

**INTERNAL AND EXTERNAL FACTORS AFFECTING BANKING  
PROFITABILITY: EVIDENCE FROM ALBANIAN BANKING SECTOR**

**By**

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**Thesis submitted for the degree of Master of Science**

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**December 2014**

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## **Abstract**

This paper gives an overview of the profitability of commercial banks with a specific view on the case of Albania. The purpose of this study is to analyse some of the most important internal and external factors that affect the profitability of commercial banks in Albania. Profitability has an essential role in evaluating performance of banks. The best formula to measure the bank profitability is Return on Assets (ROA). This paper uses backward regression to analyze the Albanian banks' profitability. The sample is composed of some important determinants of the five greatest second level banks in Albania gathered from annual reports of each bank, annual report of Bank of Albania and other data published by Albanian Association of Banks for the period from 2005 to 2014. Size, total loans, total deposits, capital ratio, GDP growth and inflation rate are used as independent variables, while return on assets is the dependent variable. The result from the analysis show that, few of internal and external variables have significant impact on Albanian bank's profitability, while some others have no significant impact on bank profitability.

**Key words:** Profitability, ROA, determinants of profitability, backward regression

## **Abstrakt**

Ky punim analizon përfitueshmërinë e bankave të nivelit të dytë duke u fokusuar në rastin e Shqipërisë. Qëllimi i këtij studimi është të analizojë disa nga faktorët më të rëndësishëm të brendshëm dhe të jashtëm që ndikojnë në përfitueshmërinë e bankave tregtare në Shqipëri. Përfitueshmëria ka një rol thelbësor në vlerësimin e performancës së bankave. Formula më e mirë për të vlerësuar përfitueshmërinë bankare është kthimi prej aktiveve (ROA). Ky studim përdor regresionin “backward” për të analizuar përfitueshmërinë e bankave shqiptare. Modeli është i përbërë nga disa faktorë të rëndësishëm të pesë bankave më të mëdha në Shqipëri, tregues të marrë nga raportet vjetore të secilës bankë, nga raporti vjetor i Bankës së Shqipërisë dhe të dhëna të tjera të publikuara nga Shoqata Shqiptare e Bankave për periudhën kohore nga viti 2005 deri në vitin 2014. Totali i aktiveve, totali i kredive, totali i depozitave, kapitali, rritja e produktit të brendshëm bruto dhe inflacioni janë variabla të pavarura, ndërsa kthimi prej aktiveve është variabël i varur. Rezultati nga analiza tregon se disa nga variablat e brendshme dhe të jashtme kanë ndikim të rëndësishëm në përfitueshmërinë e bankave shqiptare , ndërsa disa të tjera nuk kanë ndikim të rëndësishëm në përfitueshmërinë e tyre.

**Fjalët kyce:** Përfitueshmëria, Kthimi prej aktiveve, Faktorët e Përfitueshmërisë, Regresioni “backward”.

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## **DECLARATION**

I declare that this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that my thesis has not been previously or concurrently submitted for any other degree at Epoka University or other institutions.

**Blerta Bami**

**Date: December 2014**

## **ACKNOWLEDGEMENTS**

Fulfilment of this thesis would not have been possible without assistance and support of many individuals during the writing. I would like to sincerely thank them.

I would like to express my gratitude and appreciation to my advisor MSc. Indrit Beqaraj for his supervision, constant support and valuable guidance from the very early stage of this research.

Also, I would like to fundamentally thank my lovely family, in particular my exceptional parents for their endless love, stimulus and support along my entire life.

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## LIST OF ABBREVIATIONS

AAB	Albanian Association of Banks
BAS	Bank of Albania State
BKT	Banka Kombetare Tregtare
BOA	Bank of Albania
CRTA	Equity Capital to total Assets
GDP	Gross Domestic Product
IFRS	International Financial Reporting Standards
NBA	National Bank of Albania
ROA	Return on Asset
ROE	Return on Equity
RMP	Relative Market Power
RQ	Research Question
SCP	Structure Conduct Performance

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## **Introduction**

Banks' performance gets a high level of attention in the economic literature, because banks play an important role in the economy. Furthermore, this attention to bank performance is related with the Great Depression of the 1940s which brought the flow of bank failures in the United States of America. Moreover, Olweny and Shipo (2011) stated that the global financial crisis of 2007-2008 also demonstrated the importance of bank performance both in national and international economies.

There are many aspects of the performance of banks that can be analyzed and this study is focused specifically on the profitability of banks in Albania. Flamini et al. (2009) noted that bank profits provide an important source of equity if re-invested into business. This could lead to safe banks, high profits and financial stability. Therefore, profitability of banking sector is important in both individual and macroeconomic level. It is the expression of how banks run in the environment where they operate. Gottard et al. (2004) stated that profitability is vital in maintaining the stability of the banking system and contributes to the state of the financial system. But on the other hand, a high profitability is not very good. Garcia-Herrero et al. (2009) concluded that a high profitability could be investigative of market power and is especially significant for large banks. This is due to the reason that banks exercising strong market power may offer lower return on deposits but charge high interest on loans. While too low profitability might dampen private agents (depositors and shareholders) from accomplishing banking activities hence resulting in banks failing to attract enough capital to operate.

Why are some banks in Albania more successful than others? An answer to this question will be helpful to clearly identify the determinants of successful banks in Albania and will provide evidence for the developing of effective strategies and also provide stability of banks operating in the Albanian banking system. So, this study is important in order to understand the determinants of bank profitability in Albania for an efficient management of banking operations. Based on this, a lot of research work has been done related with the issue of the determinants of bank profitability. For example, Flamini et al. (2009), Athanasoglou et al. (2008) and Trujillo-Ponce (2012) have revealed that bank profitability is influenced by bank-specific, industry-specific and macro-economic factors. However, these studies are based on data of other countries and their findings may not be applicable to the Albanian banking sector. In the case of Albania, there is a very limited work on the evaluation of the determinants of profitability of banks. In the context of the above discussions, the aim of the paper is to evaluate the factors affecting the

profitability of banks in Albania. The remaining discussions in this chapter are arranged in six sections. The first section presents the scope of the study. Section 1.2 presents the research question and the hypotheses of the study. Section 1.3 presents the research methodology. Section 1.4 presents the significance of the study. Finally, the structure of the study is discussed in section 1.5.

#### *The scope of the study*

The current economic crisis has highlighted that a well-functioning financial system is significantly important for the economic growth. The financial system facilitates an economy to be more productive as it allows investors with few resources to use savings from those with few prospects of investing. Based on this, is very important to study what drives bank profitability. Higher profitability not only gives the banks the opportunity to generate funds to grant more credit to economy but also it guarantees more flexible capital ratios, even in a riskier environment. Therefore, the study seeks to fill the gap by providing the full information about the internal and external factors that affects the profitability of the five greatest banks in Albanian: Raiffeisen Bank, Banka Kombetare Tregatare, Intesa San Paolo Bank, Credins Bank and Tirana Bank for a period from 2005 to 2014.

#### *Research question (RQ)*

The following specific research question is formulated:

What are the determinants of bank's profitability in Albania and how do these factors affect the profitability of Albanian banks?

#### *Hypotheses of the study (HP)*

According to the research question the following hypothesis are formulated based on the internal and external factors taken into consideration in this study. Hypothesis of the study stands on the theories related to a bank's profitability and related to the previous empirical studies done by different researchers. Thus, based on the objective, the study seeks to test the following 6 hypothesis:

*HP1: There is a significant positive/negative relationship between the size of a bank and bank's profitability.*

*HP2: There is a significant positive relationship between the loans and bank's profitability.*

*HP3: There is a significant positive/negative relationship between the deposits and bank's profitability.*

*HP4: There is a significant positive/negative relationship between the capital ratio and bank's profitability.*

*HP5: There is a significant positive relationship between the gross domestic product growth and bank's profitability.*

*HP6: There is a significant positive/negative relationship between the inflation rate and bank's profitability.*

### *Research Methodology*

In order to complete the broad research objective the backward regression is applied which is part of stepwise regression in order to find out the relationship between dependent variable of return on asset and independent variables of size, total loans, total deposits, capital ratio, GDP growth and inflation rate. Backward regression starts with all the explanatory variables included in the model. Then, it removes the least significant explanatory variable, the one with the highest p-value. This process continues until no non-significant variables remain. Therefore, by removing all the non-significant variables the optimal model is found in the end.

### *Significance of the study*

First, studies made in Albania with the objective of identifying the determinants affecting the banking profitability are insufficient; this study makes a number of contributions towards developing a path to follow in the investigation of the factors that are relevant for bank's profitability. Second, the study represents some conclusions and identifies the factors affecting the banking sector profitability. Third, it serves a source of reference for the others researchers who want to make further study on the area in a later time. Fourth, it provides to all stake holders the necessary knowledge about the relationship of internal and external factors and profitability.

### *Structure of the study*

The focus of this paper is to identify the determinants of profitability of Albanian commercial banks. The profitability determinants are basically divided in two main categories,



the internal determinants and external ones. The internal determinants include management controllable factors such as liquidity, investment in securities, investment in subsidiaries, loans, non-performing loans, and overhead expenditure. Other determinants such as savings, current account deposits, fixed deposits, total capital and capital reserves, and money supply also play a major role in influencing the profitability. Similarly, external determinants include those factors which are beyond the control of management of these institutions such as interest rates, inflation rates, market growth and market share. It includes the five leading commercial banks in the country named: Raiffeisen Bank, Banka Kombetare Tregtare, Intesa San Paolo Bank, Credins Bank and Tirana Bank.

