

Capital Solvency and Its Impact on the Stock Prices of Banks Listed on Iraq Stock Exchange -Applying to National Bank of Iraq

Hassnain Kadhém Ojah¹, Yasir Sahib Malik², Ahmed Maher Mohammad Ali³

^{1, 2, 3} Lecturer at Accounting Department, Faculty of Administration and Economics, University of Kufa, Najaf, Iraq.

Email address: hassnink.alshahmani@uokufa.edu.iq, yasirs.abdali@uokufa.edu.iq, ahmedm.fadhil@uokufa.edu.iq

Abstract— *The repercussions of the financial crisis continue everywhere in the world. The issues of financial collapse often start from insufficient capital to face the many risks that surround banks or financial institutions. In this regard, several meetings have been held between major countries to address this threat, leading to the launching of the Basel decisions (I, II and III).*

The research aims to indicate the most important requirements of Basel III as financial indicators, and then tested on one of the banks of the private sector actors (the National Bank of Iraq), to show the impact of solvency and liquidity indicators on stock prices and the conviction of investors to invest in banks as a result of these indicators.

The research has reached some results; that, Basel III requirements are necessary to enhance the solvency and liquidity of banks if adopted in a manner commensurate with the nature and circumstances of each market. The environment surrounding banks and financial institutions affects the nature of their business, as well as their impact on the level of performance and confidence of any bank. It is therefore assumed that Basel III requirements are harmonized with the legal and domestic requirements of a country, and that the minimum requirements are determined accordingly.

Keywords— *Solvency, Stock Prices, Basel III, liquidity, and financial indicators.*

I. INTRODUCTION

The repercussions of the financial crisis continue everywhere in the world. The issues of financial collapse often start from insufficient capital to face the many risks that surround banks or financial institutions. In this regard, several meetings have been held between major countries to address this threat, leading to the launching of the Basel decisions (I, II and III). The Basel decisions achieve an integrated adjustment in the light of the diversity of risks arising from time to time. In this context, (Song 2016) (Vousinas 2015) argues that Basel's requirements impose significant and excessive conditions for banks and financial institutions, yet they provide a strong and compelling motivation for all financial authorities regulating banks' work. Or financial institutions to achieve financial stability and also to take into account the coverage of credit risk, operational and market and preventive measures of economic fluctuations and improve and regulate the financial level and meet liquidity standards. These requirements also have a direct impact on enhancing the value of bank shares in financial markets as opposed to banks that did not meet some of those requirements (BCBS 2016b) (BCBS 2015) (BCBS 2016).

The Basel III decisions are based on two main aspects: first, adjustments to capital adequacy against credit, operating and market risks; and second, three criteria introduced Net Stable Funding Ratio, Leverage Ratio, and Liquidity Coverage Ratio. Basel III enables banks to maintain a certain level of liquid or quasi-cash assets for facing real-time conditions or risks. Banks in financial markets.

This research focuses on the Iraqi banks listed in the Iraq Stock Exchange, as Iraq is an emerging financial market seeking to attract foreign investors through the adoption of a clear strategy to reduce the risk of financial crises based on the application of the decisions of Basel III. The repercussions of the financial crisis continue everywhere in the world. The issues of financial collapse often start from insufficient capital to face the many risks that surround banks or financial institutions. In this regard, several meetings have been held between major countries to address this threat, leading to the launching of the Basel decisions (I, II and III). The Basel decisions achieve an integrated adjustment in the light of the diversity of risks arising from time to time. In this context, (Song 2016) (Vousinas 2015) argues that Basel's requirements impose significant and excessive conditions for banks and financial institutions, yet they provide a strong and compelling motivation for all financial authorities regulating banks' work. Or financial institutions to achieve financial stability and also to take into account the coverage of credit risk, operational and market and preventive measures of economic fluctuations and improve and regulate the financial level and meet liquidity standards. These requirements also have a direct impact on enhancing the value of bank shares in financial markets as opposed to banks that did not meet some of those requirements (BCBS 2016b) (BCBS 2015) (BCBS 2016).

