IRMM
INTERNATIONAL REVIEW OF MANAGEMENT AND MARKETING
EJ EconJournals
ISSN: 2146-4405

International Review of Management and Marketing

ISSN: 2146-4405

available at http: www.econjournals.com

International Review of Management and Marketing, 2017, 7(2), 421-429.

EJ EconJournals

The Impact of CAMEL Indexes on Profit Management in Banks Listed on Tehran Stock Exchange

Seyed Kazem Ebrahimi[1]*, Ali Bahraminasab[2], Fahimeh Sadat Seyedi[3]

[1]Department of Accounting, Faculty of Economics, Management and Administrative Sciences, Semnan University, Semnan, Iran, [2]Department of Accounting, Faculty of Economics, Management and Administrative Sciences, Semnan University, Semnan, Iran, [3]Department of Accounting, Faculty of Economics, Management and Administrative Sciences, Semnan University, Semnan, Iran. *Email: f_cute2000@yahoo.com

ABSTRACT

Net profit is one of the most important factors that affect the investment decisions, and has a significant effect on company's share price and management awards and reselection of them. For this reason, managers have a high incentive to increase the company's share through discretionary accruals. In a recent research conducted in the field of assessment of financial performance of banks, CAMEL indexes were presented as the most important factors affecting banks' profit management, which include five indexes of capital adequacy (CA), asset quality, management quality (MQ), earnings quality (EQ) and liquidity (LQ). Therefore, this research aims to investigate CAMEL indexes effects on banks' profit management. For this purpose, the research statistical population include banks that have been listed in Tehran stock exchange during the years of 2010-2015, which is consisted of 14 banks. For conducting this research, the multivariable regression technique and panel data were adapted. This research has one main hypothesis and 5 side hypotheses. Research hypotheses analysis results indicated that CA, MQ and EQ has a negative and meaningful effect on banks' profit management, and LQ has a positive and meaningful effect on banks' profit management. Moreover, assets quality didn't have a meaningful effect on banks' profit management.

Keywords: Capital Adequacy, Asset Quality, Management Quality, Earnings Quality, Liquidity, Banks' Profit Management
JEL Classifications: C52, C32, Q13

1. INTRODUCTION

Profit management is one of the important aspects of financial reporting and the main topic of discussion among all company's shareholders, because the level of profit is one of the important assessment measures for performance. Thus, any intervention which violates the accuracy of reports can impact how users of financial reports make their decisions. Profit management is one of the results of Agency theory, according to which, the interests of managers and owners contradict. Information asymmetry of the manager and shareholders is the most important consequence of the separation of ownership and management in corporations (Zengin and Ozkan, 2010).

Business banks are financial institutes that attract stagnant funds of people and allocate them to businessmen and other inquirers of financial facilities. In fact, these banks with their operation transport the financial resources from those who for various reasons such as low knowledge and expertise, insufficient capital and fear of investment risk and so on, doesn't want to or can't engage in economic activities to those who need financial resources for investment and in this way, they contribute to the economy current of the country's economic growth (Rasouli, 2015).

For assessing the banks' performance, various measures and indexes are presented. But a solution that has been presented by financial and international institutes such as bank for international settlements or Basel committee after years of research is using the CAMEL indexes. Therefore, since 1988, Basel Committee on banking supervision and the bank for international settlements have insisted on using CAMEL indexes for assessing financial institutes (Bahraminasab, 2013). CAMEL is an assessment model for banks and non-bank credit institutions which investigates and values five fields of managerial and financial performance fields.

These five fields include capital adequacy (CA), asset quality, management quality (MQ), earnings quality (EQ), and liquidity (LQ) quality. Therefore what the CAMEL prioritizing system does is investigating and assessing the key aspects of CA, asset quality, management, earnings and LQ which is based on defined standards (Mollakarimi, 2011).

When banks have a suitable CA, their profit management motivations elevates within them, they try to increase the retained earnings by increasing profit through discretionary accruals. With the increase of company's retained earnings, the bank's base investment increases and consequently, CA improves (Salhuteru and Wattimena, 2015). Assets quality (AQ) shows how much leverages and facilities are used in banks, the lesser this amount shows higher leverages in bank capital structure. In accounting literature, one of the cases that its relationship with profit management were investigated through considering its role in the amount of opportunistic behaviors of managers is the financial leverage concept (Ahmadi, 2015). Improvement of MQ can help the firm to achieve financial health with an accurate perception of the auditory and leadership role, and prevent conflict of interests of corporate governance system actors (managers and owners). Therefore, in most conducted researches in the field of corporate governance, the importance of managers' role in improving the reporting process has been insisted upon, improvement in company management leads to improvement in the auditory task of company and reduces frauds and increases the financial reporting quality (Salhuteru and Wattimena, 2015). When bank's earning quality is lower than expectation, managers try to register a part of future period earnings in the current period earnings through changing accounting methods and using discretionary accruals, and in this way, they improve the EQ ratio (Salhuteru and Wattimena, 2015). Existence of high LQ provides this possibility for manager to manipulate profit in case of lacking a suitable corporate government structure (Ahmadi, 2015).

