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## The Impact of Credit Growth Bank Size and Bank Risk Appetite on Risk-Taking among Commercial Banks in Yemen: A Case Study of Yemen Gulf Bank

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**ABSTRACT:** The Main Goals of This Study The intermediation position of commercial banks between creditors and lenders plays an important role in the process of money formation. The collection and loan of deposits for creditors makes banks a special organisation. However, the banks are exposed to risk taking in this specific banking feature. Lending will result in a build-up of risky loan portfolios, which will ultimately impact the stability of the entire banking industry. Banks' success can be calculated using various primary banking industry-unique performance measures. A bank may intentionally alter these metrics on the basis of its desired priorities and goals. However, banks may be subject to increased risk taking by these banks particular factors. The literature available shows that particular factors influence risk-taking by the bank. Therefore, this study recommends that optimal bank size should be defined effectively between commercial banks in Yemen, which will reduce risks. Moreover, this study proposes that commercial banks reassess the quality of their assets and distinguish themselves from conventional banking to reduce risk-taking.

**Keywords:** Impact, measures Credit Growth, industry, Commercial Banks, deposits and Yemen Gulf Bank



### Introduction

The role of commercial banks as intermediaries between borrowers and lenders plays a crucial role in the process of money formation. Deposit-taking and borrowing it to borrowers to make the banking industry a special business. But this unique characteristic of banking exposes banks to risk-taking. Loans may contribute to the accumulation of risky loan portfolio, which may ultimately affect the stability of

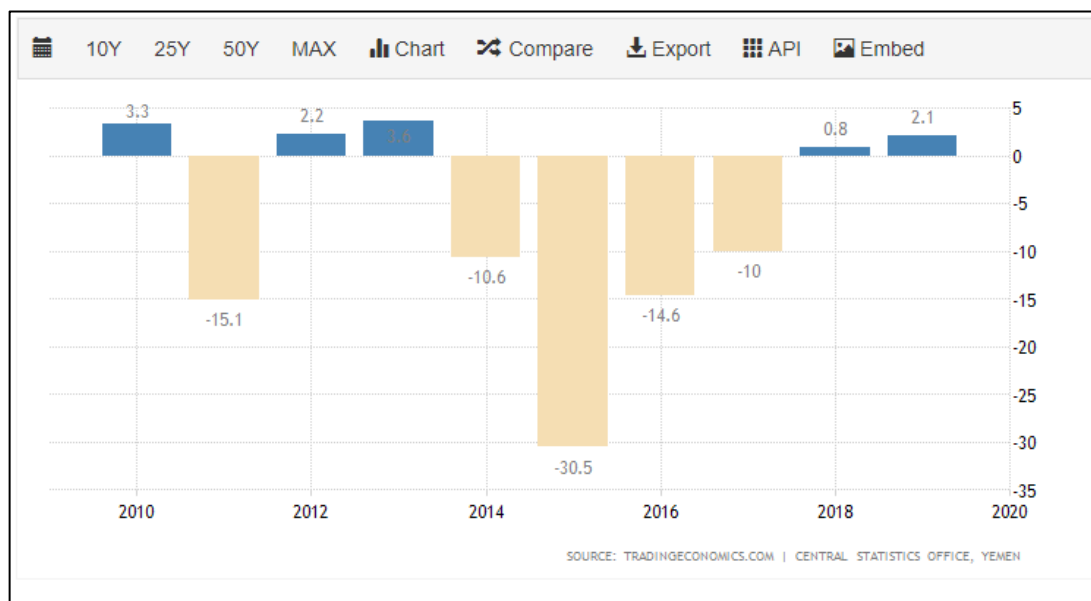
the entire banking sector. The performance of banks can be measured using various key performance indicators, unique to the banking industry (Magzumova and Fedotov, 2018). A bank's management will intentionally adjust certain performance metrics based on its expected objectives and goals. Such bank-specific factors can however expose banks to increased risk-taking. Available literature shows that risk-taking is influenced by specific bank factors. However, it is contradictory how those factors affect risk-taking. Several studies suggest that variables common to the banks have a beneficial impact on risk-taking. That means that as performance measures for commercial banks increase, risk-taking increases. Other studies have shown that factors specific to banks have a negative impact on risk-taking. This means commercial banks take fewer risks as performance measures grow. Recently, a new study has shown that the relationship between bank-specific factors and risk-taking is U-shaped, indicating that risk-taking starts to decline as bank performance measures rise, but after some time, the growth in performance measures leads to increased risk-taking. To provide empirical evidence to ensure stability in Yemen's banking industry, this research was needed to determine how bank-specific factors contributed to risk-taking among Yemen's commercial banks. The study explored the impact of credit growth on risk-taking among Yemen's commercial banks, the impact of bank size on risk-taking among Yemen's commercial banks, the effect of bank risk appetite on risk-taking among Yemen's commercial banks, and the effect of bank profitability on risk-taking among Yemen's commercial banks (Almekhlafi *et al.*, 2016a).

