Y<sub>2</sub>) Hausman test

**Table 6.** EXR (X<sub>1</sub>) and IGDPD (X<sub>3</sub>) on OCF (Y<sub>2</sub>) F-test

**Table 7.** EXR (X<sub>1</sub>) and IGDPD (X<sub>3</sub>) on OCF (Y<sub>2</sub>) Hausman test

**Table 8.** The results of the estimated models for the relationship between the independent variables and Y<sub>2</sub>

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The table 8 above presents the relation between  $(X_1 + X_2)$  and  $(X_1 + X_3)$  on  $Y_2$ . The table displays a significant relation between  $X_1$  prob  $0.000 < 0.05$  and  $Y_2$ . According to the coef = -2.305 the relationship is negative. Also, there is significant relation between  $X_2$  prob  $0.000 < 0.05$  and  $Y_2$ . According to the coef = 12546262 the relationship is positive.

The results of the random model indicate a significant relation between  $X_1$  prob  $0.0033 < 0.05$  and  $Y_2$ . According to the coef = -8.59 the relationship is negative. There is a significant relation between  $X_3$  prob  $0.0114 < 0.05$  and  $Y_2$ . According to the coef = 90800 the relationship is positive.

Thus, there is a significant negative relation between  $X_1$  and  $Y_2$ , a significant positive relation between  $X_3$  and  $Y_2$ , and a significant positive relation between  $X_2$  and  $Y_2$ . Correspondingly the prior Wang *et al.* (2014) study argues that at the macro level, companies are prone to regulate and improve their cash-holding strategies as a reaction to variations in purchasing power caused by inflation. At the firm level, firm operations also influence the corporate cash holding strategy. Outcomes indicate a significant negative association between cash holdings and the customer price index.

Evaluating the impact of EXR ( $X_1$ ), ICP ( $X_2$ ), and IGDPD ( $X_3$ ) on ICF ( $Y_3$ ).

**Table 9.**  
EXR ( $X_1$ ) and ICP ( $X_2$ ) on ICF ( $Y_3$ )  
F-test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	45.158298	(37,148)	0.0000

The Fixed Effect and Pooled models are first evaluated via the F-test. Table 9 results indicate prob. of F-test = 0.0000 that is less than 5%. Thus, the Fixed Effect model identifies the relation between  $(X_1 + X_2)$  and  $Y_3$  using multiple regression.

**Table 10.**  
EXR( $X_1$ ) and ICP ( $X_2$ ) on ICF ( $Y_3$ )  
Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	2	1.0000

The Random Effect and Fixed Effect models are compared by the Hausman test. Table 10 above infer the prob. of the Hausman test = 1.000 which is more than 5%. So, the Random Effect model is used to identify the relationship between the  $(X_1 + X_2)$  and  $Y_3$ .

**Table 11.**  
EXR ( $X_1$ ) and IGDPD ( $X_3$ ) on ICF ( $Y_3$ ) F-test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	45.224644	(37,148)	0.0000

Table 11 results indicate prob. of F-test = 0.0000 that is less than 5%. Thus, the Fixed Effect model identifies the relation between  $(X_1 + X_3)$  and  $Y_3$  using multiple regression.

**Table 12.**  
EXR( $X_1$ ) and IGDPD ( $X_3$ ) on ICF ( $Y_3$ )  
Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	2	1.0000

The Fixed Effect model is compared with the Random Effect model using the Hausman test. The outcomes of Table 12 above indicate the prob. of the Hausman test = 1.000 which is greater than 0.05 or 5%. So, the Random Effect model is used to identify the relationship between  $(X_1 + X_3)$  and  $Y_3$ .