## **CHAPTER ONE: Evolution of Albanian banking system**

### **1.1. A brief history of the banking system in Albania**

The development of the Albanian banking activity is closely linked with the overall political and economic environment in Albania and efforts to proclaim the independence of Albania as a free and independent country. These efforts began to be manifested after the second half of the XIX-th century and followed up in the first quarter of the XX-th century.

The process of creation of the monetary system and National Bank in Albania has gone through seven major stages, closely related between them, as part of the creation and consolidation of the state (Shingjergji, 2012).

**The first phase** started in 1863 with the establishment of the Imperial Ottoman bank under the surveillance of the Ottoman Empire. In 1909 the Orient Commercial bank opened a branch in Shkodra city named “Tozzi and Company”. In 28 of October 1912 Albanian declared its independency and the new government began the establishment of National Bank of Albania.

**The second phase** started in 1913 with the agreement of Ismail Qemali with Carol Pitner and Oscar Pollac (representatives of Wiener Bank Verein), and Pietro Fenolio, Guido Ansbaher (representatives of Banca Commerciale Italiana) for the establishment of the Central Bank. As a result of this agreement Central Bank began to perform activities as a real central bank: accept deposits, loan activity, guaranteed bond and emission. The French franc was set as the official currency in that period of time.

**The third phase** corresponded with the beginning of the First World War and the establishment of some of the banks. Primarily they were established to finance their respective army being in Albania such as: Wiener Bank Verein, Pester Bank and Ungarische Bank.

**The fourth phase** continued with the establishment of the National Bank of Albania in Rome and directed by an Italian President and afterwards its head office was transferred in Durrës. In 1925, the first national banknote, the Albanian currency Lek was emitted. During 1926-1936 National bank of Albania opened six branches by extending its activity across the country. Also, other banks entered in that period in Albania such as Serb-Albanian bank, Bank of Athens, Anglo-Albanian Bank Ltd and Export Bank. One of the most important events during the year 1937 was the establishment of the Agrarian Bank.

**The fifth phase** began after the Italian invasion in 1939 and was associated with the substitution of Albanian Franc with the Italian Lira. Also, in 1939 the National Labor Bank became part of the Albanian banking system. But on the other hand, in 1949 as a result of Italian invasion all the accounts were frozen and banks were not allowed to give back to people their deposits or even to extend them loans. In this case, Italian banks were obliged to leave and NBA collaborated with Germans.

**The sixth phase** started with the begging of the communist regime in Albania. In 13 January 1945, the Bank of Albanian State (BAS) was established. It took two roles: the central bank role and crediting role. On August 1959, Saving Bank was found and it served as a saving bank for Albanian citizens. On 1969, the Agrarian bank was established and it became a division of the ministry of Finance. Its role was to control the financial aspects of the cooperatives in Albania and to administer all their financial needs in order to achieve an effective separation between the heavy industry and agrarian production.

**The seventh phase** started in 1990 where our country entered in the transformation process from a communist state economy into a free market economy. In this period was established the Bank of Albania based on the new legal framework of the banking system.

## **1.2. The Albanian banking system from 1991-2012**

After 1991, as a result of democratic changes in Albania were made radical economic, social and cultural reforms and the establishment of a free banking system. The main condition of entering into a market economy was that of having a free banking system in the country. This was arranged by the establishment of the second level private banks and the reorganization of the Central Bank. The entrance of Albania in the free market economy was the urge of accepting a more effective system for the development of the country, which removed the central economy of the socialist state called “real socialism”. The prevention of the central economy, the acceptance of the free market economy and the connections that were assigned after Albania’s joining in International Monetary Fund and World Bank have been the primary of the economic and banking activity changes in Albania.

Shingjergji (2012) stated that after 1992 the Albanian government attracted foreign investors to establish their private banks in Albania and to operate in the free market. Even though the Albanian government made reforms, everything didn’t go as expected because the

free market was not yet stabilized and the private banks had a minimal influence in the economy and 90 percent of the banking deposits were controlled from state owned banks.

In 1996 and in the beginning of 1997, some so-called financial firms started to offer high interest rates on money deposited on them. The majority of people didn't have the right information that these firms were pyramidal schemes, because they believed that they could gain higher earnings on their deposited capitals (Bushati, 2008). Therefore, the pyramidal schemes gathered as much as they could clients and money by promising high gains and interest rates until 300 percent in three months. But on the other hand, these firms were not able to give back in any time the deposits to their clients with the very high interest rate as offered in the beginning from them (Shingjergji, 2012).

But when people stopped depositing and asked that the capital and interest deposited, the pyramidal schemes were not able to pay them in cash and got bankruptcy immediately. As a result of this, everyone lost the money and it was never found where the money went, with a value of approximately \$ 1.2 billion. As a consequence of this the Albanian economy suffered a downturn and the inflation rate reached values like 40 percent (Bushati, 2008).

In August 1997, the Albanian American Bank opens up business in Albania and starts to operate officially in August 1998. In addition, Albanian banking system in this period was associated with crucial developments focused more in acquisitions and privatizations. Furthermore, the first purchase was done in 2004 by Raiffeisen International, which purchased the government owned Savings Bank. This was the most important acquisition in the Albanian banking history since Raiffeisen International purchased 100 percent of the shares of the Saving Bank for \$129 million (Bushati, 2008). National Commercial Bank was the other important privatization from the Turkish Group Calik. Moreover, another merger was that of Italian – Albanian Bank with the American Bank of Albania. They act under the name of Intesa SanPaolo group. Another Italian bank present in Albania is Veneto Banka. In Albanian banking system there are three banks controlled by Greek commercial banking companies like as Alpha Bank, National Bank of Greece and Tirana Bank, while Emporiki Bank was sold to Credit Agricole on 2006. Moreover, in 2007 the Popular Bank sold out 75 percent of shares to the French Societe Generale. First Investment Bank is the only bank with Balkan owned capital as part of Bulgarian First Investment Bank. Other banks with mixed European- Afro-Asian capitals are Credit Bank

of Albania, International Commercial Bank and United Bank of Albania. Meanwhile, Procredit Bank together with Union Bank represent European shares according to the purchases done.

In Albania, actually operate sixteen banks which provide different services such as: deposits, accounts, transfers, loans, e-banking etc. in a competitive environment. Their main aim is to fulfill and enlarge the banking activity in a safe environment by investing in technology and control according to the Basel standards. The shareholders of the banks' capital are divided in 92.38 % foreign capital and 7.17% domestic capital (Shingjergji, 2012). Thus, this distribution demonstrates that the Albanian banking system is one of the most attractive sectors from the foreign investors who want to invest in the financial sector. Moreover, the services offered from the Albanian banks are as good as the services offered in other more developed countries. The main activity of the Albanian banking activity system is lending which includes: corporate lending, SME lending and retail lending. In appendix A, we can find a table with more general information for the sixteen banks operating in Albania related to their shareholders 'structure, country of origin, assets, loans, equity capital, deposits and net profit.

The Albanian banking system has made radical improvements in the last years. Banks offer a variety of product and services, 24 hours ATM's are accessible. Deposits are secured by the government and loans for individuals and businesses are easier to get. Also, Bank of Albania have played an important role by providing many regulations to protect individuals from being taken advantage from non-secure banks and in the same way keeping banks under control with their loans and credit lines.

Based on the services and advances that Albanian banking system has done during 23 years, everyone can see that Albania is operating on free market principles and it is going up in the proper direction. Nowadays, Albania has a much more automated and advanced banking system compared to that of communist era. Also, what is most important is that banking system is pushing the technological and automated improvements in other parts of everyday life and is modernizing living in Albania.

### **1.3. The Albanian banking system in 2013**

As I mentioned above, the year of 2013 was a difficult one for the Albanian economy. Banking activity reflected the challenges faced by the economy and was characterized by decreased lending and higher non-performing loans. However, other important indicators

improved during 2013. Thus, the financial result of the system was improved, while indicators of capitalism and liquidity were significantly above the regulatory minimum requirements. The banking sector continues to play a key role in financial intermediation in Albania, with a structure that has remained unchanged in recent years, with 16 banks totally privately owned. At the end of 2013, the total assets of the banks were ALL 1,234 billion, representing 91.1 per cent of the GDP, with an annual growth of 3.9 percent (AAB, 2013). The increase in assets was mainly the result of banks' activity in the interbank and government debt securities markets.

Deposits remain the main funding factor, which account for 82.1 per cent of the total liabilities of the banking sector. Despite the moderate economic activity in the country, deposits increased by 3.4 percent during 2013, compared to 7.3 per cent during 2012. The deposit expansion was sustained both by the increase in retail deposits, and in corporate deposits. In addition, the corporate deposits increased by 5.9 per cent during 2013, while they declined during year 2012.

The lending growth rates slowed down much during the first quarter of 2013, and turned negative during the second quarter, showing a decrease in the loan portfolio of 1.8 percent at the end of the year. Bank credit was concentrated in business sectors which absorbed about 73 percent of the loans in 2013. Banks continue to face very low demand as a result of uncertainties for short-term economic developments in Albania and therefore banks lacked good projects and potential funding. The non-performing loans continued to grow during 2013, with a much slower velocity compared to previous years, reaching 23.5 percent of the total loan portfolio, compared to 22.5 which was the figure last December 2012. The financial result of the banking system for 2013, calculated according to the standards of the Bank of Albania, was about ALL 6.6 billion.