The Basel III decisions are based on two main aspects: first, adjustments to capital adequacy against credit, operating and market risks; and second, three criteria introduced Net Stable Funding Ratio, Leverage Ratio, and Liquidity Coverage Ratio. Basel III enables banks to maintain a certain level of liquid or quasi-cash assets for facing real-time conditions or risks. Banks in financial markets.

This research focuses on the Iraqi banks listed in the Iraq Stock Exchange, as Iraq is an emerging financial market seeking to attract foreign investors through the adoption of a clear strategy to reduce the risk of financial crises based on the application of the decisions of Basel III.

Literature Review

In this section, we will review some of the literature on the subject of solvency and capital adequacy of banks and financial institutions (Martin and Ines 2008). Presented a study entitled "Review and Comparison of Risk-Based Capital Standards". They reviewed and compared risk-based capital requirements in the United States, the European Union, Switzerland and New Zealand (Bardolet, Alex and Lovallo 2017). They concluded that there is no single standard of capital in the insurance industry and financial institutions, there is a fair amount of disagreement about how the sector is regulated around the world, and there is no empirical evidence on the most efficient methods or requirements.

Study of (Khidmat and Rehman 2014) finds that solvency which defined by debt to equity ratio, has a negative significant impact on the (ROA) and (ROE), whereas the Study of (Reinhart and Kenneth 2011), applied on lodging firms, From the results of this study, there was a positive relationship between debt ratio and ratio of property, plant and equipment to total assets (PP&E) and revenue per available room (RevPAR). The lodging firms with high long-term debt ratio and with high PP&E ratio would have higher room rates, and this could result in higher (RevPAR). However, from the results of this study, RevPAR and revenue had a significant negative relationship. According to the results of this study, long-term debt ratio was negatively related to profitability (ROA). Most lodging firms showed a decrease in total revenue during the period.

Study (De Bandt, et al. 2014) studies the effect of banks' capitalization on banks' Return on Equity (ROE). It found that an increase in capital leads to a significant increase in ROE; study (Taani, 2013) examined the impact of capital structure on performance of Jordanian banks. Multiple regressions was applied on performance indicators such as Net Profit (NP), Return on Capital Employed (ROCE), Return on Equity (ROE) and Net Interest Margin (NIM) as well as Total Debt to Total Funds (TDTF) and Total Debt to Total Equity (TDTE) as capital structure variables. The results showed that bank performance, which is measured by net profit, return on capital employed and net interest margin is to be significantly and positively associated with total debt; while total debt is found to be insignificant in determining return on equity in the banking industry of Jordan.

Capital Solvency

The financial and banking sector is witnessing successive changes and developments from the beginning of the first decade of the twentieth century to the present day. These transformations were represented in the technological advancement of banking services, the growth and development of financial instruments, the unprecedented openness of financial markets in different ways (Vousinas 2015).

Banks have been exposed to various types of risk that have affected many financial crises in various countries (such as Brazil, Southeast Asia, Mexico and Russia) and finally the subprime mortgage crisis in the United States (Song 2016). The Group of 10 (Canada, France, Italy, Belgium, Japan,

United Kingdom, Netherlands, United States, Germany and Sweden) met in Basel, Switzerland to develop standardized risk measurement and management mechanisms to be semi-binding for all banks. The importance of banking supervision and supervision In order to ensure the safety of the local and global banking sector, known as the Basel I Agreement (Dewatripont and Tirole 1994).

