

UNIVERSITY OF GHANA

UNIVERSITY OF GHANA BUSINESS SCHOOL

**EXPLORING THE TRIGGERS OF BANK RUNS IN GHANA: EVIDENCE FROM
CONSUMERS**

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**A LONG ESSAY SUBMITTED TO THE UNIVERSITY OF GHANA IN PARTIAL
FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF DEGREE OF
MASTER OF SCIENCE IN DEVELOPMENT FINANCE.**

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DECLARATION

I do hereby declare that this work is the result of my own research undertaken under the supervision and has not been presented by anyone for any academic award in this or any other university. All references used in the work have been fully acknowledged.

I bear sole responsibility for any shortcomings.

.....

.....

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CERTIFICATION

I hereby certify that this long essay was supervised in accordance with procedures laid down by the University of Ghana.

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DR. VERA FIADOR

(SUPERVISOR)

.....

DATE

DEDICATION

This work is dedicated to my dear wife Pearl Biamah Agyei and my son Kendrick S.O. Adjei for their support, prayers and encouragement throughout the program.

ACKNOWLEDGMENT

I render my heartfelt appreciation and thanks to the Almighty God for his grace, mercy and blessing that has kept me throughout my MSc program.

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ABSTRACT

The study aims to explore the factors that drive panic withdrawal, the reasons for withdrawals and the further actions that bank clients take after withdrawing their deposits during the collapse of banks from an individual customer perspective. A cross-sectional data set was collected from 80 customers of banks in Ghana using a survey instrument. In total, 44 percent of respondents have accounts with at least one of the failed or collapsed banks.

Overall, half of the respondents withdrew their funds after the collapse of their banks while the other half did not. Also 31.3 percent of the respondents withdraw their funds before their banks collapsed. Customers withdraw their funds because they follow other depositors, and because of their bank's performance. Most of the respondents deposited with public banks after withdrawing their funds followed by depositing with foreign banks. The result indicated that the majority of those under the age of 39 years had accounts with the collapsed banks and majority of these people are those with at least a degree qualification. Most of the customers did not withdraw their funds from their banks and some were able to act earlier before the banks collapsed.

The result also suggests that withdrawals were made by depositors who are youthful (below the age of 39 years) mostly because of their lack of trust for their bank, or the banks' performance. Highly educated customers ended up keeping their funds away from the formal financial sector after they made their withdrawals.

Keywords: Bank run; Ghana; customers; deposits; panic withdrawals; risk.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The financial sector provides several financial products, services and credit instruments for individuals, corporations, and governments. Business in the financial sector is mainly one of risk as financial institutions take on risks in providing credit for investors so as to make profits. Since individuals, corporations, and governments invest so much in the financial sector, concern for the existence, stability, and performance of financial institutions is usually a priority. The banking and financial sector has become complex over time (Bonfim and Kim, 2012) as they are exposed to severe business risks such as liquidity problems and the risks of collapse (Kariuki, 2013). Individuals and corporations are therefore particular about the ability of these institutions to pay back as and when their investment matures or they need to withdraw their resources.

Andolfatto, Nosal & Sultanum (2017) suggest that banks in solving liquidity problems for their clients through risk-sharing create room for the bank to also face liquidity issues leading to bank runs. When financial institutions face liquidity problems investors and depositors tend to fear to lose their resources and may react quickly in a bit to secure their investments, hence panic withdrawals. Panic withdrawals lead to bank runs which increase the magnitude of liquidity and other problems for the financial institutions, and that could collapse the bank. Panic withdrawal is understood to be the result of some sort of rumour of a banks' demise in the near future as Diamond and Dybvig (1983) rightly puts it, panic withdrawal is driven by "self-fulfilling prophecies".

Bank runs have serious effects on economic growth as it shrinks the industrial production and output capacity (Kamau & Oluoch, 2016). It is understandable that during panics investment rates

fall because investors lose trust in financial institutions which negatively affects deposits. A drastic decline in deposits affects the ability of financial institutions to create a credit for deficit spending unit within the economy. Interest rates then rise due to shortage of credit fund and corporations are unable to expand leading to declining in their returns on equity and dividend rates. Ultimately, stock prices fall and economic growth is thwarted.

1.2 Problem Statement

Financial institutions play a very important role in every economy per the studies of Nasieku, (2014) and Kamau & Oluoch, (2016). The role of banks is centered on the banks' liquidity as banks are supposed to be solving the liquidity problems of customers. Due to the fact that depositors' liquidity needs are confidential and uncertain, financial institutions usually harbor this risk and try to share it through the mix of short and long term instruments. Bank runs then occur when the liquidity demand of customers surpasses the supply of the financial institution. Bank runs are often associated with coordination failure among depositors (Diamond and Dybvig, 1983) or fundamental problems of the bank (Calomiris and Mason, 2003). Coordination failure of customers in the sense that, depositors fail to withdraw funds at their own will but rather fall to the fear of the bank running out of funds due to the lack of communication from the bank, the mass withdrawal then causes bank failure. Liquidity issues are one of the fundamental problems of a bank and where there is a mismatch between the long-term and short-term liquidity situation in a bank, bank run is a likely outcome.

Kiss et al. (2018) found bank runs were neither because depositor coordination failed nor the bank experienced some form of fundamental problems. The bank runs in such situations were attributed to panic as depositors looked to other depositors in the process of deciding to withdraw their funds

or not even though theoretically observability should prevent bank runs (Iyer & Puri, 2012; Schotter & Yorulmazer, 2009; Brown et al., 2016; Chakravarty et al., 2014; Davis & Reilly, 2016; Kiss et al., 2014).

Recent bank runs and financial panic in Ghana has forced various players in the financial sector to be interested in information on the subject matter. Based on this, this research seeks to understand the forces driving panic withdrawals in Ghana, the institutions facing these panic withdrawals and the demographic features of customers that are driving the withdrawals. This research is also crucial because no other study has been found on the subject in Ghana, hence the study bridges this gap in academia and literature in Ghana and help ensure financial institutions are well prepared for similar events in the future as well as affecting future policies.

1.3 Research Objectives

- i. To identify the factors driving panic withdrawals in Ghana.
- ii. To examine the reasons for withdrawals after banks collapse.
- iii. To examine the further actions of bank clients after withdrawing during the collapse of banks.

1.4 Research Questions

- i. What are the factors driving panic withdrawals in Ghana?
- ii. What are the reasons for withdrawals after banks collapse?
- iii. What are the actions of bank clients after withdrawing during the collapse of banks?

1.5 Significance of the Study

The study is very relevant for the financial sector of the Ghanaian economy having that apart from the banking sector cleanup exercise, the rural banks, the savings and loans companies, and even the insurance industry is also undergoing or on the verge to undergo clean-up. The results may be essential to the Bank of Ghana or the Securities and Exchange Commission in guiding in prudential regulatory and supervisory policy directives. For instance, knowing the factors that drive panic withdrawals, the reasons for withdrawals after banks collapse and the various further actions of bank clients after withdrawing during the collapse of banks. This is to help ensure that the effects of bank collapse do not result in a systemic economic risk which could significantly affect the economy at large. These insights are also beneficial to the customers of banks and as a basis for further research.

