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The Impact of Burkina Faso's Military Coup on Ghanaian Banks Stock Valuation: An Event Study

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ABSTRACT

The study aimed to investigates how political instability in neighboring countries influences stock Valuation and investors sentiment in emerging markets and the moderating role played by proper mix of capital structure, financial slack and the Covid-19 pandemic on this impact. This topic has become important given the current political tension amongst nations and how they impact business operation. Moreover, literature on political instability in Africa specifically in Ghana from a neighboring country is lacking.

To calculate our dependent variable *Cumulative Abnormal Return*s(CAR) we collected daily stock price data of 8 listed Ghanaian banks for the event window. We tested the moderating effects of financial slack represented by debt-to-equity, capital adequacy ratio and quick ratio on Cumulative Abnormal Returns using R statistical together with excel.

The finding reveals that mean Cumulative Abnormal Return pre event was negative at -4.19% suggesting that investors sentiment was already negative before the coup, on the event day banks recorded a slightly positive mean of at 1.48% reflecting the market reassessment of stabilization as investors reacted to the news, the post event Cumulative Abnormal Returns increased to 5.72% showing that the impact of the coup continued even after the coup , meaning investors may have shifted their assets to Ghana in search of stability. Furthermore, the findings reveals that maintaining excess liquidity and keeping the right mix of debt to equity and Capital adequacy do not moderate the impact of the coup on Cumulative Abnormal Returns. In a more striking finding the covid-19 pandemic was seen to have significantly moderated the effect of the coup on Cumulative Abnormal Returns with a p-value of 0.000127.Indicating that when two major events occur simultaneously, it is crucial to analyze both to prevent misattributing observed effects to a single event.

Keywords: Military coup, Cumulative Abnormal Returns, Ghanaian Banks, Burkina Faso, stock valuation, event study methodology.

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1.0: Introduction

Current political tensions across the globe have caused tensions amongst nations resulting in mass fleeing of refugees to neighboring countries and heightened fears over political stability, economic growth and overall business activities.

Russia, Ukraine, Israel, Palestine, Niger, Sudan, South Sudan, Mali, Gabon to mention a few have all experienced sudden turmoil in their political environment.

With repercussions of uncertainty everyone suffers including businesses operating in these region.

Furthermore, it is a common saying in finance that “Don’t put all your eggs in one basket” meaning investors should have diversified portfolio. Based on this advice many investors have invested in overseas markets.

New market means investors must consider new risk in those nations they have invested in, including risk like Military Coup. [1]

As the government in any jurisdiction influences Country-specific risk and perceptions.[2]. The fact that most companies, nowadays, have global operations and rely on overseas market expansion means a better understanding of how to factor national risk into their analysis. As exemplified by USA China trade war have illustrated just how deeply these events resonate on frontiers, economies, and civilizations.

The objective of this research is to extensively evaluates the spill-over effect and the complex relationship between political instability and listed Ghanaian banks' stock valuation and discusses the moderating role of the covid-19 pandemic, firms' capital structure and financial slack during turbulent times using an event study.

The groundwork for event studies was initiated by [3] who examined the information content of earnings announcements and their effects on stock prices. This foundation helped introduced the fact that stock prices reflect new information almost instantaneously, aligning with the Efficient Market Hypothesis(EMH) which we borrow in our argument together with the Capital Asset Pricing Model(CAPM) for this research. Following [4] further refined the methodology by analyzing how stock splits impacted market reactions. Emphasizing the importance of the event study methodology in analyzing the impact of an event on Abnormal returns and Cumulative Abnormal Returns(CAR) in stock valuation. Burkina Faso is a West African country with few natural resources. The country shares boarder with Ghana. Despite rising gold exports, most of the country's GDP is still agricultural. Its poverty rate tops 40 percent. It is the 184th poorest country out of 191 countries, according to the United Nations Development Program's Human Development Index report for 2021–2022 .Some fraction of a valuation differential are as a result of differences in political risk, which includes the type of government (dictatorship vs democracy) and how easy it is to change political power. The most recent coup occurred on September 30, 2022, which saw the overthrow of Lieutenant Colonel. Paul Henri Sandogo Damiba, and on 21st October 2022, Captain Ibrahim Traore was sworn in as the new transitional president, on the other hand, Ghana, known to be the gateway to Africa has advanced into democracy since independence and currently under a multiparty system, the citizens now believe in judiciary powers. The country has enjoyed peace and a peaceful transition of power since it started practicing democracy. Ghana ranks as one of the world's most liberated countries in Africa as far as press political freedom and spoken words are concerned. However political instability in neighboring countries may throw doubt as to how safe it is

to do business with a country surrounded by political instability. According to [5] he illustrates that the volatility spillovers across stock markets are mainly associated with stock price risks and returns in equity markets. For this purpose, it seems crucial to identify: the source of volatility; the time when volatility spillovers to the market and the size of this spillover. Much like social media gossip, financial networks help to inform the risk of contagion and play a vital role in the process of governing and adapting with global finance[6] . The IMF thus researched the effects of political instability on banking and the study found out that areas of conflicts and turbulence are likely to get a system banking crisis. For example, while other variable may affect the valuation of stock it can be implied that political instability in Burkina Faso, might have an influence on the value of listed banks in Ghana, also the debt exchange exercise by the Ghanaian government can be said to have further depreciated cedi, hence more cracks in the face of Domestic Debt exchange (DDE) completed February 2023 has exposed the Ghanaian banking industry.

Borrowing tenets from the Efficient Market Hypothesis and Capital Asset Pricing Model I argue that a major event like a military coup in a neighboring country will negatively influence the investors perception and financial market of Ghana, specifically the value of listed Banks stock.

