Determinants of Related Party Transactions in Jordan: Financial and Governance Factors

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Abstract

This study aims to explore the financial and governance factors that determine related party transactions (RPTs) in the developing country context of Jordan**.** To do so, a multiple regression model was developed and used. Results show that RPTs are negatively related with CEO-duality and board independence, while they are positively related with firm leverage, ownership concentration, board size, and audit quality. However, no statistically significant relation was found between RPTs and firm profitability or board political connections. Several of these relations (or lack of relations) are contrary to the findings of extant studies from more-developed countries, and can arguably be attributed to the prevalence of the closely-held business model in Jordan, where, regardless of the firm's financial conditions, high ownership concentration and close relations among board and top executive management positions are common, and the demand for an audit service of high quality is limited. Practical implications of these findings include that regulatory authorities in Jordan should enhance regulations and corporate governance codes to protect small shareholders and other stakeholders and restrict the power of dominant shareholders that makes them able to engage in illegitimate RPTs**.** In doing so, it also has to improve its monitoring of companies more likely to engage in such RPTs.

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1. INTRODUCTION

International Accounting Standard No. 24 (IAS 24) (article 9) defines a related party as "a person or entity that is related to the entity that is preparing its financial statements". The same article also defines an RPT as "a transfer of resources, services, or obligations between related parties, regardless of whether a price is charged" (International Accounting Standards Board (IASB), 2009). Kang et al. (2014, p. 273) define RPTs as "transactions with related entities such as shareholders, members of boards of directors, and affiliated companies". Huang and Liu (2010) mention members of boards and top executive managers, in addition to their close family relatives, as potential parties with which RPTs can occur. Transactions with political connections can also be considered RPTs (Habib et al., 2017a; Habib et al., 2017b). The issue of concern in RPTs is that with the nature of the relations between these parties and the companies involved, in many cases RPTs are not normal transactions, and may be therefore used illegitimately to benefit some parties at the expense of other parties.

RPTs have been used in business for a long time. Doing business with related parties may be beneficial to a company through facilitating business transactions and lowering their cost (Srinivasan, 2013; Di Carlo, 2014), in addition to improving monitoring of these transactions (Utama & Utama, 2014). However, the vast majority of literature on RPTs highlights significant concern about the possibilities of dominant shareholders misusing RPTs to shift funds out of the business to increase their own wealth, at the expense of other shareholders and stakeholders (Utama & Utama, 2009; Williams & Taylor, 2013; Di Carlo, 2014; Kang et al., 2014; Habib et al., 2017a). In addition, dominant shareholders who also act as top executive managers in a company may use RPTs for creating intentional misstatements in the financial statements of the company, in order to deceive users of these financial statements and benefit at their expense, making the presence of RPTs a fraud risk factor (Arens et al., 2017).

While the negative use of RPTs has been witnessed worldwide, it is likely to have more negative effects in developing countries, where weak corporate governance and limited financial reporting transparency (Li et al., 2014) is coupled with limited protection of the rights of smaller shareholders (Williams & Taylor, 2013), leading to a higher likelihood of abusing RPTs by dominant shareholders. Given this, regulatory authorities in developing countries should pay attention to the degree of prevalence of RPTs in business practice. One way of doing so is to identify the determinants of RPTs in such countries, in order to enhance monitoring of companies more likely to engage in negative RPTs, and enact regulations to limit such practice when deemed desirable.

Jordan, the context of this study, is a MENA region country where the closely-held business model with limited owner/manager separation is common, and corporate governance concerns are reported (Abdullatif & Al-Khadash, 2010; Solomon, 2010; Shanikat & Abbadi, 2011; Haddad et al., 2015; Abdullatif & Kawuq, 2015; Abdullatif; 2016; Almarayeh, 2018). Such a closely-held business model is expected to lead to prevalence of different types of RPTs, especially those with negative effects on smaller shareholders who have limited protection, an issue documented by a recent study conducted by the Organisation for Economic Co-operation and Development (OECD) and the Union of Arab Securities Authorities (UASA) (OECD-

UASA, 2014). Despite the prevalence of the closely-held business model in Jordan, many Jordanian companies are formed as public listed companies and are therefore required to use the International Financial Reporting Standards, mandatory in Jordan since 1998 (Jordan Securities Commission (JSC), 1998). Of particular importance is the International Accounting Standard (IAS) No. 24 on RPTs, which requires determining related parties and adequately disclosing RPTs (IASB, 2009). In such a business environment, the negative effects of RPTs can be large, and companies involved in RPTs may attempt to limit disclosure of such transactions in order to limit public attention to them.

It is therefore interesting to study RPTs and factors affecting their presence and size in a developing country setting such as Jordan. Knowing these factors is important in order to better monitor companies and their RPT activities by regulatory authorities in Jordan or other developing countries. These authorities can, therefore, intervene when deemed useful in order to control any illegitimate RPTs. Therefore, due to possibilities of large-scale RPTs in Jordan, this study is motivated by the need to identify companies more likely to engage in illegitimate RPTs, in order for the regulatory authorities to better monitor them and enact legislation to improve their corporate governance systems and restrict the possibilities of illegitimate RPTs, thus improving investment opportunities in Jordan through providing more protection to smaller shareholders.

In particular, this study aims to contribute to our knowledge through exploring any potential effects on RPTs from financial and governance factors that characterise Jordanian companies. These factors include firm profitability, financial leverage, ownership concentration, CEO-duality, board size, board independence, political connections, and type of audit firm. These factors have been found by several international studies to potentially affect the application of negative RPTs that may harm some investors, especially minority investors (see, for example, Nekhili & Cherif, 2011; Munir et al., 2013; Williams & Taylor, 2013; Kang et al, 2014; Utama & Utama, 2014; Hwang & Wang, 2015; Bava & Di Trana, 2017; Boateng & Huang, 2017; Dicko, 2017; Habib et al., 2017a; Habib et al., 2017b; Bhuiyan & Roudaki, 2018; Habib & Muhammadi, 2018). While a developing country like Jordan may be vulnerable to the negative effects of RPTs, the characteristics of Jordanian companies may have their effect on the degree to which the above-mentioned factors may affect the occurrence of RPTs. The findings of this study are likely to significantly contribute to our knowledge, as this topic has rarely been explored in Jordan and other developing countries.

