

## FAMILY OWNERSHIP AND ACCRUAL-BASED EARNINGS MANAGEMENT: EVIDENCE FROM TUNISIA

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### ABSTRACT

*The aim of this paper is to investigate the effect of family shareholding and chief executive officer (CEO) characteristics on earnings management. We use panel data for a sample of 37 Tunisian non-financial listed firms over the period 2007–2017. We contribute to the literature on corporate governance in family firms by testing the effect of the presence of a family or a founder CEO on earnings management in Tunisia. Our results show that the family ownership and the presence of a family CEO (either founder or not) are positively and significantly associated with earnings management practices. These findings suggest that families' dominance with a significant equity stake and a CEO position under control leads to an entrenchment effect resulting in poor earnings reporting quality.*

**Keywords:** family ownership, earnings management, accruals, entrenchment

### INTRODUCTION

Researchers in management and finance have long been analysing the influence of different corporate governance mechanisms (such as the board of directors' characteristics, the managerial compensation, the role of auditors, the ownership structure, etc.) on the financial and accounting reporting quality (Shen & Chih, 2007; Chen et al., 2007; Anderson & Reeb, 2004; Ali et al., 2007; Lo et al., 2010;

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Publication date: 30 June 2021

To cite this article: Gamra, A. B., & Ellouze, D. (2021). Family ownership and accrual-based earnings management: Evidence from Tunisia. *Asian Academy of Management Journal of Accounting and Finance*, 17(1), 93–124. <https://doi.org/10.21315/aamjaf2021.17.1.4>

To link to this article: <https://doi.org/10.21315/aamjaf2021.17.1.4>

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Bekiris & Doukakis, 2011, Rahman & Bremer, 2016; Kim et al., 2020, among others).

This issue is particularly important to study in the Tunisian context due to the specific institutional characteristics of this country, especially in the last decade recognised as being a period of recession. In fact, after the 2011 revolution, Tunisia was affected by several negative shocks due to political instability, insecurity work-related disputes, the loss of the Libyan market and the decrease in tourism income (Diwan, 2019; Ihaddaden, 2020).

The Libyan revolution has also negative repercussions on the Tunisian economy. Indeed, the troubles coming from the conflictual situation in Libya took place when bilateral economic relations between the two neighbouring countries were at their peak and many joint projects were planned. Also, before these troubles, the Libyan market was absorbing a large part of Tunisian industrial products, particularly agro-food products and building materials. Moreover, several Tunisian migrants worked in Libya and sent remittances to their families in Tunisia, and many Libyans came to Tunisia to get health services (Santi et al., 2011). After the revolution, bilateral commercial transactions decreased significantly, Tunisian workers returned to their country and Libyans can no longer afford to come for medical tourism. Such a situation of recession in Tunisia leads to inefficient corporate governance practices where corruption and related-party transactions become prevalent.

Three important reasons may explain why some managers tend to engage in earnings management and to limit the disclosure of their financial information in Tunisia. First, banks play traditionally an important role in the financing of Tunisian companies. But in a situation of limited liquidity, they are imposing increasingly restrictive conditions for granting credits. Second, due to the weakening of state capacities to enforce laws, there is an expansion of informal and illegal activities inducing an unfair competition for legal firms. Third, the fiscal policy undertaken in order to collect funds and compensate for the national budget deficit has largely affected the financial situation of Tunisian firms. These reasons lead managers to be more reluctant to communicate on their real financial situation.

Studies on the relationship between corporate governance and earnings management have shown that earnings' manipulation could be affected by the effectiveness of governance mechanisms. In the Tunisian context, Kouaib and Jarboui (2014) find that the interaction between external audit quality and ownership concentration has a significant positive impact on earnings management

for Tunisian industrial firms. Moreover, they show that the joint effect of institutional ownership and the appointment of a reputed auditor has a positive impact on earnings management for commercial firms and a negative impact for industrial firms. Furthermore, Omri et al. (2009) find that the affiliation to a big network (big 4 audit firm) and the specialisation by sector tend to improve the quality of the results published by the firms. In a similar vein, Lajimi et al. (2019) show that, in the Tunisian context, choosing a big international network as auditor constrains earnings management practices significantly, improving the quality of the published accounting results. Also, they find that the presence of more external board members is associated with a better control of the firm leading to more transparent accounting information. Klai and Omri (2011) investigate the effect of two governance mechanisms on financial information quality, namely the characteristics of the board (composition, size and CEO duality) and the ownership structure. The study shows that the control of the firm by families, foreigners and blockholders is associated with poor financial reporting quality, which supports the entrenchment hypothesis in Tunisian companies. However, the control by the State and the financial institutions has a positive and significant effect on the quality of reporting. Among the multiple corporate governance mechanisms, family ownership affects earnings management. There is a large body of literature interested in the impact of the presence of families and their ownership stakes on the magnitude of earnings management (Wang, 2006; Jiraporn & Dadalt, 2009; Ding et al., 2011; Sánchez-Ballesta & García-Meca, 2007; Chi et al., 2015; Achleitner et al., 2014; Prencipe et al., 2008). But very few studies have investigated this issue in the Tunisian context and even in the MENA region. In Tunisia, only Klai and Omri (2011) consider the effect of the percentage of directors representing families without distinguishing between family and non-family firms. Yet, in Tunisia, the overwhelming majority of SMEs and a significant proportion of large firms are family controlled. Ellouze and Mnasri (2020a) note that 110 among the 200 largest firms are owned by families, and 42 among the 79 listed firms in 2016 are family controlled. One specification of large family firms is that they belong to groups, which are often well-diversified conglomerates with pyramidal structure and cross-holdings (Ellouze & Mnasri, 2020b).

Theoretical and empirical studies on the relationship between family ownership and earnings management are not conclusive. Some authors assert the alignment effect, while others are in favour of the entrenchment effect.

The alignment effect implies that the interests of the family are aligned with those of the minority stockholders resulting in higher earnings reporting quality. In fact, family owners have more incentives to control manager's opportunistic behaviour and to minimise earnings management practices in order

to protect their investments, secure their firms and preserve their reputational capital and socio-emotional wealth (Salvato & Moores, 2010; Berrone et al., 2012; Wang, 2006; Ali et al., 2007; Jiraporn & Dadalt, 2009; Cascino et al., 2010; Prencipe et al., 2008; Achleitner et al., 2014).

However, the entrenchment effect predicts that the controlling family, being incited to expropriate minority shareholders, could engage in earnings management activities in order to achieve private benefits. In this context, family firms are associated with poor earnings reporting quality (Bertrand & Schoar, 2006; Claessens et al., 2002; Ding et al., 2011; Chi et al., 2015; Lisboa, 2016; Chen et al., 2020).

Inside Tunisian groups, managers are often family founders or their descendants. They maintain large ownership stakes, control several firms in the same time and have a significant power and a dominant position. They have also political connections and the ability to influence the media.