1.6 Scope and Limitations of the study

The study considers the financial situation in Ghana, the panic withdrawals which started in 2018. All investigations are limited to Ghana and the financial institutions in Ghana. A total sample of 80 financial institutions depositors is taken from Accra. This cover mainly customers of commercial banks that are licensed under the Banking Act of Ghana as a Universal Bank. These customers could be current customers of banks or customers of banks that recently collapsed. In effect, this study does not cover rural banks, savings and loans companies but mainly commercial banks.

1.7 Organization of the study

This study was categorized into five chapters. Chapter one contained a background of the study, the problem statement, the objectives of the study, the significance and limitations of the study.

Chapter two was the literature review which looks at the theoretical and empirical literature on the topic. Chapter three: the research methodology described research design, approach data, collection and data analysis. The fourth chapter presented the interpretation of the study findings. Finally, chapter five summarized the findings, concludes and makes recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter focuses on discussing literature. The literature on bank runs and other related literature is reviewed and discussed to bring understanding to the subject matter and prove the necessity of this study. Both theoretical and empirical studies relevant to the topic under study are discussed and examined to see the strengths and weaknesses of each study.

2.2 Theoretical Literature Review

For understanding and explaining bank runs, several theories have emerged to explain the phenomena, but two main theories stand out. One school of thought is that bank runs are a result of depositor coordination failure (Diamond and Dybvig, 1983). Another school of thought believes bank runs are caused by banks experiencing some form of fundamental struggles (Calomiris and Mason, 2003). Other forms of categorizing bank runs are looking at it from whether the run is information-based or panic-based. This sometimes is difficult because the two are interrelated as fundamental failures of a bank may be leaked to depositors and bring about panics leading to bank runs.

2.2.1 Bank Runs as Coordination Failure

Backed by researches from the likes of Bryant (1980); Diamond and Dybvig, (1983); Postlewaite and Vives (1987); Rached and Vives (2004) and Goldstein and Pauzer (2005). This class of bank run categorization is of the understanding that bank runs result from problems of coordination among depositors. Depositors are believed to have expectations of the behaviours of other depositors and so may react accordingly. In effect, bank runs occur because of depositors' group-

think attitudes. In short, depositors withdraw because other depositors are withdrawing. A clear case is a run on the Bank of United States in 1930 which Friedman and Schwartz (1963) were not based on any fundamentals but the incident brought about panic which spread across the whole US banking system leading to runs on the other banks in US at the time. Bank runs in this model virtual result from panics.

2.2.2 Bank Runs as Fundamental Failure

Being one of two models explaining bank runs, this model originates from depositors' insecurities and doubts/uncertainties about their banks' solvency. Depositors, therefore, act on their fears of perceived solvency problems with the bank and withdraw. Bank runs resulting from asymmetric information among depositors regarding the fundamentals of a bank is a model supported by researches such as Jacklin and Bhattacharya (1988); Chari and Jagannathan (1988); Calomiris and Kahn (1991); and Chen (1999); (Calomiris and Mason, 2003). Bank runs from this models' perspective is seen that the belief in an impending failure of the bank (the inability of the bank to pay all its debts) play a major role in depositors' actions which leads to bank runs. Bank runs in this model are information-based

2.3 Empirical Literature

The crisis of the World Banking system in 2008 brought about financial crunches revealing the challenges liquidity risk management of banks could bring forth (Turner, 2009). Last resort liquidity barriers were being used as funding strategies i.e. liability-based funding was adopted instead of asset-based liquidity strategies, this led to the 2008 financial crisis were central banks had to step in and pay off the banks risky practices to prevent further vigorous economic meltdowns (Blaha, 2009; Ingves, 2011).

Song and Thakor (2007), Diamond and Rajan (2001) and Allen and Gale (2000) found from their researches that where banks are funded or partly funded from demand deposits, they are fragile. The findings of Iyer, Rajkamal and Munju Puri (2012) suggest a universal bank that is allowing to provide a variety of products could decrease fragility by strengthening the relationships between depositors and their banks. In the works of Brown, Trautmann, and Vlahu (2014), they demonstrate the effect of observed withdrawals on the possibility of other depositors questioning their banks' fundamentals and to some extent reacting by withdrawing their funds as well.

In the experiment of Schotter and Yorulmazer (2009), they assumed banks to be insolvent and a run imminent, they then attempted to discover the rate at which coordination and fundamental failures would affect the bank run and discovered that, where the rate on deposits is unknown or uncertain, depositors who come by information on the rate of return on deposits and insiders could tilt the balance and affect bank runs positively or negatively. For instance, if depositors get hold of information that deposit return rate is close to nothing, they may be compelled to withdraw hence bank run. Madies (2006) on the other hand looked at bank run frequency where there exists an equilibrium of no-run.

Madies recorded a low-frequency bank run outcome where a bank is highly liquid as large withdrawals are needed to trigger a run. Garratt and Keister (2009) also used a similar approach as Madies (2006), although they focused on how impromptu multiple and fundamental withdrawal demands affect the bank and the run frequency whereas Madies drives more towards the impact of partial deposit insurance schemes. Garratt and Keister (2009) find that where depositors have several/multiple opportunities to withdraw, they are more likely to withdraw than where they have to make a single decision to do so. They also pointed out that there are slim chances of bank runs where fundamental withdrawal demand is made known compared to it being random/unknown.

Liquidity is said to be the capacity to obtain cash when needed. According to the Bank for International Settlement (BIS, 2008), liquidity can be defined as the capacity of a bank to fund asset increases as they become due, without incurring undesirable losses (Matz & Neu, 2007: 3). Banks are then susceptible to institutional and bank-specific risks in their endeavour to convert short-term deposits into long-term loans. Liquidity risk management is now critical and is a requirement of competency regarding banks (Accenture, 2010) and according to Ernst and Young, (2010) majority of the respondents in their 2009 survey believed the absence of liquidity severe in the aftermath of the financial crisis. To ensure banks have enough liquid assets, most countries have a liquidity reserve requirement in that, banks have to reserve liquid assets are in the form of cash reserves. The liquidity reserve ratio has been reducing since the Bank of England in 1986 took the position as the lender of last resort. The reductions have mostly been aimed at strengthening monetary policy controls and improving industry competition (Jenkinson, 2008).

Brown et al., (2012) conducted an experiment using two banks in the effort to determine the factors affecting bank run contagion. They applied game theory such that; one bank takes a decision, depositors of bank 2 make their decisions based on the reactions of bank 1's depositors. They designed a treatment by linking the two banks economically and another whereby the two share no link. The designs were distinct in the number of replays in the game, how the two banks are linked, strategic uncertainty regarding types, and the total quantity of each bank's depositors.

As Brown et al., (2012), Chakravaty et al., (2014) in the lab used ten depositors instead of the two used by Brown et al. With a much tougher coordination problem and the random allocation, it was closer to the Diamond-Dybvig model as it added strategic unknown/uncertainty. Chakvarty et al allow one bank's depositors access to information on the banks' liquidity stance before choosing to withdraw or not whilst the other banks' depositors are denied such information but must make

a choice to withdraw or not based on the what they see bank A's depositors doing. The conclusion was that bank B's depositor reactions and decisions were highly affected by bank A's depositors' actions regardless of bank B's liquidity standings.

