ISSN 2090-3359 (Print)
ISSN 2090-3367 (Online)

Advances in Decision Sciences

Volume 25
Issue 2
June 2021

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Editor-in-Chief
University Chair Professor
Asia University, Taiwan

Published by Asia University, Taiwan

ADS@ASIAUNIVERSITY

The Safety of Banks in Vietnam Using CAMEL*

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Revised: July 2021

* The fourth author wishes to thank the Australian Research Council and the Ministry of Science and Technology (MOST), Taiwan.

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Abstract

A key, important, and popular set of criteria to evaluate the safety, stability, and sustainability of banks is the CAMEL method. The CAMEL system is an abbreviation for indicators that consists of a ranking system for a bank, and includes 5 chief ingredients, namely **C**apital Adequacy, **A**sset Quality, **M**anagement Quality, **E**arnings, and **L**iquidity. Banks need to comply with the CAMEL system in order to facilitate the bank to operate sustainably, safely, and grow larger and stronger. The primary interest in the paper is to analyze the safety, stability, and sustainability of banks in Vietnam. Based on financial statements, data are collected from banks in Vietnam from 2014 to 2017, and the CAMEL method is used to investigate the safety, profitability, liquidity, and risk management of these banks. The data were collected and stored according to banking regulations in Vietnam that have changed over time.

Keywords: CAMEL method, Analyze, Vietnam, Banks.

JEL: F38, G21, G24, G33, O16.

1. Introduction

A commercial bank is a financial organization that accepts deposits, offers capital as loans for the company, and offers basic financial products such as saving accounts and certificates of deposits to individuals and businesses. A commercial bank is the same as a source of capital for the economy, bridges the gap between businesses and financial markets, and is also a tool for economic and financial authorities to control the macroeconomy, and connect trading among countries across the world.

Although commercial banks do not directly create material wealth for the economy, they operate with specific functions and impose vital interactions across national and international economic borders. Given their functions, commercial banks always face many risks in their business. On the other hand, if organizations or businesses participate in the market economy without any risks, it can be said that the event will not be able to create or generate new investment and business opportunities. Thus, proper risk management in business operations is a key factor in the existence, stability, and sustainable development of commercial banks.

CAMEL (with an extension to CAMELS) is a system that ranks and monitors US banking scenarios, and is the standard for most financial organizations around the world to assess the effectiveness and risks of banks and credit institutions. Regarding the CAMEL method, there are several pieces of research that have been conducted and used widely. For instance, Ghazavi and Bayraktar (2018) researched the performance of banks in Turkey from 2005 to 2016 by using the CAMELS approach. Some prominent studies on this topic are given in Sarker (2005), Bodla and Verma (2006), Kaur (2010), Prasad et al. (2011), Rozzani and Rahman (2013), Gupta (2014), Rostami (2015), among others.

It is well known that the CAMEL examination framework is applied to determine bank safety, productivity, and liquidity. As is well known, safety is perceived as the capacity of banks to take care of all expenses and satisfy its commitments. Safety measures are surveyed by evaluating the

degree of capital availability, credit quality (resource accessibility), and board quality. Productivity refers to whether the bank can accomplish a pace of pay from the proprietor's speculation. Liquidity is the capacity to fulfill any need for arranged or uncommon capital.

To the best of our knowledge, the application of this approach in Vietnam has been limited, with few researchers who have applied the CAMEL method to study the safety of banks in Vietnam. Hence, it is quite significant to use this method to assess the safety of banks in Vietnam. In this paper, we investigate the safety of banks in Vietnam for the period of 2014 to 2017 based on the CAMEL approach.

The remainder of the paper is structured as follows. Section 2 reviews the CAMEL method. Relevant data and associated empirical analysis are given in Sections 3 and 4, respectively. Section 5 provides some of the advantages and disadvantages of the CAMEL method. Discussion of the empirical result and a conclusion are given in the last section.

2. Brief Literature Review

The CAMEL system is an abbreviation for indicators that comprise a ranking system for a bank, and consists of 5 ingredients, namely **Capital Adequacy, Asset Quality, Management Quality, Earnings, and Liquidity**. If banks comply with the CAMEL system, it will help the bank operate sustainably, safely, and grow larger and stronger.

The CAMEL approach is described in **Figure 1**.

Capital Adequacy is the first criterion that banks need to ensure to operate sustainably and stably. This is a requirement not only for banks, but also for business, companies, or any other business establishment. If banks meet this criterion, they do not need to calculate the lack of business capital

or borrow business capital from other organizations. From there, it will help the bank to solve all the work quickly and stably.

Asset Quality is the fundamental cause that leads to the bankruptcy of commercial banks. Technically, bankruptcies arise from the wrong management of bank lending policy. If members in the market know that the asset qualities of commercial banks are poor, they will put pressure on the bank's short-term capital. As a result, a liquidity crisis and many other problems are likely to arise, such as depositors withdrawing money without specific targets.

Management Quality is an extremely important criterion, and has far-reaching implications not only for banks, but also for all other organizations. In short, management is the operation of an organization, regardless of whether it is a business, a non-beneficiary organization, or an administrative office. Management consists of the exercises of setting up an association's methodology and organizing the endeavors of its workers (or employees) to achieve its objectives through the use of accessible assets, for instance, such asmonetary, regular, mechanical, and human.

Earnings are the main index to survey the administration and vital exercises of effective or failed administrators. Earnings will impact new capital, which is fundamental to draw in more capital and future improvement support from financial backers. Earnings are also needed to offset the lost loans and provides for irrecoverable debt funds. There are four main incomes of commercial banks, namely interest income, fees, commissions income, trading income, and other incomes.

Liquidity depicts the level to which a resource or security can be immediately purchased or sold in the market without influencing the resource cost. Liquidity is imperative for business banks because of two principal reasons. Bank liquidity is dictated by its capacity to meet all expected costs, such as subsidizing advances or making installments on obligation, utilizing just fluid resources.

