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The Impact of Related-party Transactions on Earnings' Management of Jordanian Non-financial Listed Companies: The Moderating Role of Audit-firm Type

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ABSTRACT

This study aims at investigating the impact of related-party transactions on earnings' management of the Jordanian non-financial listed companies and the impact of the Audit-firm Type as a moderating variable on this relationship. Content analysis of the financial reports of the non-financial companies was used to achieve the objectives of the study. The data used in the analysis was collected from a sample of 26 service firms and 24 industrial firms that were continuously listed in the Amman Stock Exchange during the period from 2014 to 2018, which resulted in 250 observations. Descriptive statistics and multiple-regression analysis were used to analyze the data and test the hypotheses.

The study results revealed that there is a significant positive impact for related-party transactions on earnings' management. The results also revealed that there is an insignificant impact for the audit-firm type as a moderating variable on the relationship between related-party transactions and earnings' management.

Based on the results of the study, the researchers recommend regulatory bodies as well as decision-makers to improve the monitoring mechanisms over companies and audit firms to reduce earnings' management. Also, Jordanian companies are recommended to disclose adequate and appropriate information about their related-party transactions, which may result in an increase in investors' trust in financial reporting.

Keywords: Earnings' management, Related-party transactions, Audit-firm type, Discretionary accruals.

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أثر العمليات مع الأطراف ذات العلاقة على إدارة الأرباح في الشركات الأردنية غير المالية المدرجة: دور نوع شركة التدقيق كمتغير معدل

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ملخص

هدفت هذه الدراسة إلى اختبار أثر العمليات مع الأطراف ذات العلاقة على إدارة الأرباح في الشركات الصناعية والخدماتية الأردنية غير المالية المدرجة، ودور نوع شركة التدقيق كمتغير معدل لهذه العلاقة. ولقياس إدارة الأرباح، تم استخدام أنموذج جونز المعدل 1995 لتقدير المستحقات الاختيارية. طبقت هذه الدراسة على عينة مكونة من 24 شركة من القطاع الصناعي و26 شركة من القطاع الخدماتي خلال الفترة من عام (2014) إلى عام (2018)، وقد بلغ عدد المشاهدات النهائية 250 مشاهدة. وتم استخدام الإحصاءات الوصفية وتحليل الانحدار المتعدد لتحليل بيانات الدراسة واختبار فرضياتها. وقد أظهرت نتائج الدراسة أنه يوجد أثر إيجابي هام للعمليات مع الأطراف ذات العلاقة على إدارة الأرباح، وأنه لا يوجد أثر هام لنوع شركة التدقيق كمتغير معدل على هذه العلاقة. وفي ضوء النتائج التي توصلت إليها الدراسة، أوصى الباحثون بمجموعة من التوصيات؛ من أهمها ضرورة قيام الجهات الرقابية ومتخذي القرار في الشركات الأردنية بتحسين الرقابة على هذه الشركات من أجل التخفيف من ممارسات إدارة الأرباح. كذلك أوصى الباحثون الشركات الأردنية في بورصة عمان بضرورة الإفصاح عن معلومات كافية ومناسبة عن تعاملاتها مع الأطراف ذات العلاقة، مما قد يزيد من ثقة المستثمرين في التقارير المالية لتلك الشركات.

الكلمات الدالة: إدارة الأرباح، الأطراف ذات العلاقة، المستحقات الاختيارية، نوع شركة التدقيق، الشركات الصناعية، الشركات الخدماتية.

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1. Introduction

Accounting numbers, quality of external audit and earnings' management are of major concern subsequent to financial crises (Chambers, 1999; Al-Thuneibat et al., 2016; Abbadi et al., 2016; Alzoubi, 2016; El-Helaly, 2018; Abdullatif et al., 2019; Anissa et al., 2019; Alhadab et al., 2020; Daoudieh, 2021; Al Karaki & Al-Thuneibat, 2022; Gavana et al., 2022a). Earnings' management (EM) is defined as the creative use of accounting principles to generate financial statements in a way that would reflect a distinguished view and image of the firm (Kitiwong, 2014). Management intervention in earnings using discretion within Generally Accepted Accounting Principles (GAAP) to attain some desired results is a type of earnings' management (Al-Thuneibat et al., 2016; Abbott et al., 2007; Davidson et al., 2005).

Research related to earnings' management revealed that there are many factors that affect earnings' management including firms' performance (Amawi & Abu Nassar, 2021; Zimon et al., 2021), financial distress (Daoudieh, 2021), firm value and governance (Abigail & Dharmastuti, 2022), related-party transactions (Munir & Gul, 2010; Subastian et al., 2021; Abigail & Dharmastuti, 2022). Moreover, Gavana et al. (2022b) provided evidence of an association between RPTs and earnings' management. In other words, transactions with related parties may be used as a substitute or a complement to other forms of earnings' manipulations.

This means that one of the important issues related to earnings' quality and earnings' management is related-party transactions (RPTs). These transactions are defined as transactions that occur between the firm and other individuals or organizations having a significant influence on its decisions or *vice versa* (Kohlbeck & Mayhew, 2017).

RPTs may be used as a mechanism for fraudulent financial reporting (El-Helaly et al., 2018; Hu et al., 2012; Henry et al., 2007; Kohlbeck & Mayhew (2017). According to these studies, there is an association between RPTs and the possibility of material misstatements. The management may deliberately undertake transactions with related parties without complying with disclosure requirements, as pointed out by the (IAS 24) International Accounting Standard 24 (IASB, 2001).

The IAS 24 states that an entity's financial statements must contain the disclosures necessary to draw attention to the possibility that its financial statements may have been affected by the existence of related parties and by transactions and outstanding balances, including commitments, with such parties. Moreover, (ISA 550) (IAASB, 2017)) states that the audit of related-party transactions is an essential part of an audit of financial statements. These transactions may give rise to specific risks of material misstatement of the financial statements, including the risk of fraud, because of the nature of related-party relationships.

External auditors are expected to play an important role in preventing and detecting any misuse of external financial reporting (Abuyahia & Al-Thuneibat, 2019). External auditors should reasonably assure users of financial statements about the quality of the reported accounting information (Arens et al., 2021). In other words, higher audit quality is expected to restrict a management's ability of using RPTs in manipulating earnings. The audit process is supposed to serve as a monitoring device (Al-Thuneibat et al., 2011), which reduces managers' opportunities and incentives to manipulate reported earnings.

The relationship between audit quality and EM has been explored for a long period (Gul et al., 2009; Rankin et al., 2012; Tepalagul and Lin, 2015; Alhababsah, 2019; Alhadab et. al., 2020, Almarayeh et al., 2020). It is argued that large audit firms are expected to perform extensive audit procedures, because they have more resources and have highly skilled employees compared to small audit firms (DeAngelo, 1981). High-quality audits are expected to reduce the possibility of using EM for manipulating accounting numbers (Becker et al., 1998). Therefore, it

can be hypothesized that audit quality plays an important role in moderating the relationship between RPTs and EM.

Like all other emerging markets, in Jordan, the Amman Stock Exchange (ASE) is a market that suffers from high inflation rates, increased taxes, slow growth in the business sectors and poor stock-return performance since 2008 (www.tradingeconomics/jordan.com), which may lead managers to deliberately exercise more accounting-discretion practices in the form of EM.

