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Borsa Istanbul Review

Borsa İstanbul Review 16-3 (2016) 177—184 http://www.elsevier.com/journals/borsa-istanbul-review/2214-8450

Tax optimization and the firm's value: Evidence from the Tunisian context

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Received 15 February 2016; revised 23 April 2016; accepted 23 April 2016 Available online 30 April 2016

Abstract

The paper investigated the relationship between corporate tax optimization and the firm's value in the Tunisian context over an 11 year period. The empirical results revealed that tax optimization, accruals and investment increased the firm's value. After dividing the sample between listed and non-listed firms, we concluded that, compared to non-listed firms, the listed firms were better able to optimize tax through adopting a tax policy. Our findings help decision makers, researchers and practices to better understand the role of tax optimization in the management of firms and, also, in their performance.

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JEL classification: H 25

Keywords: Firm value; Tax optimization; Listed and non-listed firms; Tunisia

1. Introduction

The importance of taxation in management of firm is large and growing. Alvarez and Marsal (2012) declare that tax topics are considered by financial executives in up to 92% of global business decisions. Recently, a great deal of effort has focused on the relationship between tax optimization and the firm's value. According to Capiez (1994) "tax optimization consists in minimizing mainly the income tax in order to maximize the result after taxes". In the same way Bryant-Kutcher, Guenther, and Jackson (2012) show that tax optimization interest managers to reduce tax burden and maximize level of profits. In this framework, we identified tax optimization in terms of legal activity such as minimizing the taxable base for investment and financing. The interest granted to the firm's tax situation and the controversies concerning the firm's tax burdens (the tax rate is about 30% in Tunisia) and the firm's

The specific nature of the Tunisian tax system, with the many opportunities granted by the legislator, suggested that this context constituted a favourable ground for conducting this study. In this framework, we identified tax optimization in terms of legal activity such as minimizing the taxable base for investment and financing.

The main objective of tax optimization is the creation of the firm's value and this is linked directly to both the planning and the quality of the firm's managerial organization. Manager look for strategies to reduce their tax burden to generate tax benefits after tax returns or shareholder wealth (Abdul Wahab & Holland, 2012).

There have been many debates about the practice of tax optimization and its impact on the firm's value. Chadefaux and Rossignol (2006) considered that tax optimization was one of the factors which were likely to increase the firm's value either by the minimization of tax burdens or through the disclosure of good information. Abdul Wahab and Holland (2012) reveal

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Peer review under responsibility of Borsa Istanbul Anonim Şirketi.

growth led us to examine the relationship between tax optimization and the firm's value.

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a negative moderating influence of departing CEO on tax optimization levels.

Nevertheless, some researchers found that the activity of tax optimization was perceived to have a destructive impact on the firm's value (MacNaughton & Mawani, 1997; Nanik & Ratna, 2015). This was because, while tax optimization minimized the firm's tax burdens, it exposed the firm to financial difficulties since no account was taken of the firm's non-tax costs. In the same context, they showed that the optimization of the taxable income influenced the interests of other stakeholders.

Hanlon and Heitzman (2010) showed that the relationship between the activity of tax optimization and the firm's value remained unclear. Although several studies have investigated the implication of tax avoidance on the firm's value, we still do not understand fully the mechanisms underlying the association between tax avoidance and the firm's value.

In our research, we used the concept of value from the shareholders' viewpoint. Our purpose was to investigate the relationship between the tax optimization and the creation of shareholder value.

Previous research on the valuation of firms did not examine clearly the empirical implications of the firm's value on tax avoidance activities. Therefore, the purpose of this study is to add to the growing literature on the implications of corporate tax optimization on the firm's value in the context of a developing country such as Tunisia.

This paper is organized as follows: in the first section, we present the literature review and, therefore, the hypotheses for our study. In the second section, we present the sample and the firms 'data. In the third section, we validate our hypotheses empirically. Finally, we present our conclusions.