In a perfect world, a bank ought to keep a degree of liquidity that likewise permits it to meet any sudden and unexpected costs without exchanging different resources. The greater the pad of fluid resources in comparison with expected liabilities, the greater and more prominent will be bank liquidity.

The CAMEL system was developed by the National Credit Union Administration (NCUA), and was introduced in 1987 not only in the USA, but also in many countries across the world. After the 1997 Asian Economic Crisis, the CAMEL system was recommended by the International Monetary Fund (IMF) and the World Bank group to apply in crisis countries as one of the prominent measures to rebuild the financial sector.

Up to the present time, the CAMEL system is still used in a variety of ways, especially in practical applications. In order to see the application of the CAMEL method, readers may refer to Kwan and Eisenbeis (1997), Said and Saucier (2003), Prasuna (2004), Sarker (2005), Gupta and Kaur (2008), Siva and Natarajan (2011), Chaudhry and Singh (2012), Aspal and Dhawan (2016), Soliman and Adam (2017), and Akter et al. (2018), among others.

We now turn on to discuss real bank data and empirical analysis in Vietnam in the next section.

3. Data

In this section, we analyze the safety of 10 sampled banks that are operating in Vietnam. Details regarding the names and swift codes of 10 banks are provided in **Table 1**.

The data set is gathered from annual financial statements of 10 joint-stock commercial banks from 2014 to 2017. The variables used and the data are taken from their financial statements. In order to investigate the safety of these banks, we use the CAMEL method in this work. Banking

regulations have changed over time, so the data have been stored safely to protect banking interest and the collected information.

The empirical analysis is presented in the next subsection.

4. Empirical Analysis

This section presents the estimation using CAMEL indexes for ten specified banks in the system. As stated above, the CAMEL approach can provide a realistic picture of how banks are performing in relation to the five identified aspects. Data has been collected from the annual financial statements. Different documentary sources have been estimated for comparison purposes to show the overall efficiency.

4.1. Capital Adequacy Ratio (CAR)

The Capital Adequacy Ratio (CAR) is defined as the proportion of a certain bank's capital to risk. The CAR coefficient is usually set to the lowest level to ensure that banks can bear the lowest loss. It is also used to determine the bank's ability to respond to risks include credit and operational risks.

It should be noted that a higher ratio is preferred because it shows a better possibility of potential losses that it can absorb. The smallest level of the CAR of a particular bank is 8%.

The formula of CAR is given as:

$$CAR = \frac{Tier\ I\ Capital + Tier\ II\ Capital}{Risk\ Weight\ Assets} x100\%$$

where:

Tier I capital consists of the most trustworthy and most liquid financial assets, mainly referring to shareholder capital including regular shares, non-cumulative preferred stocks, and retained earnings.

Tier II capital includes: unpaid profit, revalued asset value, general risk provisions and hybrid instruments between debt and capital, and secondary debts.

As shown in **Table 2** and **Figure 2**, the mean CAR of Asia Bank is most elevated, with the estimated value is 12.89%, Vietnam Prosperity is the least, with the evaluated value is 9.3%. As a rule, CAR has been on a downtrend for more than four years. The mean CAR of ten banks has been diminishing from 11.173% to 10.366% in 2017. It may very well be driven by the fast increment of bank's resources substantially more than their value. This number is not a lot higher than the base degree of the State of Bank (SBV) at 9%.

Indeed, even a few banks have remained at a steady degree of CAR, though the amelioration of CAR is important to underwrite the amplitude of the framework. SBV has given another guideline to prepare for application of the BASEL II principles from 2020 as business banks battle. Notwithstanding, the use of 8% raises the caution of a CAR rush in light of an ascent in the extent of their hazardous resources. Therefore, great planning in expanding contract capital is crucial in the current period.

4.2. Asset Quality (AQ)

Asset Quality (AQ) shows the extent of monetary safety and potential hazards in bank resources which, for the most part, involve credits and speculative behaviour. Resource quality issues could

diminish liquidity in the advanced portfolios, and lower the sufficiency of bank capital. It additionally brings down revenue payments, builds regulatory expenses for overseeing and gathering resources, subsequently diminishing profits, and contrarily affecting execution.

In order to break down resource quality, the selected criteria are the Non-performing loans/loans proportion (NPLL). NPLL is the main proportion to measure resource quality, and is computed as follows:

$$Non-performing\ Loan\ Proportion\ = \frac{Non-performing\ Loans}{Total\ Loans\ NPLL}$$

The higher NPLL indicates that the bank's resources are not productively used, so a lower proportion is preferred. As seen in **Table 3** and **Figure 3**, for non-performing credits the vast majority of the banks stay beneath the protected degree of 5%.

The NPLL has declined over time. As seen from the graph, the NPLL of VPB is the most noteworthy, while TPB is the least with 0.95% of all the components considered. In particular, the NPLL of Agribank diminished pointedly after the exertion in rebuilding after 2014. In recent years, the bank effectively reestablished its terrible obligations of more than 10 trillion VND ($446.428 million). Moreover, the figure beneath explains the pattern of chosen banks for more than 4 years.

For most of the banks assessed, the NPLL proportions diminished in the latest four years. As is normal for the term, NPLL decreased from 2.2% in 2014 to 1.5% in 2017. This is a decent indication of banks in dealing with their resources to lessen the adverse consequences of terrible credits (see **Figure 4**), and shows the exertion of banks to determine non-performing credit issues. As indicated by these numbers and some further investigation, the NPLL of SOBCs is regularly higher than of JSCBs.

Since numerous banks did not provide the full quantities of their loans, we were unable to determine the distribution of the loans. Nonetheless, as indicated by some data from SBV and alternative sources, we were able to discover that most advances zeroed in on horticulture, assembling, and development, with credits for exchange, transportation, and media communications. The allotment of credits did not change fundamentally over this period.

4.3. Management Quality

Management is a capability prompting the accomplishment of a bank. It gives the adequacy of the administration, working consumption, client association with the banks, inward control framework, observing, and staff efficiency. In order to dissect the administration quality, we can obtain three fundamental markers that cover the center of the board, namely the benefit per worker, Return on Asset (ROA), and Return on Equity (ROE).

