International Journal for Quality Research 19(2) 585-614
ISSN 1800-6450

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Article info:
Received 17.07.2024.
Accepted 05.02.2025.

DOI – 10.24874/IJQR19.02-16

THE IMPACT OF INFLATION ON CASH FLOWS AND STOCK RETURNS: A MODERATED EFFECT ON QUALITY OF INTERNAL AUDIT FUNCTION (EVIDENCE FROM COMPANIES LISTED ON THE EGYPTIAN STOCK EXCHANGE)

Abstract: *The main objective of current study is measuring the impact of inflation on cash flows and stock returns and a moderated effect of internal audit function in listed Egyptian companies. By using the content analysis method for the Egyptian listed firms through the study time period 2014-2023, the current study can clarify the most essential findings and recommendations, the findings indicated that the inflation change rate and the weighted inflation change rate negatively affect the operating cash flow .The findings indicated that the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change rate positively affect the operating cash flow and free cash flow and stock returns.*

Keywords: *inflation, cash flows, stock returns, internal audit function*

1. Introduction

Internal audit function IAF evolved beyond a monitoring role that involved examining accounting and financial data to an operational collaborator that helped management as well as shareholders enhance the governance process. Critical moments, for instance, COVID-19, pose new challenges to organizations, while IAF provides an integral part in limiting their unfavorable impacts (Bajary, Shafie, & Ali, 2023).

A precise assessment of the company and the ability to implement measures to improve its efficacy and efficiency are made possible by internal audit, which is a very practical and adaptable instrument for management. It plays a crucial role in risk assessment, conformity, and identifying fraudulent activity in corporate governance. As a result, it is believed that internal auditing is crucial to the company's survival and growth. An internal audit of superior quality adds assurance, counsel, and worth to corporate governance processes and drives value to the business's most important areas. Issues related to individuals and the business limit internal audit's ability to add value and enhance the performance of the company (Samagaio & Felıcio, 2023).

Enterprises that are just starting to recover from the turbulence caused by a three-year epidemic encounter additional unpredictability about inflation, interest rates, power expenses, and skills constraints. Thus, internal audit plays an essential role in helping firms find a way across this dynamic and unpredictable threat environment. Since

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2021, interest rates have been significantly risky since they reached unprecedented lows in response to rising levels of inflation. Customers have been affected by this; for instance, costs of energy, food prices, and interest rates on mortgages have all risen. Interest rates' next move is unknown. In light of this, managing cash and operating capital is becoming a more important field of concern that could have a major effect on business performance. Thus, important factors for the internal audit function are (BDO, 2024)

Has consideration been given to the interest rate environment while reviewing the financing and hedging strategy?

Has the finance department thought about how to invest excess money and handle cash on a daily basis to yield a fair return?

Have all available measures been considered to enhance cash conditions, such as obtaining longer credit periods?

Are there any reliable credit rules and procedures in place to keep an eye on payments from consumers and promote better cash collection techniques?

1.1. Problem Statement

An extended period of poor economic expansion and prices rising is anticipated by the World Bank's International Economic Predictions report, which was released on June 7, 2022. This is because of the COVID-19 pandemic's compounding effects as well as Russia's recent occupation of Ukraine (The World Bank, 2022). Driven by the anticipated increase in inflation in the near future (International Monetary Fund, 2023).

As a basic macroeconomic indication that impacts both the economy and community, inflation is described as a persistent rise in the overall price extent. Excessive and unstable inflation can undermine business activity and the ability to purchase, even if limited degrees of inflation are typical in an economy that's expanding (Kazaara et al., 2024). Local inflation transforms into a threatening, quickly spreading hyperinflation. The purchasing power of the local currency declines, pushing up prices for imports and raising local inflation (Hilmola, 2021).

Financial difficulties are correlated with inflation. Businesses that foresee inflation are better able to predict cost increases, which leads to revenue growth that outpaces costs and improves profits. In contrast, unexpected inflation causes the business to be delayed in adapting to cost increases, which causes costs to rise quicker than revenue and ultimately lead to a decline in profits. A decline in profits will raise the likelihood of experiencing financial difficulties (Setyawati & Amalia, 2018).

An important and detrimental long-term influence on economic growth is revealed by the relationship among inflation and exchange rate volatility. Therefore, one way that exchange rate fluctuation influences economic growth is via inflation. This makes sense as a high exchange rate raises overall prices, which lowers both a company's earnings and consumer preference for services and products. Put another way, as prices rise, customers cut down on their spending, which lowers overall demand and deters companies from making investments and undertaking new projects. Exchange rate instability affects growth via important channels of transmission that include inflation and interest rates (Yuorkuu, Kamasa, & Forson, 2024).

Out of each of the macroeconomic variables that affect the price of stocks and valuation, inflation is still extremely unanticipated. Central banks have the ability to affect the levels of borrowing, savings, and spending by regulating interest rates. Through promoting saving and lowering borrowing via higher interest rates, they can currently reduce overall demand for products and services. Nevertheless, as central banks are powerless to influence international supply-related problems, their influence is restricted

to demand-side variables. As a result, central banks' capacity to take charge of inflation is constrained (Khalid, 2022).

Given that increasing interest rates drive up manufacturing expenses, higher prices for goods ultimately result in higher inflation. Interest rates and inflation have a positive correlation. The positive correlation exists between interest rate and inflation rate; when loan interest rates rise, so do the costs associate with investing. As a result, both the overall level of prices and the cost of products and services will rise. A positive correlation exists between the exchange rate and the inflation rate. A rise in the exchange rate has the effect of raising the price of goods that are imported, whether they are entirely completed or unfinished. This raises price levels as well. Therefore, costs will rise in any situation (Mohamed, 2023).

The debates surrounding the causes of inflation, the reason why it is viewed as so expensive by investors, legislators, and households at large, as well as the implications of rising inflation for the ability of governments, businesses, and individuals to safeguard their pension funds, have been reignited by the latest rise in prices. It is essential to comprehend the economic techniques and how they appear in the statistics to relate inflation and asset values. When evaluating the dangers they incur, investors should pay attention to this connection. Knowing this connection helps regulators choose the best course of action by giving them insight into the ways stock markets interpret critical disruptions (Cieslak & Pflueger, 2023).

Substantial effects on markets are typically caused by high rates of inflation and reductions in value, which can have an impact on majority organizations' long- and short-term frequent investment processes. Nevertheless, because the majority of investment organizations aim to ensure and enhance profits, they face the risk of insolvency and decreased interest in the outcomes they generate in the event of inflation. It is advantageous to note that assessing the impact of inflation is crucial because it reduces the buying capacity of money while making decisions about investments (Saymeh, Abu Orabi, & Alshourah, 2021).

The worth of assets has traditionally been severely harmed by unanticipated inflation rather than anticipated inflation. In general, anticipated inflation for fixed returns and stocks is quite low. Prospective streams of earnings may lose value due to inflation, but as far as inflation is anticipated, it will be factored into the basic cost of fixed returns and equity assets. As described, unanticipated inflation won't be factored in; it is an unforeseen boost in the level of prices that causes a sudden decline in the valuation of stocks or fixed returns. Inflation that is unforeseeable also lessens the predictability of future prices, which makes it more challenging for companies to create contracts with extended terms. Markets respond adversely to this kind of ambiguity (Obregon, Benham, Walsh, & Yontar, 2016).

When choosing investments, inflation hedging strategies are crucial. Any investment needs to provide returns that are higher than or equal to the level of inflation in order to effectively protect against it and preserve a specific level of real buying power. Direct transfers of funds to borrowers through the stock market could be a significant factor in acting as an efficient way to hedge against inflation. Since stock returns act as a strong hedge over inflation, they may increase private investment by luring additional investors into the stock market (Aktürk, 2016).

The actual worth of money decreases with rising inflation, which has negative effects on profits, the value of currency, and actual returns on investments including stocks all of which are negatively impacted. Thus, inflation impacts not only the stock market but every sector of the economy. It is important to investigate the connection

among stock returns and inflation because it helps investors manage the threat in their portfolios and helps regulators respond to rising pressure from inflation (Hoong, Ling, Hassan, & Abdullah, 2023).

There have been conflicting results from earlier research on the relationship between stock returns and inflation in capital markets around the globe. The relationship between stock returns and inflation has been puzzling because of these contradictory results and their ensuing ramifications. A positive or independent relationship between stock returns and inflation suggests that equities are a stronger inflationary hedge. Conversely, the existence of an inverse relationship among them suggests differently (Yahya, Majid, & Hafasnuddin, 2021).