The banking sector continued to be well capitalized, and therefore able to withstand the current economic challenges both internally and internationally. Moreover, banks increased their capital more than their risk-weighted assets, thus enabling further improvement of capital adequacy ratio at the level of 17.96 percent at the end of 2013, compared to 16.2 percent at the end of 2012, while the minimum regulatory requirements for this indicator continued to be 12 percent. Banks were characterized by strong liquidity indicators during 2013, significantly above regulatory levels set by Bank of Albania. At the end of the year, the ratio of liquid assets over current liabilities for the whole system was 34.7 percent for all currencies (42.7 percent for domestic currency and 27.5 percent for foreign currencies),

while the minimum levels set by the Authority were at the levels of 25 percent for all currencies and 20 percent for each currency (AAB,2013).

**Table 1: Performance indicators of the Albanian banking system**

Indicator	2011	2012	2013
Total assets (billion ALL)	1,120.2	1,187.9	1,234.3
in %f GDP	0.846	0.894	0.911
Total deposits (billion ALL)	924	992	1,026
in %f GDP	1	1	1
Credit of Economy (billion ALL)	566	578	567
in %f GDP	0	0	0
Shareholders' Equity(billion ALL)	97	102	103
ROE (in %)	0.8	3.8	6.4
ROA (in %)	0.1	0.3	0.5

*Source : Bank of Albania*

Although a difficult year in many aspects, the year 2013 did not bring any significant change of the banks' activity in the terms of the services and facilities they offered to their customers. Also, the positive performance of the numbers of credit and debit cards associated with the increase in banking products and internet banking transactions continued during 2013. At the end of the year, the number of customers' accounts increased by 7.1 percent, compared with an increase of 3 percent in 2012.

Furthermore, out of the 16 banks in the country 14 of them offer card-issuing, while 7 banks are active in both issuing and accepting card transactions (through POS devices). During 2013 only, the number of cards in circulation increased by 5 per cent, while the number of POSes increased by 7 per cent. In 2013, card transactions increased with around 7.7 per cent in terms of the number of transactions and around 5.4 percent in terms of their volume. In reality 12 out of the 16 banks in the system offer internet banking, 6 of them have undertaken already or are undertaking mobile banking, while there are also other services offered such as MultiCash, SMS banking, and collaborations with the non-bank mobile payments companies in the country.

**Table 2: Network of banks in Albania banking system**

Indicator	2011	2012	2013
No.of banks outlets & outlets	553	556	549
No. of ATMs	805	823	822
No.of POSes	5,126	5,307	5,668
No.of Cards	731,851	768,982	805,560
Debit	693,958	719,809	741,128
Credit	37,893	49,173	64,432
No. of Internet Banking Transactions	187,431	236,215	323,676

*Source : Bank of Albania, AAB*

By the end of 2013, the banking sector's net profit was positive around ALL 6.6 billion, resulting in an improvement of 74% compared to year 2012. The operating income increased by ALL 1.14 billion, while the net interest income fell. Annualized return on average assets was 0.54%, while return on average equity was 6.4 % (BoA, 2013). In December 2013, non-performing loans increased very slowly compared to the year 2012 by accounting for 23.5% of the loan portfolio. The non-performing in household loan portfolio improved by 0.5 percent reaching 16.7 percent, while in private business loan portfolio it increased by 1.8 percent reaching 27.7%. Furthermore, the liquidity ratio was 34.7%, being 42.7% for the Lek and 26.6% for foreign currencies, meaning that each of the indicators was above the minimum regulatory requirement (BoA, 2013).

#### **1.4. Short description of the five top banks' activity**

In analyzing the profitability of Albanian banking system, I have chosen the five top banks in Albania which are: Raiffeisen Bank, Banka Kombetare Tregtare, Intesa San Paolo, Credins Bank and Tirana Bank. Below there is a short description of each of the five top banks selected and their activity in Albania.

***Raiffeisen Bank*** Albania is the largest bank in the country and occupies the number one position on all major key performance indicators. Its capital is close to 2 billion Euros. In 2004, Raiffeisen Bank International purchased the Albanian Savings Bank and during the last 10 years



has completely transformed the old State Bank into a full service bank serving all sectors of the business and private individual markets. It has the widest branches network with 103 branches on-line, 195 bank mats installed and 1423 point of sales (POS). Raiffeisen Bank Sh.a offers a full range of banking products and services in the 4 key business sectors in which it operates –small businesses, corporate business, private individuals and micro businesses. Raiffeisen Albania invested a lot in branch upgrades and computerization and their focus is on private individual, SME and corporate markets. Moreover, Raiffeisen Bank has enforced its leading market position with the introduction of lending to corporate customers and small and medium-sized enterprises and the intensive training of staff and the offering of new banking products. This includes current accounts, payment services, debit and credit cards, overdrafts, and a range of savings and deposit accounts, all forms of borrowing, access to leasing finance, access to pension fund investments, employee banking services including loans, overdrafts, and on-line real time banking services through our market leading, Internet-based called Multi Cash, as well as Internet Banking, Mobile Banking, E-commerce, MPAY, etc.

***Banka Kombetare Tregtare*** was established as a joint stock company in July 2007 with a capital of 2.7 billion. BKT completed the privatization in 2000. Under the direction of new shareholders and new management, consisting entirely by a foreign staff with broad international experience, BKT undertook radical transformations in 2001. These transformations included the development of a new infrastructure and the restructuring of all aspects of the bank's operations from personnel and procedures to IT infrastructure. In February 2003, with a decision of the General Meeting of Shareholders, the paid up capital of the bank amounted to 14.64 million dollars, turning BKT most capitalized bank in the banking sector. The year 2006 started with a new page for BKT. Upon receiving approval from the Bank of Albania and the decision from the specific court on June 9, 2006 was approved the transfer of 60% plus 2 of the BKT shares possessed by Kent Bank in favour of Calik-Seker Konsorsiyum Yatirim A.S. After deciding to expand in Kosovo, the number of branches reached 25, therefore ranking BKT as the largest bank in the region.

Çalik Financial Services bought from IFC and BERZH their shares part becoming so the only BKT shareholder owning 100 % of the shares, by June 30, 2009.

During the years 2006 - 2011 BKT has taken a series of national and international evaluations, among which several times as “ The best Bank of the Year” in Albania, “The best

medium sized bank in South-eastern Europe” and also achieving its highest evaluation as “The Best Bank in South East Europe for 2009”. Also, Bank of Albania evaluated BKT according to the Banking Evaluation system CAMELS with a Strong 1. At the same time, the prestigious magazine The Banker, part of Financial Times, has awarded for two consequent years (2010 and 2011), BKT as Bank of the Year in Albania.

In 2012, EMEA Finance and EuroMoney evaluated BKT as The Best Bank in Albania, while JCR-ER assigned AAA (Alb) for Corporate Governance. 2013 becomes the most successful year of BKT, gathering the three most prestigious awards in banking from EMEA Finance, Euromoney and The Banker as The Best Bank in Albania, while BKT’s CEO is awarded by EMEA Finance as “The CEO of the Year in Europe”.

*Intesa Sanpaolo Bank Albania* was established on 2008 from the merger of two important banks of the country Banca Italo-Albanese (founded on 1993) and the American Bank of Albania (founded on 1998), both acquired from Intesa Sanpaolo Group. Intesa Sanpaolo Bank Albania is a leading bank in the country that provides companies, institutional clients and private high-income individuals and clients of small and medium businesses reasonable solutions through excellent services and products. The Bank offers its services through a network of 32 branches in different cities of the country and continues to expand strategically closely following the economic development of Albania.

For innovation in business and improving service Intesa Sanpaolo Bank Albania is inspired by its customers. The bank through its program "Listening 100%" and the annual survey of customer satisfaction obtains data on which it builds its business strategy and action plan.

Intesa San Paolo Bank works to provide quality banking and financial services to their customers and activate ways to promote development in all the areas where it operates. It encourages a style of growth that helps in achieving sustainable outcomes and creating a process based on trust, which is derived from the satisfaction of customers and shareholder satisfaction, a sense of belonging on the part of employees and close monitoring of the needs of local communities.

It competes in the market in "fair play" and is ready to cooperate with other economic entities, private and public, whenever it is necessary to strengthen the capacity of economic growth in the countries where it operates.

**Credins bank** is founded as the first private bank with 100% Albanian capital in 31 March 2003, a landmark in the history of financial and economic developments. The selected slogan "We do our best for you because we speak your language" remains still meaningful today, without losing authenticity throughout the years. In 2005, Credins Bank signed an agreement with Monte Paschi di Siena in Italy to perform bank transfers free and fast for Albanian living in Italy. During this period, the number of branches reaches up to 12, the number of employees to 113, and the number of customers to 25,000. At the end of 2006 the Bank wound up with 36 740 customers, 17 branches and 170 employees. The year 2007 can be considered as the year of maturity for Credins Bank. It became "Member with full rights" to trading VISA card. The bank increased its profit by 132%. Credins bank Network reached to 25 branches and agencies with 45.724.customers.

In 2008, Credins Bank celebrates its 5th anniversary and adds two new shareholders: the Balkan Financial Sector Equity Holding BV (BFSE Holding BV) Netherlands represented by Development Financial Equity Partners (DFE) and another shareholder State Secretariat for Economic Affairs (SECO), represented by the Swiss Investment Fund for Emerging Markets (SIFEM AG).

In the end of 2010, the number of branches and agencies went to 41 and the number of customers to 125,737. In 2011, Credins bank ranked third in the banking system for annual turnover, which increased by 30% or 7.6 billion Lek. In the first quarter of 2013, Credins celebrated its 10<sup>th</sup> anniversary. The bank signed an agreement with the European Bank for Reconstruction and Development (EBRD) for €10 million in loans for on-lending to local small and medium-sized enterprises and supporting trade finance solutions for clients of the bank.