Benefit per employee is a proportion that gives the commitment of each employee in banks, and is determined by the gap of net benefit by the complete number of workers. A higher proportion is preferred. **Table 4** and **Figure 5** show the numerical ratio for the period.

The proportion of TPB indicates the most grounded decline pattern overall as a result of the great expansion in the number of staff, yet there is a positive mark in 2017. The VCB receives the best outcome, and still shows an expanding inclination over the years. STB plays out the most exceedingly awful outcome in this marker, and dropped significantly from 175 million (VND) per worker to 5.2 million (VND) in 2016. It is the result of the huge ascent in working costs, so that prompts a solid lessening in benefits.

Once more, Agribank actually shows the most noticeably drastic number in the proportion by and large. In any case, the image changed in 2017 when most banks addressed an expanding pattern toward the year end. The outcome demonstrates a decent sign in administration, and shows that banks are discovering alternative approaches to improve their benefits from each and every one of their employees.

Return on Assets (ROA) addresses the proficient administration the bank is using its resources to produce profits. ROA is determined by the gap of overall gain to add up to resources, and is shown as a rate. A higher ROA uncovers better misuse and the board of resources for upgrading benefits.

As we can see in **Table 5** and **Figure 6**, the ROA of the ten chosen banks decreases from 0.923% to 0.75% in 2015, and recovers two years after the fact. The normal number shows an expanding pattern from 2015 to 2017, and ideally lays the pattern over the coming years. For Agribank, Lien Viet Postbank LPB, Viettin bank CTG, and Sacombank STB must be more worried about their presence on the grounds that their proportion is substantially below the norm and on a reduced pattern, in contrast with the 4 years. The best result was VPB, with a rate much higher than average in the previous years, and strong increased in recent years.

Return on Equity (ROE) is determined by separating overall gain by all-out investor value. ROE demonstrates how well the investor's assets produce profits.

As observed in **Table 6** and **Figure 7**, the average index of the financial area is really steady in 2014-2016, and indicates a more splendid viewpoint in 2017 for Vietnam business banks when ROE increased from 11.9% in 2016 to 14.2% in 2017. In any case, the normal number is still shorter than the period from 2009 to 2014 at 17%. For the 10 banks, VPB demonstrates the best presentation in using its capital, with 22.45% overall and continues to increase over the next year. STB addresses the most exceedingly negative number when it fell significantly from 12.56% in 2014 to 3.23% in 2015, and then to0.4 % in 2016. It discloses that STB has been very wasteful in using its capital.

Nevertheless, there is a slighter expansion in 2017 when it recovers to 4.4% in 2017. Thus, banks need to pay greater effort to improve their operational efficiency as well as their image for the perspective of their investors. Indeed, even the ROE proportion is in an upswing, yet contrasting with a normal premium of 6-7%, the banks appear not to be certain about their future proficiency.

4.4. Earnings Quality

In order to quantify acquiring quality, we selected Net Interest Margin (NIM) as the main index to evaluate the efficiency of banks. NIM shows how well the bank is at placing its assets to examine its costs for a similar venture. A positive ratio shows that the bank is using the correct method to use sound judgment, and be productive in acquiring benefits on its ventures. Then again, a negative number demonstrates the administrator is losing in speculative outcomes as revenue costs are higher than the associated venture incomes.

As seen in **Table 7** and **Figure 8**, the tendency of NIM keeps a steady line and does not change a lot over the years. The average proportion remains at 3.3% to 3.5% for quite a long time. As a consequence, most banks receive a positive number, but not at all certain. The best has a place with VPB, with 7.78% all things considered, and continues to increase over the 4 years. There is very little extraordinary development among the SOCBs and JSCBs in terms of NIM. Nevertheless, based on Ngo (2015), the NIM assortment spreading between a minimum of 1.27 to a maximum of 8.28, demonstrating that there is a presence of high-hazard lending in the framework. The Vietnam financial banks need a positive change as far as contributions to produce financial benefits.

4.5. Liquidity

In this area, we study the main index is fluid resources for all-out stores. Notwithstanding, because Vietnam's bookkeeping standards have not been characterized with fluid resources, it is accepted that fluid resources would incorporate money, attractive protections, government protections, interbank stores, and transient attractive protections.

One reason that leads to liquidation is a liquidity issue when the bank was not able to meet its commitments. Liquidity is a touchy proportion to get to on the grounds that it relies heavily on numerous different factors. High liquidity is fine, whereas low liquidity will prompt the likely danger in gathering its commitments.

It is seen in **Table 8** and **Figure 9** that, generally, the indicator has a stable tendency in the period from 2014 to 2017. The average proportion is 65% to 72% for the 4 years. This proportion is still lower than a healthy degree of 80%, according to some experts. Besides, the proportion is lower than 100%, demonstrating that there is a more noteworthy reliance on more unstable assets to cover the illiquid resources of banks.

As indicated by Ngo (2015), possession does not show a solid relationship with the Liquid proportion, while bank size has a positive affiliation. Nonetheless, this saves money, with major size leading to the prevalence of "too big to fail". Notwithstanding this reality, the financial framework is as yet delicate, and ought to be cautious as far as liquidity is concerned.

5. CAMEL Method

5.1. Advantages

The CAMEL method is a powerful implement to assess and rank banks in the current economic integration period, as a basis for assessing the level of competition as well as the ability of banks to effectively operate when entering the global environment. Based on the criteria of the model, we can explore the frailty in the financial circumstances of each bank so that we can determine alternative approaches to overcome and improve them according to the subjective will of the executives.

The application of the CAMEL model in the current period contributes to filtering out weak banks, from which the management area does not have a strong impact on the banking system, keeping it safe and healthy, and providing a solid foundation for the development of Vietnam's economy. This is a model that has been applied for a long time in developed countries, so the stability is quite high, and the indicators have been changed flexibly to fit through the economic development periods, leading to a more reliable and accurate model.