1.2: Significance of the study

This paper contributes to the knowledge in political science, economics, and finance by giving an insight on how Military coups and political instability around the world impact the financial industry and overall business operation around the event date i.e. pre-event, event and post event date.

The topic is important because political instability has been on the rise on the globe over the past years including West Africa nations, however political instability in Africa and west Africa has attracted relatively little news coverage and this is surprising,

The world is a global village now hence neighboring nations are all linked to the global village and Military coups has a domino effects on neighboring countries.

To avoid misattribution of our findings we investigate the impact of both the military coup and the covid-19 pandemic simultaneously, since the two events occurred at the same time.

To guide our investigation, we seek answers to the following research questions;

RQ1: What is the impact of Burkina Faso's Military Coup, on listed Ghanaian banks stock market valuations during the event period surrounding September 30, 2022?

RQ2: What role does Debt to Equity, Quick asset and Capital Adequacy play in the impact of Burkina Faso's Military Coup on listed Ghanaian banks, stock market valuations during the event period surrounding September 30, 2022?

RQ3: How does the Covid-19 pandemic moderate the effect of the Burkina Faso coup on the Cumulative Abnormal Returns (CAR) of listed Ghanaian banks during the event period surrounding September 30, 2022?

1.3: Theoretical Framework

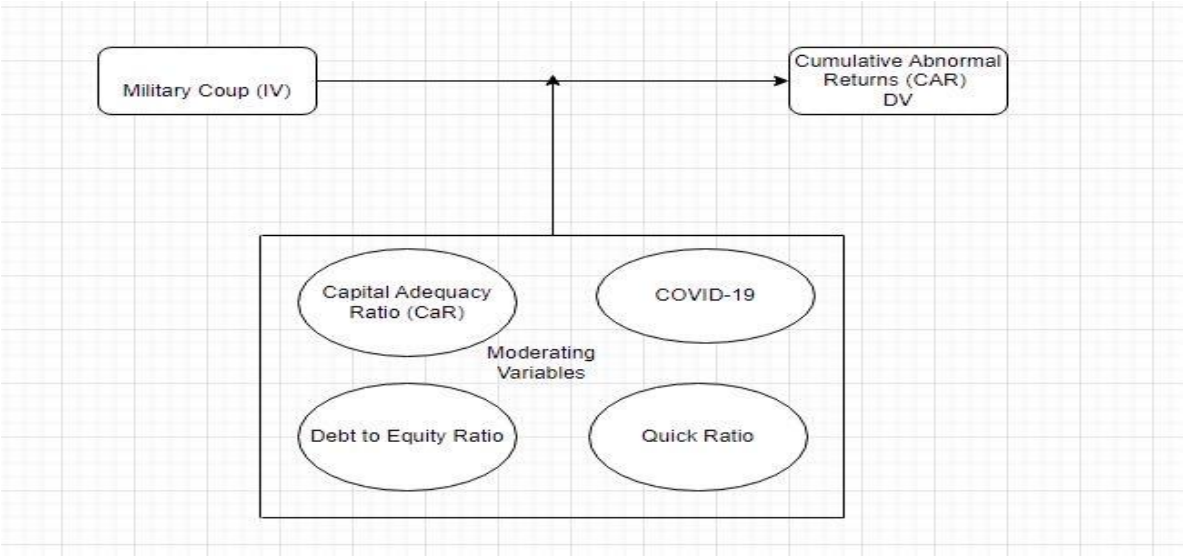

Figure 1

The paper's subsequent section gives a quick overview on the state of affairs in Burkina Faso, and an overview of Ghana's Financial Market.

1.4: State Of Affairs In Burkina Faso

Located North of Ghana a peaceful country lies Burkina faso which has experienced repeated military takeovers and political unrest. Following President Kabore's removal from office in January 2022 due to security concerns, the Patriotic Movement for Safeguard and Restoration was founded. The nation's problems were further brought to light by subsequent coups in September 2022 [7].

1.5: Ghana's Financial Market

The monetary market, which deals with short-term money assets, and the capital market, which deals with long-term finances through securities, make up Ghana's two main financial markets. A large number of banks in Ghana act as brokers in the money market, but only a small number, such as Databank and First Bank, operate as brokers in the capital market. The financial sector of the nation is dominated by banks and other financial institutions, and the Ghana Stock Exchange (GSE) is a major player in the capital market. The Financial Sector Adjustment Program (FINSAP), designed to boost the financial sector and provide access to long-term capital investments, enabled the GSE to convert from a private to a public limited corporation [8].

2.0: Literature Review

This section will provide an outline of the theoretical underpinnings of the research and why a military coup in Burkina Faso will impact banks stock valuation in Ghana drawing from Efficient Market Hypothesis (EMH) and the Capital Asset Pricing Model (CAPM). To establish a robust argument, the section will first introduce the concepts of EMH and CAPM within the context of financial markets and

then do review of existing literature on the topic considering both external and internal factors that influence the relation between political instability and valuation banks.

In order to avoid overpricing or underpricing, the Efficient Market Hypothesis (EMH) asserts that stock prices fairly reflect all relevant information nation [9]. This study centers on the semi-strong form of the Efficient Market Hypothesis (EMH), which posits that stock prices incorporate readily available information at a swift pace. If Burkina Faso's political unrest has an impact on Ghanaian bank equities, it suggests that prices are still reflecting unanticipated factors. The study emphasizes the applicability of EMH in assessing these effects and uses efficient market theory to evaluate how quickly the Ghanaian stock market responded to political unrest in a neighboring country.