Moreover, the reports published by the ASE show confusing statistics of increased liquidations and low stock prices over the last years. This context may lead corporate managements to use various mechanisms of EM practices. During the past decades, many Jordanian regulations related to the adoption of the International Financial Reporting Standards (IFRS) and International Standards on Auditing (ISA) were enacted. These regulations concentrated on financial transparency and disclosure requirements. Therefore, Jordan seems to provide an appropriate setting to test the relationship between disclosure requirements and earnings' management; that is to test the impact of RPTs on EM. Moreover, because external auditing is one of the corporate governance mechanisms, it is very important to investigate its role in mitigating the expected negative effects of RPTs on EM.

Additionally, the Jordan Securities Commission (JSC, 2017) issued instructions about corporate governance, including some instructions that must be followed when considering RPTs. These instructions tightened the requirements that must be met when the company is involved in RPTs. For example, the instructions state that a firm may not execute RPTs unless that is approved by the board of directors and the general assembly after obtaining the evaluation and opinion of the external auditor in this regard (JSC, 2017, Article 16).

This context motivates researchers to test issues pertinent to earnings' management, related-party transactions and auditing. Therefore, this study investigates the impact of related-party transactions on earnings' management of Jordanian non-financial listed companies and the impact of the Audit-firm Type as a moderating variable on this relationship.

Although some literature exists investigating the impact of RPTs on EM all over the world, as far as the researchers are aware, this study is a pioneer study in Jordan that investigates the impact of the Audit-firm Type, as a moderating variable, on the relationship between related-party transactions and earnings' management in the Jordanian context. To achieve the objectives of the study, the researchers used a content analysis of the financial reports of 50 non-financial companies, including 26 service companies and 24 industrial companies that were continuously listed in the Amman Stock Exchange during the period from 2014 to 2018. The study results revealed that there is a positive significant impact for related-party transactions on earnings' management, but there is an insignificant impact for the audit-firm type on the relationship between related-party transactions and earnings' management.

The results of the study provide additional evidence on the association among the studied variables. The findings of the study are expected to be beneficial to all users of financial statements who are concerned about the usefulness of the financial information. Moreover, the study will be useful for researchers who will investigate the implications of EM.

The rest of the research consists of Section 2 that briefly considers the related literature and develops the research hypotheses. Section 3 discusses the data and empirical methodology. Section 4 shows the main results, and Section 5 presents the conclusions, recommendations, and limitations of the study.

2. Literature Review and Development of Hypotheses

Reviewing the related literature, one can conclude that there is no agreement upon a single definition of

EM, where its definitions may range from income smoothing and signaling value relevant information enhancing the ability of financial reporting to predict future, to violating the International Financial Reporting Standards in the form of fraudulent financial reporting. Research looking at EM as opportunistic (Kassem, 2012) views EM practices as dishonest procedures or just energetic legal actions. Additionally, other research studies described EM as deliberate steps to benefit from the flexibility in the GAAP to attain a preferred level of earnings (Davidson et al., 1987; Schipper, 1989; Al-khabash & Al-Thuneibat, 2009; Zimon et al., 2021). Moreover, Stolowy and Breton (2004) defined EM as an accounts' manipulation, where the management uses accounting choices to alter the transactions to affect the political cost, cost of capital and management compensations. Additionally, managers may use earnings' management to avoid reporting losses (Degeorge et al (1999), meet earnings expectations (McKee, 2005), or enlarge their bonuses (Al-Thuneibat et al., 2016).

On the other hand, Dechow and Skinner (2000) demonstrated that it can be difficult to assign negative connotations to EM, because it is difficult to assess words such as "deliberately to mislead" when undertaking EM practices. However, they emphasized the necessity for judgements and estimates when applying accrual basis, so as to ensure that the accrual choice provides a better measurement of economic performance than the cash choice. According to them, EM could always be considered as a useful tool when it is employed properly. Healy and Wahlen (1999) pointed out that in addition to misleading some stakeholders, EM can be used to enhance financial reporting through signaling value relevant information. Holland and Ramsay (2003: 42) clarified that in addition to signaling value relevant information, the management may use internal knowledge to smooth income and improve the ability of the financial reports to predict future performance. Researchers add that discriminating among corporations' possible incentives for EM can be difficult. The smoothing rationale is also proposed by Barth et al. (1999).

It appears that earnings' management is generally used to describe several legitimate and illegitimate methods by which a company's management can alter earnings or the financial performance of a company (Rosetti, 2003). He added that the decision of managing earnings, legally or illegally, upwards or downwards, depends on the motives of the management. These motives can be related to the market, contractual agreements, and other factors. Managing earnings can be achieved by taking advantage of flexibility in GAAP or by engaging in real operating decisions, which are made at the discretion of the management (Al-Khabash & Al-Thuneibat, 2009). However, Al-Momani (2006) studied the extent of exploiting the flexibility available in accounting standards by Jordanian firms through applying the modified Jones model on 70 firms listed in the Amman Stock Exchange over the period (1997-2003) and concluded that most managers engage in EM by exploiting that flexibility.

From another aspect, a related-party is a person or entity that has a control, joint control, or significant influence over the company. A related party may include a subsidiary, associate, principal owners, officers, or directors (Gordon et al., 2004; Gordon et al., 2007), or shareholders, members of boards of directors, and affiliated companies (Kang et al., 2014), or an executive manager, a member of board, and close family relatives (Huang & Liu, 2010). Additionally, Habib et al. (2017a) considered political connections as related-party transactions. Finally, the 2008 Corporate Governance Code states that related parties may include, in addition to the above categories, persons holding over 5% of shares issued by a company or any of its affiliates.

IAS 24 defines an RPT as a transfer of services, obligations, or resources between a reporting entity and a related party. IAS 24 requires ensuring appropriate disclosure about related-party transactions

to draw the attention of financial statements' users to such transactions and related possible effects on the financial position and reported income. It states that managements of corporations must make full disclosure about such transactions and outstanding balances within the body of financial statements or within the notes.

RPTs may benefit companies in general or may be used to benefit larger, but not smaller, shareholders (Williams & Taylor, 2013; Di Carlo, 2014; El-Helaly et al., 2018; Jeon, 2019; Arens et al., 2021). Such transactions may affect earnings' quality and/or may be used as a mechanism for fraud (Hu et al., 2012; Henry et al., 2007). Kohlbeck and Mayhew (2017) stated that there is an association between RPTs and the possibility of material misstatements. Additionally, Lee et al. (2014) reported that an increase in the size and volatility of RPTs reduces the comparability of financial statements. Managements may deliberately conduct transactions with related parties without complying to disclosure requirements as mentioned in IAS 24 (Hayes et al., 2014; Limanto & Herusetya, 2016). Mahtani (2019) explored the association between RPTs and earnings and found that this relationship depends on the type of the RPT. Additionally, Rasheed et al. (2018) concluded that there is a statistically significant relationship between RPTs and EM. Likewise, El-Helaly (2018) after reviewing the literature about related-party transactions concluded that RPTs are more likely to exhibit a negative, rather than a positive, relationship with the quality of reported earnings. He added that the results of prior studies have shown that RPTs are more likely to be associated with earnings' management.

In Jordan, Alzoubi (2016) concluded that there is a negative association between disclosure quality and earnings' management. Therefore, he stated that Jordan provides an appropriate setting to test the relationship between disclosure quality and earnings' management. Likewise, Alhadab et al. (2020) examined the relation between related-party transactions and both accrual earnings' and real earnings' management practices in Jordanian industrial public-listed companies. They concluded that accrual earnings' management is negatively associated with related-party transactions, whereas no statistically significant relationship between real earnings' management and related-party transactions exists.