Basel I ensures banks are obliged to provide a minimum capital adequacy ratio of 8%, which corresponds to the total risk weighted at certain weights (Noréus 2015), capital is classified into:

- a. Basic Capital: Consists of issued and fully paid ordinary shares and preference shares, reserves of all types, except for provision for doubtful debts, retained earnings as well as retained earnings from the principal capital, mutual investments in other banks' capital (Reinhart and Kenneth 2011).
- b. Supportive capital: consisting of undeclared reserves (approved by regulatory authorities), asset revaluation reserves (55% of which fluctuate), and risk provisions (not exceeding 1.25% of assets and liabilities) Risk weighted collateral, and supporting loans (maturity not exceeding 5 years and not exceeding 50% of the base capital). In all cases, the supporting capital should not exceed 100% of the capital base (BCBS 2015), (BCBS 2016).
- c. Credit risk: which is classified according to the economic and political conditions of the countries, if these countries are classified as low and high risk. Farther its determined risk weights by dividing assets into assets in balance sheet giving weights ranging between 0 and 100%, and assets off balance sheet, which is translated into fiduciary assets according to the specified transfer transactions, is then weighted by the corresponding weights according to the beneficiary (BCBS 2015), (BCBS 2016).

Despite this, the financial crisis continued, especially in East Asian countries, despite the commitment to apply the requirements of (Basel I), which imposed the necessity of making the proposed amendments to calculate the solvency of capital to face the risks, known as the decisions (Basel II) (Roy, Kohli and Khatkale 2013).

Basel II decisions have maintained capital adequacy at the same rate of 8% with reclassification of risk into three main types: credit risk, market risk and operational risk. It also made a radical change to the system of weights, which was followed by the identity of the borrower, whether it is a state, institution or banks, and became linked to the degree of classification granted to debt by international rating institutions. The system is based on Basel II specific and detailed criteria to measure credit, operational and market risk, known as Mc Donough, to calculate the capital adequacy required for FPRC and FPRM. Moreover, Operational Risk (FPRO) (Paulin and Chouinard 2014) (Singer 2007). The senior and executive management of banks should provide the necessary support for internal control, provide systems to assess capital adequacy according to the size of the risks they face, as well as support market discipline by enhancing the degree of transparency and disclosure (Kuvalekar 2016).

Despite the stringent requirements of Basel II, the financial crisis persisted in many countries of the world, forcing the leaders of the G20 supervisory authorities to reconsider the rules of the Basel II committee to achieve an investigation. Stability, strengthening of the global banking system, and fair competition for banks subject to different banking legislation, has resulted in some important reforms of the Basel III Convention (BCBS 2015), (BCBS 2016) (Mehta 2017) (Singer 2007):

- a. Add a mandatory reserve of 2.5% to the capital adequacy ratio of 8% to maintain a minimum of 10.5% to face risks from 2019.
- b. The Bank is required to retain a portion of the pre-emptive capital known as "Basic Capital"; it shall consist of paid-up capital and retained earnings equivalent to at least 4.5% of the Bank's risky assets, an increase of 2% over the previous year. According to Basel II, the increase in the margin of ordinary equity reserves to reach 4.5% of the banking assets and commitments to face the crisis started in 2013.
- c. The Bank shall maintain a type of reserve to cope with the adverse effects of economic events ranging from 0-2.5% of the capital (shareholders' equity). While Bank provide a minimum of stable sources of financing with the Bank to ensure that it is not affected by the performance Its role in granting credit and investment, while providing specific ratios of liquidity to ensure the bank's ability to meet its obligations to customers.
- d. The excellent capital held by the Bank to face future shocks must be tripled to 7%. In case the reserve ratio falls below 7%, the financial authorities may impose restrictions on the bank's distribution of dividends to shareholders or grant financial rewards to its employees.
- e. Raise the level of the current level of total capital from 4% to 6%.

Those procedures is applied gradually from January 2013 to the beginning of its implementation in 2015 and finally implemented in 2019.

Basel III offers three criteria that enable banks to maintain a certain level of liquid or cash equivalents for meeting current circumstances or risks that reflect their ability to control crises, improve risk management, and enhance transparency:

The First Criterion: Coverage Ratio Liquidity

The objective of this Standard is to control banks' cash assets to reach the level of unrestricted liquidity. This liquidity helps to meet the obligations or changes in the short term that occur in banks. This ratio is calculated based on the ratio of high liquid assets held to total cash flow for a period of 30 days, if they are not less than 100% (BCBS 2015) (BCBS 2016) (BCBS 2014) (BCBS 2010).