Capital Asset Pricing Model(CAPM) on the other hand assumes that by connecting an asset's projected return to its systematic risk, the Capital Asset Pricing Model (CAPM) provides information about how investors are compensated for risk. Here, the systematic risk of Ghanaian banks' equities is evaluated in relation to political instability using the Capital Asset Pricing Model (CAPM). Something like a military coup in Burkina Faso might throw doubt and risk into Ghana's financial markets and change the needed rates of return for stocks held by Ghanaian banks. The relationship between Burkina Faso's political unrest and Ghanaian banks' systemic risk, which affects the value of their stocks, is better understood thanks to CAPM.

2.1: External Factors Affecting Firm Valuation

There are several reasons that provide a perfect situation for political instability in Africa. The triggering factors for conflict are: bad governance and lack of economic management, political and social exclusion to national fragmentation and unemployment.

The link between financial markets and political instability is being studied by a growing number of researchers. Research conducted in 2002 by [10] demonstrates that political turmoil can have a detrimental impact on economy wise growth of surrounding countries. [11] investigate how stock market indices react to wars in different parts of the world. Similarly, [12] discovered the terrorism-resilience of contemporary capital markets.

Using a sample of OECD countries, [13] study investigated the impact of politics on the probability for a banking crisis. According to the analysis, there is a higher chance of a banking crisis when there is political instability.

In addition, Using the event study methodology, [14] investigated how political developments affected stock prices. According to their study, stock values are significantly impacted by political developments, and this effect is especially noticeable for companies that are exposed to a high level of political risk.

Furthermore, research has demonstrated that political unrest can have an impact on listed banks' stock values. [15] political unrest impairs banks' balance sheets, leads to operational management inefficiencies, and has an impact on the distribution of assets and liabilities. Political instability reduces banks' balances, liabilities, and assets, according to [16].

2.1.1: Economic Ties

However, the degree of spill-over effect may largely depend on the connections between the two nations fluctuations in the market would be less likely to affect their neighbor if there is a weak or no relation or

connection between the two nations. Burkina Faso is a strong trading partner of Ghana. Ghana exported about $345 million worth of goods to Burkina Faso in 2022 and imported fine commodities including cotton from the landlocked country around $48.5 million. Major exports from Ghana include refined petroleum, electricity, and agricultural products, while Burkina Faso primarily exports cashew nuts, construction vehicles, and other agricultural products to Ghana. The trade relationship is facilitated by various agreements aimed at enhancing regional integration within the Economic Community of West African States (ECOWAS). These agreements aim to reduce tariffs and promote cross-border trade.

Ghanaian companies have invested in various sectors in Burkina Faso, including telecommunications, banking, and agriculture. Conversely, Burkinabe investments in Ghana are also notable but less extensive. Studies have shown that political instability negatively impacts stock market performance by creating uncertainty that discourages investment [17]. Investors may perceive increased risks associated with investing in Ghanaian banks due to their proximity to Burkina Faso. For instance, research indicates that political events often lead to abnormal returns in financial markets. A study found that political instability significantly affects stock market returns in emerging economies [18]. Consequently, investors may react by withdrawing investments or reallocating their portfolios away from perceived riskier assets. Banks with higher capital adequacy ratios may be better positioned to absorb shocks from external events. However, those heavily reliant on operations or investments in Burkina Faso may face significant challenges [17]. The perceived risk associated with political uncertainty could lead to increased volatility in their stock prices.

The longer the political instability persists in Burkina Faso, the more pronounced the negative effects on investor confidence and stock market performance in Ghana [19]. The strength of economic ties between the two countries will determine how significantly Ghana is affected by events in Burkina Faso. A strong interdependence could lead to more substantial spillover effects [20].

The ability of the Ghanaian government to manage perceptions of risk and provide support to affected sectors will play a crucial role in mitigating potential negative impacts according to [21]. Investor sentiment regarding regional stability can influence market reactions. Negative news from Burkina Faso may trigger sell-offs or increased volatility in Ghana's stock market by [22].

An emerging economy like Ghana has limited research on the spillover effect of political disruptions like a military coup on the stock price of Ghanaian banks that are listed.

To better understand the relationship between political instability and stock prices, we examine how resilient the Ghanaian stock market is to political turmoil in a neighboring nation. [23] emphasize the significance of international interdependencies and economic integration. Trade and economic relations create strong links between stock markets and economies. Similarly, we argue that Ghana's economic ties to Burkina Faso have an impact on the stock values of Ghanaian banks when there is political turbulence in that country. Therefore, in order to fully understand the extent to which political instability affects the Ghanaian stock market, it is necessary to examine these economic interconnections.

2.1.2: Covid-19 Pandemic

The interesting part in assessing the impact of Burkina Faso’s political instability on the Ghana market is that around the time of the military coup in Burkina Faso, the world was struck by the covid-19 pandemic, therefore it is imperative not to ignore the possible effect of the pandemic on the financial market. The covid-19 which has its roots in Wuhan, China, at the end of 2019 has severely and swiftly affected the entire international market [24] . In early 2020, this disaster was at its most severe in the U.S.

Ghana joined the group of nations implementing travel restrictions to contain the spread of the coronavirus (covid-19) On March 12, 2020, following the return of two individuals from Norway and Turkey, the first two cases associated with the covid-19 pandemic in Ghana were verified. While [25] explained how aviation disasters affect stock price variations, securities investors may act irrationally during the covid-19 disaster as fear and anxiety increase pessimistic attitudes toward investment decisions in the financial markets during the covid-19 outbreak. These arguments urge us to explore whether the covid-19 pandemic moderates the impact of the coup on stock valuation. As it caused many panic withdrawals to the extent that the Bank of Ghana (BoG) had to issue a statement assuring customers that things are under control hence should avoid panic withdrawals.