### 1.1.1 BANK SPECIFIC AND RISK-TAKING

There is controversy about describing a financial crisis. A variety of researchers have sought to describe what constitutes a financial crisis. Schwartz (1987) argued that there were only two real financial crises in history; one in Britain and the other in the USA, because of timely intervention by the regulators, all the other crises were mere "pseudo-crises." In Britain, the first occurred in 1866 when the small Overend Gurney collapsed. Following management changes in 1856-1857, the bank struggled to control its loan portfolios by taking bills of questionable quality and loaning to speculative firms with bad collateral. Between 1930 and 1933 the second occurred in the USA. The October 1929 stock market crash spurred a severe downturn and created confusion. In the US, the banking crisis began in November 1930, when 256 banks collapsed, and another 352 banks failed in December, the same year, as a result of the contagion effect.

### 1.1.2 CREDIT GROWTH

Credit growth is a portion of loans a bank can lend to customers over a given period. Businesses usually expect their annual profits to rise annually, and loans advanced to customers in the case of commercial banks should follow the same pattern. The total amount of loans in the Yemen banking industry has been rising. In 2016, Yemen's aggregate commercial bank loans were YER: 382 million and continued to rise to YER: 1.497 million in 2013 CBY.



**Figure 1: Yemen Gross Domestic Product (GDP) in Yemen (2010 – 2020)**  
Sources: tradingeconomics.com

According to the CBY bank supervision report (2012), the number of gross loans advanced to households was the highest (24.6%) and the corresponding NPL level is the highest in the same group (33.2%). To generate revenue, commercial banks in Yemen rely heavily on loan advances (which in 2012 accounted for 78.72 per cent). The CBY has revised the classification of assets vulnerability to exclude the sectors initially classified under "other". The key objective was to improve CBY study (2009) on risk management. In 2009, three industries were found to account for a significant proportion of NPLs (63.9 per cent) following the study.

### ❖ Problem Statement

From the above context and the studies of Chaudron (2016), Hakenes & Schnabel (2016) contribute to risk-taking by commercial banks. Bank-specific factors have been growing in the banking sector during the time under review. Specifically, Yemen's commercial banks are expected to meet the minimum criteria for legal capital. Can capital ensure that banks can lend more than before and therefore raise the loan portfolio? Credit growth has been related to risk-taking. Without empirical evidence in this area, this study must be done to investigate how bank-specific factors contribute to risk-taking among Yemen's commercial banks.

Credit growth among commercial banks in Yemen is becoming an issue due to credit risk in lending loan activities to individuals where it is likely that the actual return on a loan could vary from what the lenders expected, the difference being financial loss (Almekhlafi *et al.*, 2016a). In other words, credit risk is the risk of repayment or the probability of a borrower failing to perform as negotiated and affecting capital and earnings adversely. Credit risk is important since significant losses can be caused by the default of a small number of key borrowers, potentially contributing to bank insolvency. By creating a huge level of advance portfolio, a bank may aim towards high credit volume, but this growth is also followed by a higher risk of high credit losses.