2. THE JORDANIAN CORPORATE CONTEXT

Thousands of companies operate in Jordan, mostly as partnerships or limited liability companies. However, the number of public listed companies on the Amman Stock Exchange (ASE) is only 193, with shares of a further 45 companies traded on the Over-the-Counter market (www.ase.com.jo, as on March 24, 2019). These companies are classified into three main categories (each including several sub-categories) according to their activities; financial, services, and industrial. These companies are under the supervision and follow the regulations of the Jordan Securities Commission (JSC). In addition, some of these companies, based on the nature of their businesses, are under additional supervision and regulation by specialised authorities (such as the Central Bank of Jordan (CBJ) in the case of banks). However, as

mentioned earlier, a large number of Jordanian public listed companies from various business sectors are closely-held, and in some cases, have a large family ownership, leading to concerns about appropriate corporate governance practices being implemented, especially protecting the rights of minority shareholders (Abdullatif & Al-Khadash, 2010; Solomon, 2010; Shanikat & Abbadi, 2011; Haddad et al., 2015; Abdullatif & Kawuq, 2015; Abdullatif; 2016; Alhadab, 2018).

Given this background, the regulatory authorities in Jordan started to consider issuing corporate governance codes, and the first of such efforts were guidelines for banks (published in 2004) and for insurance companies (published in 2006) (Jordan Institute of Directors, 2013). Guidelines for banks were later revised, most recently in 2016. In 2008, the JSC issued its first corporate governance code to apply to all public listed companies. In summary, this code provided that the board of directors be comprised of five to thirteen members, be elected by the company's general assembly for a period of four years, and not include members of boards of directors of competitors in the same business. In addition, the chairman of the board was required not to hold an executive position in the company. The code provided for the establishment of an audit committee in the company, of which shall include at least three non-executive board members who have knowledge in accounting and finance, one of which is a specialist in the area by academic qualification or work experience. Regarding the general rights of shareholders, the code provided that they could, among other issues, vote in a general assembly meeting according to their number of shares owned, receive dividends if a decision on that is made, and have priority in buying new shares in the company before these shares get offered to the public. The company should disclose its periodic financial reports, ownership of its board and top executive managers and their relatives in the company's shares, RPTs, and the privileges enjoyed by the members of the company's board and executive management. As for external auditors, the company should select a licensed audit firm to audit the company's financial statements for a year, with this appointment renewable. The audit partner has to be rotated every four years and can be re-elected after two years from the rotation. It is notable that the 2008 code adopted a "comply or explain" approach, where companies not complying with the code had to explain non-compliance in their annual reports (JSC, 2008).

In 2017, the JSC revised the above code. In addition to retaining much of what was mentioned in the previous code, notable revisions in the new code include providing that that the board of directors should have a majority of non-executive members, and at least one third of its members be independent (examples of non-independence include the member or any of his first-degree relatives working for the company, having business transactions with the company exceeding 50,000 Jordanian dinars, owning 5 per cent or more of the company's shares, or working for the company's external audit firm). The chairman of the board cannot hold an executive position in the company, and any of his first-degree relatives cannot be the CEO of the company. In addition to the audit committee, the company has to establish a governance committee, both of which have to be comprised of at least three non-executive board members with a majority of these being independent board members. The governance committee is responsible for preparing a governance report to be included in the company's annual report, including the details of compliance of the company with the code. As for the external audit firm, the revised code allows it to provide consulting services to the company after approval from the

board (JSC, 2017). It is early to judge the degree of incremental effectiveness this code will have in improving corporate governance practices in Jordan, since it is very recent.

Regarding related parties, the 2008 code included in its definition of related parties members of the company's boards of directors or top executive managers; persons holding over 5 per cent of shares of the company or any of its affiliates; the relatives and partners of these parties; and the company's affiliates and joint ventures. RPTs were defined as transactions with related parties valued at more than 50,000 Jordanian dinars. Disclosures about RPTs have to be made, and the audit committee is responsible for ensuring that these transactions do not include conflicts of interest (JSC, 2008). The 2017 code added to the previous definition any companies controlled by members of the company's board or top executive management or their first-degree relatives and defined RPTs as transactions with related parties which equal or exceed 5 per cent of the company's assets. The audit committee has to make a recommendation about RPTs to the board before they are made, and to revise RPTs to ensure that they do not include conflicts of interest. RPTs have to be approved by the general assembly before they are made, with the related party involved not voting on this decision. To facilitate this, the board is required to provide the general assembly with information related to the RPT and the external auditor's evaluation of it, and a written assurance that the RPT is in the interest of the shareholders (JSC, 2017).

Despite the efforts put in by various regulatory authorities in Jordan to improve corporate governance in Jordanian companies, it is arguable that the characteristics of Jordanian companies will probably limit the effectiveness of such regulations. As mentioned earlier, many of the Jordanian public listed companies are closely-held. These companies have a high concentration of ownership by block shareholders (this figure went as high as about 99 per cent for some observations in this study). Such large shareholders may affect the application of the above governance guidelines by, for example, not complying with them and explaining the noncompliance. In addition, while CEO-duality is currently limited in Jordanian public listed companies, especially in banks and insurance companies, it is not uncommon to find Jordanian public listed companies with boards with a number of same-family members, and with the CEO being a close relative (e.g. son or brother) of the chairman of the board of directors. Even when boards are diverse and include independent members, the effect of block shareholders in appointing board members and top executive management positions is likely to limit the effectiveness of independent board members in securing high-quality corporate governance. Such boards of directors would not be inclined to demand a highly-effective audit committee (Abdullaif et al., 2015) or a high-quality external audit. Therefore, the external audit function would arguably be limited in its effectiveness as a governance mechanism (Abdullatif, 2016). This is consistent with the results of Jeong and Rho (2004) in Korea, Yasar (2013) in Turkey, and Alhadab (2018) in Jordan, where big audit firms were found not to differ from smaller audit firms in terms of audit quality in contexts where high-quality audits are not under high demand. Nurazi et al. (2015) found relatively similar results in Indonesia, where the presence of a big audit firm did not have a significant effect on the practice of negative RPTs. In summary, while many corporate governance codes applied in Jordan and other developing countries are based on what is perceived as effective practices in more-developed countries, the effectiveness of such practices in developing countries with different governance models is questionable (Chanda et al., 2017; Uddin et al., 2017).

Considering the block shareholder and closely-held business nature of many Jordanian companies, this would lead to lowering agency costs between managers and owners (Jensen & Meckling, 1976). However, such an ownership system could lead to principal vs. principal agency costs, with family owner-managers having the power of control and decision making that can be used for the interests of the family members at the expense of other shareholders (Kallmuenzer, 2015). In such a context, the protection of minority shareholders is generally low due to limited accountability and transparency of board members and managers (Solomon, 2010). One method of exploiting the weaknesses of minority shareholders is through engagement in RPTs that are for the particular benefits of the large shareholders. According to OECD-UASA (2014), there is widespread evidence of the use of RPTs in MENA countries, including Jordan. This can arguably be attributed to low agency costs in Jordan between managers and board members, coupled with limited protection of minority shareholders mitigating the effects of any agency issues between large and small Jordanian shareholders (Abdullatif, 2016). Potential negative effects of such RPTs are discussed in more detail in the following section.