The Second Criterion: Net Stable Funding Ratio

The objective of this Standard is to measure the ability of sources and resources to generate stable liquidity at the Bank, while encouraging long-term sources of funding rather than short-term sources of funding that have been a major cause of the financial crisis, especially in the United States (BCBS 2015) (BCBS 2016) (BCBS 2014) (BCBS 2010).

The Third Criterion: Leverage Ratio

The objective of this standard is to measure the amount of provisions to total assets in and out of the budget, if the ratio should not be less than 3% (BCBS 2015) (BCBS 2016) (BCBS 2014) (BCBS 2010).

The Basel Agreements (I, II, III) provide a strong and compelling motivation for all financial authorities regulating the work of banks or financial institutions to achieve financial stability, and take into account both the coverage of credit, operational and market risks. As well as it develops procedures compliance with liquidity will improve the value of banks' shares in financial markets as opposed to banks that did not meet some of these requirements.

Stock Prices

Stock trading in financial markets needs a lot of information to make the right investment decision (Rose 2003). This includes information on supply and demand for stocks, as well as information on cash flows, profits and the type of risk that surrounds the company or business (Mehta 2017). Studies show that market value is not a fixed value for an indefinite period but is fluctuating dramatically depending on what information holds good or bad news about the company's future (Al-Hindi 1996). However, the share price of the banking sector is of particular relevance among the various business sectors where the value of bank shares is highly correlated with the risk component and its diversification as well as the risk of financial instruments that create a highly uncertain environment (Vousinas 2015).

(Amoako and Smith 2002) (Atindehou and Gueyie 2001) (Huaug 2004) Indicates that bank share prices are highly sensitive to two types of risk: credit risk and the ability of capital to avoid such risks. It is related to market risk associated with interest rate risk, equity risk, foreign exchange risk, commodity price volatility and risk of options. The financial crises and the collapse of the banking sector in major countries have explicitly pointed out the ability of extra budgetary items, securitization of bank loans and the transfer of risks to investors and significantly to cause losses to savers with limited incomes (Elton and Gruber 1999).

What the Basel Committee has provided requires any bank or financial institution to disclose its capital, its exposure to risk and the methods used to determine the magnitude of the risk in order for customers, shareholders and creditors of these institutions to be aware of the risks with the possibility of proper valuation (Singer 2007). With regard to capital adequacy, the new standard allowed banks to develop internal models to determine the capital required to meet market risk, which varies from bank to bank (Amoako and Smith 2002).

Basel III has given banks flexibility in application with the freedom to choose simplified or more complex approaches in determining capital adequacy, size of banks and their ability to cope with these risks and maintain the financial stability of NBUK and financial markets while developing the risk measurement route by introducing Drastic changes were represented by risk weighting coefficients as they became dependent not on the legal nature of borrowers but on the quality of the loan (BCBS 2015) (BCBS 2016).

II. RESEARCH METHODOLOGY

For proving the research hypothesis, Basel III will be applied to the National Bank of Iraq, one of the active banks in the Iraqi business environment. The National Bank of Iraq was established in 1995 as a public shareholding company in the private sector, providing a full range of banking services to companies and individuals in Iraq. Due to the Bank's success and to support its future growth, the Bank's capital was increased from IQD 400 million at inception to IQD 250 billion (US \$ 215 million) in December 2013. In 2005, Capital Bank (Jordan) Nationality) by buying the majority of the shares of the National Bank of Iraq (61.85%), which enabled the National Bank of Iraq to develop its products and services, and strengthen its foothold globally and enhance financial inclusion at the country level. Thanks to its extensive network of correspondent banks, Capital Bank is the National Bank of Iraq's gateway to global economies, facilitating the sending and receiving of internal and external remittances, granting of credit facilities and the provision of trade finance services. In addition, NBI can trade for its clients in the Jordanian market and in international markets through Capital Investments, the investment arm of Capital Bank - as well as providing trading services in the Iraq Stock Exchange through its wholly owned subsidiary, Palm Oasis. The Bank operates through a sophisticated core banking system to support its growth and customer service. Capital Bank and all its subsidiaries use Ernst & Young to audit all accounts and prepare their financial reports in accordance with International Accounting Standards. The bank has been awarded a BB rating by Capital Intelligence International. The bank also received a rating of "good" by the Central Bank of Iraq. The National Bank of Iraq currently has 11 branches spread across all major Iraqi cities. All these reasons and more were a motivation for choosing a sample research (National Bank of Iraq 2019).