2. Previous literature and development of hypotheses

In this section, we examine the relevant literature on tax optimization and the firm's value. Also, we explain the relationships between firm value and earnings management, investment, financing, audit quality and size.

2.1. Tax optimization and the firm's value

The classic theoretical literature on firm valuation (Feltham & Ohlson, 1995) and their empirical applications (Barth, Clinch, & Shibano, 1999; Dechow, Hutton, & Sloan, 1998; Kothari, 2001) used typically after-tax earnings and did not address any influences of corporate tax avoidance on firm value.

The taxpayers' behaviours vary from conscious tax planning, tax optimization and tax avoidance to tax evasion and tax fraud; these represent illegal activities penalized by law (Alm, Cherry, Jones, & Mckee, 2010). More recent US research suggested further costs in the form of agency costs; these led shareholders to discount the firm value by reference to levels of tax planning activities (Desai & Dharmapala, 2006).

Desai and Dharmapala (2009) did not validate the simple assumption of transfer of wealth from the state to

shareholders. They proposed the incorporation of the agency theory in analyzing tax avoidance. They concluded that, amongst the retained theoretical framework, there were considerable differences between theoretical and empirical results. As advocated by Slemrod (2004) and Desai and Dharmapala (2009), a simplified model with perfect agents (managers) entails distinct conclusions as compared to a model treating an agency theory.

Desai and Dharmapala (2009) found that the effect of tax avoidance on firm value depended on firm governance. They concluded that the global effect of tax avoidance was insignificant and that it had a more positive effect on well-governed firms than on poorly governed firms.

In the context of the United Kingdom, Abdul Wahab and Holland (2012) found that, regardless of the presence of corporate governance mechanisms, there was a negative relationship between the intensity of tax planning and a firm's value. Desai and Dharmapala (2009) and Hanlon and Slemrod (2009) demonstrated that firm characteristics played a crucial role in determining the influence of tax avoidance on the firm's value. Koester (2011) considered that the governance structure moderated the relationship between tax avoidance and the firm's value.

Previous studies on taxes and the firm's value assumed a linear relationship between tax planning and the market-to-book ratio (De Simone & Stomberg, 2013). Jacob and Schütt (2014) studied two dimensions of tax avoidance such as the uncertainty and the expected level of future tax rates. They concluded that, for firms with effective tax avoidance, pre-tax earnings had a considerable impact on a firm's value. In addition, firms, with volatile effective tax rates, received a discount on their earnings.

In this study, we used Effective Tax Rates (ETRs) as a proxy of tax optimization.

Following the same line of thought as previous research, we tested the following hypothesis:

H1: There is a negative association between ETR and firm's value.

2.2. Earnings management and the firm's value

Earnings management can be opportunistic or efficient; it relates to the manager's behaviour in using accounting methods. Most previous researches concentrated on the opportunistic perspective and considered that earnings management was a way of wealth expropriation from shareholders to managers. Therefore, opportunistic earnings management might have a negative influence on the firm's performance (Cormier & Martinez, 2006; Ettredge, Xu, & Yi, 2014; Louis & White, 2006).

Many researchers, such as Frank, Lynch, and Rego (2009) and Wilson (2009) in the American context, found that firms, which practised earnings management, realized simultaneously an increase in their value. Frank et al. (2009) examined the relationship between financial and tax reporting

aggressiveness after controlling for the incentives of tax planning and earnings management.

Managers may take advantages of the tax incentives granted by the law in order to reduce their accounting income. In the Tunisian context, there is a connection between accounting income and tax income. Therefore, taxable income can be reduced. Assidi and Omri (2014) showed that tax optimization could improve the information quality within the firm. In the same order of ideas, the traditional visions of tax optimization suggest that a firm's value should increase with the practice of tax optimization. Therefore, we tested the following hypothesis:

H2: The firm's value increases if there is an increase in the sum of total accruals.