So, the facts that risk management managers and internal audit experts must be aware of in order to modify the scope of auditing in these dynamic, inflationary conditions, as well as the necessary applicable measures, are that the powerful interaction of increasing interest rates and fluctuations in markets can have significant effects on organizations as a whole; all of them pose risks and cost demands. Among the various factors that could be affected are the assessment of assets and liabilities, required capital, predicting consumer preferences, adjustments in modeling forecasts and presumptions, and the retention of staff. Handling this involves reevaluating risks and giving priority to the factors that have the biggest possible influence on internal audits and threats. IA bears the responsibility of ensuring that the company takes the inflation threat into consideration in all of its activities and decisions. This could entail monitoring changes, verifying that proper governance procedures are being followed, and assisting in making guarantees that risk control is functioning properly in unstable and extremely stressful times for the company (EY., 2023a).

Based on the above the main objective of current study is measuring the impact of inflation on cash flows and stock returns in a moderated effect of internal audit function.

The importance of current study that inflation has also become an important topic. According to prior studies (Tiwari, Adewuyi, Awodumi, & Roubaud, 2022) the purpose of stock purchases by both national and foreign independent investors is to generate returns in the form of savings, properties for diversifying their portfolios, and dividends or gains on investments. The final objective is to minimize threats related to inflation and exchange rates, which can impede the process of optimizing income or returns, so it's necessary studying the impact of internal audit function on the relation between inflation and each of cash flows and stock returns.

The remainder of this study is structured as follows: The previous literature is reviewed in Section 2 and the development of hypotheses is covered, Data and variables are explored in Section 3, Section 4 summarizes the results, and finally, Section 5 offers conclusions.

2. Literature review

2.1. Impact of inflation on cash flows and stock returns

Businesses must think about how inflation, higher interest rates, and additional macroeconomic concerns may affect their financial reports and accounting procedures. This involves figuring out which rate of discount to apply to discount those cash flows and how problems with supply chains and inflation can affect the cash flow estimates utilized in future financial reporting. Additionally, public businesses must ensure that their management's discussion and analysis and risk-related disclosures are timely. Each business may experience different indirect or direct repercussions. The specifics and conditions

of the business must be taken into account by management. When producing their financial reports, businesses should regularly take into account any prospective repercussions. Major variables applied to assess fair value may be impacted by inflation and increased interest rates, which could also increase fluctuations in the market. For instance, greater interest rates typically translate into greater discount rates, and expected cash flows may be impacted by inflation, which might have an impact on the fair value of resources and obligations (EY., 2023b).

Giving consideration to cash flow will increase the potential substitute range to remedy the cash shortfall; therefore, it is crucial to manage the business's liquidity by taking both the level and timing of cash flow misalignment into consideration at the appropriate time. An essential component of successful cash handling involves time and cash flow inconsistency detection (Setyawati & Amalia, 2018).

An organization's capital investment must be taken into consideration when calculating the effects of inflationary expansion. Specifically, a company's nominal capital can increase because of two factors: the inflationary increase in its current capital stock and the infusion of additional funds into capital assets. To ensure a reliable assessment, both must be considered (Cornell & Gerger, 2019).

Khan, Kayani, Agha, & Nabi, (2020) examined the relationship among stock prices and cash flow in the energy sector of Pakistan. Using information from the five biggest traded oil companies, the research's variables included stock prices as the dependent variable and cash flow (operating, investment, and finance cash flow) as the independent variable. The analysis discovered a strong relationship among cash flows and stock prices in the top five oil firms.

The influence of inflation must be taken into account for an assessment determination to be correct. The relationship among growth and new investment and the connection among depreciation and capital investments are two important inflation-related assessment issues that need to be resolved since they have a direct impact on the cash flows that underpin the use of discounted cash flow appraisal research. Real capital investments will surpass depreciation in order for a corporation to sustain its assets due to inflation-driven price increases. This is crucial since capital expenditures, net of depreciation is a major factor in determining a business's cash flow and, consequently, have a big influence on the projected value of a business (Cornell, Gerger, Jarrell, & Canessa, 2021).

Fang, Liu, & Roussanov, (2022) examined how energy and core inflation are priced across a variety of categories of assets, such as stocks, property, bonds, and goods, in an effort to begin to separate the consequences of various inflation shocks. It appears from the core beta that these kinds of investments do not provide basic inflation risk hedging, as it is always negative.

Elewa, Abdel aal, & Mahmoud, (2023) demonstrated how the significant shift in the exchange rate and inflation affected the ability to generate cash in the context of Egyptian accounting rules and the developing Egyptian industrial environment. The study utilized five years' worth of statistical information from 38 non-financial organizations, or 190 firm-year observations, from 2017 to 2021. According to the study, cash flow applicability is crucial to guaranteeing that investments and financial decisions are made in a way that keeps the organization running smoothly. Cash flows from investments and financing provided vital information. Still, a corporation's primary function was to carry out its operational activities. Results show that exchange rates have a strong impact on inflation in Egypt and preserve the stability of prices. Results show that exchange rates continue to be the major foundation for inflation.

The study by Soje, Gambo, & Muhammad, (2023) evaluated the effect of cash flow on the stock prices of traded companies in Nigeria, besides examining the mediating function of inflation on the relationships among cash flow and stock prices of businesses traded on the Nigerian Exchange Limited. Information from 75 randomly selected companies is used in the study. The study offers stock investors guidance on how to handle their investments more successfully and economically by paying greater consideration to cash flow accounting information. Given the reality that inflation does considerably influence accounting information, it is imperative that the specific effect of inflation be recorded on all accounting information, especially cash flow accounting data.

Binz, Ferracuti, & Joos, (2023) investigated if the relationship between investment decisions and inflationary fluctuations is influenced by the efficiency of a business's internal information systems. utilizing a sample of businesses that spans 3,597 enterprises from 21 countries and 4,870 firm-year data from 2004 to 2015. The research revealed a favorable correlation between firm-level investment and inflationary spikes. It was then demonstrated that a more effective internal information system alleviates the positive correlation between firm-level investment and inflationary shocks. This result confirmed the hypothesis that firms respond to inflationary shocks by adjusting their investment choices, and it indicated that businesses that have better internal information system efficiency generate considerably better investment decisions after inflationary shocks.

It is generally accepted to investigate the predictable patterns of stock returns and cash flows in order to determine if variations in discount rates or investors' updated projections for upcoming cash flows are the main causes of stock price movements (Yu & Chen, 2024).

The cash flow (CF) strategy and the stock returns (SR) strategy are complemented by one another. Since the current value of all previous, present, and potential cash flows determines the stock price, stock returns provide a thorough assessment of a company's success. Participants in the market are better able to handle their holdings of equity investments and hedging options when they are aware of the level of stock return vulnerability to foreign exchange fluctuations. Portfolio managers can use this information to build diverse portfolios. Business management could utilize the data from the SR technique to calculate a reasonable discount rate for prospective investments if currency threats are a consideration. Theoretically, historical cash flow and stock returns are strongly correlated. For example, in a basic constant cash flow model, the risk related to stock returns should match the risk to cash flow. The stock returns strategy uses present and prospective cash flows, whereas the cash flow strategy emphasizes historical cash flow. Variations in operational cash flow are less ambiguous than stock returns. When it comes to hedging, operational cash flow vulnerability to transactions is simpler to manage than future cash flow's unpredictable fluctuations (AbdulWahab, Bacha, Ibrahim, Abdullah, & Nasir, 2022).

Any firm depends heavily on cash flow, but inflation has the potential to skew it. Therefore, it is necessary to modify cash flow for inflation in order to prevent overestimating profits, underestimating expenditures, and making improper investment and financial choices. The following are typical mistakes that should be avoided when making adjustments to cash flow for inflation (linkedin, 2024):

The value of money coming into and going out of an entity without taking inflation into consideration is known as nominal cash flow. Although it is the simplest method of calculating cash flow, it is not always accurate. Therefore, real cash flow, which is

nominal cash flow that has been corrected for inflation, must be utilized.

In order to avoid overstating or understating real cash flow, firms must choose an inflation rate that is appropriate for their particular field of business and marketplace.

In order to avoid undervaluing or overvaluing potential cash flows, the real discount rate—which is the nominal discount rate less the inflation rate—must be employed. The discount rate is the interest rate that is utilized to compute the current value of potential cash flows.