Based on the previous theoretical discussion about the relationship between EM and RPTs, we formulate the first hypothesis as follows:

HA_1: *There is a statistically significant impact of RPTs on EM across Jordanian non-financial firms.*

A related aspect is that of audit quality. Researchers used many proxies to measure audit quality, including Audit-firm Type, audit fees, non-audit service fees and industry specialization (DeAngelo, 1981; Francis & Krishnan, 1999; Wooten, 2003). Other studies used audit tenure as a proxy for audit quality (Shockley, 1982; Deis & Giroux, 1992; Wooten, 2003), auditor litigation (Palmrose, 1988), audit fees (Lindberg, 2001), audit-firm type assuming that the bigger the size of the audit firm is, the higher is the quality of the audit (DeAngelo, 1981; Craswell et al., 1995; Wooten, 2003). When defining audit quality, DeAngelo (1981) concentrated on the possibility that a given auditor discovers and reports a failure in the client's accounting system. This definition refers to two important pillars of audit quality, including the auditor's competence and the auditor's independence. Palmrose (1988) related audit quality to the assurance level performed by the auditor; that is, a higher level of assurance that the financial statements include immaterial misstatements means a higher quality of audit. Additionally, Bradshaw et al. (2001) stated that audit quality includes reporting any material misstatement that may increase uncertainty or going concern problems. Moreover, Anissa et al. (2019) showed that an auditor's industrial specialization has a negative effect on real EM.

Some researchers assumed that the type of audit firm (Big-4 or non-Big-4) is the most relevant proxy that can

be used for audit quality (Davidson, 1993; Becker et al., 1998; Jara & Lopez, 2007; Can, 2019; Bonacchi et al., 2018). Can (2019) proposed that the Big-4 audit firms have a decreasing effect on EM through discretionary accruals, and that the discretionary accruals increase when local audit firms conduct the audit. Similarly, Bonacchi et al. (2018) found that the Big-4 audit firms mitigate accrual EM at the subsidiary level. Likewise, Becker et al. (1998) showed that clients of non-big audit firms use discretionary accruals more than clients of big audit firms. Jara and Lopez (2007) concluded that external auditing constraints managerial discretion and improves the quality of financial reporting. They proposed that the Big-4 audit firms restrain EM more than the non-Big-4 audit firms. DeAngelo (1981) argued that the independence and competence of large audit firms result in a higher quality of audit. Finally, Davidson (1993) supported the use of Audit-firm Type as a proxy of audit quality.

Moreover, many research papers, using several techniques to measure audit quality, documented that RPTs are at a relatively low level when companies have a high quality audit (DeAngelo, 1981; Palmrose, 1988; Huyghebaert & Wang, 2012; Cheng et al., 2015; Habib et al., 2017b; Rasheed et al., 2018). A reasonable assumption then is that Audit-firm Type can be a determinant factor of the relationship between RPTs and EM. However, In Jordan, Abdullatif et al. (2019) investigated the financial and governance factors that determine related-party transactions (RPTs). Their study showed that RPTs are negatively related to CEO-duality and board independence, while they are positively related to firm leverage, ownership concentration, board size, and audit quality. Moreover, Almarayeh et al. (2020) argued that, within the Jordanian context, external auditors can function differently from the Anglo-Saxon and West-European countries regarding their role in restricting earnings' management. They concluded that there is no influence for audit-firm size on mitigating the level of earnings' management, suggesting that the differences in audit quality between Big and Non-Big audit firms may be not observed, and this result is consistent with the findings of Jordanian studies (Sharaf & Abu Nassar, 2021; Al-Mousawi & Al-Thuneibat, 2011) that concluded that there is an insignificant effect of audit-firm size on earnings' management.

Based on the previous theoretical discussion, we formulate the second hypothesis as follows:

HA$_2$: *There is a statistically significant impact of Audit-firm Type on the relationship between RPTs and EM across Jordanian non-financial firms.*

3. Data and Methodology

3.1 Data

This section illustrates the methodology, including research design, sample, and the variables' measurement. The research employs a quantitative approach; using content analysis of the financial data collected from the annual reports of the non-financial companies listed in the ASE. The population according to the *Companies Guide-2018* consists of 83 firms (44 service firms and 39 industrial firms). However, the sample includes only the firms that have reported their RPTs over the whole study period (2014-2018). Those firms that have no RPTs are excluded, because we concentrated on the disclosure level and distinguished between those firms with a level of RPTs' disclosure of more than one percent of a firm's total assets and those with a level less than 1% of a firm's total assets (Ryngaert & Thomas, 2012). They argued that setting a cut-off figure of 1% of total assets is a widely used method to minimize the measurement error of this variable.

In addition, a firm to be included in the sample must have published all information required for the variables' measurement. Therefore, the final sample consists of 50 firms (26 service firms and 24 industrial firms). The data is obtained directly from the annual financial reports using the Amman Stok Exchange website.

3.2 Methodology

According to the related literature, EM of a firm can be viewed as the difference between the firm's *actual* and *normal* accruals. Calculating *actual* accruals can be straight forward using either the income statement approach or the statement of financial position approach. However, estimating normal accruals can be somewhat arguable. A well-specified model that ensures producing the lowest possible statistical type-*I* and-*II* errors is needed. This is a very critical point, because if the model produces estimated normal accruals higher (lower) than what should be, a lower (higher) abnormal accrual (EM) will be observed, interpreted as the firm adopted income decreasing (increasing) accruals' procedure. Therefore, this study uses the discretionary accruals' model that was originally initiated by Jones (1991), and then later modified by Dechow et al. (1995) to proxy for EM. We refer to this model as the Modified Jones Model (1995), or merely as (MJM, 1995). This model has been widely used in many studies that addressed EM (Rachappa et al., 2016).

Total accruals ($TACC_{it}$) for a firm ($_i$) in year ($_t$) using the income statement approach are defined as the difference between the firm's net income from operations (NIO_{it}) and its cash provided by operating activities (OCF_{it}), as follows:

$$TACC_{it} = NIO_{it} - OCF_{it} \quad (1)$$

TACC can be calculated using Equation (1) for the 50 sample firms included in a specific year over the period (2014-2018). Then, the following (MJM, 1995) regression model is used:

$$TACC_{it}/TA_{i,\,t-1} = \beta_1(1/TA_{i,\,t-1}) + \beta_2((\Delta REV_{it} - \Delta REC_{it})/TA_{i,\,t-1}) + \beta_3(PPE_{it}/TA_{i,\,t-1}) + e_{it} \quad (2)$$

where:

$TACC_{it}$ = total accruals for firm $_i$ in year $_t$,

$TA_{i,\,t-1}$ = total assets for firm i in year $_{t-1}$,

ΔREV_{it} = a change in revenues for firm $_i$ between years $_t$ and $_{t-1}$,

ΔREC_{it} = a change in receivables for firm $_i$ between years $_t$ and $_{t-1}$,

PPE_{it} = gross plant, property, and equipment for firm $_i$ in year $_t$, and

β_1, β_2 and β_3 = coefficients for firm $_i$.

To avoid the problem of heteroscedasticity, all variables in Equation (2) were scaled by lagged total assets (A_{t-1}), (Gil et al., 2016).