In the case of Calomiris and Gorton, (1991) they found bank runs to be more related to financial/stock market performance than agricultural shocks. Contagions in the banking sector are not frequent, Colomiris and Gorton, therefore, studied the causes of bank runs and panics in the National Banking of United States from 1863 to 1913. All cases of banking crisis within this period were assessed and aside from finding stock market shocks more correlated to bank runs than agricultural declines; they also discovered panics to weaken bank assets leading to bank failure and in other cases, the banks' assets were already weak before the panic.

Iyer and Puri (2012) in their experimental studies bank-depositor relationships to be a powerful tool that could determine the extent of a run. They looked into the institutional factors affecting bank runs and how depositors react or behave with regard to a bank that is affected by a large bank failure using the 2001 cooperative bank failure as their case.

(Brown et al.,2016; Chakravarty et al., 2014; Garratt and Keister, 2009; Kiss et al., 2014; Schotter and Yorulmazer, 2009; Davis and Reilly, 2016) all stand with the view that bank runs may be observed in that, depositors will withdraw their deposits because they see quite a number of their fellow depositors withdrawing. Panic behaviour is being pushed to stand alone as a source of a bank run by these researchers. The idea here is that; because other depositors are withdrawing, even depositors who do not wish to withdraw will be tempted due to fear (panic) that the bank will run out of funds to pay them and so they also go to withdraw their funds to avert their loss.

2.4 Experiences of clients and banks during panic withdrawals

With few researches in the international literature on the topic, none has looked at the features and types of customers or depositors who panic withdraw as well as the kind of banks which face these contagions when depositors decide to withdraw. This study focuses on the case of Ghana and investigates the similarities of both depositors and banks in the middle of the bank run situation. Why there is bank run in the country is, even though the researcher expects a panic run might be the case.

2.5 Chapter Summary

The literature on bank runs was discussed in this chapter. The theoretical literature broadly categorized into two; being bank run resulting from depositor coordination failure and bank runs resulting from fundamental failure and several empirical works reviewed. The researcher finds a gap in the literature and chooses to fill this gap by studying the characteristics of depositors who panic withdraw before and after four banks in Ghana were consolidated. The characteristics of the banks from which panicking depositors were withdrawing from or depositing after withdrawing is also another focus of the study.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter of the study will explain the research methods that were used to achieve the objectives of the study. Themes that are discussed under this chapter include; design of the study, population of the study, sample size and sampling technique, and data collection instruments.

3.2 Research Design and Approach

According to Babbie (2002), a research design is explained as the arrangement and structuring of various components for the collection as well as the analysis of data in a form that is aimed at combining relevance to the purpose of the study. This research used primary data for analysis as there is no literature on the subject in Ghana. Data was collected from bank customers in Accra. Being an exploratory study in nature, a qualitative approach was used to research the characteristics and similarities of banks experiencing bank runs and the customers in panic and causing the bank to run pandemic in Ghana. The sampled questionnaire was distributed to customers to solicit information pertaining to their behaviours/reactions upon the collapse and merger of some banks in Ghana. Beige Bank, Construction Bank, Royal Bank, uniBank and Sovereign bank were consolidated to bring about the Consolidated Bank Ghana Limited. The research tries to understand the studied area(s) that are learning about but seen from the viewpoint of the researched. Qualitative research design, therefore, allows the researcher to identify either the factors causing bank runs in Ghana and the characteristics of banks experiencing bank runs as well as what type of customers are prone to panic withdrawals.

3.3 Population of the Study

Mason et al. (2007) describe the population of a given study as the collection of data of all possible objects, persons or even measurements of interest. Others such as Sekaran (2008) also defined a population to be the aggregate of collection of items or elements concerning which inferences are made and therefore refers to all the possible elements that are of interest to the researcher. The population of this study took into consideration individuals within Greater Accra Region who are financially active and has some form of financial asset or investment. The researcher chooses the respondents via random sampling. The researcher distributes 80 questionnaires to 80 corresponding customers to make up the sample population. Mason et al. (1997) define a population sample as a set of individuals or objects that have been chosen from a larger population to represent the larger population.

3.4 Data Sources, Collection, and Analysis

The researcher uses a structured close-ended questionnaire to solicit information from depositors. The questionnaire addresses the factors affecting bank runs in Ghana, the types of banks experiencing bank runs and customers aiding bank runs by panic withdrawing.

According to Babbie (2002) and Cooper and Schindler (2004) a study that employs the descriptive method portrays the variables by answering who, what and how questions. Data collected is then coded and simple percentages are taken and described to answer the objectives of the research.

For the study to achieve its objectives, both the purposive and convenience sampling methods will be employed to obtain information from different groups of customers. The purposive sampling is also referred to as the judgmental sampling method and this is a method that selects the sample that will give the best data which will aid in the achievement of the study objectives/purpose.

Convenience sampling technique also referred to as grab or opportunity sampling is a kind of non-probability sampling which has to do with samples being obtained from that side of the population which is close to hand. The study, therefore, expects to use this technique in addition to the purposive because only respondents that are easily reached will be used for the study.

After data has been obtained for a study, its analysis is key. Burns and Grove (2003) explained the concept to be a way by which data is reduced and organized in a form which will produce results/findings which need to be interpreted by the researcher. Additionally, Hyndman (2008) also reported that the processing of data entails the translation of answers provided on a questionnaire into a more suitable form which can be manipulated for the production of certain relevant statistics. This data processing may entail coding, editing, data entry as well as the monitoring of the entire data processing processes. The study expects to obtain qualitative data from the field and this data after being collected will be made ready for analysis via editing, attending to questionnaires with blank responses, coding as well as categorizing and then keying this into Statistical Package for Social Sciences which is popularly known as SPSS for analysis after which the researcher will interpret the result of the analysis that is generated from SPSS. Microsoft Excel will be used to complement SPSS especially in production of charts and tables.

3.5 Ethical Considerations

Respondents were also be asked to participate in the study voluntarily. Respondents were informed that the research was for academic purpose and data to be collected would not be in a manner that would enable anyone trace the results to a respondent.

CHAPTER FOUR

ANALYSIS AND INTERPRETATION

4.1 Introduction

This section outlines firstly the demographics information of the variables used in this study. The demographics information will be presented based on age, education, gender, and employment industry. The section further goes on presenting the results for the factors driving panic withdrawal which will be based on the bank type, how long one has been with the bank, the product type, whether one has an account with other banks or financial institutions viz. The section further lays out the analysis on characteristics and similarities of depositors involved in bank run all based on the objectives of the study.

4.2 Demographics Information

Figure 4.1 reports on the demographic characteristics in the present study. These variables included age, education, gender and employment. See below for details.

