UNIVERSITI PUTRA MALAYSIA

DETERMINANTS OF G7 BANK PERFORMANCE AND IMPACT OF FOREIGN OWNERSHIP AND FINANCIAL CRISIS

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FEP 2017 20

DETERMINANTS OF G7 BANK PERFORMANCE AND IMPACT OF FOREIGN OWNERSHIP AND FINANCIAL CRISIS

By

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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of the Requirements for the Degree of Doctor of Philosophy

May 2017

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the Degree of Doctor of Philosophy

DETERMINANTS OF G7 BANK PERFORMANCE AND IMPACT OF FOREIGN OWNERSHIP AND FINANCIAL CRISIS.

By

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May 2017

Chairman : Associate Professor Cheng Fan Fah, PhD
Faculty : Economics and Management

This thesis is about the factors associated with banking performance in the G7 countries during the period from 2002 to 2012 that covering recent global financial crisis. This study specified an empirical framework to examine the effect of bank individual characteristic, industry-characteristics and macroeconomic factors on the bank performance. Performance is measured by net interest margin (NIM) which reflects market discipline and two accounting performance measurements, return on average assets (ROA), and return on average equity (ROE) that rather reflect better management decisions. To take into account the profit persistence, this study applies GMM technique to samples of banks. Various divisions of the sample, determining the bank's performance in terms of local banks and foreign, before and after the recent financial crisis, as well as small, medium and large size of banks is included in the study.

The results indicate that bank specific factors particularly certain factors such as the bank's asset quality, credit risk, management efficiency and income diversification, factors under management's discretion, have strong and significant effect on the performance of commercial banks, reveals that the primary determinants of bank performance are about capital, quality and efficiency. The influence of bank industry and macroeconomic factors do not reject to observe, but their impact on bank performance is not clear as bank specific factors are.

Factors affecting the performance of both domestic banks and foreign banks are not much different in terms of accounting performance measurements, since in terms of NIM is different. Results indicate that bank's performance, before the crisis mainly explained by liquidity risk, credit risk, and asset quality while for the years after the crisis explained by managerial efficiency and income diversification. Contradictory results clearly reflect the existence of the new regulatory environment. About the

size of the bank, results indicate that banks run different performance in different sizes of the banks. The fundamental difference in their performance is related to liquidity and capital adequacy.

The results obtained from this study, regarding to market structure, supports the Structure–Conduct– Performance (SCP) hypothesis, and about foreign ownership, no significant evidence indicating the effect of foreign ownership in all alternative specifications. In addition, results related to profit persistence show a low level of competitive market structure in NIM case, and high levels in ROA and ROE cases. The highlighted implication of this study is that the performance of the G7 commercial banks depends on its efficiency, capital, and income diversification.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

PENENTU PRESTASI G7 BANK DAN KESAN PEMILIKAN ASING DAN KRISIS KEWANGAN

Oleh

ALI NASSERINIA

Mei 2017

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Tesis ini adalah mengenai faktor-faktor yang berkaitan dengan prestasi perbankan di negara-negara G7 dalam tempoh 2002 hingga 2012 yang meliputi krisis kewangan global yang terkini. Kami menyiapkan rangka kerja empirikal untuk mengkaji kesan ciri-ciri bank, industri dan faktor-faktor makro-ekonomi terhadap prestasi bank. Prestasi diukur dengan margin faedah bersih (NIM) yang mencerminkan disiplin pasaran dan dua ukuran prestasi perakaunan, pulangan atas aset purata (ROA), dan pulangan atas purata ekuiti (ROE) yang lebih menggambarkan keputusan pengurusan yang lebih baik. Untuk mengambil kira kegigihan keuntungan, kami menggunakan teknik GMM untuk sampel bank. Pelbagai bahagian sampel, menentukan prestasi bank dari segi bank tempatan dan asing, sebelum dan selepas krisis kewangan baru-baru ini, serta saiz bank kecil, sederhana dan besar termasuk dalam kajian.

Hasilnya menunjukkan bahawa faktor-faktor tertentu bank khususnya faktor-faktor tertentu seperti kualiti aset bank, risiko kredit, kecekapan pengurusan dan kepelbagaian pendapatan, faktor-faktor di bawah budi bicara pihak pengurusan, mempunyai pengaruh yang kuat dan signifikan terhadap prestasi bank perdagangan, menunjukkan penentu utama bank adalah tentang modal, kualiti dan kecekapan. Pengaruh industri bank dan faktor makro-ekonomi tidak menolak untuk diperhatikan, tetapi kesannya terhadap prestasi bank tidak jelas sebagai faktor khusus bank.

Faktor-faktor yang mempengaruhi prestasi kedua-dua bank tempatan dan bank asing tidak jauh berbeza dari segi ukuran prestasi perakaunan, kerana dari segi NIM adalah berbeza. Keputusan menunjukkan prestasi bank sebelum krisis dijelaskan terutamanya oleh risiko kecairan, risiko kredit dan kualiti aset manakala untuk

tahun-tahun selepas krisis dijelaskan oleh kecekapan pengurusan dan kepelbagaian pendapatan. Keputusan yang bercanggah jelas menunjukkan kewujudan persekitaran kawal selia yang baru. Mengenai saiz bank, hasil menunjukkan bank-bank menjalankan prestasi yang berbeza dalam pelbagai saiz bank. Perbezaan asas dalam prestasi mereka adalah berkaitan dengan kecairan dan kecukupan modal.

Keputusan yang diperoleh daripada kajian ini, berkaitan dengan struktur pasaran, menyokong hipotesis Struktural-Pelakuan-Pelaksanaan (SCP), dan mengenai pemilikan asing, tidak ada bukti penting yang menunjukkan kesan pemilikan asing dalam semua spesifikasi alternatif. Di samping itu, keputusan yang berkaitan dengan ketabahan keuntungan menunjukkan struktur pasaran yang kompetitif yang rendah dalam kes NIM, dan tahap ROA dan ROE yang tinggi. Implikasi utama kajian ini ialah prestasi bank-bank perdagangan G7 bergantung pada kecekapan, modal, dan kepelbagaian pendapatan.