2.1.3: Political System

The political system in Ghana can have an impact on the spill-over effect as well, with certain systems increasing risk significantly more than others. [26] presents an overview of research conducted up until 1993 regarding the relationship between democracy and economic growth, with a focus on mixed findings. Seven of the 19 studies they cite show that dictatorships expand more quickly, seven conclude that democracies grow more quickly, and five show no difference in growth rates. [27] conducted a study spanning 84 nations and found a weakly negative correlation between economic growth and democracy. [28] also came to the same conclusion.

Recent events in China and Russia have highlighted the risk that firms and investors face from the large-scale, frequently irreversible measures that increasingly authoritarian regimes can take. The Chinese government's recent efforts to crack down on the country's biggest tech businesses have caused these companies' market capitalizations to decline significantly; Didi, Tencent, JD.com, and Alibaba have all lost more than half of their market value [2] . Even though it was not unforeseen, businesses and investors were unprepared for Russia's invasion of Ukraine in 2022, which resulted in a market cap wipeout for investors in some of the country's biggest publicly traded enterprises.

2.1.4: Mixed Perspectives On Political Connections

Diverse viewpoints are found in the research of how political connections affect corporate operations. Political relationships and business value and performance have been found to positively correlate by [20],[29],[30], but negatively correlated by [18],[30],[31]. Despite these differing opinions, one thing seems to be universal: these scholars admit to how bad political turmoil can be for businesses.

2.2: Internal Factors Affecting Firms Valuation

The study explores how a company's capital structure and excess liquidity affects valuation amid interruptions. The debate over how businesses finance their operations is still going strong, as seen by the historical progression of capital structure theories from Modigliani and Miller's seminal work in 1958 to the pecking order hypothesis of 1984.

Resource Dependence Theory (RDT) is introduced as adopted by [12] , who contend that operational slack, which includes financial and inventory slack, improves business resilience. RDT prioritizes resource utilisation in the face of external unpredictability, which is consistent with operational management concepts [32]. According to RDT, external resources are necessary for an organisation to survive.

According to [14], financial liquidity that is in excess can help moderate the impact of external shocks. Similarly, we argue that during periods of political unrest, companies can better survive stock market shocks by maintaining a well-balanced debt-to-equity ratio.

2.3: Capital Adequacy

Capital Adequacy Ratio introduced by the bank of Ghana is mainly to help prevent Banks from holding inadequate Capital that will make them fragile and weak against potential shocks. the minimum required capital adequacy ratio for banks in Ghana is 10%, and as of April 2023. This data will inform us on how the financial slack of each bank could potentially moderates CAR.

2.4: Gap in Literature

While the war between Russia and Ukraine as well as that of Israel and Palestine has received lots of media attention that of the conflict in South Sudan, Mali, Niger and other parts of Africa has receive little to no attention. Moreover, Quantitative studies on the valuation of Ghanaian listed companies during unconstitutional change in government in neighboring countries are notably lacking in the literature. While some studies, like [8] , have looked at how Ghana's business firms performed during democratic political transition, they specifically exclude the effects of military coups. By using a combination of excel and R statistic for event study computations and analysis we depart from standard regression analysis techniques. This work seeks to close this gap. It presents the initial theory to look at these processes of valuation.

In light of the above argument, we propose the following hypothesis that;

Hypothesis 1: Cumulative Abnormal Returns (CAR) and Political Events

H0: There is no significant relationship between political events and Cumulative Abnormal Returns (CAR) for Ghanaian banks.

H1: Political events, such as the Burkina Faso coup, significantly affect the Cumulative Abnormal Returns (CAR) of Ghanaian banks.

Hypothesis 2: Role of Financial slack

H0: There is no significant relationship between a bank's Debt to equity, Quick assets and Capital Adequacy Ratio in moderating the impact of coup on CAR.

H1: There is a significant relationship between a bank's Debt to equity, Quick assets and Capital Adequacy Ratio in moderating the impact of coup on CAR

Hypothesis 3: Covid-19 moderating variable hypothesis

H0: the severity of the covid-19 pandemic does not significantly moderate the impact of the Burkina Faso coup on the Cumulative Abnormal Returns (CAR) of listed Ghanaian bank

H1: The impact of the Burkina Faso military coup on the market valuations of listed Ghanaian banks is further moderated by the severity of the covid-19 pandemic.

3.0: Methodology

The study adopts the event study methodology and a quantitative approach. The Ghana Stock Exchange is a reliable source, as prior research had relied on its data [8],[33]. Data for Ghanaian listed banks will be specifically retrieved from this database. The Ghana Stock Exchange has been used in earlier studies to guarantee the accuracy of the data.

Using secondary data, a quantitative approach was adopted leveraging the event study methodology

(Fama, 1970)[34] is one of the pioneers of the Efficient Market Hypothesis, who asserts that the events study methodology is a reliable and efficient way to measure the influence of an event on a firms market value

Subsequently other researchers like [12] also adopted this approach to investigate "The impact of governmental covid-19 measures on manufacturers' stock market valuations: The role of labor intensity and operational slack" in China.

We first collected daily Historical stock prices from the Ghana Stock exchange for 1-Feb-2022 to 30-Dec-2022 together with the composite index for all 8 listed banks with each bank having its own corresponding codes on the Ghana Stock Exchange(GSE)), in all there are only 8 banks currently listed on the GSE covering; GCB Bank Plc (GCB), Standard Chartered Bank Ghana Ltd (SCB), Ecobank Ghana Ltd (EBG), CAL Bank Ltd (CAL), Republic Bank Ghana Ltd (RBGH), Access Bank Ghana Plc (ACCESS), Societe Generale Ghana Ltd (SOGEGH), Agricultural Development Bank Ltd (ADB).