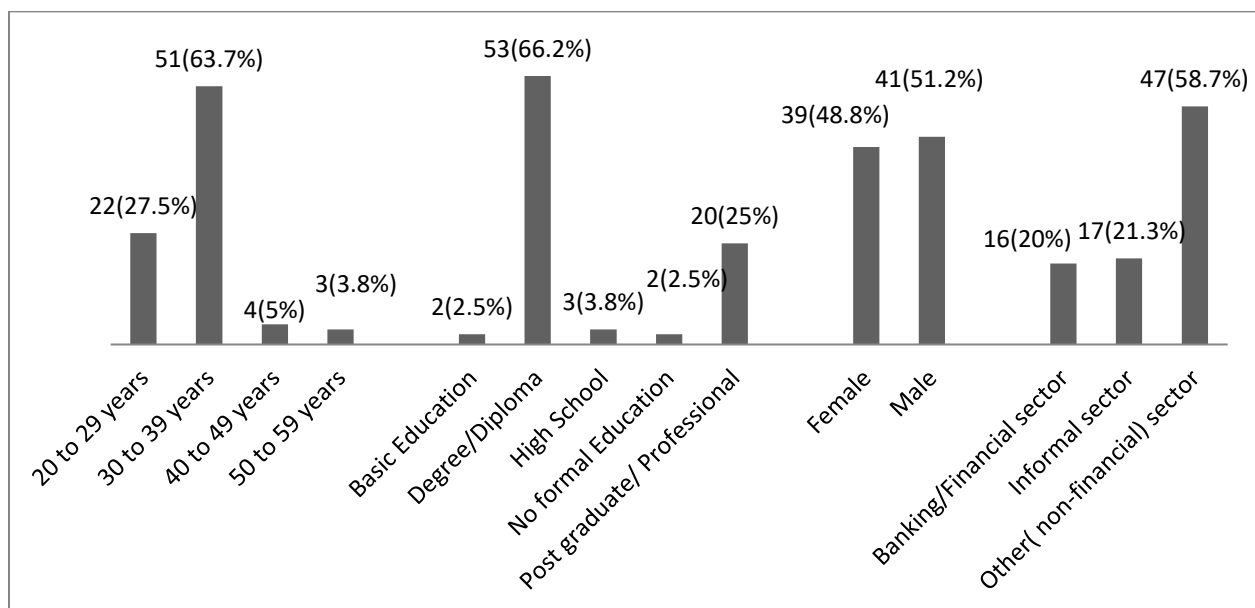


Figure 4. 1 Demographic Characteristics of Respondents

Out of 80 respondents, 22 of them representing 27.5 percent are from the ages of 20 to 29 years of age. On the other hand, a large percentage of 63.7 percent are from the ages of 30 to 39 years out of the 80 respondents representing 51 respondents. The ages from 40 to 49 years constitute 4 respondents out of a total of 80 respondents representing 4 percent. The last age division, 50 to 59 years presents a percentage of 3.8 percent corresponding to 3 respondents out of the total 80 clients.

As regarding education, a total of 80 respondents in basic education, degree/ diploma, high school, no formal education and post-graduate/ professional levels of education. Basic education has 2 respondents from a total of 80 respondents representing 2.5 percent. A huge percentage was covered by degree/ diploma respondents with a percentage of 66.3 percent comprising of 53 respondents out of 80 respondents. For high school, 3 respondents represent 3.8 percent out of the total of 80 respondents. A percentage of 2.5 percent represents respondents with no formal education which shows 2 respondents out of 80 respondents. Out of 80 respondents, 20 associates to postgraduate/ professional with a percentage of 25.0 percent.

In regards to gender, 39 respondents out of 80 respondents are female which represents 48.8 percent of the total respondents. On the other side, out of 80 respondents, 41 of them are male representing a percentage of 51.2 percent.

With regards to the employment industry of the correspondents, the banking/ financial sector involves 16 respondents out of a total of 80 respondents representing 20.0 percent. Also, out of 80 respondents, 17 represents employment in an informal sector with a percentage of 21.3 percent. Regarding the other formal (non-formal) employment industry is a 58.8 percent constituting 47 respondents out of the total 80 respondents.

4.3 Factors Driving Panic Withdrawal

To explore the various factors driving panic withdrawal, we first explore the various bank types that the respondents save with. Out of 80 respondents, 18 save with foreign private-owned bank which is equivalent to 22.5 percent. Also, 16 out of 80 respondents save with local private-owned banks matching to 20.0 percent of the total. Respondents that save with other financial institutions sum up to 11 out of 80 with a respective percentage of 13.8 percent. Respondents also save in public/ government bank representing 43.8 percent with 35 respondents out of 80.

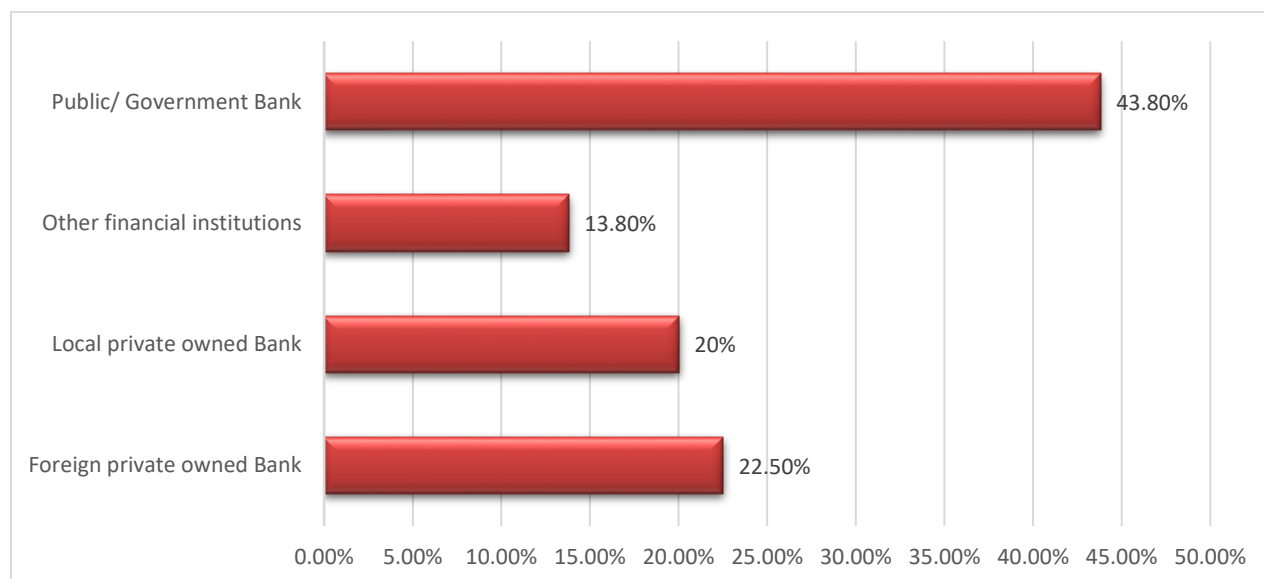


Figure 4. 2 Bank Types

The respondents were also enquired upon to find out how long they have been with their prospective banks and 46 out of 80 respondents had been with their banks for 0 to 9 years representing 57.5 percent. Another year range used in the study; 10 to 19 years had 33 out of 80 people equivalent to 41.3 percent. It also turned out that 1 out of 80 respondents indicated 20 to 29 years of being with their prospective bank representing 1.3 percent of the total.