An additional variable that may have an impact on cash flow and its inflation modification is taxes. Taxes are typically calculated using nominal income and expenses rather than actual ones. Accordingly, inflation may result in increased taxation and a lower cash flow after taxes. Therefore, businesses have to utilize after-tax cash flow for their business evaluation and take the effect of inflation on taxes into consideration.

If cash flow predictions are not updated on a frequent basis, businesses risk missing significant shifts in profits, expenses, and sales. As a result, businesses must keep an eye on inflation patterns and adjust their cash flow estimates as necessary.

Take into account how consumers and rivals may be affected by inflation when determining pricing and promotional tactics.

prior studies (Connolly, Stivers, & Sun, 2022; Jelilov, Iorember, Usman, & Yua, 2020; McMillan, 2021; Tiwari, et al., 2022; Umaryadi, Saragih, & Burhan, 2021) examined the relationship between inflation and stock market returns , these studies demonstrated that the connection among stock returns and inflation was primarily negative, but started to become positive after the economic downturn brought on by COVID-19; actual and nominal stock returns and inflation exhibited poor co-movements in the short to medium term but high co-movements in the long term, according to the wavelet technique.

So, with rising costs for products and services, inflation has a direct effect on projected cash flows and the actual rate of growth. Three elements of the discount rate have a tendency to rise in tandem with increasing inflation, risk free rates that are determined by central banks' reference interest rates; the premium charged for equity risk, which often increases through times of increased inflation and fluctuation; and the cost of debt, which goes up in tandem with rising baseline interest rates (Khalid, 2022). The following hypothesis might be stated after providing comprehensive information regarding inflation and its effects on cash flows, stock returns:

H1, there is no significant effect of inflation on cash flows and stock returns

2.2. The impact of Internal Audit Function Quality on cash flows and stock returns

The internal audit function is currently seeing revolutionary developments because of The Global Internal Audit Standards which released by the Institute of Internal Auditors (IIA) in January 2024 and must be put into effect by January 2025, represent a significant departure from the 2017 International Standards for the Expertise of Internal Auditing. The creation of an internal audit plan is one of the major improvements. Increased board and senior management supervision and governance, more accurate reporting that takes into account ratings and rankings, A staff of a minimum of one CIA will carry out independent quality assessments, and technological concerns for the internal audit function's changing requirements will be taken into account (IIA, 2024).

The updated definition states, "Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization

accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes." Accordingly, IAs have been modified in order to enhance and add outcomes to the company's activities by providing an extensive variety of services, involving functional consulting and auditing assistance (Alqudah et al., 2023).

The role of internal auditing is capable of providing an extensive range of assurance and advisory services. First, it can guarantee that the oversight mechanisms within the company are well-thought-out and functional. In order to enhance risk management, it can also serve as a consultant for management. Thirdly, it can help outside auditors and the auditing committee keeps an eye on the structure of internal control. Fourthly, it can lessen the risk of financial misreporting, asset vandalism, and fraud. In a nutshell, IAF is the foundation of business governance, which helps to raise the performance of a business, productivity, and effectiveness in both the public and private sectors. Thus, adding worth to the company is the final aim of the internal audit role (Dellai & Omri, 2016).

Foerster, Tsagarelis, & Wang, (2017) further implies that, in comparison to profits, cash flows have a stronger quantitative predictive potential for stock returns. Compared to profit measures, cash flow indicators tend to be more relevant and accurate indications of stock returns. High-quality statutory internal auditors can reduce bad news hoarding for the following reasons, according to a study by (Park, S. & Park, H., 2020) that examines the impact of statutory internal auditors on determining future stock price crash risk caused by bad news hoarding activities. First, due to their superior skills, training, and certification, competent statutory internal auditors have a higher chance of quickly learning unfavorable news. Second, there are more incentives for competent statutory internal auditors to suppress managers' negative news hoarding practices and ensure prompt disclosure of bad news, including reduced litigation risk and reputational preservation.

Jansen, Swinkels, & Zhou, (2021) created a model that demonstrates that the main factor influencing stock returns is anticipated shifts in cash flows. The basic assumption of the model—that monthly and annual stock returns are strongly and favorably connected to a company's cash flow growth—is supported by empirical proof. Stock returns have a positive relationship with cash flow growth. These findings, which show a positive correlation between stock returns and profits and cash flow metrics, are consistent throughout time, across size categories, and across industries. Practically speaking, the findings imply that by concentrating their investments in businesses that may increase cash flows and generate value for shareholders, investors may be able to realize sizable returns.

The research by Liu, Zhao, & Fu, (2021) empirically examined the relationship between internal control and external audit on corporate cash flow risk, using a sample of A-share listed businesses in Shanghai and Shenzhen from 2014 to 2019. The findings demonstrate how effective internal control can lower company cash flow risks on its own and how the two work together as a substitute in this process. The study's findings highlight the influence that a company's internal and external governance mechanisms have on cash flow risks, and they are crucial for businesses to employing internal and external resources efficiently to prevent and manage cash flow issues.

So internal auditors may implement the following crucial steps to make sure they are reacting appropriately in an inflationary environment (Chartered Institute of Internal Auditors, 2023a):

Assure the business proactively that its planned scenarios and entire risk assessment procedures are appropriate given the state of the economy. Assess the possible effects of

threats related to economic instability on the goals, activities, and cash flows of the business. Work together and in unison, along with risk control, to guarantee that the determined critical risks are congruent.

Evaluate the efficacy of fraud prevention initiatives, make sure regulations are followed, and identify and stop fraudulent transactions when there is economic instability and a risk of deception. Assessing procedures that counteract this is a critical function of internal auditors. Examine the organization's capacity to pay debts on schedule and continue running its business when the economy is unstable. An analysis of the projected cash flow and amount of debt is part of this ongoing assumption review process.

Perform contract audits and assess price plans in light of inflation. Verify whether the costs the company paid suppliers and charged clients are still appropriate and in line with the state of the market. Examine cost and budgetary controls to determine whether they are appropriate given the current state of the economy. Also, consider whether financial crimes and fraud measures are being put to the test during volatile periods.

The major risks are significant and will have various effects on assessment, capital demands, and the price of goods, hedging, and claiming expenses.

The study conducted by Dang & Nguyen, (2024) examined the function of external audit and internal corporate governance in mitigating the danger of future stock market crashes. Utilizing a sample of 655 non-financial listed companies from the Vietnam stock exchanges in Hanoi and Ho Chi Minh City between 2010 and 2019, and discovered a strong correlation between the probability of future stock market crashes and internal corporate governance. In particular, revealed a positive correlation between the likelihood of a future stock market crisis and powerful boards. Nevertheless, there is a negative correlation between crash risk and audit committee effectiveness. These findings suggest that the risk of a stock market crash can be avoided with proper internal corporate governance. Furthermore, this study shows that the effectiveness of the audit committee in reducing accident risk is improved by an external audit.

Managers have an incentive to hide negative operating results, according to earlier researches (Dang, & Nguyen, 2024; Jansen, et al., 2021; Park, S. & Park, H., 2020). A company's stock may become expensive in relation to its fundamentals if its managers continue to receive negative news after a given amount of time. The accumulation of bad news eventually reaches a tipping point, at which point the managers are forced to disclose the information, which causes the stock price to plummet. High agency risk organizations are more prone to experience stock price crashes.

Systems of corporate governance can minimize agency risk and prevent managers from acting opportunistically, which might be harmful to shareholders. Because of motivations from compensation arrangements and career worries, managers in these companies can participate in shortsighted price maximization and use information asymmetries to hide unfavorable information. Therefore, it's reasonable to believe that while adjusting cash flow and preventing overestimating earnings, the better internal auditing, and the faster negative news is disclosed, the likelihood of a stock price crash is reduced, and so on. The following hypothesis could be put forth following the provision of thorough data on internal audit, stock returns, and cash flows:

H2, there is no significant effect of the internal audit function quality on cash flows and stock returns.

2.3 The impact of the internal audit function quality on the relation between inflation, cash flows, and stock returns

Globally, there have been substantial advancements in internal auditing. IA's first responsibility was restricted to records of accounting verification. Eventually, though, the emphasis switched to keeping an eye on internal control and compliance with financial regulations. The duties of internal auditors keep starting to vary irrespective of these modifications due to a variety of circumstances. As a result, in 2020, the Institute of Internal Auditors revised the definition of internal auditing (IA) to match these changes (Alqudah et al., 2023).