3. LITERATURE REVIEW

3.1. Related Party Transactions

There are two different arguments about the economic incentives of companies to enter into RPTs, one suggesting that RPTs may be beneficial to the company and all of its shareholders, while the other suggests that they may be used to benefit the larger shareholders and therefore harm the smaller shareholders (El-Helaly, 2018; Fang et al., 2018). Regarding the former argument, RPTs can be sometimes used for the benefit of the company and all its shareholders, through transferring funds from controlling shareholders to the company (Williams & Taylor, 2013). Such RPTs may lead to a decrease in operational costs (Srinivasan, 2013; Di Carlo, 2014) and to improvement in monitoring activities of the company by controlling shareholders (Utama & Utama, 2014).

However, it is the negative effect of RPTs, referred to as "tunnelling" (Johnson et al., 2000), that has been the matter of most concern in academic literature and for regulators and stakeholders of companies. The main concern here is that dominant shareholders would exploit their control of the firm to expropriate funds from it for their own benefit, thus harming minority shareholders (Utama & Utama, 2009; Williams & Taylor, 2013; Di Carlo, 2014; Kang et al., 2014; Bona-Sanchez et al., 2017; Habib et al., 2017a). Several methods may be used in performing tunnelling activities. These include excessive payments to family members of controlling shareholders who hold top executive management jobs (Utama & Utama, 2009), conducting transactions with related party companies at unfair prices or terms (Utama & Utama, 2014), or giving loans to related parties at interest rates significantly different from the prevailing rates (Manaligod, 2012), all to the detriment of small shareholders and, to some extent, other stakeholders of the company.

Another potential negative effect of RPTs is that they can be used in committing fraudulent financial reporting. The existence of RPTs increases the possibility of such fraud being committed by the management of companies using RPTs to misstate the values of financial

transactions (e.g. sales or purchases) (Arens et al., 2017). Additional fraud may also be committed by management deliberately concealing their questionable RPTs through not disclosing their nature and amount according to IAS 24 requirements (Hayes et al., 2014). Kohlbeck and Mayhew (2017) found a significant association between RPTs and the likelihood of material misstatements in financial statements, while Lee et al. (2014) found that comparability of financial statements decreases with an increase in the size and volatility of RPTs. Indeed, such fraud is expected to benefit the controlling shareholders at the expense of financial statement users.

As mentioned earlier, the practice of tunnelling and fraudulent RPTs has potentially damaging effects to minority shareholders and other company stakeholders. In economically-developed countries, improved regulations and corporate governance systems can, to some extent, mitigate such effects. However, in developing countries, the problems of RPTs are expected to be significantly larger, as protection of minority rights is limited due to controlling shareholders being family members or the state, coupled with weak enforcement of regulations (Williams & Taylor, 2013). In the MENA region, corporate governance systems in companies have been described as having high power distance (Aghimien, 2016) and limited transparency and disclosure (Nadal, 2013), in addition to facing several structural issues including weaknesses in development of stock markets, legal controls, and investor protection, in addition to economic uncertainty, family control of companies, and high ownership concentration (Shehata, 2015). In their report, OECD-UASA (2014) mentioned the wide use of RPTs in the MENA region, particularly highlighting the high potential of tunnelling by using RPTs between a company and its controlling shareholder. They highlighted the serious risk of abusing RPTs by top managers and controlling shareholders in the MENA region, and linked it to closely-held governance systems and limited protection of non-controlling shareholders in this region (OECD-UASA, 2014).With Jordan, the context of this study, being a MENA country characterised by many of the issues reported above, this study aims to contribute to our knowledge through studying RPTs and their determinants in such a context.

3.2. Determinants of Related Party Transactions

Literature on the determinants of RPTs is limited, due to most of the extant literature on RPTs focussing on their potential effects on other factors (such as financial performance or earnings management), rather than looking at the existence of RPTs themselves and treating them as a dependent variable. On this issue, the extant literature is mainly from Western countries or from China, and does report some financial and governance factors that may lead to an effect on the number and amount of RPTs. Many of these studies are listed below.

As for the financial factors that potentially affect RPTs, two of the most cited factors are firm performance and profitability, and firm leverage. The International Standard on Auditing No. 240 (ISA 240), issued by the International Auditing and Assurance Standards Board (IAASB) considers matters such as decreasing profitability and decreasing ability to generate debt as fraud risk factors (IAASB, 2009). In a survey study by Smith et al. (2005), financial factors were found to be the most important fraud risk factors. Therefore, if a company is facing problems of deteriorating profitability or cash flows, it is possible that it may engage in RPTs in order to deal with that. Empirical international studies have generally found a negative relation

between RPTs and financial performance (Gallery et al., 2008; Chen et al., 2009; Srinivasan, 2013; Williams & Taylor, 2013; Bava & Di Trana, 2017). Other international studies have generally found a positive relation between RPTs and leverage (Nekhili & Cherif, 2011; Utama & Utama, 2014).

This study attempts to test the existence of similar relations in the developing country context of Jordan. In Jordan, companies vary significantly in terms of their levels of profitability and leverage. However, the prevalent closely-held system of ownership and governance of companies, coupled with the limited protection of minority shareholders, is likely to make engaging in RPTs easier. Therefore, using RPTs in a negative manner may be a reason for lower profitability levels and higher financial leverage levels for some Jordanian companies. Therefore, this study tests the following hypotheses:

H1: Profitability is negatively associated with the existence of RPTs in Jordanian companies.

H2: Financial leverage is positively associated with the existence of RPTs in Jordanian companies.

Similar to its consideration of financial problems as pressures that may lead to fraud, ISA 240 considers problems with company governance (such as too much power given to one or a few individuals without sufficient monitoring of their activities) as opportunities that are considered fraud risk factors (IAASB, 2009). Surveys by Apostolou et al. (2001) and Abdullatif (2013) found that factors related to management characteristics were considered among the most important fraud risk factors. Indeed, Alhadab (2018) found that managers of Jordanian public firms manipulate reported income using discretionary accruals to meet their compensation targets (pay-performance compensation). Further, ownership concentration, especially by family members, may lead to abuse of power at the expense of minority shareholders from outside the family, especially when family shareholders participate in management (Bammens et al., 2011). This, in turn, suggests that if managers have the incentive (e.g. obtaining a private gain) and the power (e.g. CEO-duality), they may engage in RPTs to maximize their wealth at the expense of other parties (e.g. minority shareholders).

Issues such as ownership concentration and CEO-duality were found by several international studies as affecting RPTs. For example, Hu et al. (2009), Nekhili and Cherif (2011), Huyghebaert and Wang, (2012), Juliarto et al. (2013), Munir et al. (2013), Kang et al. (2014), and Utama and Utama (2014) all found significant relations between the power of controlling or managing shareholders and the occurrence of RPTs, with the general finding being that such power by these parties is positively connected to the occurrence of RPTs. A general interpretation of this finding is that dominant directors may use RPTs to tunnel funds for their personal benefits, with CEO-duality a supporting factor.