Considering the effect that CAMEL indexes have on profit management, CAMEL indexes effects on profit management of banks listed in Tehran stock exchange are investigated in this study. Thus, this study's main question is if CAMEL indexes have a meaningful effect on profit management of banks listed in Tehran stock exchange?

2. RESEARCH THEORETICAL PRINCIPLES

2.1. Profit Management

Profit quality theory were first discussed by financial analysts and brokers of stock exchange. As they sensed that the reported profit does not show the profit quality in a way that it can be imagined in mind. They realized that predicting future profits based on reported results is a difficult task (Ahmadi, 2015).

Profit management in accounting literature is considered as one of the concepts discussed in the profit field of accounting. Such concepts in accounting were formed nearly since the beginning of the 20th century with various researches conducted by accounting scholars. Each of these researches focused on particular aspects with different phrases such as profit manipulation, profit leveling, and finally profit management. In the accounting literature, various definitions are presented of profit management which some of them are referred to in next parts.

Schipper (1989) expresses profit management as a purposeful intervention in exterior financial reporting process for achieving personal interests.

Scott (1997) defines profit management as a kind of artificial manipulation of profit by managers for achieving the expected profit level for some particular decisions. In managers' point of view, the main incentive for profit management is to manage the investors' perception of the business unit.

Jones and Sharma (2001) believe that profit management is a kind of deliberate action with a natural purpose of showing the company's profit level in a suitable and intended position. They believe that profit management happens when managers manipulate financial reporting through using judgment in financial reporting and transactions structure for misleading some of the interested individuals about the company's economic performance or affecting the conventional results that depend on the reported accounting numbers.

2.2. CAMEL Indexes

After the important economic changes and events during the last three decades of the 20th century, fast technology changes and the importance of banking industry in countries' economic growth, the bank for international settlements established a committee named Basel committee for investigation of banking matters in 1974. This committee presented the first edition of minimum CA concept to the banking world in 1988 with the name of Basel instruction and structure. In Basel 1, concepts regarding credit risk and after corrigendum in 1996, the concept of market risk was discussed. In 2004, the Basel committee presented the first edition of Basel 2 to the banking world. Basel committee is one of the main four banking committees for international settlements which was formed in 1974 by a group including 10 countries of Belgium, Canada, France, Germany, Italy, Japan, Netherland, Sweden, England and USA. Currently, this committee has 13 members (three countries of Swiss, Luxembourg and Spain joined in next years). The original name of this committee is the committee of audit on banks management, however, this committee is known as the Basel Committee. This committee has provided a set of indexes for auditing banking operations which are known as CAMEL indexes (Padganeh, 2007). These indexes elements are:

Capital adequacy (C), Assets' quality (A), Management accuracy (M), Earnings and profitability (E), and Liquidity (L). The five fields of the CAMEL index can be briefly defined as bellow.

2.2.1. Capital adequacy (C)

Adequate and suitable capital is one of the necessary conditions for keeping the banking system healthy and each bank or credit institutes should always create a suitable ratio between capital and existing risks in their assets to guarantee their actions persistence and durability (Javaheri, 2014). The ratio of CA is one of the ratios of assessing the performance health and financial stability of banks

and financial institutes. Banks should have the adequate capital for covering the risk of its activities and should be careful that the damages do not affect others. Therefore, they should have the minimum suitable capital for covering their operational risks. CA ratio is one of the indexes measuring banks' performance which is determined by the international regulation committee of bank for international settlements for evaluating the risk management of the banks of the countries that are members of the Organization for Economic Co-operation and Development (CA Regulations, 2003).

2.2.2. Assets' quality (A)

Assets' quality in financial institutes is related to their financial performance. The value of a bank's facilities depends on the value of its collaterals' LQ, while investment value depends on market value. Banks should use a stable agent in their portfolio to preserve the quality of their assets, and they should utilize suitable resources and the timetabled plan to compensate the reduction of their value (Islami et al., 2011).

Since banks themselves should make decisions about allocating cash invested in them, this decision form the level of credits risk and default risk and their exceptions. Therefore, with a measure such as investigation of AQ of banks that include loans and their paper moneys, this aspect of the purpose of evaluating banks can be achieved. Deferred debts and past dues in financial statements, stored amount for covering probable losses, and banks profitability are some of the statistics that can be extracted from bank's balance sheet (Tabatabai, 2011).

2.2.3. Management accuracy (M)

Considering the determining role of management in organizations and firms success, financial institutes managers' vision, professionality, accuracy and adequacy are particularly significant and in indexes prioritizing, they are often weighted more than other indexes (Javaheri, 2014). Ways of evaluating a bank is related to its management. For evaluating the quality of banks management, some measures for administrative skill, capability and following the current banking and financial regulations and rules, and overcoming the commerce environment changes and turning threats to opportunities can be named (Islami et al., 2011).

2.2.4. Earnings quality (E)

Quality and the process of gaining earnings in a financial institute highly depends on how capitals and debts are managed within in. Gaining earnings in a financial institute should be continuous and profitable. In a way that it supports the assets growth and increase the storing capability of the organization, so that it leads to increasing the investors earnings value. A good earnings performance leads to increase in the depositors, investors, lenders and public section confidence in the bank (Bahraminasab, 2013).