ACKNOWLEDGEMENTS

Firstly, I would like to express my sincere gratitude to my supervisor, Associate Professor Cheng Fan Fah for the continuous support of my Ph.D study and related research. His guidance helped me in all the time of research and writing of this thesis.

Besides my supervisor, I would like to thank the rest of my thesis committee: Professor Mohamed Ariff Syed Mohamed and Associate Professor Wan Azman Saini Wan Ngah for their insightful comments and encouragement.

Last but not the least; I would like to thank my family for supporting me spiritually throughout writing this thesis and my life in general. Besides that, I would like to thank my friends and course mates for spending their time and efforts when I am in need.

Ali Nasserinia

I certify that a Thesis Examination Committee has met on 23 May 2017 to conduct the final examination of Ali Nasserinia on his thesis entitled "Determinants of G7 Bank Performance and Impact of Foreign Ownership and Financial Crisis" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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This is to confirm that:

- the research conducted and the writing of this thesis was under our supervision;
- Supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) were adhered to.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This thesis is about the factors that are associated with the banking performance of the G7 leading economies of the world. A banking system is part of the financial system of every country, and its performance is crucial for economic growth through effective intermediation, so that banks can play a critical role in the economy. The motivation for this research is to uncover the key determinants associated with bank performance in the leading economies, using a large data set, and the latest panel methodology to accurately measure the parameters in the models.

The financial system of every country fulfils a critical function in managing savings and providing intermediation efficiently for the economy to produce the incomes. In spite of the growing role of non-banking organizations, for example, investment and insurance companies, and telecommunication companies in financial markets, the function of banks remain significant in funding the economic actions in common and various segments of the market. Assuming that banks are the leading financial organizations in the economy, their safety and permanence are very significant to the wellbeing of the economy, especially during the current financial crisis, resulting to financial organizations suffering heavy losses, and failures.

Financial crises are created by uncertainties in the financial systems. Economic growth boosts the basis of performance, which converts the economy to be prosperous and productive economic actions. Stiglitz (2000) stated that the growing occurrence of the financial crises is strictly related to the too-early liberalization of the financial segments. In the latest period, three international financial crises have observed; Global Financial Crisis (2007 – 2008), East Asian Financial Crisis (1997-98), and European sovereign debt crisis (2010). The Financial crisis of (2008) was a tough and unwelcome surprise which quickly shifted to a number of countries starting from the United States of America and the United Kingdom financial organizations.

Throughout the last two decades, drastic changes happened in the world economy in terms of the banking segment. Also, worldwide there have been modifications in the working arena. Furthermore, both exterior and local factors have greatly influenced organizations to alter their performances. Prompt action was enforced to put in place the market-oriented financial system reforms that altered the type of financial intermediation in order to regain the management of the economy. For example, the shadow banking system, which was established since 1996, had given impetus for worsening the banking behaviour, so it's a critical function within the market-constructed financial system which failed badly. This can be considered in itself a significant element in initiating the financial crisis. Developing and developed economies have experienced financial crisis as a result. The cost of the financial crisis has frequently been huge. Nevertheless, as the main function of banks is to promote economic development through efficient management and intermediation, therefore, any inefficiency in the banking segment can have disadvantage influences on the economic development of the country. Consequently, the actions of banks, specifically commercial banks, have a significant influence on the growth of an economy.

Today, banks are going through a new period of reorganizations as there is no room for the sectional influence of banks being placed above the need of the economy. Specifically, competition in the banking segment has strengthened meaningfully in recent years with reforms and many factors contributing to the upsurge of competition. Banks have responded to the increasing competition by providing more services and new products.

Three sets of factors affecting the bank performance are notable in the current debate both theoretically and empirically are financial reform, competition level, and risk-taking. Research which determines the bank performance is considered a significant research, has been conducted by Keeley (1990), cited that the deregulation of the United States banking segment in the 1970s and the 1980s had expanded the competition leading to a decrease in monopoly rents sought by banks. Keeley's research offered proof that the market-oriented bank reforms led to a corrosion of bank market control thereby worsening the cost of their equity capital, especially in the face of too-low interest rates that prevailed in the period from 1994 onwards. In sequence, this induced the banks to take additional risk, therefore, also raising the risk to a very high degree resulting to failures in the banking sector. On the other hand, others argue that banks in the case of higher competition reduce their chances of bankruptcy (e.g. Boyd et al. 2005). Also, empirical studies have shown that competition has a positive impact on the stability and ongoing activities (e.g. Beck et al. 2006).

The performance of a bank is measured according on revenue. There are numerous indicators to assay the performance of banks. Average Return on Equity, Average Return on Asset, and Net Interest Margin are the three significant indicators, in addition to others. The assessment of the bank performance is an exercise that includes specific consideration of several aspects. These aspects are connected to the macroeconomic and microeconomic elements in which the banks operate. Ignoring these factors in a research may lead to wrong conclusions, therefore, for this study the best econometric methods are employed to address how to bring other aspects into the tests.

The bank performance is naturally considered to be the result of external and internal determinants. Internal determinants primarily arise from how banks manage their business. Such determinants include the level of credit risk, liquidity, operation expenses administration, capital adequacy, and bank scope. The external determinants are variables that are related to the economic situation which provide the credit facility of organizational function.

A study on the determinants of the bank's acting has characteristically comprised bank-specific factors (operational efficiency, capital ratio, bank size), industry-specific factors (concentration and ownership) and macroeconomic factors, for example ;(cyclical output and inflation) determinants. Researchers have concentrated on the association between bank profitability and bank-particular factors. A second group of researchers took the macroeconomic and/or organizational factors to study the banking performance.

Creane et al. (2003) stated that there is a clear requirement for durable creditor rights, prudential principles and good management, and contract implementation. Thus, government decision-makers have to remove financial suppression first for banks to perform well. In so doing, it will assist in the financial growth significantly, which in turn improves the economic conditions.

