

The Matching Characteristics between Revenues and Expenses for Listed Firms in the ASE

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Abstract

The paper aims to examine the matching process for expenses and its items in different periods and over time with associated revenues. The sample includes listed firms in the ASE. The results show that expenses in periods (t-1), (t) and (t+1) are associated with current revenues which add distortion to the matching process. Results also show that this distortion in matching is caused by certain expense items from past and future periods. Moreover, the results show that matching between current expenses and associated revenues has become worse over time.

Keywords: matching; revenues; expenses.

• قسم المحاسبة، جامعة مؤتة.

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خصائص مقابلة الإيرادات مع المصاريف للشركات المدرجة في سوق عمان المالي

طارق زكي مشوقه

ملخص

تهدف هذه الدراسة إلى قياس عملية مقابلة الإيرادات مع المصاريف وبنود هذه المصاريف في فترات مختلفة وعبر الزمن. اشتملت عينة الدراسة على الشركات المدرجة في سوق عمان المالي. أظهرت النتائج أن المصاريف في الفترة السابقة والحالية والمستقبلية مرتبطة مع إيرادات الفترة الحالية الأمر الذي يؤدي إلى حدوث بعض التشوهات في تطبيق مبدأ المقابلة. كذلك أظهرت النتائج أن هذه التشوهات لمبدأ المقابلة سببها بعض البنود من المصاريف من الفترات السابقة والمستقبلية. إضافة إلى ذلك، أظهرت نتائج الدراسة أن مقابلة الإيرادات مع المصاريف للفترة نفسها أصبحت أسوأ مع الزمن.

الكلمات الدالة: مبدأ المقابلة، الإيرادات، المصاريف.

1. Introduction

The underlying purpose of accounting standards and principles is to produce relevant and reliable information for stakeholders whom have interests in the firm. Accordingly, the purpose of financial statements is to provide this information for the users. In recent years, accounting research examined the value relevance and information content of accounting data. Most recently, research focused on the practice and implementation of basic accounting principles; namely, the matching process. The matching principle states that expenses must counterpart with contemporaneous revenues for the same period in order to measure the performance of the firm. This principle later became the foundation of the expenses classification in the income statement. The most important aspect of matching is drawing a direct link between the revenue and the prompting expense in the same period. Thus, expenses that generate revenues in future periods are generally capitalized (e.g., fixed assets). However, the process of matching has been questioned in recent studies. Specifically, the mismatching between revenues and unsuitable expenses is becoming one of underlying reasons of lower earnings quality and lower information content of accounting information.

This paper examines the matching process for listed firms in the Amman Stock Exchange (ASE). The contribution of this paper is providing evidence for the matching process between revenues and expenses in the Jordanian context. This context is considered interesting because of the economic and political developments in the past years. These developments motivated firms to diversify their operations causing them to become more complex. As firm's operations become more diversified, relating expenses with their contemporaneous revenues becomes more complicated. Therefore, the matching between expenses and revenues will decline.

Objectives:

The paper aims to achieve three objectives:

- 1- The paper examines the matching process between current revenues with past, current and future expenses in order to understand why expenses in past and future periods will have an association with current revenues. This will provide explanations to whether expenses are recorded in the proper period.

- 2- The paper will examine the specific associations for each expense items in different periods with current revenues. This will provide an in-depth understanding of how each expense item is recorded and matched with revenues.
- 3- The paper will examine the matching process through time in order to reach conclusions of whether matching has improved or declined over the years. The importance of this objective is determining if mismatching affects the value relevance of reported income for listed firms in the ASE.

Importance of the study:

The importance of this paper is to show the characteristics of matching between revenues and expenses for listed firms in the ASE. Additionally, to examine the major components of expenses in different periods and their association with current period revenues. The paper also highlights the matching properties between expenses and revenues through time.

The paper is organized as follows. Section 2 provides theoretical background; section 3 presents the hypothesis development; section 4 explains the model and sample selection; section 6 provides results and discussion and section 7 the conclusion.