Organizations find it difficult to plan ahead and make investments because inflation creates unpredictability in costs, prices, and demands. This is made worse by the fact that the majority of company executives have little to no expertise in responding to a situation with greater inflation. Internal auditors must comprehend the new threats it poses as well as how it alters the current risk environment. All businesses will certainly be impacted; thus, when assessing outcomes and deciding on management measures, internal auditors must take this into account. Internal auditing requires adaptation to the shifting risk environment that rising inflation delivers, just as all organizations must. Major dangers must be continuously reevaluated, and the proper internal audit reaction must be made. An internal audit must question whether the current controls are still sufficient to reduce this evolving and increased threat. In many cases, there will be a growing necessity for depending on these current controls, which may require them to be carried out more frequently or precisely. The organization will also need to place more emphasis on maintaining tight, continuous communication with stakeholders (Chartered Institute of Internal Auditors, 2023b).

It is possible to use stocks as effective inflation hedges for two primary reasons. First, the valuations of real assets, which are supposed to fluctuate in line with shifts in power of purchase, are represented by equity claims. Second, businesses typically leverage their funds and have net debt. As a result, when the company's long-term obligations for paying fixed nominal sums decline in actual value, investors would profit from unanticipated inflation. Additionally, since dividends are paid out of company profits, they ought to rise in line with inflation (Salisu, Ndakoc, & Akanni, 2020).

Asiedu, Mireku-Gyimah, Kamasa, & Otoo, (2021) suggested that the long-term efficiency of the stock market is negatively impacted by inflation. They did discover, subsequently, that the market is not immediately impacted by an abrupt change in inflation because it takes some time for any changes in macroeconomic disruption to materialize.

The data in the study of Chiang & Chen (2023) encompass 10 sectoral stock indexes and dividend yields, covering the sectors of finance, medical care, manufacturing, housing, consumer product retail, raw materials, power, services for investment, and technologies, in addition to the overall data for the United States and other G7 nations in the appendix. In the overall United States data, the research's analysis of the relationship among inflation threat and stock returns revealed a negative relationship. The power industry is an anomaly, exhibiting a positive indicator that suggests hedging ability over inflation. If cash flows are not changed by the same amount as the discount rate in inflation, stock values will decline. An informed investor expects cash flows to change with the inflation rate, growing with respect to the discount rate.

The paper of Chiang (2023) examined the association between real stock returns and inflation using data collected from 12

developed nations. The sample, which included data spanning January 1990 to June 2022, revealed a negative correlation among inflation and stock returns due to their shared relationship with equity fluctuations. This research has significant implications for managing portfolios and stock return models since it shows that each of the fluctuations in markets and inflation should be specifically considered when attempting to clarify actual stock returns.

Časta (2023) and Philips, Akinseye, & Oduyemi, (2022) examined how interest rates and inflation could forecast stock returns and found that predicting stock returns requires taking shifts in optimal real interest rates and trending inflation into consideration. Stock returns are additionally affected by inflation and exchange rates.

Tiwari, Cunado, Gupta, & Wohar, (2019) examined the correlation among British stock returns and inflation rates across a broad time span (1790–2017) and multiple times. The British economy's outcomes were contrasted against those of the United States and two emerging economies (South Africa and India). Emerging markets have seen significantly more erratic rates of inflation compared to advanced economies, and because their stock markets tend to be less developed, investors in emerging economies have fewer options for additional inflation hedges compared to investors in advanced economies. In general, the data showed that neither the developed nor the two emerging economies showed any signs of stock returns serving as an inflation hedge, even if the link between stock returns and inflation rates varied throughout frequency and time ranges.

Chiang (2023) studied the relationship among inflation predictions and stock market returns, utilizing statistics from 20 developed nations from January 1990 to June 2023. Research showed that, with the exclusion of Brazil and Russia, a negative relationship exists in almost all of the other eighteen countries. Data support the idea that stock returns are negatively impacted by both predicted national inflation and stock market fluctuations.

There are two possible responses to the issue of how central banks ought to respond to stock prices. One of these is that investment, which impacts income and inflation, is greatly influenced by major shifts in asset prices. To reduce fluctuations in the economy, central banks should respond to the underlying changes in asset values via changes in interest rates. A second viewpoint, on the other hand, disagrees with this and contends that macroprudential instruments, not interest rates, should be used by central banks to affect stock prices (Shah & Sosvilla-Rivero, 2021).

Laurila & Ilomäki (2020) focused on how the asset market and rational investors are affected by inflation, or the depreciation of money. The primary conclusions were that, while inflation decreases the prediction coefficient of ignorant investors, it has no effect on that of rational investors. While inflation has no influence on the level of demand for unsafe assets from rational investors, it does impact demand from misinformed investors, changing the market value of the riskier asset. Lastly, inflation increases the volatility of the stock market.

Different types of assets that mitigate inflation shocks should be included in investment portfolios. Large investors should think about the decision to allocate to inflation-hedging investments from a total portfolio perspective that takes into account two primary considerations. First of all, different investors have different risk tolerances and return targets. As a result, although some investors would not be concerned about inflationary pressures on their assets, others could be required to generate actual returns as opposed to merely nominal ones. Second, there isn't an ideal asset for an inflation hedge. To create an effective utilization of inflation-hedging assets, every investor must determine the amount of risk associated with inflation they

are ready to trade off against other threats, taking into account their goals (Obregon, et al., 2016).

The research of Boons, Duarte, Roonc, & Szymanowska,(2020) utilized the seasonally adjusted Consumer Price Index for All Urban Consumers and computed each month's inflation as a proportional difference. The inflation threat is valued because inflation forecasts rise in real consumption, as demonstrated by the sample duration, which ran from July 1962 to December 2014, and by the changing risk of inflation bonuses in the overall marketplace and cross-section. The history of variations in the inflation betas of stocks and their prediction helps explain the amount, signal changes, forecasting, and volatility of inflation risk premia.

In order to analyze the inflation hedging possibility of US stock returns, Salisu, et al. (2020) looked at how it helps to pick price level data over index level data. By using the individual prices of the S&P 500 component stocks as the price level data and the index level data of these stocks as a substitute for the total stock price data, regardless of the information available from the sample, estimating technique, or inflation measure, the study indicated that US stock returns can be a reasonable hedge versus inflation, provided the price level data is employed.

In order to determine if stocks can effectively hedge for inflation, researchers have examined the connection among stock returns and inflation. Around fifty years (1960–2014) were covered by Bhanja & Dar, (2019)'s research, which looked at India's experiences regarding prior to and post-structural economic shifts. Stocks were supported as an inflation hedging device by the empirical proof, which indicated that the two factors were independent throughout time periods.

Higher inflation rates tend to cause investors to withdraw from the main equity markets, which undermines stock market growth and performance. Investors are motivated to make investments if inflation diminishes, which boosts stock market performance and expansion. When there is high inflation, investors could expect a higher rate of return on their investment to compensate for the long-term decline in the purchasing capacity associated with their currency (Jamaani & Alawadhi, 2023).

A company's various departments are impacted by the risk of inflation. It can impact long-lasting aspects like staff and client loyalty in addition to short-term financial performance. Although internal audit staff may not be capable of dealing with every issue, they can supervise and work with different divisions to provide integrated assurance in order to provide greater oversight for those dangers. It is possible to control inflation risk more easily by utilizing technologies such as risk-based audit tools. For analyzing big data collections, utilize Team Mate Analytics. Although economic challenges such as inflation won't go anywhere in the near future, internal auditors can lower the threat of inflation by following these guidelines and utilizing these specialist techniques (Wolters Kluwer 2022).

It is unlikely that internal auditors will have an effect on inflation rates or prevent the threats that inflation poses to the firms they support. They are able to evaluate the dangers that inflation brings to the business's capacity to meet its goals. Internal auditors should evaluate and verify the efficacy of risk-mitigation techniques and procedures where threats are substantial (Chambers, 2022).

So, internal auditors may take into account the following elements while creating an audit plan and carrying out an audit at the time of rising inflation (Paul, 2023):

Taking into account how inflation will affect the company's general strategy, estimating, and budgeting to make sure management is appropriately handling inflation.

Recognizing how cost structures are affected by inflation since it may result in higher

costs for items supplied and lower currency purchasing capacity.

Being aware of how inflation affects the company's funding structure is important because it can have an effect on managing debt by changing bond and loan interest rates.

Evaluating the efficacy of internal controls in times of rising inflation since deception and misuse of assets are more likely to occur. When necessary, the auditors may advise revising control mechanisms in light of managerial propensity and threats associated with inflation.

