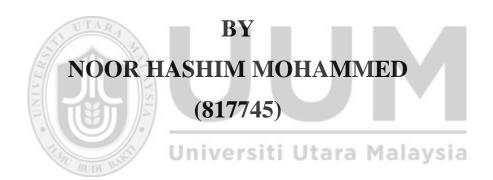
The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



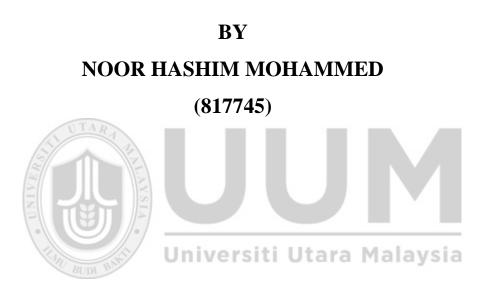
THE IMPACT OF LIQUIDITY RISK, CREDIT RISK AND OPERATIONAL RISK ON THE PERFORMANCE OF IRAQI PRIVATE BANKS



MASTER OF SCIENCE (BANKING) UNIVERSITI UTARA MALAYSIA

2016

THE IMPACT OF LIQUIDITY RISK, CREDIT RISK AND OPERATIONAL RISK ON THE PERFORMANCE OF IRAQI PRIVATE BANKS



Thesis Submitted to Othman Yeop Abdullah Graduate School of Business University Utara Malaysia in Fulfilment of the Requirement for the Degree of Master of Science (Banking)



Pusat Pengajian Ekonomi, Kewangan dan Perbankan

Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PENYELIDIKAN (Certification of Research Paper)

Saya, mengaku bertandatangan, memperakukan bahawa (), the undersigned, certified that) NOOR HASHIM MOHAMMED AL YOUSUF (817745)

Calon untuk Lazah Sarjana (Candidate for the degree of) MASTER OF SCIENCE (BANKING)

telah mencemukakan kertas penyelidikan yang bertajuk (has preparted his bar research paper of the following title)

THE IMPACT OF UQUIDITY RISK, CREDIT RISK AND OPERATIONAL RISK ON THE PERFORMANCE OF IRAQI PRIVATE BANKS

> Utar Sepert yang tercatal di muka sunat tajuk dan kulit kertas penyelitikan

(as it appears on the title page and front cover of the research paper)

Bahawa kertas penyelidikan tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.

(that the research paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by the dissertation)

Nama Penyelia (Name of Supervisor) DR. SABRI NAYAN

Tandatangan

able nos

(Signature)

The SALED INCOME المراز بشاب of of Economics, Presmo and Sanding (SCI II) COS, Ontrensiti Utara Malagalia

Tarikh (Date) 8 JUNE 2016

PERMISSION TO USE

In presenting this thesis in partial fulfilment of the requirements for a Post Graduate degree from the University Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this dissertation/project paper in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor(s) or in their absence, by the Dean of School of Economics, Finance & Banking (SEFB). Where I did my dissertation/project paper and copying or publication or use of this dissertation/project paper parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my dissertation/project paper.

Request for permission to copy or to make other use of materials in this dissertation/project paper in whole or in part should be addressed to:

Dean of School of Economics, Finance & Banking (SEFB)

University Utara Malaysia

06010 UUM Sintok Kedah

Darul Aman

Abstract

The main objectives of this research is to study the effect of liquidity risk, credit risk and operational risk on the performance of private banks in Iraq for the period 2009 to 2014. This study especially focus on Iraqi commercial private Banks. The dependent variables for bank performances are measured by return on asset (ROA) and return on equity (ROE), and independent variables which are, liquidity risks are measured by liquidity ratio and calculate as liquid asset to total asset, credit risks are measured by non-performing loan ratio and operational risks are measured by earnings before interest and tax divide on total asset. This study employs panel data regression analysis of fixed effects and random effects models. Furthermore, the results show that liquidity risk was found having positive significant relationship with ROA and ROE. While credit risk has negative significant relationship with ROA, and negative insignificant relationship with ROE. However, operational risk was found to have significant and negative effect on ROA. While operational risk was significant and positively related to ROE.

Keywords: Liquidity risk (LR), Credit risk (CR), Operational risk (OR), return on asset (ROA), return on equity (ROE).

ABSTRAK

Objektif utama kajian ini adalah untuk mengkaji kesan risiko kecairan, risiko kredit dan risiko operasi ke atas pencapaian bank-bank di Iraq bagi tempoh (2009 hingga 2014). Kajian ini lebih memberi tumpuan kepada Bank Komersial Swasta di Iraq. Pembolehubah bersandar adalah pencapaian bank yang diukur berdasarkan Pulangan atas Aset (ROA) dan Pulangan atas Ekuiti (ROE). Dalam pembolehubah tidak bersandar, risiko kecairan diukur menggunakan nisbah kecairan dan dikira sebagai aset cecair kepada jumlah aset, risiko kredit diukur oleh nisbah pinjaman tidak berbayar dan risiko operasi diukur menggunakan pendapatan sebelum faedah dan cukai yang dibahagi dengan jumlah aset. Kajian ini menggunakan panel data analisis regrasi yang memberi kesan tetap dan model kesan rawak. Tambahan pula, keputusan menunjukkan bahawa risiko kecairan didapati mempunyai hubungan yang ketara negatif dengan ROA dan hubungan yang tidak ketara negatif dengan ROE. Walau bagaimanapun, risiko operasi didapati mempunyai kesan yang ketara negatif dengan ROA. Manakala risiko operasi adalah penting dan positif yang berkaitan dengan ROE.