According to Dechow et al. (1995), variables in Equation (2) are the most related to the operating cycle and are therefore used as the determinants of normal accruals. It is also worth noting that the (MJM, 1995), in the estimation period (Equation (2)) differs from the original Jones (1991) model in that it subtracts the change in receivables from the change in revenues, whereas the Jones (1991) model does not. For justifying this treatment, Dechow et al. (1995) argued that firms' managements may manipulate the sales account during the estimation period. Once the estimated parameters $\hat{\beta}_1$, $\hat{\beta}_2$ *and* $\hat{\beta}_3$ are obtained through fitting Equation (2) using ordinary least squares regression, the DA_{it} (discretionary accruals representing the amount of EM for firm $_i$ in event year$_t$) will be determined as the difference between $TACC_{it}$ (actual total accruals for firm $_i$ in event year $_t$) and the estimated NDA_{it} (non-discretionary "normal" accruals for firm $_i$ in event year $_t$), all deflated by lagged total assets, as follows:

$$DA_{it}/TA_{i,\,t-1} = TACC_{it}/TA_{i,\,t-1} - \{\hat{\beta}_1(1/TA_{i,\,t-1}) + \hat{\beta}_2((\Delta REV_{it} - \Delta REC_{it})/TA_{i,\,t-1}) + \hat{\beta}_3(PPE_{it}/TA_{i,\,t-1})\} \ldots \quad (3)$$

where:

NDA_{it} = non-discretionary accruals for firm $_i$ in event period year $_t$,

$\hat{\beta}1$ $\hat{\beta}2$ and $\hat{\beta}3$ = estimated coefficients for firm $_i$.

All other variables in Equation (2) are defined as in Equations (1 & 2).

DA may have positive (negative) values, referring to firms managing earnings through accruals upwardly (downwardly), respectively (Li, 2019).

Once the DA_{it} is obtained for all 250 firm-year observations (referring to the magnitude of EM

achieved by the firms) using Equation (3), the model to test the first hypothesis is as follows:

$$DA_{it} = \alpha + \beta_1 RPT_{it} + \beta_2 Lev_{it} + \beta_3 MB_{it} + \beta_4 FrmSize_{it} + e_{it} \quad (4)$$

where:

DA_{it}: the absolute value of discretionary accruals (EM) for firm $_i$ in year $_t$, obtained using the (MJM, 1995).

RPT_{it}: related-party transactions for firm$_i$ in year$_t$. Researchers stated that using a dummy variable for measuring RPTs would overcome measurement errors associated with using the dollar value (Ryngaert & Thomas, 2012). Therefore, we will give RPT a value of one if the total value of disclosed RPTs is more than 1 percent of a firm's total assets and zero otherwise (Ryngaert & Thomas, 2012). These researchers argued that a cut-off figure of 1% of total assets is a widely used method to minimize the measurement error of this variable.

The control variables are[1]:

Lev_{it}: leverage for firm $_i$ in year $_t$, measured as debt ratio equals total debts divided by total assets.

MB_{it}: Market-to-book ratio for firm $_i$ in year $_t$, measured as market value divided by book value.

$FrmSize_{it}$: firm size for firm $_i$ in year $_t$, measured as the natural log. of total assets.

Finally, to allow for any possible moderating effect of the audit quality measured as the Audit-firm Type on the relationship between RPTs and EM, we used the following model:

$$DA_{it} = \alpha + \beta_1 RPT_{it} + \beta_2 AdType_{it} + \beta_3 RPT*AdType_{it} + \beta_4 LEV_{it} + \beta_5 MB_{it} + \beta_6 FrmSize_{it} + e_{it} \quad (5)$$

where:

$AdType_{it}$: Audit-firm type of firm $_i$ in year $_t$. A dummy variable that is equal to one if firm $_i$ in year $_t$ is audited by one of the Big-4 audit firms, and zero otherwise (Becker et al., 1998). The audit-firm type is added to the model as a moderating variable to test the impact of audit-firm type on the relationship between RPTs and EM.

All other variables in the Equation are defined as in equation (4).

4. Results and Discussion

4.1 Descriptive Analysis and Correlation Matrix

Table I presents the descriptive statistics of the dependent, independent, and control variables. As appears in Table I, the mean of DA is close to zero (-0.0004) with a standard deviation (st.dev.) of 0.1458. These results are comparable to the mean of EM produced by Jones (1991) who used a sample of 1000 randomly selected observations and concluded that the mean of DA is close to 0.001 (st.dev. 0.118), and the results produced by (MJM, 1995) indicating that the mean of DA is 0.002 (st.dev. 0.119) (Dechow et al., 1995:205).

Table 1
Descriptive statistics

Variable	N	Min.	Max.	Mean	Std. Deviation
DA_{it}	250	-0.5868	0.5809	-0.0004	0.1458
$RPTs_{it}$	250	0.0000	1.0000	0.6880	0.4642
Lev_{it}	250	0.0180	0.9172	0.3443	0.2129
MB_{it}	250	0.1144	12.4103	1.1063	0.9589
$FirmSize_{it}$	250	6.5216	9.2549	7.5667	0.5609
$AdType_{it}$	250	0.0000	1.0000	0.5160	0.5007

DA_{it} is the discretionary accruals (EM) for firm *i* in year *t* scaled by lagged total assets, obtained using the (MJM, 1995). $RPTs_{it}$ is the related-party transactions for firm *i* in year *t* that equals 1 if the total value of disclosed RPTs is more than 1% of a firm's total assets and 0 otherwise. Lev_{it} is the leverage for firm *i* in year *t*, measured as total debts divided by total assets. MB_{it} is the Market-to-book ratio for firm *i* in year *t*, measured as market value divided by book value. $FirmSize_{it}$ is firm size for firm *i* in year *t*, measured as the natural log. of total assets. $AdType_{it}$ is the Audit-firm Type that is equal to 1 if firm *i* in year *t* is audited by a big-4 audit firm and 0 otherwise. (Obs.: 250).

[1] Firms may adopt income-increasing accounting practices to mitigate the leverage ratio when negotiating with creditors. Firm with a high leverage ratio may use discretionary accruals to meet the liabilities obligations (Sweeney, 1994; Becker, et al., 1998). Market-to-book ratio controls the growth. High growth firms have stronger incentives to manage earnings to meet their targets. Large size firms are expected to be less likely to manage earnings (Chen et al., 2005; Gul et al., 2009).

The mean value of RPTs is (0.6880) which reflects that the majority of Jordanian industrial and service companies have RPT values of more than 1 percent of the firm's total assets (Ryngaert & Thomas, 2012). AdType shows that around 51% of the sample firms are audited by Big-4 audit firms[2].

Table 2 presents the Pearson correlations among the variables of the study.

Table 2
Correlation matrix

Variable	DA	RPTs	LEV	MB	FirmSize	AdType
DA	1.000000					
RPTs	0.153521	1.000000				
LEV	0.060147	0.140417	1.000000			
MB	0.052523	-0.049915	-0.095788	1.000000		
FirmSize	-0.420404	0.047466	0.271693	0.075030	1.000000	
AdType	-0.106449	0.120303	0.075969	0.202758	0.080671	1.000000

DA is the discretionary accruals (EM) scaled by lagged total assets, obtained using the (MJM, 1995). RPTs is the related-party transactions that equals 1 if the total value of disclosed RPTs is more than 1% of a firm's total assets and 0 otherwise. Lev is the leverage, measured as total debts divided by total assets. MB is the Market-to-book ratio, measured as market value divided by book value. FirmSize is the firm size, measured as the natural log. of total assets. AdType is the audit-firm type that is equal to 1 if the sample firm-year is audited by a Big-4 audit firm and 0 otherwise.