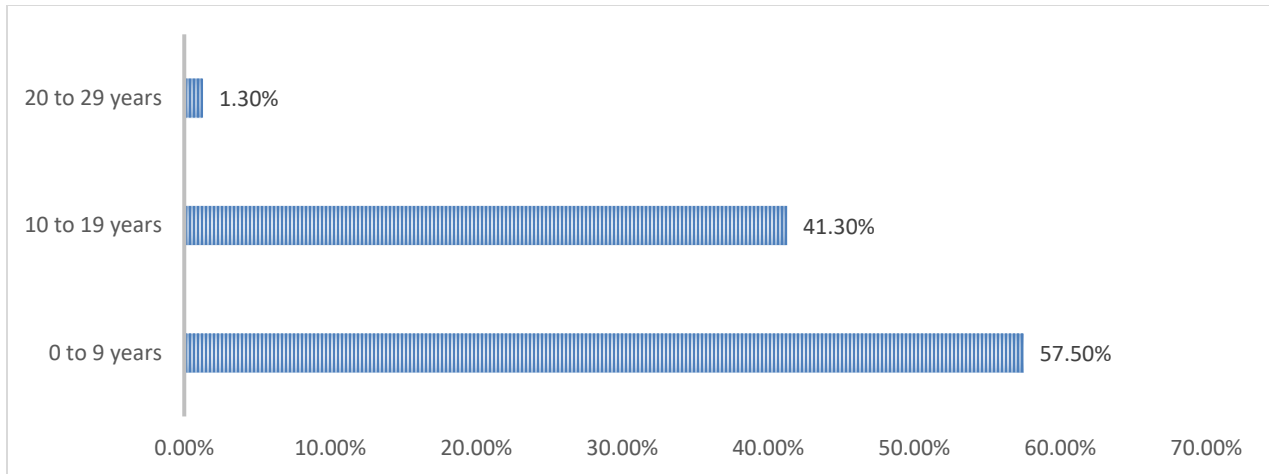


Figure 4. 3 Number of Years Respondents Banked With Their Banks

The respondents were also inquired from to determine their product or account types with their prospective banks and 13 out of 80 of them has a current account with their banks matching 16.3 percent of the total. On the other hand, respondents have other forms of investment e.g fixed deposits with their prospective banks with 16.3 percent of the total also representing 13 respondents out of 80. Out of 80 respondents is 54 respondents having savings account with their prospective banks representing 67.5 percent of the total.

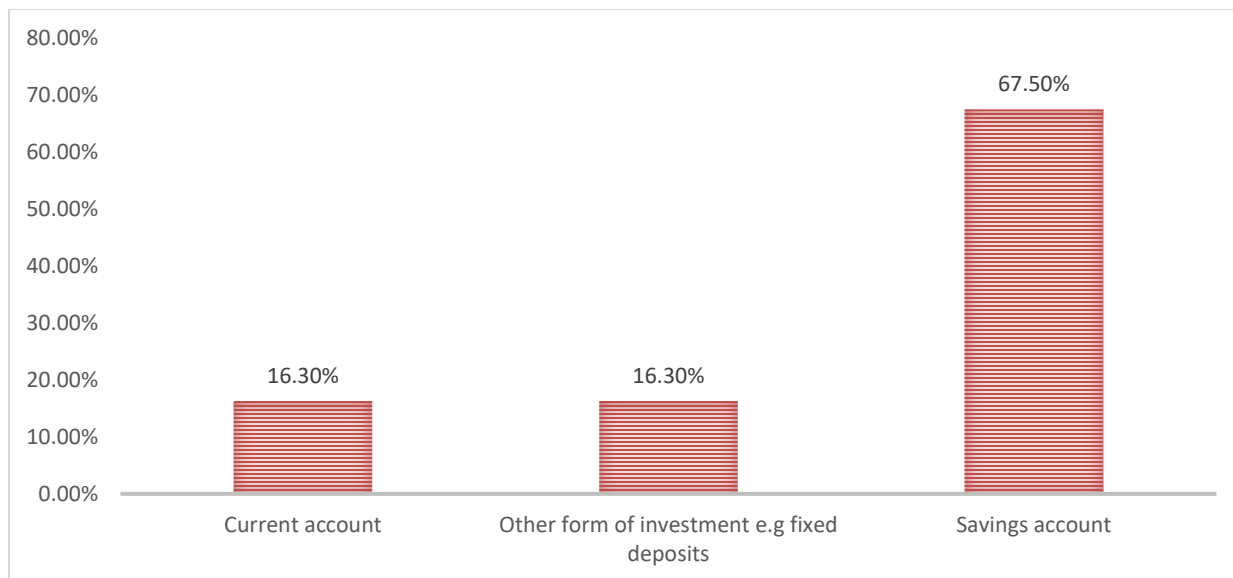


Figure 4. 4 Type of Products Offered by Banks

Inquiries were made on whether the respondents have other banks accounts, monetary savings/ investments with other financial institutions and 23.8 percent replied with a “No”. This indicates that 19 out of 80 respondents are associated with not having bank accounts, monetary savings/ investments with other financial institutions. The “Yes” group of respondents represented 76.3 percent consisting of 61 out of 80 respondents indicating they have bank accounts, monetary savings/ investments with other financial institutions.

Table 4. 1 Accounts, Monetary Savings/ Investments with other Financial Institutions

	Frequency	Percent
No	19	23.8
Yes	61	76.3
Total	80	100.0

Source: Field data (2019)

The respondents were also queried on whether they remember the collapsed/ consolidated banks and all 80 responded replied positively with a “Yes” indication their remembrance of the collapsed/ consolidated banks.

Inquiries were also made on whether the respondents had an account with any of the collapsed/ consolidated bank and 45 out of 80 indicating 56.3 percent of them indicated not having accounts with the banks in question with a “No”. On the other side is 43.8 percent respondents representing 35 out of 80 indicating that they had accounts with the collapsed/ consolidated banks.

Table 4. 2 An Account with any of the Collapsed/ Consolidated Banks

	Frequency	Percent
No	45	56.3
Yes	35	43.8
Total	80	100.0

Source: Field data (2019)

The respondents were also examined on when they withdrew their deposits from their collapsed/ consolidated banks. Out of 80, 25 of the respondents identified withdrawing their deposits a month before the collapse of the banks representing 31.3 percent of the total. A number of respondents, 15 out of 80 indicated the withdrawal of their deposits after the collapse of the banks with a respective percentage of 18.8 percent. 50.0 percent of respondents indicated they did not withdraw their deposits from the bank at any time and they comprised of 40 out of 80 respondents in all.

Table 4. 3 Whether Respondents Withdraw their Deposits from their Bank

	Frequency	Percent
A month before the collapse	25	31.3
After the collapse	15	18.8
I did not withdraw my deposits	40	50.0
Total	80	100.0

Source: Field data (2019)

Respondents were also inquired about why they did or did not withdraw their deposits from the collapsed banks. 15 out of 80 respondents replied with the reasons being the access to their deposits covering 18.8 percent of the total. Respondents also answered that they had followed other depositors' behavior around withdrawal issues and this is 41.3 percent equivalent to 33 respondents out of 80 in all. On the other side is another group of respondents covering 15.0 percent and whose decisions on why they did or did not withdraw was based on the performance of the banks and they amounted to 12 out of 80 respondents. Regarding the trust respondents have in their banks is 20 out of 80 respondents with 25.0 percent of the total.