Kata Kunci: risiko kecairan (LR), risiko kredit (CR), risiko operasi (OR), pulangan atas aset (ROA), pulangan atas ekuiti (ROE).

Acknowledgements



I am grateful to the **Almighty Allah** for his blessings and giving me the opportunity to complete my thesis in Master degree. Alhamdulliah and million thanks to Allah. May peace and blessing of Allah be upon His beloved **Prophet Muhammad** (SAW), his family Divine good and his companions Almentajabin.

I would like to express my sincere appreciation to my supervisor **Dr. Sabri Bin Nayan**. He has showed professionalism and commitment in his guidance. His keenness to complete this research was crucial to achieve this state of success.

I am indebted to **my father**, **Hashim**. **M**. for his care and love. As a typical father, he worked industriously to support the family and spare no effort to provide the best possible environment for me to grow up and attend school. My deepest gratitude goes to **my mother**, **Ekram**. **K**. she is simply perfect. I have no suitable words that can fully describe my everlasting love for her. She will be remembered forever with great respect and deep love. My parents instilled in me the desire to achieve in spite of impediments, they taught me the value of education and to them I will be forever grateful without their constant encouragement, motivation and assistance, I would not be able to complete my study. May Allah protect my parents.

A million thanks and appreciation goes to **my beloved husband**, to my love and my partner life **Hamid** while there were times when no one understood the trials and tribulations of my experience, I sincerely appreciate your willingness and desire to endure the years of much less than perfect housekeeping. I am entirely grateful and owning a favour to my beloved husband for his patience, sacrifice, spiritual support and everlasting encouragement me and without his continuous encouragement and understanding, it would have been impossible for me to complete this thesis. Also, special love and appreciation goes to my lovely daughter and **the fruit of my life** *Malak*.

My love also and grateful goes to my brothers, Ali, Ahmed, Amar, to my beautiful sisters, Abeer and Hawraa, and my beloved aunt Asraar for their support and eternal prayers.

My love and yearning goes to the pure spirit to martyr hero my brother Zaid may Allah grant him mercy.

I would like to thank all of the faculty members and staff at the School of Economics Finance and Banking and Othman Ayoub Abdullah Graduate School of Business at University Utara Malaysia for their help and support through my journey. My love also, and thankful goes to my classmate **Faida**, **Dian** and **Faiza**.

Last but not least I thankful my family and all my friends in **Iraq** is supportive me in many different way especially **Hawraa Om Serag** and also to whom my pen forgotten them but my heart remember them.

NOOR HASHIM

17/5/2016

Table of Contents

CHAPTER ONE: BACKGROUND OF THE STUDY	1
1.1 Introduction	1
1.2 Background of the Study	1
1.2.1 Overview of Iraqi banking sectors	1
1.3 Problem Statement	6
1.4 Research Questions	8
1.5 Research Objectives	8
1.6 Scope of the Study	8
1.7 Significant of the Study	9
1.8 Organization of the Thesis	9
1.9 Concluding Remarks	10
CHAPTER TWO: BACKGROUND OF THE STUDY	11
2.1 Introduction	
2.2 Definition and Concept of Bank Performance	11
2.3 Banking Risks	12
2.3.1 Liquidity Risks	
2.3.2 Credit Risks	16
2.3.3 Operational Risks	16
2.4 Liquidity Risks and Bank Performance	19
2.5 Credit Risk and Bank Performance	
2.6 Operational Risks and Bank Performance	24
2.7 Concluding Remarks	27
CHAPTER THREE: METHODOLOGY	28
3.1 Introduction	28
3.2 Theoretical Framework	28
3.3 Measurement of Variables	29
3.3.1 Dependent Variables	29
3.4 Data Sources	35
3.5 Population and Sample of the Study	35
3.6 Hypothesis Development	35
3.6.1 Liquidity Risk	35
3.6.2 Credit Risk	36

3.6.3 Operational Risk	37
3.7 Regression Models	38
3.8 Empirical Method	39
3.8.1 Correlation	39
3.8.2 Diagnostic Test	40
3.8.3 Panel Least Squares Regression	41
CHAPTER FOUR: RESULTS AND DISCUSSIONS	42
4.1 Introduction	42
4.2 Descriptive Statistics	42
4.3 Correlation	44
4.4 Diagnostic Test	45
4.4.1 Autocorrelation Test	45
4.4.2 Heteroscedasticity Test	46
4.4.3 Normality Test	46
4.4.4 Multicollinearity test	47
4.5 Hausman Test	48
4.6 Regression Analysis	48
4.6.1 Regression Analysis of Return on Asset (ROA)	
4.6.2 Regression Analysis of Return on Equity (ROE)	
4.7 Discussion and finding	52
4.7.1 Liquidity risk and bank performance	52
4.7.2 Credit Risk and Bank Performance	
4.7.3 Operational Risk and Bank Performance	53
4.8 Concluding Remarks	54
CHAPTER FIVE: SUMMARY AND CONCLUSION	55
5.1 Introduction	55
5.2 Summary of the findings	55
5.3 Implication of the Study	57
5.3.1 Implication to the Policymakers	57
5.3.2 Implication for Managers	57
5.3.3 Implications for Academic Researchers	58
5.4 Limitations of the Study and Future Suggestion	58
5.5 Concluding Remarks	59
References	60
Appendices	75