As a result, they may be more entrenched against the interests of minority shareholders than non-family firms' managers, especially in an environment characterised by serious problems of information opacity. Thus, this paper explores the ways in which these Tunisian family managers may be incited to undertake earnings management practices and if their behaviour could be affected by the proportion of their ownership stakes.

Furthermore, another stream of research has focused on the influence of governance characteristics in family firms, such as the management of the company by the founder or another member of the family to solve Type I or Type II agency problems. On the one hand, some authors predict that firms managed by a family CEO or the founder align the interests of shareholders with those of managers and face less Type I agency problems, which leads to lower earnings management (Yang, 2010). On the other hand, according to some other studies, hiring a CEO outside of the founding family could be a mechanism to alleviate Type II agency problems since a family CEO gives more power to the family owners and increases their ability to entrench themselves (Chen et al., 2020).

Since there are very few empirical studies to date providing convincing evidence on the effect of firm management by the founder or a member of the family on earnings management, we propose also to test this issue in the Tunisian context.

To conduct our study, we use hand-collected information for 37 non-financial listed Tunisian firms over the period 2007–2017. Our paper makes several contributions to the field of research. First, early empirical studies on the effect of family ownership on earnings management have been conducted in different contexts such as United States and European or Asian countries, but very few studies have tested this issue in the Tunisian context. Second, we contribute to the literature on family governance characteristics by testing the effect of the presence of a family or a founder CEO on earnings management, which remains, to the best of our knowledge, largely unexplored.

## **LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

### **Family Ownership and Earnings Management**

Agency theory describes managers as agents who perform a service by executing certain transactions on behalf of shareholders (principals). It assumes that the interests of principals and agents are not always in alignment. In fact, in a context of asymmetric information, where the agent could be opportunistic, the separation between ownership and control may induce agency problems due to the conflicting relationships between the manager and the shareholders.

There are two potential types of agency problems depending on ownership setting. The Type I agency problem assumes that, in case of dispersed ownership, managers could adopt opportunistic behaviour against shareholders' interests, while trying to maximise their own wealth (Jensen, 1983). However, Type II agency problem assumes that, in a concentrated ownership setting, majority shareholders could collude with managers in order to expropriate minority ones.

Consequently, according to the ownership structure, agency problems and conflicts could be attenuated or exacerbated. Existing literature suggests that family ownership has two alternative effects on earnings management: The alignment and the entrenchment effects (Chi et al., 2015; Wang, 2006).

According to the alignment effect, the interests of family owners are aligned with those of the other shareholders, which leads them to monitor the manager to improve earnings reporting quality. In this case, Type I agency problems arising from the opportunistic behaviour of the manager could be attenuated. Indeed, families tend to have more incentives to monitor the manager because of their large stakes in the company tying their wealth to the firm's profitability, performance and sustainability. This better monitoring of managers

and greater control of operations and business processes should constrain the opportunistic behaviour of the manager such as the manipulation of reported results and financial statements (Tong, 2007; Salvato & Moores, 2010; Berrone et al., 2012).

In addition, family owners tend to be long-term investors in their firms. On the one side, the longer time-horizon of family's investments can limit the pressure on managers to meet or beat certain earnings thresholds required by capital market investors. The long-term perspective should, therefore, result in less earnings management and manipulation since such activities only serve short-term objectives. On the other side, the family's long-term horizon provides them with greater and superior knowledge of the firm's processes, operations and practices (Jiraporn & DaDalt, 2009; Bertrand & Schoar, 2006; Claessens et al., 2002). They have the opportunity, resources and ability to monitor, discipline and influence managers, reducing, therefore, the scope for opportunistic behaviour, particularly regarding earnings management.

Finally, family owners seek to preserve their "reputational capital" serving as a bonding mechanism and an insurance-like protection for them (Gomez-Mejia et al., 2007; Jiraporn & DaDalt, 2009). This reputational capital comes from the fact that these firms usually bear the family's name. Moreover, family members tend to deal repeatedly with the same capital providers to ensure the succession of the company to the next generation. For these reasons, and in order to preserve their reputation, family owners tend to look out for manager's opportunistic behaviour to limit earnings management activities (Salvato & Moores, 2010; Berrone et al., 2012).

As for the entrenchment effect, the proponents of this theory contend that concentrated ownership creates incentives for larger shareholders to exploit their dominant position and abuse their power by expropriating wealth from minority shareholders, implying severe Type II agency problems (Morck et al., 1988).

The entrenchment of family owners is explained by information asymmetry and agency problems between controlling shareholders (the family members) and minority shareholders (Sánchez-Ballesta & García-Meca, 2007). The family has a greater motivation to engage in earnings management as insider ownership increases (Yang, 2010). Moreover, majority owners tend to be more motivated to report financial information that benefits them rather than information that actually reflect the economic situation of the firm (Fan & Wong, 2002), decreasing, as a result, the quality of earnings information.

Suggesting that the family tend to extract private benefits from the firm at the expense of minority shareholders, the entrenchment effect predicts that family firms report lower-quality earnings.

The results of the empirical studies testing the effect of family ownership on earnings management are mixed. In the U.S. context and using data from the S&P 500 companies during the period of 1994–2002, Wang (2006) finds that founding family ownership is associated with higher earnings quality, which is in line with the alignment effect. This positive association between family ownership and earnings quality is robust to alternative definitions of family ownership (a binary variable, a continuous variable, and the CEO attributes of family firms) and three attributes of earnings management (abnormal accruals, earnings informativeness and persistence of transitory loss components in earnings).

In the same context, Ali et al. (2007), comparing the quality of the reported earnings of family and non-family firms, affirm that family firms report lower levels of discretionary accruals compared to non-family firms. These results are explained by the idea that these firms face less severe Type I agency problems than non-family ones leading to less earnings management practices and less opportunistic behaviour.

Another study conducted by Jiraporn and Dadalt (2009) using, as well, S&P 500 companies confirms that the level of abnormal accruals is nearly a third lower for family firms than for their non-family counterparts, suggesting again that family firms are less likely to manipulate earnings than non-family firms.

In the European context, Cascino et al. (2010) document that Italian family firms convey financial information of higher quality compared to information provided by their non-family peers. Indeed, family firms show higher quality of accruals, more predictable, persistent and smoother earnings, comparatively to non-family firms.

In a similar spirit, Prencipe et al. (2008) show that Italian family firms have fewer incentives to smooth income since they are less sensitive to the short-term fluctuations of the market than their non-family counterparts. This finding supports the long-term horizon hypothesis stating that the main goal of family firms is to ensure the long-term survival of the firm rather than seeking short-term shareholder's wealth.

In the same vein and using a sample of 838 firms listed in Germany during 1998–2008, Achleitner et al. (2014) document evidence that, on average,

there is a reliably negative association between family ownership and earnings management. This result supports the socioemotional wealth argument stating that family firms avoid practices that hinder future value in order to maintain their business and preserve their dynasty for the next generations.