Table 4. 4 Reasons for Withdrawal / Non-withdrawal of Deposits

	Frequency	Percent
Access to my deposits	15	18.8
I followed other depositors' behavior	33	41.3
Performance of my bank	12	15.0
Trust of my bank	20	25.0
Total	80	100.0

Source: Field data (2019)

Here, respondents were probed on where they deposited their funds after withdrawals from the collapsed banks and 11 out of 80 respondents representing 13.8 percent deposited in Foreign private-owned bank. Out of 80, 1 respondent deposited with local private owned bank with a percentage of 1.3 percent while 2 out of 80 respondents deposited their withdrawn funds with other financial institutions with a percentage of 2.5 percent. On the other side is 14 out of 80 respondents that deposited in public/ government bank with 17.5 percent of the total. Lastly, 52 out of 80 respondents equivalent to 65.0 percent deposited in none of the above-mentioned banks and financial institutions.

Table 4. 5 Avenues to Deposit Panic Withdrawal

	Frequency	Percent
Foreign private owned bank	11	13.8
Local private owned Bank	1	1.3
Other financial institutions	2	2.5
Public/ Government bank	14	17.5
None of the above	52	65.0
Total	80	100.0

Source: Field data (2019)

With 22 respondents of the age range of 20 to 29 years from a total of 80 respondents, 11 respondent each responded No and Yes when asked whether they had an account with any of the collapsed/ consolidated banks. Also, respondents from the ages of 30 to 39 years summing up to 51 out of 80 replied to whether they had an account with any of the collapsed/ consolidated banks such that, 32 responded No and 19 responded Yes. The 40 to 49 years age range had 4 respondents out of 80 to whether they had an account with any of the collapsed/ consolidated banks such that, 2 each responded No and Yes. Furthermore, 3 respondents out of a total of 80 answered to whether they had an account with any of the collapsed/ consolidated banks in that 0 responded No and all 3 responded Yes.

Table 4. 6 Age & Account with any of the Collapsed/ Consolidated Banks

		Did you have an account with any of the collapsed/ consolidated bank?		Total
		No	Yes	
Age	20 to 29 years	11	11	22
	30 to 39 years	32	19	51
	40 to 49 years	2	2	4
	50 to 59 years	0	3	3
Total		45	35	80

Source: Field data (2019)

With regards to education, 20 out of 80 respondents who are of post-graduate/ professional educational backgrounds answered to whether they had an account with any of the collapsed/ consolidated bank such that, 12 answered No and 8 answered Yes. Respondents with degree/ diploma educational levels came 53 out of 80 in number of which 32 answered No and 21 Answered yes when asked whether they had an account with any of the collapsed/ consolidated banks. High school educational level respondents were 3 out of 80 of which 1 answered No and 2 answered Yes when probed on whether they had an account with any of the collapsed/ consolidated banks. Respondents with basic education and no formal education with 2 out of 80 respondents each had the same replies when asked whether they had an account with any of the collapsed/ consolidated banks such that, 0 answered No and 2 answered Yes in both cases.

Table 4. 7 Education & Account with Collapsed/ Consolidated Banks

		Did you have an account with any of the collapsed/ consolidated bank?		Total
		No	Yes	
Education	Post graduate/ Professional	12	8	20
	Degree/ Diploma	32	21	53
	High School	1	2	3
	Basic Education	0	2	2
	No formal Education	0	2	2
Total		45	35	80

Source: Field data (2019)

Gender wise, 39 out of 80 female respondents answered such that, 19 answered No and 20 answered Yes when asked if they had an account with any of the collapsed banks. On the other hand, 41 out of 80 male respondents answered whether they had an account with any of the collapsed/ consolidated banks such that, 26 answered No and 15 answered Yes.

Table 4. 8 Gender & Account with any of the Collapsed/ Consolidated Banks

		Did you have an account with any of the collapsed/ consolidated bank?		Total
		No	Yes	
Gender	Female	19	20	39
	Male	26	15	41
Total		45	35	80

Source: Field data (2019)

When asked when the respondents withdrew their deposits from their banks, 22 out of 80 respondents all from 20 to 29 years of age replied such that, 9 withdrew a month before the collapse, 4 withdrew after the collapse and 9 did not withdraw their deposits with the bank. From the ages of 30 to 39 years were 51 out of 80 respondents to when they withdrew their deposits from their banks of which 13 replied that they had withdrawn a month before the collapse, 9 withdrew after the collapse and 29 did not withdraw their funds from the collapsed/ consolidated banks. With the age range of 40 to 49 years, 4 out of 80 respondents answered to when they withdrew their deposits from their banks of which withdrawals a month before the collapse and after the collapse had one respondent each and 2 respondents on the other hand that did not withdraw their deposits from the bank. Lastly, the ages from 50 to 59 years had 3 out of 80 respondents to when they withdrew their funds from their banks such that, 2 and 1 respondents answered a month before the collapse and after the collapse respectively and 0 respondents did not withdraw their deposits from the collapsed/ consolidated banks.

Table 4. 9 Age and Withdrawal Behaviour

		Withdrawal behaviour			Total
		A month before the collapse	After the collapse	I did not withdraw my deposits	
Age	20 to 29 years	9	4	9	22
	30 to 39 years	13	9	29	51
	40 to 49 years	1	1	2	4
	50 to 59 years	2	1	0	3
Total		25	15	40	80

At the post-graduate/ professional educational level was 20 out of 80 respondents to when they withdrew their deposits from their banks such that, 4 replied a month before the collapse, 3 replied after the collapse and 13 replied they did not withdraw their deposits from the banks. Also, the degree/ diploma educational level respondents summing up to 53 out of 80 replied to when they had withdrawn their deposits from their banks. Respondents from high school were 3 out of 80 of which 0 replied a month before the collapse, 1 replied after the collapse and 2 replied they did not withdraw their deposits when probed on when they withdrew their deposits from their bank. Basic educational level respondents were a total of 2 out of 80 of which 2 replied a month before the collapse and no one (0) each replied after the collapse and I did not withdraw my deposits when asked when they withdrew their deposits from their banks. Lastly, 2 out of 80 respondents had no formal education and when asked when they withdrew their deposits from their banks, 1 each replied a month before the collapse and after the collapse and 0 respondents replied they did not withdraw their deposits from the collapsed/ consolidated banks.

Table 4. 10 Education & Withdrawal Behaviour

		Withdrawal behaviour			Total
		A month before the collapse	After the collapse	I did not withdraw my deposits	
Education	Post graduate/ Professional	4	3	13	20
	Degree/ Diploma	18	10	25	53
	High School	0	1	2	3
	Basic Education	2	0	0	2
	No formal Education	1	1	0	2
Total		25	15	40	80

Source: Field data (2019)

In terms of gender, 39 out of 80 female respondents responded to when they withdrew their deposits from the bank such that, 17 answered a month before the collapse, 7 answered after the collapse and those that answered they did not withdraw their deposits from the bank were 15 in number. The response to the questionnaire also shows 41 out of 80 males respondents that were asked when they withdrew their deposits from the bank and their response is as follows; 8 equally responded a month before the collapse and after the collapse and 25 replied they did not withdraw their deposits from the collapsed/ consolidated banks.