LIST OF TABLES

Table		Page
Table 1.1	ROA and ROE for Iraqi Banks	5
Table 3.1	Summary of Variable and Measurement	
Table 4.1	Descriptive Statistics	
Table 4.2	Correlation Matrix	
Table 4.3	Breusch-Godfrey Serial Correlation LM Test	47
Table 4.4	Heteroscedasticity ARCH Test	47
Table 4.5	Test of Normality using Jarque-Bera Test	48
Table 4.6	Multtticollinearity Test	48
Table 4.7	Hausman Test	49
Table 4.8	Regression Analysis of the independent variables on ROA	50
Table 4.9	Regression Analysis of the independent variables on ROE	51
Table 4.10	Summary of the Hypotheses Testing Results	53 ia

LIST OF FIGURES

Figure		Page
Figure 3.1	Research Framework	28

LIST OF APPENDICES

Appendix		Page
Appendix 1	Sample of the Study (18 Iraqi Private Commercial Banks)	75

CHAPTER ONE

BACKGROUND OF THE STUDY

1.1 Introduction

This chapter consists of nine sections. It serves the purpose of introducing the entire research. Section 1.2 presents background of the study. Then, section 1.3 consists of problem statement. While section 1.4 presents a number of research questions, which are translated into objectives of the study as, contained in section 1.5. Furthermore, section 1.6 explains the scope of the study and significance of the study is presented in section 1.7. Additionally, organization of the study in section 1.8. Finally, section 1.9 Summarize the chapter.

1.2 Background of the Study

1.2.1 Overview of Iraqi banking sectors

Iraqi banking sector grew up since the nineteenth century as a special sector featuring a group of Iraqi banks and branches of Arab and foreign banks (with seventeen branches). Then the emergence of a government banking sector that is represented by the establishment of the Agricultural bank and Industrial bank in 1935, the Rafidain Bank in 1941, the Central Bank of Iraq in 1947, and the Real Estate Bank in 1948. The government banks and private banks were competing to provide better services to the public (Abdul Nabi, 2012). In Iraq, due to the country's huge economic liberalization, the banking sector is starting to play an important role in pushing the country towards free market trade. This sector is showing amazing chance for extension and variety and accounted 44.6% of total stock market capitalization, and participated 18.7% to Gross Domestic Product (GDP) (Iraqi Banks Annual report, 2014). The Iraqi government is

Universiti Utara Malaysia

The contents of the thesis is for internal user only

References

- Abdul Nabi, W. I. (2012). Iraqi Banking System: Its Inception, development, and Future Prospects. Working paper submitted to the Central Bank of Iraq. Baghdad, Iraq.
- Abdul Redha, N. J. (2013). The Requirement of the Iraqi Banking System Reform. Civilized dialogue. NO. 3721
- Abu Hussain, H., & Al-Ajmi, J. (2012). Risk management practices of conventional and Islamic banks in Bahrain. *The Journal of Risk Finance*, *13*(3), 215-239.
- Acerbi, C., & Scandolo §, G. (2008). Liquidity risk theory and coherent measures of risk. *Quantitative Finance*, 8(7), 681-692.
- Adeusi, S. O., Akeke, N. I., Adebisi, O. S., & Oladunjoye, O. (2014). Risk Management and Financial Performance of Banks in Nigeria. *European Journal* of Business and Management, 6(31), 336-342.
- Ahmad, S. (2006). Corporate governance and performance of Commercial Banks in Pakistan. In 23 rd International Symposium on Money, Banking and Finance (pp. 1-21).
- Al Khatib, A. (2009) 'Financial performance of Palestinian Commercial Bank', International Journal of Business and Social Sciences, 3(3), .175–184.
- Alalade, S. A., Binuyo, B. O., & Oguntodu, J. A. (2014). Managing Credit Risk to Optimize Banks' Profitability: A Survey of Selected Banks in Lagos State, Nigeria. *Research Journal of Finance and Accounting*, 5(18), 76-84.
- Alhassoun, N. (2014, June). Delays in the Development of Iraqi Banks Hinder their Ability to Grant Guarantees for Projects. Al-Hayat Newspaper. Beirut, Lebanon. NO. 18686.
- Al-Hennawi Mohamed Saleh Ibrahim. (2009), "Financial management of the entrance to the value and decision-making", University House, Alexandria, 2002 National investment commission report Iraq.