In contrast, several other studies predict and shed lights on the negative association between earnings management and the extent of investor protection and they associate this relationship with a potential entrenchment effect.

Ding et al. (2011) and Chi et al. (2015) provide empirical evidence that family ownership is associated with poor earnings quality and a higher likelihood of earnings management and manipulation.

Using different attributes of earnings quality, including earnings informativeness, conservatism, and discretionary accruals, Ding et al. (2011) find evidence that Chinese family firms, marked by the greater opportunistic reporting behaviour, exhibit a higher level of discretionary accruals than their non-family counterparts. These results are explained by the severe Type II agency problems characterising family firms in China and by the weak investor protection mechanisms and imperfection of the market in this emerging economy.

Evidence of the family entrenchment effect is also provided by Chi et al. (2015). The results of their study, conducted on listed High-Tech firms in Taiwan, show that family firms are more likely to engage in earnings management than non-family firms. According to Chi et al. (2015), earnings manipulation could be also explained by the weak legal system and the ineffective corporate governance mechanisms in Taiwan.

In a more recent study, Chen et al. (2020) find evidence of entrenchment in family firms with ineffective internal control when compared with family firms with effective internal control.

In the same line, addressing the issues of transparency, minority rights, and the weak investor protection characterising the legal framework in Portugal, the findings of Lisboa (2016) suggest that family firms engage more in earnings management than their non-family counterparts, especially by manipulating accruals, which supports the entrenchment hypothesis. The results also suggest that, during periods of recession, Portuguese family firms are more likely to engage in earnings management not only to hide bad news but also to preserve the family's socio-emotional wealth and reputation.

These opposite effects may be explained by the structures of the businesses and the corporate governance systems in different contexts, especially since each country has its own characteristics (legal framework, social environment, political frame, cultural aspects, economic and financial development, etc.), which could potentially impact the earnings management behaviour of firms in that country. In fact, it is argued that countries characterised by higher regulatory quality, the rule of law, higher investor protection, financial development, and economic development would experience less earnings management since these factors reduce agency problems and information asymmetry between insiders and outsiders (Lemma et al., 2013).

Since Tunisia is characterised by low investor protection and a weakness of its corporate governance system and building on the results of Klai and Omri (2011) suggesting that the control of the firm by families implies poor financial reporting quality, we expect an entrenchment behaviour of family managers in Tunisia.

Moreover, the ownership in large family firms in Tunisia is highly concentrated and the majority of family listed firms belong to large groups that are managed by dominant and powerful families having political connections and an influence on media, which could lead to more entrenchment of these families. Thus, we hypothesise that:

H1: There is a positive relationship between family ownership and earnings management in Tunisia.

### **Family CEO and Earnings Management**

Researches have shown that the majority of family firms around the world are managed by the founders or their descendants (La Porta et al., 1999; Morck et al., 2000; Faccio & Lang, 2002). Being the highest-ranking individual in the company, the CEO is the first responsible for the success and the continuity of the business by making top-level managerial decisions. Therefore, it is important to focus on the decision to appoint a family CEO (either the founder or one of his descendants) and the consequence of this decision on the firm's willingness to manage earnings.

It is recognised that family firms do not face the same degree of agency problems' severity. On the one hand, family firms managed by a family CEO (the founder or a later generation family member) face less Type I agency problems, where managers appropriate the corporate resources for their personal benefits,

such as maximising resources under control and consuming perquisites. Thus, the decision of appointing a family related CEO could lead to the alignment of interests between shareholders and managers and to fewer earnings management practices. Using a Taiwanese sample, Yang (2010) indicates that non-family CEOs exhibit greater tendency to manage earnings than do family CEOs. In addition, the links between the CEO and the family owners and the proportion of managerial ownership (the CEO being part of the family) would affect their behaviour in terms of performance and earnings quality (Alzoubi, 2016; Fama & Jensen, 1983).

On the other hand, when the CEO is the founder or one of his descendants, the family have considerable influence over corporate decisions, and therefore, Type II agency problem is potentially severe, indicating that majority shareholders expropriate minority ones, particularly by manipulating accruals.

Randolph et al. (2017) came to the conclusion that, at lower levels of ownership, families tend to pick one of their members as family managers and / or directors and engage in entrenchment activity. However, the study associates higher levels of family ownership with a noticeable reduction in entrenchment behaviours. By having substantial control over the firm through high levels of equity and voting rights, family owners are less eager to be directly involved in the business' management (Madison et al., 2018).

Chen et al. (2020) argue that, among S&P 500 firms, having the CEO position under control strengthens the family authority and increases its ability to entrench. According to these authors, having more family members serving as managers or directors gives the family more power. As a consequence, families are less likely to face resistance to entrenchment.

In this paper, we investigate not only the effect of the firm management by a family CEO, but also the influence of the presence of the founder as CEO. Consequently, we posit that:

- H2: In Tunisian family firms, earnings management is more pronounced when the CEO is the founder or a later generation member of the family.

## **DATA AND METHODOLOGY**

### **Sample Selection**

Our empirical analysis is conducted using 37 non-financial Tunisian companies listed on the Tunis Stock Exchange for the eleven-year period, from 2007 to 2017. Firms operating in the financial industry (commercial banks, insurance firms, security brokerage firms, etc.) are excluded because of their specific statutory requirements and regulatory environment. Data is hand collected from the financial statements (i.e., balance sheets and income and expenditures statements), prospectus and stock guides available in the Tunis Stock Exchange and the Financial Market Council websites. In our sample, the majority of family firms are those belonging to a well-known family business group. Consequently, to measure family ownership, we consider all stakes held by other entities related to the family, especially other family members and affiliated firms. We refer to Choi et al. (2015) who contend that affiliates' ownership must be included in family ownership since affiliates are controlled by the business group of the family.

Since family business groups in Tunisia are named by the surname of the founder and the founders of large groups are well-known, we hand collect data on the CEO status (family member, founder or not) from prospectus and stock guides available in the Tunis Stock Exchange and the Financial Market Council websites, public information and firms' websites.

After omitting observations with missing data, the final sample includes 369 firm-year observations.

### **Sample Description**

Table 1 presents a description of the sample and the characteristics of family firms. It shows that family business is a prevalent organisation in the Tunisian context forming almost two third of publicly listed companies. Indeed, the percentage of family firms in the sample ranges from 59.26% in 2008 to 75.68% in 2016 and 2017.

Table 1 reports the distribution and the characteristics of family firms by year. Family firms are those in which family members hold at least 25% of common stocks. Family ownership is measured as the mean of common stocks held by families for each year.

