“Income smoothing in banks and insurance companies and its impact on earnings per share – evidence from Jordan”

AUTHORS	Leqaa Al-Othman https://orcid.org/0000-0001-6184-693X

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Leqaa Al-Othman (Jordan)

INCOME SMOOTHING IN BANKS AND INSURANCE COMPANIES AND ITS IMPACT ON EARNINGS PER SHARE – EVIDENCE FROM JORDAN

Abstract

This study aims to determine the existence of practices of income smoothing in banks and insurance companies in Jordan. Also, it focuses the to determining the impact of the income smoothing on earning per share (EPS). The study covered all the companies in the study population, which are 38 companies – 15 banks and 23 insurance companies listed on the Amman Stock Exchange (ASE). The results show that income smoothing is practiced by Jordanian banks and insurance companies. The number (and percentage) of insurance companies that practiced income smoothing is greater than the number of banks: 34.8% of insurance companies and 20% of banks practiced income smoothing. The results also clearly indicate that financial institutions, which practice smoothing, have a higher EPS compared to those that do not practice income smoothing; this also indicates that the most important goal of using income smoothing is to maintain a positive earnings level.

Keywords earnings, income smoothing, earning per share, banks, insurance companies

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Leqaa Al-Othman, Ph.D. in Accounting, Department of Accounting, Amman University College, Al-Balqaa Applied University, Jordan.

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INTRODUCTION

Accounting earnings are the most important part that any user can observe in financial statements and it is considered as an index of company's performance, according to shareholders' and investors' interests. But the volatility of these earnings can lead to the losses for investors based on the belief that income volatility increases risk and that companies with less volatile income are less risky and attractive to investments. Lang and Maffett (2011) stated that "stakeholders... are exposed more directly to losses than to gains, and so they prefer lower risk. As a consequence, managers have an incentive to report smooth earnings to create the impression of a less risky earnings stream". Aflatooni and Nikbakht (2010) showed that investors are attracted to companies that have a smooth income rather than those that have a fluctuating income. Therefore, managers do their best to reach a target level of earnings and make these earnings stable to reduce risk by accounting methods called income smoothing. According to Matsuura (2008), income smoothing is one of the most common earning management methods used by companies, while Chong's study (2006) confirmed that the income smoothing is an irresistible process for most companies. The flexibility available to the management when choosing accounting measurements and classification of certain revenues and expenses has contributed to the spread of the phenomenon of income smoothing; this means that companies can report a certain amount of income over time (Khoury & Shakhatreh, 2014).

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Therefore, this study aims to investigate the extent of income smoothing practices in Jordanian banks and insurance companies, as well as to examine the effect of income smoothing on the earning per share (EPS), as it is very important index that investors use to make investment decisions and it is the only ratio that is calculated and reported in financial statements. This study contributes to the income smoothing literature in two ways: firstly, it focuses on the Jordanian market; and secondly, this study focuses on the impact of income smoothing on earning per share.

Study aims

This study aims to achieve two main objectives:

1. To determine the existence of income smoothing practices in banks and insurance companies in Jordan.

2. To determine the impact of the income smoothing behavior on earnings per share (EPS).

1. LITERATURE REVIEW

1.1. Income smoothing

The subject of income smoothing has attracted the attention of researchers, especially after financial crises and corporate governance issues. Previous studies dealt with this subject and defined different income smoothing definitions. Khoury and Shakhatreh (2014) defined income smoothing as the increase or decrease of the current earnings in the financial statement by a manager to achieve his own specific goals.

Income smoothing can be defined as a method used by management to reduce the volatility of earnings in the financial statements by manipulation (Dewi et al., 2018).

Income smoothing was defined briefly and clearly as the process of minimizing the fluctuation of reported income over time (Ozili & Outa, 2018).

Previous studies have agreed that income smoothing is a way to reduce income volatility without addressing whether it is a good method or not. However, Fudnberg and Tirole (1995) insisted that income smoothing is a fraud, defined as the deliberate manipulation of the timing of recognizing of revenues and expenses declared to achieve a stable income level.

According to previous studies, income smoothing can be defined as a process that is used to reduce income volatility and to show it as a state of stability, either by manipulation or by choice, between permissible accounting alternatives.

Many previous studies have talked about income smoothing types (B. Bao & D. Bao, 2014; Khoury & Shakhatreh, 2014). However, the most important of these studies is that by Eckle (1981), which classified income smoothing into natural smoothing and intentional smoothing. Natural smoothing results from the income generating process that produces smoothed income, which is not considered a manipulation by the management. In contrast, intentional smoothing can be real smoothing (manipulating and changing transactions) or artificial smoothing (changing the timing of the transaction record).

1.2. Previous studies

Previous studies of income smoothing are varied, with each study focusing on one aspect of income smoothing.

Putri's study (2019) aimed to analyze the effect of governance on income smoothing and the impact of income smoothing on stock returns. The study examined 555 companies listed on the Indonesia Stock Exchange. The result showed that good governance of the company had a significant positive impact on reducing income smoothing, and income smoothing had a negative and significant impact on stock returns.

