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Herding Behaviour and Investment Decisions of Individuals with Fraudulent Microfinance Institutions in Ghana

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Abstract
Access to credit and financial services of sections of the societies in low-income developing countries has led to the proliferation of genuine and fraudulent microfinance institutions in recent times and this has been the subject of intense interest by researchers. This study explores the sociological and psychological factors that influence investment decisions of individuals with microfinance institutions to maximize their economic wellbeing in spite of the high incidence of atrophy of such institutions and fraud. This is an exploratory research which adopted a descriptive-analytic approach in the analysis. In all 165 respondents were purposively selected from five administrative areas in the Brong Ahafo Region in Ghana. The study found that out of the total respondents of 165 who ever engaged in business with microfinance institutions, 119 of them have ever been swindled by microfinance institution. The respondents exhibited herding behaviour in their investment decisions with these fraudulent microfinance institutions. These fraudulent microfinance institutions used interest rate as a conduit to deceive and lure people to save with them. The respondents used bounded rationality in their investment decisions which resulted in the bad investment with these fraudulent microfinance institutions.

Keywords: Herding behaviour, bounded rationality, investment decision, fraudulent microfinance.

Introduction

Access to credit and financial services of sections of the societies (usually the poor) in low-income developing countries has been the subject of intense interest and research by both the academia and international financial institutions (IFIs) since the early 1990s. Globally, microfinancing of microenterprises has emerged as an effective strategy for poverty reduction espercially in empowering women, assisting vulnerable groups, and improving standards of living (Goldberg, 2005; Imai, Arun and Annim, 2010; Mahjabeen, 2008). Widespread market failures and institutional failures that diminished the ability of the self-employed, individual and family (micro) enterprises to access credit from formal banking institutions turned attention to the informal institutions which have served the needs of the poor and the segmentation of financial markets in low-income developing countries. There was a shift in focus to harnessing the potential of informal financial institutions to serve as a vehicle for the mobilization and channelling of financial resources to the poor through the activities of informal savings systems. Referred to as the 'rural microfinance revolution', informal savings systems were expected to promote greater poverty reduction, improve the standard of living, and empowerment of women.

The introduction of the financial sector adjustment programme (FINSAP) in 1988 as part of neoliberal policy reforms in Ghana introduced in April 1983 created a liberalized monetary system which has since fostered the proliferation of microfinance institutions. While the interest in microfinance institutions have spawned substantial literature that have focused extensively on their scope and coverage, sustainability, greater poverty reduction and greater empowerment of the poor and marginal groups, especially women, there has also been pervasive failures of such institutions and instances of fraud and the loss of deposits of customers (the cases of Pyram and R4 scams in 1995 in Ghana being classic cases). These developments by no means appear to have diminished investor interest in these institutions; on the contrary, it seems to be on the upward. Substantial studies exist on the connections between investor behaviour and crises in financial markets in Europe and the Gulf states (Balcilar, Demirer and Hammoudeh, 2013; Corredor, Ferrer and Santamaria, 2015; Galariotis, Krokida and Spyrou, 2016). Yet hardly any studies have been done on the behaviour of investors in financial markets in Ghana, and this is a very important gap in the literature. Ghana is one country which has implemented one of the most far-reaching neoliberal economic policy reforms encompassing total liberalisation of the financial sector since the early 1980s.

This paper is primarily concerned with the economic behaviour of investors in financial markets in Ghana, with particular reference to microfinance institutions. Specifically, it examines the motivations that influence the decisions of individuals and households to whether or not invest in microfinance institutions in spite of the high incidence of atrophy of such institutions and fraud, with a special focus on sociological and psychological factors. We argue that neoclassical economics has severe limitations in explaining economic behaviour in financial markets, in particular its axiom of rational, atomistic, utility-maximising individuals and the neglect of collectivities and collective action problems, and that sociological and

psychological factors are inherently economic and rational in character and are important variables in explaining the behaviour of agents in financial markets.

In this paper, we adopt a descriptive-analytic approach to study the interactions between the institutions' behaviour, the influence of society, and the preferences of individuals and households to maximize their economic wellbeing in the long term. This approach is appropriate because it enables us to explain the dynamics and effects of the sociological and psychological factors, in addition to the purely economic motives, on the decisions to invest in microfinance institutions and the benefits and costs of the decisions. The major contribution of the paper is that while recognizing economic rationality as an important explanatory factor, we emphasize the limits of the fundamental axioms of neoclassical economics in explaining the economic behavior of actors in financial markets; instead, we emphasize the relative importance and explanatory power of the concepts of 'bounded rationality' and herd behaviour.