Table 1  
*Distribution and characteristics of family firms*

Year	Number of firms	Number of family firms	% of family firms	Family ownership in family firms (%)	% of family firms with family CEO	% of family firms with founder CEO
2007	25	16	64	67.11	68.75	43.75
2008	27	16	59.26	65.14	75	50.
2009	29	18	62.07	69.13	72.22	50
2010	30	20	66.67	61.35	65	45
2011	36	25	69.44	63.54	56	36
2012	37	25	67.57	61.82	52	32
2013	37	25	67.57	57.26	50	28
2014	37	26	70.27	55.13	50	30.77
2015	37	26	70.27	54.65	50	26.92
2016	37	28	75.68	54.41	39.28	21.34
2017	37	28	75.68	54.73	39.28	21.43
Total	369	253	65.66	59.54	54.15	33.20

It is noteworthy that in these family firms, families hold on average 59.54% of equity stakes, which is relatively high, particularly given that our sample comprises only publicly listed companies. This percentage reaches 69.13% in 2009.

Table 1 also indicates that a family member CEO manages more than half of the family firms, while the founder only serves as CEO in almost 33% of the firms. We note that in 2007, a family member runs 68.75% of family firms, but in 2017, only 39.28% of family-controlled firms are family managed. The percentage of family firms managed by the founder is almost 44% in 2007, but this value decreases to about 21% in 2017. Overall, Table 1 shows that in the Tunisian context, the percentage of family firms run by family members (founders or their descendants) is declining over time to reach its lowest value in 2016 and 2017.

These findings could be explained by the fact that the founders in Tunisia, being quite old, have changed their mentality over the years for more openness of their capital. Moreover, they are increasingly looking for competent and experimented leaders. They appoint more qualified external managers in order to prepare the succession of their groups to the next generation, maintain their socio-

emotional wealth and ensure the perpetuation of their family dynasty (Villalonga & Amit, 2006; González-Cruz & Cruz-Ros, 2016; Ellouze & Mnasri, 2020a).

### Dependent Variable Measurement

Several approaches are used in the literature to detect earnings management. However, the Accrual-Based models are the most popular approaches. The analysis of earnings management focuses on management's use of discretionary accruals, representing the modifications made to the cash-flow by the firm's managers, which are subject to manipulations.

The dependent variable used in our study to detect earnings management is the absolute value of discretionary accruals (ABS<sub>DA</sub>), estimated using the modified Jones model proposed by Dechow et al. (1995).

In a first step, we estimate the Equation (1) explaining Total Accruals.

$$\frac{TotAcc_{it}}{TA_{it-1}} = \alpha_1 \frac{1}{TA_{it-1}} + \alpha_2 \frac{\Delta REV_{it}}{TA_{it-1}} + \alpha_3 \frac{PPE_{it}}{TA_{it-1}} + \varepsilon_{it} \quad (1)$$

where,

$TotAcc_{it}$  = Total accruals of the firm  $i$  in year  $t$  = Operating income <sub>$it$</sub>  – Operating cashflow <sub>$it$</sub>

$TA_{it-1}$  = Lagged total assets of firm  $i$  in year  $t$ ;

$\Delta REV_{it}$  = Change in sales revenues minus change in accounts receivables of firm  $i$  in year  $t$ ;

$PPE_{it}$  = Property, Plant and Equipment of firm  $i$  in year  $t$ ;

$\varepsilon_{it}$  = Error term.

Each variable in the model is deflated by the lagged total assets ( $TA_{it-1}$ ) to avoid heteroscedasticity in the error term.

In a second step, we use the coefficient estimates from Equation (1) to estimate normal accruals ( $NDA_{it}$ ) for firm  $i$  in year  $t$  as follows:

$$\frac{NDA_{it}}{TA_{it-1}} = \alpha_1 \frac{1}{TA_{it-1}} + \alpha_2 \frac{\Delta REV_{it}}{TA_{it-1}} + \alpha_3 \frac{PPE_{it}}{TA_{it-1}} \quad (2)$$

Discretionary Accruals (DA) are then generated by subtracting the estimated Non-Discretionary Accruals (NDA) from Total Accruals (TotAcc).

$$\frac{DA_{it}}{TA_{it-1}} = \frac{TOTAcc_{it}}{TA_{it-1}} - \left( \alpha_1 \frac{1}{TA_{it-1}} + \alpha_2 \frac{\Delta REV_{it}}{TA_{it-1}} + \alpha_3 \frac{PPE_{it}}{TA_{it-1}} \right) \quad (3)$$

## Research Models and Control Variables

To test our hypothesis on the effect of family ownership and CEO status (family member or founder) on the absolute value of discretionary accruals as a proxy for earnings management, we estimate the following panel-regression models using the GMM estimator of Blundell and Bond (1998) for dynamic models.

$$\begin{aligned}
 ABSDA_{i,t} = & \beta_0 + \beta_1 ABSDA_{i,t-1} + \beta_2 FAMOWN_{i,t} + \beta_3 FamCEO_{i,t} + \\
 & \beta_4 LEV1_{i,t} + \beta_5 SIZE1_{i,t} + \beta_6 BSIZE_{i,t} + \beta_7 AGE + \\
 & \beta_8 SALEGR_{i,t} + \beta_9 ROA_{i,t} + \beta_{10} OCF_{i,t-1} + \mu_{it}
 \end{aligned} \tag{4}$$

$$\begin{aligned}
 ABSDA_{i,t} = & \beta_0 + \beta_1 ABSDA_{i,t-1} + \beta_2 FAMOWN_{i,t} + \beta_3 FoundCEO_{i,t} + \\
 & \beta_4 LEV1_{i,t} + \beta_5 SIZE1_{i,t} + \beta_6 BSIZE_{i,t} + \beta_7 AGE + \\
 & \beta_8 SALEGR_{i,t} + \beta_9 ROA_{i,t} + \beta_{10} OCF_{i,t-1} + \mu_{it}
 \end{aligned} \tag{5}$$

$$\begin{aligned}
 ABSDA_{i,t} = & \beta_0 + \beta_1 ABSDA_{i,t-1} + \beta_2 D\_FAM_{i,t} + \beta_3 FamCEO_{i,t} + \\
 & \beta_4 LEV1_{i,t} + \beta_5 SIZE1_{i,t} + \beta_6 BSIZE_{i,t} + \beta_7 AGE + \\
 & \beta_8 SALEGR_{i,t} + \beta_9 ROA_{i,t} + \beta_{10} OCF_{i,t-1} + \mu_{it}
 \end{aligned} \tag{6}$$

$$\begin{aligned}
 ABSDA_{i,t} = & \beta_0 + \beta_1 ABSDA_{i,t-1} + \beta_2 D\_FAM_{i,t} + \beta_3 FoundCEO_{i,t} + \\
 & \beta_4 LEV1_{i,t} + \beta_5 SIZE1_{i,t} + \beta_6 BSIZE_{i,t} + \beta_7 AGE + \\
 & \beta_8 SALEGR_{i,t} + \beta_9 ROA_{i,t} + \beta_{10} OCF_{i,t-1} + \mu_{it}
 \end{aligned} \tag{7}$$

where,

*ABSDA* = The absolute value of discretionary accruals calculated using the modified Jones's model (Dechow et al., 1995).

