

# Loan Loss Provision and the Profitability of Commercial Banks: Evidence from Jordan

Mohammad Alhadab<sup>1</sup> & Saba Alsahawneh<sup>1</sup>

<sup>1</sup> Department of Accounting, Faculty of Finance and Business Administration, Al al-Bayt University, Jordan

Correspondence: Mohammad Alhadab, Department of Accounting, Faculty of Finance and Business Administration, Al al-Bayt University, Jordan. E-mail: M.Alhadab@aabu.edu.jo

Received: July 29, 2016

Accepted: October 25, 2016

Online Published: November 20, 2016

doi:10.5539/ijbm.v11n12p242

URL: <http://dx.doi.org/10.5539/ijbm.v11n12p242>

## Abstract

The purpose of this study is to examine the impact of loan loss provision on the profitability of Jordanian commercial banks. While the impact of loan loss provision on the profitability of banks has been examined by prior research, this study is the first to examine this relationship using Jordanian data. By examining a Jordanian sample of 13 banks that listed on Amman Stock Exchange (ASE) over the period 2004-2014, this study provides the first evidence that loan loss provision has a negative impact on the profitability of Jordanian commercial banks. This evidence suggests that Jordan banks adjust their loan loss provision due to several motives and, this in turn, leads to negative consequences for their profitability. Return on assets (ROA) and return on equity (ROE) are employed as a proxy of the profitability in this study.

**Keywords:** commercial bank, loan loss provision, profitability, Amman stock exchange

## 1. Introduction

Commercial banks play an important role in the economic development and growth, due to their contribution to the financial system through providing financial facilities to all economic enterprises and individuals. In addition, the commercial banks provide comprehensive financial services as compared to any other financial institutions e.g., they receive and collect the money from individuals who want to make saving and provide these collected amounts to those who are in need to set up their enterprises. As a result of economic development in various countries, banks have become an essential element in the financial system and its development, for example the financing of trade activities, services, industrial and agricultural sectors, as well as individuals through long and short-term loans and other banking services.

Nowadays banks have become more exposed to the risk of failure due to the huge amounts of money that are provided to the customers through loans, which may threaten the stability and growth of the banks. One of the solutions that was introduced to the banking section in order to reduce such risk was by sitting aside some amount of money known as loan loss provision. Therefore, loan loss provision is considered to be an important tool that has been employed to reduce the risk of customers' failure to pay their liabilities to the bank.

Given the importance of these provisions, prior literature (e.g., Bouvatier & Lepetit, 2008; Fonseca & Gonzalez, 2008; Beatty & Lioa, 2009; Packer & Zhu, 2012; Bushman & Williams, 2012; Ul Mustafa et al., 2012; Norden & Stoian, 2013; Tahir et al., 2014; Caporale et al., 2015; Fernando & Ekanayake, 2015; Ozili, 2015) shows that banks manipulate these provisions to meet several incentives e.g., increase or decrease reported earnings, making reserves for future, tax evasion, etc. In line with this view, Ul Mustafa et al. (2012) and Ul Mustafa et al. (2012) find that loan loss provision is negatively associated with profitability. Despite the increased interest of examining the impact of loan loss provision, no research to date has examined this relationship using Jordanian data. This study therefore contributes to the literature by examining this issue in Jordan and providing the first evidence that loan loss provision has a negative impact on the profitability of Jordanian commercial banks.

## 2. Theoretical Framework, Literature Review and Hypotheses Development

### 2.1 Commercial Banks

Commercial banks are considered as an essential pillar of economic progress because of their role in financing investment projects and to satisfy the various needs of customers, whether individuals or institutions. Also commercial banks have a role in expanding the size of the market by facilitating and stimulating the financial

and commercial transactions, so commercial banks are considered as financial institutions due to the nature of their activity.

Commercial bank is defined as financial institution acting as a mediator between two groups of customers, the first group have the funds seek to maintain and develop, the second group is that they need the money for the purposes of investment and employment (Al-Sairafi, 2007). While Basile (2008) defines it as the bank which depends on access to deposits for reinvestment periods of short and medium-term period, to facilitate converted into cash without loss, capital to help finance and support trade and economy. Al-kasas (2010) defines commercial banks as institutions that deal in debt or credit, which gives depositors interest on the deposit and the thing for taking higher interest on lending.