Theoretical Discussion and Literature review

Three main theoretical paradigms in contemporary financial economics provide the analytical framework for explaining the evolution and developments in financial market systems and the impact of policy reforms. In the main, market conditions can be linked to the stage and nature of institutional development. These paradigms are presented as complementary to each other but differentially focused on government failure/policy-based or structural/institutional and non-economic psychological and sociological explanations.

Government Failure or Policy-based Explanation: The Financial Repression Thesis

The starting point of the theoretical discussions on financial systems (and especially microfinance institutions) is the analysis of government failure. The financial repression hypothesis (Fry, 1982, 1988; McKinnon, 1973; Shaw, 1973) attributes underdeveloped and inefficient financial systems to government policy failure as a consequence of excessive government intervention. Other analysts perceive repressive policies as the prime cause of fragmentation of financial markets in developing countries (Roe, 1991). Financial repression may take various forms: the central bank may impose credit ceiling or rationing on the commercial banks, or insist that the banks lend to certain priority sectors; or nominal interest rates may be kept artificially low, so that in the context of high inflation the real interest is negative, and the acquisition of interest-bearing financial assets is discouraged (Thirlwall, 1999). In particular, ceilings on deposit and loan rates tend to raise the demand for investible funds and depress the supply. Unmet demand for funds compels financial intermediaries to ration credit by means other than the interest rate, while an informal market develops at uncontrolled rates. The result is the emergence of a fragmented financial or credit markets in which favoured borrowers obtain funds at subsidized, often highly negative real interest rates in the formal markets, while others are forced to seek credit in inefficient, expensive informal markets (Aryeetey, Hettige, Nissanke and Steel, 1997). Thus financial repression leads to misallocation of savings and credit. Another major criticism of government-

backed loan programs is that the default rates are very high and that most of the beneficiaries appeared to be the wealthy borrowers.

According to this perspective, financial liberalization would lead to financial deepening; improved efficiency in financial resource allocation to the most productive sectors; and increased flow of funds between segments, including improved access to formal finance of previously marginalized savers and borrowers.

Market Failure and Institutional Failure Argument and Microfinance

Conventional economic theory postulates that economic transactions in conditions of perfectly competitive markets (characterized by perfect competition and perfect information dissemination) are characterised by efficient allocation of resources and socially optimal outcomes, what is widely referred to as the efficient market hypothesis (EMH). However, in practice, markets do not work well all the times: sometimes, markets do fail, and market failure occurs when a competitive market fails to allocate scarce societal resources optimally to achieve the maximum possible social welfare. By the same token, credit market failures lead to inefficient allocation of credit among the members of the society which is particularly pernicious to the poor and underprivileged. In particular, rural credit markets in developing countries are characterized by pervasive market imperfections, resulting from institutional failures which lead to the unavailability of credit to the rural poor. Hoff and Stiglitz (1990) put forward an explanation for persistent market and institutional failures based on imperfect information on creditworthiness and differences in the costs of screening, monitoring and enforcing contract across lenders. Institutional failures, which are legendary, are thought to result from the difficulties in enforcing and monitoring repayments, scarcity of suitable collateral and under-developed property rights, the underdevelopment of complementary institutions such as insurance markets, and a high degree of covariant risks among borrowers resulting from insecure sources and volatility of income (Besley, 1994; Rao, 2012). In the circumstances, banks are unlikely to satisfy the credit demands of the self-employed and family (micro) enterprises due to high transactions costs, relative to commercial bank spreads between the interbank rate and lending rate, and smallholder farmers may have extremely limited access to formal sector credit in a liberalized financial market in which credit is allocated purely on commercial criteria; and whereas banks are unwilling to extend secured lines of credit to micro enterprises, banks in Ghana have been historically oriented to large firms, reflecting the penchant for short-termism.

Many economic decisions are however based on expected future economic conditions. Ignorance and uncertainty about the future mean that many decisions may turn out to be incorrect. Thus in the presence of the classic problems of information asymmetry and costly contracting, which are most widespread in low-income developing countries, market failures are conceived to result from adverse selection and moral hazard which undermine the operation of financial markets. Regarding enforcement problems in credit markets, the borrowers' commitment to repay in the future may not be credible. This brings up the centrality of acceptable collateral to reduce uncertainty by shifting the risk from lender to borrower. The

structural collateral is compounded by weaknesses inherent in the infrastructure that supports the financial system. For example, formal financial sector's ability to offset the risk of default may be limited by the absence of a well-functioning insurance market and of markets for the sale of confiscated collateral (Binswanger and Rosenzweig, 1986), coupled with the social difficulties of seizing the assets owned by the poor, which may be more costly to sell than their worth on second-hand markets (Roth, 2000).