*FAMOWN* = The percentage of ownership stakes belonging to the family.

*D\_FAM* = A dummy variable that equals one if the ownership stake belonging to family members exceeds 25% and zero otherwise. We consider that family firms are those where family holding exceeds 25%. We refer to several papers that retain this threshold, such as Andres (2008), Achleitner et al. (2014) and Leitterstorf and Rau (2014). They refer to the European commission (2009) and argue that a threshold of 25% should be high enough to ensure both sufficient incentives to monitor and the power to exert control.

In the robustness tests, we consider alternative variables of family firms using the thresholds of 20% and 30% to check that our results are robust when we retain these alternative thresholds.

*FamCEO* = a dummy variable that equals one if the CEO is a member of the family (the founder or one of his descendants) and zero otherwise.

*FoundCEO* = a dummy variable that equals one if the CEO is the founder and zero

otherwise. To know if the CEO is founder, member of the family or not, we made cross-checking using prospectus and stock guides available in the Tunis Stock Exchange and the Financial Market Council websites, firms' websites and publicly available documents.

*LEVI* = Total debt to total assets.

*SIZE1* = The natural logarithm of total sales of the firm.

*BSIZE* = The number of directors on the board.

We consider board size as a control variable since it is often considered as a mechanism reflecting the quality of monitoring (Jensen, 1993; Lipton & Lorsh, 1992).

*AGE* = The natural logarithm of the age of the firm.

*SALEGR* = Sales growth from the year t-1 to the year t.

*ROA* = Net income to total assets.

*OCF* = Operating cash flows divided by sales.

$\mu_{it}$  = The error term.

## **DESCRIPTIVE STATISTICS**

Summary statistics of the regression variables for the total sample are given in Table 2 Panel A. The mean value of the discretionary accruals proxy (0.082) reveals the use of earnings management by Tunisian firms, although this value is relatively low. Variations in the level of discretionary accruals are also relatively low (SD = 0.087), that means that during the eleven-year period, accrual earnings management in Tunisian firms are relatively stable.

Panel A presents summary statistics for the key regression variables used to test the impact of family ownership on earnings management. Panel B reports group-mean comparison tests of ABSDA between family and non-family firms. Panel C reports group-mean comparison tests of ABSDA between the presence of family CEO and non-family CEO. Panel D reports group-mean comparison tests of ABSDA between the presence of founder CEO and non-founder CEO. The sample includes 37 non-financial Tunisian firms listed on the Tunis Stock Exchange over the period 2007–2017.

Table 2  
Descriptive statistics

<b>Panel A:</b> Summary statistics for the regression variables					
Variables	Mean	Median	SD	Minimum	Maximum
ABSDA	0.082	0.055	0.087	0.0006	0.517
FAMOWN	0.425	0.479	0.296	0	1
LEV1	0.546	0.506	0.362	0.096	2.643
SIZE1	17.815	17.807	1.280	15.040	20.808
BSIZE	8.347	8	2.244	4	12
AGE	3.409	3.466	0.655	1.386	4.489
SALEGR	0.080	0.065	0.190	-0.448	0.0808
ROA	0.048	0.045	0.087	-0.239	0.235
OCF	0.067	0.069	0.108	-0.301	0.347

  

<b>Panel B:</b> Group-mean comparison tests of ABSDA for family and non-family firms				
	Family firms	Non-family firms	Difference	<i>p</i> -value
ABSDA	0.088	0.068	-0.020	0.036**

  

<b>Panel C:</b> Group-mean comparison tests of ABSDA for the presence of family CEO and non-family CEO				
	Family CEO	Non-family CEO	Difference	<i>p</i> -value
ABSDA	0.094	0.074	-0.020	0.028**

  

<b>Panel D:</b> Group-mean comparison tests of ABSDA for the presence of founder CEO and non-founder CEO				
	Founder CEO	Non-founder CEO	Difference	<i>p</i> -value
ABSDA	0.102	0.076	-0.026	0.016**

Notes: All variables are winsorised at the 1st and 99th percentiles. \*\* indicate significance at the 5% level. Definitions of variables are outlined in the Appendix.

This result corroborates that of several studies demonstrating the use of earnings management by Tunisian firms in order to conceal the real financial situation of the firm, such as Zgarni et al. (2012) and Kouaib and Jarboui (2014).

Table 2 Panel A shows also that the firms of our sample are highly leveraged and not very profitable, with an average ROA of about 5%, a sales growth ratio of 8% and a mean leverage ratio greater than 54%.

In addition, the results confirm that family business is a prevalent organisation in Tunisia since the average of family ownership in our total sample is about 43%. This percentage is consistent with those reported in previous studies on family firms in Tunisia such as Bouzgarrou and Navatte (2013) and Guidara et al. (2016) who find a mean family ownership of 41.5% and 45.3%, respectively.

Table 2 Panel B reports difference in means of absolute discretionary accruals across two sample groups: the sample of family firms and that of non-family firms. Average ABSDA is 0.088 for family firms and 0.068 for non-family firms. This finding gives us a first indication that Tunisian family-owned firms exhibit higher levels of accruals based earnings management than their non-family counterparts, which confirms our first hypothesis.

Table 2 Panels C and D report group-mean comparison tests of ABSDA depending on whether the manager is member of the family or founder, respectively. The results show that firms engage more in earnings management activities when the manager is the founder or a family member and confirm our second hypothesis.

Table 3 presents pairwise correlations for the variables of interest during the entire study period (2007 to 2017). The absolute value of the abnormal accruals (ABSDA) is positively correlated with both of the measures of family ownership but this correlation is significant only for  $D\_FAM$ . Thus, in line with the first hypothesis, Tunisian family firms are associated with significantly higher levels of earnings management.

This table reports the pairwise correlations for each pair of the regression variables used to test the impact of family ownership and CEO characteristics on earnings management for the sample comprising 37 non-financial Tunisian firms over the period 2007–2017.