Table 2 shows that multi-collinearity is not a problem in the regression model. The findings of the Pearson correlation matrix show that the highest negative correlation (-0.4204) is between the FirmSize as a control variable and DA as a dependent variable, and this negative correlation indicates that when the firm's size increases, the discretionary accruals will decrease. Although this result is unexpected, it is consistent with the results revealed by an Egyptian researcher (Ahmad, 2015) who concluded that there is no significant relationship between firm size and earnings' management practices in Egypt. This may be attributed to the specific characteristics of the firms and the context in which they operate (Almarayeh et al., 2020; Bao & Lewellyn, 2017).

Wuryani (2012) argued that big companies may avoid performing earnings' management for reputation purposes, and because they have a strong internal control system and an effective internal audit. These characteristics are expected to help in controlling the fair presentation and disclosure of financial information. Big companies always try to run their businesses well to be able to create value. Thus, they tend to be trusted by their stakeholders, and therefore, can easily get access to the capital markets.

4.2 Panel Regression Results

This sub-section discusses results of the regression analysis to test the impact of RPTs and the moderating effect of AdType on EM. To test the hypotheses, multiple-regression analysis (panel-data random effect regression) is used. Table 3 presents results of the first model (*Equation 4*) considering the impact of RPTs on EM and the second model (*Equation 5*) that tests the impact of AdType as a moderating variable on the

[2] Big-4 audit firms are Deloitte, PricewaterhouseCoopers (PwC), Ernst & Young (EY) and KPMG.

relationship between RPTs and EM across Jordanian industrial and service companies.

The results provide evidence that the first model is significant at 1% level of significance, which indicates that explanatory variables can explain changes in EM. The adjusted R^2 is 49.93%, which indicates that the model can explain around 50% of the dependent variable.

Table3 shows that the estimated coefficient β has a positive value of 0.4814, which is statistically significant at 1% level. This means that there is a statistical impact of RPTs as an independent variable on EM. In other words, this finding expects that higher levels of EM are associated with higher levels of RPTs. Therefore, the hypothesis which states that "*There is a statistically significant impact of RPTs on EM across Jordanian non-financial firms"* is accepted. This result is consistent with previous research (e.g. Rasheed et al., 2018), who examined the relationship between RPTs and EM and found that there is a statistically significant positive relationship. This finding is also consistent with Subastian et al (2021) who documented a significant positive relationship between RPTs and EM. The International Standards on Auditing (ISA) 550 states that RPTs can negatively affect accounting information quality (Par. 2).

Table 3 also reports results of evaluating Equation 5 (the second model). It appears that the overall regression is significant at the 1% level of significance, indicating that the explanatory variables can explain changes in EM. The adjusted R^2 is 54.79% indicating that the model explains around 55 % of the dependent variable. Moreover, R^2 has improved by 6.09%, moving from 50.47% to 56.56%.

The variable RPT * AdType has an insignificant positive coefficient of 0.0720 at the 5% level, indicating that the interaction between RPTs and audit-firm type does not represent a moderator, and therefore, it should not be included in the regression.

Table 3

Results of regression analysis

First Model (Equation 4) $DA_{it} = \alpha + \beta_1 RPT_{it} + \beta_2 Lev_{it} + \beta_3 MB_{it} + \beta_4 FrmSize_{it} + e_{it}$				
Second Model (Equation 5) $DA_{it} = \alpha + \beta_1 RPT_{it} + \beta_2 \text{AdType}_{it} + \beta_3 RPT*AdType_{it} + \beta_4 LEV_{it} + \beta_5 MB_{it} + \beta_6 FrmSize_{it} + e_{it}$				
Model / **The Variables**	**First Model**		**Second Model**	
	β	**t-statistic**	***β***	**t-statistic**
(Constant)	0.0036	0.08	0.0042	0.09
RPT_{it}	0.4814	5.02***	0.4980	5.16***
$AdType_{it}$			-0.1064	2.13**
RPT_{it} * $AdType_{it}$			0.0720	1.69
LEV_{it}	-0.0479	-2.89***	-0.0632	-3.23***
MB_{it}	0.0021	0.25	-0.0009	-0.11
$FrmSize_{it}$	0.0388	1.40	0.0347	1.25
R^2	50.47%		56.56%	
Adj. R^2	49.93%		54.79%	
R^2 Change	-		6.09%	

F	25.256	29.227
Sig.	0.0003	0.0004

DA_{it} is the discretionary accruals (EM) for firm *i* in year *t* scaled by lagged total assets, obtained using the (MJM, 1995). $RPTs_{it}$ is the related-party transactions for firm *i* in year *t* that equals 1 if the total value of disclosed RPTs is more than 1% of a firm's total assets and 0 otherwise. Lev_{it} is the leverage for firm *i* in year *t*, measured as total debts divided by total assets. MB_{it} is the Market-to-book ratio for firm *i* in year *t*, measured as market value divided by book value. $FirmSize_{it}$ is the firm size for firm *i* in year *t*, measured as the natural log. of total assets. $AdType_{it}$ is the audit-firm type that is equal to 1 if firm *i* in year *t* is audited by a big-4 audit firm, and 0 otherwise. **, and *** indicate statistical significance at the 5% and 1% levels, respectively.

However, using the second model, we observe even a stronger fitted coefficient on RPTs (0.4980) and t-statistic of (5.16) compared with the first model (coefficient 0.4814, and t-statistic 5.02), while the impact of the AdType variable on EM is insignificant. Therefore, we reject the second hypothesis which states that "*There is a statistically significant impact of Audit-firm Type on the relationship between RPTs and EM across Jordanian non-financial firms*".

This result is inconsistent with previous research (e.g. DeAngelo, 1981; Palmrose, 1986; Huyghebaert & Wang, 2012; Cheng et al., 2015; Habib et al., 2017b; Rasheed et al., 2018) that provided evidence that RPTs are at a relatively lower level if sample firms have a higher audit quality. The current result regarding the audit-firm type, being inconsistent with the international evidence, may be related to differences in requirements between developed and emerging markets that may affect or limit the performance of audit firms in emerging markets that generally suffer from poor economies compared with developed markets. Abdullatif and Al-khadash (2010) argued that international differences between audit firms must be considered when interpreting research results. For example, they stated that the business risk approach in auditing may not be applied in the same manner by the large international audit firms and the local ones, making it difficult for local audit firms to achieve the approach's main objectives.

Moreover, Almarayeh et al. (2020) argued that, given the institutional environment in Jordan, audit-firm size and audit fees have no significant effects on earnings' management. They added that previous literature has shown that the role of auditing in restricting earnings' management practices is influenced by both firm-level and country-level factors, and these factors may differ in developed countries from those of developing ones (Almarayeh et al., 2020; Bao & Lewellyn, 2017).

It also can be argued that the insignificant results of the audit-firm type may be attributed to the lack of significant differences between big and small audit firms in Jordan. In other words, the audit quality offered by large and small audit firms does not generally vary, as both auditors must follow audit protocols in compliance with the auditing regulations (Assad et al., 2020). Beasley and Petroni (2001) found that RPTs are among the top-10 audit deficiencies in cases of SEC fraud-related enforcement actions. They concluded that auditors are often unaware of RPTs or appear to cooperate with the client's management to obscure such transactions.