Well-functioning financial markets resulting from the liberalization of the market place together with the competitive banking sector help to improve the intermediation across the economy. Financial units realizing the significance of mobilizing savings, giving resources to productive units in the economy results to improved efficiency. However, there is an agreement in the literature that states there is a sturdy and strong positive correlation among the financial growth and economic development. Also, there is need to demonstrate the elements that are connected to banking performance, so that one could link the economy to the banking sector to better understand how performance of banks are determined. This is the objective of this research study. The background to the banking sectors of the major economies are given in the next section before the research problem is stated.

1.2 Banking industry in G7 group

G7 group is regarded as a very essential group playing not only a dominant role in world affairs, but also play a leading role in banking as well. The G7 group meets and generates new rules by which international financial (and exchange rate) markets are to function by abiding to the new rules. Because G7 group is a main creditor to the multilateral organizations such as the World Bank and IMF, they seek to make the credit creation to be efficient via the IMF/World Bank lending processes and strategies. Therefore, the G7 group puts the limits within financial organizations with a wider multilateral process. It was identified by Baker (2008) that the G7 group has four powers; rejection, encouragement, authorization, and weight in world affairs. In the last two decades, the G7 group accounts for 44% of finance. In addition, they have contributed to resolving the previous crisis by providing guidelines on how to resolve the crisis. Hence, in this thesis, the G7 countries are selected to study the banking performance.

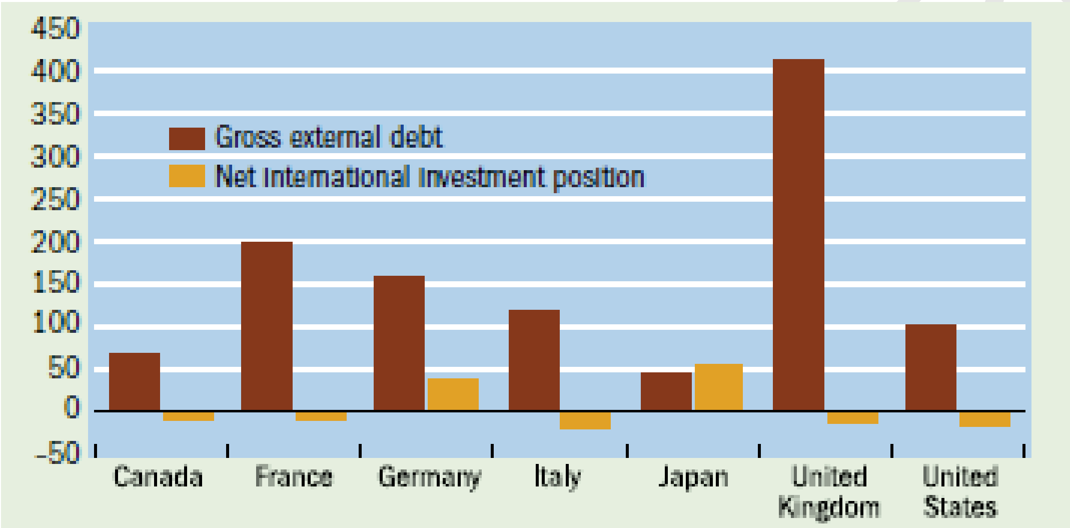
In Table (1-1), the forces that act on the industry were specified. The function of banks in G7 countries primarily is due to its role as a financial center. The Magazine of Finance & Development, in June 2012 in a notice, "G7 Borrowing from Abroad" evaluated a country's financial power by reference to International Investment Position IIP. So, the net IIP—the variance between exterior assets and exterior liabilities, shows the net borrowing from/or net lending to the remnant of the Universe (Figure 1-1).

Table 1.1 : Factors determining banking industry

Field	Guiding principles	Affect	Inclusion
Economy	Conventional loan market and delay the approval of credit.	Declining request for debt.	Banks want to be extremely-competitive and innovative to manage demand.
	Households with high percentage of debt-to-income ratio.	Reduced capability to service debt in contrary of macroeconomic circumstances.	Clients go into deleveraging method.
Industry Business Drivers	Rising the competition in a restricted local market	Client preservation and achievement trials.	Effective straits agreed to distinguish and state customer requirements
	Well-running, Well-capitalized, and well-regulated banks.	A robust and steady banking industry.	Banks are well-prepared to treat with economic worries.
	Growth into international markets for development.	Guiding, Business and economic business challenges.	Banks want to do in advance needed alterations and comprise these in their long -term strategies.
Regulation	Comprehensively structured local marketplace.	The requirement to invest in active risk management, authority and submission systems.	Enlarged compliance costs.
	Raising governing improvements internationally.	Lesser profitability and need to convert current business models.	The necessity to invest in systems to enhance profitability and accomplish controlling change.
Technology	Failure of inheritance systems to prepare supervisory variations and business requirements rapidly.	Reduced capability to activate and prosper in markets.	The necessity to utilize cloud-based technology platforms and low-cost (SOA).
	Expansion of Business into newer markets.	Enlarged capacity on current IT systems to back up modern businesses.	Steady refurbishment of current IT systems.

Source: http://www.cognizant.com/InsightsWhitepapers/Canadian-Banking-Industry-Performance-and-Perspectives.

In 2010, Germany and Japan were net creditors; however, the additional five G7 countries were net debtors. So, for the arrangement of exterior debt in 2011, the biggest share in Germany, France, the United Kingdom, and Japan, was owned by banks as shown in Figure (1-2). In Canada and the United States, the biggest stake was “other segments” (primarily non-bank financial companies and non-financial companies), last by common government debt. From 2006 till 2011, the government exterior debt grew in every G7 countries, except Italy. The excess was partially due to the financial crisis, which led to an increase in borrowing for social spending and a reduction in business spending and borrowing.