Herding Behaviour

Despite the influential impact of the Keynesian revolution on economic thinking, and in particular, the importance of psychological and sociological factors that influence the financial behaviour of investors, and the inherent tendency of the financial market towards instability and collapse, ideas about the behaviour of individuals, households, and society and of financial markets continue to be dominated by neoclassical economic theory. Neoclassical economics rests on a number of theoretical assumptions in hypothesizing about the behaviour of economic agents. First, a fundamental axiom of neoclassical economics is that perfect and efficient markets are populated by individuals, not households, nor societies, nor communities. Second, individuals are rational, choosing, and maximizing in the pursuit of their preferences. Third, these preferences are purely private in character. From this narrow and restrictive perspective, the theory asserts that there are rational, independent, atomistic, and self-interested individuals who have at their disposal and use all relevant information efficiently, and endlessly seek to systematically maximize their unique private preferences.

A fundamental flaw of neoclassical economics, however, is that in practice it turns its methodology on its head, suggesting the recognition that some aspects of life are inherently collective or social rather than purely private, and individuals' and societies' preferences may and do often coincide (see Buchanan, 1978). The central problem for Keynesian economic theorizing and behavioral economics is the explanation of the central role of psychology, emotions, and sociological influences on the decisions of individuals that originate from the wider network of social ties in which the individual is embedded which formed the basis of much economic analysis. Thus rather than rational, atomistic, utility-maximizing individuals, actors tend to behave as collectivities, such as herds, with each individual motivated by the desire to minimize his/her exposure to risks or losses but to maximize his/her welfare function, which is usually similar to the society's overall welfare function. Though such behaviour may be inherently rational, the individual's behaviour is likely to be constrained by incomplete information and the limits imposed by human cognitive power or human and social conventions. The building blocks of the idea of 'bounded rationality' are thus derived from the recognition of a world in which market failure, information asymmetry, cognitive sightedness, institutions such as social conventions and norms, and human exuberance most often, if not always, influence economic decisions (Simon, 1978). From this perspective, a number of economic and non-economic models, which emphasise the important role of sociological, psychological and emotional factors, have been developed to explain herd behaviour in financial markets (Baddeley, 2010).

The conceptualization and definition of herding can be traced to the original influences of Keynesian economic thinking which focused on the significance of socio-psychological factors in explaining the economic behaviour of individuals; specifically, Keynes emphasized the motivations of individuals to imitate and follow the crowd in a world of uncertainty (Keynes, 1930). Herding has thus been defined as the phenomenon of individuals deciding to follow others and imitating group behaviours rather than deciding independently and atomistically on the basis of their own, private information. Keynes conceptualized herding as a response to uncertainty and individuals' perception of their own ignorance: people may follow the crowd because they think that the rest of the crowd is better informed. Such a behaviour has the potential to not only generate economic instability, but it can also create speculative episodes in financial markets.

A very important insight provided by Keynes relates to the ways in which socio-psychological influences result in imitative learning, reputation building and/or 'beauty contests' or profit-making. In this view, (Baddeley, 2010) in a seminal paper has highlighted the futility of attempts by neoclassical economists to explain herding using rational expectations theory by retaining rationality 'assumptions but in a weakened form', i.e. by deploying 'a range of different statistical hypotheses' which incorporate sociological influences while psychology and emotional factors are accorded very little role (Baddeley, 2010). On the contrary, the paper emphasizes an eclectic approach as essential to understanding how and why herding and social influence evolve in economic and financial context. Bringing together ideas from the social and behavioural sciences including economics, sociology, psychology, evolutionary biology and neuroscience, the most powerful explanation of herding and social influence emphasise the dual roles played by reason and emotion. As Baddeley (2010) has perceptively observed, emotions and socio-psychological traits exert a major moderating influence on herding and imitation in economic and financial decision-making.

This paper, therefore, integrates insights from economics and other social sciences to provide an understanding of how reason and emotion interact to generate herding in individuals' investment decisions in microfinance institutions in Ghana.