2.3. Financial debt and the firm's value

The financial debt represents a major source of financing for the firm. Modigliani and Miller (1963) presented the seminal work which hypothesized that the tax benefits of debt increased firm value and reduced the cost of using debt capital. In the same order of ideas, the tax perspective considers that financial debt is a tax source of benefit to the firm. Indeed, the interest, being fiscally deductible, allows the tax burdens to be minimized and to increase subsequently the firm's value. Based on the trade-off theory, Lim (2011) showed that there was a negative correlation between debt and tax rates.

Financial debt equals financial debt divided by equity (Guenther, 1994). Therefore, we tested the following hypothesis:

H3: Debt has a negative effect on the firm's value.

2.4. Firm investment

Investment is the fundamental source of firm value and of economic growth. A stable environment helps a firm to invest. Income taxes can play a significant role in the managers' decision-making concerning the investment. The amounts, report and, even, the uncertainty of the payment of tax burdens affect the calculation of the firm's net present value and, consequently, the decision on investment. Besides, tax incentives can interact potentially with financial returns and can affect the firm's decisions on investments (Hanlon & Heitzman, 2010). In the Tunisian context, the state promulgated the code of incentives and granted benefits to firms to increase these values. Also, the firm's value is no longer independent of factors which create corporate value. Indeed, Frank (2002) signalled that the economic circumstances, such as investment, played a considerable role in the determination of the firm's value. Therefore, we tested the following hypothesis:

H4: Investment has a positive influence on the firm's value.

2.5. Audit quality

The audit quality is a necessary element in guaranteeing the relevance and reliability of the decision making process. The auditors' affiliation to international BIG 4 firms plays an important role in the valorization of the firm. According to De Angelo (1981), BIG 4 firms offer better quality services because they have competent and informed teams.

Sulong, Gardner, Hussin, Mohd Sanusi, and McGowan (2013) revealed that audit quality had a significant and negative impact on a firm's performance. The authors used the sum of audit fees, paid to the auditors, as proxy of audit quality. Their results were inconsistent with the findings of previous studies which confirmed that audit quality was associated with higher performance. We highlight that the retained measure of audit quality has a considerable differential effect on the nature of the links between the variables in question.

The Tunisian firms are obliged to designate an auditor who belongs to the Institute of Chartered Accountants; this ensures the transparency of the published information.

Bouaziz and Triki (2012) studied the audit committee's effect on financial performance in the Tunisian context. In particular, they underlined the audit committee's characteristics such as its independence, the members' expertise and its size. Their findings showed that the audit committee's attributes enhanced the performances of Tunisian listed firms.

Many studies¹ used Big 4 firms rather than Non-Big 4 firms to approximate audit quality. Therefore, we tested the following hypothesis:

H5: Audit quality has a positive effect on the firm's value.

2.6. Sector of activity

Belonging to a well determined sector, it can help the firm to benefit from certain tax advantages and can influence, also, the firm's value. Several researchers noted the importance of the sector of activity in increasing the firm's value (Christopher, Armstronga, & Blouina, 2012; Janssen, Crabbe, & Vanenbussche, 2005; Omer, Molloy, & Ziebart, 1993; Zimmerman, 1983).

From an empirical point of view, Omer et al. (1993) detected a significant difference between firms in the industrial sector and firms carrying out their activities in other sectors. Similarly, Janssen et al. (2005) concluded that effective tax rates varied between sectors. In addition, in the Tunisian context, the tax benefits and the minimum amount of tax depends on the firm's sector of activity. Indeed, we

¹ Bauwhede et al., 2000; Zhou & Elder, 2001.

assumed that the sector of activity might constitute a control factor on tax optimization. Therefore, we tested the following hypothesis:

H6: The firm's value depends on the sector of activity.

2.7. Firm size

Previous empirical research studies found that there was a positive relationship between firm size and corporate performance (Hanlon & Slemrod, 2009). In contrast, in the American context, Kim and Limpaphayom (1998) confirmed the existence of a negative relationship between the firm's size and the firm's value. Several previous works indicated that the total assets could be considered to be an indicator of the firm's size (Zhou, 1999; Zimmerman, 1983).