- Ali, A., & Nasir, S. Bin. (2014). Impact of board characteristics and audit committee on financial performance: A Study of Manufacturing Sector of Pakistan, *Research Journal of Finance and Accounting*, 5(7), 144-1 52.
- Ali, K., Akhtar, M. F., & Sadaqat, S. (2011). Financial and Non-Financial Business Risk Perspectives–Empirical Evidence from Commercial Banks.*Middle Eastern Finance and Economics*, 12, 150-159.
- Al-Matari, E. M., Al-Swidi, A. K., Faudziah, H. B., & Al-Matari, Y. A. (2012). The impact of board characteristics on firm performance: Evidence from Nonfinancial Listed Companies in Kuwaiti Stock Exchange. *International Journal of Accotlnting and Financial Reporting*, 2(2), 310-332.
- Almayahi, M. al-J. (2015, September). The Emergence of the Iraqi Private Banks. The Constitution Newspaper. Baghdad. NO. 3181.
- Alshammari, R. S. (2012). Non-performing Loans in the Banks and their Impact on Financial Crises. In Isra Private University Conference (pp. 1–32). Ammaan, Jordan.
- Al-Tamimi, H. A., & Al-Mazrooei, F. (2007). Banks' risk management: a comparison study of UAE national and foreign banks. *The Journal of Risk Finance*, 8(4), 394-409.
- Altman, E. I. (1977). Predicting performance in the savings and loan association industry. *Journal of Monetary Economics*, *3*(4), 443-466.
- Arena, M. (2008). Bank failures and bank fundamentals: A comparative analysis of Latin America and East Asia during the nineties using bank-level data. *Journal* of Banking & Finance, 32(2), 299-310.
- Arif, A and Anees, A. (2012). Liquidity Risk and Performance of Banking System. Journal of Financial Regulation and Compliance. 20(2), 1358-1988.
- Ariffin, N. M., & Kassim, S. H. (2011, December). Risk Management Practices and Financial Performance of Islamic Banks: Malaysian Evidence. In 8th International Conference on Islamic Economics and Finance (pp. 19-41).

- Aruwa, S. A. S., & Musa, A. O. (2014). Risk components and the financial performance of deposit money banks in Nigeria. *International Journal of Social Sciences and Entrepreneurship*, 1(11), 514-522.
- Aslan, A. (2012). The Relationship between Military Spending and Black Market Premium in Greece: An ARDL Approach. *Transition Studies Review*, Springer, 19(2), 155-161.
- Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industryspecific and macroeconomic determinants of bank profitability. *Journal of international financial Markets, Institutions and Money*, 18(2), 121-136.
- Bacha, E. A., Satou, G. M., Moran, A. M., Zurakowski, D., Marx, G. R., Keane, J. F., & Jonas, R. A. (2001). Valve-sparing operation for balloon-induced aortic regurgitation in congenital aortic stenosis. *The Journal of thoracic and cardiovascular surgery*, 122(1), 162-168.

Bank Annual Report, Iraq. (2014).

- Barth, J. R., Caprio, G. & Levine, R. (2004). Bank Supervision and Regulation: What Works Best. *Journal of financial intermediation*, 13(2), 205-84.
- Barth, J. R., Nolle, D. E., Phumiwasana, T., & Yago, G. (2003). A Cross-country Analysis of the Bank Supervisory Framework and Bank Performance. *Financial Markets, Institutions & Instruments*, 12(2), 67-120.
- Basel Committee on Banking Supervision, (November 2005). International convergence of capital measurement and capital standards: A revised framework. Bank for International Settlements, Press and Communications, Basel, Switzerland.
- Basel, I. I. (2003). The new Basel capital accord. *Switzerland: Bank for International Settlements*.
- Berger, A. N., & Bouwman, C. H. (2005, June). Bank capital and liquidity creation. In EFA 2005 Moscow Meetings Paper, June, http://ssrn. com/abstract (Vol. 672784).

- Berrios, M.R. (2013). The Relationship between Bank Credit Risk and Profitability and Liquidity. *The International Journal of Business and Finance Research*, 7(3), 105-118.
- Bessis, J. (2010), Risk Management in Banking, Wiley, Third edition
- Blacker, K. (2000)."Mitigating Operational Risk in British Retail Banks". *Risk Management*, 2(3), 23-33.
- Boahene, S. H., Dasah, J., & Agyei, S. K. (2012). Credit risk and profitability of selected banks in Ghana. *Research Journal of finance and accounting*, 3(7), 6-14.
- Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. *Journal of Banking & Finance*, 13(1), 65-79.
- Brock, P.L. & Suarez, L.R. (2000). Understanding the behavior of bank spreads in Latin America. *Journal of Development Economics*, 63(63), 113–135.
- Broll, U., & Welzel, P. (2002). Credit risk and credit derivatives in banking (No. 228).
 Volkswirtschaftliche Diskussionsreihe, Institut f
 ür Volkswirtschaftslehre der Universit
 ät Augsburg.

Brownbridge, M. & Harvey, N. (1998). Banking in Africa. James Currey Ltd, USA.

- Cebenoyan, A. S., & Strahan, P. E. (2004). Risk management, capital structure and lending at banks. *Journal of Banking & Finance, Elsevier, 28*(1), 19-43.
- Chari, V. V., & Jagannathan, R. (1988). Banking panics, information, and rational expectations equilibrium. *The Journal of Finance*, Wiley Online Library, *43*(3), 749-761.
- Chernobai, A., Jorion, P., & Yu, F. (2008, April). The determinants of operational losses. In 18th Annual Derivatives Securities and Risk Management Conference, April (Vol. 11).
- Chijoriga, M. M. (1997). An application of credit scoring and financial distress prediction models to commercial bank lending: the case of Tanzania.

- Chitan, G. (2012). Corporate governance and bank performance in the Romanian banking sector. *Procedia Economics and Finance*, Elsevier, *3*(*1*), 549-554.
- Cocri¹, V., Andrie¹, A., (2009). Managementul riscurilor si al performanaelor bancare, Wolters Kluwer România.
- Cooper, M. J., Jackson, W. E., & Patterson, G. A. (2003). Evidence of predictability in the cross-section of bank stock returns. *Journal of Banking & Finance*, Elsevier, 27(5), 817-850.