**Tirana Bank** is the first bank with fully private capital in Albania. Tirana Bank is a member of Piraeus Group and it controls 96.71 % of the shares. The bank was established in 1996 and during this period there has been a great development. It expanded its network of branches throughout Albania. Nowadays, after 15 years in the Albanian market, it is consolidated, offering a wide range of products and services that best respond to the demands of its customers. It continues to grow and expand, but rigorously maintains its philosophy of providing quality services and to be a step forward in offering new banking products in Albania. Tirana Bank has currently 56 branches and agencies and more than 85 ATM's, being

thus the third largest bank in terms of branch network in the country. Actually, it holds the second greatest market share in terms of loans.

Its main objectives are:

- To remain a leader in the Albanian market;
- To be a pioneer in offering innovative services for individuals and businesses;
- To be close to its clients, finding customized solutions to their needs;
- In total synergy with Piraeus Bank Group to offer its best values in regional projects;
- To recognize and expand further its abilities of its human resources.

Tirana Leasing was established in 2004 in Albania and provides leasing services for cars and transport vehicles under the specified conditions. The qualified staff of Tirana Leasing gives customers all the assistance necessary to understand the benefits that provide leasing and how they can benefit from it. Tirana Leasing is part of the Piraeus Bank Group and shows the seriousness needed to successfully meet the intended objectives of the group of which it is part.

## **CHAPTER TWO: Literature Review**

### **2.1. The role of banks**

Why do banks exist? The first answer that comes in mind is that banks act as an intermediary between those who are in need for money and those who have excess of money. Based on the perfect capital market of Modigliani-Miller (1958), financial institutions are unnecessary because entities can borrow and save directly through capital markets. But in reality, such a perfect market does not exist; transaction costs and monitoring costs deform capital markets. Moreover, capital markets suffer from the information asymmetry and the agency problem. The agency problem refers to the different incentives of borrowers and savers or the different incentives of principals and agents (Jensen and Meckling, 1976). Moreover, monitoring the borrower's behavior is required to safeguard the continuity and stability of banking sector due to moral hazard issues. To sum up, in inefficient markets, financial intermediation is helpful because banks have lower monitoring and transaction costs than individuals, due to economies of scale.

In addition, another important aspect of banking is the function of maturity transformation. Banks receive short-term savings from depositors and on the other hand transform those into long-term loans to borrowers. Therefore, by holding a part of short-term savings in liquid assets or cash, they can withstand daily withdrawals from depositors. Different from banks, capital markets cannot achieve maturity transformation with such benefits. Individual investors face liquidity, price and credit risk and they cannot diversify as banks can do. Furthermore, banks diversify their liquidity risk, since savers do not withdraw their deposits at the same time and they only keep a part of deposits in liquid cash. Also, individual savers can diversify their investment in terms of credit and price risks but it remains doubtful that they could withdraw the investment without facing liquidity issues at any time.

#### **2.1.1 Theories of bank profitability**

Commercial banks are important financial institutions in the financial system and the economy. They have played an important role in the tremendous economic development that has taken place in the region in recent years. Banks mobilize, allocate and invest the greatest part of the economic agents' savings. In addition, their performance has important consequences on capital allocation, firm expansion, industrial growth and economic development. Therefore,

profitability of banks is very important not only at the individual bank level, but also in the macroeconomic level. Profitability is a reflection of how banks are run, given the environment in which they operate. Profitability is vital in maintaining the stability of the banking system and contributes to the state of the financial system (Goddard et al., 2004). Therefore, the determinants of bank performance have attracted the interest of academic research, financial markets and bank supervisors.

Studies on the performance of banks started in the late 1970s and early 1980s with the application of two industrial organizations models: the Market Power and Efficiency Structure theories (Athanasoglou et al., 2006). Moreover, the balanced portfolio theory has also contributed into the study of bank profitability (Nzongang and Atemnkeng, 2006).

### **The market power theories**

Tregenna (2009) stated that market power theory indicates that performance of bank is influenced by the market structure of the industry. There are two different approaches within the market power theory: the Structure-Conduct-Performance (SCP) and the Relative Market Power (RMP) hypotheses. According to the SCP approach, banks in more concentrated market are more willing to raise their profitability, by the opportunity to lower the deposits rates and to charge higher loan rates as a result of the monopolistic environment, rather than firms operating in less concentrated markets (Tregenna, 2009). While, RMP hypothesis implies that bank profitability is influenced by market share. It supposes that only banks with differentiated products can influence prices, exercise market power and earn non-competitive profits (Tregenna, 2009).

### **The efficiency theory**

The efficiency theory assumes that banks earn high profits because they are more efficient than others. The efficiency theory has two different approaches such as: the X-efficiency and Scale-efficiency hypothesis. Efficient firms are more profitable because of their lower costs due to X-efficiency. Furthermore, the scale approach emphasizes economies of scale rather than differences in management or production technology. Larger firms can gain lower unit cost and higher profits through the economies of scale. Such firms tend to have large market share, which can provide higher concentration and profitability (Athanasoglou et al., 2006).

### **The balanced portfolio theory**

The balanced portfolio theory is the most significant and plays an important role in bank performance studies (Nzongang and Atemnkeng, 2006). According to the Portfolio theory, the optimal holding of each asset in a wealth holder's portfolio is a function of policy decisions determined by a number of factors such as the vector of rates of return held in a portfolio, a vector of risks associated with the ownership of each financial assets and size of the portfolio. They stated that the ability to receive maximum profits depends on the feasible set of assets and liabilities determined by the management and the unit costs incurred by the bank for producing each component of assets.

### **Risk-return trade off theory, the signaling and bankruptcy cost hypotheses**

Also, balance sheet structure could influence bank's profitability; therefore the equity-to-asset-ratio is an important balance sheet ratio. According to Modigliani & Miller (1958) theorem there exists no relationship between the capital structure (debt or equity financing) and the market value of a bank. Financing theory suggests that increasing risks, by increasing leverage and lowering the equity-to-asset ratio, leads to a higher expected return as entities will take more risks when expected return will increase. This theoretical explanation is known as the risk-return trade off (Van Ommeren, 2011).

On the other hand, there are also theoretical explanations that a higher equity-to-asset ratio has a positive effect on profitability. Berger stated that these explanations are based on the signaling and bankruptcy cost hypotheses. The signaling hypothesis states that a higher equity ratio is a positive signal to the market of the value of a bank (Berger, 1995). While, the bankruptcy cost hypothesis suggests that in a case where bankruptcy cost are unexpectedly high a bank holds more equity to avoid periods of distress (Berger, 1995).

### **2.1.2 Factors affecting bank profitability**

The profitability determinants are basically divided in two main categories, the internal determinants and external ones. The internal determinants include management controllable factors such as liquidity, investment in securities, investment in subsidiaries, loans, non-performing loans, and overhead expenditure. Other determinants such as savings, current account deposits, fixed deposits, total capital and capital reserves, and money supply also play a major role in influencing the profitability. Similarly, external determinants include those factors which

are beyond the control of management of these institutions such as interest rates, inflation rates, market growth and market share.

## **2.2 Previous studies in relation to bank profitability and its determinants**

The study on the determinants of bank profitability began as early as 1979 when Short examined the relationship between profit rate and bank concentration. The determinants of bank profitability were classified to three specific aspects: bank-specific, industry-specific and macroeconomic determinants of bank profitability (Said and Tumin, 2011, p.159). Hence, the following section reviews the studies on factors affecting bank profitability with a particular focus on those conducted in single country and those conducted on a panel of countries.

### **2.2.1 Single country studies**

Berger (1995) examined the relationship between the return on equity and the equity to asset ratio for a sample on United States banks for the time period from 1983-1992. By using the granger causality model, he demonstrated that the return on equity and equity to asset ratio is positively related.

Guru et al. (2002) investigated the determinants of bank profitability in Malaysia, using a sample of 17 commercial banks during the 1986 to 1995 period. The determinants were classified into two main categories, the internal determinants (liquidity, capital adequacy, and expenses management) and the external determinants (ownership, firm size and economic conditions). Their finding revealed that efficient expenses management was one of the most significant factors explaining high bank profitability. Also, inflation was found to have a positive effect on bank performance.

Athanasoglou et al. (2008) investigated the effect of bank-specific characteristics, industry-specific and macroeconomic determinants of bank profitability for Greek banks for the period 1985-2001. SCP hypothesis had a specific attention into the study. The empirical results recommended that capital, labor productivity growth, operating expenses, inflation, and cyclical output significantly affect profitability. On the other hand, the impact of bank size and ownership cannot be observed. Furthermore, the SCP hypothesis on bank profitability was found insignificant.

Sufian and Chong (2008) studied the determinants of Philippines banks profitability during the period 1990–2005. The empirical findings showed that all the bank-specific determinant variables had a significant impact on bank profitability. Also, the empirical findings



recommended that size, credit risk, and expense preference behavior are negatively related to banks' profitability, whereas non-interest income and capitalization had a positive impact. Moreover, the results showed that inflation had a negative impact on bank profitability, although the impact of economic growth, stock market capitalization and also money supply had not significantly explained the variations in the profitability of the Philippines banks.

Ben Naceur and Goaid (2008) investigated the impact of bank characteristics, financial structure and macro-economic conditions on Tunisian banks' net interest margins and profitability during the period from 1980 to 2000. They recommended that banks which hold a relatively high amount of capital and higher overhead expenses tend to show higher net-interest rate margin and profitability levels, whereas size was negatively related to bank profitability. Further, they found that stock market development had a positive impact on bank profitability. The empirical findings recommended that private banks were relatively more profitable than their state owned counterparts. The result specified that macroeconomic conditions had no significant impact on Tunisian banks' profitability.