5.2. Disadvantages

The biggest drawback of the CAMEL model is reliance on heavy data statistics. The analysis is largely based on quantitative factors, with even the management capacity factor quantified in the analysis. In the current volatile economy, the risks to the banking industry are inevitable and, if the banking industry is based entirely on quantitative analysis, it will not bring the expected results, and may even distort the true assessment over time.

Moreover, using only financial indicators based on the analysis of the financial accounts of the model to assess the financial circumstances of banks may face some problems. Banks may intentionally lead to cover-ups, which will lead to inaccurate evaluations, and will not reflect the true nature of possibilities. Furthermore, if the data set has incomplete values or faults in measurement and statistical noise, this can affect the CAMEL method.

Nevertheless, eliminating defective elements from the model may lead to bias in inferences. Regarding the method to solve issues that have incomplete values, Little (1992), and Pho et al. (2019), among others, have considered the underlying issues and range of solutions.

6. Discussion and Conclusion

Basically, the data set surveyed in this paper are somewhat outdated, however, because these are the financial statements of banks in Vietnam. Normally, after a few years of operation, they provide these figures. Therefore, the data presented in this paper are slightly outdated. However, if readers have access to a new data set, they can rely on this paper to analyze it. Consequently, this paper can have a profound meaning and still contribute to the literature in a meaningful way.

It has been seen that the CAMEL examination framework is applied to evaluate bank safety, benefits, and liquidity. Safety is perceived as the capacity of the bank to take care of all expenses and satisfy its commitments. Safety models are surveyed by evaluating the degree of capital

sufficiency, credit quality (resource accessibility), and board quality. The benefit is whether the bank can accomplish a pace of pay from the proprietor's venture.

Liquidity is the capacity to fulfill any need for arranged or strange capital. It ought to consistently be noticed that the budget summaries cannot give all the data examiners need to evaluate bank safety, productivity, and liquidity. In this way, it is important to consolidate and support a CAMEL examination with subjective bank appraisals to obtain exhaustive and valuable bank investigation results. As an application, the CAMEL method is applied to analyze the safety, profitability, liquidity, and risk management of banks in Vietnam for the period 2014-2017, with an historical assessment of what is likely to occur in the years ahead.

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Appendices

Table 1

Names and Swift Codes of 10 Banks in Vietnam

No.	Swift code	Name
1	**ACB**	Asia Commercial Joint Stock Bank
2	**BIDV**	JSC Bank for Investment and Development of Vietnam
4	**CTG**	Vietnam Joint Stock Commercial Bank for Industry and Trade
4	**LPB**	Joint-stock commercial Lien Viet postal bank
5	**MB**	Military Commercial Joint Stock Bank
6	**STB**	Sai Gon Thuong Tin Commercial Joint Stock Bank
7	**TPB**	Tien Phong Bank
8	**VCB**	JSC Bank for Foreign Trade of Vietnam
9	**VPB**	Vietnam Prosperity Bank
10	**Agribank**	Vietnam Bank for Agriculture and Rural Development

Table 2

CAR of Ten Banks from 2014 to 2017 (%)

Year / Name	2017	2016	2015	2014	Mean
ACB	11.49	13.19	12.8	14.08	**12.89**
BIDV	9.3	9	11.1	11.6	**10.25**
CTG	9.76	10.4	10.6	10.33	**10.2725**
LPB	10.3	11	10.41	11.89	**10.9**
MB	11.2	12.5	12.03	10.07	**11.45**
STB	8.7	9.5	9.6	10.4	**9.55**
TPB	9.2	9.3	12.1	11.7	**10.575**
VCB	9.85	11.13	11.04	11.61	**10.9075**
VPB	11.2	8.8	9	8.2	**9.3**
Agribank	12.66	12.84	9.17	11.85	**11.63**
Mean	**10.366**	**10.766**	**10.785**	**11.173**	

Table 3

NPLL of Ten Banks from 2014 to 2017 (%)

Year / Name	2017	2015	2016	2014	Mean
ACB	0.7	0.9	1.3	2.2	**1.275**
BIDV	2.14	1.99	2.31	1.92	**2.09**
CTG	1.3	1.02	1.6	1.1	**1.255**
LPB	1.04	1.08	0.88	1.1	**1.025**
MB	1.2	1.33	1.62	2.73	**1.72**
STB	2	2.4	1.9	2.4	**2.175**
TPB	1.1	0.7	0.8	1.2	**0.95**
VCB	1.14	1.51	1.84	2.31	**1.7**
VPB	2.91	2.69	2.54	2.81	**2.7375**
Agribank	1.54	1.89	2.01	4.46	**2.475**
Mean	**1.507**	**1.551**	**1.68**	**2.223**	

Table 4

Profit Per Employee of Ten Banks from 2014 to 2017 (Million VND)

Year / Name	2017	2016	2015	2014	Mean
ACB	205.0	134.9	103.5	102.4	**136.4**
BIDV	279.1	275.6	267.3	260.6	**270.6**
CTG	313.6	294.7	271.9	289.5	**292.4**
LPB	185.4	206.4	87.0	132.0	**152.7**
MB	266.6	270.6	321.7	360.7	**304.9**
STB	63.7	5.2	39.3	175.0	**70.8**
TPB	223.2	184.5	475.2	455.7	**334.6**
VCB	561.4	438.7	361.4	325.9	**421.9**
VPB	270.3	226.3	185.3	131.9	**203.5**
Agribank	33.6	35.1	21.8	126.9	**54.3**
Mean	**240.2**	**207.2**	**213.4**	**236.1**	

Table 5

ROA of Ten Banks from 2014 to 2017

Year / Name	2017	2016	2015	2014	Mean
ACB	0.8	0.6	0.5	0.5	**0.6**
BIDV	0.63	0.66	0.84	0.83	**0.74**
CTG	0.73	0.78	0.79	0.92	**0.805**
LPB	0.9	0.85	0.32	0.52	**0.6475**
MB	1.23	1.2	1.18	1.3	**1.2275**
STB	0.29	0.03	0.27	1.26	**0.4625**
TPB	0.84	0.62	0.88	1.28	**0.905**
VCB	1	0.93	0.85	0.87	**0.9125**
VPB	2.54	1.86	1.34	0.88	**1.655**
Agribank	0.36	0.36	0.55	0.87	**0.535**
Mean	**0.932**	**0.789**	**0.752**	**0.923**	