Cornalba, C., & Giudici, P. (2004). Statistical models for operational risk management. *Physica A: Statistical Mechanics and its applications, Elsevier, 338*(1), 166-172.

- Crouhy, M. Galai, D., Mark, R (2005). "The essentials of risk management". McGraw-Hill
- Crouhy, M., Galai, D., & Mark. (2006). The Essentials of Financial Risk Management. USA.: McGraw-Hill.
- Cruz, M. G. (2002). *Modeling, measuring and hedging operational risk*. Chichester: Wiley.
- Cummins, J. D., Lewis, C. M., & Wei, R. (2006). The market value impact of operational loss events for US banks and insurers. *Journal of Banking & Finance*, Elsevier, 30(10), 2605-2634.
- Daniels, K., & Ramirez, G. G. (2008). Information, credit risk, lender specialization and loan pricing: Evidence from the DIP financing market. *Journal of Financial Services Research*, 34(1), 35-59.
- Darabi, Roya; Molayi, Ali, (2011). The impact of liquidity, inflation, capital preservation, and GDP variables on profitability of Bank Mellat. Journal of Financial Knowledge of Exchange, No. 10, 139-180
- DeCoster, J. (2004). Meta-analysis notes. Retrieved July, 15, 2006.
- Demirgüç-Kunt, A. and Detragiache, E. (2003). Does deposit insurance increase banking system stability? An empirical investigation. *Journal of Monetary Economics*: 120-145.

- Demirgüç-Kunt, A., & Huizinga, H. (1999). Determinants of commercial bank interest margins and profitability: some international evidence. *The World Bank Economic Review*, *13*(2), 379-408.
- Demirgüç-Kunt, A., Laeven, L., and Levine, R. (2003). The Impact of Bank Regulations, Concentration, and Institutions on Bank Margins. World Bank Policy Research Working Paper NO. 3030.
- Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. *The journal of political economy*, 401-419.
- Diamond, D.W. and Rajan, R.G. (2005). Liquidity shortages and banking crises. *The Journal of Finance*, 60(2), 615-47.
- Doliente, J. (2005). Determinants of Bank Interest Margins in South East Asia', *Applied Financial Economic Letter*, 1(1) 53–57.
- Drehmann, M., & Nikolaou, K. (2013). Funding liquidity risk: definition and measurement. *Journal of Banking & Finance*, Elsevier, *37*(7), 2173-2182.
- Duca, J & McLaughlin, MM (1990). Developments affecting the profitability of Commercial banks. *Federal Reserve Bulletin*, 76(7), 477-499.
- Duraj, B., & Moci, E. (2015). Factors Influencing the Bank Profitability-Empirical Evidence from Albania. Asian Economic and Financial Review, 5(3), 483-494.
- Emami, M., Ahmadi, M. &Tabari, N.A.Y. (2013). The Effect of Liquidity Risk on the Performance of Commercial Banks. *International Research Journal of Applied* and Basic Sciences, 4 (6), 1624-1631.
- Falconer, B. (2001). Structural liquidity: the worry beneath the surface. *Balance Sheet, Emerald*, 9(3), 13-19.

Farhi, E., & Tirole, J. (2011). Bubbly liquidity. *The Review of Economic Studies*, rdr039.

Fernández-Laviada, A. (2007). Internal audit function role in operational risk management. *Journal of Financial Regulation and Compliance, Emerald*, 15(2), 143-155.

- Flores, F., Bónson-Ponte, E., & Escobar-Rodriguez, T. (2006). Operational risk information system: a challenge for the banking sector. *Journal of Financial Regulation and Compliance, Emerald*, 14(4), 383-401.
- Fofack H (2005). Non-Performing Loans in Sub-Saharan Africa: Causal Analysis and Macroeconomic Implications, World Bank Policy Research Working Paper No. WP 3769.
- Freixas, X., Rochet, J. C., & Parigi, B. M. (2004). The lender of last resort: A twentyfirst century approach. *Journal of the European Economic Association*, 2(6), 1085-1115.
- Froot, K. A. (2007). Risk management, capital budgeting, and capital structure policy for insurers and reinsurers. *Journal of risk and Insurance*, 74(2), 273-299.
- Gatev, E., Schuermann, T., & Strahan, P. E. (2009). Managing bank liquidity risk: How deposit-loan synergies vary with market conditions. *Review of Financial studies*, 22(3), 995-1020.
- Goddard, J., Molyneux, P., & Wilson, J. O. (2004). The Profitability of European Banks: a cross-sectional and dynamic panel analysis. *The Manchester School*, 72(3), 363-381.
- Goddard, J., Molyneux, P., Wilson, J., (2004). Dynamics of Growth and Profitability in Banking. *Journal of Money, Credit and Banking 36*(3), 1069-1090.
- Graham, C. & Bordeleau, E. (2010). The Impact of Liquidity on Profitability.*Bank of Canada Working Paper*, (38), 6-22.
- Gujarati, D. (2003). Essentials ofeconometrics (3rd ed.). Singapore: Irwin McGraw-Hill.
- Gujarati, D. N. (2003). Basic Econometrics. 4th. McGraw-Hill.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006).*Multivariate data analysis* (Vol. 6). Upper Saddle River, NJ: Pearson Prentice Hall.
- Hair, J.F., Black, W. C., Babin, B. J., & Anderson, R.E., (2010). Mtlltivariate Data Analysis (7th ed.). Upper Saddles fiver, NJ:Pearson Education.