Moreover, it is probable that the best indicator of audit efficiency is not the audit-firm size (Siregar & Utama, 2008). It is also argued that big audit firms may reduce their professional care by bearing more risk expecting that their reputation will protect them (Lagace, 2013). However, our findings are consistent with those of E-Helaly et al. (2018), who provided evidence that there is an insignificant relationship between audit-firm type and RPTs. Additionally, we may get different results when considering additional independent and control variables, including ownership structure and governance dimensions (Ryngaert & Thomas, 2012; Gavana et al., 2022a).

5. Conclusions, Recommendations and Limitations

This study investigates how RPTs and AdType influence EM using data of non-financial publicly listed firms in the ASE covering the period (2014-2018). The main conclusions are summarized as follows:

There is a significant positive impact of RPTs on EM in Jordanian industrial and service companies. In other words, the managements of these firms have been found using RPTs to manage earnings. Managers may use RPTs to manage earnings upwardly or downwardly through altering their accruals which may be performed within GAAP for income smoothing purposes and signaling value relevant information or through violating the GAAP for opportunistic purposes to mislead some stakeholders.

Additionally, the findings provide evidence that there is an insignificant impact of the audit-firm type on the relationship between RPTs and EM in Jordanian industrial and service firms. This result is in line with that of (E-Helaly et al., 2018) who found an insignificant relationship between RPTs and Big-4 audit firms. Likewise, the findings of this study suggest that audit firms in Jordan appear to have a limited role in mitigating the effect of the related-party transactions on earnings' management. This result is also consistent with the finding of a Jordanian study conducted by Sharaf and *Abu Nassar* (2021) who concluded that there is an insignificant effect of audit-firm size on earnings' management.

Based on the results of this study, the researchers recommend the necessity of disclosing all relevant information about RPTs to effectively limit the possibility of managements' engagement with opportunistic EM practices. Policy-makers and regulators are required to enhance and enforce the monitoring mechanisms over disclosure requirements of RPTs. In addition, the findings of this study suggest that audit firms in Jordan appear to have a limited role in mitigating the effect of the related-party transactions on earnings' management. Therefore, regulators in Jordan must exercise more effective monitoring over audit firms and their quality control procedures. Moreover, to avoid the negative effects resulting from earnings' management and related-party transactions, there is a need for directing more attention to the various dimensions of governance mechanisms, including the effectiveness of audit committees and internal audit function.

Finally, the researchers would point out that this study is a pioneer study in Jordan that investigates the impact of the Audit-firm Type, as a moderating variable, on the relationship between related-party transactions and earnings' management in the Jordanian context. The results of the study provide additional evidence on the association among the variables. The findings of the study are expected to be beneficial to all users of financial statements who are concerned about the usefulness of the financial information. However, there are some limitations to this study. Firstly, the study was limited to non-financial companies in Jordan due to the specific regulations and specific characteristics of these companies. Therefore, future research could consider applying this study to other sectors. Secondly, the analyses of the study were based on data contained in the financial statements before the COVID-19 pandemic. Therefore, further studies could deepen the analyses by considering extending the period of the study to include the COVID-19 period. Finally, this study is limited to certain types of independent and control variables and therefore excluded many other possible variables that may influence the relationship between RPTs and EM, such as ownership structure and corporate governance. Further research could extend the analysis by including such variables. This may provide additional evidence regarding RPTs and EM and deepen our understanding of the relationship between the variables. For example, Subastian et al. (2021) argued that the presence of family ownership strengthens the relationship between related-party transactions and earnings' management, where family ownership encourages an entrenchment effect that is

detrimental to the company. Moreover, Abdul Rasheed et al. (2022) stated that the governance factors, such as the board structure, have a significant impact on RPT decisions.

REFERENCES

Abbadi, S.S., Hijazi, Q.F., & Al-Rahahleh, A.S. (2016). Corporate governance quality and earnings' management: Evidence from Jordan. *Australasian Accounting, Business and Finance Journal, 10* (2), 54-75. https://doi.org/10.14453/aabfj.v10i2.4

Abbott, L.J., Parker, S., Peters, G.F., & Rama, D.V. (2007). Corporate governance, audit quality, and the Sarbanes-Oxley Act: Evidence from internal audit outsourcing. *The Accounting Review, 82* (4), 803-835.

Abdullatif, M., Alhadab, M., & Mansour, I. (2019). Determinants of related-party transactions in Jordan: Financial and governance factors. *Australasian Accounting, Business and Finance Journal, 13* (1), 44-75. https://doi.org/10.14453/aabfj.v13i1.4

Abdullatif, M., & Al-khadash, H.A. (2010). Putting audit approaches in context: The case of business risk audits in Jordan. *International Journal of Auditing, 14* (1), 1-24.

Abdul Rasheed, P.C., Hawaldar, I.T., & Mallikarjunappa, T. (2022). Related-party transactions and firm value: The role of governance mechanisms. *Economic Research Journal, 36* (2), 1-12.

Abigail, A., & Dharmastuti, C. (2022). The impact of related-party transactions on firm value in Indonesia: Moderating role of good corporate governance. *Cogent Business & Management, 9* (1), 2135208. https://doi.org/10.1080/23311975..2022.2135208

Abuyahia, J. S., & Al-Thuneibat, A. (2019). The effect of the ownership structure on external audit fees: Evidence from Jordan. *Jordan Journal of Business Administration, 15* (3), 403-420.

Ahmad, A. A. (2015). The impact of firm size on earnings' management practices: An applied study on companies listed in the Egyptian Exchange. *Accounting Research Journal-Tanta University, 2,* 644-681.

Alhababsah, S. (2019). Ownership structure and audit quality: An empirical analysis considering ownership types in Jordan. *Journal of International Accounting, Auditing and Taxation, 35*, 71-84.

Alhadab, M., Abdullatif, M., & Mansour, I. (2020). Related-party transactions and earnings' management in Jordan: The role of ownership structure. *Journal of Financial Reporting and Accounting, 18* (3), 505-531.

Al Karaki, S.M., & Al-Thuneibat, A. (2022). The impact of intangible assets and fair value measurement on audit fees: Empirical evidence from Jordanian banking sector. *Jordan Journal of Business Administration, 18* (2), 223-243.

Al-khabash, A.A., & Al-Thuneibat, A.A. (2009). Earnings' management practices from the perspective of external and internal auditors: Evidence from Jordan. *Managerial Auditing Journal, 24* (1), 58-80.

Almarayeh, T.S., Aibar-Guzmán, B., & Abdullatif, M. (2020). Does audit quality influence earnings' management in emerging markets? Evidence from Jordan. *Spanish Accounting Review, 23* (1), 64-74.

Al-Momani, M.A. (2006). The study and evaluation of the flexibility available in accounting standards used by managers for earnings' management practice and its understanding by investors: An empirical study. (Unpublished Doctoral Dissertation). Amman Arab University for Graduate Studies, Amman, Jordan.

Al-Mousawi, R.J., & Al-Thuneibat, A. (2011). The effect of audit quality on the earnings' management activities. *Dirasat, Administrative Sciences, 38* (2), 614-628.

Al-Thuneibat, A., AlIssa, R.T., & Baker, R.A. (2011). Do auditor's tenure and size contribute to audit quality? Evidence from Jordan. *Managerial Auditing Journal,*

26 (4), 317-334.