**Table 13.**  
The results of the estimated models for the relationship between the independent variables and  $Y_3$

Random Model			Fixed Effects Model	Pooled Model	Independent Variable	Dependent
P-value	Coefficient	Note				



0.2780	—	NS	NS	NS	X <sub>1</sub>	Multiple Regression	Y <sub>3</sub>
0.8559	—	NS	NS	NS	X <sub>2</sub>	Multiple Regression	
0.3000	—	NS	NS	NS	X <sub>1</sub>	Multiple Regression	Y <sub>3</sub>
0.3375	—	NS	NS	NS	X <sub>3</sub>	Multiple Regression	

\*NS represents non-significant impact

The table 13 above presents the relation between (X<sub>1</sub> + X<sub>2</sub>) and (X<sub>1</sub>+ X<sub>3</sub>) on Y<sub>3</sub>. The results in Table 13 show non-significant relation between X<sub>1</sub> prob 0.2780 > 0.05 and Y<sub>3</sub>. There is also non-significant relation between X<sub>2</sub> prob 0.8559 > 0.05 and Y<sub>3</sub>. Table 13 results indicate a non-significant relation between X<sub>1</sub> prob 0.3000 > 0.05 and Y<sub>3</sub>. There is a non-significant relation between X<sub>3</sub> prob 0.3375 > 0.05 and Y<sub>3</sub> as well. Thus, there is no relation between (X<sub>1</sub> + X<sub>2</sub>) and (X<sub>1</sub>+ X<sub>3</sub>) on Y<sub>3</sub>.

Similarly, the Jansen *et al.* (2021) paper proves there is a positive relationship between cash flow growth and stock returns. The company investment events explain less than operating events.

Evaluating the Impact of EXR (X<sub>1</sub>), ICP (X<sub>2</sub>), and IGDPD (X<sub>3</sub>) on FCF (Y<sub>4</sub>).

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.245244	(37,136)	0.1838

**Table 14.** EXR (X<sub>1</sub>) and ICP (X<sub>2</sub>) on FCF (Y<sub>4</sub>) F-test

The Fixed Effect and Pooled models are first evaluated by F-test. Table 14 results above indicate prob. of F-test = 0.1838 that is more than 0.05 or 5%. Thus, the Pooled model is used to identify the relation between (X<sub>1</sub> + X<sub>2</sub>) and Y<sub>4</sub> using multiple regression.

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.237144	(37,136)	0.1908

**Table 15.** EXR (X<sub>1</sub>) and IGDPD (X<sub>3</sub>) on FCF (Y<sub>4</sub>) F-test

After the evaluation and comparison, results in Table 15 above infer prob. of F-test = 0.1908 that is more than 0.05 or 5%. Thus, the Pooled model is used to identify the relation between (X<sub>1</sub> + X<sub>3</sub>) and Y<sub>4</sub> using multiple regression.

Random Model	Fixed Effects Model	Pooled Model			Independent	Dependent
		P-value	Coefficient	Note	Variable	
+	+	0.000	1.92	+	X <sub>1</sub>	Y <sub>4</sub>
-	-	0.000	-127356	-	X <sub>2</sub>	
NS	NS	0.1607	—	NS	X <sub>1</sub>	Y <sub>4</sub>
NS	NS	0.2163	—	NS	X <sub>3</sub>	

**Table 16.** The Results of the Estimated Models for the Relationship Between the Independent Variables and Y<sub>4</sub>

\*NS represents non-significant impact

Table 16 above presents the relation between (X<sub>1</sub> + X<sub>2</sub>) and (X<sub>1</sub>+ X<sub>3</sub>) on Y<sub>4</sub>.

From Table 16 it is clear there is a significant relation between X<sub>1</sub> prob. 0.000 < 0.05 and Y<sub>4</sub>. According to the coef. = 1.92 the relationship is positive. Also, there is a significant relation between X<sub>2</sub> prob. 0.000 < 0.05 and Y<sub>4</sub>. According to the coef. = -127356 the relationship is negative.

Table 16 shows a non-significant relation between X<sub>1</sub> prob. 0.1607 > 0.05 and Y<sub>4</sub>. Also, there is a non-significant relation between X<sub>3</sub> prob 0.2163 > 0.05 Y<sub>4</sub>.