The study of Dewi et al. (2018) aimed to find reasons to continue using income smoothing on the Indonesia Stock Exchange by analyzing its effect on market performance. Market performance was divided into three perspectives: market response represented the current investor; market risk represented potential investors; and market value represented the management. 65 companies were examined during the period 2011–2013. The results showed that income smoothing only significantly affects the companies' market performance in the perspective of market response.

Bora and Saha (2016) examined income smoothing practices in Indian companies and the factors that led to using income smoothing. The study included the companies listed on the National Stock Exchange (NSE) of India. The study concluded that smoothing practices were low among Indian companies. Also, the size of the company was shown to have a negative impact on income smoothing. The study did not find any relationship between income smoothing and the type of a sector.

Dolar (2016) investigated whether banks used income smoothing practices during the financial crisis. Based on more than 25,000 observations of banks over the four-year period (2007–2010), the results show that banks have already smoothed their income by increasing their earnings by underestimated provisions for loan losses in the period after the financial crisis.

Kusuma and Nugroho (2014) analyzed the practices of income smoothing in non-industrial companies listed on the Indonesian Stock Exchange (2007–2011). The study sample was composed of 73 companies. The Eckel model was used to calculate income smoothing. The results showed that 22 companies used income smoothing practices and 51 companies did not. The construction companies had the highest rate of applying income smoothing (66.66%).

The study of Rusmin et al. (2013) aimed to confirm that managers apply income smoothing to achieve their objectives. A sample of 1,094 transport companies was selected in seven (7) Asian countries. The results revealed that managers used income smoothing in an opportunistic way to reach the target profit. The study also revealed that the size of the company, the global economic crisis and the quality of the audit do not have any effect on income smoothing.

The study by Luqman and Shahzad (2012) aimed to reveal the relationship between the income smoothing and both tax income and profitability ratios (ROA and ROE). The study sample was composed of 168 companies listed on the Karachi Stock Exchange. Using the Eckel index, the study sample classified companies into income smoothers and non-income smoothers. The study's results clearly showed a significant relationship between income smoothing and both tax income and profitability ratios.

1.3. Importance of this study

The importance of this study is that it attempts to provide practical evidence on the extent to which Jordanian banks and insurance companies practice income smoothing behavior. The vast majorities of studies have examined the extent to which industrial companies (Abdullah, Suwaidan, & Alqaraan, 2007) or service companies (Jahmani, 2001; Khoury & Shakhatreh, 2014) practice income smoothing behaviors. Therefore, this study intended to cover the lack of studies about income smoothing in banks and insurance companies. It also aims to identify and test the extent of awareness of the phenomenon of income smoothing, its use in banks and insurance companies and its impact on earnings per share.

1.4. Hypotheses of the study

This study tested the following hypotheses:

H1: The banks and insurance companies listed on the ASE do not use income smoothing.

H2: There are no statistically significant differences between EPS in companies that use income smoothing and those that do not.

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2. STUDY DATA AND METHOD

2.1. Study population and sample

The study population consisted of all banks and insurance companies listed on the Amman Stock Exchange (ASE) for 2018; this selection takes into account the most recent data available prior to publication. As this study did not exclude any company, the study sample comprised 38 companies – 15 banks and 23 insurance companies (see Table 1).

Table 1. Study sample

Valid	Frequency	Percent	Cumulative percent
Banks	15	39.5	39.5
Insurance companies	23	60.5	100.0
Total	38	100.0	–

2.2. Study variables

2.2.1. *Independent variable: Income smoothing*

In this study, income smoothing was measured using the Eckel model (1981), which has been commonly applied in previous studies. The Eckel model relates to the coefficient of variance in income to sales using the following equation:

$$IS = CV{\cdot}\Delta E/CV{\cdot}\Delta S, \quad (1)$$

where IS – Income Smoothing Index, CV·ΔE – coefficient of variation in earnings, and CV·ΔS – coefficient of variation in sales. (Coefficient of variation: ratio of the standard deviation to the Mean).

As a result, if the IS value is greater than or equal to one, this means that the change in income is greater than or equal to the change in sales; therefore, the company is not an income-smoother. If the IS value is less than one, then the company is considered as a smoother, meaning that any change in sales results in a greater change in income. To calculate the changes, the earnings and sales of banks and insurance companies for the years 2018 and 2017 were taken.

2.2.2. *Dependent variable: Earning per share (EPS)*

EPS is the best index of the real price of a stock and the most common measure because it shows the share of each stock of the company's earnings after tax. Therefore, this ratio is one of the most important figures that investors look for in the financial statements. EPS is clearly calculated in financial statements using the following formula:

EPS = (Net income after tax – dividends of preferred stocks)/of common stocks.

2.3. Statistical methods used

The statistical package for social sciences (SPSS) was used to achieve the objectives of this study; in this study, the following statistical methods were used:

1. Descriptive statistics: includes a set of statistics aimed to introduce the variables of the study, including means and standard deviations.