2. Theoretical background and literature review

The accounting literature in recent years has focused on the properties of earnings and the information content of the financial statements. Researchers have questioned the value relevance of the earnings figure and whether it has a real impact on investor's decision making. Accordingly, a large group of studies examined the components of earnings through the decomposition of the earnings figure into accruals and cash flows in order to determine whether information content or noise is added (Bushman et al. 2016; Hribar & Yehuda, 2015; Sloan, 1996). Other studies questioned the effect of the accounting fundamentals on earnings. For example, Penman and Zhang (2002) finds a negative impact of accounting conservatism on earnings quality in certain circumstances. This means that accounting conservatism adds noise to earnings causing the loss of some of its information content. Overall, many studies have focused on examining the persistence of earnings in order to reach a conclusion about the quality of earnings (Dechow et al. 2010).

Moreover, studies looked into the conventional matching practice between revenues and expenses. These studies raised the question of the efficiency of matching in producing an earnings figure that in fact measures the firm's performance. These studies also examined whether firms' are actually matching their revenues and expenses correctly. One of the earliest studies is traced back to the 60's of the past decade. Hylton (1965) in his conceptual paper defines the proper matching practice between revenues and expenses and shows the basis on which the matching process is based upon. He also provides examples of matching and some of its exceptions in practice. The main argument of the paper is that the income statement is prepared entirely on matching the period's revenues and expenses, and this adds objectivity to the earnings figure far away from forecasting problems. Hence, the argument is it's quite difficult to forecast future performance if the matching process is done correctly, especially if taken into consideration the non-recurring items. Therefore, the income statement is entirely based on historical data and is not meant to be used in predicting future earnings, at least not without a great amount of error which leads to higher risk. One of the important conclusions of the paper is that if accruals include estimates of future revenues, then it will definitely add noise to the earnings figure.

Later studies continued examining the matching practice in order to examine the disaggregation of net income (e.g., gross profit, operating income) and its effect on the information content. For example, Fairfield et al. (1996) find that disclosing earnings in a disaggregated manner does not increase the predictive content of reported earnings. In other words, matching sales revenues with cost of sales to produce gross profit does not add significant predictive power to earnings. Therefore, generally matching revenues with expenses will have similar predictive content than when matching specific revenues with their related expenses.

An important study on the matching properties between revenues and expenses is that of Dichev and Tang (2008) which is currently considered a corner stone paper in the matching literature. The paper examines the matching practice between revenues and expenses overtime to determine the changing properties of earnings. The main argument is poor matching adds noise to current earnings through advancing expenses in order to generate revenues. This theory is based on the premise that earnings is shaped by both economic factors and proper matching. The paper finds that matching has become worse over the past 40 years for US firms which leads to an increase in earnings volatility and more negative autocorrelation in earnings

changes. These negative changes in earnings make it lose some of its information content. Accordingly, Donelson et al. (2011) find the changes in revenue-expenses relation is attributable to the increase of large special items reported in the income statement. These items result from changes in real economic events due to the increase competition between firms. Moreover, the paper shows that the increase of mismatching between revenues and expenses are more related to these economic events rather than changes in accounting standards. On the other hand, Prakash and Sinha (2013) show that poor matching might be attributable to deferred revenues. This occurs when firms receive cash payments from customers before providing services or delivering goods. Direct expenses is matched with deferred revenues when realized in future periods, but the incremental costs related to deferred revenues are realized in current periods resulting in poor matching. Similarly, Ball and Easton (2013) find that bad news about the future leads to acceleration in expenses recognition in current periods (e.g., inventory write-offs) whereas when good news is anticipated this recognition of expenses slows down. In other words, poor matching is explained by current and future performance as reflected in stock returns. Srivastava (2014) conclude that the decline of matching between revenues and expenses over the past years has affected the earnings quality negatively. The main reason of poor matching is not attributed to economic events or accounting standards but rather because of changes in the sample of firms due to higher intangible intensity. Similarly, Bushman et al. (2016) shows that poor matching can also be explained by the deteriorated correlation between the accrual and cash flow components of earnings, which is also caused by higher intangible intensity in firms.