2.2.5. Liquidity (L)

LQ is a banks capability in achieving cash for meeting current or necessary needs. Banks should have an adequate level of LQ for being able to respond to depositors and facilities takers needs, so that it can attract the public's trust in this way. For this purpose, financial institutes need an efficient asset and debt management system, so that they can minimize the inapplicability of due dates of assets and debts and optimize their return (Bahraminasab, 2013). Controlling LQ is one of the important responsibilities of bank management. Using short term funds in long term investments faces the bank with this risk that investment account holders might claim their funds and this might force the bank to sell its assets (Tabatabai, 2011).

2.3. Effect of CAMEL Indexes on Profit Management

When banks do not have an adequate CA ratio, incentives for profit management increases in them. They try to increase the stored profit of the company by increasing profit through discretionary accruals, then the base capital of the bank is increased and consequently, the ratio of banks CA improves. Thus, when bank managers see a reduction in the ratio of bank's CA, they try to improve it through discretionary accruals and profit management before closure (Salhuteru and Wattimena, 2015).

AQ shows how much leverages and facilities are used in banks, lower amounts of this ratio indicate the existence of a higher leverage in the bank's asset structure. Financial leverage indicate that how much the company relies on financial provision through loaning instead of increasing capital. In accounting literature, one of the cases that its relationship with profit management were investigated with regard to its role in managers' opportunistic behaviors is financial leverage. Results of other conducted researches indicate that high financial leverage degree potentially increases the amount of profit management, while increasing the financial leverage alongside with lowering the opportunistic behaviors of managers lead to profit management reduction. It can be said that those companies facing increasing debt and financial leverage can be engaged in real profit management. Increasing the financial leverage can be an incentive for moving accrual profit management to the real profit management (Ahmadi, 2015).

Management board is considered as one of the important corporate governance mechanisms and plays a significant role in improving the quality of financial reporting and increasing the level of responsiveness. Improving the quality of management with an accurate understanding of the auditory and leading roles can lead to increasing the financial health of the firm and prevent interest conflict between the corporate governance system actors. On this basis, in most researches conducted in the corporate governance field, the managers' role in improving the reporting process were insisted upon and the position of management board of the company as a leading firm which plays the role of monitoring and auditing the executive managers performance becomes more important than anytime. In the perspective of the Agency theory, it can be assumed that improving company's management causes the improvement in task of corporate audit and leads to reduction of frauds and increasing the quality of financial reporting (Salhuteru and Wattimena, 2015).

The quality of bank earnings which is measured by dividing the earnings resulted of loans interests to the average loan amount is another assessment measures for banks performance. When the measured ratio is less than expected, managers try to register a part of future earnings in the current earnings statement through

using accounting techniques and adapting discretionary accruals, and through this, they improve the quality of earnings (Salhuteru and Wattimena, 2015).

Existence of high LQ provides this possibility that in case of lacking a suitable corporate governance structure, the manager can manipulate the profit. Profit manipulation in high LQ companies is higher than others. Researches prove this claim that companies that have higher free cash flows face more agency cost problems. Particularly, in companies where there is low investing opportunities, growth is seen less. Considering the mentioned cases, it is expected that bank mangers that have a high level of LQ to use excessive cash funds in inefficient investments to preserve their own interests. These managers tend to conduct profit management in order to hide the effects of such activities (Ahmadi, 2015).

2.4. Research Literature

In a research with the topic of "Effects of free cash flows and institutional investors on profit management," Mehrani and Bagheri (2009) investigated this subject by using the information of 90 sample companies through the years of 1999-2005. Research results showed that there is a direct meaningful relationship between profit management and high free cash flows in low growth rate companies, while no meaningful relationships were found between profit management and institutional investors in high free cash flows in low growth rate companies.

In the research of Etemadi and Shafakhabiri (2011) with the topic of "Effect of free cash flows on profit management and the role of auditory committee" they investigated this subject through using the data of 87 companies of the research sample during the years of 2003-2009 through adapting the Pearson test, student's t distribution and multiple regression. The results of this study indicate that there is a direct meaningful relationship between profit management and free cash flows. In other words, companies' free cash flows can be considered as a stimulus for profit management. It was also found that companies that have an auditory committee have a better profit management compared to other companies, and moreover, they investigated the relationship between auditory committee and free cash flows and control variables, but no meaningful relationship were found between auditory committee and free cash flows with profit management, however, there is a direct meaningful relationship between free cash flows, company size, and discretionary accruals.

Nouri et al. (2013) conducted a research with the topic of "Profit management, Share's risk and earnings fluctuations in banks listed in Tehran stock exchange" and used the information of 12 banks during the years of 2009-2012. Hypotheses test results indicated that if annual data are the basis of variables generation, only the relationship between special risk and profit management is meaningful, but when variables are generated from inter-period data, all three variables of special, operational and systematic risks have a relationship with profit management.