Garcia-Herrero et al. (2009) analyzed the main determinants of profitability for Chinese banks by employing a panel data set for 87 banks from 1997-2004. Both of them, originated that better capitalized banks, a comparatively larger share of deposits, and more X-efficient banks tend to be more profitable. Thus, a less concentrated banking system and a lower government intervention increase bank profitability. Moreover, from the macroeconomic variables studied, higher real interest rates on loans and inflation appear to increase profitability while the volatility of interest rates reduces it.

Gul et al. (2011) analyzed the relationship between bank-specific and macro-economic characteristics for Pakistan bank profitability by using data of top fifteen Pakistani commercial banks for the period 2005-2009. They used the Pooled Ordinary Least Square method to investigate the effect of assets, loans, equity, deposits, economic growth, inflation and market capitalization on main profitability indicators i.e., return on asset, return on equity, return on capital and net interest margin. The empirical results found strong evidence that both internal and external factors have a strong influence on the profitability.

Olweny & Shipho (2011) investigated the effects of banking sector factors on the profitability of commercial banks in Kenya. Annual financial statements of 38 Kenyan commercial banks from 2002 to 2008 were obtained from the Central Bank of Kenya and

banking survey 2009 for the analysis purpose. The data was analyzed using multiple linear regressions method. The results of the analysis revealed that all the bank specific factors had a statistically significant impact on profitability, whereas not any of the market factors had a significant impact.

Sufian (2011) analyzed the bank-specific and macroeconomic determinants of profitability of Korean banking sector for the period 1992-2003. The empirical results showed that liquidity level, diversification, credit risk, business cycle, and industry concentration significantly affect banks' profitability.

The latest study of Sufian and Noor-Mohamad-Noor (2012) explored the internal and external factors that affected the performance of banks operating in the Indian banking sector during the period 2000–2008. The empirical findings suggested that credit risk, operating expenses, liquidity and size had statistically significant impact on the profitability of Indian banks.

In addition, Ponce (2012) also analyzed the factors that determine the profitability of Spanish banks for the period of 1999–2009. The study concluded that the high bank profitability during these years is related with a large percentage of loans, an increase of customer deposits and good efficiency. Also, the findings provided that there is no evidence of either economies or diseconomies of scale existing in the Spanish banking sector.

### **2.2.2 Panel countries studies**

Molyneux and Thornton (1992) were the first that analyzed the determinants of bank profitability on a set of countries. They used a panel data of 18 European countries during the 1986-1989 periods. They found a significant positive relation between return on equity and level of interest rates in each country.

Abreu and Mendes (2002) investigated the determinants of bank's interest margins and profitability for some European countries in the last decade. The results showed that the unemployment rate and inflation rate were relevant to explaining the bank profitability.

Athanasoglou et al. (2006) analyzed the profitability of bank-specific, industry and macroeconomic determinants including a panel data for the South Eastern European credit institutions for the period 1998-2002. The results showed that except liquidity, all bank-specific determinants significantly affect bank profitability.

Pasioras and Kosmidou (2007) measured for the period 1995-2001 the effects of 10 internal and external variables on profitability, including the capital ratio, cost to income ratio, loans to customers and short-term funding, bank size, inflation, GDP growth, concentration, and three determinants reflecting the development of banking and stock markets on bank return for 584 domestic and foreign commercial banks in the 15 developed European Union countries. The impact of all variables was found to be statistically significant except for the concentration ratio.

Flamini et al. (2009) studied the determinants of bank profitability for a sample of 389 banks for the period 1998-2006. The paper supposed that higher returns on assets are correlated with larger bank size, activity diversification, and private ownership. Therefore, the study emphasized the policy of imposing higher capital requirements in the region to promote financial stability.

Ben Naceur and Omran (2011) analyzed the influence of bank regulations, concentration and financial and institutional development on the Middle East and North Africa countries 'commercial bank's margins and profitability during the period 1989-2005. They found that bank capitalization and credit risk had a positive impact on banks 'net interest margins, cost efficiency and profitability. On the other hand, macroeconomic and financial development indicators had no significant impact on bank performance.

Said and Tumin (2011) analyzed performance and financial ratios of commercial banks in Malaysia and China. The paper investigated the impact of bank-specific factors which include liquidity, credit, capital, operating expenses and the size of commercial banks on their performance, which is measured by return on asset and return on equity. The results indicate that ratios have different impact on the performance of banks in both countries, except credit and capital ratios.

### **2.2.3 Review of previous studies on Albania**

In the context of Albania, to my best knowledge, there appears to be only one work on the estimation of determinants of the profitability of banks. This study includes the paper of Eliona Gremi (2013). She studied some of the most important internal factors that affect the profitability of commercial banks for the time period from 2005 to 2012 for 12 commercial banks organized by 95 observations. The paper used regression analysis fixed effect model to implicate the results with the respective hypothesis. The aim of the study is to test the relationship between dependent variable Return on Asset (ROA) and the internal factors taken

into the consideration such as: Bank size, Loans, Deposits, Credit Risk and Interest Income. The result from the analysis showed that, few of internal variables have significant influence on banks 'profitability in Albania and some other have no significant effect on it.

The review of literature exposes the existence of many gaps of knowledge related to the factors affecting bank profitability, especially in the context of Albania. The recent study made by Gremi (2013) examined only some of the internal factors that affect the profitability of Albanian commercial banks. Thus, the objective of my paper is to examine both the internal and external factors that affect bank profitability in Albania and to fill the knowledge gap that exists.

## **CHAPTER THREE: Determinants of Bank Profitability**

The focus of this chapter is to identify the determinants of profitability of Albanian commercial banks. It presents the dependent variable as a proxy for bank's profitability. Then it presents the independent variables that are basically divided in two main categories, the internal determinants and external ones.

### **3.1 Dependent variable**

According to earlier studies that analyzed the determinants of bank's profits, I use return on assets (ROA) as a measure to evaluate bank profitability and as a dependent variable. The ROA reflect the ability of bank's management to generate profits from the bank's assets and is expressed in percent. Another alternative of profitability measure is return on equity (ROE) defined as the net profits over average equity and is expressed in percent. Bank profitability is best measured by ROA, because it represents the best measure of the ability of a firm to generate returns on its portfolio assets (Kosmidou, 2008; Naceur and Goaid, 2008). ROA indicates the profit earned per unit asset and which is most important, it shows the management's ability to utilize the bank's financial and real investment resources to generate profits. As Golin (2001) points out, the ROA has emerged as a key ratio for the evaluation of bank profitability and has become the most common measure of bank profitability in the literature. The second profitability measure is the return on average equity ROE, which is the return to the shareholder on their equity. Banks with a lower leverage ratio (higher equity) usually report a higher ROA, but a lower ROE. Meanwhile, ROE is also commonly used in the literature; it is not the best profitability indicator. Therefore, ROA is considered as more significant and a better profitability measure and dependent variable.

### **3.2 Independent variables**

This subsection describes the independent variables that are used in the econometric model to estimate the dependent variable. The determinants of bank's profitability, the independent variables are classified into bank-specific, industry-specific and macroeconomic variables (Athanasoglou et al., 2008; Flamini et al., 2009; Sastrosuwito and Suzuki, 2011).

The bank-specific variables are internal factors and controllable by bank's managers while the industry-specific and macroeconomic variables are external factors and uncontrollable.

In this study are not included all internal factors which affect bank profitability, but is focused on the analysis of the relationship between ROA ( dependent variable) and 5 independent variables taken into consideration:

**Bank size:** Bank size is measured by total assets. One of the most important questions in the literature is if there exists an optimal bank size in order to maximize bank profitability. It has been argued that a growing bank size is positively related to bank profitability (Smirlock, 1985; Pasiouras and Kosmidou, 2007). Lager banks are more willing to have a higher degree of product and loan diversification than smaller banks. Furthermore, due to high diversification, economies of scale can also arise from a larger size. We expect a positive effect of size on bank profitability as diversification reduces risk and economies of scale lead to increased operational efficiency. Therefore, if the bank becomes extremely large in size, a negative effect could be between size and bank profitability, because the bank is harder to be managed due to bureaucratic and other reasons. Therefore, the size-profitability relationship is expected to be non-linear (Eichengreen and Gibson, 2001). In order to emphasize this possible non-linear relationship, as a proxy we use the logarithm of bank's total assets.

*HP1: There is a significant positive/negative relationship between the size of a bank and bank's profitability.*

**Bank loans:** One of the most important roles of banks is to offer loans to borrowers and loans serves as the main source of earnings for commercial banks. In different words, loans are the highest yielding asset on bank's balance sheet. According to Abreu and Mendes (2002) the more the banks offer loans the more they do generate revenue and more profit they make. Therefore, loans should positively affect profitability as the bank is working vigilantly and not taking excessive risk.

*HP2: There is a significant positive relationship between the loans and bank's profitability.*

**Bank deposits:** Deposits are the main source of bank funding and hence it has an impact on the profitability of the banks. Even though, the contribution of increasing amount of deposits to the profitability depends upon a number of factors. Firstly, it depends on the capability of the bank to convert deposit liabilities into earnings. Increasing those means that a bank has more funds available to use in different profitable ways and that should increase ROA (Holden and El-Bannany, 2006). But on the other hand, high growth rates might attract additional competitors

and this may cause the decrease of the profits for all market participants. Thus, the sign of this variable is either positive or negative.