Microfinance

Microfinance is a catch-all term. It refers broadly to the provision of financial products targeted at low-income groups. The aim of such small-scale financial services may have to do with the desire to help the poor get out of poverty trap by developing new income generating activities or strengthening the existing income-generating activities. Microfinance institutions (MFI) to some extent solve the problems of collateral security and information asymmetry by lending to groups rather than individual so that there is joint liability for borrowers. Under the structure of financial services industry in Ghana, microfinance belongs to both deposit-taking institutions and non-deposit taking institution. Therefore in place of collateral security, the forced savings of the group of borrowers or individuals is substituted by some of these institutions. Similarly smaller but frequent repayment

instalments are found to be more suitable for borrowers having daily or weekly earnings. The local presence of these institutions also enables them to be in constant touch with the borrowers thereby reducing the transaction costs of borrowing (Rao, 2012). Customers of microfinance institution may borrow from the institutions for a variety of purposes ranging from household emergencies, paying of school fees, to investment of their businesses. Customers are also allowed to retain or save money for future use or for unexpected costs.

As of 2016, there were five hundred and sixty-four (564) MFIs in Ghana, which are made up of seventy-one (71) money lending companies, eleven (11) Financial NGOs and four hundred and eighty-two (482) microfinance companies (Bank of Ghana, 2016). In terms of growth, the microfinance sector recorded a marginal growth of 1.9 per cent in total assets in 2016 compared with growth of 30.3 per cent in 2015. The MFls controlled 1.3 per cent of industry's total assets in 2016, down from 1.7 per cent in 2015 (Bank of Ghana, 2016). In 2016, Bank of Ghana suspended the granting of new licence to MFIs to give greater supervisory attention to the existing licensed institutions perhaps due to the increasing numbers of fraudulent microfinance institutions in Ghana. Some microfinance institutions in Ghana are fraudulently extorting monies from their clients for which reason the Bank of Ghana had to place a moratorium on some of these institutions (Bank of Ghana, 2016). Since the role of microfinance in poverty reduction cannot be overstated, there is the need to explore the sociological and psychological factors that influence the decisions of individuals to whether or not invest in microfinance institutions in spite of the high incidence of atrophy of such institutions and fraud.

Methodology

This was an exploratory study conducted in five (5) municipalities/ district in the Brong Ahafo Region in Ghana. The five (5) municipalities/ districts include Sunyani East Municipal, Techiman South Municipal, Asunafo North District, Dormaa Central Municipal and Nkoranza South Municipal. The population for the study includes all persons who have ever been engaged in business with microfinance institutions in these administrative areas. The economy of these administrative areas is made up of the agriculture, industry, commerce and the service sectors with agriculture being the predominant economic activity. There are several commercial financial institutions including banks, credit unions and savings and loans institutions among others in these administrative areas.

Research Design and Data

This is an exploratory research where a quantitative approach was adopted through the use of survey responses from the populace of the five administrative areas who have ever engaged the services of microfinance institutions in these areas. In all 165 respondents were purposively given the opportunity to respond to the survey questions with 33 from each administrative area because they have the best knowledge needed to meet the objectives of this study. The instrument used in the data collection was the questionnaire and the statistical software used in the data analysis was StataCorp 2013.

Results and discussion

Demography characteristics

Literature has shown that the decisions/choices of individual investors have been influenced by their social settings (Barber and Odean, 2013). Demographic characteristics, such as age, education level, investment experience among others have been found to affect the investor's choice of financial services and their perceived risk from financial service (Falk and Matlulich, 1976; Mitchell and Greatorex, 1993). Relationship between demographic characteristics and herding bias has also been found in literature (Lin, 2011). The cross tabulation of age and education of respondents is presented in Table 1.

Table 1: Cross Tabulation of Age and Education of Respondents

	Level of Formal Education					
Age of Respondents	**No Education**	**Primary**	**Secondary**	**University**	**Other tertiary**	**Total**
21-30	5 (41.67)	3 (11.54)	37 (48.68)	19 (67.86)	6 (26.09)	70 (42.42)
31-40	6 (50)	11 (42.31)	17 (22.37)	6 (21.43)	7 (30.43)	47 (28.48)
41-50	0 (0)	11 (42.31)	11 (14.47)	2 (7.14)	2 (8.7)	26 (15.76)
51-60	1 (8.33)	0 (0)	9 (11.84)	1 (3.57)	5 (21.74)	16 (9.7)
61 and above	0 (0)	1 (3.85)	2 (2.63)	0 (0)	3 (13.04)	6 (3.64)
Total	**12 (100)**	**26 (100)**	**76 (100)**	**28 (100)**	**23 (100)**	**165 (100)**