Azadi et al. (2015) investigated the effects of privatization on the reported profit quality of private banks before and after privatization. They investigated all of the aspects of profit quality (including discretionary accruals quality, profit reliability and profit predicting capability) before and after privatization in the form of research hypotheses, and they used the information of Mellat, Tejarat, and Saderat Banks. Study results indicate that the quality of discretionary accruals and profit reliability didn't change before and after privatization, but the profit predicting capability were increased.

Muhammadjani and Sadeghi (2015) in their research with the topic of "Effect of excessive free cash flows on profit management and the role of auditory committee" investigated this subject by using the data of 87 companies of the study sample during the years 2005-2011. Research results indicate that there is a direct meaningful relationship between profit management and excessive free cash flows. In other words, companies' free cash flows can be considered as a stimulus for profit management. Furthermore, results showed that companies that have an auditory committee have a better profit management compared to other companies, and also no meaningful relationships were found between auditory committee and excessive free cash flows with profit management. However, there is a direct meaningful relationship between excessive free cash flows, company size and all of the discretionary accruals.

Khanifar et al. (2016) investigated and compared the financial performance of governmental and private business banks according to the CAMEL model during the years 2006-2009. The study statistical sample included 8 business banks (4 governmental banks and 4 private) that were selected through the judgmental sampling technique. Research results indicated that the performance of private banks in the aspects of LQ and earnings were better than governmental banks, and the performance of governmental and private banks were not meaningfully distinct.

Zahara and Veronica (2009) investigated this subject that "can profit management be measured in Indonesian Islamic banks through discretionary accruals?" and they realized that profit management exists in Indonesian Islamic banks and the discretionary accruals model is the best model of identifying profit management, because discretionary accruals are used for reducing or increasing the reported earnings through selecting accounting techniques by management.

Rina and Takiah (2009) investigated the relationship between excessive free cash flows and profit management in a study with the subject of "Excessive free cash flows, profit management and auditory committee." In this study, they assumed that the managers of high free cash flow companies show a good performance in profit management. Results of this study shows that the auditory committee contributes in monitoring the profit management process independent from the high free cash flows companies.

In an investigation with the topic of "Effect of excessive free cash flows and audit quality on profit management," Rosmin et al. (2014) investigated the variables of excessive free cash flows,

audit quality and profit management and found evidences from three developed country during the years 2005-2010, and they extracted their information from the stock exchange of the three countries of Indonesia, Malaysia, and Singapore. Research results showed that audit quality has a negative relationship with profit management, excessive free cash has a positive relationship with profit management. Moreover results showed that audit quality didn't meaningfully affect the relationship between excessive free cash flows and profit management.

Salhuteru and Wattimena (2015) in their research with the topic of "Investigation and comparison of governmental and private banks performance in profit management according to CAMELS model" aimed to investigate the effect of CAMELS model on profit management methods of the Governmental Bank Negara Indonesia. They used the secondary data of this governmental bank's monthly report which was published by Bank Indonesia in the years 2012 and 2013. Research results show that in governmental banks, the net profit margin has a positive and meaningful effect on profit management, while the ratio of CA and market risk have a negative and meaningful effect on banks' profit management. In private banks, the net profit margin and asset yield have a positive and meaningful effect on profit management and the ratio of CA and the ratio of loan to deposit have a negative effect on profit management.

3. METHODOLOGY AND STATISTICAL POPULATION

In terms of purpose, this is an applied study, and in terms of methodology, this is a descriptive research based on multivariable linear regression analysis. Required data were collected from Tadbir-Prdaz compact disc and www.codal.ir website. Analysis were conducted through using the Eviews software. The study's statistical population included the banks listed in Tehran stock exchange during the years 2010-2015. Considering that the number of banks listed in this stock exchange is limited, there were no sampling required and the whole population were studied. Therefore, 14 banks were studied in the mentioned time period and considering this 6 years period, a total of 84 bank-year were investigated.

4. HYPOTHESES AND RESEARCH MODEL

Considering the theoretical principles and the literature of the research, the research hypotheses are provided as bellow.

4.1. Research Main Hypothesis

CAMEL indexes have a meaningful effect on bank's profit management.

Side hypotheses:

1. CA has a meaningful effect on bank's profit management
2. AQ has a meaningful effect on bank's profit management
3. MQ has a meaningful effect on bank's profit management
4. EQ has a meaningful effect on bank's profit management
5. LQ has a meaningful effect on bank's profit management.

The regression equation of the research hypothesis were provided by modeling from Salhuteru and Wattimena's (2015) research, which is as equation 1:

$$DAC_{i,t} = \beta_0+\beta_1 CA_{i,t}+\beta_2 AQ_{i,t}+\beta_3 MQ_{i,t}+\beta_4 EQ_{i,t}+\beta_5 LQ_{i,t}+\beta_6 INS_{i,t}+\beta_7 SIZE_{i,t}+\beta_8 BSIZE_{i,t}+e_{i,t} \quad (1)$$

Where DAC is profit management, CA is capital adequacy, AQ is assets quality, MQ is management quality, EQ is earnings and profitability quality, LQ is LQ, Institutional investors share (INS) is institutional investors' share, SIZE is the bank's size, and BSIZE is the management board size and $e_{i,t}$ is the element of error.