Bank size also affects the risk that commercial banks in Yemen are taking with their normal overall share value decreases by bank size due to larger banks engaged more in risky trade and off-balance sheet activities such as securities, allowing them to raise leverage (Khasawneh, 2007). This also impacts banks, which do not show a high rate of growth in individual loans compared to their competitors. The

diversification effect of higher interest income share can, however, decrease with a bank's size because larger banks are more likely than small banks to engage with volatile and risky trading and balance sheets, such as securitization. This effect, however, depends on the deposit size. While the income diversification effects of higher non-interest income share favour smaller banks, for big banks we are the opposite.

### ❖ Research Objectives

In this research study, the objectives include the following below:

To determine the effect of credit growth on risk-taking among commercial banks in Yemen

O1: R To investigate the effect of credit growth on risk-taking among commercial banks in Yemen.

O2: R To establish the effect of bank size on risk-taking among commercial banks in Yemen.

O3: R To determine the impact of bank risk appetite on risk-taking among commercial banks in Yemen.

### ❖ Literature Review

#### 1. INTRODUCTION

This section offers a summary of both theoretical and empirical literature. The theoretical portion deals with hypotheses relevant to the topic of the study and they form the basis on which the variables of the study are derived from the empirical literature review, providing the different studies and results of other researchers. The chapter also illustrates the research discrepancies from the empirical studies that have been established and a conceptual framework is later created. Various studies have studied the factors impact of credit growth bank size and bank appetite on the risk taken among commercial banks, while this study will focus on a case study of Yemen Gulf Bank many studies have been done on the relationship between bank-specific factors and risk-taking in the banking industry. In this section, the research evaluated two theories that appear relevant to the statement of the problem. These theories are agency theory and expected utility theory. The research study also evaluated research work done by other scholars on the field of risk-taking in the banking industry. The empirical review took cognizance of the models used in past studies and their empirical findings. The literature review was concluded by the identification of literature gaps. This means that in the banking industry, there will be no incentive to lend to individuals who may default repayment as determined by a bank loan officer's due diligence. If new firms enter the market and the level of concentration reduces, firms operating in that industry will have to do their best to maintain their market power and in so doing they will compete for any available customers. This may lead to credit risk exposure are most likely to occur.

#### 2. REVIEW OF CONSTRUCTS AND CONCEPTS INVOLVED

The effect of bank-specific factors on risk-taking can be explained based on previous research work done in different parts of the world in the area of banking. The researcher study will be reviewed past studies done, their findings and relates that to the Yemen operating environment. This section is divided into credit growth, bank size, banks risk appetite and finally bank profitability (Magzumova and Fedotov, 2018).

#### 3. CREDIT GROWTH

A study by Stein (2002) found out that organizational structure affects the lending behaviour of banks. This is because of the different information levels soft information and hard information that existed from the time a borrower applies for a loan to the time a loan is credited to their account. Soft

information originates from a loan officer's interaction with a borrower and is qualitative. Soft information is not verifiable and is harder to communicate between a loan officer and the bank manager. Most banks in Yemen have a team dedicated to selling their products. The loan sales team interaction with the potential borrowers is classified as soft information. Goetz (2010) suggested that as banks grow, they should shift from soft information and rely more on hard information. Large banks have complex organizational structures and are better placed to lend to borrowers based on hard information.

#### **4. BANK SIZE**

A company's size determines the impact it has on that market. Hellmann, Murdock & Stiglitz (2000) expressed the view that the liberalisation of the financial market in Japan in the 1990s increased competition and decreased commercial banks' profitability. This has been proposed as one of the reasons that contributed to the financial crisis in East Asia and Japan's poorer financial system. The Spanish financial system claims that liberalisation of the financial system decreases the income of banks and thus leaves banks with only one alternative: pursuing riskier lending practises to preserve their former profits. Salas & Saurina (2003) found that with higher bank solvency ratios and lower credit risk, higher market power was associated (Demirgüç-Kunt et al. 2018).