Survey data (Figures in parenthesis represent percentages)

The results in Table 1 shows that most of the respondents are between the ages of 21 and 30 years (70) and 31 and 40 years (47) of age; most of whom have attained secondary level of education (48.67 % and 22.37% respectively out of a total of 76). A chi-square test of goodness-of-fit was performed to determine whether the education of respondents was equally distributed across age groups. The education of respondents was not equally distributed across the age groups, χ^2 (16, N = 165) = 47.82, $p < .05$. This finding is consistent with Lin (2011) who found that young investors are more prone to herding behaviour than older ones. The respondents between 21 and 30 years who have attained university level of education are 19 which represent 67.86% out of a total of 28.

Generally, empirical financial literature has revealed that women exhibit a higher degree of risk aversion and have a lower propensity to undertake risky projects (Croson and Gneezy, 2009; Dohmen, Falk, Huffman, Sunde, Schupp and Wagner, 2005; Fellner and Maciejovsky, 2007; Lusardi and Mitchell, 2008). The results in Table 2 indicate that 88 of the respondents are males and 77 are females. Literature elsewhere has analyzed the impact of marital status on financial choices. Lupton and Smith (2003) and Waite and Gallagher (2000) concluded that single individuals are more risk averse than the married. The cross tabulation of sex and marital status results show that majority of the males (45 representing 51.14%) and females (40 representing 51.95%) respondents are married. This suggests that the married are more prone to herding behaviour. Lin (2011) found that females are more involved in herding behaviour than males.

Table 2: Cross Tabulation of Sex and Marital Status of Respondents

	Sex		
Marital Status	**Male**	**Female**	**Total**
single	40 (45.45)	28 (36.36)	68 (41.21)
married	45 (51.14)	40 (51.95)	85 (51.52)
divorced	2 (2.27)	5 (6.49)	7 (4.24)
widowed	1 (1.14)	4 (5.19)	5 (3.03)
Total	**88 (100)**	**77 (100)**	**165 (100)**

Survey data (Figures in parenthesis represent percentages)

A chi-square test of goodness-of-fit was performed to determine whether there was sex difference in the marital status of the respondents. There is no significant sex difference in the marital status of the respondents, χ^2 (16, N = 165) = 4.79, p = 0.188.

Business characteristics

Real Sector of Economy and Business Engagement

The study sought to find out the real sector of the economy where the respondents were engaged in a type of business. The result of the analysis is presented in Table 3. It is not surprising that majority of the respondents (95 representing almost 58%) are engaged in a business in the primary sector (agriculture) since agriculture predominate the economic activities while 66 (40%) are engaged in a business in the tertiary sector (services). Persons who are interested in agriculture sometimes face credit constraints as banks find it less profitable or more risky to lend to businesses in agricultural production.

Table 3: Sector of Economy and Business Engagement

Real Sector of Economy	**Number of respondents**	**Frequency**
Primary Sector	95	57.58
Secondary Sector	4	2.42
Tertiary Sector	66	40.00
Total	**165**	**100**

Survey data (Figures in parenthesis represent percentages)

The high risk perception of the agricultural sector and lack of adequate risk management tools are the central reasons why banks have been reluctant in lending to the sector. Therefore farmers would have to look elsewhere for capital injection into their businesses. Though literature has shown that microfinance play an important role in increasing agricultural production (Sulemana and Adjei, 2015), identifying the genuine microfinance institutions has always been a challenge to these farmers.

Savings and income

According to Keynes, (1936) there are eight kinds of goals which would motivate individuals to abstain from spending out of their incomes. These goals include precaution to build up a reserve against unstable and unforeseen conditions in the future, calculation to enjoy interest, improvement to increase the standard of living, enterprise to secure a certain amount of money for investment among others (see also Canova, Rattazzi and Webley, 2005). Table 4 shows that 58 (35%) of the

respondents (165) save below 11% of their monthly income with 107 (65%) of them saving more than 11% of their monthly income.