*HP3: There is a significant positive/negative relationship between the deposits and bank's profitability.*

**Capital ratio:** As a proxy for the bank capital, we use the ratio of equity to assets. The equity to asset ratio measures how much of bank's assets are funded with owner's funds. According to literature review, academic research is mixed regarding to the relationship between the capital ratio and bank's profitability. According to risk-return tradeoff, a higher equity to asset ratio leads to a lower expected return. Opposed to risk-return hypothesis, Berger (1995b) examined the signaling hypothesis and bankruptcy cost hypothesis; suggesting that a higher equity to asset ratio increase profitability due to lower costs of financial distress. Therefore, there is an ambiguous relationship between capital ratio and bank's profitability.

*HP4: There is a significant positive/negative relationship between the capital ratio and bank's profitability.*

Furthermore, I include also external factors, which are expected to have an impact on bank profitability as well:

**Real GDP growth:** GDP growth is expected to have a positive impact on bank profitability according to the literature on the association between economic growth and financial sector profitability (Demirguc-Kunt and Huizinga, 1999; Bikker and Hu, 2002; Athanasoglou et al., 2008). In addition, we expect a positive relationship between bank profitability and GDP development as the demand for lending increases or decreases in cyclical upswings or downswings.

*HP5: There is a significant positive relationship between the gross domestic product growth and bank's profitability.*

**Inflation rate:** Revell (1979 cited in Ponce 2012) stated that the effect of inflation on bank profitability depends on how inflation affects both salaries and other operating costs of the bank. Moreover, Staikouras and Wood (2003) revealed that an increase in the price of labor and indirect effects bring changes in interest rates and assets prices on the profitability of banks. Also, Perry (1992) suggested that the effects of inflation on bank performance depend on whether inflation is anticipated or unanticipated. In the anticipated case, the interest rates are

adjusted properly, bringing a faster increase in revenues rather than costs and therefore having a positive impact on bank profitability. Conversely, in the unanticipated case, banks may be slow in adjusting interest rates resulting in a faster increase of costs than revenues and therefore having a negative impact on bank profitability.

*HP6: There is a significant positive/negative relationship between the inflation rate and bank's profitability.*



## CHAPTER FOUR: Data, Methodology, and Analyses

### 4.1. Data Description

This study employs quarterly data for a period from 2005 to 2014 of the five greatest second level banks operating in Albania. The data have been obtained from annual reports of each bank, annual report of Bank of Albania and other data published by Albanian Association banks. In order to have a more accurate result, the weighted average of the data of the five second level banks will be used in this model. Determinants will be analyzed based on the published data by banks using the program SPSS. In this paper, the backward regression will be applied which is part of stepwise regression in order to find out the relationship between dependent variable of return on asset and independent variables of size, total loans, total deposits, capital ratio, GDP growth and inflation rate.

### 4.2. Methodology

Stepwise regression is a combination of the forward and backward techniques. Stepwise regression requires two significance levels: one for adding variables (forwards regression) and one for removing variables (backward regression). In our paper, the backward regression will be applied.

Backward regression starts with all the explanatory variables included in the model. Then, it removes the least significant explanatory variable, the one with the highest p-value. This process continues until no non-significant variables remain. Therefore, by removing all the non-significant variables the optimal model is found in the end.

In order to examine the determinants of the profitability of the Albanian banking sector, the data are analyzed by using backward regression:

$$Y_{it} = \beta_0 + \beta_1 \ln X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 X_{6it} + u_{it}$$

Where:

$\beta_0$  → represents a constant term

$Y_{it}$  → represents ROA (return on assets of the bank  $i$  at time  $t$ )

$X_{1it}$  → represents Bank Size (log of assets of bank  $i$  at time  $t$ )

$X_{2it}$  → represents Bank Loans (TL/TA represents the ratio of Total Loans to Total Assets for bank  $i$  at time  $t$ )

$X_{3it}$  → represents Bank Deposits (TD/TA represents the ratio of Total Deposits to Total Assets for bank  $i$  at time  $t$ )

$X5_{it}$  → represents Capital ratio (CRTA represents the ratio of Equity Capital to total Assets for bank  $i$  at time  $t$ )

$X5_{it}$  → represents GDP growth at time  $t$

$X6_{it}$  → represents Inflation rate at time  $t$

$U_{it}$  → represents error term

The main focus of the study is to find out the relationship between internal and external factors and bank's profitability in top 5 five banks of Albania. Based on the objective, the study tries to test the following main hypothesis:

$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$  (none of the factors has any impact on bank profitability)

$H_1: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq \beta_6 \neq 0$  (at least one factor has significant impact on bank profitability)

Moreover, if we reject the hypothesis  $H_0$  we have to verify alternative hypothesis as follows:

H1-1  $\beta_1 \neq 0$  (Bank size has significant effect on bank profitability)

H1-2  $\beta_2 \neq 0$  (Bank loans have significant effect on bank profitability)

H1-3  $\beta_3 \neq 0$  (Bank deposits have significant effect on bank profitability)

H1-4  $\beta_4 \neq 0$  (Capital ratio has significant effect on bank profitability)

H1-5  $\beta_5 \neq 0$  (GDP growth has significant effect on bank profitability)

H1-6  $\beta_6 \neq 0$  (Inflation rate has significant effect on bank profitability)

### **4.3. Analysis**

According to table 3, Model Summary table shows the main result from the data analyzed for this study. As can be seen in the table below, from the first model the R-squared statistic and adjusted R-squared statistic of the model are 55.6% and 45.7% respectively. The result indicates that the changes in the independent variables explain 45.7% of the change in the dependent variable. That is bank size, loans to total asset ratio, deposits to total asset ratio, capital ratio, gross domestic product and inflation rate collectively explain 45.7% of the changes in ROA. The null hypothesis of F-statistics (the overall test of significance) that the  $R^2$  is equal to zero was rejected at 1% as the p-value is sufficiently low. F value of 0.001 indicates statistical significance, which shows the reliability of the model. From the second model, R-squared

statistic and adjusted R-squared statistic of the model are 55.5% and 47.6% respectively. The result indicates that the changes in the independent variables explain 47.6% of the changes in dependent variable. In the third model, R-squared statistic and adjusted R-squared statistic of the model are 55.5% and 49.3% respectively. The result provides that the changes in the independent variables explain 49.3% of the changes in the dependent variable. Lastly, the R-squared statistic and adjusted R-squared statistic of the model are 53.3% and 48.6% respectively. The result shows that the changes in the independent variables explain 48.6% of the changes in the dependent variable. The Durbin-Watson Statistic estimated at 1.582 indicates that there is no trace of serial correlation in the error terms of our model which may render it a spurious regression.

**Table 3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F change	df1	df2	Sig.F change	
1	.745 <sup>a</sup>	.556	.457	.00440	.556	5.627	6	27	.001	1.582
2	.745 <sup>b</sup>	.555	.476	.00432	.000	.028	1	27	.869	
3	.745 <sup>c</sup>	.555	.493	.00425	-.001	.039	1	28	.844	
4	.730 <sup>d</sup>	.553	.486	.00428	-.022	1.411	1	29	.244	

As I explained above, the backward regression is applied in this paper and as a result of this four models are obtained. Therefore, the fourth model is the optimal one and it provides the main results of the regression. This is supported by the F-Statistic which is given at 11.41 and significant at 1% level of significance from the F-Statistic Prob. This shows that the coefficients of the variables in our model are statistically different from zero and good fit with the data.

**Table 4: ANOVA**

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	.001	6	.000	5.627	.001 <sup>b</sup>
1 Residual	.001	27	.000		
Total	.001	33			
Regression	.001	5	.000	6.990	.001 <sup>c</sup>
2 Residual	.001	28	.000		
Total	.001	33			
Regression	.001	4	.000	9.026	.001 <sup>d</sup>
3 Residual	.001	29	.000		
Total	.001	33			
Regression	.001	3	.000	11.41	.001 <sup>e</sup>
4 Residual	.001	30	.000		
Total	.001	33			

According to the table 5, in the first model, the six variables are included. The result shows that size variable is positively correlated with ROA but it is non-significant. In addition, variables like loans to total asset ratio and GDP have a positive relationship with profitability and in the same time are significant variables. This indicates that there is a direct relationship between these two independent variables and ROA. Hence, the increase of these variables will lead to an increase in ROA. Furthermore, capital ratio is negatively related with profitability but on the other hand it is a significant variable. This reveals that there is an inverse relationship between capital ratio and profitability. Thus, an increase of capital ratio will lead to a decrease in ROA. While, variables like total deposits to total assets ratio and inflation rate are non-significant variables related with profitability. Therefore, deposits to total asset ratio and inflation rate have no impact on bank's profitability in Albania.

As explained above, at each step the variable that is the least significant is removed from the backward regression. Based on our result, the least significant variable is the inflation rate.

So, in the second model the variable of the inflation rate is excluded, since its p-value is 0.869. By removing the inflation rate, we retain a large value of R-squared as shown in the table 3.

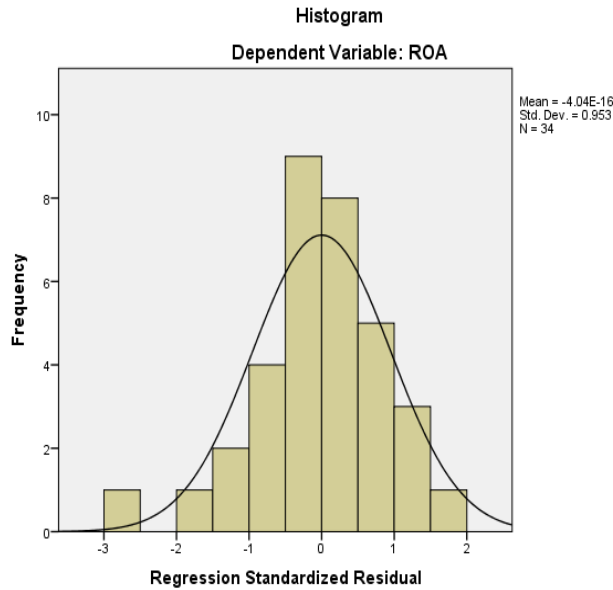
Based on the result of the second model, it is clearly shown that the next variable which is the least significant in the regression is the bank size with a p-value of 0.844. The process of removing continues till the last step when the optimal model is achieved. Therefore, in the fourth model, the deposits to total asset ratio variable is removed, since it the least significant from the four other variables remaining: GDP, loans to total asset ratio and capital ratio. In the last model all the non-significant variables are removed. This model concludes that only three of six independent variables taken into consideration are significant to bank's profitability such as: GDP, loans to total asset ratio and capital ratio.