5. RESEARCH'S VARIABLES MEASUREMENT METHOD

5.1. Research's Independent Variables

The independent variables of this research include CAMEL indexes, which the measurement method of these indexes as bellow:

1. CA: CA is measured through equation 2:

$$\text{Capital adequacy} = \frac{\text{Complementary capital (side)} + \text{Initial capital (main)}}{\text{Assets adjusted according to the risk}} \quad (2)$$

The main capital of the bank include paid capital, legal savings, other savings (except for the saving of re-evaluation of fixed assets and bank's shares) is used for retained earnings (losses) and shares, and the complementary capital include doubtful claims reserves, reserves for re-evaluation of fixed assets, and reserves caused by re-evaluation of shares.

Another component of CA ratio is the assets that are in the denominator part. Since the assets of every bank has various risk coefficients, assets components are classified by risk degrees of 0, 10, 20, 50 and 100. CA were extracted from management board reports and in cases where some banks didn't publish CA in their management board report, it was measured through the formula above. It needs to be mentioned that most often, banks have measured their CA ratio and have enclosed it in management board activity reports.

2. AQ: AQ is measured through equation 3:

$$\text{Assets quality} = \frac{\text{Banks assets}}{\text{Shareholders earnings}} \quad (3)$$

3. MQ: MQ is measured through equation 4:

$$\text{Management quality} = \frac{\text{Total costs}}{\text{Total earnings}} \quad (4)$$

4. EQ: EQ is measured through equation 5:

$$\text{Earnings quality} = \frac{\text{Earnings gained by loans interest}}{\text{Loans average amount}} \quad (5)$$

5. LQ: LQ is measured through equation 6:

$$\text{Liquidity} = \frac{\text{Cash} + \text{Short term investment} + \text{Claims}}{\text{Short term debts}} \quad (6)$$

5.2. Dependent Variable

In this study, banks performance is the dependent variable and is measured according to return on equity which as equation 7:

$$\text{Return on equity} = \frac{\text{Net profit}}{\text{Shareholdres returns}} \quad (7)$$

5.3. Control Variable

1. INS: Total shares are for institutional investors. Institutional investors are the total shares of a company which belongs to banks, insurance institutions, social security organization, pension funds, governmental firms, corporations and holdings.
2. Bank's size (SIZE): It is measured through banks total assets logarithm.
3. Board's size (BSIZE): It is measured through natural logarithm of all board's members.

6. RESEARCH FINDINGS

6.1. Descriptive Statistics and Variables Correlation

For gaining more information about the statistical sample and study variables, the descriptive statistics brief status of research variables are measured. Table 1 shows a generic view of variables' descriptive statistics.

In a regression model, if variables are of high correlation, it might lead to damage to results. What is meant by the correlation above, is a severe correlation, i.e. higher than 0.50. As you can see in Table 2, there are no correlations higher than 0.50.

6.2. Data Type Determination Test

For data test, we should identify if data is in panel form or cross sectional. For this purpose, the F-Limer test was used. If the probability level is lower than 0.05, data are panel, otherwise they are cross-sectional. As you can see in the table, the F-Limer test probability level is lower than 0.05 and data are panel. Considering that the data of the first hypothesis are cross-sectional, therefore, the Hausman test cannot be utilized (Table 3).

6.3. Research Hypotheses Test

Results concerning the regression model analysis of the research hypothesis is as Table 4.

For investigating the total meaningfulness, the F statistic is used. Considering the probability of the F statistic measured in Table 4 (models probability 0.0000) it is identified that the model is meaningful and at least one of the regression model coefficient is not zero. The Durbin - Watson amount measured is in the range of 1.5-2.5, therefore, this amount indicates that no type 1 self-correlation exists between remainders.

The amount of regression model's balanced determination coefficient (adjusted-R^2) in the measured results equals 0.421 which this amount indicates that approximately 42% of the behavior of the dependent variable is explained by independent and control variables, which this shows a relative strong relationship between independent and control variables with independent variable.

Considering that the level of significance of the institutional investor (INS) and Bank's size (SIZE) variables are 0.0212 and 0.0001, respectively. These amounts are below 0.05, therefore there is a meaningful relationship between institutional investor and bank's size control variables with profit management dependent variable (DAC), and considering that the institutional investor control variable coefficient is positive and equals 0.054 and the bank's size control variable coefficient is negative and equals −0.014, therefore there is a positive and meaningful relationship between institutional investor and profit management, and with the increase of institutional investor, the use of discretionary accruals is also increased. Moreover, there is negative and meaningful relationship between bank's size and profit management, and with the increase of bank's size, the use of discretionary accruals is reduced. The level of significance of Board's size (BSIZE) control variable is higher than 0.05, thus, boards size doesn't have a meaningful effect on banks' profit management.

6.4. First Side Hypothesis Test Results

6.4.1. First side hypothesis

CA has a meaningful effect on bank's profit management.