This study attempts to test the existence of similar relations in the developing country context of Jordan. In Jordan, a large percentage of companies have highly concentrated ownership levels, and some have CEO-duality. The prevalent closely-held system of ownership and governance of companies, coupled with limited protection of minority shareholders, is likely

to make engaging in RPTs easier for companies where ownership concentration is high, and many board members have close relations to each other and to the top executive officers in the company. Therefore, this study tests the following hypotheses:

H3: Ownership concentration is positively associated with the existence of RPTs in Jordanian companies.

H4: CEO duality is positively associated with the existence of RPTs in Jordanian companies.

Other related factors potentially affecting RPTs include the size of the board of directors and the existence of independent board members. As for board size, determining an optimal size can be a function of the effectiveness of monitoring between insider and outsider directors (Garner et al., 2017). Few studies covered the issue of board size and its effects on corporate governance or financial performance, and these studies found mixed results as to whether board size matters, or whether larger or smaller boards are more effective. For example, Nurazi et al. (2015) found no significant relationship between board size and tunnelling. However, a negative relation was found between board size and firm value (Kumar & Singh, 2013) and board size and firm financial performance (Orozco et al., 2018). On the other hand, a positive relation was found between board size and financial performance by Romano and Garrini (2014), Ali (2018), and Rashid (2018). Also, Hwang and Wang (2015) found that smaller boards are more likely to engage in earnings management.

Regarding board independence, unlike block shareholders, who may abuse their power at the expense of minority shareholders (Bammens et al, 2011), independent board members are expected to better protect the rights of shareholders, given their expected freedom from conflicts of interest and limited agency problems (Monks & Minow, 2008; Garner et al., 2017). Boateng and Huang (2017) found that the existence of multiple non-controlling large shareholders in a company restricted the ability of controlling shareholders to practice tunnelling. Similarly, Chen et al. (2014) found positive effects of independent directors on controlling tunnelling. Although such effectiveness of independent board members may be limited if they are appointed by the CEO, interlocked, older in age, or hold multiple board memberships (Core et al., 1999), several studies showed positive effects of independent board members. These studies include Chen et al. (2014), Wu and Li (2015), Zhu et al. (2016), Boateng and Huang (2017), and Reguera-Alvarado and Bravo (2017).

This study attempts to test the existence of similar relations in the developing country context of Jordan. In Jordan, board sizes vary considerably (In this study, they ranged between three and fourteen members per board). However, given that the prevalent closely-held system of ownership and governance of companies, coupled with limited protection of minority shareholders, is likely to make engaging in RPTs easier for companies, it can be argued that a larger board size, especially if coupled with a larger percentage of independent board members, is likely to reduce the level of a company's engagement in negative RPTs. Therefore, this study tests the following hypotheses:

H5: Board size is negatively associated with the existence of RPTs in Jordanian companies.

H6: Board independence is negatively associated with the existence of RPTs in Jordanian companies.

In addition to the above-mentioned factors, another potential factor that can have an effect on the use of RPTs is the political connections of the company or members of its board of directors or top executive management. Evidence on the effects of political connections on firm value or firm financial performance is mixed, with studies including Wu et al. (2012), Su and Fung (2013), Wang and Lin (2016), Mohammed et al. (2017), and Maaloul et al. (2018) finding a positive relation, explained by Maaloul et al. (2018) as a result of the power of the political ties, and the willingness of investors to invest in companies with strong political ties. However, Jaffar and Abdul-Shukor (2016) and Saeed et al. (2016) found a negative relation between political connections and firm value. Despite the possible effect of political connections on firm performance and firm value, several studies documented the potential negative effects of political connections on the governance of companies, especially in less-developed countries. For example, Dicko (2017) found that politically connected companies are associated with lower-quality governance, especially regarding board functions and minority shareholders' protection, while You and Du (2012) found that CEOs with political connections are more powerful in that they are less likely to be dismissed. Cheng et al. (2015), Habib et al. (2017b), and Hu et al. (2017) found that the presence of political connections is likely to lead to the selection of lower quality audit firms, while Mohammed et al. (2017) found that such a presence is likely to lead to a reduction in accounting conservatism. Regarding the potential effects of political connections on RPTs in particular, several studies (including Wang & Lin, 2016; Habib et al., 2017a; Habib et al., 2017b; Habib & Muhammadi, 2018) found a positive relationship between political connections and the use of RPTs in tunnelling activities, with Habib and Muhammadi (2018) associating the existence of RPTs in politically-connected companies with a longer audit reporting lag resulting from the need for more audit efforts to deal with the possible negative effects of RPTs.

This study attempts to test the existence of the effects of political connections on RPTs in the developing country context of Jordan. In Jordan, some companies have several sorts of political connections, including partial ownership of a company by the government or an individual politician. The prevalent system of governance of Jordanian companies, coupled with limited protection of minority shareholders, is likely to make engaging in RPTs easier for companies where some owners are politically connected. Therefore, this study tests the following hypothesis:

H7: Political connections are positively associated with the existence of RPTs in Jordanian companies.

A final potential governance factor affecting RPTs is the choice of external audit firm. It is generally accepted by much audit literature that Big Four audit firms provide audits of higher quality than non-Big Four audit firms (e.g. Francis, 2004; DeFond & Zhang, 2014; Knechel & Shefchik, 2014). In terms of RPTs, several international studies have found that RPTs are at a relatively lower level when companies use Big Four audit firms than when they use other audit firms (and vice versa) (Huyghebaert and Wang, 2012; Bennouri et al., 2015; Cheng et al., 2015; Khan et al., 2016; Habib et al., 2017b; Bhuiyan & Roudaki, 2018).

This study attempts to test the existence of a similar relation between the type of audit firm and RPTs in the developing country context of Jordan. In Jordan, Big Four audit firms generally tend to issue longer audit reports with more disclosure of information about the client and its audit (e.g. through more disclosure of key audit matters). In addition, clients of Big Four audit firms generally tend to have more disclosure in their notes to the financial statements. Despite the prevalent system of governance of Jordanian companies putting pressure on all types of audit firms as to the level of audit quality, the level of disclosure by audit firms and their clients gives an impression of some variability regarding audit quality among audit firms in Jordan. Therefore, it can be expected that Big Four audit firms in Jordan may have some effect on restricting the level of engagement in RPTs by their clients. Given that, this study tests the following hypothesis:

H8: The use of a Big Four audit firm is negatively associated with the existence of RPTs in Jordanian companies.