The following table shows some abbreviations used in calculating the financial ratios and their meanings:

TABLE (1) abbreviations used in calculating the financial ratios

| | |
|---|------|
| Capital | CP |
| Capital required to meet the credit risk | CRCR |
| Capital required to meet the market risk | CRMR |
| Capital required to meet the operational risk | CROR |
| Current accounts and Deposits | CA&D |
| Financial solvency | FS |
| Investment in land and real estate | ILR |
| Leverage Ratio | LR |
| Liquidity Coverage Ratio | LCR |
| Net cash credit | NCC |
| Net Fixed Assets | NFA |
| Net Stable Funding Ratio | NSFR |
| Reserves | R |

To determine the extent to which the bank fulfills the requirements of Basel III criteria and its impact on the share prices in the Iraq Stock Exchange, the solvency indices of the selected bank will be determined for a series of years (2014-

2017) and then compared with Stock price changes for an equivalent series of subsequent years (2015-2018)¹.

a. Capital solvency of the Bank for 2017

$$\begin{aligned} \text{Financial solvency} &= \text{CP} - \text{NFA} + \text{R} / \\ &\text{CRCR} + \text{CRMR} + \text{CROR} * 100 \geq 10.5 \% \\ \text{CRCR} &= \{(250,000 - 204,485 + 11,507 + 184,729) / 75\} + \\ &\quad \{177,168 * 25\} + \{67,695 * 25\} = 159.257 \\ \text{CRMR} &= (\text{Average revenue for three years} + \text{Exchange} \\ &\quad \text{account balance}) * 8\% * 12.5\% \\ &= (35,769 + 6,970) * 8\% * 12.5\% = 427.4 \\ \text{CROR} &= (\text{Average revenue for three years}) * 8\% * 12.5\% \\ &= (35,769) * 8\% * 12.5\% = 357.7 \\ \text{Financial solvency} &= (250,000 - 204,485 + 11,507 / \\ &\quad 159.257 + 427.4 + 357.7) * 100 \geq 10.5 \% \\ &= 21.25 \% \end{aligned}$$

The National Bank of Iraq has achieved a higher percentage of "Basel III" by (10.75%) and the reason is due to the effective control imposed by the Central Bank of Iraq because of terrorism and military operations, which led to the instability of Iraqi markets.

b. criteria for the preservation of liquid assets or cash equivalents

1) Liquidity Coverage Ratio

$$\text{LCR} = \text{High Quality Liquid Assets} / \text{Total Net Liquidity Outflows over 30} \geq 100 \%$$

High quality liquid assets = The Assets of the first level + (Assets Level II / Class A + Assets Level II / Class B)

The upper limit adjustments by 15%, the upper limit adjustments by 40%.

- The upper limit adjustments by 15% = whichever is higher Assets Level II / Class B – 15/85 (Assets of the first level + Assets Level II / Class A), (Assets Level II / Class B – 15/60 Assets of the first level), (0).
- The upper limit adjustments by 40% = whichever is higher (Assets Level II / Class A + Assets Level II / Class B – The upper limit adjustments by 15%) – (Assets of the first level) 2/3, (0).

