Al-Qadisiyah Journal for Administrative and Economic Sciences ISSN$_{Online}$: 2312-9883
QJAE, Volume 26, Issue 2 (2024) ISSN$_{Print}$: 1816-9171

The impact of liquidity risks and their impact on banking stability

Ali Abdu Hussein Rajil
Safaa Ghazi Mohammed Albder
University of AL-Qadisiyah
Corresponding Author : Safaa Ghazi Mohammed Albder

Abstract : The study aims to know the liquidity index and its role in financial stability in the banking system, given that banks are one of the important elements in building the economy and through them the economic stability of the country is enhanced. This importance comes from the effective role of banks as mediating institutions between supply and demand units in addition to providing all modern banking services. Therefore, The liquidity index is considered one of the important indicators that reflect the bank's activity in terms of the strength of its balance sheet with obligations to others, as well as the extent of its commitment to the required international standards and instructions issued by the Central Bank of Iraq, which prompted us to choose the research topic, on a sample of Iraqi commercial banks for the period between (2018 to 2022).) for six commercial banks. The descriptive analytical approach was adopted based on audited financial statements taken from the annual reports of commercial banks listed on the Iraqi Stock Exchange. The research problem is based on whether there is a relationship between the liquidity index and banking stability, which proves the validity of the study's hypothesis that there is a relationship. There is evidence between the variables of the study, namely bank liquidity measures and the extent of their impact on banking stability. The most important conclusions and recommendations were also reached to overcome bank liquidity risks.

Introduction: The banking sector contributes significantly to achieving economic development, as it contributes significantly to stimulating financial innovations, enhancing competencies, and opening up to new markets as a result of technological progress in the banking industries and the increasing risks related to banking work, which prevent the achievement of the desired goals that all banking sectors seek, which is to prove their capabilities in front of... Competitors, and the ongoing transformations in the financial markets, as the Basel III agreement emerged to support banking stability through a set of reforms proposed under that agreement, which aimed to increase capital requirements and enhance the quality of the banking sector in the face of economic fluctuations and financial crises to which these sectors may be exposed. It also contributed The Basel Accord makes a major contribution to the stability of banking systems through competitive compatibility between banks, harmony between regulatory systems, and the application of international standards required to avoid the risks to which financial institutions are exposed in general and affect the profitability of the bank. These risks vary in their forms and causes, and most of these are related to budget items that the bank can control, such as Liquidity risk, our research highlights the impact of these risks on the extent of the bank's stability, by relying on six private commercial banks (as a sample from among a group of commercial banks whose ability to continue and meet the research requirements has been confirmed. It has been possible to obtain the financial and incoming data In the annual reports of the banks in the research sample.

Research Methodology

1. Research problem:

The problem of the research lies in determining and knowing the nature of the relationship between the liquidity index and its impact on banking stability, as it is considered the basic pillar on which any commercial bank relies, so a failure in it leads to destabilization and weakening of the bank's financial position, which exposes it to a risk that cannot be faced, and thus its inability to grow. And continuing to achieve a competitive advantage, so the research problem came to answer the following questions:

First: Is there an effect of the presence of a surplus or shortage of liquidity on achieving banking stability in commercial banks?

Second: What is the amount of liquidity that must be maintained in commercial banks for operating purposes?

Third: What measures do commercial banks take to confront liquidity risks?

2. The importance of research

The banking sector is considered to be of great importance in the economic development of every country, as it plays a fundamental and effective role in economic and investment activity and accelerating the wheel of growth within the country, as it works as a financial intermediary by mobilizing funds from surplus units to deficit units, and the ability of banking management In using this liquidity and how to invest it to achieve stability in its ability against competitors, it has a major task in how to provide the necessary liquidity to finance projects that contribute in one way or another to the process of economic development. In return, all banks aim, through the availability of high liquidity, to achieve the return they aspire to. The term of any commercial bank without being exposed to various risks through which it is forced to face its financial obligations, and highlights the importance of searching for knowledge of the methods and methods that bank administrations can use in the process of liquidity management, which is thus reflected in the profitability of banks by international standards and instructions issued by the Central Bank of Iraq.