The first step in an event window is to establish the event window, ie the periods surrounding the event.

September 30, 2022, is the day the coup was officially announced, this day is taken into consideration as the event day or day 0.

The estimation window lies between 1st February 2022 to 29th September 2022. Which is the days when normal returns are observed with no event scenario.

I then set my event window as (-40, 0, +40). "-40" in this case refers to the abnormal returns 40 days pre-event and "0" represent 30th September 2022, that is the official announcement date and "+40" represent 40 days post event date.

Window Estimation

This is the time period during which normal returns are observed in the absence of the coup.

Using excel Abnormal Returns are calculated as: $AR_t = R_t - E(R_t)$

Where:

AR_t is the abnormal return at time t.

R_t is the actual return of the stock at time t which can be observed on the GSE website.

$E(R_t)$ is the expected return of the stock at time t, which can be calculated using various models, such as the Capital Asset Pricing Model (CAPM)

Using the formula below we convert our daily stock prices to percentage returns;

$$Rt=\frac{(\textbf{Return on the specific stock(bank) on the current day}-\textbf{return on the specific stock(bank) from the day before})}{\textbf{return on the specific stock(bank) from the day before}}$$

Find detailed computations in the excel sheet from the link below https://1drv.ms/x/s!Alfzjm2KQwXDbBYw4f4kZmA1R8Y

E(Rt =CAPM=Rit =αiþ+βi*Rmt +ϵit

Where:

aiþ=Rf=ntercept is the risk-free rate.

Intercept(Rf)= Intercept (return on the specific banks stock for all the event window up to -41, +41 days, return on market)

βi Beta is the sensitivity of the stock's returns to market returns.(in this case the slope)

Calculated as: Beta=slope (return on the specific bank stock for all the event window up -41, +41 days, return on market)

Rmt is the expected return of the market

ϵit is the error term

After we have obtained the abnormal returns for all 8 banks we move on to calculate the CAR, our dependent variable.

Pre event CAR is calculated as follows;

CAR=sum(-2day:-5days) we use this days because EMH asserts that information is reflected on the market immediately after an event

Post event

CAR=sum(+2day:+5days)

$CAR= \sum_{t=t1}^{t2} AR$

Where:

CAR is the cumulative abnormal return which we set as our dependent variable.

AR is the abnormal return at time t.

t1 and t2 define the start(pre event and post event days of the event window which we set as -5 days pre event,-2 pre event,+2 post event, +5post event.

Pre event: CAR=sum(-2day:-5days)

Post event: CAR=sum(+2day:+5days) we use 2 and 5 days pre and post event date because the EMH suggest that information is quickly incorporated into stock pricing at the earlierst possible date of the event.

Find detailed computations in the excel sheet from the link below https://1drv.ms/x/s!Alfzjm2KQwXDbBYw4f4kZmA1R8Y

3.1 Model Specification

CARi=α+β1Coup+β2Debt To Equity+ β3Capital Adequacy Ratio+β4Quick Ratio+ β5Covid-19+ϵ

Where:

CARi = cumulative abnormal returns for all the 8 banks

α = intercept

β1,β2,β3, β4, β5 = coefficients for the respective independent variables

β2,β3,B4 data is obtained from individual banks financial reports

β2,β3, B4 Pre event: second quarter financial data, event day data is the third quarter financial data and Post event: fourth quarter financial data

β5Covid-19 I collected data from worldometer which collects live COVID-19 data from health organizations and government reports. Find detailed computation in table 2 variable description for covid-19 data source.

I find the daily percentage changes of active covid-19 cases in Ghana and group them into pre(on second quarter average), event(day 0), and post event(fourth quarter average).

ϵ = error term.

Finally I prepare my panel data for the multivariate regression analysis in R statistical software as can be seen in table 1 below.

Find detailed computations in of financial slack variables in the excel sheet from the link below: https://1drv.ms/x/s!Alfzjm2KQwXDbBYw4f4kZmA1R8Y

Table 1 Panel data

BANK	Period	CAR	EVENT	DebToEquity	CaR	QuickRatio	COVID19
ADB	Pre Event	-0.9221	-5	0.5069	0.1117	0.8070	0.1729
ADB	Pre Event	0.0328	-2	0.5069	0.1117	0.8070	0.1729

ADB	Event	0.0165	0	0.6652	0.1046	0.8252	0.0455
ADB	Post Event	0.0332	2	0.8940	0.0736	0.8611	-0.0599
ADB	Post Event	0.0828	5	0.8940	0.0736	0.8611	-0.0599
GCB	Pre Event	-0.9202	-5	0.9791	0.2110	0.7840	0.1729
GCB	Pre Event	0.0336	-2	0.9791	0.2110	0.7840	0.1729
GCB	Event	0.0169	0	0.2860	0.1770	0.5800	0.0455
GCB	Post Event	0.0340	2	0.5018	0.1786	0.6966	-0.0599
GCB	Post Event	0.0847	5	0.5018	0.1786	0.6966	-0.0599
ACCESS	Pre Event	-0.9253	-5	0.7067	0.3723	0.9359	0.1729
ACCESS	Pre Event	0.0333	-2	0.7067	0.3723	0.9359	0.1729
ACCESS	Event	0.0169	0	1.2370	0.2330	0.9000	0.0455
ACCESS	Post Event	0.0342	2	0.8336	0.3693	0.6593	-0.0599
ACCESS	Post Event	0.0848	5	0.8336	0.3693	0.6593	-0.0599
SCB	Pre Event	-0.9260	-5	0.1655	0.1937	0.7915	0.1729
SCB	Pre Event	0.0289	-2	0.1655	0.1937	0.7915	0.1729
SCB	Event	0.0000	0	0.1202	0.1657	1.1066	0.0455