In conducting our research, we referred to the works of Wilson (2008) who measured the firm's size by the natural logarithm of the book value of total assets. The econometric transformation to the logarithm allowed us to avoid the problem of stationary of the variables. Since large size firms are subject to larger transfers of wealth, we anticipated that, for the Tunisian firms, the firm's size increased the firm's value. Next, we tested the following hypothesis:

H7: Size has a significant and positive effect on the firm's value.

3. Methodology

In this section, we present our data and the sample selection of our research along with the dependent variables and independents variables. Likewise, we present the model, the descriptive analysis, the statistical tests and the results of the estimations.

3.1. Data and selection of sample

Our empirical study covered a sample of Tunisian firms over an 11 year period. We began with a sample of all Tunisian listed and non-listed firms during the years from 2000 to 2010. We chose these eleven years because they represented the most recent years for which financial statement data were currently available. For the listed firms, we collected the data from the financial statements and the stock market data published by the financial market council. However for non-listed firms, we collected the data from the accounting services of the firm itself. We excluded firms belonging to the financial sector (such as banking, insurance and investment firms) and real estate firms because of their accounting and tax specificities. Indeed, these firms are required to submit to sectorial standards techniques whereby the financial accounting techniques are different from those other industrial, commercial and services firms. We excluded, also, the firms, which exported totally, because they were

required to submit to a particular tax regime such as income tax exemption.

3.2. Dependent variable

3.2.1. Firm value

The literature recommended several measurement instruments such as accounting measures, namely, Return on Assets (ROA) and Return on Equity (ROE) and Stock Exchange measures (Q of Tobin value).

In this study, we measured firm value by using ROA; this was calculated by the net profit on the total assets. Notably, in the American context, Dodd and Chen (1996) showed that ROA was the most efficient measure of the firm's value. Also, this measure has a relationship between tax benefits accorded by the state and corporate assets which represent factors of the creation of value. This ratio also represents companies' profitability level from their business transaction activities (Santoro & Wei, 2011).

In the following, we present a brief description of the explanatory variables used in our research.

3.3. Independent variables

Effective Tax Rate (ETR): tax income divided by income before taxes. Several recent pieces of research (e.g. Aliani, 2014; Dyreng, Hanlon, & Maydew, 2010; Wilson, 2009) used this measure as a proxy of tax minimization activities.

Total accruals: equal the difference between the firm's income and cash flow.

Financial debt: financial debt divided by equity (Guenther, 1994)

Investment: gross change in tangible assets (Tang & Firth, 2010).

3.4. Control variables

BIG: 1 if the firm is audited by a Big Four company and 0 otherwise (Bouaziz & Triki, 2012).

SECTOR: 1 if the firm belongs to the industrial sector and 0 otherwise (Christopher et al., 2012).

SIZE: logarithm of the book value of total assets (Wilson, 2008)

3.5. Model presentation

In accordance with the micro-economic and classical financial theory, we found that firm performance was valorized by managerial choice. Therefore, tax optimization was a means of creating value by applying all available means and strategies. We developed the following model to present the relationship between tax optimization and the firm's value:

$$ROA_{it} = \alpha_0 + \beta_1 ETR_{it} + \beta_2 ACCT_{it} + \beta_3 DEBT_{it} + \beta_4 \Delta INV_{it}$$
$$+ \beta_5 BIG_{it} + \beta_6 SECTOR_{it} + \beta_7 SIZE_{it} + \varepsilon_{it}$$

We applied this model on unbalanced panel data for a sample composed of 385 observations (35 firms).

3.6. Descriptive analysis

From Table 1, we found that, in our sample, the average effective tax rate was 21.1%. This percentage was below the Tunisian statutory tax rate (30%). In fact, we considered that the average performance of tax optimization of Tunisian firms was significant.