3. Research objective

The research aims to achieve several goals:
A- Knowing the role of liquidity risks in achieving banking stability
B - Adherence to international standards, including the proposals of the Basel Committee and instructions issued by the Central Bank of Iraq to avoid or remedy liquidity problems in commercial banks.
C - Identify the extent of the bank's management's ability to benefit from surplus funds from the cash masses and direct them towards investment to achieve satisfactory returns and maximize its profit without exaggerating the liquidity it has.
D- Measuring liquidity risks using their indicators based on each bank's financial statements.
E- Measuring the liquidity risk ratio in the banks sampled in the research and their ability to cover their financial obligations.

4. Research hypotheses: The research starts from the hypothesis

A- The risks resulting from a shortage in bank liquidity or the presence of a surplus affect banking stability.
B- The instructions of the Central Bank of Iraq have set the bank's liquidity retention rate at 20%.
C- Adherence to international standards and instructions issued by the Central Bank of Iraq to avoid financial risks

5. The spatial and temporal limits of the research

A- Spatial boundaries: The research sample was chosen from six private commercial banks due to the possibility of obtaining financial data through the annual reports published by each bank.
B- Time limits: The duration of the study was five years (2018-2022) because it is more recent.

6. Methods of data collection:

To cover the theoretical aspect of the research topic, relevant Arab and foreign sources were used. As for the applied aspect, the researcher relied on the private financial data found in the annual reports of each bank. As for the statistical analysis, linear regression was applied and the results were obtained from the electronic calculator and using the Excel system.

previous studies:

Study (Al-Marsoumi 2017)	
Study Title	The impact of bank liquidity risk and capital adequacy on the performance of commercial banks Iraqi For the period (2005-2014).
Purpose of the study	Identify the impact of bank management adopting important indicators such as the index Liquidity risk and the capital adequacy index
Study method	Descriptive method
The study sample	Iraqi private commercial banks amounted to (14) banks for a selected time series (10 years.
The most important conclusions	The increase in cash in banks is an indicator of the accumulation of funds Non-profitable liquidity, which led to a negative impact on the financial performance of management The bank
The most important recommendations	Encouraging the banks sampled in the study to enter into new investment fields In order to achieve profitable returns.

Study (Al-Jubouri 2021)	
Study Title	The impact of credit, liquidity and size risks on the market value of common shares
Purpose of the study	Identify the impact of banking risks on market value.
Study method	Descriptive method
The study sample	Commercial banks consist of (10) banks for the period from (2014-2019)
The most important conclusions	There is a statistically significant relationship and impact between credit and liquidity risks on the market value of stocks
The most important recommendations	Bank management should operate according to a moderate lending policy and evaluation Conditions affecting the market in terms of return and risk.

The first topic

1.1Risk Concept

The concept of risk is considered one of the most important phenomena that threatens the bank's achievement of the desired goals and negatively affects the stability of its ability in front of competitors, which exposes the bank to bearing unexpected losses that lie in the possibility of deviation of cash flows (Rasheed, 2012, p. 152). Therefore,

banking risks, especially liquidity risks, are It is one of the most important topics that should be highlighted, especially after the recent financial crises that occurred in the world.
Among the most important risks facing the bank are credit risks, liquidity risks, interest rate risks, operational risks, capital risks, and other risks. In this research, we will discuss banking liquidity risks.

Liquidity concept

Banking liquidity means the bank's ability to fulfil its financial obligations, which largely consists of a balance between two variables. The first variable is meeting requests to withdraw deposits, and the second variable is meeting requests to grant loans at the banking credit department (Al-Husseini, Al-Duri, 2000: p. 93). Liquidity is also defined as the ability to The bank must pay all its commercial obligations in cash and respond to credit requests or grant new loans. This requires the availability of high cash liquidity at the banks or the possibility of obtaining it by liquefying some assets or converting them into liquid cash quickly and easily (Abu Ahmed, 2002, p. 185), as Liquidity does not only mean converting an asset into cash but rather converting it into cash without exposing it to any loss. It is represented by quickly converting assets into liquid cash and within the objectives and policy of the bank to secure its financial position (Al-Alaq, 2001: 11). Thus, liquidity is considered one of the most important tasks for the bank's management, as it must Measuring and meeting the liquidity needs of the bank managed by the bank's management (Hempel.et.at.1994:158)), or it is the extent of the availability of assets that can be quickly converted into cash without losses in value to meet debts due on time without delay. Liquidity has three dimensions: (Sirin, 2009, p. 18)
1. Time: This is how quickly assets can be converted into liquid money.
2. Risk: This is the deviation of cash flows in some way due to the possibility of a decline in the value of assets in this area.
3. Cost: It is expressed as the financial sacrifice that must be made when converting assets into liquid cash.