4. RESEARCH METHOD

4.1. Study Population and Sample

The sample of this study consists of Jordanian industrial companies publicly listed on the Amman Stock Exchange (ASE) over the period 2011-2017. IAS 24 has been effective since January 1, 2011. The sample period, therefore, starts in 2011 to cover disclosure of RPTs by Jordanian public listed companies after its implementation. Data concerning RPTs and their determinants were collected from several sources. The ASE website (ase.com.jo) was used to collect financial data, while financial reports were downloaded and used to collect data concerning the governance variables and other control variables. Financial and insurance companies were excluded from the sample due to the differences related to their financial reporting process (Alhadab 2015; Alhadab & Tahat, 2016; Alhadab, 2017). After imposing restriction to companies with the necessary data for the analysis, the final sample consisted of 432 company-year observations over the sample period from 2011 to 2017.

4.2. Measurement of Variables

4.2.1. Related party transactions

Data concerning the financial transactions of related parties were collected from the financial statements over the sample period. In this study, RPTs are defined as any sales, purchases, accounts payable, and accounts receivable transactions between the company and its related parties.

To examine the total effect of RPTs, we follow prior research (Ryngaert & Thomas, 2012; El-Helaly et al., 2018) and use a dummy variable (*RPTs*) that equals 1 if the sum of sales, purchases, and the outstanding balance between the company and its related parties exceeds 1 per cent of total assets in the company-year, and zero otherwise. As indicated by Ryngaert and Thomas (2012), using a dummy variable to measure RPTs would overcome measurement errors

associated with using raw dollar values for RPTs. The sales represent the amounts of all revenue transactions during a year between a company and its related parties. The purchases represent the amounts of all purchase transactions during a year between a company and its related parties. The outstanding balance represents the difference between all accounts payable and accounts receivable transactions during a year between a company and its related parties.

4.2.2. Determinants of related party transactions

This study examines several determinant factors that are expected to affect RPTs. The first determinant is the profitability ratio of return on assets (*ROA*), which is calculated as net income divided by total assets. The second determinant is the financial leverage ratio (*LEV*), which is calculated as total debt divided by total assets. The third determinant is the ownership concentration (*OWCN*), which is defined as the total ownership percentage of shares owned by individual or institutional shareholders who each own 5 per cent or more of the company's shares. The fourth determinant is CEO-duality (*CEO*), which is a dummy variable that equals 1 if the CEO is the board chairman, or if both share the same family name (e.g. brothers or father/son), and zero otherwise. The fifth determinant is board size (*BDSIZE*), which is calculated as the number of directors on the board. The sixth determinant is board independence (*BDIND*), which is defined as the percentage of outside directors on the board and calculated by dividing the number of outside directors by the number of total directors on the board. The seventh determinant is a proxy of political connection (*GOVSHHLD*), which is defined as the total ownership percentage of shares owned by a government or its representatives. Finally, the eighth determinant is a proxy of audit quality (*BIG4*), which is defined as a dummy variable that equals 1 if the audit firm is one of the Big Four, and zero otherwise. Table 1 shows details of how the variables used in this study were measured.

Table 1
Definition of the variables

Variable	Definition
RPTs	A dummy variable that equals 1 if the sum of sales, purchases, and the outstanding balance between the company and its related parties exceeds 1 percent of total assets in the firm-year, and zero otherwise.
ROA	The profitability ratio of return on assets, calculated as net income divided by total assets.
LEV	The financial leverage ratio, calculated as total debt divided by total assets.
OWCN	The total ownership percentage of shares owned by individual or institutional shareholders who each own 5 per cent or more shares in the company
CEO	A dummy variable that equals 1 if the CEO is the board chairman, or if both share the same family name (e.g. brothers or father/son), and zero otherwise.
BDSIZE	The number of directors on the board
BDIND	The percentage of outside directors on the board, calculated by dividing the number of outside directors by the number of total directors on the board
GOVSHHLD	The total ownership percentage of shares owned by government or its representatives.

BIG4	A dummy variable that equals 1 if the audit firm is one of the Big Four, and zero otherwise.
SIZE	The natural logarithm of total assets
CFO	Operating cash flows
SLGRW	Sales growth

4.3. Empirical Model

To investigate the relationship between the potential determinant factors and RPTs, the following logit model is estimated. The dependent variable is a proxy of RPTs, and the independent variables represent the determinant factors and other associated control variables. The model is as follows:

$$RPTs_{it} = a_0 + \beta_1\,ROA_{it} + \beta_2\,LEV_{it} + \beta_3\,OWCN_{it} + \beta_4\,CEO_{it} + \beta_5\,BDSIZE_{it}$$
$$+ \beta_6\,BDIND_{it} + \beta_7\,GOVSHHLD_{it} + \beta_8\,BIG4_{it} + \beta_9\,SIZE_{it} + \beta_{10}\,CFO_{it}$$
$$+ \beta_{11}\,SLGRW_{it} + IND + Year + \varepsilon_{it}$$

$$(1)$$

The measurement of the dependent variable and the independent variables was provided earlier. As can be seen from the previous studies used in the hypotheses development, these independent variables can potentially affect RPTs in Jordan. The model also controls for the size effect by adding the natural logarithm of total assets (*SIZE*), while growth opportunities are controlled by adding operating cash flows (*CFO*) and sales growth (*SLGRW*) into the model. Finally, dummy variables are included into the model to control for industry and time effects (*IND* and *Year*).

We use the Variance Inflation Factor (VIF) to check for multicollinearity in our regression analysis. The test of the VIF shows that our results reported in Tables 4, 5, and 6 are not affected by the multicollinearity problem.

5. FINDINGS

5.1. Descriptive Statistics

Table 2 presents descriptive statistics for all variables examined in this study. It shows that the mean value of RPTs is 0.721, suggesting that more than 72 percent of the total sample exhibit evidence of RPTs. In terms of the determinants, Table 2 shows that the mean (median) values of *ROA, LEV, OWCN, CEO, BDSIZE, BDIND, GOVSHHLD,* and *BIG4* are -0.724 (0.009), 38.944 (33.065), 62.014 (65.865), 0.317 (0.000), 7.525 (7.000), 0.741 (0.750), 0.047 (0.000), 0.347 (0.000), respectively. In general, the mean values are greater than the median values, suggesting

that these variables are positively skewed. It can be seen that the percentage of ownership concentration is high among Jordanian public firms where the mean value of *OWCN* is 62 per cent, and that CEO-duality is not uncommon. In addition, the majority of the sample companies are audited by non-Big Four audit firms.

Table 2
Descriptive statistics for the sample over the period.