Table 4. 11 Gender & Withdrawal Behaviour

		Withdrawal behaviour			Total
		A month before the collapse	After the collapse	I did not withdraw my deposits	
Gender	Female	17	7	15	39
	Male	8	8	25	41
Total		25	15	40	80

Source: Field data (2019)

When the respondents were asked why they did or did not withdraw their deposits, 22 out of 80 replied from the ages of 20 to 29 years such that 4 replied because of access to their deposits, 10 replied because they followed other depositors' behaviour, 2 replied that it was because of the performance of their bank and 6 replied it was because of the trust they had in their banks. Regarding inquiries as to why respondents did or did not withdraw their deposits, 51 out of 80 respondents replied from the ages of 30 to 39 years of which 11 stated that it was because of the access to their deposits, 18 replied it was because they followed other depositors' behaviour, 2 replied it was because of the performance of their bank and 13 replied it was because of the trust in their bank.

From the ages of 40 to 49 years sums up 4 out of 80 respondents that responded to why they did or did not withdraw their bank such that, no one replied it was because of the access to their deposits, 2 replied they followed other depositors' behaviour and 1 each replied it was because of the performance of their bank and because of the trust of their bank. The ages of 50 to 59 had a total of three respondents to why they did or did not withdraw their deposits and all three responded they followed other depositors' behaviour leaving no replies for access to their deposits, the performance of their bank and the trust of their bank.

Table 4. 12 : Age & Why Respondents Withdraw Their Deposits

		Why did you or did you not withdraw your deposits?				Total
		Access to my deposits	I followed other depositors' behaviour	Performance of my bank	Trust of my bank	
Age	20 to 29 years	4	10	2	6	22
	30 to 39 years	11	18	9	13	51
	40 to 49 years	0	2	1	1	4
	50 to 59 years	0	3	0	0	3
Total		15	33	12	20	80

Source: Field data (2019)

Respondents of post-graduate/ professional educational level came up 20 out of 80 when asked why they did or did not withdraw their deposits such that, 6 replied it was because of access to their deposits, 5 responded it was because of they followed other depositors' behaviour, 2 responded it was because of the performance of their bank and 7 responded it was because of the trust of their bank. Responding from the degree/ diploma educational level is 53 respondents out of 80 to whether they did or did not withdraw their deposits from that, 9 replied it was because of the access to their deposits, 21 replied they had followed other depositors' behaviour, 10 replied it was because of the performance of their bank and 13 replied it was because of the trust of their bank.

Springing from the high school educational level is 3 out of 80 respondents of which all 3 responded it was because of the access to their deposits leaving no response for those that followed other depositors' behaviour, performance of their banks and trust of their banks when asked why they did or did not withdraw their deposits from the collapsed/ consolidated banks. Respondents from the basic educational level and those with no formal education each came out with 2 out of 80 respondents of which when asked why they did or did not withdraw their deposits answered such that, all 2 each replied it was because they followed other depositors' behaviour leaving no replies for access to their accounts, performance of their banks and the trust of their bank.

Table 4. 13 Education & withdrawal of deposits

		Why did you or did you not withdraw your deposits?				Total
		Access to my deposits	I followed other depositors' behaviour	Performance of my bank	Trust of my bank	
Education	Post graduate/ Professional	6	5	2	7	20
	Degree/ Diploma	9	21	10	13	53
	High School	0	3	0	0	3
	Basic Education	0	2	0	0	2
	No formal Education	0	2	0	0	2
Total		15	33	12	20	80

Source: Field data (2019)

Gender wise, 39 out of 80 female respondents responded to whether they did or did not withdraw their deposits such that, 7 replied it was because of the access to their banks, 19 replied it was because they followed other depositors' behaviour, 2 replied that it was because of the performance of their bank and 11 replied it was because of their trust in their bank. On the other hand, 41 out of 80 respondents answered to why they did or did not withdraw their deposits of which 8 replied it was because of the access to their deposits, 14 replied it was because they followed other depositors' behaviour, 10 replied it was for the performance of their bank and 11 replied it was because of the trust of their bank.

Table 4. 14 Gender & why respondents withdraw their deposits

		Why did you or did you not withdraw your deposits?				Total
		Access to my deposits	I followed other depositors' behaviour	Performance of my bank	Trust of my bank	
Gender	Female	7	19	2	11	39
	Male	8	14	10	9	41
Total		15	33	12	20	80

Source: Field data (2019)

When asked where they did deposit their funds after withdrawal, 22 respondents from the ages of 20 to 29 years replied of which 4 replied foreign private-owned banks, 1 replied local private-owned banks, 1 replied other financial institutions, 7 replied public/ government banks and 9 replied none of the above. Respondents from 30 to 39 years of age responded 51 out of 80 to where they did deposit their money after withdrawal such that, 6 replied foreign private-owned banks, no one (0) replied for both local private-owned banks and other financial institutions, 7 replied public/ government banks and none of the above had a large number of replies of 38. The ages from 40 to 49 years had a total of 4 out of 80 replies to where they did deposit after withdrawal of which no one (0) replied for foreign private-owned banks, local private-owned banks, and public/ government banks, 1 replied for other financial institutions and 3 relied upon none of the above. Lastly, the ages of 50 to 59 years had 3 respondents of which 1 replied foreign private-owned banks, 2 replied none of the above and no one (0) replied local private-owned banks, other financial institutions and public/ government banks to where they did deposit their funds after withdrawal.

Table 4. 15 Age & where deposited after withdrawals

		Where did you deposit after your withdrawal?					Total
		Foreign private owned bank	Local private owned Bank	Other financial institutions	Public/ Government bank	None of the above	
Age	20 to 29 years	4	1	1	7	9	22
	30 to 39 years	6	0	0	7	38	51
	40 to 49 years	0	0	1	0	3	4
	50 to 59 years	1	0	0	0	2	3
Total		11	1	2	14	52	80

Source: Field data (2019)

With regards to education, 20 out of 80 respondents were identified as having post-graduate/ professional educational background. Out of the 20 post-graduate/ professional respondents to where they deposited their withdrawals from the bank, 3 replied foreign private-owned banks, no (0) respondents replied for both local private owned bank and other financial institutions, 2 replied public/ government bank and 15 replied none of the above. For degree/ diploma educational background, 53 out 80 respondents replied to where they deposited their funds after withdrawal such that, 5 replied foreign private-owned bank, 1 each replied local private owned bank and other financial institutions, 12 replied public/ government bank and 34 replied none of the above.

With high school education is a total of 3 out of 80 respondents to where they deposited their withdrawals from the banks of which 2 replied foreign private-owned bank, 1 replied none of the above types of banks and there were no replies for local private-owned banks, other financial institutions, and public/ government bank. Basic education also came out with 2 respondents out

of 80 of which 1 each responded other financial institutions and none of the above, no replies for foreign private-owned banks, local private-owned banks and public/ government banks when asked where they deposited their funds after withdrawal. Out of 80 respondents in all to where they deposited their deposits after withdrawal, 2 responded such that, 1 each responded for foreign private-owned banks and none of the above leaving no replies for local private-owned banks, other financial institutions and public/ government banks.