He and Shan (2015) find a decline in matching between revenues and associated expenses in 42 countries from the period 1991-2010. The main reason is attributed to economic factors such as low GDP in countries with high percentage of service firms and the presence of large special items. The paper also shows that countries with high investor protection have a higher association between past expenses and current revenues. Moreover, the paper did not find a significant impact of the adoption of IFRS on matching. On the other hand, Jin et al. (2015) show that the adoption of the IFRS has a positive effect on the matching between revenues and expenses for Australian firms. The paper shows an increase in the association between operating expenses and other expenses with contemporaneous revenues. The

reason behind the enhanced matching is the improved classification of expenses and better linkage between the expense item and associated revenues.

3. Hypothesis development

The conceptual framework of the International Financial Reporting Standards (IFRS) and accordingly the Generally Accepted Accounting Principles (GAAP) indicate that expenses are recognized based on the direct association between costs incurred and the resulting benefits (i.e., revenues). This process is referred to as the matching process, presenting the matching principle according to GAAP. This process is emphasized in accounting standards and principles to ensure proper measurement of firms performance and the basis for preparing the income statement.

In this paper, three hypotheses are formulated in order to test matching revenues with expenses. First, the paper examines the contemporaneous relationship between expenses and revenues. If all relevant revenues are matched with associated expenses it will lead to perfect matching, otherwise it will lead to poor matching. In other words, if future and past periods' expenses are more related to current period revenues compared to current period expenses, the result will be poor matching. Based on that, the first testable hypothesis of this study:

H1: Current expenses are more related to associated revenues than future and past expenses.

it is expected to find a relation between past (lagged association) and future expenses (forward association) with current revenues because of the advancing of some expenses to earn revenues in future periods (e.g., R&D expenses) and the recognition of revenues before the recognition of incremental future expenses (e.g., bad debt expense). However, the relation is expected to be stronger between current expenses and current revenues (Dichev and Tang, 2008).

The second hypothesis is formulated to test which component or item of expenses have the highest contemporaneous association with current revenues. This test is to examine which type of expenses (e.g., cost of goods sold, selling expenses, and administrative expenses) in past, current and future periods have the strongest association with current period revenues. Hence, the second testable hypothesis:

H2: Current expenses components are more related to current revenues than future and past expenses components.

The expectation is to find a strong relation for current period expense items. However due to the forward and lagged association, some components of expenses are expected to be related with current period revenues. Moreover, it will examine the under-provision of current expenses. This will also provide explanations to specific practices in firms for advancing expense and deferring revenues. Additionally, it will examine the levels of conservatism (Srivastava, 2014).

The third hypothesis is to test the matching pattern between expenses and revenues over time. Previous studies found that matching has declined over time and has become worse, which results in higher earnings volatility and decreasing earnings persistence and lower earnings quality (Srivastava, 2014; Donelson et al. 2011; Dichev and Tang, 2008).

H3: Matching between revenues and expenses has become worse over time.

The expectation is to find a similar trend in the contemporaneous relationship between expenses and associated revenues as found in previous studies.

4. Model, variables and sample selection

Following Dichev and Tang (2008), this paper measures matching revenues with expenses through the following regression model on annual cross-sectional basis:

$$Revenues_{it} = \alpha_{1it} + \alpha_2 Expenses_{it-1} + \alpha_3 Expenses_{it} + \alpha_4 Expenses_{it+1} + \varepsilon_{it} \quad ..(1)$$

Revenues are measured as net sales revenue; Expenses are measured as follows:

$$\text{Net income}_t = \text{Total Revenues}_t - \text{Total Expenses}_t$$

$$\text{Total Expenses}_t = \text{Total Revenues}_t - \text{Net income}_t$$

The coefficients α_2 and α_4 measure the contemporaneous relation of past and future periods' expenses respectively with revenues. Hence, α_3 is the measure for matching. All terms of equation (1) is scaled with total assets to reduce heteroscedasticity. This model will be used to measure matching for the purposes of testing H1 and H3.