- Hameeda Abu Hussain, Jasim Al-Ajmi, (2012), "Risk management practices of conventional and Islamic banks in Bahrain", The Journal of Risk Finance, Vol. 13 Iss 3 pp. 215-239 http:// dx.doi.org/10.1108/15265941211229244
- Hamisu, S.K. (2011). Credit risk and the performance of Nigerian banks. Journal of Business Administration, Vol. 13 No 1 and 2.
- Hanim, Tafri, F., Abdul Rahman, R., & Omar, N. (2011). Empirical Evidence on the risk Management Tools Practised in Islamic and Conventional Banks. *Qualitative Research in Financial Markets*, 3(2), 86-104.
- Hassan, M. K., & Bashir, A. H. M. (2003, December). Determinants of Islamic banking profitability. In *10th ERF Annual Conference, Morocco* (pp. 16-18).
- Hayashi, F. (2000). Econometrics. Princeton University Press. Princeton.
- Holmstrom, B. and Tirole, J. (2000). Liquidity and risk management. *Journal of Money Credit and Banking*, 32(3), 295-319.
- Hoque, K. (2013). Human resource management in the hotel industry: Strategy, innovation and performance. Routledge.
- Hosna A, Manzura B, & Juanjuan S (2009). Credit risk management and profitability in commercial banks in Sweden. School of Business Economics and Law.
- Huang, R., & Ratnovski, L. (2011). The dark side of bank wholesale funding. *Journal* of Financial Intermediation, Elsevier, 20(2), 248-263.
- Instefjord, N. (2005). Risk and hedging: Do credit derivatives increase bank risk? *Journal of Banking & Finance*, Elsevier, 29(2), 333-345.

Institute of the Chief Risk Officers (CRO) and International Financial Risk

- Isshaq, Z., & Bokpin, G.A. (2009). Corporate liquidity management of listed firms in Ghana. *Asia-Pacific Journal of Business Administration*, 1(2), 189-198.
- Jarrow, R. A. (2008). Operational risk. *Journal of Banking & Finance, Elsevier*, 32(5), 870-879.

- Jeanne, O. and Svensson, L.O. (2007). Credible commitment to optimal escape from a liquidity trap: the role of the balance sheet. *The American Economic Review*, *97*(1), 474-90.
- Jenkinson, N. (2008). Strengthening regimes for controlling liquidity risk: some lessons from the recent turmoil. *Bank of England Quarterly Bulletin, Quarterly*, 2.
- Kanchu, T., & Kumar, M. M. (2013). Risk Management in Banking Sector- An Empirical Study. International Journal of Marketing, Financial Services & Management Research, 2(2), 145-153.
- Kargi, H.S. (2011). Credit Risk and the Performance of Nigerian Banks, AhmaduBello University, Zaria.
- Kashyap, A.K., Rajan, R. and Stein, J.C. (2002). Banks as liquidity providers: an explanation for the coexistence of lending and deposit-taking. *The Journal of Finance*, 57(1), 33-73.
- Kaur, J. (2014). Corporate Governance and Financial Performance: A Case of Indian Banking Industry. Asian Journal of Multidisciplinary Studies, 2(2), 91-96.
- Khrawish, H.A. (2011) Determinants of Commercial Banks Performance: Evidence from Jordan. International Research Journal of Finance and Economics. Zarqa University, 5(5), 19-45.
- Khwaja, A. I., & Mian, A. (2005). *Tracing the impact of bank liquidity shocks*.Mimeo, Working Paper, Graduate School of Business, University of Chicago.
- King, J.L., 2001. Operational Risk, Measurement and Modelling. Wiley & Sons, New York
- Kithinji, A.M. (2010). Credit risk management and profitability of commercial banks in Kenya, Working paper, School of Business? University of Nairobi, Kenya. Available at: <u>http://erepository.uonbi.ac.ke</u>
- Klapper, L., & Love, S. (2004). Corporate governance, investor protection and firm performance in emerging markets. *Journal of Corporate Finance*, *3*(1), 1-26.