SCB	Post Event	0.0332	2	0.1221	0.2300	0.6290	-0.0599
SCB	Post Event	0.0828	5	0.1221	0.2300	0.6290	-0.0599
EGH	Pre Event	-0.9440	-5	0.0082	0.1605	0.8190	0.1729
EGH	Pre Event	0.0297	-2	0.0082	0.1605	0.8190	0.1729
EGH	Event	0.0172	0	0.0125	0.1321	0.5811	0.0455
EGH	Post Event	0.0345	2	0.0037	0.1463	0.5059	-0.0599
EGH	Post Event	0.0861	5	0.0037	0.1463	0.5059	-0.0599
RBGH	Pre Event	-0.9221	-5	0.1421	0.2189	1.4594	0.1729
RBGH	Pre Event	0.0328	-2	0.1421	0.2189	1.4594	0.1729
RBGH	Event	0.0165	0	0.1212	0.2149	1.4965	0.0455
RBGH	Post Event	0.0332	2	0.2416	0.2125	1.4907	-0.0599
RBGH	Post Event	0.0828	5	0.2416	0.2125	1.4907	-0.0599
CAL	Pre Event	-0.9182	-5	1.8081	-0.0730	0.6620	0.1729
CAL	Pre Event	0.0333	-2	1.8081	-0.0730	0.6620	0.1729
CAL	Event	0.0167	0	1.9709	0.1630	0.7170	0.0455
CAL	Post Event	0.0335	2	3.0326	0.1190	1.6850	-0.0599

CAL	Post Event	0.0836	5	3.0326	0.1190	1.6850	-0.0599
SOGEGH	Pre Event	-0.9923	-5	0.5011	0.1949	0.9040	0.1729
SOGEGH	Pre Event	0.0353	-2	0.5011	0.1949	0.9040	0.1729
SOGEGH	Event	0.0176	0	0.9467	0.1593	0.9225	0.0455
SOGEGH	Post Event	0.0351	2	0.5901	0.1600	0.8836	-0.0599
SOGEGH	Pre Event	0.0878	5	0.5901	0.1600	0.8836	-0.0599

Source: Prepared by author

Note: find in detailed computation of the above in the link below (https://1drv.ms/x/s!Alfzjm2KQwXDbBYw4f4kZmA1R8Y)

Table 2 Variable Description

Variable	**Code**	**Defined**	**Data Source**
Abnormal returns	AB	The difference between actual and expected return	https://1drv.ms/x/s!Alfzjm2KQwXDbBYw4f4kZmA1R8Y
Cumulative abnormal returns	CAR	The sum of abnormal returns during the event window	https://1drv.ms/x/s!Alfzjm2KQwXDbBYw4f4kZmA1R8Y
Liquidity/quick ratio	QuickRatio	Quick assets divided by current liabilities	Financial report
Capital Adequacy Ratio	CaR	The minimum amount of cash, Ghanaian banks must hold, in	Financial report

		relation to their risk-weighted assets.	
Covid-19	Covid19	The average daily percentage change in active covid-19 cases expressed as a ratio	https://1drv.ms/x/c/c305438a6d8efhttps://1drv.ms/x/c/c305438a6d8ef357/EYXJozCmRRhGp1zEx3XYhvYBNcpBkiVA6xltn9p3i-kjHA357/EYXJozCmRRhGp1zEx3XYhvYBNcpBkiVA6xltn9p3i-kjHA
Debt to Equity Ratio	DebToEquity	total debt divided by total equity	https://simplywall.st/stocks/gh/banks/ghse-egh/ecobank-ghana-shares/health
Composite index		historical data to control for market-wide movements.	Ghana Stock Exchange
Stock prices		GSE	Trading & Data - Ghana Stock Exchange (gse.com.gh)
Bank code		Identifier for each bank in the study.	GSE
Period		Categorical variable indicating whether the data corresponds to the pre-event period, event day, or post-event period.	Author

Source: prepared by author

4.0 Results And Discussion

In this section, we present the results of our analysis. The findings are derived from the descriptive statistics outcomes, statistical outcomes including regression coefficients and their significance, to find out how these factors interact with the coup timing and its effects on banks performance during the coup.

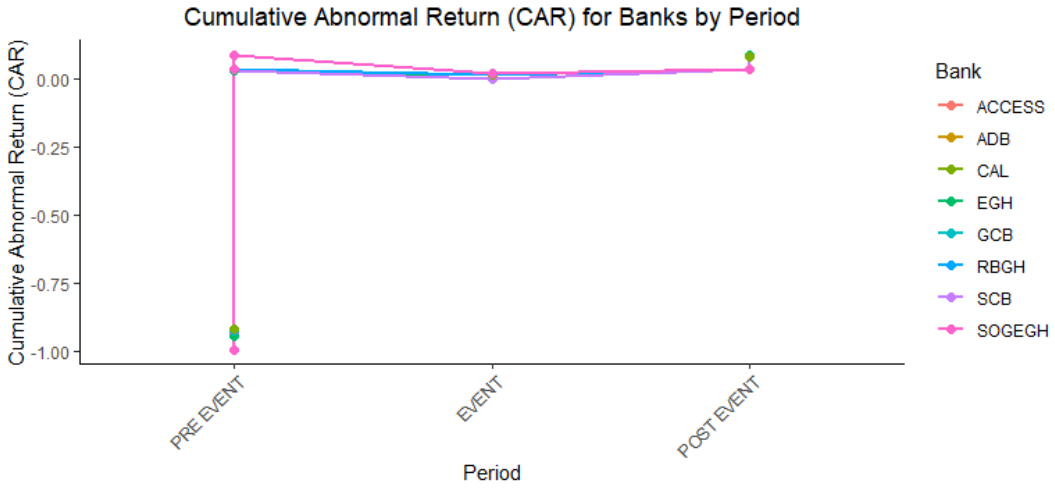

Figure 2

Key Observations:

We find answer to RQ1, as can be observed from figure 2 that pre event period was characterized by a rapid decline indicating a fragile banking system prior to the event.