Following Srivastava (2014), this paper applies the following model to test for H2; model 2 will measure the components of expenses in periods t-1, t and t+1 respectively to examine the different associations of expenses items from different periods with current period revenues:

$$\text{Revenues}_{it} = \beta_{1ik} + \beta_2 \text{COGS}_{ik} + \beta_3 \text{SD}_{ik} + \beta_4 \text{GA}_{ik} + \beta_4 \text{DEP}_{ik} + \gamma_{it} \dots\dots(2)$$

Where COGS is cost of goods sold, SD is selling and distribution expenses, GA is general and administrative expenses and DEP is other depreciation expenses; all variables are scaled with total assets. All variables are obtained from the financial reports of listed firms in Amman Stock Exchange (ASE). The sample includes all listed firms with complete data from (2001-2014). The sample consists of (144) firms generating (2016) firm-year observations. Data are organized on annual cross-sectional basis. Financial firms are excluded from the sample because of the difficulty in interpreting conventional income statement components for these firms (He and Shan, 2015; Donelson et al. 2011).

6. Results

The following table shows descriptive results and the correlation matrix for the variables of the study.

Table (1) Descriptive results and correlations

Panel A: Descriptive results						
	<u>Period t-1</u>		<u>Period t</u>		<u>Period t+1</u>	
	<u>Mean</u>	<u>Std. dev.</u>	<u>Mean</u>	<u>Std.dev.</u>	<u>Mean</u>	<u>Std. dev.</u>
Revenues	0.406	0.257	0.411	0.266	0.409	0.258
Expenses	0.389	0.255	0.398	0.255	0.396	0.248
COGS	0.295	0.225	0.302	0.232	0.298	0.226
SD	0.022	0.038	0.022	0.039	0.022	0.039
AD	0.015	0.062	0.016	0.064	0.016	0.066
DEP	0.032	0.028	0.032	0.029	0.033	0.030
<i>Revenues is net sales revenue, Expenses is revenues– net income, COGS is cost of goods sold, SD is selling and distribution expenses, GA is general administrative expenses, DEP is depreciation expenses for. All variables are scaled with total assets.</i>						
Panel B: Correlation matrix						
	Revenues	Expenses t	Expenses t-1			
Revenues	-	-	-			
Expenses t	0.935	-	-			
Expenses t-1	0.845	0.865	-			
Expenses t+1	0.854	0.863	0.790			

The table shows that the biggest expense item is cost of goods sold, followed by depreciation expense, which is even bigger than selling and administrative expenses. This indicates that firms are capital intensive and invest heavily in fixed assets. The size of the expenses items is relatively stable each year. Additionally, the correlation matrix shows that revenues

are highly correlated with lagged and forward expenses as well with current expenses. This indicates that expenses in past and future periods are associated with revenues in current period, which suggests some distortion in the matching process.

Table (2) shows results for H1; model (1) is applied on the whole sample on cross sectional basis. As expected current period expenses is highly significant with current revenues and more related compared to expenses from past and future periods. This result makes absolute sense in terms of matching; where current revenues are highly associated with current expenses.

Table (2) Measuring matching between revenues and expenses on whole sample			
	Expenses _{t-1}	Expenses _t	Expenses _{t+1}
Coefficient (α)	0.1184	0.735	0.168
t-value	5.56 ***	27.95 ***	8.05 ***
Adjusted R ² = 0.887			
$Revenues_{it} = \alpha_{1it} + \alpha_2 Expenses_{it-1} + \alpha_3 Expenses_{it} + \alpha_4 Expenses_{it+1} + \epsilon_{it}$			
The model is applied on cross sectional basis Revenues _{it} is net sales revenue for firm i in period t. Expenses _{it} is measured as Revenues– Net Income for firm i in periods t-1, t, t+1 respectively. All variables are scaled with total assets ***indicates significance level at 1%			

Moreover, the coefficients of expenses in period (t-1) and in period (t+1) are also significant. This indicates that current revenues are also associated with expenses in previous and subsequent periods. However, the coefficient for expenses in period (t+1) is higher than the coefficient for expenses in period (t-1): 0.168 compared to 0.735. In other words, future period expenses are more associated with current revenues.

The association between expenses in (t-1) and current revenues can be explained as indication of accounting conservatism. Firms charge expenses in advance in previous periods before revenues are recognized. These expenses are management expectation for next period's expenses and are required to record them early even before recognizing revenues in order to report their financial results in a prudent manner. On the other hand, the association between current revenues and expenses in subsequent periods can be explained by understating or under-provisioning current expenses. This will lead to some distortions in the matching process and consequently distorting the value relevance of reported earnings. Understating current period expenses will trigger a catch-up effect in subsequent periods, which leads to an association between current revenues and future expenses. For example, if there is an understatement for the value of assets or the amount of depreciation expenses, the catch-up effect will occur in future periods in the form of impairment losses.