#### **5. BANK RISK APPETITE**

In the commercial banking industry set up, the market consists of borrowers and lenders Goetz (2010). Borrowers differ on the degree of information available from them to enable a loan officer to make a decision; this information can either be hard information or soft information, Petersen (2004). Goetz (2010) in his model of risk-taking, showed that the expected loan returns are concave concerning information, meaning lending to soft information borrowers provides a higher return than lending to hard information borrowers. This occurs because the cost associated with lending based on hard information is lower and the decision is based on quantitative data and facts. Interest charged will therefore be lower as compared to lending based on soft information (Magzumova and Fedotov, 2018)

#### **6. BANK PROFITABILITY**

The research was carried out to determine whether the strict lending rules which banks can expose to unfulfilled lending mitigate commercial banks making huge profits. Boyd, De Nicolo & Al Jalal (2006) have applied the risk-shifting model by using a Z-score based on bank return on assets, their distribution and the equity / total assets ratio as a risk predictor. As a calculation of a market concentration, the Herfindahl-Hirschmann Index (HHI) also showed that there was a positive and significant relationship between the Z-notation and the HHI, suggesting the link between higher concentrations in the banking sector and higher financial risk Nicolo & Loukoianova (2007) pointed out that the findings were even better when considering bank ownership. Berger, Klapper & Tuk-Ariss (2009) found that more credit portfolio risks are posed for banks with higher market capacity; however, they have general risk exposure due to higher stock levels.

#### **7. Risk Taking**

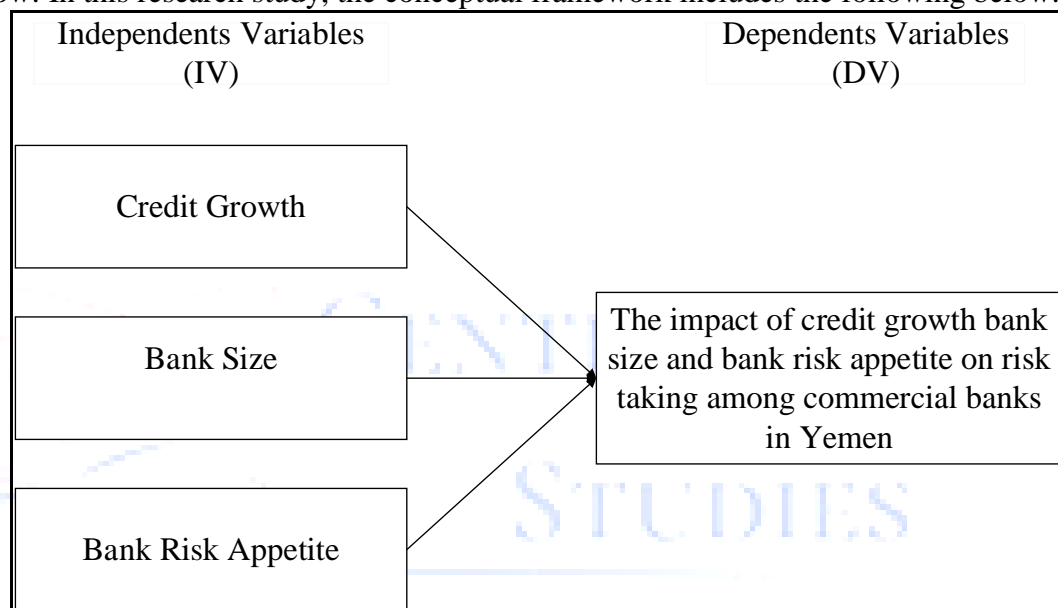
means the extent to which a bank is exposed to distress level (Ismal, Muslem and Abdou, 2014). When people take risks, they engage in behaviours that could lead to negative consequences such as physical injury, social rejection, legal troubles, or financial losses. Behaviour that is more likely than behaviour that is less likely to contribute to certain consequences is known as riskier than behaviour. However, whatever the danger, behaviours of any sort can lead either to positive or negative implications. Those who fear thinking in one way or two about the consequences. First, we must realise that actions like gambling can have both positive and negative implications (e.g., their winning could continue to grow or all their money could be lost), but people are at all costs dedicated, assuming that the positive impacts are more probable than the negative effects. On the other hand, people who think about second-