Table 3  
Pairwise correlations

	ABSDA	FAMOWN	D_FAM	FamCEO	FoundCEO	LEVI	SIZE1	Bsize	AGE	SALEGR	ROA	OCF
ABSDA	1											
FAMOWN	0.070 (0.182)	1										
D_FAM	0.109 (0.036)**	0.840 (0.000)***	1									
FamCEO	0.115 (0.028)**	0.503 (0.000)***	0.496 (0.000)***	1								
FoundCEO	0.125 (0.016)**	0.250 (0.000)***	0.340 (0.000)***	0.693 (0.000)***	1							
LEVI	0.169 (0.001)***	-0.080 (0.124)	-0.098 (0.059)*	-0.049 (0.349)	-0.052 (0.318)	1						
SIZE1	0.033 (0.532)	0.041 (0.438)	0.051 (0.332)	-0.092 (0.078)*	-0.175 (0.001)***	0.280 (0.000)***	1					
Bsize	0.064 (0.219)	-0.401 (0.000)***	-0.325 (0.000)***	-0.259 (0.000)***	-0.263 (0.000)***	0.104 (0.045)**	0.267 (0.000)***	1				
AGE	-0.140 (0.007)***	-0.201 (0.000)***	-0.201 (0.000)***	-0.266 (0.000)***	-0.361 (0.000)***	-0.058 (0.269)	0.447 (0.000)***	0.258 (0.000)***	1			
SALEGR	0.010 (0.842)	0.132 (0.011)**	0.112 (0.032)**	0.056 (0.288)	0.007 (0.887)	-0.067 (0.199)	0.102 (0.051)*	-0.004 (0.937)	-0.068 (0.196)	1		
ROA	-0.087 (0.095)*	0.124 (0.017)**	0.159 (0.002)***	0.104 (0.046)**	0.163 (0.002)***	-0.589 (0.000)***	0.017 (0.750)	-0.075 (0.148)	0.142 (0.006)***	0.207 (0.000)***	1	
OCF	-0.058 (0.264)	0.109 (0.036)**	0.056 (0.284)	-0.056 (0.283)	-0.039 (0.449)	-0.251 (0.000)***	0.077 (0.142)	-0.040 (0.440)	0.199 (0.000)***	0.191 (0.000)***	0.479 (0.000)***	1

Note: All continuous variables are winsorized at the 1st and 99th percentiles. *p*-values are reported in parentheses. \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% level, respectively. Definitions of variables are outlined in the Appendix.

Table 3 shows that firm performance (ROA) and age (AGE) are negatively and significantly correlated with the absolute value of discretionary accruals, however the leverage is positively associated with ABSDA, indicating that managers are less likely to manipulate earnings in older, more performing and less leveraged firms.

According to Pallant (2007), a serious multi-collinearity problem might exist among independent variables if the univariate correlation coefficient is significant and greater than 0.7. Table 3 shows that all correlation coefficients are lower than 0.7, suggesting that our models are not suffering from multicollinearity problems.

## **MULTIVARIATE ANALYSIS**

### **Family Ownership and Accrual Based Earnings Management**

The results of the estimation of Equations (4), (5), (6) and (7) are reported in Table 4. To deal with issues of simultaneity and dynamic endogeneity of panel data, we use the system GMM model of Blundell and Bond (1998).

This table presents regression results of the Equations (4), (5), (6) and (7) testing the impact of family ownership and CEO status on earnings management using the system GMM of Blundel and Bond (1998) for dynamic models of panel data. The dependent variable is the absolute value of discretionary accruals (ABSDA) derived from the modified Jones model (Dechow et al., 1995).

Table 4 reports the results of the models testing the effect of family ownership and CEO characteristics on earnings management. The coefficient estimates of the family ownership measures are significantly positive, except in the first model where it is positive but not significant, indicating that the level of discretionary accruals is higher for family firms than for their non-family counterparts. This result corroborates the first hypothesis suggesting that family ownership is associated with more incentives to manage earnings by accruals manipulations. Accordingly, the influence of the family in firms through significant ownership of firm's equity, results in an opportunistic behaviour.

Table 4  
*The effect of family ownership and CEO status on earnings management*

Variable	Model 1	Model 2	Model 3	Model 4
Constant	-0.135 (0.025)**	-0.135 (0.058)*	-0.025 (0.486)	-0.071 (0.000)***
ABSDA ( $t-1$ )	0.088 (0.123)	0.001 (0.981)	-0.039 (0.137)	-0.002 (0.933)
FAMOWN	0.006 (0.717)	0.024 (0.030)**		
D_FAM			0.018 (0.018)**	0.028 (0.004)***
FamCEO	0.046 (0.003)***		0.029 (0.065)*	
FoundCEO		0.026 (0.088)*		0.037 (0.000)***
LEV1	0.027 (0.039)**	0.030 (0.011)**	0.029 (0.000)***	0.042 (0.000)***
SIZE1	0.013 (0.008)***	0.013 (0.010)***	0.005 (0.009)***	0.006 (0.024)**
BSIZE	0.004 (0.025)**	0.003 (0.091)*	0.006 (0.000)***	0.006 (0.000)***
AGE	-0.028 (0.001)***	-0.024 (0.017)**	-0.023 (0.004)***	-0.015 (0.093)*
SALEGR	-0.179 (0.007)***	-0.117 (0.003)***	-0.100 (0.000)***	-0.118 (0.000)***
ROA	-0.057 (0.614)	-0.143 (0.098)*	-0.099 (0.015)**	-0.035 (0.465)
OCF	0.250 (0.029)**	0.329 (0.000)***	0.218 (0.000)***	0.168 (0.000)***
Wald $\chi^2$	269.55	343.07	11662.47	14028.82
Prob> $\chi^2$	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Observations	332	332	332	332
AR(1) $p$ -value	0.005	0.002	0.003	0.002
AR(2) $p$ -value	0.225	0.127	0.054	0.099
Hansen test $p$ -value	0.262	0.480	0.770	0.305

*Note:* Dependent variable: Absolute value of discretionary accruals (ABSDA). All continuous variables are winsorised at the 1st and 99th percentiles. The sample includes 37 Tunisian non-financial firms listed on the Tunis Stock exchange.  $p$ -values are reported in parentheses with \*, \*\* and \*\*\* denoting statistical significance at 10%, 5% and 1% level, respectively. Definitions of variables are outlined in the Appendix.

The positive and significant relationship between family ownership and earnings management supports the agency theory prediction based on the entrenchment effect. Indeed, due to the large blocks owned by family members and their long-term presence in the firm, they are more likely to extract private benefits at the expense of minority shareholders, which leads to increased earnings management practices. This result can be explained by the affiliation of listed family firms in Tunisia to large family groups forming powerful conglomerates with the control of the founder or his descendants. These families have a dominant influence on the affiliated firms and all their customers and suppliers and may profit from related-party transactions. They also have several political connections, which brings them a significant power over non-family shareholders, especially during the study period, characterised as a period of recession.

Our findings are consistent with Ding et al. (2011), Chi et al. (2015), Lisboa (2016) and Chen et al. (2020), suggesting that family owners are more willing to entrench themselves when Type II agency problems are severe. These problems are particularly exacerbated in a context of weak investor protection and legal system, and ineffective corporate governance mechanisms, which is the case of the Tunisian context.

### **The Effect of Family CEO Characteristics on Accrual Based Earnings Management**

Table 4 reports also the empirical results related to CEO status, testing the second hypothesis investigating the influence of the presence of a family member or the founder as a chairman.

The results show that the variables FamCEO and FoundCEO are associated with a significant positive coefficient, indicating that firms with family leadership are more likely to engage in earnings management activities. These findings support our second hypothesis and suggest that the presence of a family member (the founder or a later generation member) at the top management of family firms is associated with higher likelihood of opportunistic behaviour and earnings management by accruals manipulation. Thus, family managers are more willing to entrench themselves and use their position to extract private benefits through earnings management activities.