Liquid Assets:

Assets of the first level = 112,009 IQD

Assets Level II / Class A = 74,613 IQD

Assets Level II / Class B = 319,101 IQD

- The upper limit adjustments by 15% = whichever is higher. (319,101 - 15/85 * 248,084 + 74,613), (319,101 - 15/60 * 248,084), (0).
Whichever is higher (200,708), (275,321), (0)
= 275,321 IQD
- The upper limit adjustments by 40% = whichever is higher. (74,613 + 319,101 - 275,321) - 248,084 * 2/3, (0).
= 118,393 - 165,389 (0) = 46,996 IQD
(319,101 - 275,321) = 43,780, 43,780 + 74,613 - 46,996

¹ Note the amounts in millions of dinars, The method of calculating solvency indices for 2017 will be indicated only, whereas previous indices are calculated in the same manner.

$$= 71,397, 71,397 - 43,780$$

$$= 27,617 \text{ IQD}$$

$$\text{High quality liquid assets} = 248,084 + 43,780 + 27,617$$

$$= 319,481 \text{ IQD}$$

Total Net Liquidity Outflows over 30 = the total external expected cash flows – Total expected cash inflows.

$$= 618,549 - 367,099 = 251,450 \text{ IQD}$$

$$\text{LCR} = 319,481 / 251,450 = 1.27 \text{ Liquidity Coverage Ratio}$$

The National Bank of Iraq has achieved a higher percentage of Basel III by (27%), which indicates that the bank maintains a good ratio to cover liquidity.

2) Net Stable Funding Ratio

$$\text{NSFR} = \text{Available stable of funding} / \text{required stable of funding} \geq 100 \%$$

Available stable of funding

$$= 248,084 + 74,613 + 319,101 = 641,798 \text{ IQD}$$

Required stable of funding

$$= 367,099 + 69,022 + 19,956 = 456,077 \text{ IQD}$$

Net Stable Funding Ratio indicates that the National Bank of Iraq achieved a higher percentage of Basel III by (41%), which indicates that the bank maintains a good percentage of net stable funding.

3) Leverage Ratio

$$\text{LR} = \text{Tier I Capital} / \text{Total assets} \geq 3 \%$$

$$= 211,039 / 603,980 = 0.35$$

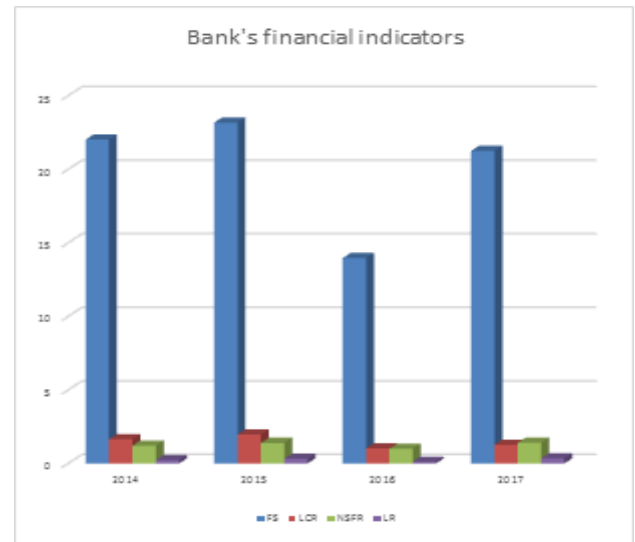
$$\text{NSFR} = 641,798 / 456,077 = 1.41\%$$

Leverage Ratio refers to the achievement of the National Bank of Iraq a higher percentage of Basel III by (32%), which indicates the bank maintains a good percentage of leverage.

The Bank's financial indicators for previous years have been calculated in the same way and we have obtained the results shown in the following table:

TABLE (2) Bank's financial indicators

| Year | FS | LCR | NSFR | LR |
|------------------------|---------------------------|-----------------------|--------------------------|------------------------|
| 2014 | 22.02 | 1.63 | 1.21 | 0.22 |
| 2015 | 23.17 | 1.96 | 1.39 | 0.3 |
| 2016 | 13.96 | 1.01 | 1 | 0.12 |
| 2017 | 21.25 | 1.27 | 1.41 | 0.35 |
| Basel III requirements | Greater or equal to 10.5% | Greater or equal to 1 | Greater or equal to 100% | Greater or equal to 3% |



Because of the Bank's compliance with the requirements of the supervisory authorities and supervisors on the performance of Iraqi banks. As well as international requirements for international financial reporting, and Basel requirements to reduce credit, operating and market risks, the bank has maintained a normal level of prices and value of shares in the Iraqi Stock Exchange. Against some banks, the value of their shares fluctuated significantly due to the high risk and lack of fulfillment of requirements, as evidenced by the following trading table.