Taking into account how inflation may affect the worth of deals and contracts, including loans, leasing, and contracts of purchase, these deals and agreements should be examined by internal auditors to make sure the company is not taking on an unwarranted threat and that the effect of inflation is taken into consideration.

Assessing the company's inventory management practices and making necessary price adjustments to reflect inflation.

Being proactive about taking into account how inflation may affect pay for staff because it might lower the currency value of salaries and wages.

Examining how the organization's funding plans are affected by inflation with regard to the amount of capital needed, the length of the investment, and the associated return on investment.

Assessing the effect of inflation on cash flow since it might affect both the frequency and quantity of incoming cash and cash outflows.

Finally, and perhaps most importantly, internal auditors must take into account how inflation affects risk management since it can have an effect on the probability and consequences of different threats.

Having previously discussed the function of internal auditing in light of the relation between inflation, cash flows, and stock returns we can make the following hypothesis:

H3, there is no significant effect of internal audit function quality on the relation between inflation and cash flows, stock returns.

3. Research Design

3.1. Sample Selection

The current study relies on secondary data extracted from the financial statements, boards of directors' reports, and governance reports of the Egyptian listed firms. Therefore, the study population becomes all the secondary data related to the financial statements and reports of the boards of directors of those listed firms.

Within the framework of the study's goal of using content analysis methods for the above reports of the Egyptian listed firms, and within the framework of the study's connection to measuring the economic variables that more related by the inflation and the movements of the stock prices, the current study can rely on the most traded firms in the Egyptian stock market for the purpose of achieving and monitoring the relationship in a more realistic way.

Based on the above discussion, the researcher can rely on statistical sampling methods to choose a deliberate control sample through the following conditions:

The sample must be one of the most traded firms on the Egyptian stock market and listed on the EGX 30 index for the fiscal year 2024.

Given the various economic fluctuations that the Egyptian Stock Exchange went through as a result of the continuous flotation of the price of the foreign currency compared to the Egyptian pound, the researcher decided to start the time series from the year 2014 to 2023 in the Egyptian stock market.

Excluding listed firms in the banking and financial institutions sectors (non-banking

financial services) even if they are listed in the EGX 30 index. They equal 2 banks and 5 firms that perform non-banking financial services.

By using the content analysis method for the Egyptian listed firms through the study time period and following the aforementioned conditions, it turns out that the number of listed firms in the EGX 30 index that are characterized by continuity during the analysis period without delisting or recent registration is 23 firms. The final sample of the study resulted in 23 firms available in that time period, which resulted in recording 230 observations (23 companies x 10 years). By excluding 22 observations with missing values and 9 observations with outliers and extreme values, the final sample becomes 199 firm year observations.

It is worth noting that the sample of the current study is distributed among 8 sectors of the Egyptian stock market during the time period of the study, and the researcher can clarify this distribution through the following table (Table 1).

Table 1. sample observations distribution among the Egyptian capital market sectors

Sector / Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Communication	1	1	1	1	1	1	1	1	1	1	10
Food &Tobacco	4	5	5	3	4	4	3	3	5	5	41
Services	1	2	2	2	1	1	2	2	2	2	17
Industrial Firms	2	3	2	3	2	2	2	3	3	3	25
Health care	1	1	1	1	2	2	1	2	2	2	15
Real Estate	5	6	6	6	5	5	5	5	6	6	55
Chemicals	1	1	1	1	1	1	1	1	1	1	10
Basic Resources	2	3	3	2	2	2	3	3	3	3	26
Total	*17*	*22*	*21*	*19*	*18*	*18*	*18*	*20*	*23*	*23*	*199*

3.2. Variables Measurement

This study aims to examine the impact of inflation on cash flows and stock returns in the presence of the moderating role of internal audit function on the Egyptian listed firms. So, we can define the measurement tools as follow:

(1) Independent Variable: Inflation:

The independent variable for this study is the effects of inflation on the financial statements. In the context of the Egyptian environment, the Central Bank tended to move the exchange rate consecutive four times, the first of them began in 2016, and then the exchange rate was liberalized 3 final times, starting from 2022 until 2023.

In accordance with International Accounting Standard No. 13 on fair value, assets are revalued in the financial statement to address the effects of inflation, provided that unrealized revaluation gains or losses are transferred to the statement of other comprehensive income. Therefore, the researcher can rely on the rate of change in the re-estimation profits or losses carried forward to the statement of other comprehensive income. Therefore, we can measure the exchange rate using both of the following measures:

First is to measure the effects of inflation in the financial statements through the rate of change in the effects of revaluing assets in the financial statements.

Second, the rate of change in the effects of revaluing assets in the financial statements, weighted by the periods of the central bank's decisions to liberalize the exchange rate, where the value of the previous rate is multiplied by 1 for the period before 2016, the value 2 for the periods from 2016 to 2021, and the value 3 for the periods after 2021.

(2) Moderator Variable: Internal audit function:

The dependent variable in this study is Internal audit function (IAF), which is measured by the natural logarithm of the IAF costs, a widely used measure in the IAF literature (Carcello et al., 2005; Barua et al., 2010; Al-Qadasi et al., 2019; Ghaleb et al., 2020).

(3) Dependent Variables: cash flows & stock returns:

The dependent variables of this research are the cash flow from the financial statements and the stock returns from the stock markets. Consequently, we can define the measurement tools for those variables as follow:(Da 2009; Jansen, 2021; Aswani et al., 2024)

Cash flow which can be measured by two types of cash flows: operating cash flows measured by natural log (O*CF*) and free cash flows (*FCF*). Where *FCF* is the natural log of the difference between O*CF* and capital expenditures.

Stock returns can be measured by the difference between the closing price and the opening price.

(4) Control variables:

Control variables related to the factors that may affect the dependent variable. In this context, we choose some control variables that may affect the cash flow and stock returns according to the previous studies (Da 2009; Jansen, 2021; Aswani et al., 2024), these variables can be represented in the following table (Table 2).

Table 2. Control Variables Definition

Variable	Symbol	Explanation
Loss Index	Loss	Dummy variable, which is take 1 in case of loss and 0 otherwise;
Firm Size	Size	natural log of the total firm assets
Return On Assets	ROA	Net income before tax and interest divided by the total assets
Financial Leverage	Lev	Total liabilities divided by total assets
Current assets to current liabilities ratio	CA_CL	Current assets divided by current liabilities

3.3. Empirical Model

3.3.1. Regression specification for testing H1

To investigate the effect of inflation on cash flows and stock returns for the listed firms in the EGX 30 index, we can estimate the following regression models as follow:

$$OCF = \alpha + \beta1\ Inf. + \beta2\ WInf. + \beta3\ Loss + \beta4\ Size + \beta5\ ROA + \beta6\ Lev + \beta7\ CA\_CL + \varepsilon. \quad (1)$$

$$FCF = \alpha + \beta1\ Inf. + \beta2\ WInf. + \beta3\ Loss + \beta4\ Size + \beta5\ ROA + \beta6\ Lev + \beta7\ CA\_CL + \varepsilon. \quad (2)$$

$$SR = \alpha + \beta1\ Inf. + \beta2\ WInf. + \beta3\ Loss + \beta4\ Size + \beta5\ ROA + \beta6\ Lev + \beta7\ CA\_CL + \varepsilon. \quad (3)$$

3.3.2. Regression specification for testing H2

To investigate the effect of internal audit function on cash flows and stock returns for the listed firms in the EGX 30 index, we can estimate the following regression models as follow:

$$OCF = \alpha + \beta1\ IAF + \beta2\ Loss + \beta3\ Size + \beta4\ ROA + \beta5\ Lev + \beta6\ CA\_CL + \varepsilon. \quad (4)$$

$$FCF = \alpha + \beta1\ IAF + \beta2\ Loss + \beta3\ Size + \beta4\ ROA + \beta5\ Lev + \beta6\ CA\_CL + \varepsilon. \quad (5)$$

$$SR = \alpha + \beta1\ IAF + \beta2\ Loss + \beta3\ Size + \beta4\ ROA + \beta5\ Lev + \beta6\ CA\_CL + \varepsilon. \quad (6)$$