- Kolapo, T. F., Ayeni, R. K., & Oke, M. O. (2012). Credit risk and commercial banks' performance in Nigeria: A panel model approach. *Australian journal of business* and management research, 2(2), 31-38.
- Kosmidou, K. (2008). The Determinants of Banks' Profits in Greece during the Period of EU Financial Integration. *Managerial Finance*, *34*(3), 146-159.
- Kosmidou, K., Tanna, S., and Pasiouras, F. (2005), "Determinants of Profitability of Domestic UK Commercial Banks: Panel Evidence from the Period 1995-2002," Money Macro and Finance (MMF) Research Group Conference.
- Kosmidou, K.Tanna, S. & Pasiouras, F. (2008). Determinants of Profitability of Domestic UK Commercial Banks: Panel Evidence from Period 1995-2002.Applied Research Working Paper Series, Convertry University Business School.
- Kumar, V. (2008), "Why liquidity is important for banks", available at: <u>http://www.gtnews.com/article/7362.cfm#request.location#</u>
- Laeven, L., & Levine, R. (2009). Bank Governance, Regulation and Risk Taking. Journal of Financial Economics, 93(2), 259-275.
- Lin, W., Liu, C. F., & Chu, C. W. (2005). Performance Efficiency Evaluation of the Taiwan 'S Shipping Industry : an Application of Data Envelopment Analysis. In Proceedings of the Eastern Asia Society for Transportation Studies, 5, 467–476. Retrieved from <u>http://www.easts.info/on-line/proceedings_05/467.pdf</u>
- Loutskina, E. (2005). Does securitization affect bank lending? Evidence from bank responses to funding shocks. *Manuscript, Caroll School of Management*.
- Loutskina, E., & Strahan, P. E. (2009). Securitization and the declining impact of bank finance on loan supply: Evidence from mortgage originations. *The Journal of Finance*, 64(2), 861-889.
- Mahmoud, N., & Ahmed, E. M. (2014). Risk management practices impact on Iraqi private banks financial performance. *International Journal of Social Sciences and Entrepreneurship*, 1(11), 735-757.
- Mainelli, M (2002). Industrial strengths: operational risk and banks. *Balance Sheet, Emerald*, 10(3), 25-34.

- Mansur, I., Zangeneh, H., & Zitz, M. S. (1993). The association between banks' performance ratios and market-determined measures of risk. *Journal of the History of Economic Thought*, 25(12), 1503-1510.
- Maudos, J., & De Guevara, J. F. (2004). Factors explaining the interest margin in the banking sectors of the European Union. *Journal of Banking & Finance, Elsevier*, 28(9), 2259-2281.
- Merton, Robert, & Perold, Andre, (1993). Theory of Risk Capital in Financial Firms. Journal of Applied Corporate Finance, 6(3), 16–32.
- Miiller, V. 0. (2014). the Impact of Board Composition on the Financial Performance of FTSE 100 Constituents. Procedia-Social and Behavioral Sciences, Elsevier, 109, 969-975.
- Miller, S. M., & Noulas, A. G. (1997). Portfolio Mix and Large-bank Profitability in the USA. *Applied Economics*, Taylor & Francis, 29(4), 505-512.
- Molyneux, P., & Thornton, J. (1992). Determinants of European bank profitability: A note. *Journal of banking & Finance*, Elsevier, 16(6), 1173-1178.
- Muranaga, J. and Ohsawa, M. (2002). Measurement of Liquidity Risk in the Context of Market Risk Calculation. Working paper, Institute for Monetary and Economic Studies, Bank of Japan, Tokyo.
- Musyoki D, & Kadubo A. S. (2011). The Impact of Credit Risk Management on the Financial Performance of Banks in Kenya for the Period 2000–2006. International Journal of Business and Public Management, 2(2), 72-80.
- Mwangi, G. (2012). The Effect of Credit Risk Management on the Financial Performance of Commercial Banks in Kenya. *International Journal of Financial Research*, 1(1), 45–47. doi:10.5897/AJBM2013.7171
- Naceur, S. B., & Kandil, M. (2009). The Impact of Capital Requirements on Banks' Cost of Intermediation and Performance: The Case of Egypt. *Journal of Economics and Business, Elsevier, 61*(1), 70-89.
- Neupane, B. &Subedi, S. (2013). Determinants of Banks Liquidity and their Impact on Financial performance in Nepalese Commercial Banks. Pokhara University.

- Nickel, M. N., & Rodriguez, M. C.(2002). A Review of Research on The Negative Accounting Relationship between Risk and Return: Bowman's Paradox. *Omega*, *Elsevier*, *30*(1), 1-18.
- Nijskens, R., & Wagner, W. (2011). Credit risk transfer activities and systemic risk: How banks became less risky individually but posed greater risks to the financial system at the same time. *Journal of Banking & Finance, Elsevier, 35*(6), 1391-1398.
- Nikolaou, K. (2009). Liquidity (risk) concepts: definitions and interactions.
- Ogboi, C., & Unuafe, O. K. (2013). Impact of Credit Risk Management and Capital Adequacy on the Financial Performance of Commercial Banks in Nigeria. *Journal of Emerging Issues in Economics, Finance and Banking*, 2(3), 703-717.
- Ogboi, C., & Unuafe, O. K. (2013). Impact of Credit Risk Management and Capital Adequacy on the Financial Performance of Commercial Banks in Nigeria. *Journal of Emerging Issues in Economics, Finance and Banking*, 2(3), 703-717.
- Olagunju, A., David, A. O., & Samuel, O. O. (2012). Liquidity Management and Commercial Banks' Profitability in Nigeria. Research Journal of Finance and Accounting, 2(7-8), 24-38.
- Onaolapo, A. R. (2012). Analysis of Credit Risk Management Efficiency in Nigeria Commercial Banking Sector, (2004-2009). Far East Journal of Marketing and Management, 2(4), 39-52.
- Ongore, V. O., & Kusa, G. B. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues*, 3(1), 237-252.
- Owojori, A. A., Akintoye, R. I., & Adidu, A. F. (2011). The challenge of risk management in Nigerian banks in the post consolidation era. *Journal of Accounting and Taxation*, 13(2), 23-31.