Model (2) elaborates the components of expenses to examine each individual item and its effect on matching with current period revenues from periods (t-1); (t); (t+1). Results are shown in the following table.

Table (3) Measuring matching based on components of expenses			
$Revenues_{it} = \beta_1 i_{ik} + \beta_2 COGS_{ik} + \beta_3 SD_{ik} + \beta_4 GA_{ik} + \beta_5 DEP_{ik} + \gamma_{ik}$			
	Period t-1	Period t	Period t+1
COGS	-0.133	0.969 ***	0.0498
SD	-0.689 ***	1.214 ***	0.470 ***
GA	0.239 **	0.595 ***	0.226 *
DEP	0.933 ***	0.697 ***	0.0167
Revenues is net sales revenue for firm i in period t COGS is cost of goods sold for firm i period k. SD is selling and distribution expenses for firm i period k. GA is general administrative expenses for firm i period k. DEP is depreciation expenses for firm i period k All variables are scaled with total assets to reduce heteroskedasticity. ***, **, * , indicates significance level at 1%, 5%, 10% respectively			

For COGS it is only significant in period (t) because it is a direct expense related only to its contemporaneous revenue. On the other hand, GA is significant in the three periods. This suggests that administrative expenses are mismatched with revenues. The significant relationship of GA in period (t-1) could be an indication of recording some items of the administrative expenses in advance before the recognition of associated revenues (i.e., evidence of conservatism). Examples of such items could include office supplies that might all be expensed in the period even before the occurrence of related revenues because of the difficulty of tracing them directly to the benefits that might occur in future periods. On the other hand, the significance of GA in period (t+1) could suggest that some items of administrative expenses were underestimated in the previous period which triggered a catch-up effect. The over (under) estimation of administrative expenses in period's t-1 and t+1 respectively, indicates the difficulties facing firms in establishing a direct relationship between some expenses and their associated revenues. This leads to some distortions in the matching process which could result in the loss of information content of reported earnings.

Similarly, SD is significant in three periods, and has the highest coefficient in period t, even higher than COGS (1.214). This suggests that selling expenses are more related to associated revenues because firms can directly link them to revenues in the same period. The significance of SD in period t+1 suggest that some items are understated. For example, some firms may pay sales commissions to their employees based on prior period sales levels as part of the reward or compensation arrangement. The interesting result is that SD in period t-1 has a negative effect. In other words, selling and distribution expenses in prior periods are not only recorded before the associated revenues, but also affect revenues negatively. Based on this result, one might conclude that advertising expenses for example, are expensed before the occurrence of sales and affects them negatively. As the advertising expenses increases, sales levels drop; a conclusion that does not make sense. However, this can be related to firms' special characteristics and uniqueness of their operations

Depreciation expense is significant in period's t and t-1. However, the coefficient in period t-1 is higher than in period t (0.933 compared to 0.697). That is, depreciation expenses from previous period are more associated with current revenues compared to depreciation in current period. Anecdotal evidence from the profession indicates that Jordanian firms apply the

straight line method to record depreciation expense to comply with tax regulations and to avoid deferred taxes. One of the issues related to the straight line method is that it does not provide good matching. The depreciation expenses is the second largest item (mean value of 0.032) immediately after cost of goods sold, which means that depreciation has a significant effect on the matching process. Thus, depreciation expenses are overestimated when recorded and matched improperly with the irrelevant revenues. This also adds more problems to mismatching, inducing further distortion to the value relevance of reported income. Firms can overcome this problem by applying other methods to compute depreciation that will produce better matching.

Matching between expenses and revenues is examined through time. Model (1) is applied on cross sectional basis each year from 2002 to 2013. Results are shown in table (4).