Table 4: Cross Tabulation of level of monthly income and percentage of monthly income saved

	percentage of monthly income saved				
level of monthly income (GHS)	**below 11%**	**11% - 20%**	**21% - 30%**	**more than 30%**	**Total**
less than 100	4 (6.9)	2 (5.56)	3 (9.68)	1 (2.5)	10 (6.06)
100-500	26 (44.83)	15 (41.67)	9 (29.03)	16 (40)	66 (40)
501-1000	19 (32.76)	11 (30.56)	15 (48.39)	10 (25)	55 (33.33)
1001-1500	4 (6.9)	8 (22.22)	3 (9.68)	7 (17.5)	22 (13.33)
1500 and above	5 (8.62)	0 (0)	1 (3.23)	6 (15)	12 (7.27)
Total	**58 (100)**	**36 (100)**	**31 (100)**	**40 (100)**	**165 (100)**

Survey data (Figures in parenthesis represent percentages)

The analysis shows that out of the 58 respondents who saved below 11% of their monthly income, 26 (44.83%) earn between 100 and 500 Ghana cedis in a month (Table 4) while 19 (32.76%) earn between 501 and 1000 Ghana cedis. While 40 of the respondents save more than 30% of their monthly income, 36 of them save between 11% and 20% and 31 save between 21% and 30%. A chi-square test of independence was performed to examine the relation between level of monthly income and percentage of monthly income saved by the respondents. The relation between these variables was not significant, χ^2 (12, N = 165) = 17.43, p = 0.134.Though the motive for the savings cannot be predicted, the most probable reasons could be the calculation to enjoy interest, improvement to increase the standard of living, enterprise to secure a certain amount of money for investment.

Business with microfinance institution

Sources of Information and background check of microfinance institution

The sources of information have attracted much interest due to their direct influence on investment decisions and market efficiency. As indicated earlier, neoclassical economic theory conceives that there are rational, independent, atomistic, and self-interested individuals who use all relevant information they have at their disposal efficiently, and endlessly seek to systematically maximize their unique private preferences. The concept of bounded rationality suggests that individuals can only process a limited set of information accessible on the market (Khan, Tan and Chong, 2017). The sources of information on the existence of the microfinance institution in the research areas were found to include friends, radio and newspapers among others. Table 5 shows that 73 of the respondents knew of the existence of the microfinance institutions through friends and 57 through radio advertisements. This finding is consistent with Arnswald (2001) who finds that fund managers search for information from colleagues and other market participants to endorse their own investment decisions besides using fundamental information. In fact, Ivkovic and Weisbenner (2007) postulate word-of-mouth communication as an important information source affecting financial decisions. Some investors would want to reduce search costs and because they lack expertise prefer to use word-of-mouth communication as the main information channel (Khan, Tan and Chong, 2017).

Table 5: Level of Formal Education and mediums of information on the existence of the microfinance institution

Level of Formal Education	Mediums of Information on The Existence of The Microfinance Institution				
	Friends	**Newspaper**	**Radio**	**Others**	**Total**
No Education	4 (5.48)	0 (0)	5 (8.77)	3 (11.11)	12 (7.27)
Primary	8 (10.96)	2 (25)	8 (14.04)	8 (29.63)	26 (15.76)
Secondary	37 (50.68)	3 (37.5)	26 (45.61)	10 (37.04)	76 (46.06)
University	18 (24.66)	2 (25)	5 (8.77)	3 (11.11)	28 (16.97)
Other Tertiary	6 (8.22)	1 (12.5)	13 (22.81)	3 (11.11)	23 (13.94)
Total	**73 (100)**	**8 (100)**	**57 (100)**	**27 (100)**	**165 (100)**

Survey data (Figures in parenthesis represent percentages)

The analysis in Table 5 show that out of 73 respondents who knew of the existence of the microfinance institutions through friends, 37 (50.68%) have obtained secondary level of education and those who have obtained university education are 18 (24.66%). Similarly 26 (45.61%) out of 57 respondents who knew of the existence of the microfinance institutions through radio advertisement, have obtained secondary level of education. With these levels of education, it is expected that the respondents would have sought for further information on the microfinance institution from the Bank of Ghana before engaging in any business activity with them. More emphasis was placed on friends and this confirms the contention of Menkhoff, Schmidt and Brozynski (2006) that German fund managers place more emphasis on the decisions of colleagues and other market participants to obtain information. A chi-square test of independence was performed to examine the relation between level of formal education of the respondents and mediums of information on the existence of the microfinance institution. The relation between these variables was not significant, χ^2 (12, N = 165) = 18.22, p = 0.109.