As regards the variable earnings management, we found that 2.8% of the firms managed their earnings; this explained the relationship between the earnings management and the firm's value.

For the financial debt, we noted that this was, on average, 55%; this showed that the Tunisian firms had significant levels of debt which minimized their values. Indeed, the average of the corporate investment was of the order of 2.69%; this showed that investment and tax benefits increased the firm's value. The variable size generated an average of 81.91%. This value suggested that the Tunisian firms, selected in our sample, were large in size; this played a role in the firm's value.

In Table 1 below, we show the descriptive statistics of our variables.

As shown in Table 2, the results indicate that 62.06% of firms belonged to the industrial sector. This demonstrated the importance of this sector to Tunisian economic life and the weight of the tax placed on the industrial firms. The frequency of commercial and services firms were 20.69% and 17.25% respectively. This led us to conclude that the value of the

Table 1

Panel A: Variable definitions				
Variables	Definition	Measures		
ETR	Effective tax rate	Income tax/profit before tax		
Accruals	Total accruals	Net income – cash flow		
Size	Total assets	Log total assets		
ΔINV	Change in property	Gross change in tangible assets		
DEBT	Debt	Financial debt/equity		
AUDIT	Audit	1 if the firm is audited by a		
		Big Four company and 0 otherwise		
SECTOR	Sector of activity	1 industry 0 otherwise		

Panel B: Descriptive statistics of quantitative variables

	Minimum	Maximum	Mean	Standard error
Effective tax rate	0.000	0.431	0.218	1.480
Accruals	-7.829	10.080	0.028	2.174
Debt	0.990	4.120	0.553	2.127
Investment	-5.730	3.190	1.922	12.059
Size	13.94	21.01	8.190	9.050

Table 2 Frequency table.

		Frequency
Sector of activity	Industrial	62.06%
	Commercial	20.69%
	Service	17.25%
Audit quality	BIG	43.89%
	NBIG	56.10%

Table 3
Correlation matrix.

	ETR	ACC	DEB	INV	SECT	SIZ	BIG
ETR	1.00						
ACC	-0.23	1.00					
DEB	-0.04	-0.13	1.00				
INV	0.01	-0.05	-0.06	1.00			
SEC	0.03	-0.05	0.09	0.04	1.00		
SIZ	0.009	0.13	-0.17	-0.14	-0.39	1.00	
BIG	-0.09	0.07	0.09	0.06	-0.19	-0.31	1.00

Table 4 Hausman test.

	Coefficients	Difference		Standard error
ETR	-0.111	-0.070	0.040	
DET	-0.404	-0.512	0.107	0.034
INV	0.007	0.004	0.002	_
BIG	0.123	0.265	-0.141	0.161
ACC	0.19 0	0.160	0.024	0.003
SIZ	1.274	1.294	-0.019	0.042
Prob = 0	0.002			

Table 5
Estimation results.

Independent variables	Coefficients	Z	P	
ETR	-0.015	-4.12	0.000	
ACC	0.019	11.07	0.000	
DET	-0.017	-4.08	0.000	
INV	0.005	2.18	0.030	
BIG	0.002	0.23	0.819	
SEC	0.073	3.32	0.000	
SIZ	0.018	5.99	0.000	
CONSTANT Prob > $F = 0.000$	1.175	20.37	0.000	

industrial firms was more important than that of commercial and services firms.

According to Table 2, our sample shows a frequency of 43.89%. This result explains that almost half of the studied firms were not audited by the BIG 4; this raised the problem of the relationship between the BIG 4 and firm value.

As presented in Table 3, the correlation matrix of the explanatory variables shows that there is a moderate correlation of the variables. We noted the absence of strong correlations which might bias our results. We verified, also, the degree of correlation between the ETR and the accruals on the one hand and, on the other hand, between the ETR and the other variables. This was because a strong correlation between the variables could influence the nature of the relationship between the firm's value, as measured by the economic profitability, and the other variables.