Source: www.imf.org, retrieved on 18 Aug 2013

Figure 1.1 : G7 external debt and International Investment Position (IIP) ratios, end 2011

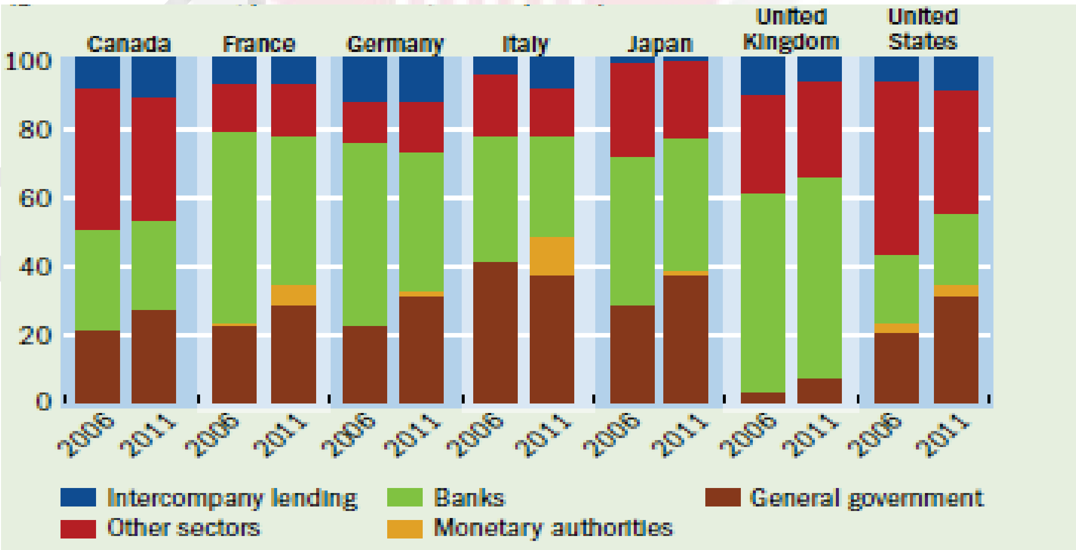


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Figure 1.2 : Gross external debt by sector

Regarding the situation of banking industry, some measures could be used to evaluate the state of the banking industry and its direction. The share of the market and profitability are two common ones. These two measures are significant since the movements in these measures can indicate the banking status today or how the banking situation would be in the future.

Since 1980 the market share of G7 banking industry declined in relation to other financial mediators because mutual funds and credit unions have contributed as well. In spite of that, the image is more complex due to financial markets after having developed progressively becoming complicated, the banking industry has continued to develop and banks have moved from the position of traditional banking towards modern banking.

Table (1-2) presents the 5-Bank Asset Concentration for G7 countries with particular reference to the banking segment concentration. Also, in Table (1-3) it shows that the market authority of banks in G7 countries have enlarged during the period and the banking system works were under improved competition (referring to the Lerner Index). The banking system in the United States is somewhat less concentrated than those of the G7 group. Around 5 United States bank accounts for 56 per cent of the total banking assets in the country as shown in Figure (1-3) in comparison with other G7 countries.

Table 1.2 : 5-Bank Asset Concentration for G7 countries

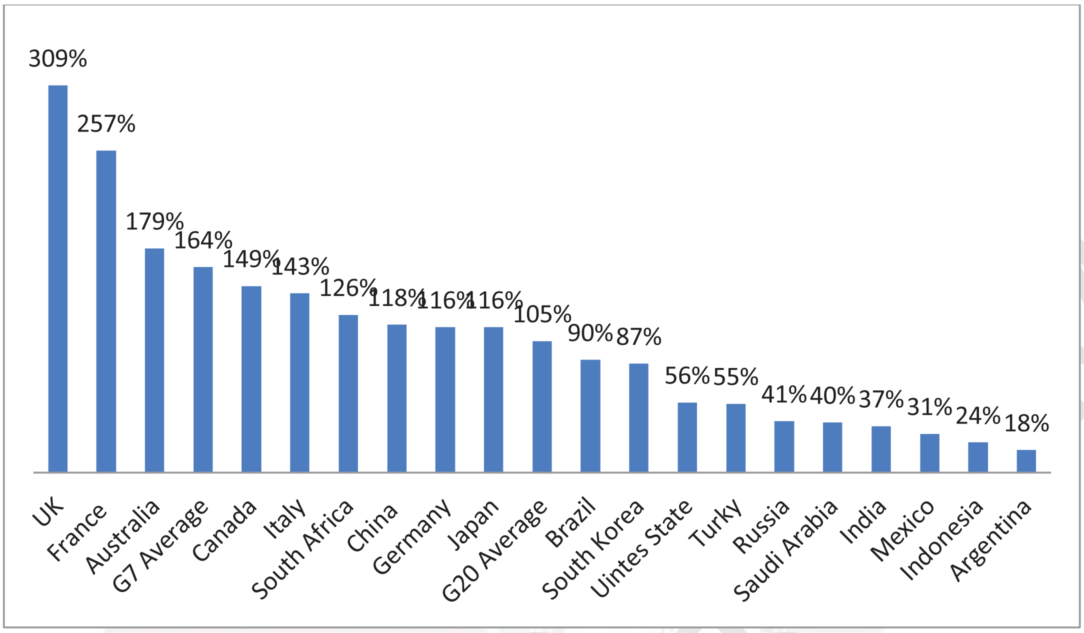
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Canada	61.23	72.52	72.16	80.49	81.07	83.15	75.68	72.15	77.96	82.64	84.55	84.26
Germany	87.90	88.11	89.27	87.62	85.72	85.51	83.88	84.37	84.87	84.81	85.79	85.62
France	68.22	69.72	67.11	68.54	71.44	73.78	72.42	74.20	73.19	75.53	76.84	76.21
Italy	88.78	84.55	76.38	79.78	91.80	47.85	49.46	56.83	63.12	65.20	68.97	72.19
Japan	46.36	50.07	51.74	52.37	51.87	51.42	50.16	58.64	58.83	58.25	58.06	58.63
United Kingdom	41.45	42.32	45.60	45.43	77.03	64.41	65.95	73.08	77.34	74.67	75.08	76.91
United States	28.05	29.36	30.82	31.03	36.66	39.14	41.52	43.75	44.75	45.15	48.30	46.98