**Table 5: Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
	B	Std.Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	.042	.047		.887	.383					
GDP	.012	.005	.360	2.601	.015	.533	.448	.334	.857	1.167
Inflation	3.364E-005	.000	.032	.167	.869	-.431	.032	.021	.452	2.214
Size	.000	.001	.035	.223	.825	.026	.043	.029	.652	1.534
1 TL to TA	.0127	.041	1.821	3.116	.004	.030	.514	.400	.048	20.754
TD to TA	-.038	-.037	-.267	-1.012	.320	.092	-.191	-.130	.237	4.228
CRTA	-.589	.189	-2.091	3.116	.004	-.166	-.514	-.400	.037	27.370
(Constant)	.046	.040		1.166	2.53					
2 GDP	.012	.005	.360	2.647	.013	.533	.447	.334	.857	1.167
Size	9.692E-005	.000	.030	.198	.844	.026	.037	.025	.677	1.477

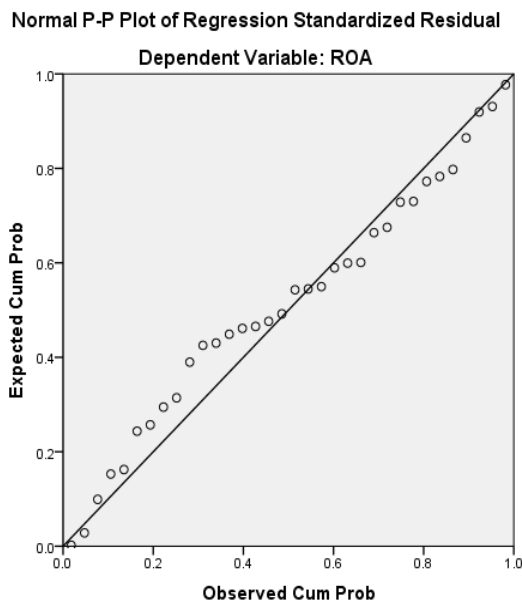
TL to TA	.123	.031	1.76	3.927	.001	.030	.596	.495	.079	12.648
TD to TA	-.038	.036	-.270	-1.043	.306	.092	-.193	-.131	.237	4.211
CRTA	-5.68	.142	-2.019	4.007	.000	-1.66	-.604	.505	.063	15.979
(Constant)	.050	.034		1.456	.156					
GDP	.012	.005	.361	2.701	.011	.533	.448	.335	.335	1.165
TL to TA	.123	.031	1.767	4.023	.000	.030	.599	.599	.499	12.564
3 TD to TA	-.040	.034	-.286	1.188	.244	.092		.215	-.147	3.778
CRTA	-.570	.139	-2.025	4.094	.000	-.166	-.605	.605	-.507	15.923
(Constant)	.009	.003		2.729	0.011					
GDP	.012	.005	.351	2.61	.014	.533	.43	.326	.862	1.16
4 TL to TA	.123	.031	1.757	3.973	.000	.03	.587	.496	.496	12.559
CRTA	-.499	.126	-1.772	3.943	.000	-.166	-.584	.492	-.492	12.966

**Figure 1: Histogram**



**Figure 2: Normal P-P plot of regression standardized residual**

In the figure 2 below is shown the probability Plot of the standardized figures which seems that the assumption is acceptable for these data. This scatter plot shows that there exist a linear correlation between dependent variable and independent ones and it also has a homoscedasticity.



#### **4.4 Research hypotheses and question**

As presented in chapter one the main objective of this study is to identify the factors that affect bank profitability in Albania. In order to reach this objective the study developed the 6 following hypotheses and one research question.

*HP1: There is a significant positive/negative relationship between the size of a bank and bank's profitability.*

*HP2: There is a significant positive relationship between the loans and bank's profitability.*

*HP3: There is a significant positive/negative relationship between the deposits and bank's profitability.*

*HP4: There is a significant positive/negative relationship between the capital ratio and bank's profitability.*

*HP5: There is a significant positive relationship between the gross domestic product growth and bank's profitability.*

*HP6: There is a significant positive/negative relationship between the inflation rate and bank's profitability.*

#### **Research question (RQ) is:**

*What are the determinants of bank's profitability in Albania and how do these factors affect the profitability of Albanian banks*

#### **4.5 Analysis of results**

This section of the chapter discusses the analysis of the results. The analysis focused on the results of the regression analysis for the internal and external factors taken into consideration in this study and their impact on bank's profitability in Albania. The selected factors are the internal ones: size, loans, deposits, capital ratio and external ones: GDP growth and inflation rate.

##### **Size**

Bank size which is measured by the natural log of total assets has a positive impact on bank's profitability in Albania with a non- significant coefficient. Furthermore, the positive correlation between Albanian banks' size and profitability indicates that larger banks are better



placed than smaller banks and experience more significant increases in profitability through economies of scale. The result is consistent with the finding of Damena (2011).

### **Loans**

Loans to total assets ratio has a positive relationship with banks' profitability in Albania. The loans to total assets ratio was statistically significant at 1% significance level. The coefficient of 0.000 in the regression model indicates that loans are a significant determinant of banks' profitability in Albania. This means that these five banks are more vigilant and don't take excessive risk with their loans portfolio. Also, the loans are the main source of profit for Albanian banking system, since the interest rate applied on them from the banks is very high. Great banks have a large share of the loans in the market. Therefore, they more concerned with keeping a high quality for their loans. On the other hand, smaller banks try hard to increase their market share. In this process, they often tend to overlook the quality of their borrowers.

### **Deposits**

The deposits do not affect bank profitability significantly. This indicates that there is no evidence that banks in Albania are able to convert an increasing amount of deposit liabilities into higher income earning assets.

### **Capital ratio**

The coefficient of capital ratio which is measured by the equity to asset ratio is negative and statistically significant at 1% significance level (p-value =0). The negative coefficient for capital ratio is in the same line with the risk-return trade-off hypothesis. Banks with lower capital ratio are considered riskier and are expected to have higher returns. On the other hand, lower capital ratio implies higher leverage and risk, which instantly lead to higher borrowing costs.

### **Gross Domestic product**

As expected, Albanian banks profitability is positively related to GDP growth, mainly through the impact of the economic cycle on the demand for credit by households and firms and also to provisions. The growth of GDP was statistically significant at 5% significance level. The coefficient of 0.014 in the fourth regression model indicates that GDP is a quite significant determinant of banks' profitability in Albania. The positive relationship between GDP and

banks' profitability in Albania is in the same line of the studies done by Pasiouras and Kosmidou (2007) and Ponce (2012).

### **Inflation**

The coefficient of inflation was positive and in the same time not statistically significant, hence, the effect of inflation on the Albanian banking system is not significant. The finding also shows that inflation rate is not a determinant of banks' profitability in Albania, since the p-value of it is around 0.869.

## **Conclusion**

The aim of the study is to identify the main bank-specific, industry-specific and macro-economic factors that can affect Albanian banks' profitability and to find out to what extent these determinants affect the Albanian banks profitability. Based on other studies, the profitability of bank is expressed as a function of internal and external determinants. The internal determinants refer to the factors that are originated from bank accounts (balance sheets and/or profit and loss accounts) and could be called micro or bank-specific determinants of profitability. While, the external determinants are variables that are not related to bank management but are related to the economic and legal environment that affects the operation and performance of financial institutions. The previous empirical studies conclude that both internal and external factors explain and have impact on banks' profitability.

Most of the studies have employed as internal determinants variables such as size, capital, asset quality, income diversification, loans, and deposits to show their impact on banks profitability. While, as external factors the most used as impacting on profitability are variables such as inflation rate, interest rate and economic growth, and variables that represent market characteristics.

This study investigates the impact of both internal and external determinants of the Albanian banking system's profitability for the period 2005 to 2014. The internal factors included in this study are variables such as banks size, loans to total asset ratio, deposits to total assets ratio and capital ratio. While, as external determinants are used two variables gross domestic product and inflation rate. To comply with the objective of this research, the paper is based on quantitative research method. The quantitative data are obtained from annual reports of each bank, annual report of Bank of Albania and other data published by Albanian Association of banks in order to identify and measure the determinants of banks profitability. So, for testing the research hypothesis, this study employed quarterly data for a period over 2005 to 2014 of the five second level banks operating in Albania.

The empirical findings on the impact on banks' profitability in Albania suggest the following conclusions:

First, the natural logarithm of total assets has a positive impact on ROA with a non-significant coefficient. This indicates that larger banks of the country experience more significant increases in profitability through economies of scale.

Second, as expected loans to total asset ratio has a positive relationship with banks profitability in Albania. This is related to the fact these five banks are more vigilant and don't take excessive risk with their loans portfolio.

Third, the yearly growth of deposits has a negative relationship with profitability. Different from the previous studies the deposits to total asset ratio has a negative impact in the case of Albania, meaning that there is no capability of Albanian banks to convert an increasing amount of deposits into higher income earning assets.