Post Event Stability: As seen in figure 2 during the post event period, the CAR for all banks is considerably better and typically centered at 0.05. This can indicate positive abnormal returns from bank stocks following the event.

All the lines for banks are almost flat from the event to post event period which shows good stability post-event.

We also saw that the lines for different banks are parallel and very close during both event period and post event period, which means there is no difference in performance across bank lines during both event and post event phase.

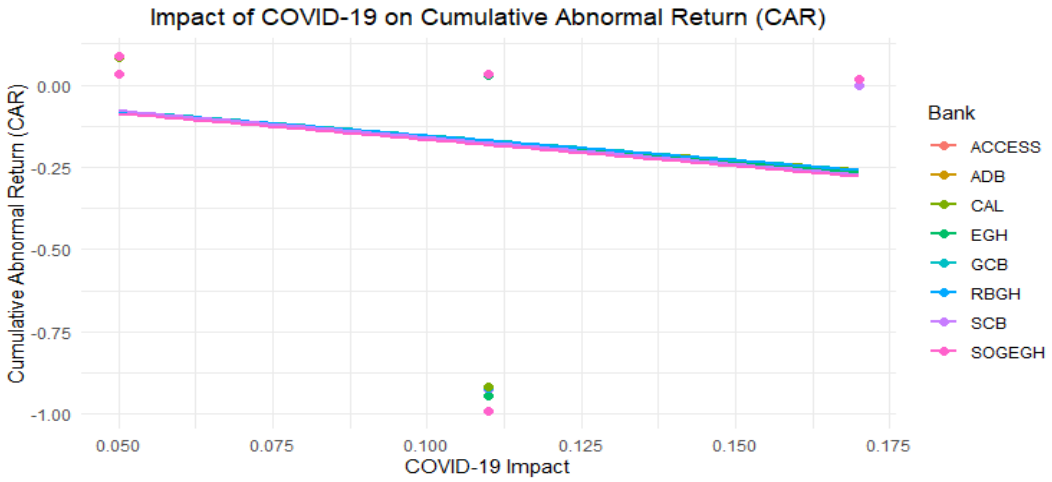

Figure 3

Key Observations:

From the figure 3 the negative correlation of covid-19 impact and CAR in general implies that as covid-19 deteriorates, uniform abnormalities of the banks tend to decrease thereby indicating that adverse effect of covid-19 prevails in banking sector industry.

Yet the degree of this impact differed by bank, given their different natures (SCB and SOGEGH had greater volatility, as evidenced by the wider spread in their CAR values).

Figure 3 helps to show the magnitude of how different banks were impacted by the pandemic as a few exhibited stronger ability to recover in contrast with others such as SCB which faced relatively higher level of negative abnormal returns. This answers our RQ3.

Mean of CAR over the 3 periods

Table 3

Pre Event	-0.419
Event	0.0148
post event	0.0572

The finding in table 3 reveals that pre event average Cumulative Abnormal Returns for Ghanaian banks was notably low at -4.19% indicating significant underperformance before the coup, suggesting that investors sentiments was already negative prior to the coup.

on the event day banks recorded a slightly positive Cumulative Abnormal Returns of 1.48% this implies the market reacted positively to the coup, confirming the EMH that investors had no information of the coup which is in line with [12] findings answering RQ1.

Surprisingly the post event Cumulative Abnormal Returns increased to 5.72% , contradicting our initial hypothesis that military coup in a neighboring country could impact banks stock valuation negatively and highlighting an unexpected resilience among Ghanaian banks. The fact that the impact of the coup continued even after the event day. A possible explanation could be that investors moved their assets to Ghana a neighboring country which has a more stable political environment.

Table 4 Regression Analysis

Min	1Q	Median	3Q	Max
-0.57419	-0.06849	-0.01538	0.15187	0.46076

Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-0.017804	0.194492	-0.092	0.927585
Covid-19	-2.223426	0.516171	-4.308	0.000127 ***
DebToEquity	-0.001111	0.081879	-0.014	0.989251
CaR	-0.050375	0.618113	-0.081	0.935511
QuickRatio	-0.005956	0.177733	-0.034	0.973456 ---

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.3368 on 35 degrees of freedom

Multiple R-squared: 0.3504, Adjusted R-squared: 0.2762

F-statistic: 4.721 on 4 and 35 DF, p-value: 0.003751

The regression analysis from table 4 answer RQ2 and RQ3 The finding reveals that Covid-19 pandemic was seen had significantly moderated the impact of the coup on Cumulative Abnormal Returns with a p-value of 0.000127. Indicating that the covid-19 pandemic economic repercussions played a more critical role in influencing stock valuation more than the coup in Burkina faso, raising questions about how external shocks can overshadow the immediate impact of political events in neighboring countries.

The Debt to Equity, CaR and Quick Ratio also does not have a great effect on CAR as their impact is not statistically significant.

The model explains overall variation in CAR by 35 % .
Hence, it seems that the financial metrics used in this model do not appears to have a strong influence on the CAR of banks in this dataset on the contrary covid-19 does. Meaning there may be other factors not included in the model accounting for the remaining 65% variable in CAR.

4. 1: Financial Implication

The rather decent CAR among most banks may have shown investors' ability to discriminate between political risks in Burkina Faso and the perception of relative stability in Ghana's banking sector. The discovery underlines that proper due diligence should be conducted and one needs to have a good local understanding the investment when assessing potential deals in politically sensitive regions.