hand consequences do not seem to take into account both positive and negative consequences when they think about actions. Rather, the potential positive effects just seem to be taken into account. They may not have taken the gamble if they had not considered the negative implications (Ismal, Muslem and Abdou, 2014).

#### ❖ Theoretical Framework

The dependent variable in this study risk-taking in the commercial banking industry in Yemen as measured using dependent and independent variable. The independent variables were credit growth, bank size, and risk appetite. Credit growth was measured as the change in total loans between period one and the previous period. The study also applied a lag for the second period. Banks size was measured as bank capital while bank profitability was measured as pre-tax profits. Banks' risk appetite was taken as the ratio of total loans and total assets. In this research study, the conceptual framework include the following below: In this research study, the conceptual framework includes the following below:



**Figure 2: Conceptual Framework**

#### ❖ Recommendation

The study has established that minimum regulatory capital is contributing to risk-taking among commercial banks in Yemen. This presents a new challenge since the minimum capital requirement was implemented to enhance stability of the banking industry. Past studies have attributed this scenario to liquidity challenges. To manage the risk-taking in the banking industry, the regulator should put in place mechanisms to manage liquidity in the banking industry. The banking industry asset quality requires keen monitoring. Bank risk appetite as well as credit growth are contributing to risk-taking in the Yemen banking industry. These two measures touch on banks assets portfolio and there is need for commercial banks in Yemen to examine their asset portfolio in a bid to manage risk-taking. This risky loan portfolio is attributed to high competition that leaves banks with fewer options than to advance a loan at a higher cost which will end up unrecoverable.

#### ❖ Future Scope

Risk-taking in the banking industry may be caused by factors other than bank specific factors. The study focused on bank specific factors to establish its effect on risk-taking. Similar researchers factored in macro-economic variables including Gross Domestic Product, interest rates, and inflation and exchange rate fluctuations in establishing how bank specific factors affected risk-taking. There is, therefore, need for further research to be undertaken covering both macro-economic variables and bank indicators to establish the relationship between bank specific factors and risk-taking. The increase in risky loan

portfolio accompanied with high interest rates have been suggested by researchers as a main cause for NPLs and this study did not consider interest rates. The study recommends further study to establish whether high interest rates on loans have any effect on risk-taking. The introduction of credit reference bureaus is an area of interest and more research work should be carried to establish how it affects risk-taking.

## Conclusions

The analysis showed that bank specific factors affects the risk-taking in the commercial banking industry in Yemen. The study results agrees with some of the previous researchers who found out that less competition among commercial banks increased risk taking. The researchers argued that as the banking market structure changed, banks increased the loan interest rates therefore taking more risks that ultimately lead to riskier loan portfolio. Banks' capital plays critical roles in absorbing risks but introduces moral hazard issues. Commercial banks in Yemen are regulated by the CYB and each bank is required to comply with capital requirements as per legal provisions. Commercial banks with huge capital base may "feel" they are too large to fail and continue to accumulate risky loan portfolio. To reduce the level of NPLs in Yemen, commercial banks have to re-examine the quality of their assets. Both bank risk appetite and credit growth affect risk-taking among commercial banks in Yemen and both touch on the banks' assets. Diversification from the traditional banking activities as well as optimal balance between capital growth and lending will yield positive results in minimizing risk-taking in Yemen banking industry.

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