TABLE (3) prices and value of shares in the Iraqi Stock Exchange.

| Year | Volume of shares traded | Opening | highest price | Lowest price | Current rate | Previous rate | Closing price |
|------|-------------------------|---------|---------------|--------------|--------------|---------------|---------------|
| 2015 | 29,342,858,000 | 0.470 | 0.6 | 0.4 | 0.50 | 0.49 | 0.470 |
| 2016 | 50,150,951,000 | 0.410 | 0.56 | 0.29 | 0.425 | 0.50 | 0.410 |
| 2017 | 250,986,000 | 0.55 | 0.96 | 0.47 | 0.715 | 0.425 | 0.55 |
| 2018 | 1,472,971,000 | 0.90 | 1.14 | 0.7 | 0.92 | 0.715 | 0.90 |

By examining the extent of stock price changes, the authors concluded that there was a direct correlation between the solvency indicators and the additional liquidity required by Basel III and investors' appetite for shares. Additional research can be conducted to determine the correlation and decline between financial indicators and stock prices, and to be comprehensive for all banks within any market (this could represent a master's study).

III. CONCLUSION AND DISCUSSIONS

Basel III requirements are necessary to enhance the solvency and liquidity of banks if adopted in a manner commensurate with the nature and circumstances of each market. The environment surrounding banks and financial

institutions affects the nature of their business, as well as their impact on the level of performance and confidence of any bank. It is therefore assumed that Basel III requirements are harmonized with the legal and domestic requirements of a country, and that the minimum requirements are determined accordingly.

By examining the extent of stock price changes, the authors concluded that there was a direct correlation between the solvency indicators and the additional liquidity required by Basel III and investors' appetite for shares. Additional research can be conducted to determine the correlation and decline between financial indicators and stock prices, and to be comprehensive for all banks within any market (this could represent a master's study).

The indicators reached by the authors that relate to the Bank's Iraqi National indicate that there are requirements imposed on the working environment in the Iraqi banks are higher than the Basel III requirements and is not far from the rest of the Iraqi banks indicators. The higher requirements are the result of the exceptional circumstances that Iraq is going through, which are enacted to give greater confidence to investors and create a better investment environment.