Source: www.worldbank.org, retrieved on 18 Aug 2013

Table 1.3 : Lerner Index in Banking Market

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Canada	0.171	0.159	0.187	0.170	0.170	0.170	0.164	0.152	0.165	0.222	0.239
France	0.150	0.143	0.141	0.159	0.197	0.205	0.193	0.176	0.145	0.201	0.222
Germany	0.131	0.121	0.145	0.162	0.172	0.166	0.199	0.147	0.137	0.176	0.218
Italy	0.198	0.170	0.166	0.178	0.172	0.213	0.241	0.234	0.197	0.204	0.203
Japan	0.260	0.253	0.224	0.250	0.250	0.268	0.284	0.277	0.232	0.196	0.228
United Kingdom	0.117	0.099	0.112	0.132	0.136	0.144	0.159	0.153	0.143	0.160	0.161
United States	0.196	0.196	0.239	0.252	0.257	0.243	0.210	0.184	0.180	0.192	0.223

Source: www.worldbank.org, retrieved on 18 Aug 2013



Source: www.worldbank.org, retrieved on 18 Aug 2013

Figure 1.3: Top 5 Banks by Assets as a Percent of GDP by Country (2011)

Table (1-4) presents the statistics on the financial soundness indicators of G7 countries over the period 2000-2011. In terms of profitability, the industry's return on assets (ROA) remains significantly below pre-crisis levels. It is less than 0.6 per cent over 2007 to 2011. Banks should have the ability to produce adequate profitability to offer the capital required to back up lending and to deliver the profit to their investors. Nevertheless, profit also offers us an inadequate evaluation of the banking condition and predictions. To have an extra evaluation, we must take into consideration other elements of the industry, for example, asset quality, capital, and administration. At the beginning of the financial crisis, banks have concentrated on the balance sheet management and accomplished important deleveraging. Increased capital needs will influence the bank’s lending capability. The banks regulatory capital to risk weighted asset and bank capital to asset have increased during 2008 to 2011.

Table 1.4 : Financial soundness indicator of G7 average in present

Indicators	Years											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Bank Capital to Total Assets	6.03	6.44	6.43	5.77	6.09	6.00	5.90	5.87	5.36	5.90	6.36	6.37
Regulatory Capital to Risk-Weighted Assets	11.81	11.96	11.90	12.31	12.33	12.17	12.47	12.39	12.10	13.59	14.43	14.69
Bank's Return On Assets	0.54	0.36	0.29	0.43	1.03	0.80	0.74	0.61	0.06	0.18	0.41	0.25
Bank's Return On Equity	8.48	4.55	2.12	4.32	12.68	12.96	12.92	10.96	-1.79	2.42	5.98	4.90
Bank's Net Interest Margin	1.74	1.67	1.73	1.79	1.89	1.95	1.65	1.68	1.56	1.65	1.91	1.70
Bank Non-Performing Loans to Gross Loans	3.96	4.17	4.19	3.81	3.14	2.41	2.41	2.20	2.69	4.06	4.30	4.20
Bank's Cost to Income	66.32	63.50	71.81	62.02	65.38	65.24	59.28	59.25	64.13	79.17	63.17	61.65
Bank's Overhead Costs to Total Assets	1.84	1.81	1.98	2.03	2.05	1.98	1.63	1.64	1.34	1.34	1.71	1.62
Bank's Non-Interest Income to Total Income	47.34	47.86	46.56	48.46	46.27	47.16	48.37	45.03	28.32	40.57	41.37	40.33
Domestic credit provided by banking sector (% of GDP)	156.14	169.64	169.13	173.13	174.90	179.71	184.39	179.58	185.37	193.84	194.59	194.14
Liquid Assets to Deposits and Short Term Funding	29.22	28.44	31.29	30.50	31.10	32.45	32.50	31.83	32.98	34.62	34.57	35.33

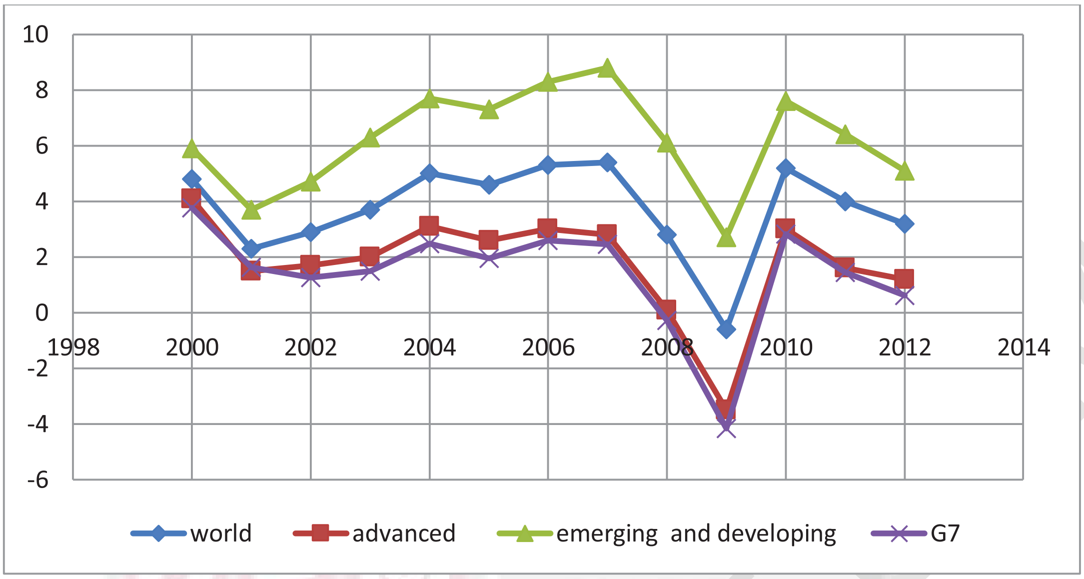
Source: www.worldbank.org, retrieved on 18 Aug 2013

The net interest margin (NIM) in the mentioned countries has been steady. Steady average (NIM) occurred during 2000-2011, indicating that this steady rate is at historically low levels. As a consequence of growing competition, advanced economies became liable to have lower (NIMs), while developing economies showed widely higher NIMs. The U.S. has the greatest (NIM) among all the advanced countries, which might be due to the higher growth of this economy relative to others. The ROE is the bank's return on equity was very low in 2008 but it has improved to 5 per cent by 2011. This is less than half of what it was during the pre-crisis era: it was then 12.38 per cent during 2004-2007.