3.3.3. Regression specification for testing H3

To investigate the effect of moderating role of internal audit function on the relationship

between inflation and cash flows and stock returns, we can estimate the following regression models as follow:

$$OCF = \alpha + \beta 1\ IAF \times Inf. + \beta 2\ IAF \times WInf. + \beta 3\ Loss + \beta 4\ Size + \beta 5\ ROA + \beta 6\ Lev + \beta 7\ CA\_CL + \varepsilon. \quad (7)$$

$$FCF = \alpha + \beta 1\ IAF \times Inf. + \beta 2\ IAF \times WInf. + \beta 3\ Loss + \beta 4\ Size + \beta 5\ ROA + \beta 6\ Lev + \beta 7\ CA\_CL + \varepsilon. \quad (8)$$

$$SR = \alpha + \beta 1\ IAF \times Inf. + \beta 2\ IAF \times WInf. + \beta 3\ Loss + \beta 4\ Size + \beta 5\ ROA + \beta 6\ Lev + \beta 7\ CA\_CL + \varepsilon. \quad (8)$$

Table 3. Variables List

Type	Variables	Code	Definition	Data Source	Citation
Independent variable	Inflation	Inf.	Rate of change in the effects of revaluing assets in the financial statements	Financial reporting	
		WInf.	The rate of change in the effects of revaluing assets in the financial statements, weighted by the periods of the central bank's decisions to liberalize the exchange rate, where the value of the previous rate is multiplied by 1 for the period before 2016, the value 2 for the periods from 2016 to 2021, and the value 3 for the periods after 2021		
Moderator Variable	Internal Audit Function	IAF	the natural logarithm of the IAF costs	Board of directors & Governance Reports	Carcello et al., 2005; Barua et al., 2010; Al-Qadasi et al., 2019; Ghaleb et al., 2020
Dependent Variables	Operating Cash Flow	OCF	operating cash flows	Financial Statements	
	Free Cash Flow	FCF	the difference between OCF and capital expenditures		
	Stock Returns	SR	the difference between the highest price and the lowest price		
Control Variables	Loss Index	Loss	Dummy variable, which is take 1 in case of loss and 0 otherwise;	Financial Statements	
	Firm Size	Size	natural log of the total firm assets		
	Return On Assets	ROA	Net income before tax and interest divided by the total assets		
	Financial Leverage	Lev	Total liabilities divided by total assets		
	Current assets to current liabilities ratio	CA_CL	Current assets divided by current liabilities		

4. Results

4.1. Stationary Tests

Since the current study is based on the use of accounting variables under the umbrella of economic events related to the macro economy, the importance of measuring the level of stability of equal time series of floating currency that causes the inflation.
From this standpoint, econometrics indicates the importance of conducting three types of tests to measure the level of stability of data at the level of parallel time series in the current study, which are the Dickey-Fuller test, the Levin-Lin-Chu test, and the Hadri LM test. The results of the statistical analysis resulted in the Table 4.

It is worth noting that reaching these results does not mean there is a significant impact of the parallel time periods chosen by the research on the accounting variables in the study, but the previous results indicate that there is no anomaly in the accounting data that requires the use of lagged regression methods.

Table 4. Stationary Tests Results

Variable	Dickey-Fuller		Levin-Lin-Chu		Hadri LM test	
	Statistic	**P-Value**	**Statistic**	**P-Value**	**Statistic**	**P-Value**
Inf.	-6.284	0.000	5.469	0.025	0.682	0.111
WInf.	-7.154	0.000	5.051	0.012	0.912	0.091
IAF	-5.734	0.000	5.279	0.034	0.717	0.121
OCF	-6.647	0.000	4.391	0.034	0.826	0.101
FCF	-8.159	0.000	4.601	0.017	0.896	0.095
SR	-6.971	0.000	5.012	0.030	0.585	0.121
Loss	-7.783	0.000	6.001	0.035	0.759	0.112
Size	-6.861	0.000	4.297	0.026	0.865	0.111
ROA	-6.016	0.000	4.991	0.013	0.618	0.123
Lev	-6.247	0.000	5.426	0.031	0.831	0.118
CA_CL	-5.665	0.000	6.248	0.011	0.607	0.114

4.2. Normality Tests

The Shapiro–Wilk test is more appropriate method for small sample sizes (<50 samples) although it can also be handling on larger sample size while Kolmogorov–Smirnov test is used for $n \geq 50$. For both of the above tests, null hypothesis states that data are taken from normal distributed population. When $P > 0.05$, null hypothesis accepted and data are called as normally distributed.

Table 5. Normality tests results

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Inf.	0.578	198	0.006	0.877	198	0.033
WInf.	0.562	198	0.002	0.938	198	0.033
IAF	0.469	198	0.009	0.888	198	0.009
OCF	0.633	198	0.004	0.935	198	0.034
FCF	0.701	198	0.020	0.922	198	0.010
SR	0.566	198	0.013	0.851	198	0.032
Loss	0.652	198	0.024	0.790	198	0.015
Size	0.773	198	0.012	0.790	198	0.037
ROA	0.594	198	0.004	0.912	198	0.009
Lev	0.685	198	0.012	0.920	198	0.031
CA_CL	0.556	198	0.017	0.864	198	0.015

Source: own work based on (SPSS.26).

Therefore, based on the results presented previously in Table 5, and accordance with what the central limit theorem stipulates, and since the size of the sample in the current study is (N = 199). The problem of the data not being normally distributed will not have an impact on the validity of the models used in the study.

4.3. Descriptive Statistics

This study used both measures of central tendency and measures of dispersion or variance, which are represented in the table below (Table 6).

Table 6. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Inf.	199	0.067	0.498	0.361	0.112
WInf.	199	0.000	0.897	0.524	0.215
IAF	199	0.987	3.486	1.687	0.527
OCF	199	0.871	2.987	1.419	0.487
FCF	199	0.627	1.997	1.115	0.236
SR	199	-0.315	0.269	0.187	0.055
Loss	199	0.000	1.000	0.224	0.016
Size	199	0.936	5.611	3.788	0.287
ROA	199	-0.151	0.369	0.274	0.011
Lev	199	0.489	0.613	0.551	0.187
CA_CL	199	0.664	0.889	0.714	0.226
Valid N (listwise)	199				

Source: own work based on (SPSS.26).

According to the above results, Inf. which represent the inflation rate change according to the change in the financial statements values has a mean 36.1% and it is a high percentage because of the floating of the exchange rate more than one time in the time period of the sample .In addition, the mean of the WInf which represent the weighted average inflation rate change in the financial statements is 52.4% and this percentage is higher than the inflation rate change without weighting by the floating periods and this result mean that floating periods is a crucial component of increasing the inflation level in the Egyptian environment .

In another vein, the mean of natural log for the operating cash flow (OCF) and free cash flow (FCF) equal 1.419 and 1.115 respectively which mean that the firms listed in the sample have sufficient liquidity and haven not any tendency to hold high level of assets because of hedging the inflation risks .Finally, the stock returns (SR) mean is a positive value and equal 18.7% which mean that firms listed in the sample characterized by high demand levels on its stocks in the Egyptian stock market. Consequently, we can assure that results can be compared with the other previous studies based on matching degree on the descriptive statistics with the other; especially the standard deviation is low for all variables so there are no outliers in the sample.

4.4. Correlation matrix

According to the results of Table 7 Panel (A), there is a significant negative relationship between the independent variable which is the inflation change rate and the dependent variables which are the operating cash flow and free cash flow, beside the same negative relationship between the weighted inflation change rate

and both the operating cash flow and free cash flow. In another side, the matrix revealed a positive relationship between the independent variables which are the inflation change rate and the weighted inflation change rate and the dependent variable of stock returns. Moreover, the positive relationships between the internal audit function and all of the dependent variables which are the operating cash flow and free cash flow and the stock return.

The above results indicate that increasing the inflation change rate and the weighted inflation change rate leads to decrease in the operating cash flow and free cash flow. But it leads to increasing in the stock return. Moreover, these results ensure that internal audit function leads to more operating cash flow and free cash flow and stock return. Finally, the coefficient correlation among the independent variables and the other control variables are less than 0.8 which indicate that there is no multicollinearity problem, in addition the VIF values is less than 10 which ensure this result.