Al-Thuneibat, A., Al-Hangary, H., & Alssad, S. (2016). The effect of corporate governance mechanisms on earnings' management: Evidence from Saudi Arabia. *Review of International Business and Strategy, 26* (1), 2-32.

Alzoubi, E.S.S. (2016). Disclosure quality and earnings' management: Evidence from Jordan. *Accounting Research Journal, 29* (4), 429-456. https://doi.org/10.1108/ARJ-04-2014-0041

Amawi, D.A., & Abu Nassar, M.H. (2021). The impact of corporate governance and earnings' management on stock liquidity: Empirical study of Jordanian industrial firms. *Jordan Journal of Business Administration, 17* (4), 531-552.

Anissa, N., Mukhlasin, N., & Petronila, T.A. (2019). Audit quality and real earnings' management: An analysis based on the auditor industry specialization and client importance. *International Journal of Management, Accounting and Economics, 6* (6), 436-453.

Arens, A.A., Elder, R.J., Beasley, M.S., & Hogan, C.E. (2021). *Auditing and assurance services* (17ᵗ edn.). Harlow, UK: Pearson Education, Limited.

Assad, N.F., & Alshurideh, M.T. (2020). Financial reporting quality, audit quality, and investment efficiency: Evidence from GCC economies. *WAFFEN-UND Kostumkd. Journal, 11* (3), 194-208.

Bao, S.R., & Lewellyn, K.B. (2017). Ownership structure and earnings' management in emerging markets: An institutionalized agency perspective. *International Business Review, 26* (5), 828-838.

Barth, M.E., Elliott, J.A., & Finn, M.W. (1999). Market rewards associated with patterns of increasing earnings. *Journal of Accounting Research, 37*, 387-413.

Beasley, M.S., & Petroni, K.R. (2001). Board independence and audit-firm type. *AUDITING: A Journal of Practice & Theory, 20* (1), 97-114.

Becker, C.L., DeFond, M.L., Jiambalvo, J., & Subramanyam, K.R. (1998). The effect of audit quality on earnings' management. *Contemporary Accounting Research, 15*, 1-24. https://doi.org/ 10.1111/j.1911-3846.1998.tb00547.x

Bonacchi, M., Fabrizio, C., & Pau, Z. (2018). Parents' use of subsidiaries to "push down" earnings' management: Evidence from Italy. *Contemporary Accounting Research, 18 (*35), 1332-1362.

Bradshaw, M.T., Richardson, A.J., & Sloan, R.G. (2001). Do analysts and auditors use information in accruals? *Journal of Accounting Research, 39 (*1), 45-62.

Can, G. (2019). The impact of auditor qualifications on earnings' management of companies listed on the Borsa Istanbul industrial index. *Business & Economics Research Journal, 10* (2), 373-390.

Chambers, R.J. (1999). The poverty of accounting discourse. *Abacus, 35* (3), 241-251.

Chen, K.Y., Lin, K.L., & Zhou, J. (2005). Audit quality and earnings' management for Taiwan IPO firms. *Managerial Auditing Journal, 20* (1), 86-104.

Cheng, C., Hsu, C., & Kung, F. (2015). Political connections, managerial incentives, and auditor choice: Evidence from China. *Pacific Accounting Review, 27* (4), 441-465.

Craswell, A.T., Francis, J., & Taylor, S. (1995). Auditor brand name reputations and industry specializations. *Journal of Accounting and Economics, 20* (3), 297-322.

Daoudieh, B.S. (2021). The impact of financial distress on earnings' management: A special study around the Jordanian financial sector. *International Journal of Accounting Research, 9 (*10), 253-260.

Davidson, A., & Neu, D. (1993). A note on the association between audit-firm size and audit quality. *Contemporary Accounting Study, 9 (*2), 479-488.

Davidson, R.J., Goodwin-Stewart, J., & Kent, P. (2005). Internal governance structures and earnings' management. *Accounting and Finance, 45 (*2), 241-267.

Davidson, R., Stickney, C., & Weil, R. (1987). *Accounting: The language of business*. Arizona: Thomas Horton and Daughter.

DeAngelo, L.E. (1981). Auditor size and audit quality.

Journal of Accounting and Economics, 3, 183-199.

Dechow, P.M., & Skinner, D. (2000). Earnings' management: Reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons, 14*, 235-250.

Dechow, P., Sloan, R.G., & Sweeney, A.P. (1995). Detecting earnings' management. *The Accounting Review, 70* (2), 193-225.

Degeorge, F., Patel, J., & Zeckhauser, R. (1999). Earnings' management to exceed thresholds. *Journal of Business, 72 (*1), 1-33.

Deis, J.R. Jr., & Giroux, G.A. (1992). Determinants of audit quality in the public sector. *The Accounting Review, 67 (*3), 462-479.

di Carlo, E. (2014). Related-party transactions and separation between control and direction in business groups: The Italian case. *Corporate Governance: The International Journal of Business in Society, 14 (*1), 58-85.

El-Helaly, M. (2018). Related-party transactions: A review of the regulation, governance, and auditing literature. *Managerial Auditing Journal, 33* (8/9), 779-806.

El-Helaly, M., Georgiou, I., & Lowe, A. D. (2018). The interplay between related-party transactions and earnings' management: The role of audit quality. *Journal of International Accounting, Auditing and Taxation, 32*, 47-60.

Francis, J. R., & Krishnan, J. (1999). Accounting accruals and auditor reporting conservatism. *Accounting Research, 16* (1), 135-165.

Gavana, G., Gottardo, P., & Moisello, A.M. (2022a). Related-party transactions and earnings' management in family firms: The moderating role of board characteristics. *Journal of Family Business Management*. https://doi.org/10.1108/JFBM-07-2022-0090

Gavana, G., Gottardo, P., & Moisello, A. M. (2022b). Related-party transactions and earnings' management: The moderating effect of ESG performance. Empirical evidence from Italy. *Sustainability, 14*, 5823. https://doi.org/10.3390/su14105823

Gil, D., & Song, Y. (2016). Modeling and management of big data: Challenges and opportunities. *Future Generation Computer Systems, 63* (1), 96-99.

Gordon, E.A., Henry, E., & Palia, D. (2004). Related-party transactions and corporate governance. In *Corporate Governance: Advances in Financial Economics* (Vol. 9, pp. 1-27).

Gordon, E.A., Henry, E., Louwers, T.J., & Reed, B. (2007). Auditing related-party transactions: A literature overview and research synthesis. *Accounting Horizons, 21* (1), 81-102.

Gul, F., Fung, S., & Jaggi, B. (2009). Earnings' quality: Some evidence on the role of auditor tenure and auditors' industry expertise. *Journal of Accounting and Economics, 47* (3), 265-287.

Habib, A., Muhammadi, A., & Jiang, H. (2017a). Political connections and related-party transactions: Evidence from Indonesia. *The International Journal of Accounting, 52* (1), 45-63.

Habib, A., Muhammadi, A., & Jiang, H. (2017b). Political connections, related-party transactions, and auditor choice: Evidence from Indonesia. *Journal of Contemporary Accounting and Economics, 13* (1), 1-19.

Hayes, R., Wallage, P., & Gortemaker, H. (2014). *Principles of auditing: An introduction into international standards on auditing* (2nd edn.). Prentice Hall.

Healy, P.M., & Wahlen, J.M. (1999). A review of the earnings' management literature and its implications for standard setting. *Accounting Horizons, 13* (4), 365-383.