Factors affecting bank liquidity:

There are a group of factors that have an impact on the amount of liquidity available to commercial banks, the most important of which are: (Sahib, 2005: p. 266)
1. The process of depositing and withdrawing deposits.
2. Treatment of bank customers while providing public service.
3. Balance of clearing transactions between banks.
4. The position of the Central Bank regarding banks.
5. The balance of owned capital.
6. Other factors.

Causes of liquidity risk

Liquidity problems in financial institutions arise mainly as a result of poor management of circulating resources or as a result of poor composition of the liabilities side of the general budget, which leads to an imbalance in the nature of resources and uses. Several reasons lead to the occurrence of liquidity risks, the most important of which is
1. The imbalance between the growth of institutions' obligations and the burdens of their services.
2. Poor liquidity management planning, which leads to a lack of coordination between assets and liabilities in terms of maturity.
3. Poor distribution of assets among different uses, which leads to difficulty converting them into liquid balances.
4. The sudden transformation of some Arab commitments into actual commitments.
5. Financial crises that arise in the markets.

Basel Committee Agreement and Liquidity Risk:-

In September 2008, the Basel Committee issued a bulletin entitled Factors for Effective Liquidity Risk Management and Supervision. This bulletin included several paragraphs that represent the basis for managing liquidity risks, which requires banks to be guided by these paragraphs to avoid liquidity risks and reduce them as much as possible, most notably the recent financial crises, which lack sound and effective management. To address the liquidity risks to which banks are exposed (Rizvi etal 2018:845).
1. The bank's management must provide solid standards for identifying, measuring, following up and monitoring liquidity risks. These procedures must include a comprehensive framework for predicting the cash flows that will be generated as a result of its obligations towards others during specific future time periods.
2. The bank must take the necessary measures by competent authorities to follow up and monitor exposure to liquidity risks and financing needs among its affiliated institutions.
3. The bank's management must assume responsibility for managing the conditions of effective assets, distinguishing between restricted assets and unrestricted assets, and monitoring the legal conditions of guarantees and the possibility of their implementation.
4. The bank's management must adopt a formal emergency plan for financing and liquidity management, which clearly defines strategies for providing liquidity under crisis conditions.

5. Management must maintain a margin of safety consisting of highly liquid and unrestricted assets that represent a margin of safety against liquidity risks under difficult circumstances.

Liquidity risk indicators

The following indicators help in diagnosing liquidity risks early and how to measure and treat them. This allows the necessary information to be communicated to decision-makers and the necessary procedures to be followed to confront those risks. These indicators depend on the accuracy of the financial data contained in the annual reports of banks, including: - (Aql, 1995: p. 56)

A high percentage of this indicator indicates a decrease in liquidity risk, through what it reflects of the presence of surplus funds that enable the bank to meet its obligations to others.

liquidity risk= (Cash and bank balances)/(total assets)

The increase in this indicator indicates the increase in liquidity risks, given that the greater the percentage of total loans, which, due to the difficulty of liquidating those loans very quickly, when the bank needs new cash liquidity to enable it to meet the requests of other lending operations.

Liquidity risk = (Total loans)/(Total deposits)

The concept of banking stability:-

The banking sector is considered one of the most sensitive economic sectors to the rapid and rapid changes and developments in the field of technology in the field of banking and financial transactions taking place in global markets (Naumovskaetal., 2015: 209). The sector is considered an important sector for the stability of financial systems, as banks play a major role in financing and investing money to achieve Economic growth and financing of companies, individuals, and financial systems (Yunita, 2022: 155), and thus payment provides a set of diverse services that are indispensable for any economy, such as financial intermediation, credit risk management, as well as deposit mobilization, for companies and individuals in all economies, as it contributes significantly It is effective in operating the wheel of economic growth, and thus the safety and stability of the banking sector in particular (Munteanu, 2012:993-994), and reflects positively on the economic sector in general, as financial crises are among the most prominent challenges facing banking systems and threaten their stability, which is what has been demonstrated. The recent global financial crisis. The hidden weaknesses of banks are revealed through the general shortage of liquidity, reserves, and capital, and if the bank fails to achieve sufficient returns, it will exhaust its resources and the state’s resources as well. Therefore, increasing the liquidity factor is considered one of the most important factors in determining the strength and durability of any bank (: 207Cecchetti & Kohler, 2014).