Thus, there exists a significant positive relationship between  $X_1$  and  $Y_4$ . There exists a significant negative relationship between  $X_2$  and  $Y_4$ . The supporting literature includes the Mioduchowska-Jaroszewicza (2022) study that analyzes the effect of the flow of cash from firm financing, operations, and investments, on fluctuation of reported cash amounts. Also, the Michael *et al.* (2017) paper states local stock markets adjust slowly to local inflation fluctuations. This study points out that as the local rate of inflation increases; investors earn significantly lower real returns on local stocks. However, investors earn considerably higher real returns on foreign stocks and local bonds.

Overall findings indicate a significant positive relationship between;  $X_1$  and  $Y_1$ ,  $X_3$  and  $Y_2$ ,  $X_2$  and  $Y_2$ , and  $X_1$  and  $Y_4$ . However, there is a significant negative relationship between;  $X_1$  and  $Y_2$ , and,  $X_2$  and  $Y_4$ . The Besnik *et al.* (2016) study explains that exchange rates prevail as primary cause of inflation. The study proves steady exchange rate has an important impact in retaining price reliability in emerging economies.

#### 4. Conclusion

This paper exposes the influence of corporate policies on the macro level to firm cash generation power on the micro level. It offers a guideline for managers to augment the distribution of assets built on modifications in both the market setting and firm level. That is to say, this study tries to highlight the relation and the importance of this relation between the macro and micro level of the business environment through the exchange rate EXR, inflations rates (represented by inflation consumer price ICP and inflation gross domestic product deflator IGDPD), and the generating power of cash GPC (represented by operating cash flow OCF / operating cash flow OCF + investing cash flow ICF + financing cash flow FCF).

The studies above focus on the causal link between inflation and exchange rates on the generating power of cash and cash flow resulting from operations, investments, and financing activities in the emerging Egyptian business environment. The study concludes that there is a substantial positive correlation between EXP and FCF. There is a significant negative relationship between ICP and FCF.

Findings confirm the exchange rates maintain price stability and have a robust effect on inflation in Egypt. Findings reveal that the EXR remains the primary basis of inflation; therefore, policymakers in the area need to balance costs and benefits associated with hosting a flexible EXR system. The results of this study are constant with the findings of preceding Besnik *et al.* (2016) study that establishes that the firmness of the exchange rate plays a major part in retaining price steadiness in emerging business markets.

During economic instability, increasing inflation harms liquid corporate assets. The firm spends more on financing its operating activity because of the increase in the value of inputs. Furthermore, managers who expect more inflation gather inventory to deal with the risk of inflation occurrence, in turn, dropping the cash holdings.

The Helaly (2022) study confirms the need for an Egyptian inflation accounting standard with the help of the inflation adjusted cost model part of AIS 29. Due to the constant fluctuation accompanied by sudden sharp increases in the inflation rates, it is vital to have an accounting standard for inflation tailored for the emerging Egyptian business environment. That is to say, there needs to be an Egyptian accounting standard specifically related to the accounting treatment of inflation and its effects on the financial statements especially on the cash flow statement. In addition, adjustments need to be made to supporting Egyptian accounting standards such as amended standards; no. (13) effects of changes in foreign exchange rates (it is worth noting that the most recent adjustment made to this standard was on December 2022 as a result of the floating of the Egyptian Pound, as well as, the overall change in prices and the purchase power of consumers), no. (28) Provisions, contingent liabilities, and contingent assets, no. (30) Periodic financial statements and, no. (45) Fair value

measurements. Otherwise, these business firms need to apply existing International Accounting Standards IAS related to inflation. However, the ideal situation is to have a designated Egyptian Accounting Standard EAS for the accounting treatment of inflation along with necessary adjustments to supporting the EAS.

On the basis of this study, recommendations for further research is essential since the stock market takes on a vital part in the economic movement of a country, and is stimulated by many macroeconomic conditions.

### Credit Author Statement

The authors worked equally throughout the manuscript in terms of the introduction, literature review, methodology, results, conclusion, and future studies.

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