REFERENCES

- [1] Al-Hindi, Munir Ibrahim (1996). Modern thought in investment. Alexandria: Knowledge, pp. 37-39.
- [2] Amoako, Ben; Smith, Brian (2002), analysis of P/E ratios and interest rates, managerial finance, 28, 4, 48 - 59.
- [3] Atindehou B, Roger; Gueyie, Jean-Pierre (2001), Canadian Chartered banks' stock returns and exchange rate risk, management decision, 39, 4, 285 - 295.
- [4] BCBS, Basel Committee on Banking Supervision (2015), "Finalizing Post-Crisis Reforms: An Update – A Report to G20 Leaders", November 2015.
- [5] Basel Committee on Banking Supervision (2016), "Revised Market Risk Framework and Work Programmed for Basel Committee is Endorsed by its Governing Body", Press Release 11 January 2016.
- [6] Basel Committee on Banking Supervision (2016b), "Standards: Minimum Capital Requirements for Market Risk", January 2016.
- [7] Basel Committee on Banking Supervision (2014a), "Basel III Leverage Ratio Framework and Disclosure Requirements", January 2014.
- [8] Bardolet, David; Alex, Brown; Lovallo, Dan, (2017), "The Effects of Relative Size, Profitability, and Growth on Corporate Capital Allocations", Journal of Management, Vol. 43 No. 8, November 2017 2469–2496.
- [9] BCBS. (2014). Basel III: International framework for liquidity risk measurement, standards and monitoring. Basel: Bank for International Settlements.
- [10] BCBS (2010). Results of the Comprehensive Quantitative Impact Study. Basel: Bank for International Settlements.
- [11] De Bandt, O., Camara, B., Pessarossi, P., and Rose, M. (2014). Does the capital structure affect banks' profitability? Pre and Post-Financial crisis evidence from significant banks in France (No. 12). Banque de France.
- [12] Dewatripont, M., & Tirole, J. (1994). A Theory of Debt and Equity: Diversity of Securities and Manager-Shareholder Congruence. Quarterly Journal of Economics, No.109, pp: 1027-1054.
- [13] Elton, Edwin J.; Gruber, Martin J. (1999), modern portfolio theory and investment analysis, John Wiley and sons Inc., 46-66.
- [14] Huaug, Xiaowu (2004), china stock price reactions to financial announcements: evidence from segmented markets, managerial finance, 30, 3, 26 - 73.
- [15] Khidmat, W. and Rehman, M. (2014). Impact of Liquidity & Solvency on Profitability Chemical Sector of Pakistan. Economics Management Innovation, Vol. 6, Issue 3, 3-13.
- [16] Kuvalekar.S V (2016)" Basel Accords and their Implications on Banking Business ", Vinimaya, Vol. XXXVII, No. 3, pp: 16-23.
- [17] Malhotra, A. (2007). "Factors Affecting Share Prices". Available at: <http://ezinearticles.com/?Factors-Affecting-Share-Prices&id=741674>
- [18] Martin Eling, Ines Holzmüller, (2008), an Overview and Comparison of Risk-Based Capital Standards, Working Papers on Risk Management and Insurance NO. 57, edited by Hato Schmeiser, Chair for Risk, Management and Insurance. Institute of Insurance Economics. University of St.Galler.
- [19] Mehta. Pushpkant Shakhdiwee, (2017)" From Basel I to Basel II to Basel III ", International Journal of New Technology and Research (IJNTR) Volume-3, Issue-1, pp: 66-70.
- [20] Noréus, Martin (2015) "Amortization requirement and risk weights – two current issues for macro prudential policy", speech by Finance inspection is acting Director-General at UBS Nordic Financial Services Conference, 10 September 2015.
- [21] Paulin. Éric, Chouinard Graydon (2014)" La mise en oeuvre de Bâle III: vers UN secteur bancaire plus sûr ", Bank of Canada, Financial System Review, pp: 61-68.
- [22] Rose, Peter, S. (2003). "Money and Capital Markets". Eighth ed. McGraw Hill.
- [23] Reinhart, Carmen M. and Kenneth S. Rogoff (2011), This Time Is Different: Eight Centuries of Financial Folly, Princeton University Press. Services Risk bank" Higher Capital Requirements for the Major Swedish Banking Groups", November 2011.
- [24] Roy. Debajyoti Ghosh, Kohli. Bindya, and Khatkale, Swati (2013)" Basel I to Basel II to Basel III: A risk management journey of Indian banks", AIMA Journal of Management & Research, May 2013, Volume 7, Issue 2/4, pp: 1-23.
- [25] Singer, D. A. (2007). "Regulating Capital Setting Standards for the International Financial System". Ithaca and London: Cornell University Press, p. 1.
- [26] Song, Guoxiang, (2016) "The Pro-Cyclical Impact of Basel III Regulatory Capital on Bank Capital Risk" In Risk Management Post Financial Crisis: A Period of Monetary Easing, by Emerald Group Publishing Limited.
- [27] Voutsinas, Georgios. L, (2015) "Supervision of financial institutions" Journal of Financial Regulation and Compliance, Vol. 23 Issue 4 pp. 383 -402.
- [28] National Bank of Iraq, (<https://www.nbi.iq>)