Based on these definitions of commercial banks, someone can argue that commercial banks are creative institutions that receive deposits from individuals and institutions in exchange for giving interest on these deposits. These deposits are used to help individuals to set up projects and investment by offering loans in return for interest to maximize profits, where most banks seeking to provide short-term loans to balance between liquidity and profitability.

In Jordan there are 13 Commercial banks that have branches inside and outside Jordan. These banks are as follows; Arab Bank was established in Jerusalem in 1930, Jordan Commercial Bank (JCB) was established in 1977, Arab Banking Corporation Jordan (ABCJ) was established in 1980,. Bank of Jordan (BOJ) was established in 1960, Cairo Amman Bank was established in 1960, Capital Bank of Jordan was established in 1995, Jordan Kuwait Bank (JKB) was established in 1976, Jordan Ahli Bank was established in 1955, The Housing Bank for Trade and Finance (HBTF) was established in 1973, Arab Jordan Investment Bank (AJIB) was established in 1978, Investment bank established in 1982, Societe General Bank Jordan (SGBJ) was established in 1965, Union Bank was established in 1978.

As a result of economic development in various countries, banks have become an essential element in the financing the economy and its development, through the financing of economic and trade activities, services, industrial and agricultural, as well as consumer's finance to meet their needs through the granting of credit facilities as such as long and short-term loans and other banking services

### *2.2 Non-Performing Loans and Financial Default*

Non-performing loans are considered as the most important problems that facing the local and foreign banks, as the development of the banking sector has led to increase credit services provided by banks for the purpose of financing and investments by granting loans, which express the strength of the bank or express the weakness for the bank in case the debtors defaulted to pay in time. Thus, banks follow some strategies to overcome the problems that are resulted by non-performing loan. For example, the importance of moving the distressed debt in order to reduce the need for increasing provision of non-performing debt; taking the legal action to recover the due payments, without preventing banks from negotiating with the client to reach an acceptable settlement for both parties.

Due to the large amount of the non-performing loans, banks have become more exposed to the credit risk (risk of failure), which may threat the stability and growth of the banks and the economy as a whole. In with the importance of credit risks, prior research has focused on this issue. For example, Akhtar (2007) pointed out that credit operations are the main source of income for banks, and at the same time are the primary source of risk. Talbot and Jakeman (2009) meanwhile indicate that are the potential losses from which the bank will suffer, borrower failed to pay, or meet the interest payment on the loan obligations and repayment of the amount borrowed under the terms that have been agreed between the bank and the borrower. Also, the credit risk is one of the biggest risks facing the banks, and arises from the possibility that loans or bonds held by banks will not be repaid either in part or in full. In addition, to the credit risk which is often synonymous with the risk of default.

As a result of the credit risks, many local and international organizations have taken many steps to minimize the negative effects of such risks, and the developed several procedures and policies that should be followed to avoid these risks. One of the most important steps was creating the Loan Loss Provision (LLP).

### *2.3 Loan Loss Provision (LLP)*

As a result of the difficulties and crises facing banks recently, Loan Loss Provision (LLP) has a key role to strengthen the financial position of the banks. Beatty and Lioa (2009) define LLP as a policy that followed by commercial banks by putting some money aside (reserves) to face any potential loans default, which in turn would help to protect banks' positions in terms of profitability and capital. The main objectives of LLP is to provide special information about the bank's future (Kanagaretnam & Lobo, 2010); reduce taxes by earnings

managing, and management of regulatory capital (Boucekoua et al., 2012); managing the level of income volatility and the volatility of earnings (Norden & Stoian, 2013); and avoiding fluctuations which occur in risk-weighted assets that in turn affect the bank's risk and profitability (Norden & Stoian, 2013).

Bouvatier and Lepetit (2008) classifies the types of LLP into two types. First, the non-discretionary elements which are designed to cover losses that are expected due to failure in paying the loans and/or the interests, and these elements help properly in assessing the credit risk properly. Second, the discretionary elements which are designed by the bank's management to achieve its goals, mainly represents earnings management, management of the proportion of the capital, and tax exemption.

Given the importance of LLP, the International Accounting Standards (IAS) have issue the IAS 37 which requires the disclosure for all provisions. This standard is used to ensure that the appropriate standards of recognition will be followed, the right measurement of provisions will be used, and potential liabilities will be recognized. For example, the IAS37 requires disclosing sufficient information to enable users to understand the nature, timing and quantity of these provisions.