The importance of banking stability:-

Banking stability plays an important role in contributing to the country's economic development, although it has witnessed structural and administrative changes in recent years that have contributed to making banking stability an important criterion for determining whether the economic sector is strong enough to withstand internal factors and external shocks (Rizv etal., 2018). :845), and in itself depends on the efficiency of multiple criteria. For example, if the bank possesses sufficient capital and is affected negatively or positively by the conditions prevailing in the financial market and the real economy. The extent of ensuring banking stability in the economy is determined and it is considered a pioneer in financial stability in the economy through its ability to absorb... Financial and economic shocks (Swamy, 2014: 27-28). Hence, banking stability can be treated as a state in which the financial system can effectively allocate resources, assess and manage financial risks, ensure smooth banking stability, measure payments and transfers, and enhance balance through management. It works to balance assets and payments towards achieving the desired goals (1371Faruqinata & Wibowob, 2020).

Banking stability is of vital importance for sound economic performance through many functions performed by the banking sector, which work to facilitate the movement of the economic wheel (122: Aluko & Ajayi, 2018), which are as follows:-

1. Mobilizing and collecting deposits.
2. It increases economic growth, which enhances economic development.
3. It increases the exchange process between companies and financial institutions.
4. Facilitating the exchange of goods and services.
5. Monitoring investments and providing credit.
6. Speeding up and facilitating the trade exchange process and diversifying risks.

The second topic (the applied aspect)

Analyzing and measuring the liquidity risk index and its impact on banking stability

In this study, the study tools will be applied statistically, as we will clarify the relationship between indicators of some liquidity risk measurements (cash and bank balances / total assets and total loans / total deposits) by conducting regression analysis and then linear regression according to the following table: -

Table No. (1): Descriptive analysis of some indicators for measuring liquidity risk Descriptive statistics

Variables	N	Minimum M	Maximum M.	Mean	Std. Deviation
Liquidity risk cash and bank balances to total assets	36	15	71	4819	16366
Liquidity risk total loans to total deposits		104	940	35831	274414

The table was prepared by the researcher based on financial data from banks' annual reports

Through Table No. (1) above, which is related to the descriptive statistical analysis of the variables represented (the ratio of cash and bank balances to total assets, and the ratio of total loans to total deposits) for some liquidity risk indicators for the period from (2018-2022) and six years, which is the period of the study, as for the number The values for each variable are 36, and we can notice from these values of the standard deviation that the highest spread value is the liquidity amounting to 0.274414. As for the maximum and minimum values for the same variable, the largest value was 0.940 and the smallest value was 0.104. We conclude from this that the private commercial banks in Iraq are the research sample. It has more diversification and a liquidity ratio

Table No. (2) The relationship between return on assets (ROA) and liquidity ratios

. Linear regression analysis (1) Regression analysis

Variables	Coefficient	Standard Error	T	P ≥ (t)	90% Confidence Interval	R2
Constant	**0.504**	**0.073**	**6.887**	**-**	**0.295**	
Cash / Assets	**0.577**	**0.129**	**4.473-**	**0.039**	**0.113**	**0.05**
Cash / Deposits	**0.295**	**0.077**	**3.830**	**0.046**	**0.309**	

The table was prepared by the researcher based on the financial data mentioned in the annual reports of the commercial banks that are the research sample

We notice in Table No. (2) the relationship between the return on assets and the liquidity risk index, where the results showed, for statistical significance (P-value), that the ratio of cash to assets is 3.9% and the ratio of loans to deposits is 4.6% for the significance level of 5%, and the two values are below the significance level. This indicates the existence of a statistically significant relationship between cash to assets and loans to deposits on the one hand, represented by bank liquidity risks and return on assets (ROA) on the other hand, represented by bank profitability. As for the type of relationship between the variables, we find a negative relationship, which indicates that the more The liquidity ratio, i.e. (cash to assets), the lower the bank's profitability and vice versa. As for the (loans to deposits) indicator, we find it in the same previous relationship. Whenever this ratio increases, it leads to a decrease in liquidity risks, and thus the bank's profitability increases.