These findings are in line with those of Yang (2010), Alzoubi (2016) and Chen et al. (2020) predicting that the presence of a founder or a family CEO gives the family members more power and increases their ability to entrench themselves. Thus, the dominance of the founding family in Tunisia is attenuated when the firm is run by an external manager.

Turning to the control variables, Table 4 shows that firm leverage is positively and significantly associated with earnings management, suggesting that more leveraged firms are more likely to engage in earnings manipulation in order to avoid any violation of contractual debt provisions. Moreover, it seems that older firms and those having more growth opportunities exhibit less earnings management practices. However, larger firms and those with large boards are more likely to manipulate their earnings. Indeed, Jensen (1993) predicts that large boards are less effective in controlling managerial discretion since they are associated with weaker monitoring, slow decision-making process and a difficulty to coordinate. However, a smaller board, limited to seven or eight members, can allow members to easily interact with each other and reach an agreement (Lipton & Lorsh, 1992).

As for firm performance, we find that return on assets is positively and significantly associated with absolute discretionary accruals, however the operating cash-flow ratio is rather negatively associated with earnings management.

## **ROBUSTNESS CHECKS**

We conduct some sensitivity tests to check for the robustness of the primary results.

### **Alternative Measure of Discretionary Accruals**

We re-estimate the primary models using an alternative measure of discretionary accruals referring to Kothari et al. (2005) model. Compared to the modified model of Jones (Dechow et al., 1995), that of Kothari et al. includes the ratio of Return on Assets divided by the lagged value of total assets as an explanatory variable of total accruals. The results reported in Table 5 are qualitatively the same as those reported in Table 4 and show that our results are not driven by the proxy of the dependent variable.

This table presents regression results of the Equations (4), (5), (6) and (7) testing the impact of family ownership and CEO status on earnings management using the system GMM of Blundel and Bond (1998) for dynamic models of panel data. The dependent variable is the absolute value of discretionary accruals (ABSDA) derived from Kothari et al. (2005) model.

Table 5  
*The effect of family ownership and CEO status on earnings management using an alternative measure of discretionary accruals (Dependent variable: ABSDA)*

Variables	Model 1	Model 2	Model 3	Model 4
Constant	-0.147 (0.003)***	-0.136 (0.023)**	-0.161 (0.001)***	-0.069 (0.000)***
ABSDA ( <i>t</i> -1)	0.117 (0.029)**	0.023 (0.634)	0.068 (0.108)	0.071 (0.001)***
FAMOWN	-0.014 (0.493)	0.025 (0.035)**		
D_FAM			0.004 (0.740)	0.019 (0.055)*
FamCEO	0.061 (0.000)***		0.059 (0.000)***	
FoundCEO		0.044 (0.002)***		0.026 (0.003)***
LEV1	0.017 (0.226)	0.023 (0.057)*	0.020 (0.150)	0.033 (0.000)***
SIZE1	0.015 (0.001)***	0.012 (0.008)***	0.016 (0.000)***	0.008 (0.000)***
BSIZE	0.003 (0.134)	0.004 (0.006)***	0.004 (0.012)**	0.004 (0.000)***
AGE	-0.030 (0.000)***	-0.017 (0.056)*	-0.029 (0.000)***	-0.024 (0.000)***
SALEGR	-0.203 (0.001)***	-0.112 (0.002)***	-0.209 (0.000)***	-0.160 (0.000)***
ROA	-0.103 (0.330)	-0.002 (0.981)	0.056 (0.670)	-0.039 (0.400)
OCF	0.356 (0.003)***	0.071 (0.002)***	0.102 (0.000)***	0.256 (0.000)***
Wald $\chi^2$	164.44	164.44	427.21	6607.35
Prob> $\chi^2$	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Observations	332	332	332	332
AR (1) <i>p</i> -value	0.003	0.006	0.001	0.000
AR (2) <i>p</i> -value	0.143	0.058	0.085	0.100
Hansen test <i>p</i> -value	0.320	0.388	0.283	0.408

Notes: All continuous variables are winsorised at the 1st and 99th percentiles. The sample includes 37 Tunisian non-financial firms listed on the Tunis Stock exchange. *p*-values are reported in parentheses with \*, \*\* and \*\*\* denoting statistical significance at 10%, 5% and 1% level, respectively. Definitions of variables are outlined in the Appendix.

### Alternative Measures of Some Control Variables

Our second robustness check concerns alternative definitions of firm size, leverage and profitability. We re-run our regressions using the natural logarithm of assets (SIZE2) instead of the natural logarithm of sales to measure firm size. Leverage is measured by debt to equity (LEV2) instead of debt to assets. Also, to measure profitability, we use return on equity (ROE) instead of return on assets. Table 6 shows that our initial results remain unchanged: Family ownership positively impacts earnings management. Moreover, firms are more likely to engage in earnings management when the CEO is the founder or a family member.

This table presents regression results of the Equations (4), (5), (6) and (7) testing the impact of family ownership and CEO status on earnings management using the system GMM of Blundel and Bond (1998) for dynamic models of panel data. The dependent variable is the ABSDA derived from the modified Jones model (Dechow et al. ,1995).

Table 6

*The effect of family ownership and CEO status on earnings management using alternative measures of control variables.*

Variables	Model 1	Model 2	Model 3	Model 4
Constant	-0.070 (0.324)	-0.092 (0.369)	0.023 (0.535)	-0.018 (0.600)
ABSDA ( $t-1$ )	0.035 (0.584)	0.131 (0.161)	-0.039 (0.095)*	-0.066 (0.005)***
FAMOWN	0.013 (0.466)	0.056 (0.038)**		
D_FAM			0.022 (0.007)***	0.026 (0.003)***
FamCEO	0.038 (0.028)**		0.028 (0.003)***	
FoundCEO		0.092 (0.020)**		0.026 (0.008)***
LEV2	0.006 (0.009)***	0.015 (0.026)**	0.003 (0.108)	0.007 (0.000)***
SIZE2	0.010 (0.025)**	0.016 (0.019)**	0.005 (0.068)*	0.005 (0.093)*
BSIZE	0.003 (0.079)*	0.003 (0.217)	0.005 (0.000)***	0.004 (0.000)***

(continued on next page)

Table 6: (continued)

Variables	Model 1	Model 2	Model 3	Model 4
AGE	-0.027 (0.001)***	-0.047 (0.000)***	-0.020 (0.001)***	-0.018 (0.008)***
SALEGR	-0.186 (0.000)***	-0.106 (0.037)**	-0.105 (0.000)***	-0.117 (0.000)***
ROA	-0.045 (0.000)***	-0.263 (0.000)***	-0.001 (0.956)	0.029 (0.000)***
OCF	0.081 (0.372)	0.743 (0.000)***	0.128 (0.002)***	0.148 (0.000)***
Wald $\chi^2$	152.93	335.35	2302.87	7112.09
Prob > $\chi^2$	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Observations	332	332	332	332
AR (1) <i>p</i> -value	0.006	0.001	0.006	0.002
AR (2) <i>p</i> -value	0.202	0.800	0.052	0.073
Hansen test <i>p</i> -value	0.267	0.672	0.625	0.204

Notes: All continuous variables are winsorised at the 1st and 99th percentiles. The sample includes 37 Tunisian non-financial firms listed on the Tunis Stock exchange. *p*-values are reported in parentheses with \*, \*\* and \*\*\* denoting statistical significance at 10%, 5% and 1% level, respectively. Definitions of variables are outlined in the Appendix.