Table 6

ROE of Ten Banks from 2014 to 2017

Year / Name	2017	2016	2015	2014	Mean
ACB	14.13	9.9	8.2	7.6	**9.9575**
BIDV	14.82	14.12	16.66	15.15	**15.1875**
CTG	11.98	11.59	10.25	10.47	**11.0725**
LPB	15.45	13.34	4.67	6.36	**9.955**
MB	12.53	11.47	12.56	15.62	**13.045**
STB	4.4	0.4	3.23	12.56	**5.1475**
TPB	15.59	10.79	12.44	13.5	**13.08**
VCB	18.09	14.67	12.01	10.65	**13.855**
VPB	27.48	25.75	21.42	15.01	**22.415**
Agribank	7.95	7.45	11.46	15.49	**10.5875**
Mean	**14.242**	**11.948**	**11.29**	**12.241**	

Table 7

NIM of Ten Banks from 2014 to 2017

Year / Name	2017	2016	2015	2014	Mean
ACB	3.27	3.17	3.2	3	**3.16**
BIDV	2.89	2.62	2.71	2.97	**2.7975**
CTG	2.77	2.71	2.78	3.07	**2.8325**
LPB	3.58	3.48	3.13	2.88	**3.2675**
MB	4.17	3.56	3.8	3.8	**3.8325**
STB	1.8	1.56	3.3	4.33	**2.7475**
TPB	2.93	2.44	2.31	2.44	**2.53**
VCB	2.49	2.63	2.58	2.34	**2.51**
VPB	8.69	7.67	6.34	4.42	**6.78**
Agribank	3.18	3.09	5.75	4.67	**4.1725**
Mean	**3.577**	**3.293**	**3.59**	**3.392**	

Table 8

Liquidity of Ten Banks from 2014 to 2017

Year / Name	2017	2016	2015	2014	Mean
ACB	82.24	78.92	76.6	75.2	**78.24**
BIDV	77.06	77	75.7	74	**75.94**
CTG	87.29	86.1	85.93	81.76	**85.27**
LPB	66.89	60.68	57.15	45	**57.43**
MB	67.11	67.93	62.79	57.65	**63.87**
STB	65.88	65.21	69.96	75.94	**69.2475**
TPB	54.79	47.01	39.82	42.38	**46**
VCB	56.31	63.37	62.79	61.97	**61.11**
VPB	78.44	71.49	66.85	53.02	**67.45**
Agribank	81.91	79.99	77.81	88.66	**82.0925**
Mean	**71.792**	**69.77**	**67.54**	**65.558**	**68.665**

Figure 1

Five Elements of CAMEL

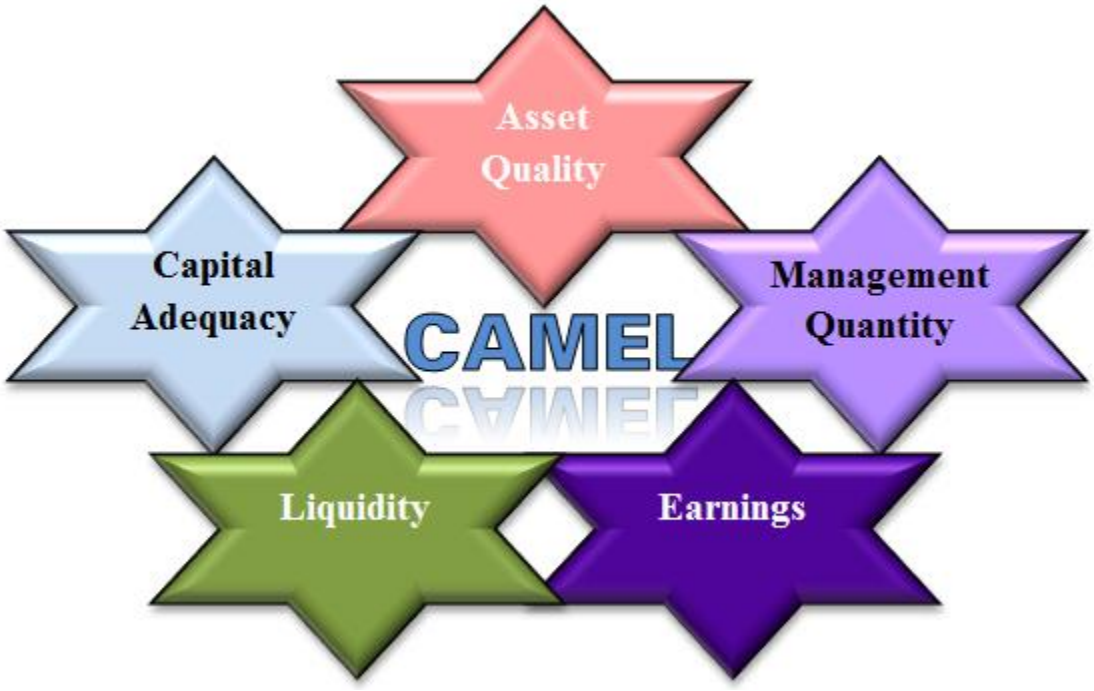

Figure 2

CAR of Ten Banks from 2014 to 2017 (%)