Considering that the level of significance of the independent variable of CA which relates to the research's first side hypothesis equals 0.0126 and is lower than 0.05, therefore, with the confidence level of 95%, model's results indicate that there is a meaningful relationship between CA independent variable with Profit management control variable (DAC). In general, this can be said for the first side hypothesis of the research that this hypothesis is approved and CA has a meaningful effect on bank's profit management. Considering that the CA independent variable

Table 1: Research variables descriptive statistics

Variable's name	Symbol	Average	Mean	Maximum	Minimum	Standard deviation	Skewness
Profit management	DAC	−0.003	−0.002	0.193	−0.174	0.069	0.076
Capital adequacy	CA	10.328	9.125	24.71	2.122	2.95	0.891
Assets quality	AQ	14.573	14.007	27.83	5.381	3.241	0.409
Management quality	MQ	0.12	0.092	0.319	0.04	0.066	1.175
Earnings quality	EQ	0.578	0.43	2.108	0.145	0.428	1.87
Liquidity	LQ	1.155	1.095	1.957	0.476	0.222	1.82
Institutional ownership	INS	0.483	0.42	0.96	0.07	0.289	0.088
Bank's size	SIZE	18.938	19.062	21.296	16.146	1.315	0.222-
Board's size	BSIZE	5.25	5	7	4	0.942	0.613

coefficient is negative and equals −0.002, thus the relationship between the independent and dependent variables is a negative relationship. It can be concluded that when banks' CA increases, profit management and usage of discretionary accruals reduce. In other words, with the increase of banks' CA ratio, profit management reduces and financial reporting quality improves.

6.5. Second Side Hypothesis Test Results

6.5.1. Second side hypothesis

AQ has a meaningful effect on bank's profit management.

Considering that the AQ independent variable level of significance which relates to the research's second side hypothesis equals 0.7779 and is higher than 0.05, therefore, with a confidence level of 95%, model's results show that there is no meaningful relationships between the AQ independent variable with profit management (DAC) dependent variable. In general, this can be said about the second side hypothesis of the research that this hypothesis is not approved and AQ does not have a meaningful effect on banks' profit management.

6.6. Third Side Hypothesis Test Results

6.6.1. Third side hypothesis

MQ has a meaningful effect on bank's profit management.

Considering that the MQ independent variable level of significance which relates to the research's third side hypothesis equals 0.0482 and is lower than 0.05, therefore, with a confidence level of 95%, model's results show that there is a meaningful relationships between the MQ independent variable with profit management (DAC) dependent variable. In general, this can be said about the third side hypothesis of the research that this hypothesis is approved and MQ has a meaningful effect on bank's profit management. Considering that the MQ independent variable coefficient is negative and equals −0.149, thus the relationship between the independent and the dependent variable is negative, and this can be concluded that when banks' MQ increases, profit management and discretionary accruals reduce. In other words, with improving bank's management and controlling the costs by banks' managers, profit management reduces and financial reporting quality increases.

Table 2: Correlation coefficient test results

	CA	AQ	MQ	EQ	LQ	INS	SIZE	BSIZE
CA	1							
AQ	−0.45	1						
MQ	−0.19	−0.12	1					
EQ	−0.03	0.03	−0.29	1				
LQ	0.12	−0.17	−0.16	−0.22	1			
INS	−0.10	0.05	0.47	−0.31	−0.18	1		
SIZE	−0.20	0.32	0.2	−0.17	−0.08	0.23	1	
BSIZE	0.48	−0.38	−0.41	0.16	0.17	−0.40	0.03	

CA: Capital adequacy, AQ: Assets quality, MQ: Management quality, EQ: Earnings quality, LQ: Liquidity

Table 3: F-Limer test results

Hypothesis	Statistics	P	Result
Research hypothesis	1.525	0.13339	Pool (cross-sectional)

6.7. Fourth Side Hypothesis Test Results

6.7.1. Fourth side hypothesis

EQ has a meaningful effect on bank's profit management.

Considering that the EQ independent variable level of significance which relates to the research's fourth side hypothesis equals 0.0004 and is lower than 0.05, therefore, with a confidence level of 95%, model's results show that there is a meaningful relationships between the EQ independent variable with profit management (DAC) dependent variable. In general, this can be said about the fourth side hypothesis of the research that this hypothesis is approved and EQ has a meaningful effect on bank's profit management. Considering that the EQ independent variable coefficient is negative and equals −0.051, thus the relationship between the independent and the dependent variable is negative, and this can be concluded that when banks' EQ increases, profit management and use of discretionary accruals reduce. In other words, with elevating bank's earnings earned from loans interests ratio to average loans amount, profit management reduces and financial reporting quality increases.

6.8. Fifth Side Hypothesis Test Results

6.8.1. Fifth side hypothesis

LQ has a meaningful effect on bank's profit management.