### Alternative definition of the Variable D\_FAM

As a third robustness check reported in Table 7, we consider two other thresholds to define the variable D\_FAM. In the two first models, we define D\_FAM as a dummy variable that equals one if family ownership exceeds 30% and zero otherwise. In the third and fourth model, D\_FAM equals one if family ownership exceeds 20% and zero otherwise. The results of Table 7 corroborate those presented in Tables 4, 5 and 6 and continue to support our evidence.

This table presents regression results of the Equations (6) and (7) testing the impact of family control and CEO status on earnings management using the system GMM of Blundel and Bond (1998) for dynamic models of panel data. The dependent variable is the ABSDA derived from the modified Jones model (Dechow et al., 1995). In the two first models, the variable D\_FAM equals one when family ownership exceeds 30% and zero otherwise. In the third and fourth model, the variable D\_FAM equals one when family ownership exceeds 20% and zero otherwise.

Table 7  
*The effect of family ownership and CEO status on earnings management using alternative thresholds for the variable D\_FAM*

Variables	D_FAM (30%)		D_FAM (20%)	
	Model 1	Model 2	Model 3	Model 4
Constant	-0.084 (0.010)***	-0.091 (0.000)***	-0.081 (0.032)**	-0.070 (0.008)***
ABSDA ( $t-1$ )	0.020 (0.258)	0.008 (0.801)	-0.024 (0.362)	-0.037 (0.153)
D_FAM	0.009 (0.119)	0.016 (0.011)**	0.025 (0.037)**	0.032 (0.008)***
FamCEO	0.044 (0.000)***		0.050 (0.000)***	
FoundCEO		0.042 (0.000)***		0.034 (0.001)***
LEV1	0.029 (0.000)***	0.040 (0.000)***	0.037 (0.000)***	0.046 (0.000)***
SIZE1	0.010 (0.000)***	0.008 (0.001)***	0.007 (0.018)**	0.006 (0.033)**
BSIZE	0.004 (0.000)***	0.004 (0.000)***	0.005 (0.000)***	0.004 (0.001)***
AGE	-0.024 (0.000)***	-0.016 (0.010)***	-0.017 (0.004)***	-0.016 (0.051)*
SALEGR	-0.133 (0.000)***	-0.121 (0.000)***	-0.117 (0.000)***	-0.126 (0.000)***
ROA	0.060 (0.257)	-0.164 (0.225)	-0.048 (0.244)	-0.040 (0.419)
OCF	0.227 (0.000)***	0.235 (0.000)***	0.223 (0.000)***	0.198 (0.000)***
Wald $\chi^2$	12696	4846.45	8182.94	4338.89
Prob> $\chi^2$	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Observations	332	332	332	332
AR (1) $p$ -value	0.004	0.005	0.004	0.005
AR (2) $p$ -value	0.087	0.117	0.070	0.089
Hansen test $p$ -value	0.648	0.451	0.292	0.233

Notes: All continuous variables are winsorised at the 1st and 99th percentiles. The sample includes 37 Tunisian non-financial firms listed on the Tunis Stock exchange.  $p$ -values are reported in parentheses with \*, \*\* and \*\*\* denoting statistical significance at 10%, 5% and 1% level, respectively. Definitions of variables are outlined in the Appendix.

## **CONCLUSION**

In this paper, we rely on a unique hand collected database of 37 Tunisian non-financial listed firms over the period 2007–2017 to investigate the impact of family shareholding and the presence of a family CEO (the founder or one of his descendants) on firm's earnings management. To estimate earnings management, we use the accrual-based model of Jones (1991) as modified by Dechow et al. (1995).

Using the system GMM estimator for dynamic panel data (Blundell & Bond, 1998), we provide evidence that there is a positive relationship between family ownership and earnings management, suggesting an entrenchment effect. Thus, involvement of families with a significant stake in the firm leads to more managerial opportunism and worse reporting quality. In fact, in a context of asymmetric information, families are more likely to exploit their dominant position to increase their private benefits, leading to a severe Type II agency problem between controlling and minority shareholders. Our results could be explained by the fact that listed family firms in Tunisia often belong to important family groups with a dominant position and an ability not to communicate on their actual financial situation and by the lack of information transparency and the weak governance structures and investor protection characterising the legal framework in Tunisia.

Furthermore, our findings show that family member-managers and especially founders are more likely to engage in earnings management activities, suggesting that in the Tunisian context, families having the CEO position under control are less likely to face resistance to entrenchment and more likely to manipulate earnings.

As all studies, this research has some limitations. First, since we use the modified Jones model proposed by Dechow et al. (1995), the estimation should be conducted by industry and year. But the Tunisian market is quite small and due to the limited number of firms per industry and year in our sample, only panel data regressions are estimated. Second, the opportunistic behaviour of managers is estimated through the accruals, which represents only one of many attributes of managerial discretion. Third, we consider a limited number of governance variables. Other governance mechanisms related to earnings management incentives could be addressed in future researches.

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## APPENDIX

### Variables definition

Variable abbreviation	Definition
TotAcc	Total accruals = Operating income – Operating cash flow
TAit-1	Lagged value of total assets
ΔREV	Change in sales revenues minus change in accounts receivables
PPE	Property, Plant and Equipment
NDA	Non-discretionary accruals
DA	Discretionary accruals
ABSDA	The absolute value of discretionary accruals calculated using the modified Jones's model (Dechow et al., 1995).
FAMOWN	The percentage of ownership stakes belonging to the family
D_FAM	a dummy variable that equals one if the ownership stake belonging to family members exceeds 25 per cent and zero otherwise
LEV1	Total debt to total assets.
LEV2	Total debt to total equity
SIZE1	The natural logarithm of total sales of the firm
SIZE2	The natural logarithm of total assets of the firm
BSIZE	The number of directors on the board
AGE	The natural logarithm of the age of the firm
SALEGR	Sales growth from the year $t-1$ to the year $t$
ROA	Net income to total assets
ROE	Net income to total equity
OCF	Operating cash flows to sales
FamCEO	a dummy variable that equals one if the CEO is a member of the family and zero otherwise
FoundCEO	a dummy variable that equals one if the CEO is the founder and zero otherwise