3.7. Statistical tests and results of estimations

The Hausman test result (Table 4) shows that the likelihood is 0.00 per cent which is less than 5%. Therefore, this statistic allowed us to choose the fixed effect model.

From Table 5, we interpreted the correlation between the independent and dependents variables of our model. The effective tax rate correlated negatively and significantly with the firm's economic profitability. This shows that the minimization of the tax rate has a direct impact on the firm's profitability. This result corroborated both Desai and Dharmapala's (2009) work and confirmed our theoretical hypothesis. Despite, the different context the minimization of tax burden remains ultimate objective for all company in word. Then, in making their decisions, managers have to take account of the after tax consequences.

In our sample, the coefficient of the accruals variable is positive and statistically significant. It followed that most of manager used earnings management upwards for different objectives. In our context, the firms had a high concentration of ownership. In fact, in the American context, Warfield, Wild, and Wild (1995) proved, also, this positive relationship between the firm's economic value and the firm's earnings management. This result confirm in the majority of all context because manager every time look for personnel wealth.

The investment had an immediate effect on the value for a coefficient of 0.05. It was considered to be an investment oriented towards the productive or the material yield. The investment is correlated positively with economic profitability. Therefore, it represented a factor in the creation of value and the extension and development of firms. This might be explained by the socio-politic stability, favourable environment for investment and low risk.

The coefficient of the debt variable is negative and statistically significant, this result confirm with Hovakimian (2006). It is the short-term debt rather than the investment cycle which was intended to finance the operating cycles or the banking competition. Consequently, it has a negative effect on economic profitability because of the importance of the financial charge. Also, the firm used short-term debts to compensate for the financial disequilibrium.

The sector variable was significant and this validated our hypothesis. The choice of sector of activity is a necessary element which helps the firm to create value (Christopher et al., 2012).

The industrial sector creates better value than firms in the other sectors. This result explains by the benefits and incentives which the State allowed the industrial sector.

The coefficient of the size variable is positive and statistically significant; this validated our hypothesis. This raised the problem of increasing return to scale. In our sample, there were social problems such as the large wage bills. The Tunisian firms were inefficient since they did not have the economies of scale.

In order to determine the effect of the Stock Exchange listing on firm value, we split our sample into two separate sub-samples (24 firms listed and 11 firms non-listed). The first one included the listed firms and the second contained the listed firms. The Hausman test revealed that the listed firms had a random effect, whilst, on the other hand, those unlisted displayed a fixed effect. The logic of this result was likely

Table 6 Estimation results after decomposing the sample.

Variables	Listed firms			Non-listed firms		
	Coefficient	Z	P	Coefficient	Z	P
ETR	-0.013	-4.48	0.00	-0.213	-4.48	0.00
ACC	0.014	9.31	0.00	0.021	3.75	0.001
DEB	-0.017	-3.77	0.00	-0.012	-1.52	0.13
INV	0.004	0.16	0.87	0.005	0.04	0.30
BIG	0.002	0.32	0.75	_	_	_
SEC	0.038	3.20	0.00	0.51	1.54	0.13
SIZ	0.005	1.41	0.15	0.02	4.71	0.00
CONS	0.95	14.23	0.00	1.16	13.55	0.00
	Prob > F = 0.000			Prob > F = 0.000		

because the publicly traded firms were more exposed to different cyclical phenomena which affected their market prices.

According to Table 6, the coefficient of the effective tax rate of listed firms is significant and negative. This coefficient is more important than the coefficient of non-listed firms. This can be explained by these firms' abilities to optimize their tax policies in order to maximize their values. The listed firms are subject to the regulatory constraints and controls which are the responsibility of their managers. Consequently, the non-listed firms are less liable to have the opportunities of tax optimizations due to the absence of the strict application of the tax rules and the absence of professionals able to optimize the tax burdens. In addition, the estimation results showed that the debt was the variable; this allowed the listed firms to better achieve tax optimization since, compared to non-listed firms, they had more chances to access debt.