Considering that the LQ independent variable level of significance which relates to the research's fifth side hypothesis equals 0.0360 and is lower than 0.05, therefore, with a confidence level of 95%,

Table 4: Regression model probability test results

$$DAC_{i,t} = \beta_0+\beta_1 CA_{i,t}+\beta_2 AQ_{i,t}+\beta_3 MQ_{i,t}+\beta_4 EQ_{i,t}+\beta_5 LQ_{i,t}+\beta_6 INS_{i,t}+\beta_7 SIZE_{i,t}+\beta_8 BSIZE_{i,t}+e_{i,t}$$

Variables	Model's coefficients	T statistic	Meaningfulness (P)
Model's constant amount (α_0)	0.263	3.532	0.0007
CA - Independent variable of the first side hypothesis	−0.002	−2.577	0.0126
AQ - Independent variable of the second side hypothesis	−0.001	−0.283	0.7779
MQ - Independent variable of the third side hypothesis	−0.149	−2.008	0.0482
EQ - Independent variable of the fourth side hypothesis	−0.051	−3.709	0.00004
LQ - Independent variable of the fifth side hypothesis	0.044	2.134	0.036
Institutional investors (INS) - Control variable	0.054	2.353	0.0212
Bank's size (SIZE) - Control variable	−0.014	−4.052	0.0001
Board's size (BSIZE) - Control variable	−0.005	−0.769	0.444
Model's determination coefficient (R^2)	0.477	Model's meaningfulness	0
Model's balanced determination coefficient (adjusted-R^2)	0.421	Durbin-Watson	2.265
Models fitness suitability (F statistic)	8.57	Observes number	84

CA: Capital adequacy, AQ: Assets quality, MQ: Management quality, EQ: Earnings quality, LQ: Liquidity

model's results show that there is a meaningful relationships between the LQ independent variable with profit management (DAC) dependent variable. In other words, the null hypothesis is rejected and the alternative hypothesis is approved. In general, this can be said about the fifth side hypothesis of the research that this hypothesis is approved and LQ has a meaningful effect on bank's profit management. Considering that the LQ independent variable coefficient is positive and equals 0.044, thus the relationship between the independent and the dependent variable is positive, and this can be concluded that when banks' LQ increases, profit management and discretionary accruals increase as well. In other words, with increasing the level of LQ in banks, profit management increases and financial reporting quality reduces.

7. CONCLUSION AND SUGGESTIONS

In this study, with investigation of CAMEL indexes effect on banks' profit management, it has been tried to take a new step in researches related to Iran's banks' profit management. This study has one main hypothesis and 5 side ones. Results of analyzing the first side hypothesis of the research indicate that in a confidence level of 95%, this hypothesis is approved and therefore, CA has a negative and meaningful effect on profit management. When banks do not have a suitable CA, incentives for profit management increase, so that company's retained earnings and banks base capital are increased by increasing profit through discretionary accruals, and consequently, bank's CA is improved. Therefore, there is a negative and meaningful relationship between the ratio of CA, profit management and use of discretionary accruals. Second side hypothesis analysis result indicates the rejection of this hypothesis in the confidence level of 95%. Thus, AQ doesn't have a meaningful effect on bank's profit management. Third side hypothesis analysis result shows that in a confidence level of 95%, this hypothesis is approved. Therefore, MQ has a negative and meaningful effect on profit management. Improving MQ can prevent interests conflict between corporate governance system actors (managers and owners), thus, the results of this hypothesis comply with the agency theory. In the agency theory perspective, improving company's management leads to improvement in the audit task of the company, reduces fraud and increases the quality of financial reporting, and when MQ is improved, discretionary accruals reduce. Fourth side hypothesis analysis results indicate that in a confidence level of 95%, this hypothesis is approved. Therefore, EQ has a negative and meaningful effect on profit management. When EQ is lower than expected, managers try to register a part of future earnings into the current period earnings through manipulation in accounting techniques and using discretionary accruals, and in this way, they improve the ratio of EQ. Therefore, there is a negative and meaningful relationship between EQ and profit management. Fifth side hypothesis analysis results show that in a confidence level of 95%, this hypothesis is approved and LQ has a positive and meaningful effect on profit management. High levels of LQ provides this possibility for the managements that in case of lacking a suitable corporate governance system, the manager can manipulate the profits. Therefore, profit manipulation and management is higher in high LQ companies compared to others. Companies with high levels of free cash flows face more agency cost problems and profit management also increases with the elevation of LQ level.

It is suggested to capital market investors and activists to focus on the mentioned ratios and analyze the probability of discretionary accruals usage and banks' profit management that when seasonal and annual reports of banks are published., It is suggested to investors and financial analysts that when analyzing profit and financial reporting quality, specially consider the measures of CA, MQ and EQ as factors that have negative relationships with profit management and consider LQ as a factor which has a direct relationship with profit management. It is suggested to major and institutional bank owners to select skilled and efficient board members, so that they can consider suitable strategies for bank's investments, and in this way, they can prevent increase of LQ in banks and reduce the probability of profit management in banks. Moreover, it is suggested to bank's auditor to receive seasonal reports from bank's financial managers about CAMEL indexes, analyze the mentioned ratios and analyze the probable effects of these indexes on bank's performance and profit management.