Table (4) Measuring matching between revenues and expenses across time			
Years	α_2	α_3	α_4
2002	0.0880	0.9563	0.0186
2003	0.1716	0.8015	0.0346
2004	0.1791	0.6754	0.1606
2005	0.0150	0.7643	0.2470
2006	0.2559	0.6603	0.1379
2007	0.1191	0.8593	0.0198
2008	0.1544	0.6725	0.2433
2009	-0.0071	0.8917	0.1378
2010	0.1704	0.4927	0.3873
2011	0.0847	0.7356	0.1945
2012	0.1245	0.7714	0.1279
2013	0.1875	0.6389	0.1782

$Revenues_{it} = \alpha_{1it} + \alpha_2 Expenses_{it-1} + \alpha_3 Expenses_{it} + \alpha_4 Expense_{it}$

The model is applied each year on cross sectional basis.
 α_3 is measure for matching and significant in each year at a 1% level.
 Revenues_{it} is net sales revenue for firm i in period t.
 Expenses is measured as Revenues– Net Income for firm i in periods t-1, t, t+1 respectively.
 All variables are scaled with total assets.

The coefficient (α_3) is the measure for matching between current period's expenses and contemporaneous revenues. As the results show, (α_3) is statistically significant in each year. The measure of matching is highest in the first year (0.956) but decreases to (0.639) in the last year. The trend for the measure and the percentage change is presented in figure (1). Although the general trend for the measure is declining throughout the years, there are a few increases in some of the years. The measure declines steadily in the first three years (-16%) but slightly increases in the fourth year (+13%) and slides down in the fifth year (-14%). The noticeable pattern in the measure is it always decreases significantly after a slight increase in the year before. The measure in the last year drops down to (-17%); the percentage change between first year in the sample and the last year is (-33%). The results confirm the hypothesized relationship; matching between current period's expenses and contemporaneous revenues has declined over time. Consequently, it can be concluded that the value relevance and the information content of reported earnings are becoming lower as the years progresses. Alternatively, expenses in period (t-1) follow a similar pattern, but increases in recent years. This shows that the relation between lagged expenses and current revenues is becoming more significant and can be explained as evidence of increasing conservatism. On the other hand, expenses in period (t+1) is significant in most years (except in years 2003 and 2007) indicating a relationship with current period's revenues. This result is explained by the underestimation of expenses as mentioned in the previous section.

There are several possible explanations for the mismatching between revenues and expenses. There could be some problems related to the classification of certain items. For example, some items might be classified as expenses when in fact they should be classified as prepaid items. These items could result in mismatching and might contribute to the significant relation between expenses in period t+1 with current revenues. Moreover, some firms might find it difficult tracing some items and linking them directly to current revenues resulting in increase mismatching. The difficulty of tracing certain expenses to associated revenues could be a result of the growth in firms' operations and the increasing complexity and diversity of their operations. Most firms diversify their operations in order to reduce risk or minimize the effect of sales seasonality. As a result, some items might be capitalized instead of expensing them in the current period; this adds distortions to the matching process.

The mismatching can play a critical role in decreasing the value relevance of reported earnings. If revenues are matched with unrelated and irrelevant expenses, then the resulting net income will have less information content. In other words, net income will become a weak measure of the firm’s performance. Therefore, firms must practice with higher cautiousness when relating expenses with associated revenues.

The conceptual framework of the IFRS clearly states that any expense that have a direct association with revenues must be recognized immediately in the same period as the revenue in order to have proper matching. Moreover, generally accepted accounting principles focus on the matching process to the extent it considers it one of the fundamental principles of accounting which underlines the proper measurement of performance.