Regarding asset quality, non-performing loans showed a downward trend during 2001-2007, but it increased during 2008-2011. Overhead costs to total assets, cost to income ratio, and non-interest income to total income showed noticeable improvements. The domestic credit offered via the banking segment to various sectors on a gross basis increased during 2000-2011. Liquid assets to customer deposits and short term market capital ratio, which displayed the capability of a bank to pay its obligations, has increased in the same period.

Nevertheless, financial indicators only help to characterize an overall development in the banking segment. Banks struggled to get their previous levels of profitability; they have also taken actions to make their balance sheets stronger and to change their business models in the changed post-crisis environment. Banks have become focused on prudential regulations and customer issues. Regulations and regulatory compliance have been important in the banking industry and technology also plays a significant role in accomplishing their objectives.

Towards the end, it was noted that the movement of economic powers from developed to the developing countries actually changed the banking industry internationally (Figure 1-4). These variations have occurred from the period prior to the international financial crisis. The international economy is affected by the current financial crisis which has also affected important changes in the banking segment. Furthermore, the financial crisis has exposed the weakness of the economy and the weakness of the banking segment due to their connectedness.



Source: www.worldbank.org, retrieved on 18 Aug 2013

Figure 1.4 : Real GDP growth

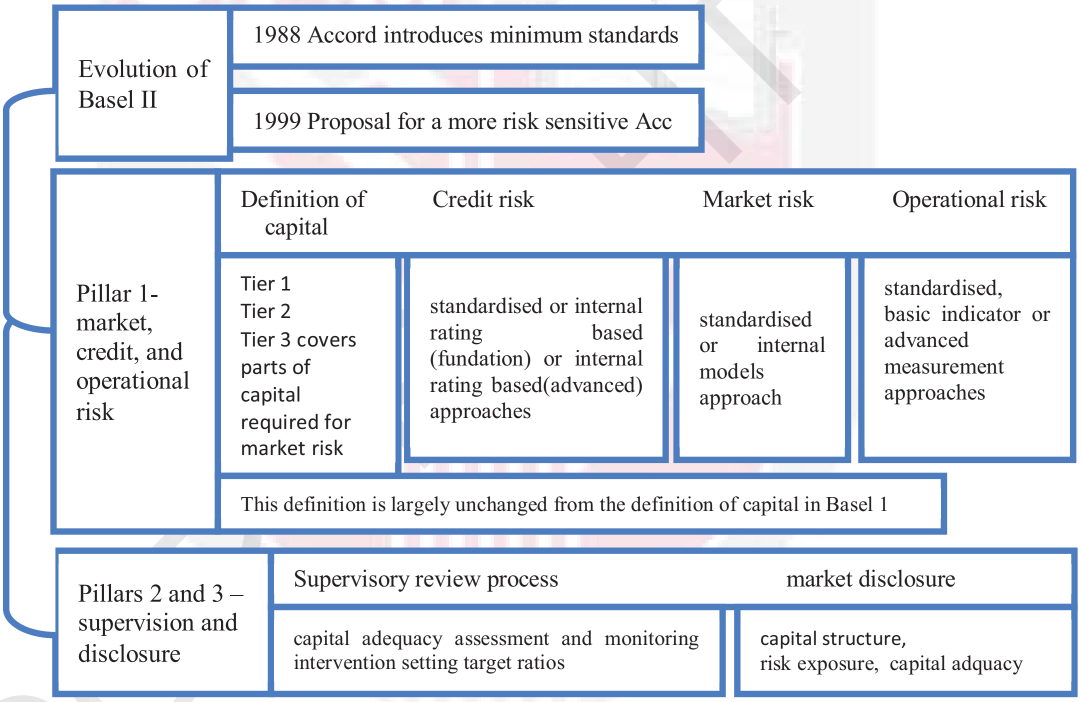
1.3 Background of Basel I, II, and III

The Basel committee on banking supervision was established as the committee on banking regulations and supervisory practices by the central-bank governors of the group of ten countries at the end of 1974 in the aftermath of serious disturbances in international currency and banking markets. The first meeting took place in February 1975, and meetings have been held regularly three or four times a year since then. The committee provides a forum for regular cooperation between its member countries on banking supervisory matters and formulates certain principles as minimum standards, which set out the minimum capital requirements of financial institutions, with the goal of minimizing credit risk.

The topic to which most of the Committee's time has been devoted in recent years is capital adequacy. In the early 1980s, members of the Committee had decided to stop the erosion of capital standards in their banking systems and work towards a greater convergence in the measurement of capital adequacy. This resulted in the promotion of good risk management systems and the appearance of a weighted approach to the measurement of risk.

In July 1988, the committee published a paper associated to the capital adequacy of banking systems, to provide a framework for the implementation of the minimum capital ratio of capital to risk-weighted assets of 8 percent by end of 1992. Consequently, the 1988 capital framework was revised with respect to provision, and market risk. The development of worldwide banking and the realization that the best way to measure, manage and reduce risk, which is different from bank to bank, was led by the Basel Committee to begin the revised 1988 Accord. In June 1999, the Committee proposed a new capital adequacy framework which became effective by the end of 2006. The revised Capital Accord-Basel II - consists of three pillars: minimum capital requirements, supervisory review and market disclosure.