While for the recognition the IAS37 indicates that a provision should be recognized only in the following cases; when the project is a present obligation (legal or constructive) and is a result of a past event; when it is probable (more likely than not) that a certain flow out of embodying economic benefits will be required to repay an obligation; If it is possible to make a reliable estimate of the amount of commitment and standard refers that only in very rare cases proceeding of trusted estimating. IAS 37 also pointed out the need to review the provisions at the end of each period to prepare reports and their adjusting to reflect the current best estimate.

#### *2.4 Loan Loss Provision (LLP) and Profitability*

In line with the importance of LLP, prior research has investigated the impact of LLP on banks future performance. For example, Caporale et al. (2015) examine the determinants of LLP for 400 Italian banks over the period 2001-2012. They find evidence that the main drivers of LLP in Italian banks are non-discretionary components, while managers' expectations about future potential losses do not appear to play a role. Caporale et al. (2015) also find evidence that there is a negative association between the level of collateralized loans, which can reduce credit risk and future losses. Fernando and Ekanayake (2015) examine whether commercial banks in Sri Lankan use LLP to smooth earnings over the period 2003 to 2012. They find a positive relationship between the loan losses provision and profits before tax, and that public banks do not use LLP to manage their income.

Tahir et al. (2014) examine the impact of LLP on Bank Profitability in Pakistan and control for other well-known determinants. Using return on assets (ROA) and return on equity (ROE) as a proxy of profitability. The study find the following evidence. First, there is a negative relationship between the loan loss provision (LLP) and profitability (ROA, ROE). So the higher loan loss provisions decreases profitability and financial stability of the bank, and the higher provisions for loan losses decreased profitability. Second, there is a negative relationship between deposits and profitability. Third, there is a positive relationship between size and return on assets (ROA). Finally, there is a positive relationship between advances and bank return on assets (ROA).

While ul Mustafa et al. (2012) examine also the effects of loan loss provisions on the performance of Pakistan banks using panel data for 15 bank overs the period 2001–2009. They find a similar evidence to Tahir et al. (2014) that there is a negative relationship between the loan loss provision (LLP) and profitability. Tahir et al. (2014) also find evidence on a negative correlation between the lack of political stability and performance of the bank, and a positive relationship between advances and deposits and profitability (ROA). Further, Packer and Zhu (2012) focus on LLP practices of 240 Asian banks over the period 2000-2009 from 12 Asian economies, namely Australia, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore and Thailand. Packer and Zhu (2012) find evidence that banks resort to the use of International Accounting Standards after the Asian crisis to ease fluctuations in the economic cycle.

Despite this increased interest of research that has examined the impact of LLP on banks profitability and its determinants, there is no research yet has examined this association for Jordanian Banks. This study aims to answer these question. Thus, the main hypothesis of this study is as follows:

**H1:** Loan loss provision is negatively associated with bank profitability (as measured by return on assets and return on equity) for the Jordanian commercial banks.

### **3. Research Methodology**

#### *3.1 Sample Construction*

The sample of this study consists of all Jordanian 13 commercial banks (1) that are listed on the Amman Stock

Exchange (ASE) during the period 2004-2014. All financial and LLP data are collected from the annual reports, which are available on the website of the Amman Stock Exchange (ASE). After including all banks with the necessary data, the final sample consists of 143 bank-year observations during the period 2004-2014.

### 3.2 Empirical Models

To investigate whether Loan Loss Provision (LLP) affects bank profitability, we estimate two models where the dependent variable is LLP and the main independent variables proxies of return on assets (ROA) and return on equity (ROE). Following prior research (e.g., Tahir et al., 2014; Kaur & Singh, 2014; ul Mustafa, 2012), a set of control variables are added to the models that are found to impact bank profitability. We control for bank size by using while natural logarithm of total assets (SIZE), while liabilities (LIAB) and deposit (DEP) as consistent with prior research. For example, Tahir et al. (2014) and Ul Mustafa et al. (2012) find evidence that bank profitability is positively associated with liabilities and is negatively associated with deposits. Except for bank size, all other variables are scaled by total assets to reduce the scale effects in the regression models. The following two models are estimated to examine our hypotheses.

$$ROA_{it} = \alpha_0 + \beta_1 LLP_{it} + \beta_2 SIZE_{it} + \beta_3 LIAB_{it} + \beta_4 DEP_{it} + \varepsilon_{it} \quad (1)$$

$$ROE_{it} = \alpha_0 + \beta_1 LLP_{it} + \beta_2 SIZE_{it} + \beta_3 LIAB_{it} + \beta_4 DEP_{it} + \varepsilon_{it} \quad (2)$$

Where:

$ROA_{i,t}$  = return on assets at the end of year  $t$  for firm  $i$ .