Henry, E., Gordon, E. A., Reed, B., & Louwers, T. (2007). The role of related-party transactions in fraudulent financial reporting. *SSRN Scholarly Paper*. Social Science Research Network. https://doi.org/10.2139/ssrn.999999

Holland, D., & Ramsay, A. (2003). Do Australian companies manage earnings to meet simple earnings benchmarks? *Accounting and Finance, 43* (1), 41-62.

Hu, S.-H., Li, G., Xu, Y.-H., & Fan, X.-A. (2012). Effects of internal governance factors on cross-border related-party transactions of Chinese companies. *Emerging Markets Finance & Trade, 48*, 58-73.

Huang, D., & Liu, Z. (2010). A study of the relationship between related-party transactions and firm value in high technology firms in Taiwan and China. *African Journal of Business Management, 4* (9), 1924-1931.

Huyghebaert, N., & Wang, L. (2012). Expropriation of minority investors in Chinese listed firms: The role of internal and external corporate governance mechanisms. *Corporate Governance: An International Review, 20* (2), 308-332.

IAASB. (2017). *International Standard on Auditing (ISA) 550: Related parties.* http://www.ifac.org/ auditing-assurance

International Accounting Standards Board. (2001). *IAS 24: Related-party disclosures* (Revised 2023). https://www.ifrs.org/issued-standards/list-of-standards/

Jara, M.A., & Lopez, F. J. (2007). Auditing and earnings' management in large non-financial Spanish firms. *Spanish Journal of Accounting and Finance, 36*, 569-594.

Jeon, K. (2019). The characteristics of board of directors and related-party transactions. *Academy of Accounting and Financial Studies Journal, 23* (3), 1-12. https://doi.org/10.2139/ssrn.397

Jones, J.J. (1991). Earnings' management during important relief investigations. *Journal of Accounting Research, 29*, 193-228.

Jordan Securities Commission. (2017). *Instructions of corporate governance for shareholding listed companies for the year 2017, Article (16): Related-party transactions*.

Jordan Securities Commission. (2008). *Corporate governance code for shareholding companies listed in the Amman Stock Exchange*.

Kang, M., Lee, H., Lee, M., & Park, J.C. (2014). The association between related-party transactions and control-ownership wedge: Evidence from Korea. *Pacific-Basin Finance Journal, 29*, 272-296.

Kassem, R. (2012). Earnings' management and financial reporting fraud: Can external auditors spot the difference? *American Journal of Business and Management, 1*, 30-33.

Kitiwong, W. (2014). *Earnings' management and audit quality: Evidence from Southeast Asia*. (Unpublished Doctoral Dissertation). University of York.

Kohlbeck, M., & Mayhew, B.W. (2017). Are related-party transactions red flags? *Contemporary Accounting Research, 34*, 900-928.

Lagace, M. (2013). Are the big four audit firms too big to fail? *Business Research for Business Leader*. Harvard Business School, Working Knowledge.

Lee, M., Kang, M., Lee, H., & Park, J.C. (2014). Related-party transactions and financial statement comparability: Evidence from South Korea. *Asia-Pacific Journal of Accounting and Economics, 23* (2), 224-252.

Li, V. (2019). The effect of real earnings' management on the persistence and informativeness of earnings. *The British Accounting Review, 51* (4), 402-423.

Limanto, G. K., & Herusetya, A. (2016). The association between related-party transactions and real earnings' management: Internal governance mechanism as moderating variables. *SHS Web of Conferences, 34*, 04008. https://doi.org/10.1051/shsconf/20163404008

Lindberg, D. L. (2001). Discussion of the demand for auditor reputation across international markets for audit services. *The International Journal of Accounting, 36* (4), 429-432.

Mahtani, U. S. (2019). Related-party transactions in India and their impact on reported earnings. *Journal of Developing Areas, 53* (1), 165-178.

McKee, T.E. (2005). *Earnings' management: An executive perspective* (1st edn.). Cengage Learning.

Munir, S., & Gul, R. J. (2010). Related-party transactions, family firms, and firm performance: Some Malaysian evidence. In: *Finance and Corporate Governance Conference 2011 Paper*. SSRN. https://ssrn.com/abstract=1705846

Palmrose, Z.V. (1988). An analysis of auditor litigation

and audit service quality. *Accounting Review, 63* (1), 55-73.

Palmrose, Z.V. (1986). Audit fees and auditor size: Further evidence. *Journal of Accounting Research, 24* (1), 97-110.

Rachappa, S., Kuntluru, S., & Korivi, S.R. (2016). Opportunistic earnings' management during initial public offerings: Evidence from India. *Review of Accounting and Finance, 15* (3), 352-371.

Rankin, M., Stanton, P., McGowan, S., Ferlauto, K., & Tilling, M. (2012). *Contemporary issues in accounting* (1st edn.). Wiley.

Rasheed, P.C., Abdul, P.C., & Mallikarjunappa, T. (2018). Related-party transactions and earnings' management: An empirical examination of selected companies in India. *Journal of Accounting Research & Audit Practices, 17* (20), 22-35.

Rosetti, C.J. (2003). Financial statements' fraud: When earnings' management becomes fraud—How to investigate it. *14th Annual Fraud Conference*, 1-8. http://www.cfenet.com

Ryngaert, M., & Thomas, S. (2012). Not all related-party transactions (RPTs) are the same: Ex ante *versus* ex post RPTs. *Journal of Accounting Research, 50*, 845-882.

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

Sharaf, N., & Abu Nassar, M.H. (2021). The effect of audit quality and auditor's opinion on earnings' management: Evidence from Jordan. *Jordan Journal of Business Administration, 17* (2), 236-253.

Shockley, R.A. (1982). Perceptions of auditors' independence: An empirical analysis. *The Accounting Review, 56* (4), 785-800.

Siregar, S.V., & Utama, S. (2008). Type of earnings' management and the effect of ownership structure, firm size, and corporate governance practices: Evidence from Indonesia. *The International Journal of Accounting, 43* (1), 1-27.

Stolowy, H., & Breton, G. (2004). Accounts' manipulation: A literature review and proposed conceptual framework. *Review of Accounting and Finance, 3* (1), 5-92.

Subastian, L.U., Widagdo, A.K., & Setiawan, D. (2021). Related-party transactions, family ownership, and earnings' management in Indonesia. *Jurnal Keuangan dan Perbankan, 25* (3), 688-700. https://doi.org/10.26905/jkdp.v25i3.5778

Sweeney, A. (1994). Debt covenant violations and managers' accounting responses. *Journal of Accounting and Economics, 17*, 281-308.

Tepalagul, N., & Lin, L. (2015). Auditor independence and audit quality: A literature review. *Journal of Accounting, Auditing & Finance, 30* (1), 101-121.

Williams, M.P., & Taylor, D. W. (2013). Corporate propping through related-party transactions: The effect of China's securities' regulations. *International Journal of Law and Management, 55* (1), 28-41.

Wooten, T.C. (2003). Research about audit quality. *CPA Journal, 73*, 48-51.

Wuryani, E. (2012). Company size in response to earnings' management and company performance. *Journal of Economics, Business, and Accountancy Ventura, 15* (3), 491-506.

Zimon, G., Appolloni, A., Tarighi, A., Shahmohammadi, S., & Daneshpou, A. (2021). Earnings' management, related-party transactions, and corporate performance: The moderating role of internal control. *Risks, 9* (8), 1-26. https://doi.org/10.3390/risks 9080146