Pillar 1 sets the minimum acceptable capital levels, Pillar 2 deals with the supervisory review to ensure the bank's capital level is sufficient to cover the whole risk, and Pillar 3 relates to market discipline and a minimum level of public disclosure of capital structure, risk measurement and management practices, risk profile, and capital adequacy. The Committee believes that, taken together, these three elements are important pillars in the framework of effective capital. The new framework is designed to improve the way regulatory capital requirements reflect the underlying risks and better addresses the financial innovation that has occurred in recent years. The Figure below shows the relationship between the elements of the Basel II framework.



Source: www.fsc.gi/download/newsletters/news0506,

Figure 1.5 : The elements of Basel II, an overview

In addition to working on the agreements and capital standards, the Committee has addressed issues of significant supervision. These include accounting, auditing, money laundering, and various types of risks such as credit risk, liquidity, market and operational risks. Work on these topics often end in the publication of supervisory guidance, standards or good practice paper. Recent publications address this, among other things, viz; liquidity risk management and supervision, financial instrument fair value practices of banks, the quality of the external audit, and implementation of the principles of compliance.

The financial crisis of 2008 revealed some weaknesses on capital regulations. So, in July 2009 the committee issued a package of documents to strengthen the Basel II capital framework. Strengthening the capital framework to improve the quality, consistency and transparency of the capital base, increasing the risk coverage, supplementing risk-based capital requirements with a leverage ratio, reduce procyclicality and promoting a sound buffer, and addressing systemic risks.

Consequently, Basel III reformed the capital ratio and provided new opportunities to enhance risk management, disclosures and supervisory practices, particularly proposed two liquidity risk metrics - liquidity coverage ratio, and net stable funding ratio - as regulatory standards. Publication of the committee on liquidity and valuation issues reflects the part of these efforts. In order to provide an appropriate response in a timely manner to events beyond the scope of a single bank, the committee, since the beginning of the crisis, is more closely related with other international finance organizations, such as the Financial Stability Forum.

1.4 Problem statement

There are some research findings on reforms in the banking industry to improve the competitive conditions for banking institutions. The recent phase of reforms and financial crisis events show that it is necessary to deal with the combined effects of the global financial and economic crises in any research on banks. Many of the reforms in the banks and financial institutions in almost all countries are based on the premise that reforms must be in a direction in which the financial system reflects the needs of all the interest groups in the system. Reforms implemented partially will lead to limited changes in global financial governance. Although, both the scope and the pace of the reforms in the global financial governance arrangements have not continued in line with the rapidly growing role of the emerging economies, the efforts of countries and international institutions are underway to build a sustainable, and effective global financial governance architecture. These reforms will shape their long term performance international financial system. The G7 countries still dominate the global financial governance and have not yet lost control of the global financial and economic governance agenda.

The banks responded to the changing competitive landscape to encourage the pursuit of strategies of diversification, product differentiation and consolidation. This means that banks have to invest in quality and differentiate their services, thereby gaining control in the face of competition. Moreover, in response to increasing competition, banks have diversified into non-interest earning activities. Growth has slowed down in traditional sources of revenue such as interest income from loans and investments, while revenue from trading activities, fees on credit cards, and service charges on deposits has grown in recent years. In addition, many banks have focused on the realization of the growth of other sources of income such as off-balance sheet business, which generates revenue of fees and commission income. Laeven and Levine (2007) argued that bank diversification increases agency costs and income volatility.

That is, there have been fundamental changes in the behaviour of banks with emphasis not only on profitability, but also on stability with comprehensive asset management in recent periods. Besides, financial scholars have observed the financial integration in the world and the financial legislation by international institution may severely affect the banks' performance. A more forward-looking analysis of the future of community banking in the world would take into account the cost of new regulation when fully implemented. This structural change has forced individual banking institutions, especially state-owned banks, to increase a check on the performance of their branches and to identify improvement directions so as to gain more competitive advantages. It would be appropriate to examine how new regulations after the global financial crisis impact the bank risk and consequently bank performance and the direction that they affect performance.

In the face of increased competition resulting from reforms, there is a challenge to conduct a research on how bank performance is determined in the major economies, in the recent years, which is quite different from the pre-crisis years. What are the determinants of bank performance in the contemporary period remains a problem to be investigated; especially now since newer methodology is available for research. So, there is room for research, given the gap in literature on bank performance in recent years, with particular reference to commercial banking sector. This is the problem identified for research in this study.

Reforms to regulatory financial services have occurred after the 2008 financial crisis, which is reshaping the banking industry in the world. Coincidently with these reforms, central banks have offered policies that are aimed at promoting sustainable growth. Wide and diverse risks associated with the reforms are taking place. Besides, in the banking industry that preset unique services, identifying the key determinants of bank performance and how these new regulations and reforms interact with the risk-taking behaviour of banks to reshape them is crucial. There is a gap in the empirical literature about key factors affecting the performance of commercial banks in G7 countries. Similarly, the literature did not empirically examine how regulations, such as capital requirements, interact with the risk taking behaviour of banks. In addition, there is disparity in the literature of global financial crisis effects; the impact of the crisis on the determinants of bank performance has not yet been widely analyzed: these factors have not been taken into account in the banking performance studies, so a newer approach is needed to secure reliable findings.

More important, the 2007-2008 global recession is due mainly to the failure of major US banks - the subprime crisis. The effects spread like wildfire around the globe causing a crisis in the country after the country. Although some banks are considered "too big to fail" and are saved through government bailouts, others are allowed to go under. Recent news articles indicate that banks have emerged from the shadow and become profitable once again. However, the question remains in the mind of investors which affects risk observations and investors' priorities. 'To invest or not invest'? Add this impulse to the state of being uncertain in the market. Certainly, the investor is unwilling to invest. If so, what are the key determinants of bank performance before and after the crisis? It is worth to explore the determinants that affect the profitability of the bank.