- Paravisini, D. (2004). Constrained banks, constrained borrowers: the effects of bank liquidity on the availability of credit. *Unpublished working paper, MIT*.
- Pasiouras, F., & Kosmidou, K. (2007). Factors Influencing the Profitability of Domestic and Foreign Commercial Banks in the European Union. *Research in International Business and Finance, Elsevier, 21*(2), 222-237.
- Poudel, R. p. S. (2012). The Impact of Credit Risk Management on Financial Performance of Commercial Banks in Nepal. *International Journal of Arts and Commerce*, 1(5), 9–15.
- Power, M. (2004). The Risk Management of Everything. *The Journal of Risk Finance, Emerald*, 5(3), 58-65.
- Rajagopal, S. (1996). Bank Risk Management–A Risk Pricing Model. SBI Monthly Review, 35(11), 553-567.
- Ratnovski, L. (2013). Liquidity and transparency in bank risk management. *Journal of Financial Intermediation*, Elsevier, 22(3), 422-439.
- RI, A. (2012). Risk management and corporate governance performance–empirical evidence from the nigerian banking sector. Ife PsychologIA, 20, 1.
- Rochet, J. C., & Vives, X. (2004). Coordination failures and the lender of last resort: was Bagehot right after all? *Journal of the European Economic Association*, Wiley Online Library, 2(6), 1116-1147.
- Rose, P. S. & Hudgins, S. C. (2010). Bank Management and Financial Services. 8th ed. McGraw-Hill International Edition. Boston.
- Rose, P. S. & Hudgins, S. C. (2013). Bank Management and Financial Services. 9th ed. McGraw-Hill International Edition. Boston.
- Rostamiyan, F. & Haji B., F. (2009). Measurement of banks' liquidity risk using value at risk model (the case study of Saman Bank). *Journal of Financial Accounting and Auditing*, *1*(3), 176-196
- Saibaba, M. D., & Ansari, V. A. (2013). Audit committees, board structures and firm performance: A Panel Data Study of BSE 30 Companies. *The IUP Journal of Accounting Research and Audit Practices*, 12(2), 19-29.

- Samad, A. (2004). Performance of Interest-free Islamic banks vis-à-vis Interest-based Conventional Banks of Bahrain. *International Journal of Economics, Management and Accounting*, 12(2). 1-15.
- Samad, A., & Hassan, M. K. (1999). The Performance of Malaysian Islamic Bank during 1984-1997: An Exploratory Study. *International Journal of Islamic Financial Services*, 1(3), 1–14.
- Samson, O., & Tarila, B. (2014). Corporate Governance and Financial Performance of Banks: Evidence from Nigeria. *Acta Universitatis Danubius. OEconomica*, (2 (2), 216-230.
- Santomero, A. M. (1997). Commercial bank risk management: an analysis of the process. *Journal of Financial Services Research*, *12*(2), 83-115.
- Sayedi, S. N. (2014). Credit Risk, Market Power and Exchange Rate as Determinants of Banks Performance in Nigeria. *Journal of Business and Management*, 16(1), 35-46.
- Shen, C.-H., Kuo, C. J., & Chen, H.-J. (2001). Determinants of Net Interest Margins in Taiwan Banking Industry. *Journal of Financial Studies*, 9(1), 47-83.
- Sohaimi, A. N. A. (2013). Liquidity Risk and Performance of Banking System in Malaysia. *Available at SSRN 2271427*, 1–17.
- Soyemi, K. A., Ogunleye, J. O., & Ashogbon, F. O. (2014). Risk management practices and financial performance: evidence from the Nigerian deposit money banks (DMBs). *The Business & Management Review*, 4(4), 345-354.
- Srairi, S. A. (2009). Factors influencing the profitability of conventional and Islamic commercial banks in GCC countries. *Review of Islamic Economics*, *13*(1), 5-30.
- Tafri, F. H., Hamid, Z., Meera, A. & Omar, M. A. (2009). Impact of financial risk on profitability of Malaysian commercial bank: 1996–2005. *International Journal* of Social and Human Sciences, 3(3) 807–821.
- Tafri, F. H., Rahman, R. A., & Omar, N. (2011). Empirical evidence on the risk management tools practised in Islamic and conventional banks. *Qualitative Research in Financial Markets*, 3(2), 86-104.

- Tai, C. S. (2007). Market integration and contagion: Evidence from Asian emerging stock and foreign exchange markets. *Emerging Markets Review*, *Elsevier*, 8(4), 264-283.
- Tandelilin, E., Kaaro, H., & Mahadwartha, P. A. (2007). Corporate governance, risk management and bank performance: Does type of ownership matter.*EADN individual research grant project*, 34.
- Taskin, A. A., Sasaki, S., Segawa, K., & Ando, Y. (2012). Manifestation of Topological Protection in Transport Properties of Epitaxial Bi 2 Se 3 thin films. *Physical review letters*, 109(6), 066803.
- Thirlwell, J. (2002). Operational risk: the banks and the regulators struggle. *Balance Sheet, Emerald, 10*(2), 28–31.
- Tomar, S., & Bino, A. (2012). Corporate governance and bank performance: evidence from Jordanian banking industry. *Jordan Journal of Business Administration*, 8(2), 353-72.
- Van den Brink, G. J. (2002). Operational risk: the new challenge for banks. Macmillan.
- Wen, W. (2010). Ownership Structure and Banking Performance: New Evidence in China. Universitat Autònoma de Barcelona Departament D'economia de L'empresa, 2010.