2. Kolmogorov-Smirnov test: tests the normal distribution of data.

3. Independent sample (T) test: compares the mean of two independent samples to determine the existence of a statistically significant difference between the EPS of smoothing and non-smoothing companies.

3. RESULTS AND HYPOTHESES TEST

After collecting necessary data about the banks and insurance companies on the ASE, normal distribution was assessed, and then the study hypotheses were tested as follows.

3.1. Normal distribution test

The Kolmogorov-Smirnov test was used to examine the normal distribution of the study's data. The results were as follows (Table 2).

Table 2. Normal distribution test

Variable	N	Kolmogorov-Smirnov Z value	Sig.
EPS	38	1.164	.133

According to the Kolmogorov-Smirnov test, if the (Sig.) value is greater than 0.05, the data have a normal distribution. Consequently, Table 2 shows that the study's data have a normal distribution.

3.2. The first hypothesis testing (*H1*)

This study used the Eckel model to classify the researched companies according to their use of income smoothing. Table 3 shows the classification of companies into smoothing and non-smoothing. The number of smoothing companies was 11 (28.9% of all companies), while the number of non-smoothing companies was 27 (71.1%). Table 2 notes that the percent of smoothing companies is low; which means that income smoothing is not widespread among banks and insurance companies.

Table 3. Income smoothing

Valid	Frequency	Percent	Valid percent	Cumulative percent
Smoothing	11	28.9	28.9	28.9
Non-smoothing	27	71.1	71.1	100.0
Total	38	100.0	100.0	–

Table 4 classifies companies by sector: banks and insurance companies. Table 4 shows the number of smoothing and non-smoothing companies in each sector. It is noticeable from the table that the number and percentage of smoothing companies in the insurance sector are greater than that in the banks. 34.8% (8 of 23 insurance companies) of insurance companies practiced income smoothing, while 20% (3 of 15 banks) of banks practiced income smoothing.

From the above, there are many banks and insurance companies using income smoothing. Therefore, the first hypothesis that "The banks and insurance companies listed on the ASE do not use income smoothing" is rejected.

Table 4. Income smoothing by industry type

Income smoothing		Industry type	
		Banks	Insurance companies
Smoothing	Count	3	8
	%	20%	34.8%
Non-smoothing	Count	12	15
	%	80%	65.2%
Total	Count	15	23
	%	100%	100%

3.3. The second hypothesis testing (*H2*)

To test the second hypothesis, which states that "There is no statistically significant difference between EPS in companies that use income smoothing and those that do not", Table 5 presents the descriptive statistics of the EPS of the study sample. The number of previews is 38, the minimum preview is –0.314 that means the companies have losses, and the maximum is 0.483. The mean of EPS for all companies in the sample was 0.11658.

Table 5. Descriptive statistics

Variable	N	Min	Max	Mean	Std. deviation
EPS	38	–0.314	0.483	0.11658	0.160475
Valid N (listwise)	38	–	–	–	–

Secondly, to test the relationship between Income Smoothing and EPS, Table 6 presents the results of the T-test to compare the mean of EPS between smoothing and non-smoothing companies.

Table 6. Test results (T) of comparing average EPS in the smoothing and non-smoothing companies

	Income smoothing	N	Mean	Std. D	t	Sig. (2-tailed)
EPS	Non-smoothing	27	.07518	.256233	2.506	.017
	Smoothing	11	.21815	.384627	–	–

Table 6 shows the results of the T-test of the second hypothesis. It is clear from the table that there is a difference in the EPS between the two groups, with advantage for smoothing companies, as the average EPS of smoothing companies was 0.21815, and that of non-smoothing companies was 0.07518. As can be seen from Table 6, there is a statistically significant difference at the level of 0.05 between EPS in both groups. Based on the above, the second hypothesis is rejected.

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CONCLUSION AND SUGGESTIONS

This study aims to provide practical evidence on the extent to which Jordanian banks and insurance companies practice income smoothing behavior. After collecting the data, analyzing it statically, and testing the hypotheses, the results show that income smoothing is practiced by Jordanian banks and insurance companies: 28.9% of banks and Insurance companies smoothed its earnings. Income smoothing was more widespread in insurance companies than in banks. The percentage of insurance companies practiced income smoothing was 34.8%, while in banks this percentage was only 20%. The results clearly indicate a significant difference in EPS between the smoothing and non-smoothing companies. The smoothing companies have a high EPS compared to those that do not practice income smoothing, which may indicate that the most important goal of using income smoothing is to maintain a positive earning level – especially in insurance companies – because of low levels of earnings.

Based on the results and conclusions, the study recommends the following:

1. Conducting similar studies to clarify factors that affect the process of income smoothing in Jordanian companies and identify the necessary methods to reduce income smoothing.

2. Develop laws and regulations that penalize companies that adopt income smoothing (focusing on insurance companies) if they practice income smoothing for fraud, and prohibit companies from using more than one accounting method to reduce the manipulation of financial statements of these companies.

3. Provide information and guidance to users of financial statements and accounting information about income smoothing, where a user can classify the companies and then determine whether the company is pursuing income smoothing or not.

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