$ROE_{i,t}$  = return on equity at the end of year  $t$  for firm  $i$ .

$SIZE_{i,t}$  = natural logarithm of total assets at the end of year  $t$  for firm  $i$ .

$LIAB_{i,t}$  = total liabilities at the end of year  $t$  for firm  $i$ .

$DEP_{i,t}$  = total deposits at the end of year  $t$  for firm  $i$ , and;

$\varepsilon_{it}$  = a random error term.

## 4. Results

### 4.1 Descriptive Statistics

Table 1 presents descriptive statistics for all variables that included in the analysis and shows that the mean (median) of our main variable of interest LLP is 0.003 (0.002), and ranges from -0.009 to -0.009. While for our proxies of profitability, Table 1 shows that ROA ranges from -0.17 to 4.97 and that ROE ranges from -1.44 to 39.84. These very large differences between the mean and median values suggests that both ROA and ROE are positively skewed.

Table 1. Presents descriptive statistics

|              | ROA    | ROE    | LLP    | DEP   | LIAB  | SIZE  |
|--------------|--------|--------|--------|-------|-------|-------|
| Mean         | 1.52   | 11.33  | 0.003  | 0.74  | 0.86  | 9.13  |
| Median       | 1.47   | 10.27  | 0.002  | 0.74  | 0.86  | 5.07  |
| Maximum      | 4.97   | 39.84  | 0.021  | 0.83  | 1.00  | 10.37 |
| Minimum      | -0.17  | -1.44  | -0.009 | 0.49  | 0.78  | 8.02  |
| Std. Dev.    | 0.67   | 5.39   | 0.004  | 0.07  | 0.03  | 0.45  |
| Skewness     | 1.20   | 1.26   | 0.95   | -1.02 | 0.67  | 0.74  |
| Kurtosis     | 8.14   | 7.61   | 5.19   | 4.10  | 5.05  | 4.0   |
| Jarque-Bera  | 191.63 | 164.07 | 50.42  | 32.15 | 35.68 | 18.74 |
| Probability  | 0.00   | 0.00   | 0.00   | 0.00  | 0.00  | 0.00  |
| Observations | 143    | 143    | 143    | 143   | 143   | 143   |

This table provides descriptive statistics for all variables.

### 4.2 Correlation Matrix

Table 2 provides the correlation matrix for all variables and shows that ROA and ROE are negatively associated with LLP. Thus, this evidence indicates that LLP has a negative impact on bank profitability Table 2 also shows

very low correlation between the independent variables (DEP, LIAB, SIZE) and therefore there is no multicollinearity problem.

Table 2. Presents Pearson correlation coefficient for our sample

|      | ROA      | ROE      | LLP      | DEP      | LIAB     | SIZ |
|------|----------|----------|----------|----------|----------|-----|
| ROA  | 1        |          |          |          |          |     |
| ROE  | 0.866**  | 1        |          |          |          |     |
| LLP  | -0.399** | -0.378** | 1        |          |          |     |
| DEP  | -0.154   | 0.021    | 0.11 *   | 1        |          |     |
| LIAB | -0.082   | 0.280**  | -0.05    | 0.317 ** | 1        |     |
| SIZ  | -0.147   | -0.137   | 0.109 ** | 0.107 ** | 0.026 ** | 1   |

This table provides correlation matrix for all variables. \*, \*\*. Correlation is significant at the 0.05, 0.01 level (2-tailed), respectively.

#### 4.3 Test for Stationary

It well documented that time series data are usually associated with the spurious regression issues which may lead to very weak results. Thus, we check for this by testing for unit root of each variable are included in our analysis. We use the Augmented Dickey-Fuller (ADF) and PP Phillips-Perron (PP) tests as these are the most commonly used tests. Table 3 reports the results and shows that there is no any concern associated with stationary time series tests.

Table 3. Presents unit root test result

| PP (LEVEL) | ADF (LEVEL) | variable |
|------------|-------------|----------|
| -7.85      | -9.34       | ROA      |
| -6.14      | -5.23       | ROE      |
| -7.51      | -6.15       | LLP      |
| -6.88      | -3.53       | DEP      |
| -6.87      | -4.21       | LIAB     |
| -3.98      | -2.87       | SIZE     |

Table 3 reports the Unit Root Test result.