	Mean	SD	Median	Min	Max
RPTs	0.721	0.449	1.000	0.000	1.000
ROA	-0.724	11.418	0.009	-195.296	36.071
LEV	38.944	32.738	33.065	-27.201	366.035
OWCN	62.014	24.788	65.865	0.000	100.000
CEO	0.317	0.466	0.000	0.000	1.000
BDSIZE	7.525	2.168	7.000	3.000	14.000
BDIND	0.741	0.142	0.750	0.167	1.000
GOVSHHLD	0.047	0.123	0.000	0.000	0.610
BIG4	0.347	0.477	0.000	0.000	1.000
SIZE	16.549	1.566	16.553	10.825	20.925
CFO (JD Mill)	5.319	25.787	0.627	-44.011	310.878
N	432				

Note: this table presents descriptive statistics for all variables. Definitions of all variables are presented in Table 1.

Table 3 presents the correlation matrix and shows that the determinant factors (*OWCN*), (*LEV*) and (*BIG4*) are positively correlated with RPTs. It can also be seen that CEO-duality *(CEO)* and firm board independence *(BDIND)* are negatively correlated with RPTs. Similar evidence on a negative correlation is also reported between RPTs and operating cash flows (*CFO*).

Table 3

Correlation matrix.

	RPTs	ROA	LEV	OWCN	CEO	BDSIZE	BDIND	GOVSHHLD	BIG4	SIZE	CFO	SLGRW
RPTs	1											
ROA	0.072	1										
LEV	0.155**	-0.161**	1									
OWCN	0.233***	-0.037	0.122*	1								
CEO	-0.219***	0.059	-0.062	-0.082	1							
BDSIZE	-0.027	0.022	-0.242***	-0.325***	-0.140**	1						
BDIND	-0.167**	-0.095	0.008	-0.098	-0.186***	0.372***	1					
GOVSHHLD	0.016	0.008	-0.023	0.220***	-0.255***	0.205***	0.063	1				
BIG4	0.146**	-0.025	-0.029	0.190***	-0.290***	0.146**	0.105*	0.328***	1			
SIZE	0.060	0.165**	-0.004	0.123*	-0.143**	0.247***	0.137**	0.376***	0.217***	1		
CFO	-0.162**	0.047	-0.127*	0.162**	-0.086	0.272***	0.121*	0.489***	0.231***	0.416***	1	
SLGRW	0.043	0.015	-0.023	0.086	-0.007	0.130*	0.147**	0.127*	0.073	0.178***	0.014	1

This table presents a Pearson correlation matrix for all variables. Definitions of all variables are presented in Table 1. ***, ** and *, denote significance at the 1, 5, and 10 per cent levels, respectively. Robust t statistics are in parentheses.

5.2. Empirical Results
5.2.1. Financial determinants of RPTs

The results of the regression analysis between all of the independent variables and the dependent variable (RPTs) are presented in Table 4. Regarding financial factors, it can be seen that there is no statistically significant relation between the profitability of the company, measured by its ROA, and RPTs, with the coefficient being a positive 0.027 that is statistically insignificant. As for financial leverage, it is found to have a positive statistically significant relation with RPTs at only the 10 per cent level, with a positive coefficient of 0.020. As a result, hypothesis H1 (profitability is negatively related with RPTs) is rejected, while hypothesis H2 (financial leverage is positively related with RPTs) is accepted. These findings can arguably be explained by the effect of the general governance systems of many Jordanian companies that may make larger shareholders inclined to engage in RPTs regardless of the level of firm profitability. This tendency is also expected to increase in the case of higher levels of financial leverage, a finding generally consistent with those of many previous international studies.

Table 4
Logistic regression estimation: the association between all determinant variables and RPTs.

VARIABLES	Logit regression RPTs = 1
ROA	0.027
	(1.083)
LEV	0.020*
	(1.772)
OWCN	0.023***
	(3.613)
CEO	-1.144***
	(-3.653)
BDSIZE	0.314***
	(3.356)
BDIND	-5.849***
	(-3.533)
GOVSHHLD	-0.401
	(-0.223)
BIG4	0.893**
	(2.402)
SIZE	0.097
	(0.770)
CFO	-0.030**
	(-2.353)
Constant	-0.097
	(-0.041)
Industry dummy	Yes
Year dummy	Yes

Chi^2	65.87
Pseudo R^2	0.2407
Log likelihood	-185.482
Mean VIF	1.84
N	413

Note: This table reports the results of Logistic regression estimates of the determinant variables of RPT proxies. The dependent variable is a dummy variable (*RPTs*) that equals 1 if the sum of sales, purchases, and the outstanding balance between the company and its related parties exceeds 1 percent of total assets in the firm-year, and zero otherwise. Definitions of all variables are presented in Table 1. ***, ** and *, denote significance at the 1, 5, and 10 per cent levels, respectively. Robust t statistics are in parentheses.

5.2.2. Board of directors' characteristics as determinants of RPTs

Table 4 reports the results on the relationships between several independent variables related to corporate governance and RPTs. These independent variables include company ownership concentration, CEO-duality, board size, board independence, and political connections. Table 4 shows evidence of a statistically significant positive relation between ownership concentration and RPTs, with a positive coefficient of 0.023 that is significant at the 1 per cent level. This finding is expected given that under the governance system common in Jordanian companies, along with limited protection of minority shareholders, companies with higher concentration of ownership have more incentives to exploit RPTs for their advantage. As for CEO-duality, Table 4 shows a statistically significant negative relation between it and RPTs, with a negative coefficient of -1.144 that is significant at the 1 per cent level. This finding is not consistent with those of many previous studies, but it may suggest that the power of dominant shareholders in Jordanian firms will undermine that of the CEO, regardless of the CEO's relation with the board members. These results mean that hypothesis H3 (ownership concentration positively related with RPTs) is accepted, while hypothesis H4 (CEO-duality positively related with RPTs) is rejected.

Regarding board size and board independence, Table 4 shows statistically significant relations between the two variables and RPTs at the 1 per cent level, with board size showing a 0.314 positive coefficient and board independence showing a -5.849 negative coefficient. These results mean that at the 1 per cent level, hypothesis H5 (board size is negatively related with RPTs) is rejected and hypothesis H6 (board independence is negatively related with RPTs) is accepted. These findings suggest that the board size of Jordanian companies may not be considered an effective corporate governance mechanism unless it was dominated by outside directors. Finally, Table 4 reports evidence that political connections are not associated with RPTs. The coefficient of *GOVSHHLD* is -0.401 and is statistically insignificant. As a result, hypothesis H7 (political connections are positively related with RPTs) is rejected. This finding is not consistent with those of many previous studies. However, potential explanations for it include first that RPTs may be widespread in Jordanian companies regardless of whether they are politically connected or not. Another potential explanation is that politically connected companies in the Jordanian industrial sector, despite generally being highly concentrated, have some tendency to be among the largest and most influential industrial companies for the Jordanian economy, and are therefore likely to be more monitored by Jordanian authorities and (in cases where this applies) by their international block owners.