Table No. (3) The relationship between return on equity (ROE) and liquidity ratios

(Linear regression analysis) (2) Regression Analysis

Variables	Coefficient	Standard Error	T	P ≥ (t)	90% Confidence Interval	R2
Constant	0.359	0.116	3.102	-	0.472	
Cash / Assets	0.155	0.204	0.761-	0.049	0.310	0.05
Loans/Deposits	0.005	0.122	0.038	0.042	0.010	

The table was prepared by the researcher based on the financial data mentioned in the annual reports of the private commercial banks sample of the study

We notice from the table above that the relationship between liquidity risk and return on shareholders' equity, as it shows us the statistical significance values (P-value) for the variable cash-to-assets ratio, 4.9%, and the loan-to-deposit ratio, 4.2%, is below the 5% significance level, and the two values are below the significance level, and This indicates that there is a statistically significant relationship between cash to assets and loans to deposits on the one hand, which is represented by banking risks, and the return on shareholders' equity (ROE) on the other hand, which the profits generated by the bank represent. As for the type of relationship between the variables, it was a negative relationship, that is, a relationship. Inversely, the more the liquidity ratio (cash to assets) increases, it affects the bank's profitability and vice versa. As for the indicator (loans to deposits), it is also at the same level of the relationship. Whenever this ratio increases, it leads to a decrease in liquidity risks, and thus this leads to an increase in the level of profits for the bank. The bank.

Conclusions

In this section, we review the most important conclusions and explain the most important indicators on which the study was based. Our study aimed to find the relationship between liquidity risk and its impact on banking stability for a sample of commercial banks listed on the Iraq Stock Exchange. This was done by collecting financial data from the annual reports of six Private banks for the period from 2018 to 2022. In order to analyze the variables, two indicators of liquidity risk were chosen, which is the ratio of cash to assets and loans to deposits. After completing the data collection, statistical analysis was used to test the two hypotheses of the study, where linear regression was used to find the relationship between the variables.

1. Our results showed that there is a negative or inverse statistically significant relationship between the return on assets on the one hand and the ratio of cash to assets and loans to deposits on the other hand, which means the largest amount of (cash to assets) leads to a decrease in the value of invested capital. Thus, it leads to a decrease in profits.
2. The results showed a negative relationship between the return on shareholders' equity on the one hand and the ratio of cash to assets and the ratio of loans to deposits on the other hand, which means that the largest amount of (total loans to total deposits) leads to a decrease in the value of invested capital and thus leads to a decrease In the profit ratio.
3. The study contributed to increasing the interest of the Iraqi banks, the research sample, in the liquidity index, as it is considered one of the basic pillars of the bank's sustainability and steadfastness in the face of competitors in the market, and it is also considered a reason for financial and banking stability.
4. The study showed that a weak banking sector is more vulnerable to crises and financial fragility, which is reflected in its financial and banking instability.
5. The results showed that increasing banking stability in the commercial banks in the research sample results from the presence of a strong and cohesive banking system, which thus creates a more stable and appropriate banking environment for creating profitable financial investments, which in turn reflects positively on the rest of the sectors in the country.
6. The results showed that commercial banks are working to implement appropriate strategies to manage banking risks and fully comply with international standards, including the Basel III agreement, to create stable financial institutions that enhance customers' confidence in the banking sector.
7. The research results showed that most of the private commercial banks in the research sample adhered to a high percentage of capital adequacy and liquidity coverage ratio and adhered to the minimum requirements of the decisions of the Basel III Committee published in the annual reports of private financial statements of commercial banks listed on the Iraqi Stock Exchange

Recommendations

In this section, we review the most important recommendations through which we can address the weak points within the Iraqi banking system and work to support and enhance the strengths within the banking sector to ensure its stability and ability to confront financial shocks. A set of recommendations emerged for study in private commercial banks in Iraq, the most important of which are:

1. The need for the bank to increase its work to attract bank deposits of all kinds by enhancing the confidence of depositors and shareholders in the importance of their money remaining with the bank and obtaining partial returns as a result of it remaining without withdrawal before the specified date. The greater the volume of the bank's funds, the safer the bank's position will be, and thus it will affect the bank's financial position. Increase bank stability.
2. The need for the Central Bank of Iraq to ensure stability, by ensuring the stability of the exchange rate index because it contributes to improving the investment environment in the Iraqi markets and creates a mix of profitable investments with the possibility of providing many banking services to customers such as external transfers in foreign currency, which guarantees exchange in it. Reducing the value of the dollar against the value of the Iraqi dinar, thus creating a more stable banking environment.
3. The need to emphasize the development of supervisory and administrative cadres to improve the quality of banking performance in the banks sampled in the study, because the availability of qualified supervisory cadres contributes to reducing financial crises, defaults and successive financial shocks, and controlling banking risks, and these factors are greatly reflected in the stability of the Iraqi banking system.
4. The necessity of using liquidity optimally and investing the bank's cash surplus in profit-generating areas through specialized committees of specialized financial experts and economists to identify, measure and follow up to confront the risks to which banks may be exposed.
5. The need to urge commercial banks in Iraq to develop tools for measuring, monitoring and monitoring liquidity risks and developing effective contingency plans to manage liquidity risks.
6. Adherence to the laws and regulations represented by the decisions of the Basel Committee.
7. The need for the commercial banks, the research sample, to maintain reasonable proportions of liquidity to confront the possibility of their inability to fulfil their short-term obligations when they fall due to the lack of the necessary liquidity for that, which hurts the security stability of the bank

Arabic sources:-

1. Abu Rahma, Sireen Samee, Banking liquidity and its impact on return and risk, Palestine, published master's thesis, 2009
2. Iraqi Securities Commission, Stock Market, Annual Reports of Commercial Banks, Iraq, http://www.isc.gov.iq/node/78
3. Mufleh Aql, Introduction to Financial Management, first edition, Jordan, 1995.
4. Reda Saheb Abu Hamad, Banking Management, Introduction to Contemporary Quantitative Analysis, Dar Al-Fikr for Printing and Publishing. and distribution, Jordan, 2002
5. Abdel Sattar, Rajaa Rasheed, Evaluating the financial performance of Rasheed Bank and its importance in measuring banking liquidity risks, Responsible Management Institute, 2012
6. Abu Ahmed, Reda Sahib, Faiq Mishal, Banking Department, Ibn Al-Atheer for Printing and Publishing, University of Mosul, 2005.
7. Dr. Falah Hassan Al-Husseini, Dr. Moayed Abdul Rahman Al-Douri, Bank Management, A Contemporary Quantitative and Strategic Introduction, Wael Publishing House, Jordan, 2000.
8. Al-Alaq, Bashir Abbas: (Bank management is a career approach) Jordan 2001.

Foreign sources:-

1. Hempel , George ; simonson , Donald ; coleman , Ala (Bank Management) 4th ed , John Wiley 8 Son's Inc U.S.A , 1994.
2. Rizvi, Noor Ulain, Kashiramka , Smita & Singh, Shveta " Basel I to Basel III: Impact of creditrisk and interest rate risk of banks in India ", Journal of Emerging Market Finance 17, 2018
3. Yunita, Patria " Dual Banking System Stability Index in the Shadowof COVID-19 Pandemic International Journal of Islamic Economics and Finance (IJIE Vol. 5(1), January , 2022.
4. Cecchetti , Stephen G. & Kohler, Marion " When Capital Adequacy and Interest Rate Policy Are Substitutes (And When They Are Not), International Journal of Central Banking , Vol. 10 No. 3, September , 2014.
5. Munteanu ,Irena, " From Basel II to Basel III — Changes, 200. Ovidius, University Annals, Economic, Improvements and Proposals Economic Sciences Series , Volume XII, Issue 1 , 2012.
6. Nisar, Shoaib, Susheng, Wang, Ahmed, Jaleel. &Ke, Peng " Determinants of bank'sprofitability in Pakistan: A latest panel data evidence", International Journal of Economics Commerce and Management Vol. III, Issue 4, April , 2015.
7. Farroukh, Arafet " Financial Integration, Banking Competition Changes and Financial Stability:The Case of the MENA Region Financial and Monetary Policy Studies" , Springer Edition Volume 36, 2013.
8. Rizvi, Noor Ulain, Kashiramka , Smita & Singh, Shveta " Basel I to Basel III: Impact of credit risk and interest rate risk of banks in India ", Journal of Emerging Market Finance 17, 2018.
9. Swamy, Vighneswara " Testing the interrelatedness of banking stability measures" , Journal of Financial Economic Policy Vol. 6 No. 1, 2014