#### 4.4 Empirical Results

##### 4.4.1 The LLP and Bank Profitability

Table 4 reports the results for the analysis of whether LLP is associated with bank profitability proxied by ROA, and shows evidence that LLP has a negative impact on profitability. Specifically, the results show that one unit increase of LLP lead to decrease of bank profitability proxied by ROA by 55.8, other things being constant. While for the other control variables (DEP, SIZE LIAB), Table 4 shows no evidence that these variables are associated with bank profitability. The value of ( $R^2$ ) reveals that 0.187 of the change in ROA is explained by the independent variables (LLP, DEP, LIAB, SIZ), while the value and significant of F indicate the model is accepted to explain the relationship between dependent variable and independents variable.

Table 4. Presents multiple regression model (1)

| Model |            | Unstandardized Coefficients |                   | Standardized Coefficients | t       | Sig. |
|-------|------------|-----------------------------|-------------------|---------------------------|---------|------|
|       |            | B                           | Std. Error        | Beta                      |         |      |
| 1     | (Constant) | 4.916                       | 1.623             |                           | 3.028   | .003 |
|       | LLP        | -55.842-                    | 11.312            | -.385-                    | -4.937- | .000 |
|       | DEP        | -.775-                      | .846              | -.075-                    | -.916-  | .361 |
|       | LIAB       | -1.559-                     | 1.561             | -.081-                    | -.999-  | .319 |
|       | TAllog     | -.138-                      | .108              | -.099-                    | -1.275- | .204 |
|       | $R^2$      | 0.187                       | Adjusted R Square | 0.163                     | F       | 7.91 |

**Source:** Researcher calculations. Dependent variable ROA. a. Predictors: (Constant), TAllog, LIABTA, LLPTA, DEPTA; b. Dependent Variable: ROA.

Table 5 reports the results for the analysis when ROE is used as a proxy of bank profitability and shows similar evidence to Table 4 that LLP is negatively associated with bank profitability. Specifically, the results show that one unit increase of LLP leads to decrease of bank profitability proxied by ROE by -411.83, other things being constant. Table 5 also shows that liabilities (LIAB) are negatively associated profitability, while for the other two control variables (DEP, SIZE), no evidence is found that these variables are associated with bank profitability. The value of ( $R^2$ ) reveals that 0.219 of the change in ROE is explained by the independent variables (LLP, DEP, LIAB, SIZ), while the value and significant of F indicate the model is accepted to explain the relationship between dependent variable and independents variable.

Table 5. Presents multiple regression model (2)

| Model |            | Unstandardized Coefficients |                   | Standardized | T       | Sig.  |
|-------|------------|-----------------------------|-------------------|--------------|---------|-------|
|       |            | B                           | Std. Error        | Coefficients |         |       |
| 1     | (Constant) | -11.936                     | 12.787            |              | -.933-  | .352  |
|       | LLP        | -411.837                    | 89.095            | -.353-       | -4.622- | .000  |
|       | DEP        | -1.143-                     | 6.660             | -.014-       | -.172-  | .864  |
|       | LIAB       | 40.553                      | 12.292            | .263         | 3.299   | .001  |
|       | SIZE       | -1.008                      | .850              | -.090-       | -1.186  | .237  |
|       | $R^2$      | 0.219                       | Adjusted R Square | 0.197        | F       | 9.687 |

**Source:** Researcher calculations Dependent variable ROE.

a. Predictors: (Constant), SIZE, LIAB, LLP, DEP;

b. Dependent Variable: ROE.

In summary, the reported results of Tables 4 and 5 confirms our main hypothesis that loan loss provision has a negative impact on bank profitability. This result suggests that bank may not use the LLP in the right way it was designed for e.g., to make some reserves for a potential credit risk that resulted by loans failure.

## 5. Conclusions

Prior literature has focused on examining the impact of LLP on bank profitability (e.g., Tahir et al. 2014; Kaur & Singh, 2014; Ul Mustafa, 2012) due the importance of LLP for banking system; however, this study is the first to examining this issue using a Jordanian data. Jordan is located in the heart of Middle East and plays a very significant political and financial role in the region. Thus, the finding of this study would help to reform the bank regulation in Jordan to protect the savings of investors and individual. The study contributes to current literature by providing a number of findings. First, this study provides the first evidence that LLP has a negative impact on the profitability of Jordan Commercial banks. The study uses a large sample that consists of all 13 Jordanian commercial banks and it covers the period from 2004 to 2014. Thus, it is provide a comprehensive view about the use of LLP in Jordan and how this impact the profitability.