Table 4. 16 Education & where deposited after withdrawals

		Where did you deposit after your withdrawal?					Total
		Foreign private-owned bank	Local private-owned Bank	Other financial institutions	Public/ Government bank	None of the above	
Education	Post graduate/ Professional	3	0	0	2	15	20
	Degree/ Diploma	5	1	1	12	34	53
	High School	2	0	0	0	1	3
	Basic Education	0	0	1	0	1	2
	No formal Education	1	0	0	0	1	2
Total		11	1	2	14	52	80

Source: Field data (2019)

In respect to gender, 39 out of 80 respondents which were males responded to where they deposited their funds after withdrawal such that, 6 replied foreign private-owned banks, 1 replied local private-owned banks, 1 replied other financial institutions, 9 replied public/ government banks and 22 replied none of the above. On the other hand is 41 female respondents such that, 5 responded foreign private-owned banks, 0 replied local private-owned banks, 1 replied other financial

institutions, 5 replied public/ government banks and 30 replied none of the above when asked where they did deposit their withdrawals.

Table 4. 17 Gender & where deposited after withdrawals

		Where did you deposit after your withdrawal?					Total
		Foreign private-owned bank	Local private-owned Bank	Other financial institutions	Public/ Government bank	None of the above	
Gender	Female	6	1	1	9	22	39
	Male	5	0	1	5	30	41
Total		11	1	2	14	52	80

Source: Field data (2019)

4.4 Chapter Summary

This chapter reports the results of the analysis carried out. First, descriptive statistics of the responses have been presented, as well as, the demographic features of the respondents. Further, to obtain deeper insights from the dataset, cross-tabulations have been explored to unearth the individual features of the respondents that drive the various bank run related actions.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter provides an overall conclusion drawn from the study. It summarizes the results and provides some indications of the implications of the results for the purpose of practice policy and for future research on the banking industry.

5.1 Conclusions of the Study

The study aims to explore the factors that drive panic withdrawal in Ghanaian banks from the individual customer perspective. In addition, the study examines the reasons for withdrawals after bank collapse. The third objective of the study is to examine the further actions that bank clients take after withdrawing their deposits during collapse of banks. A cross-sectional data set was collected from 80 customers of banks in Ghana using a survey instrument. The data was examined through descriptive analysis, frequency tables and cross-tabulations. The results indicated that majority of the respondents, representing 91.2 percent, are within the age bracket of 20 to 39 years while the rest above 39 years. In addition, more than 90 percent of the respondents are degree or professional qualification holders. Majority of the respondents are men and also workers in the non-financial sector. Most of the respondent bank with government-owned banks followed by foreign banks, and then local banks. About 42.5 percent of respondents have been banking for more than 10 years while less 57.5 percent have been banking for less than 10 years. Majority of these respondents have savings accounts with the banks.

The results indicated that the majority of the customers of banks have other forms of accounts with financial institutions in form of investments or monetary savings. In total, 44 percent of respondents have accounts with at least one of the failed or collapsed banks. Overall, half of the respondents withdrew their funds after the collapse of their banks while the other half did not. Also 31.3 percent of the respondents withdraw their funds before their banks collapsed. Customers withdraw their funds because they follow other depositors, and because of their bank's performance. Most of the respondents deposited with public banks after withdrawing their funds followed by depositing with foreign banks. The result indicated that the majority of those under the age of 39 years had accounts with the collapsed banks and majority of these people are those with at least a degree qualification. Most of the customers did not withdraw their funds from their banks and some were able to act earlier before the banks collapsed.

The result also suggests that withdrawals were made by depositors who are youthful (below the age of 39 years) mostly because of their lack of trust for their bank, or the bank's performance. Also, some identified easy access to the funds as the motivating factor for their withdrawals. On gender basis, most men made their withdrawals based on bank performance issues while for females, such decisions were made based on trust issues or by following other depositors. Highly educated customers ended up keeping their funds away from the formal financial sector after they made their withdrawals.

5.2 Recommendations

The study provides a descriptive evaluation of some of the factors that are characterized by the collapse of banks in Ghana in recent years, 2017-2018. The results are important for practitioners

in the banking industry. First, the results provide insight into some of the factors that motivated bank customers to withdraw their funds before or after the collapse of the banks. It also provides insights into where customers deposited their funds after withdrawing for the defunct banks.

Furthermore, the results provide insight into the demographic features of the factors driving the withdrawals by the customers, as well as, those that motivate them to deposit their funds later with some type of banks. The study also provides implications for the use of data analytics by banks and financial institutions where the various customer characteristics are factored into making decisions regarding customers. The result may be useful to provide insights into the demographic features of the customers and their actions when banks are at the verge of collapsing or a collapsed. In the future, further examination can be done to provide other relevant explanations into what factors drive bank run. In addition, some financial statement modelling could be done on the banks to provide such insights. One of the limitations of this study is the small sample size of the study. Future studies should explore larger sample sizes to enhance the accuracy of the predictions.

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APPENDIX: QUESTIONNAIRE



**UNIVERSITY OF GHANA
DEPARTMENT OF FINANCE
(University of Ghana Business School)**

Dear Respondent,

This study seeks to solicit information on the triggers of Bank Runs in Ghana. Please note that all information provided will be strictly confidential and will be used for academic purposes only. By completing this questionnaire, you indicate that you voluntarily wish to participate in this research. For any questions please contact the researcher; details are below.

Researcher's name: Martin Justice Adjei

Contact: 0246848259

Section 1: Demographic information

1. Age

Less than 20

20-29

30-39

40-49

50-59

60+

2. Highest level of formal education.

Post Graduate/ Professional

Degree/ Diploma

High School

Basic Education

No formal Education

3. Gender

Male

Female

4. Employment industry

- Banking/ Financial sector*
- Other formal (non-financial) sector*
- Informal Sector*

5. What type of bank do you bank with?

- Public/ Government Bank*
- Local private owned Bank*
- Foreign private owned bank*
- Other financial institutions*

6. How long have you banked with your bank?

- 0 – 9 years*
- 10 – 19 years*
- 20 – 29 years*
- 30 or more years*

7. What type of product do you have with your bank?

- Current account*
- Savings account*
- Other form of investments e.g. fixed deposits*

8. Do you have other bank accounts, monetary savings/ investments with other financial institutions?

- Yes*
- No*

9. Do you remember the collapsed/ consolidated banks?

- Yes*
- No*

10. Did you have an account with any of the collapsed/ consolidated bank?

- Yes*
- No*

11. When did you withdraw your deposits from your bank?

- A month before the collapse*
- After the collapse*
- I did not withdraw my deposits*

12. Why did you or did you not withdraw your deposits?

Trust of my bank

Performance of my bank

I followed other depositors' behaviour

Access to my deposits

13. Where did you deposit after your withdrawal?

Public/ Government bank

Local private owned Bank

Foreign private owned bank

Other financial institutions

None of the above