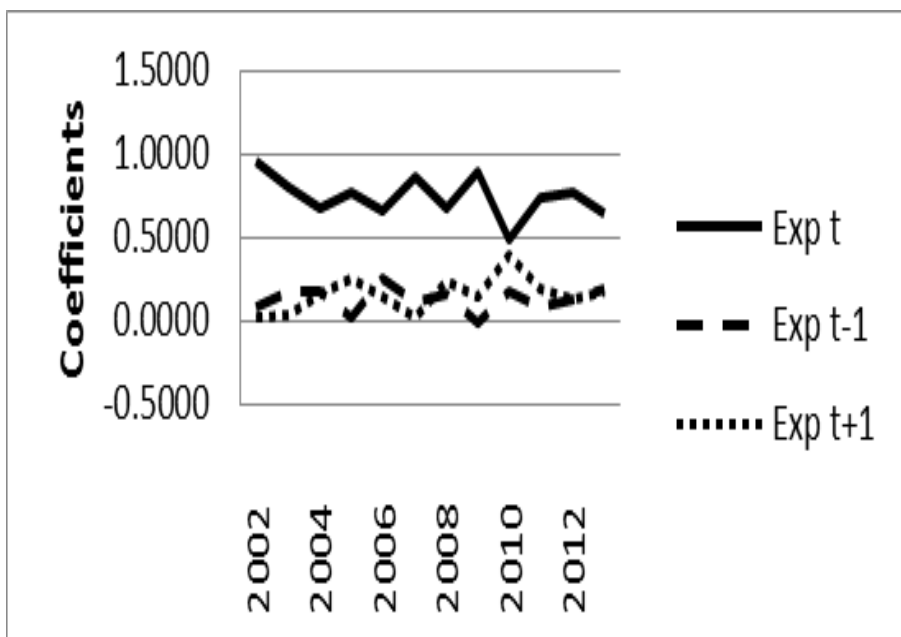


Figure (1) Panel A: Coefficients of Regressing Revenues in period t on Expenses in periods t, t-1, t+1 from period 2002-2013

Panel B: Percentage change in coefficients												
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
Exp t		-16%	-16%	13%	-14%	30%	-22%	33%	-45%	49%	5%	-17%
Exp t-1	95%	4%	-92%	1607%	-53%	30%	-105%	-2492%	-50%	47%	51%	
Exp t+1	87%	364%	54%	-44%	-86%	1129%	-43%	181%	-50%	11-34%	39%	

The figure plots the slope coefficients resulting from model (1):

$$Revenues_{it} = \alpha_{1it} + \alpha_2 Expenses_{it-1} + \alpha_3 Expenses_{it} + \alpha_4 Expenses_{it+1} + \epsilon_{it}$$

Revenues_{it} is net sales revenue for firm i in period t. Expenses is measured as Revenues– Net Income for firm i in periods t-1, t, t+1 respectively. All variables are scaled with total assets. Percentage change is computed as first difference between two years relative to previous year: $(\alpha_t - \alpha_{t-1} / \alpha_{t-1})$.

7. Conclusion

This paper examines the association between expenses and revenues for listed firms in the ASE. According to the conceptual framework of the IFRS, the importance of proper matching is accurately measuring the firm's performance through connecting the efforts with the accomplishments. Conversely, mismatching will insert distortions in reported income. The paper measures mismatching by using a model developed by Dichev and Tang (2008); where revenues in current period are regressed on expenses from past, current and future periods. Moreover, the paper builds on the model developed by Srivastava (2014) to examine the associations between current revenues expense items from different periods.

Results show that current expenses are highly associated with current revenues but past and future expenses are significantly associated with current revenues as well. The significant relationship of past expenses is an indication of conservatism; firms' record expected expenses in advance to report in a prudent and conservative manner. On the other hand, the relationship between future expenses and current revenues indicates the presence of underestimating some of the expense items, which triggers a catch-up effect in future periods. Moreover, results for specific expense items show that selling expenses in past, current and future periods are highly associated with current revenues. Misclassifications of these expenses are the underlying reason for mismatching. The interesting result is that selling expenses in past periods have a negative effect on matching. This might indicate that some of the selling expenses are misclassified and recorded in different periods.

Results also show that matching has declined over the past years for listed firms in the ASE. This indicates that firms are facing troubles when tracing direct expenses with the revenues and the result is poor matching. One possible explanation is that firms may have diversified their operations in the past years in order to reduce risk. This contributed to the misclassification problem and the higher difficulty in linking expenses with associated revenues. The mismatching between revenues and expenses can be a reason for higher earnings volatility. This will decrease the value relevance of reported income, resulting in loss of information content.

Future research should focus on the characteristics of firms to further examine underlying reasons for poor matching for listed firms in the ASE. Additionally, future studies might include other factors such as level of risk, target income and whether the mismatching might be caused by earnings manipulation. Moreover, future research should take into consideration the effect of applying the international standards (IFRS). The results in this paper can be also used to compare the Jordanian case with results from other countries in the region to examine whether mismatching is a general trend.

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