We call on the Bank of Ghana and other regulatory bodies to upgrade their surveillance to the level where they are able to easily detect potential risks from political risk or external shocks.
The results also suggest that it may be useful to develop comprehensive crisis management frameworks that can set in during periods of political turmoil. These frameworks must contain the means to keep banks liquid and investor confidence in times of uncertainty.

4.2: Economic Implication

From an economic perspective, the study implies that Ghanaian banks have not felt immediate adverse consequences following the coup d'état in Burkina Faso; however, there are long-term economic stability implications.

Although the average CARs suggest a short-term recovery, prolonged political instability in Burkina Faso could weigh on trade and investment flows into Ghana.

The large CAR volatility suggests that some sectors should be a bit more exposed to political incidents. Economic policies should zero in on giving more assistance to sectors hardest hit by uncertainty especially targeted help, while offering these segments access to the funding and resources necessary for them to get back up off the floor.

Since the impact of political issues in financial markets can be so hard, it tends to be smarter to enhance your strategies for economic diversification. Rightly, policymakers should be placing a premium on investments in multiple sectors that are less concentrated than relying 100% on any individual industry and making the overall economy more robust.

4.3: Political Implication

Investor confidence in Ghana seemed higher as most banks recorded a positive capital adequacy ratios. That is an important distinction, as it suggests that good governance in Ghana may have the potential to insulate the country against violent regional upheaval.
The research stresses that maintaining regional stability is not just a national interest, but essential for there to be true economic development for all in West Africa.

4.4: Regional Cooperation

The event study illustrates the policy linkages between West African countries. Regional risk management frameworks including regional coordination are powerful tools for countries to improve readiness and response to political disruptions. Perhaps mutually agreed upon safety nets in security sectors and coordinated emergency response teams could improve stability at the regional level.
This will help in ensuring that policies are harmonized across West African countries which will create a more unified regional market

4.5: Theoretical Contribution

This paper contributes the existing event study methodology as it allows a systematic analysis of two major event that is political disruptions and covid-19 pandemic at the same time with respect to market valuations by analyzing CAR. R software use ensures that accurate statistical processing and visualization of data results into more precise and professional output.

The addition of financial slack measures (debt-to-equity ratio, capital adequacy ratio, quick ratio) to the framework, as moderating variables provides insight on firm-specific influences on stock performance when it comes to political instability. Such integration provides additional insights on the study of resilience and the management of risk in financial institutions, where R is used to perform calculations that identify variable interrelations.

4.6: Understanding the Impact of External Shocks

This analysis incorporates an external variable covid-19, affecting CAR which also fits into the theoretical concept on the interaction of global crisis with local political events. Findings confirm that covid-19 indeed negatively impacted on CAR, statistically significant, however, the model overall with an F-statistics of 4.721 allows us to say that the model can account for 35% of variation in CAR which connotes that other factors might be more decisive in determining stock performance during such shocks

The results indicate that powerful regional institutions are required to bring a crisis under control. Restructuring organizations like ECOWAS (Economic Community of West African States) give united response to political events, helping member states work together politically and maintaining stability.

While uncertainty from political instability is generally a bad thing, it may not spell downfall for financial institutions if there are other mitigating factors to consider. Such research opens the door to additional investigations into systemic resilience, particularly when analyzing foreign exchange markets and global financial systems in both political and economic uncertainties providing a first-step framework that can gauge investor sentiment within these contexts.

Policy makers also need to know that without a stable political environment it is impossible for economic development and unless there is foreign investment, no one will come. The findings highlight that stability in the region is not only a national issue of each country but fundamental to growth on a continental basis within west Africa.

4.7: Limitation of the study

First of all, the thesis focus on the short time frame around the event date paying little attention to the long term impact of the coup.

4.8: Future research direction

Future studies could focus on the geopolitical unrest in other nations and it's impact on business operations and employ different statistical tools for analyzing the impact on business operations and other firm specific variable that can serve as a buffer during political unrest as well as those other variables like firm age and size not touched on in this paper.

5.0: Conclusion

Military Coups in sub-Sahara Africa and elsewhere around the word in recent years have led to fears of doing business in these regions.

The research is occasioned by the desire to find out what influence a major political change could have on investor sentiment and consequentially stock performance, especially in emerging markets such as Ghana. A complete event study of Cumulative Abnormal Returns (CAR) was done using R statistical software for multivariate analysis in a time frame process of three different periods: pre-event, during the event as well as post-event.

The results illustrates that while the continued stability of Ghanaian Banks in response to Burkina Faso is unexpected, that same resilience does further illustrate how this issue has seemingly been overshadowed by covid-19 making analysis on market reactions from geopolitical instability all the more crucial.

However, keeping excess liquidity did not moderate the impact of the coup on CAR.

Policy makers also need to know that without a stable political environment it is impossible for economic development and unless there is foreign investment, no one will come. The findings highlight that stability in the region is not only a national issue of each country but fundamental to growth on a continental basis within west Africa.

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Authors Contributions

Isaac Kwesi Sam is the sole author of this manuscript. I conceptualized the study, designed the research methodology, conducted data collection and analysis and drafted the manuscript. However throughout the process I received guidance and feedback from my supervisor, Prof. Yinkai Tang, which helped refined the research and improve the overall quality of work. I take full responsibility for the content of this article and confirm that everything was done independently.

Competing Interest Statement

The author declares that there are no competing interest regarding the publication of this article. The research was conducted independently, and no economic or personal relationship influenced the study's design, data collection, analysis and interpretation.

All views expressed are those of the author and not reflected the opinions of any affiliations.

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