Table 7. Correlation Matrix

Panel A: Pairwise correlations for Basic Models													
Variables		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	11	VIF
(1)	OCF	1											--
(2)	FCF	0.087	1										--
(3)	SR	0.108	0.123	1									--
(4)	Inf.	-0.312 ***	-0.403 ***	0.301 ***	1								5.484
(5)	WInf.	-0.392 ***	-0.397 ***	0.309 ***	0.125	1							7.069
(6)	IAF	0.321 ***	0.317 ***	0.328 ***	0.090	0.093	1						1.349
(7)	Loss	0.109	0.092	0.112	0.116	0.088	0.112	1					1.371
(8)	Size	0.101	0.106	0.110	0.093	0.115	0.115	0.100	1				1.523
(9)	ROA	0.109	0.099	0.098	0.113	0.100	0.089	0.109	0.116	1			1.017
(10)	Lev	-0.127	-0.095	-0.096	-0.108	-0.124	-0.099	-0.096	-0.094	-0.095	1		1.155
(11)	CA_CL	0.096	0.086	0.101	0.114	0.107	0.101	0.122	0.108	0.087	0.094	1	1.287
Note: *, ** and * indicate statistical significance at the 10, 5 and 1% levels, respectively**													
Panel B: Pairwise correlations for moderated Models													
Variables		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	11	VIF
(1)	OCF	1											--
(2)	FCF	0.101	1										--
(3)	SR	0.116	0.109	1									--
(4)	IAF × Inf.	0.411 ***	0.392 ***	0.325 ***	1								6.381
(5)	IAF × WInf.	0.405 ***	0.395 ***	0.394 ***	0.093	1							6.951
(6)	IAF	0.321 ***	0.317 ***	0.328 ***	0.090	0.093	1						1.022
(7)	Loss	0.107	0.111	0.120	0.087	0.086	0.113	1					1.187
(8)	Size	0.123	0.107	0.112	0.126	0.125	0.108	0.099	1				1.376
(9)	ROA	0.091	0.127	0.103	0.105	0.086	0.100	0.106	0.095	1			1.004
(10)	Lev	-0.094	-0.088	-0.123	-0.113	-0.103	-0.119	-0.112	-0.115	-0.090	1		1.330
(11)	CA_CL	0.114	0.095	0.086	0.101	0.127	0.112	0.120	0.115	0.102	0.113	1	1.300
Note: *, ** and * indicate statistical significance at the 10, 5 and 1% levels, respectively**													

Source: own work based on (SPSS.26).

According to the results of Table 7 Panel (B), there is a significant positive relationship between the moderating variable (the interaction between the inflation change rate and internal audit function) and the dependent variables which are the operating cash flow and free cash flow and stock return, beside the same positive relationship between the moderating variable (the interaction between the weighted inflation change rate and internal audit function) and the dependent variables which are the operating cash flow and free cash flow and stock return. In another side, the matrix revealed a positive relationship between the moderated variables which are the interaction between inflation change rate and the weighted inflation change rate with the internal audit function and the dependent variable of stock returns. Moreover, the positive relationships between the internal audit function and all of the dependent variables which are the operating cash flow and free cash flow and the stock return.

The above results also indicate that increasing the interaction between the inflation change rate and the weighted inflation change with the internal audit function leads to increase in the operating cash flow and free cash flow and stock return. Finally, the coefficient correlation among the independent variables and the other control variables are less than 0.8 which indicate that there is no multicollinearity problem, in addition the VIF values is less than 10 which ensure this result.

4.5. Regression analysis results

(1) The Effect of inflation on cash flows and stock returns (H1):

The first hypothesis tests the relationship between the inflation on the cash flow and stock returns based on the model no. (1) and its sub models. Consequently, running model no. (1) and its sub models lead to the results stated in Table 8, depending on these results.

Table 8. The effect of inflation on cash flows and stock returns (H1)

Variables	Panel A: Dependent Variable OCF			Panel B: Dependent Variable FCF			Panel C: Dependent Variable SR	
	β Coef.	t-stat.		β Coef.	t-stat.		β Coef.	t-stat.
Cons.	0.016	0.794		0.025	0.676		0.029	0.877
Inf.	-0.598***	-2.635		-0.491***	-2.910		0.342***	3.051
WInf.	-0.544***	-3.008		-0.366***	-2.743		0.502***	2.816
Loss	0.046	0.730		0.020	0.782		0.056	0.720
Size	0.055	1.042		0.035	0.707		0.023	0.821
ROA	0.047	0.678		0.025	0.605		0.038	0.774
Lev	-0.064	-0.719		-0.054	-1.151		-0.016	-0.880
CA_CL	0.021	1.125		0.022	1.082		0.021	0.953
Year & Industry Dummies	*Included*			*Included*			*Included*	
N	199			199			199	
F-value	13.303***			15.078***			12.170***	
Adj. R2	17.43%			17.57%			18.65%	
Note: *, ** and *** indicate statistical significance at the 10, 5 and 1% levels.								

Source: own work based on (SPSS.26).

It is obvious that R^2 for the models equal 17.43%, 17.57% and 18.65% respectively, which means that the independent variables of inflation change rate and the weighted inflation change rate & the other control variables can explain 17.43%, 17.57% and 18.65% respectively from the change of operating cash flow, free cash flow and

stock returns. Moreover, the F-Value for the models equal 13.303, 15.078 and 12.170 respectively and significant at level 1% which means that models explain the relationship efficiently.

From Panel (A), it is obvious that the inflation change rate and the weighted inflation change rate negatively affect the operating cash flow (Where, β = -0.598, -0.544; T Stat. = -2.635, -3.008 > 2). This result means that increasing in the inflation change rate and the weighted inflation change rate lead to decrease in the operating cash flow i.e. the inflation lead to more risk motivate the firm to hold its assets and decreasing the sales operations and decreasing the liquidity and operating cash flow. Therefore, we can accept the first sub hypothesis in the alternative form as follow: *the inflation change rate and the weighted inflation change rate negatively affect the operating cash flow*.

Panel (B) results revealed that the inflation change rate and the weighted inflation change rate negatively affect the free cash flow (Where, β = -0.491, -0.366; T Stat. = -2.910, -2.743 > 2). This result means that increasing in the inflation change rate and the weighted inflation change rate lead to decrease in the free cash flow i.e. the inflation lead to more risk motivate the firm to hold its assets and decreasing the sales operations and decreasing the liquidity and free cash flow. Therefore, we can accept the second sub hypothesis in the alternative form as follow: *the inflation change rate and the weighted inflation change rate negatively affect the free cash flow*.

Finally results of Panel (C) results revealed that the inflation change rate and the weighted inflation change rate positively affect the stock return (Where, β = 0.342, 0.502; T Stat. = 3.051, 2.816 > 2). This result means that increasing in the inflation change rate and the weighted inflation change rate lead to increase in the stock return i.e. the inflation lead to more risk motivate the investors to hedge their probable loss by holding their stocks and don't making resale so the supply decrease and demand increase and the price increase resulted in increase in its returns. Therefore, we can accept the third sub hypothesis in the alternative form as follow: *the inflation change rate and the weighted inflation change rate positively affect the stock return*.

Based on the results of panels (A, B & C), we can accept the first hypothesis of this study on the alternative form as follow: ***H1, inflation negatively affects the cash flow and positively affects the stock return.***

(2) The Effect of internal audit function quality on the cash flow and stock returns (H2):

The second hypothesis test the relationship between the internal audit function on the cash flow and stock returns based on the model no. (2) and its sub models. Consequently, running model no. (2) and its sub models lead to the results stated in Table 9, depending on these results It is obvious that R^2 for the models equal 19.12%, 20.90% and 17.77% respectively, which means that the independent variable of internal audit function & the other control variables can explain 19.12%, 20.90% and 17.77% respectively from the change of operating cash flow, free cash flow and stock returns. Moreover, the F-Value for the models equal 13.498, 14.634 and 15.921 respectively and significant at level 1% which means that models explain the relationship efficiently.

From Panel (A), it is obvious that the internal audit function positively affects the operating cash flow (Where, β = 0.398; T Stat. = 2.739 > 2). This result means that increasing in the internal audit function lead to increase in the operating cash flow i.e. the internal audit function lead to more restrictions on the management behaviours so the firm management will be more efficient in its operations and maintaining the optimal level of liquidity and increasing the operating cash flow. Therefore, we can accept the first sub hypothesis in the alternative form as follow: *the internal audit*

function positively affects the operating cash flow.