The sector of activity was significant for the publicly traded firms whereas it was insignificant for the non-listed firms. In effect, the industrial listed firms created better value than other sectors.

In effect, when there was favourable financial leverage, a part of the firm's generated value was transferred to the State in the form of tax. On the other hand, in the presence of negative financial leverage, the State takes on a part of the burden since the financial losses of the exercises were deferred to the following fiscal year.

4. Conclusion

The main interest of this work is to examine the relationship between tax optimization and the firm's value. Specifically, we underlined the factors, which could be related intimately to effective tax rates and influenced the firm's value. We stressed the audit quality, earnings management, debt, sector of activity. To demonstrate such an effect, we used a sample of Tunisian listed and non-listed firms for a period from 2000 to 2010.

The results showed that there was a negative relationship between corporate tax optimization and firm value for Tunisia firms. This shows that the minimization of the tax rate had a direct impact on the firm's profitability. In addition, since the managers were looking to smooth out the results to increase the benefits from new sources of funding, the accruals had a positive impact on the firm's value.

Debt had a negative impact on the firm; this showed that the indebtedness of Tunisian firms was oriented to the financial operating cycle. However, investment had a positive impact on the firm's value. The sector of activity was significant; this was explained by the importance of the industrial sector to the creation of the firm's value. The firm's size had a positive impact on its economic performance; this was consistent with the political theory which showed that, if the firm's size increased, the firm's value increased, also.

After dividing the sample between listed and non-listed firms, our results showed that the listed firms were better able to optimize tax by adopting a tax policy and creating value. The sector of activity was significant for the publicly traded firms whereas it was insignificant for non-listed firms. Indeed, the listed firms, operating in the industrial sector, created better value than firms in the other sectors.

References

- Abdul Wahab, N. S., & Holland, K. (2012). Tax planning, corporate governance and equity value. *The British Accounting Review*, 44(2), 111–124.
- Aliani, K. (2014). CEO characteristics and corporate tax planning: evidence from US companies. *International Journal of Managerial and Financial Accounting*, 6(1), 49–59.
- Alm, J., Cherry, T., Jones, M., & Mckee, M. (2010). Taxpayer information assistance services and tax compliance behavior. *Journal of Economic Psychology*, 31, 577-586.
- Alvarez & Marsal. (2012). CFO matters: Tax perspectives survey highlights. Alvarez & Marsal. Available at http://www.alvarezandmarsal.com/en/about/action_matters/documents/CFOSurvey_FINAL_002.pdf.
- Assidi, S., & Omri, M. A. (2014). Information quality and tax optimization: case of Tunisian firms. *European Journal of Accounting Auditing and Finance Research*, 2(5), 76–86.
- Barth, M. E., Clinch, G., & Shibano, T. (1999). International accounting harmonization and global equity markets. *Journal of Accounting and Economics*, 26, 201–235.
- Bauwhede, H. V., & Willekens, M. (2004). Evidence on (the lack of) auditquality differentiation in the private client segment of the Belgian audit market. *European Accounting Review*, 13(3), 501–522.
- Bouaziz, Z., & Triki, M. (2012). The impact of the presence of audit committees on the financial performance of Tunisian companies. *International Journal of Management & Business Studies*, 2(4), 57–64.
- Bryant-Kutcher, L. A., Guenther, D. A., & Jackson, M. (2012). How do cross-country differences in corporate tax rates affect firm value? *The Journal of the American Taxation Association*, 34(2), 1–17.
- Capiez, A. (1994). L'exemple du crédit-bail: De l'optimisation fiscale à la planification fiscale. *Revue Française de Gestion*, 101, 60–71.
- Chadefaux, M., & Rossignol, J.-L. (2006). Le taux effectif d'imposition. *Revue Française de Comptabilité*, 386, 8–10.
- Christopher, S., Armstronga, L., Blouina, D. F., & Larcker. (2012). The incentives for tax planning. *Journal of Accounting and Economics*, 53, 391–411.
- Cormier, D., & Martinez, I. (2006). Management earnings forecasts, discretionary accruals and stock market valuation: evidence from French IPOs. The International Journal of Accounting, 41, 209–223.
- Dechow, P., Hutton, A., & Sloan, G. (1998). An empirical assessment of the residual income valuation model. *Journal of Accounting and Economics*, 26, 1–34.
- De Angelo, L. (1981). Auditor size and audit quality. *Journal of Accounting and Economics*, 3, 183–199.
- De Simone, L., & Stomberg, B. (2013). Do investors differentially value tax avoidance by income mobile firms?. Working paper.