5.2.3. Audit quality as a determinant of RPTs

Regarding results on the relationship between audit quality and RPTs, Table 4 shows that the coefficient for audit quality is 0.893 and it is statistically significant at the 5 per cent level. Therefore, hypothesis H8 (audit quality negatively related with RPTs) is rejected. This finding is relatively consistent with that of Alhadab (2018), which shows evidence that audit quality is not associated with financial reporting quality in Jordan, and with the findings reported earlier, especially from developing countries (e.g. Yasar, 2013). This evidence can be attributed to the potential weakness of all types of audit firms, including the Big Four firms, in confronting powerful clients who are generally governed with a closely-held system, frequently with high ownership concentration levels, and do not tend to demand an external audit of high quality.

5.2.4. The control variables and RPTs

The results on the relationship between control variables and RPTs are also shown on Table 4. They show evidence that operating cash flows are associated with RPTs with a coefficient of -0.030 that is statistically significant at the 5 per cent level. On the other hand, Table 4 shows no evidence of a statistically significant relationship between company size and RPTs.

In summary, the results reported in Table 4 generally provide new evidence on factors determining RPTs in Jordan. In particular, RPTs are positively associated with financial leverage, ownership concentration, board size, and audit quality. Further, RPTs in Jordan are negatively associated with CEO-duality, board independence, and operating cash flows.

6. ADDITIONAL TESTS

6.1. Endogeneity Test

To ensure that our results are not driven by the endogenous relation between related party transactions and firm's specific characteristics (e.g. financial leverage, ownership concentration, etc.), we follow Bennouri et al. (2015) and use the system of Generalized Method of Moments (GMM) to address the endogeneity issue. Using the system of GMM, according to Bennouri et al. (2015), provides consistent and efficient coefficient estimators especially when examining small panel data, controls for time-invariant fixed effects that may bias the estimation of the dependent variable, and addresses issues related to omitted variables, autocorrelation, and heteroscedasticity. Thus, the following model is estimated using a system GMM.

$$RPTs_{it} = \alpha_0 + \beta_1\,ROA_{it} + \beta_2\,LEV_{it} + \beta_3\,OWCN_{it} + \beta_4\,CEO_{it} + \beta_5\,BDSIZE_{it}$$
$$+ \beta_6\,BDIND_{it} + \beta_7\,GOVSHHLD_{it} + \beta_8\,BIG4_{it} + \beta_9\,Lag\text{-}RPTs_{it} + \beta_{10}\,SIZE_{it}$$
$$+ \beta_{11}\,CFO_{it} + \varepsilon_{it} \qquad (2)$$

The results are reported in Table 5, and show relatively similar results to those reported in Table 4. In particular, Table 5 shows evidence that RPTs are positively associated with company

profitability (*ROA*), leverage (LEV), ownership concentration (*OWCN*), board size (*BDSIZE*), audit quality (*BIG4*), and lag of RPTs (*Lag-RPTs*). While board independence (*BDIND*) is found to be negatively associated with RPTs. Thus, these results confirm that our results are robust even after controlling for the endogeneity concern.

Table 5
GMM regression estimation: the association between all determinant variables and RPTs.

VARIABLES	Logit regression RPTs = 1
ROA	0.003*
	(1.764)
LEV	0.001***
	(2.913)
OWCN	0.002**
	(2.486)
CEO	-0.060
	(-1.396)
BDSIZE	0.031***
	(3.456)
BDIND	-0.376***
	(-2.770)
GOVSHHLD	-0.016
	(-0.118)
BIG4	0.081**
	(2.067)
Lag-RPTs	0.610***
	(11.355)
SIZE	-0.009
	(-0.634)
CFO	-0.001
	(-1.135)
Constant	0.276
	(1.081)

Note: This table reports the results of a system GMM regression of the determinant variables of RPT proxies, addressing the endogeneity concern. The dependent variable is a dummy variable (*RPTs*) that equals 1 if the sum of sales, purchases, and the outstanding balance between the company and its related parties exceeds 1 percent of total assets in the company-year, and zero otherwise. Where (*Lag-RPTs*) is the lag value of RPTs, and all other variables are previously defined in Table 1. ***, ** and *, denote significance at the 1, 5, and 10 per cent levels, respectively.

6.2. Sample Selection Issue

For robustness, we also address the concern of self-selection issue that may arise since public companies self-select whether to engage in RPTs or not. As indicated by prior research, a self-selection concern could impact the estimation of OLS regressions (e.g. companies that engage in RPTs may share similar characteristics relative to companies that do not engage in RPTs), and

this, in turn, explains the results (Lawrence et al., 2011). To address the self-selection issue, we use the Propensity Score Matching (PSM) approach where each company that reported RPTs is matched with another that did not report RPTs, based on a set of observable company's characteristics. In the first stage, a logit regression is used to estimate the propensity scores of engaging in RPTs. The logit model is as follows.

$$RPTs_{it}[\,0,1\,] = a_0 + \beta_1\ LNSALES_{it} + \beta_2\ ASSTURN_{it} + \beta_3\ LEV_{it} + \beta_4\ ROA_{it}$$
$$+ IND + Year + \varepsilon_{it} \qquad\qquad (3)$$

Where the dependent variable (*RPTs*) is a dummy variable that equals 1 if the sum of sales, purchases, and the outstanding balance between the company and its related parties exceeds 1 per cent of total assets in the firm-year, and zero otherwise, (*LNSALES*) is the natural logarithm of sales that used as a proxy of size, (*ASSTURNR*) is the ratio of asset turnover, computed as sales scaled by total assets, and all other variables are previously defined. In the second stage, we use the predicted value from equation (3) to match each company that reported RPTs with another that did not report RPTs that has the closest predicted value. This process leads to a matching sample of 238 company-year observations; 119 company-year observations that reported RPTs versus 119 company-year observations that did not report RPTs. Then, the matched sample is used to estimate the following model.

$$RPTs_{it} = a_0 + \beta_1\ ROA_{it} + \beta_2\ LEV_{it} + \beta_3\ OWCN_{it} + \beta_4\ CEO_{it} + \beta_5\ BDSIZE_{it}$$
$$+ \beta_6\ BDIND_{it} + \beta_7\ GOVSHHLD_{it} + \beta_8\ BIG4_{it} + \beta_9\ SIZE_{it} + \beta_{10}\ CFO_{it}$$
$$+ \beta_{11}\ SLGRW_{it} + IND + Year + \varepsilon_{it}$$
$$(4)$$

The results of the logit regression on the probability of engaging in RPTs are reported in Table 6 (Panel A), while the results on the relationship between RPTs and the financial and governance determinants after addressing the selection bias are reported in Panel B of Table 6. Overall, the results of Table 6 present consistent evidence that RPTs are positively associated with ownership concentration (*OWCN*) and board size (*BDSIZE*) and negatively associated with board independence (*BDIND*) and CEO-duality (*CEO*). This evidence also confirms that the self-selection issue is not a big concern that can affect our main inferences from the findings of this study.