Table 6: Level of Formal Education and Enquiring Whether the microfinance Have a Valid operation Licence

	Enquire Whether MF Have Valid Licence To Operate		
Level of Formal Education	**Yes**	**No**	**Total**
No Education	7 (9.46)	5 (5.49)	12 (7.27)
Primary	8 (10.81)	18 (19.78)	26 (15.76)
Secondary	32 (43.24)	44 (48.35)	76 (46.06)
University	13 (17.57)	15 (16.48)	28 (16.97)
Other Tertiary	14 (18.92)	9 (9.89)	23 (13.94)
Total	**74 (100)**	**91 (100)**	**165 (100)**

Survey data (Figures in parenthesis represent percentages)

Out of the 165 respondents, 91of them never enquired whether the microfinance institution they are engaged in business have a valid license from the Bank of Ghana to operate while 74 actually did enquire (Table 6). The cross tabulation shows that out of the 91 respondents who never enquired whether the microfinance institution they are engaged in business has a valid license, 44 (48.35%) have obtained secondary level of education while 24 (26.37%) have obtained university and other

tertiary level of education. Unfortunately, even with the level of education, rather than rational, atomistic, utility-maximizing individuals, the respondents behaved as collectivities, such as herds, with each individual motivated by the desire to minimize his/her exposure to risks or losses without ascertaining the genuineness or otherwise of the microfinance institution. Though such behaviour may be inherently rational, the individual's behaviour is likely to be constrained by incomplete information and the limits imposed by human cognitive power or human and social conventions. According to Khan, Tan and Chong (2017) several studies have found that investors like to seek information from informal communication such as unsystematic and word-of-mouth communications among others (Shiller and Pound,1989) but studies elsewhere also indicate that obtaining information from trustworthy sources contributes more toward active trading than information acquired from less reliable sources (Epstein and Schneider, 2008). A chi-square test of independence was performed to examine the relation between level of formal education of the respondents and whether they enquired if the microfinance institution they are engaged in business have a valid license from the Bank of Ghana. The relation between these variables was not significant, χ^2 (4, N = 165) = 5.61, p = 0.230.

Kind of Business Engaged with the Microfinance Institution

The kind of business the respondents engaged with the microfinance institution included either borrowing, saving or both. Table 7 shows that 135 (82%) out of the 165 respondents only saved with the microfinance institution and 26 saved and borrowed. One of the eight goals according to Keynes (1936) which would motivate individuals to abstain from spending out of their incomes is calculation to enjoy interest. Also among the three motives identified in literature for the desires to hold cash (McKinnon, 1973); the speculative motive is influenced by the level of interest rate and therefore an increase in interest rates will make saving more attractive and should encourage saving. Mwega, Ngola and Mwangi (1990) found that one of the main determinants of savings is interest rate. Since McKinnon (1973) and Shaw (1973) argue that low interest rate discourages savings mobilization, it therefore suggest that a higher interest rate encourages savings. For this reason, interest rate has become an instrument used by fraudulent microfinance institutions to deceive and lure people to save with them so they can swindle them.

Table 7: Cross Tabulation of Promised interest rate and kind of business engaged in with the microfinance institution

	kind of business engaged in with the microfinance institution			
Promised interest rate	**Borrowing**	**Saving**	**Borrowing and Saving**	**Total**
1% - 20%	1 (25)	22 (16.3)	13 (50)	36 (21.82)
21% - 40%	3 (75)	17 (12.59)	9 (34.62)	29 (17.58)
41% - 60%	0 (0)	72 (53.33)	4 (15.38)	76 (46.06)
above 60%	0 (0)	24 (17.78)	0 (0)	24 (14.55)
Total	**4 (100)**	**135 (100)**	**26 (100)**	**165 (100)**

Survey data (Figures in parenthesis represent percentages)

Table 7 shows that out of the 135 respondents who only saved with the microfinance institution, 96 (71.11%) of them save because of the promised of interest rate of over 41 percent deposit interest rate. A chi-square test was performed to find out if there is difference between the promised interest rate and kind of business the customers are engaged in with the microfinance institution. There is significant difference between these variables, χ^2 (62, N = 165) = 140.85, p = 0.000. Though the basic component of assessment of capital investments is risk assessment, this seems to have been ignored by the respondents in their quest to get higher returns on their investment. Deposit interest rate in Ghana averaged 17.71 percent from 1980 until 2015, reaching an all-time high of 35.76 percent in 1997 and a record low of 8.89 percent in 2006. In 2015, deposit interest rate in Ghana increased to 13.30 percent from 12.90 percent in 2014 (World Bank, 2016). Therefore, a promise of deposit interest rate of over 41 percent by any microfinance institution should be an indication of a very high risk business venture. In light of this high level of deposit interest rate, it is the expectation that customers will do further background investigation on the credibility of the activities of those microfinance institutions with the central bank (Bank of Ghana) before engaging in any business with them. Failure to do so was likely to leave the customers with only some limited information to process in relation to the decision to invest with those institutions, a behaviour referred to as bounded rationality (Simon, 1978).