Fourth, the result showed a negative relationship between capital ratio and profitability with a strong statistical significance. This implies that banks with lower capital ratio are considered riskier and are expected to have higher returns.

Lastly, the GDP growth has a positive relationship with banks' profitability in Albania. This is due of the improvement of economic conditions in Albania, improvement of solvency of borrowers and the increase of demand for credit of households and firms. On the other hand, inflation rate factor has no impact on the profitability of Albanian banks in this model, since the p-value of it is around 0.869.

Generally, the results provide some important new insights for a better understanding of the determinants that affect the profitability of commercial banks in Albania. The empirical findings are relevant due to several reasons: First, our results confirm findings of other studies done on bank profitability. Second, the study considers both internal and external factors of bank profitability, which extend more the knowledge about the relationship between factors and banks' profitability in Albania. Third, the backward regression is an innovation because few of the studies have used it to find out the relationship between internal and external factors and bank's profitability.

The explanatory internal variables are more important in explaining the variability in ROA for commercial banks in Albania than external variables. But on the other hand, among the external variables included in the study GDP growth rate is one of the most significant factors of profitability of Albanian banks. So, this is a clear signal to all commercial banks in Albania that they cannot disregard the macroeconomic factors when they imply strategies to improve their profits or performance. Therefore, banks in Albania should not be concerned only with internal policies, but they should thoroughly consider both the internal environment and the macroeconomic environment in their strategies to improve profits and performance.

The study investigated the factors that influence the profitability of commercial banks in Albania. Still, the variables included in the statistical analysis did not include all factors that can affect Albanian banks' profitability. Therefore, upcoming research could include other external factors such as exchange rates, government regulation etc. Also, it might be productive to integrate specific characteristics about the management and board members such as education, skill level, experience, independence, all of which are very important factors to understand bank profitability.

There are few years under consideration. So, in the future studies, with the passing of time, there could be more years to be taken into analysis.

Only the five greatest banks are taken into the consideration. This makes us to be biased towards more successful banks. In order to have a more thorough picture of the overall Albanian banking system we should also include smaller banks. Including these other banks probably would increase the percentage explained by our equation.

**Bio-data**

The author, Blerta BAMI, was born in Tirana, Albania in 1989. She completed her bachelor degree in New York University of Tirana and graduated in 2011. In 2013, she started a master of second level in Banking and Finance at Epoka University. The author had started her professional carrier in 2011 as a dealer in the Treasury Department of the National Commercial Bank (Banka Kombetare Tregtare) in Tirana. She is still working for the same company.

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51. [www.raiffeisen.al/](http://www.raiffeisen.al/)
52. [www.tiranabank.al](http://www.tiranabank.al)

**Appendices:**

**Appendix A: Correlations**

		ROA	GDP	Inflation	Size	TLtoTA	TDtoTA	CRTA
Pearson Correlation	ROA	.000	.533	-.431	.026	.030	.092	-.166
	GDP	.533	1.000	-.275	-.070	-.102	.213	-.204
	Inflation	-.431	-.275	1.000	.068	.245	-.389	.438
	Size	.026	-.070	.068	1.000	.489	-.562	.491
	TLtoTA	.030	-.102	.245	.489	1.000	-.811	.955
	TDtoTA	.092	.213	-.389	-.562	-.811	1.000	-.857
	CRTA	-.166	-.204	.438	.491	.955	-.857	1.000
Sig. (1-tailed)	ROA	.000	.001	.005	.441	.434	.303	.174
	GDP	.001	.000	.058	.348	.283	.113	.124
	Inflation	.005	.058	.000	.351	.081	.011	.005
	Size	.441	.348	.351	.000	.002	.000	.002
	TLtoTA	.434	.283	.081	.002	.000	.000	.000
	TDtoTA	.303	.113	.011	.000	.000	.000	.000
	CRTA	.174	.124	.005	.002	.000	.000	.000
N	ROA	34	34	34	34	34	34	34
	GDP	34	34	34	34	34	34	34
	Inflation	34	34	34	34	34	34	34
	Size	34	34	34	34	34	34	34
	TLtoTA	34	34	34	34	34	34	34
	TDtoTA	34	34	34	34	34	34	34
	CRTA	34	34	34	34	34	34	34

## Appendix B: Collinearity Diagnostics

Dimension Model	Eigenvalue	Condition Index	Variance Proportions						
			(Constant)	GDP	Inflation	Size	TLtoTA	TDtoTA	CRTA
1	5.939	1.000	.00	.00	.00	.00	.00	.00	.00
2	.981	2.460	.00	.86	.00	.00	.00	.00	.00
3	.069	9.310	.00	.02	.00	.00	.01	.00	.01
4	.007	29.320	.00	.00	.02	.75	.00	.00	.01
5	.003	42.487	.00	.11	.11	.02	.25	.02	.12
6	.001	95.482	.00	.01	.65	.00	.65	.16	.86
7	.000	182.983	.99	.01	.22	.22	.09	.81	.00
1	4.947	1.000	.00	.00		.00	.00	.00	.00
2	.980	2.247	.00	.86		.00	.00	.00	.00
3	.064	8.800	.00	.03		.00	.01	.00	.02
4	.006	27.981	.00	.00		.81	.01	.01	.01
5	.002	48.804	.00	.11		.00	.97	.00	.79
6	.000	152.219	.99	.00		.18	.00	.98	.18
1	3.958	1.000	.00	.00			.00	.00	.00
2	.978	2.012	.00	.86			.00	.00	.00
3	.062	8.018	.00	.02			.01	.00	.02
4	.002	43.593	.00	.11			.99	.00	.78
5	.000	123.685	1.00	.00			.00	1.00	.20
1	2.992	1.000	.00	.00			.00		.00
2	.971	1.755	.00	.86			.00		.00
3	.034	9.339	.88	.02			.01		.03
4	.002	37.919	.12	.11			.99		.97

a. *Dependent Variable: ROA*

### Appendix C: Data of the five greatest banks\*

Period	ROA	Size	TL/TA	TD/TA	CRTA	GDP	Inflation rate
Q4 2005	0.0113	18.1376	0.1973	0.9744	0.0403	(0.01)	107.9
Q1 2006	0.0099	18.1613	0.2069	0.9000	0.0441	(0.01)	110.06667
Q2 2006	0.0154	18.2047	0.2315	0.9160	0.0496	(0.02)	110.2
Q3 2006	0.0147	18.2309	0.2534	0.9166	0.0530	(0.04)	108.8892
Q4 2006	0.0143	18.3373	0.2639	0.8809	0.0524	0.01	110.67
Q1 2007	0.0144	18.3614	0.2776	0.8849	0.0570	0.00	97.8
Q2 2007	0.0165	18.3828	0.3046	0.8676	0.0582	(0.02)	96.96
Q3 2007	0.0170	18.4025	0.3239	0.8968	0.0643	(0.06)	97.45
Q4 2007	0.0170	18.4567	0.3393	0.8957	0.0662	(0.03)	99.08
Q1 2008	0.0157	18.5342	0.3492	0.8868	0.0662	0.02	101.45
Q2 2008	0.0161	18.5711	0.3615	0.8766	0.0721	(0.02)	101.07
Q3 2008	0.0191	18.6189	0.3785	0.8795	0.0701	(0.01)	100.3352
Q4 2008	0.0146	18.5814	0.4160	0.8490	0.0838	(0.03)	101.5765
Q1 2009	0.0162	18.5790	0.4358	0.8423	0.0882	(0.02)	103.3119
Q2 2009	0.0117	18.5925	0.4346	0.9375	0.0846	0.02	103.1774
Q3 2009	0.0114	18.6331	0.4320	0.8546	0.0905	0.03	102.4653
Q4 2009	0.0217	18.6575	0.4418	0.8140	0.0944	(0.04)	104.7058
Q1 2010	0.0177	18.6923	0.4389	0.8454	0.0972	(0.02)	107.7889
Q2 2010	0.0152	18.7134	0.4450	0.8510	0.0980	0.00	106.6588
Q3 2010	0.0160	18.7604	0.4310	0.8604	0.0967	(0.00)	105.9976
Q4 2010	0.0160	18.7860	0.4388	0.8439	0.0987	(0.03)	107.9126
Q1 2011	0.0193	18.8138	0.4388	0.8383	0.1006	0.02	112.1184
Q2 2011	0.0135	18.8528	0.4452	0.8340	0.0938	(0.02)	111.0112
Q3 2011	0.0229	18.9001	0.4458	0.8376	0.0953	0.00	109.3668
Q4 2011	0.0180	18.9360	0.4620	0.8327	0.0997	0.00	110.6428
Q1 2012	0.0202	18.9603	0.4564	0.8302	0.1000	(0.00)	113.3014
Q2 2012	0.0145	18.9806	0.4453	0.8297	0.1031	(0.02)	113.1192
Q3 2012	0.0029	19.0062	0.4360	0.8347	0.1012	0.01	112.3583
Q4 2012	-0.0024	19.0005	0.4392	0.8300	0.1039	0.00	113.3631
Q1 2013	0.0120	19.0078	0.4359	0.8270	0.1069	(0.01)	116.1541
Q2 2013	0.0093	19.0155	0.4310	0.8268	0.1054	0.02	115.6229
Q3 2013	0.0050	19.0405	0.4090	0.8157	0.1065	(0.02)	114.0555
Q4 2013	-0.0041	19.0327	0.4128	0.8146	0.1070	(0.00)	115.0703
Q1 2014	0.0098	19.0445	0.4040	0.8055	0.1054	1.00	118.3820

\*Source: Annual Reports, data from AAB and BOA for the selected banks from 2005-2013