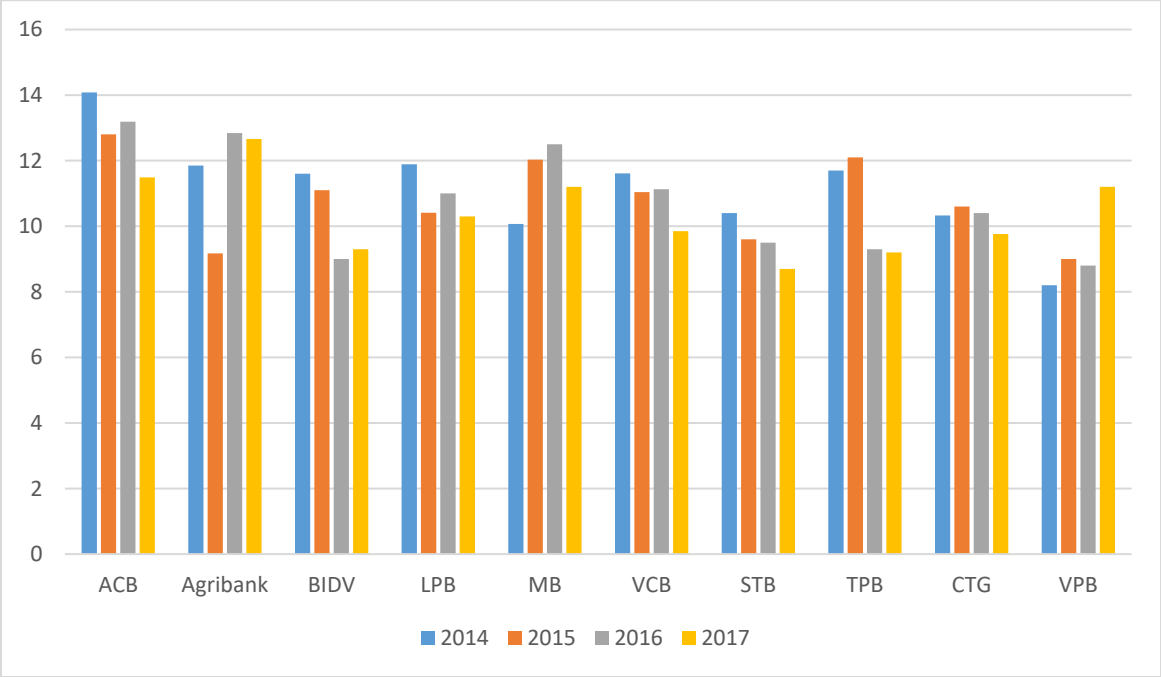

Figure 3

NPLL of Ten Banks from 2014 to 2017

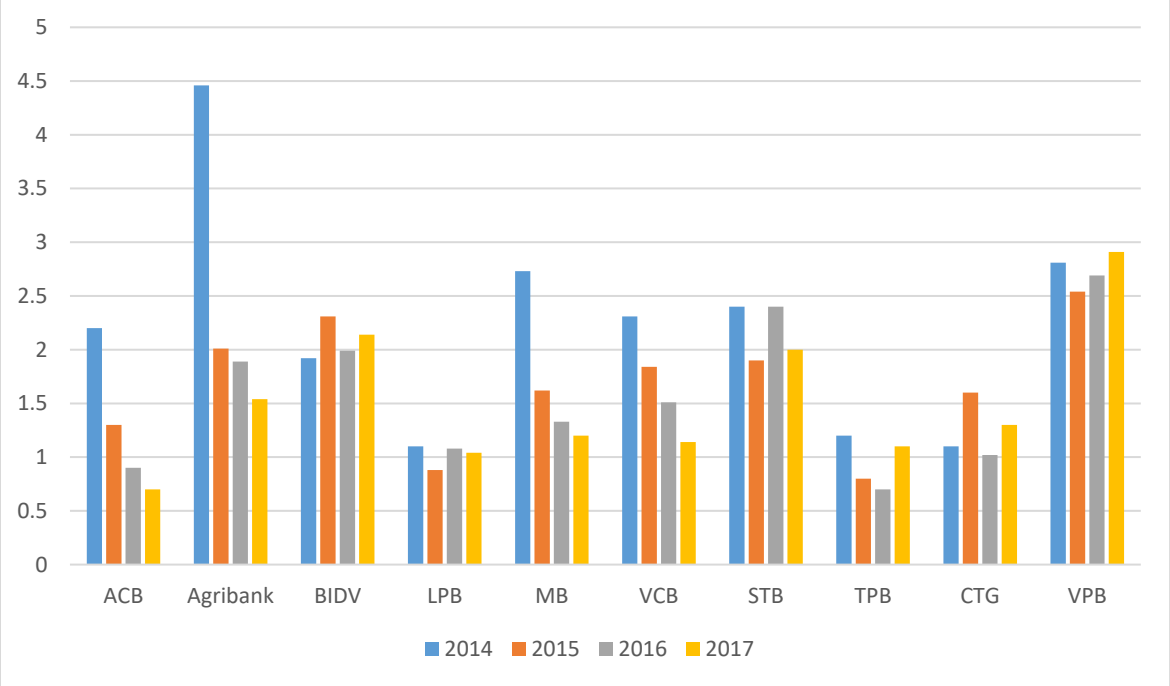

Figure 4

Trend on NPL ratio from 2014 to 2017