Results of this study complies with the studies conducted by Salhuteru and Wattimena (2015), Rosmin et al. (2014), and Muhammadjani and Sadeghi (2015). In the research of Salhuteru and Wattimena (2015), they showed that CA ratio has a negative and meaningful effect on bank's profit management in governmental and private banks. Rosmin et al. (2014) research revealed that LQ and excessive free cash flow have a positive relationship with profit management. And Muhammadjani and Sadeghi's (2015) research showed that there is a direct and meaningful relationship between LQ and profit management.

For future researches, the following suggestions are presented:

1. It is suggested to researchers to prioritize banks according to CAMEL indexes and investigate the effect of these ranks on banks' profit management in future researches.
2. It is suggested to researchers to test the effects of other variables affecting profit management such as audit quality and corporate governance structure in banks in future researches.
3. It is suggested to researchers to investigate the effect of severe changes in exchange rate in 2011 on banks' profit management.

REFERENCES

Ahmadi, M.M. (2015), Investigation of Relationship between Limitation in Financial Provision, Financial Provision Decisions and Free Cash Flow Risk with Different Types of Profit Management. Accounting Masters Degree Thesis, Semnan University.

Azadi, K., Noush, A., Mohsen, F.R. (2015), Investigation of Banks Privatization Effect on Reported Profits Quality (Banks Listed in Tehran Stock Exchange), Social Sciences, Management and Economy International Conference, Spain.

Bahraminasab, B. (2013), Investigation of the Effect of Banks Ranking According to CAMEL Indexes on Banks' Shares Yield, Accounting Masters Degree Thesis, Islamic Azad University, Science and Research Branch of Semnan.

Capital Adequacy Regulation, Legislation. (2003).

Etemadi, H., Shafakhabiri, N. (2011), Effect of Free Cash Flows on Profit Management and the Role of Auditory Committee in it. Financial Accounting Scientific and Research Periodical. No. 19. Third Year. p4-18.

Islami, Z., Bahrami, Z., Maryam, R., Muhammad, M.M. (2011), Necessity of Formation of Banks Ranking Model and Presenting the Suggested Model. Research Project, Bank Sepah Department of Researches and Risk Control.

Javaheri, M. (2014), Investigation of Banks Privatization Effect on CAMEL Indexes, Management Masters Degree Thesis. Semnan University, Economics and Administrative Sciences Faculty.

Jones, S., Sharma, R. (2001), The impact of free cash flow, financial leverage and accounting regulation on earnings management in Australia old and new economics. Journal of Managerial Finance, 27(12), 18-39.

Khanifar, H., Bazaz, Z., Tehrani, R., Mohagheghnia, M.J. (2016), Investigation and comparison of private and governmental banks performance according to CAMEL model. Organizational Culture Management Magazine, 13(2), 437-461.

Mehrani, S., Bagheri, B. (2009), Investigation of free cash flows and institutional investors effect on profit management in companies listed in Tehran stock exchange. Accounting Researches, 2, 51-64.

Mollakarimi, N. (2011), CAMELS Prioritizing Model in Islamic Banking Framework. Economic News Magazine, 132, Ninth Year. p82-90.

Muhammadjani, A., Sadeghi, M. (2015), Relationship between Excessive free Cash Flow and Profit Management and the Role of Auditory Committee. The First International Accounting Conference. Management and Economics Audit, Isfahan.

Nouri, B., Peyman, S., Davoud, A.G., Muhammad, A. (2013), Profit management, shares risk and earnings fluctuations in banks listed in Tehran stock exchange. Quantitative Researches in Management, 4(3), 165-183.

Padganeh, Y. (2007), Basel Committee Conference and its Solutions. Saderat Bank of Iran, Persian Gulf District.

Rasouli, R. (2015), Effect of Internal and External Factors on Business Banks Profitability. Accounting Masters Degree Thesis, Islamic Azad University, Science and Research Branch-South Tehran.

Rina, B.B., Takiah, M.I. (2009), Surplus free cash flow, earnings management and audit committee. International Journal of Economics and Management, 3(1), 204-223.

Rosmin, R., Astami, E.W., Hartadi, B. (2014), The impact of surplus free cash flow and audit quality on earnings management. Asian Review of Accounting, 22(3), 217-232.

Salhuteru, F., Wattimena, F. (2015), Bank performance with camels ratios towards earnings management practices in state banks and private banks. Advances in Social Sciences Research Journal, 2(3), 301-314.

Schipper, K. (1989), Commentary on earnings management. Accounting Horizons, 3(4), 91-102.

Scott, W.R. (1997), Financial Accounting Theory. Scarborough: Printing Hall. Levitt, A. (1998), The Numbers Game. Speech Delivered at the NYU Center for Law and Business, New York, NY.

Tabatabai, M. (2011), Comparing the Financial Performance of Bank Shahr with Other Banks Through Using the CAMEL Model. Accounting Master's Degree Thesis, Tehran University.

Zahara, D., Veronica, S.S. (2009), Pengaruh rasio camel terhadap manajemen Laba Di bank syariah. Jurnal Riset Akuntansi Indonesia, 12(2), 104-115.

Zengin, Y., Serdar, O. (2010), Audit Quality and Earnings Management in Interim Financial Reports. Available from: http://www.SSRN.com.