Finally, while many studies have been done on the functioning of the US banking system coupled with the influence of the recent global financial crisis, but for non-US financial markets, quantitative studies have been done. So far, no studies have yet been evaluated for the performance of the banking sector in the G7 countries. Likewise, none of the studies considered the data set that has been affected by the crisis. Therefore this study contributes to the literature of this issue as well.

1.5 Research Objectives

The general objective of this study is to find out what are the determinants of commercial banks performance in G7 countries, especially the bank-specific determinants. The specific objectives of the study are as follows:

1. To assess key bank-specific factors (using as controls the industry-specific and macroeconomic determinants) associated with the bank performance in G7 countries.

2. To assess the key determinants of domestic versus foreign commercial banks performance in G7 countries.

3. To assess the determinants of bank performance according to their size in G7 countries.

4. To measure and test performance factors (ROA, ROE, and NIM), as to whether an average performance is significantly different before and after the 2008 global financial crisis.

This study uses three different dependent variables with independent variables comprehensively using the latest econometric model in a panel setting requiring the use of advanced econometric models.

1.6 Significance of the study

The financial sector is the number of institutions, instruments and markets, legal and regulatory frameworks to conduct the financial service business. A crucial factor that leads to the emergence of financial intermediaries is producing information. By exploring the determinants explain that the probability of worst and best performance can reduce asymmetric information problems associated with lending. For instance, investigation of the relationship between size of the bank, diversified bank verses specialized bank, with their performance can help us in supporting the ideas that smaller, specialized banks can reduce asymmetric information.

Understanding the factors influencing bank performance is the demand of the management in order to be careful in setting up their policies such as credit policy, and liquidity policy. Managers are interested to employ policies that do not have negative effects on their performance and need to know how, for instance, credit policy affects the operation of their banks to ensure prudent operation of deposits. However, exploring bank performance determinants can suggest optimal policies for bank management. Identifying the determinants of bank performance would help to understand changing trends in bank efficiency through time and provide policy implications for the banking environment.

Extracted evidence from the investigation on bank performance can support to identify which banking theory leads to higher performance. Are privately owned banks more profitable or state-owned banks? Market Power (MP) and Efficiency Structure (ES) theories, portfolio composition theory, agency problem, theory of capital structure, risk taking theory and competition, product differentiation, and other banking theory explain the bank's performance and how it is related to factors influencing their performance/ efficiency. This issue is also important to understand how banking theory evolves, as it helps to find a better understanding of the assumptions about the channels through, for example, bank capital affects the various aspects of bank performance.

Determinants of bank performance can affect the entry of foreign bank. Government regulations, such as deposit insurance scheme and taxation, have a direct effect on bank margins and entrance of foreign banks. Foreign banks affect the operation of domestic banking firms. In principle, foreign bank entry would lead the domestic firms to improve their pricing, and to reduce their operating costs to remain competitive.

Generally, there is consensus that the health of commercial banks is associated with the growth of countries. Given this relationship, knowledge of the underlying factors that influence bank performance (profitability; net interest margin) is essential not only for the managers of the banks but for numerous stakeholders such as the Central Banks, Bankers Associations, Governments, and other financial authorities. Knowledge of these factors would also be of particular interest to the countries whose economies and banking systems are experiencing fundamental changes in the current period. A sound and profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial system. The analysis of banking profitability in the banking market offers an insight on how the variation of a particular factor can affect the bank's profitability.

Commercial banking is a transitional industry and their managers are worried that the burden of the new rules may impact their ability to lend or increase the cost of credit. Identifying the factors that influence the performance of banks, particularly the effect of regulatory changes and their associated costs and benefits help us to have a robust understanding of the bank issues.

1.7 Contribution

This study adds to the literature in a number of ways. First, the studies that assessed the impact of the recent financial crisis on the performance of banks are few in numbers and the results obtained from these cases are not certain. In these studies the variables which are demonstrative of the crisis were taken into account. This study exclusively examined the bank performance before and after the crisis year, thus allowing us to investigate the profit persistence as well as for the same periods. Our data set considers a much more recent period that was affected by the crisis. Such comparative assessments bring about a better understanding of the factors which play a vital role in the bank performance.

Second, a thorough set of variables which is consistent of internal and external variables were considered while being able to explain a change in the findings. Third, the current year profitability are susceptible with the last year and among them there is endogeneity, therefore in this study the GMM systems were applied which resolves both these issues, while it controls unobserved heterogeneity. Fourth, the recent financial crisis is rooted in USA which is one of the G7 countries studied in our case, and therefore all these seven countries are mostly affected internationally. However these countries are still most dominant in the banking industry while they are the predominantly strong economies. As far as we are informed, there has been no study done on the influential factors on the bank profitability and therefore this study contributes to the literature of this issue.

Fifth, despite the general knowledge that the greater presence of foreign banks is related to an increase in the costs of domestic banks, there is no conclusive perspective on how the profitability of domestic banks is affected by the foreign bank penetration. This study examines both domestic and foreign banks and compare their performance.

1.8 Plan of study

The relationship between bank performance and factors associated with them were empirically studied together with the objectives. To examine the nature of this relationship, estimations of bank performance were carried out using bank specifics, industry specifics, and macroeconomics variables. This study used a dynamic model of performance to measure the degree to which variables from these three groups determine the profitability of banks. For a closer look at the study of factors affecting the banks performance, different grouping models including ownership, size, and timeframe will be tested.

In the literature, it can be distinguish between the two study groups that are focused on the determinants of bank performance. The first group is country specific studies and the other set of studies are cross-country ones. Each group will be presented briefly in the study of literature, while the focus is on the nature and purpose of each study to extract a number of explanatory variables that have been proposed for both categories.

The study is structured as follows: after the Introduction, Chapter two reviews the theoretical framework and relevant literature. Chapter three describes the model specification, estimation techniques, and data used for empirical analysis. Chapter four proceeds to the empirical results and finally, chapter five provides a summary of the empirical findings along with concluding remarks.

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