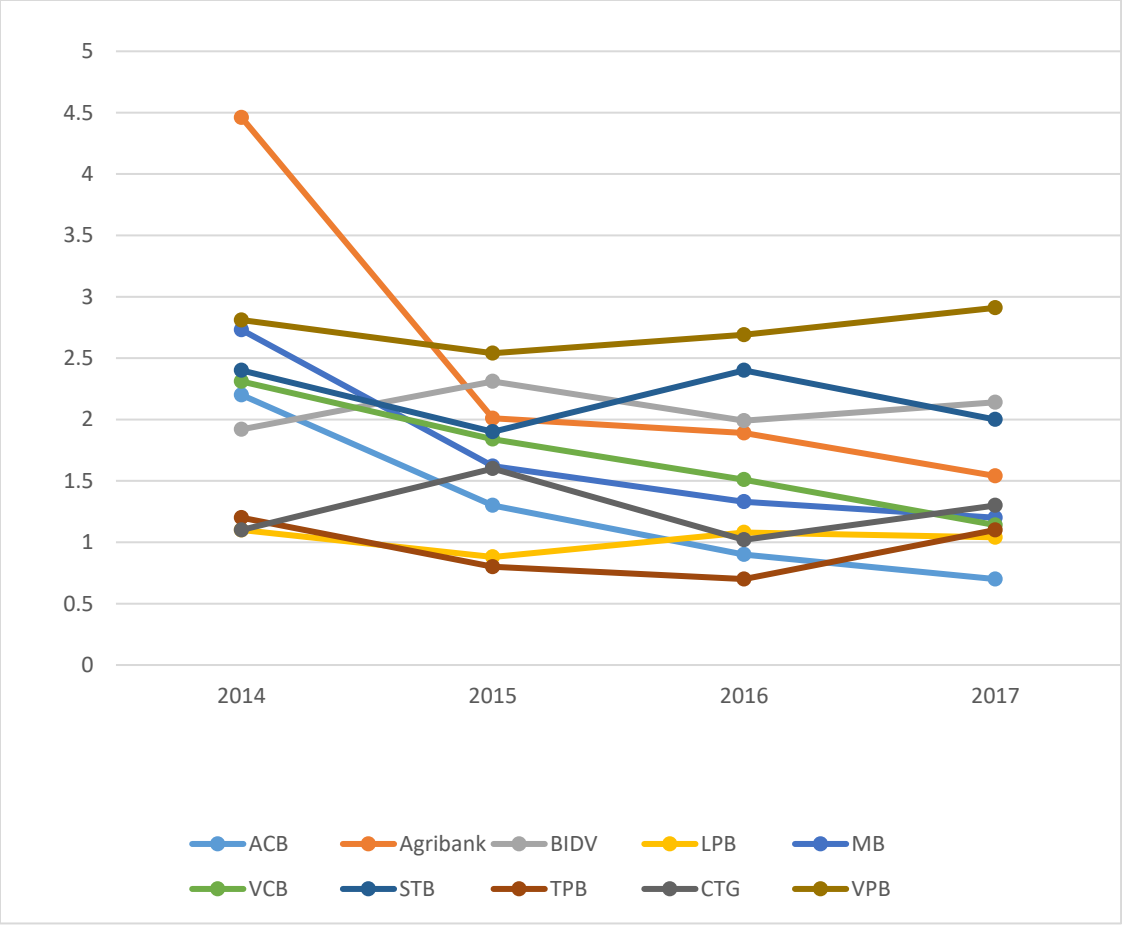

Figure 5

Profit Per Employee of Ten Banks from 2014-2017 (Million VND)

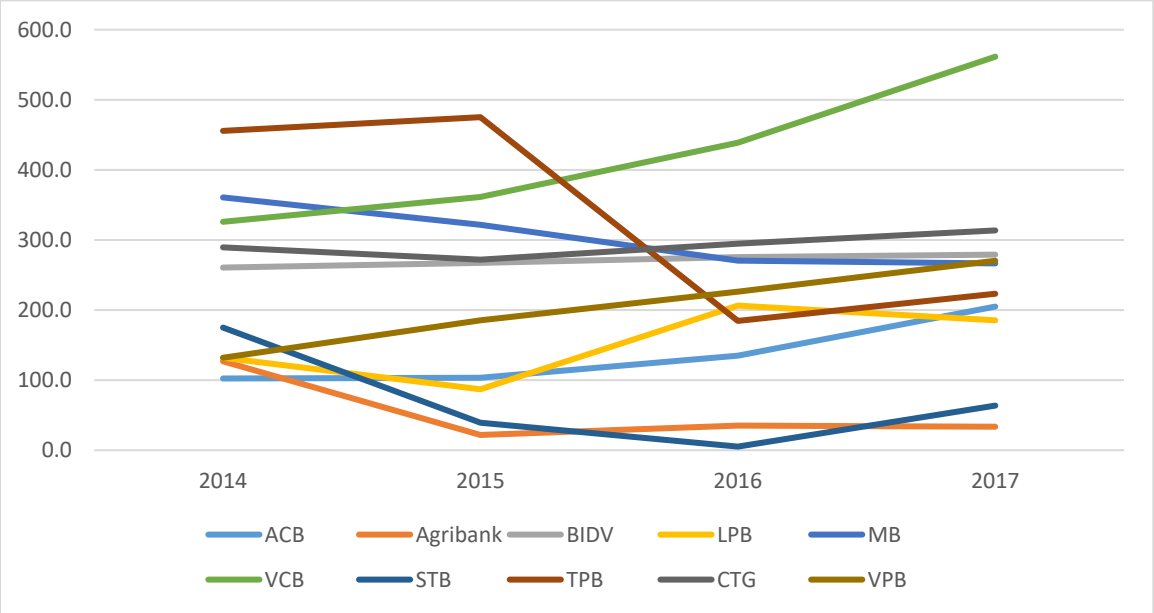

Figure 6

ROA of Ten Banks from 2014 to 2017 (%)