Table 6
The association between all determinant variables and RPTs using the PSM approach.

Panel A: Logit regression on the probability of engaging in related party transactions.

VARIABLES	RPTs = 1	
	Coeff.	t-value
LNSALES	0.203***	(2.824)
ASSTURN	-0.045	(-1.413)
LEV	0.019***	(3.064)
ROA	-0.003	(-0.125)
Constant	-2.318*	(-1.852)
Industry dummies	Yes	
Year dummies	Yes	
Log likelihood	-193.85469	
Pseudo R2	0.1294	
Chi squared	57.62	
Mean VIF	1.66	

Panel B: The association between all determinant variables and RPTs using the PSM approach.

VARIABLES	RPTs = 1	
	Coeff.	t-value
ROA	0.004	(0.133)
LEV	0.008	(0.738)
OWCN	0.033***	(3.278)
CEO	-1.380***	(-2.641)
BDSIZE	0.483***	(3.372)
BDIND	-8.505***	(-2.996)
GOVSHHLD	-2.011	(-0.578)
BIG4	0.573	(1.097)
SIZE	-0.126	(-0.849)
CFO	-0.022**	(-1.988)
Constant	1.115	(0.394)
Industry dummies	Yes	
Year dummies	Yes	
Log likelihood	-109.00701	
Pseudo R2	0.2097	
Chi squared	28.77	
Mean VIF	2.48	
N	199	

Notes: This table reports the results on the association between all determinant variables and RPTs, after using the PSM approach to address the selection bias concern. Panel A presents the results for Logistic regression on the probability of engaging in related party transactions, while Panel B present the results of Logistic regression estimates of the determinant variables of RPTs using the PS matching sample. Where the dependent variable (RPTs) is a dummy variable that equals 1 if the sum of sales, purchases, and the outstanding balance between the company and its related parties exceeds 1 percent of total assets in the company-year, and zero otherwise, (LNSALES) is the natural logarithm of sales that used as a proxy of size, (ASSTURNR) is the ratio of asset turnover computed as sales scaled by total assets, and all other variables are previously defined in Table 1. ***, ** and *, denote significance at the 1, 5, and 10 per cent levels, respectively. Robust t statistics are in parentheses.

7. DISCUSSION AND CONCLUSION

This study investigates the impact of a set of determinant factors of RPTs using a sample of 432 Jordanian company-year observations covering the period of 2011 to 2017. The results of this study show evidence that CEO-duality, board independence, and operating cash flows are negatively associated with RPTs. On the other hand, financial leverage, ownership concentration, board size, and audit quality are positively associated with the occurrence of RPTs. This evidence suggests that companies with a higher level of debt and ownership concentration, and large boards, which are audited by Big Four audit firms exhibit a higher level of RPTs. On the other hand, companies that have CEO-duality, a large number of outside directors on the board, and a higher level of operating cash flows exhibit a lower level of RPTs.

Findings of this study related to financial leverage and ownership concentration are generally consistent with extant literature that suggests that companies with high debt levels try to mask such performance by illegitimately using RPTs, and that companies with high ownership concentration might use RPTs in tunnelling activities to expropriate funds to dominant shareholders. However, findings related to CEO-duality are generally contrary to extant literature, suggesting that the power of dominant shareholders in Jordanian companies will undermine that of the CEO, regardless of the CEO being a board chairman or a close relative of the chairman or not. As for board size, the findings of this study support findings of some other studies that larger board sizes are associated with more involvement in RPTs. This may be attributed to the argument that boards in Jordan, whether large or small, may not be sufficiently independent, and are ineffective in confronting powerful, dominant shareholders. In addition, this study found that the presence of political connections on the companies' boards of directors is not associated with RPTs, a finding contrary to many previous studies. A possible explanation of this finding is that companies with government ownership (the proxy used for political connections in this study) are under more scrutiny, especially given the size and economic significance of several of these companies, leading to lowering the level of RPT use. Finally, findings of this study report a statistically significant positive relation between using Big Four audit firms and engagement in RPTs, a result contrary to much of extant international literature from more-developed countries. A possible interpretation of this finding is that the quality of auditing in Jordan might not be very different between Big Four and other audit firms, since both types of firms are under pressure from dominant shareholders in clients to produce a statutory audit where quality is not under high demand (Abdullatif & Al-Khadash, 2010; Abdullatif, 2016). In general, the closely-held corporate governance system common in Jordanian companies, coupled with weak protection for small shareholders, is expected to lead to tunnelling activities by dominant shareholders regardless of the company's profitability, political connections, or audit firm type. Indeed, OECD-UASA (2014) reported too much use of RPTs in Jordan and other MENA countries, regardless of the type of company or its financial and governance characteristics.

The findings of this study present the first evidence in Jordanian literature on determinants of RPTs. These findings also contribute in general to RPT literature by shedding more light on a set of determinant factors that have not all been sufficiently examined by prior research (e.g. ownership concentration and CEO-duality, as both were defined and measured in

this study). Further, these findings present practical implications for several interested parties. For example, the JSC, in its capacity as regulator and supervisor of public listed companies, should expand its regulations to increase the disclosure of RPTs by Jordanian public listed companies, and to expand controls and monitoring over RPTs in companies through improving corporate governance mechanisms, including increasing the power of smaller shareholders and independent board members in approving such transactions (see OECD, 2009). This is because even though CEO-duality and political connections did not show in this study an expected effect of increasing the level of RPTs, they are to a high extent both a product of ownership concentration (CEO-duality through the relation of the CEO with a block owner, and political connections through their tendency to be relatively large ownership levels in companies), and ownership concentration clearly showed a statistically significant positive relation with the level of a company's engagement in RPTs. In addition, the findings of this study suggest that audit firms in Jordan appear to have a limited role in mitigating the occurrence of illegitimate RPTs. Therefore, the JSC and other Jordanian regulators have to increase their monitoring of audit procedures of Jordanian audit firms relating to auditing RPTs. In summary, corporate governance codes and other regulations in Jordan have to be improved and better implemented regarding mitigating negative effects of RPTs, and special attention should be given to companies with high debt levels and high ownership concentration as to monitoring their RPT activities.

Research on RPTs in developing countries is generally limited in quantity, and there is need to replicate this study in other developing country contexts to better assess the RPT issue and its potential effects on capital markets and different stakeholders of companies. Due to unexpected results related to the effects of political connections, CEO-duality, and audit firm quality found by this study, detailed studies of these variables and their possible impact on RPTs is encouraged. Other avenues for future research include critical analysis of regulations and corporate governance codes related to RPT conduct and disclosure in developing countries and how to improve these regulations and codes in order to better monitor companies and protect small shareholders and other stakeholders who may be victims of tunnelling conducted by dominant company owners.

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