As a result of this bounded rationality, the customers take bad investment decisions to invest with these fraudulent microfinance institutions. The results in Table 8 shows that out of the total respondents of 165 who ever engaged in business with microfinance institutions, 119 of them have ever been swindled by the microfinance institution. A chi-square test was performed to find out if there is difference between the promised interest rate and whether the respondents were ever swindled by the microfinance institution. There is low significant difference between these variables, χ^2 (31, N = 165) = 41.94, p = 0.091.

Table 8: Cross Tabulation of promised interest rate and whether the respondent was ever swindled by this microfinance institution

	ever been swindled by the microfinance institution		
Promised interest rate	**Yes**	**No**	**Total**
1% - 20%	20 (16.81)	16 (34.78)	36 (21.82)
21% - 40%	19 (15.97)	10 (21.74)	29 (17.58)
41% - 60%	60 (50.42)	16 (34.78)	76 (46.06)
above 60%	20 (16.81)	4 (8.7)	24 (14.55)
Total	**119 (100)**	**46 (100)**	**165 (100)**

Survey data (Figures in parenthesis represent percentages)

The analysis in Table 8 shows that 60 (50.42%) of the respondents who have ever been swindled were promised an interest rate of between 41% and 60% and 20 (16.81%) were promised an interest rate of above 60%. The microfinance institutions capitalised on the bounded rationality behaviour of their customers due to information asymmetry to swindle them.

A cross tabulation analysis of the source of motivation to do business with the microfinance institution and whether the respondent was ever swindled by this microfinance institution was done. Source of motivation to do business with the microfinance institution included income generation, valid licence by the microfinance to operate from Bank of Ghana, easy access to loan, expansion of business, save for contingencies, children's education and friends advice which is consistent with the eight goals postulated by Keynes (1936) to motivate individuals to abstain from spending out of their incomes. Table 9 shows that 88 (73.95%) out of the respondents who have ever been swindled by the microfinance institutions saved with the intention of generating income. A chi-square test was performed to find out if there is difference between the Source of motivation and whether the respondents were ever swindled by this microfinance institution. There is significant difference between these variables, χ^2 (6, N = 165) 17.33, p = 0.008.

Table 9: Source of motivation and ever been swindled by the microfinance institution

	ever been swindled by the microfinance institution		
Source of motivation	**Yes**	**No**	**Total**
income generation	88 (73.95)	22 (47.83)	110 (66.67)
valid licence from BoG	3 (2.52)	0 (0)	3 (1.82)
easy access to loan	16 (13.45)	11 (23.91)	27 (16.36)
expansion of business	6 (5.04)	5 (10.87)	11 (6.67)
save for contingencies	2 (1.68)	5 (10.87	7 (4.24)
children's education	3 (2.52)	1 (2.17)	4 (2.42)
friends advice	1 (0.84)	2 (4.35)	3 (1.82)
Total	**119 (100.00)**	**46 (100.00)**	**165 (100.00)**

Survey data (Figures in parenthesis represent percentages)

Conclusion

The phenomenon of individuals deciding to follow others and imitating group behaviours rather than deciding independently and atomistically on the basis of their own, private information - referred to as herding- has an influence on their financial decisions. This paper adopted a descriptive-analytic approach to study the interactions between the institutions' behaviour, the influence of society, and the preferences of individuals and households to maximize their economic wellbeing. The study found that out of the total respondents of 165 who ever engaged in business with microfinance institutions, 119 of them have ever been swindled by the microfinance institution. The respondents exhibited herding behaviour in their investment decisions with these fraudulent microfinance institutions since most of the respondents (78.78%) knew of the existence of these microfinance institutions through friends and radio advertisements. These fraudulent microfinance institutions used interest rate as a conduit to deceive and lure people to save with them so they can swindle them. Out of the 165 respondents, 91of them never enquired whether the microfinance institution they are engaged in business have a valid license from the Bank of Ghana to operate in the country. The respondents used bounded rationality in their investment decisions by failing to do any background check on these institutions and relied on the little information from

friends to process in relation to the decision to invest with these institutions. The respondents, therefore, took bad investment decisions to invest with these fraudulent microfinance institutions as a result of this bounded rationality.

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