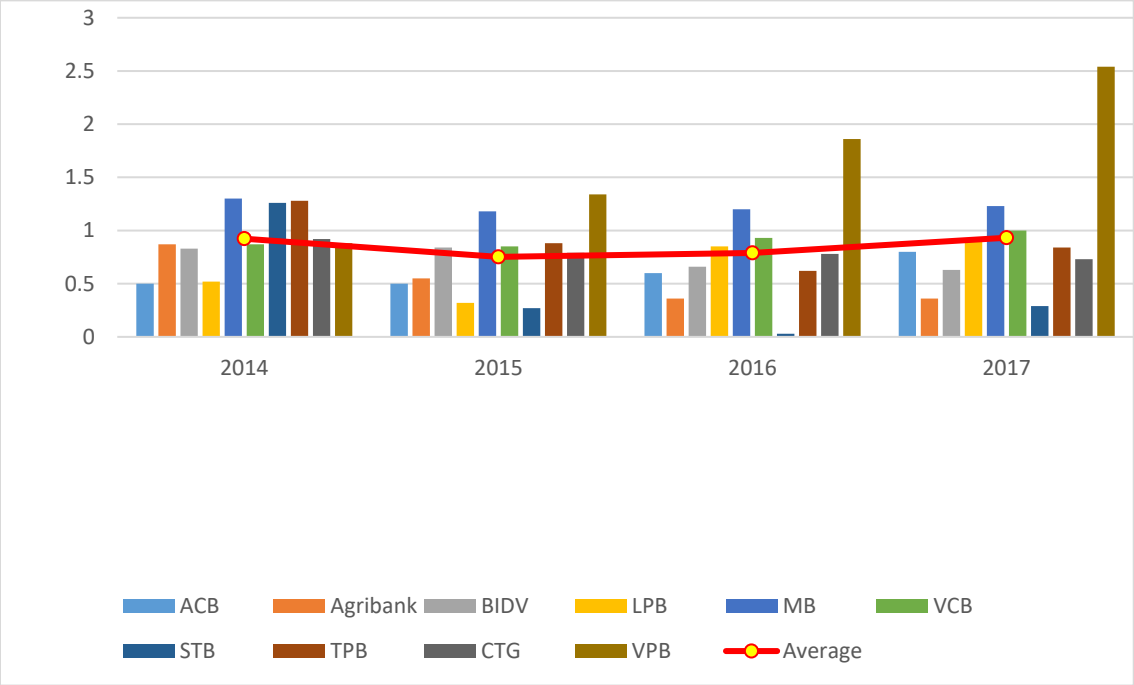

Figure 7

ROE of Ten Banks from 2014 to 2017 (%)

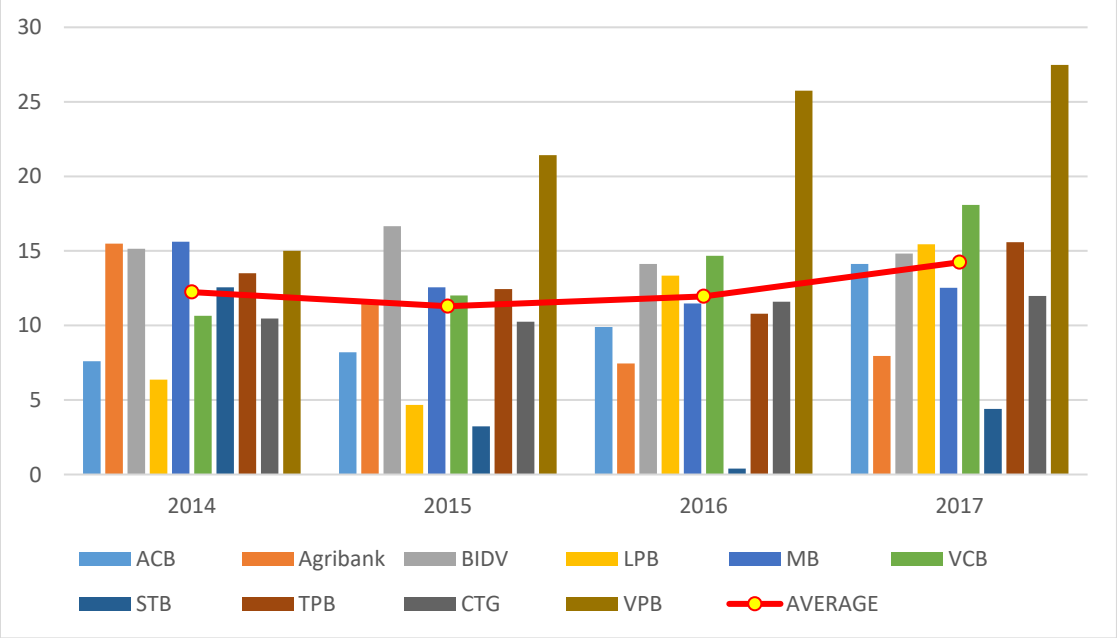

Figure 8

NPL Ratio of Ten Banks from 2014 to 2017

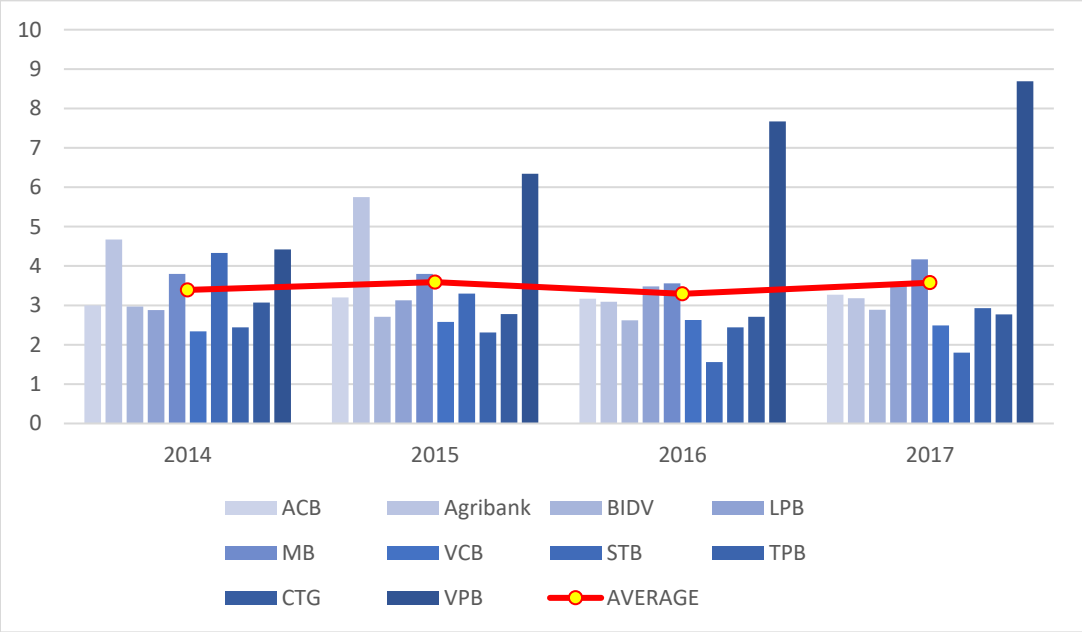

Figure 9

Liquidity of Ten Banks from 2014 to 2017