Table 9. The effect of internal audit function quality on the cash flow and stock returns (H2)

Variables	Panel A: Dependent Variable OCF			Panel B: Dependent Variable FCF			Panel C: Dependent Variable SR	
	β Coef.	t-stat.		β Coef.	t-stat.		β Coef.	t-stat.
Cons.	0.066	0.943		0.023	0.728		0.066	0.644
IAF	0.398***	2.739		0.470***	2.993		0.487***	3.127
Loss	0.055***	0.744		0.036***	0.705		0.019***	0.828
Size	0.015	0.760		0.068	0.723		0.067	0.951
ROA	0.030	0.775		0.064	0.918		0.046	0.676
Lev	-0.043	-1.013		-0.066	-0.970		-0.051	-0.581
CA_CL	0.047	0.658		0.065	0.921		0.027	1.031
Year & Industry Dummies	*Included*			*Included*			*Included*	
N	199			199			199	
F-value	13.498***			14.634***			15.921***	
Adj. R2	19.12%			20.90%			17.77%	
Note: *, ** and *** indicate statistical significance at the 10, 5 and 1% levels, respectively								

Source: own work based on (SPSS.26).

Panel (B) results revealed that the internal audit function positively affects the free cash flow (Where, β = 0.470; T Stat. = 2.993 > 2). This result means that increasing in the internal audit function lead to increase in the free cash flow i.e. the internal audit function lead to more restrictions on the management behaviours so the firm management will be more efficient in its operations and maintaining the optimal level of liquidity and increasing the free cash flow. Therefore, we can accept the second sub hypothesis in the alternative form as follow: *the internal audit function positively affects the free cash flow*.

Finally results of Panel (C) revealed that the internal audit function positively affects the stock return (Where, β = 0.487; T Stat. = 3.127 > 2). This result means that increasing in the internal audit function lead to increase in the stock return i.e. the internal audit function lead to more restrictions on the management behaviours so the firm management will be more efficient in its operations and maintaining the optimal level of liquidity and increasing the trading volume on the stock which lead to increasing the stock returns. Therefore, we can accept the third sub hypothesis in the alternative form as follow: *the internal audit function positively affects the stock return*.

Based on the results of panels (A, B & C), we can accept the second hypothesis of this study on the alternative form as follow*: H2, internal audit function quality positively affects the cash flow and stock return.*

(3) The Effect of interaction between the inflation and internal audit function on cash flow and stock returns (H3):

The third hypothesis test the effect of the interaction relationship between the internal audit function and inflation on both the cash flow and stock returns based on the model no. (3). consequently, running model no. (3) And its sub models lead to the results stated in Table 10. Depending on these results It is obvious that R^2 for the models equal 19.81%, 20.48% and 18.91% respectively, which means that the interaction between the inflation and internal audit function & the other control variables can explain 19.81%, 20.48% and 18.91% respectively from the change of operating cash flow, free cash flow and stock returns. Moreover, the F-Value for the models equal 13.242, 14.464 and 11.557 respectively and significant at

level 1% which means that models explain the relationship efficiently.

Table 10. The effect of moderated relationship for the interaction between internal audit function quality and inflation on the cash flow and stock returns (H3**)**

Variables	Panel A: Dependent Variable OCF			Panel B: Dependent Variable FCF			Panel C: Dependent Variable SR	
	β Coef.	t-stat.		β Coef.	t-stat.		β Coef.	t-stat.
Cons.	0.043	1.090		0.037	1.018		0.034	0.706
IAF × Inf.	0.621***	2.830		0.388***	2.688		0.319***	3.132
IAF × WInf.	0.496***	2.650		0.496***	2.825		0.365***	2.699
Loss	0.051	0.709		0.055	1.043		0.016	0.874
Size	0.034	1.086		0.016	1.138		0.067	0.809
ROA	0.056	0.983		0.033	0.881		0.039	1.029
Lev	-0.068	-0.748		-0.044	-0.860		-0.067	-0.610
CA_CL	0.017	0.728		0.057	0.567		0.017	0.989
Year & Industry Dummies	*Included*			*Included*			*Included*	
N	199			199			199	
F-value	13.242***			14.464***			11.557***	
Adj. R2	19.81%			20.48%			18.91%	
Note: *, ** and *** indicate statistical significance at the 10, 5 and 1% levels, respectively								

Source: own work based on (SPSS.26)

From Panel (A), it is obvious that the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change rate positively affect the operating cash flow (Where, β = 0.621, 0.496; T Stat. = 2.830, 2.650 > 2). This result means that increasing in the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change lead to increase in the operating cash flow i.e. the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change lead to more restrictions on the management behaviours and mitigating the risks so the firm management will be more efficient in its operations and maintaining the optimal level of liquidity and increasing the operating cash flow. Therefore, we can accept the first sub hypothesis in the alternative form as follow: *the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change rate positively affect the operating cash flow*.

Panel (B) results revealed that the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change rate positively affect the free cash flow (Where, β = 0.388, 0.496; T Stat. = 2.688, 2.825 > 2). This result means that increasing in the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change lead to increase on the free cash flow i.e. the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change lead to more restrictions on the management behaviours and mitigating the risks so the firm management will be more efficient in its operations and maintaining the optimal level of liquidity and increasing the free cash flow. Therefore, we can accept the second sub hypothesis in the alternative form as follow: *the moderated relationship for the interaction*

between internal audit function and inflation by both inflation change rate and weighted inflation change rate positively affect the free cash flow.

Finally results of Panel (C) revealed that moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change rate positively affect the stock return (Where, β = 0.319, 0.365; T Stat. = 3.132, 2.699 > 2). This result means that increasing in the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change lead to increase on the stock return i.e. the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change lead to more restrictions on the management behaviours and mitigating the risks so the firm management will be more efficient in its operations and maintaining the optimal level of liquidity and increasing the stock return. Therefore, we can accept the third sub hypothesis in the alternative form as follow: *the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change rate positively affect the stock return*.

Based on the results of panels (A, B & C), we can accept the third hypothesis of this study on the alternative form as follow: H3, the moderated relationship for the interaction between internal audit function quality and inflation positively affect the cash flow and stock return.

5. Conclusions and Future Research

The purpose of this study is to investigate the impact of inflation on cash flows and stock returns in a moderated effect of internal audit function quality and the current study can clarify the most essential findings and recommendations as follows:

It is expecting cash flows to change with the inflation rate, growing with respect to the discount rate. If cash flows are not changed by the same amount as the discount rate in inflation, stock values will decline.

External governance mechanisms are crucial for businesses to employing internal and external resources efficiently to prevent and manage cash flow issues.

The findings indicated that the inflation change rate and the weighted inflation change rate negatively affect the operating cash flow (Where, β = -0.598, -0.544; T Stat. = -2.635, -3.008 > 2).

The results showed that an increase in the inflation change rate and the weighted inflation change rate lead to a decrease in the operating cash flow.

The inflation lead to more risk motivates the firm to hold its assets and decreasing the sales operations and decreasing the liquidity and operating cash flow .

Results revealed that the inflation change rate and the weighted inflation change rate positively affect the stock return (Where, β = 0.342, 0.502; T Stat. = 3.051, 2.816 > 2).

The results showed that increasing in the inflation change rate and the weighted inflation change rate lead to increase in the stock return.

The inflation lead to more risk motivate the investors to hedge their probable loss by holding their stocks and don't making resale so the supply decrease and demand increase and the price increase resulted in increase in its returns.

The internal audit function positively affects the operating cash flow (Where, β = 0.398; T Stat. = 2.739 > 2). This result means that increasing in the internal audit function lead to increase in the operating cash flow

The results revealed that the internal audit function positively affects the free cash flow (Where, β = 0.470; T Stat. = 2.993 > 2). This result means that an increase in the internal

audit function lead to an increase in the free cash flow.

The results showed that an increase in the internal audit function lead to an increase in the stock returns and the internal audit function lead to more restrictions on the management behaviours.

The findings indicated that the moderated relationship for the interaction between internal audit function and inflation by both inflation change rate and weighted inflation change rate positively affect the operating cash flow and free cash flow

The findings indicated that the moderated relationship for the interaction between internal audit function quality and inflation by both inflation change rate and weighted inflation change rate positively affect the stock return (Where, β = 0.319, 0.365; T Stat. = 3.132, 2.699 > 2).

Based on the statistical and theoretical results, the study found a positive effect for the interaction between internal audit function quality and inflation on the cash flow and stock return in companies listed on the Egyptian Stock Exchange. The study recommends, based on theoretical and statistical findings, as follows:

It is important to manage the inflation risk by mechanisms of internal audit function.

It is necessary to highlight the influence that a company's internal and external governance mechanisms have on cash flow risks and stock returns.

Analysing the relationship between the exchange rate and inflation and its impact on the firm value.

Measuring the relationship between digital assets on accounting hedging against inflation in the light of exchange rate liberalization.

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