This study provide some important implications for policy makers and regulators in Jordan e.g., raising the awareness among external users that banks may use LLP to smooth income, and the need to increase the transparency in financial reporting about LLP.

## References

- Akhtar, S. (2007). Changing risk management paradigm-Perspective of the Regulator. ACCA Conference-CFOs: The Opportunities and Challenges Ahead. Speech by Governor of the State Bank of Pakistan.
- Beatty, A., & Liao, S. (2009). *Regulatory capital ratios, loan loss provisioning and procyclicality*. Columbus, United States: Ohio State University. Mimeographed document.
- Boucekoua, A., Matoussi, H., & Trabelsi, S. (2010). Monolithic versus Differential Impacts of Sox Regulation on Market Valuation of Banks' Loan Loss Provision. *CAAA Annual Conference 2012*. <http://dx.doi.org/10.2139/ssrn.1762810>
- Bouvatier, V., & Lepetit, L. (2008). Banks' procyclical behavior: Does provisioning matter? *Journal of International Financial Markets, Institutions and Money*, 18(5), 513-526. <http://dx.doi.org/10.1016/j.intfin.2007.07.004>

- Bushman, R. M., & Williams, C. D. (2012). Accounting discretion, loan loss provisioning, and discipline of banks' risk-taking. *Journal of Accounting and Economics*, 54(1), 1-18. <http://dx.doi.org/10.1016/j.jacceco.2012.04.002>
- Caporale, G. M., Alessi, M., Di Colli, S., & Lopez, J. S. (2015). *Loan Loss Provision: Some Empirical Evidence for Italian Banks*. Working paper, Brunel University London. <http://dx.doi.org/10.2139/ssrn.2576711>
- Fernando, W. D., & Ekanayake, E. M. (2015). Do Commercial Banks Use Loan Loss Provisions to Smooth Their Income? Empirical Evidence from Sri Lankan Commercial Banks. *Journal of Finance*, 3(1), 167-179.
- Fonseca, A., & Gonzalez, F. (2008). Cross-Country Determinants of Bank Income Smoothing by Managing Loan-Loss Provisions. *Journal of Banking & Finance*, 32(2), 217-228. <http://dx.doi.org/10.1016/j.jbankfin.2007.02.012>
- Kanagaretnam, K., & Lobo, G. (2010). An empirical analysis of auditor independence in the banking industry. Working paper. *The Accounting Review*, 86(6), 2011-2046. <http://dx.doi.org/10.2308/accr.2010.85.6.2011>
- Kaur, M. H., & Singh, S. (2014). Impact of investment and financing policies on profitability and risk. *Advances in Business-Related Scientific Research*, 183.
- Norden, L., & Stoian, A. (2013). Bank earnings management through loan loss provisions. A double-edged sword? Working Paper, Amsterdam.
- Ozili, P. K. (2015). Loan Loss Provisioning, Income Smoothing, Signalling, Capital Management and Procyclicality: Does IFRS Matter? Empirical Evidence from Nigeria. *Mediterranean Journal of Social Sciences*, 6(2), 224-232.
- Packer, F., & Zhu, H. (2012). Loan loss provisioning practices of Asian banks. <http://dx.doi.org/10.2139/ssrn.2038215>
- Phillips, P. C., & Perron, P. (1988). Testing for a Unit Root in Time Series Regression. *Biometrika*, 75, 335-346. <http://dx.doi.org/10.1093/biomet/75.2.335>
- Tahir, S., Ahmad, F., & Aziz, B. (2014). Impact of Loan Loss Provision on Bank Profitability in Pakistan. *TIJ's Research Journal of Social Science & Management*, 3(12).
- Talbot, J., & Jakeman, M. (2009). Security Risk Management Body of Knowledge. Hoboken, New Jersey, USA: John Wiley & Sons, Inc. <http://dx.doi.org/10.1002/9780470494974>
- Ul Mustafa, A. R., Ansari, R. H., & Younis, M. U. (2012). Does the Loan Loss Provision Affect the Banking Profitability in Case of Pakistan? *Asian Economic and Financial Review*, 2(7), 772.

## Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).