- Desai, M., & Dharmapala, D. (2006). Corporate tax avoidance and high-powered incentives. *Journal of Financial Economics*, 79, 145–179.
- Desai, M., & Dharmapala, D. (2009). Corporate tax avoidance and firm value. *Review of Economics and Statistics*, 91(3), 537–546.
- Dyreng, S., Hanlon, M., & Maydew, E. (2010). The effects of executives on corporate tax avoidance. *The Accounting Review*, 85, 1163–1189.
- Dodd, L., & Chen, S. (1996). EVA: a new panacea? Business and Economic Review, 42, 26–28.
- Ettredge, M. L., Xu, Y., & Yi, H. S. (2014). Fair value measurements and audit fees: evidence from the banking industry. AUDITING: A Journal of Practice & Theory, 33(3), 33-58.
- Feltham, A., & Ohlson, A. (1995). Uncertainty resolution and the theory of depreciation measurement. *Journal of Accounting-Research*, 34, 209–234.
- Frank, M. (2002). The impact of taxes on corporate defined benefit plan asset allocation. *Journal of Accounting Research*, 40, 1163–1190.
- Frank, M., Lynch, J., & Rego, S. (2009). Tax reporting aggressiveness and its relation to aggressive financial reporting. *The Accounting Review*, 84, 467–496.
- Guenther, D. (1994). The relation between tax rates and pre-tax returns: direct evidence from the 1981 and 1986 tax rate reductions. *Journal of Accounting and Economics*, 18(3), 379–393.
- Hanlon, M., & Heitzman, S. (2010). A review of tax research. Journal of Accounting and Economics, 50, 127-178.
- Hanlon, M., & Slemrod, J. (2009). What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement. *Journal of Public Economics*, 93, 126–141.
- Hovakimian, A. (2006). Are observed capital structures determined by equity market timing? *Journal of Financial and Quantitative Analysis*, 41, 221–243.
- Jacob, M., & Schütt, H. (2014). Firm valuation and the uncertainty of future tax avoidance. fAccT Center. Working paper nr. 13/2013.
- Janssen, B., Crabbe, K., & Vanenbussche, H. (2005). Is there regional tax competition? Firm level evidence from Belgium. *De Economiste*, 153, 257–276.
- Kim, K. A., & Limpaphayom, P. (1998). Tax and firm size in Pacific-Basin emerging economies. *Journal of International Accounting Auditing and Taxation*, 7, 47-63.
- Koester, A. (2011). *Investor valuation of tax avoidance through uncertain tax positions*. Georgetown University. Working paper.
- Kothari, P. (2001). Capital markets research in accounting. *Journal of Accounting and Economics*, 31, 105–231.
- Lim, D. (2011). Tax avoidance, cost of debt and shareholder activism: evidence from Korea. *Journal of Banking & Finance*, 35, 456e470.
- Louis, H., & White, H. (2006). Do managers intentionally use repurchase tender offers to signal private information? Evidence from firm financial reporting behavior. *Journal of Financial Economics*, 85(1), 205–233.
- MacNaughton, & Mawani. (1997). Tax minimization versus good tax planning. CA Magazine, 40.
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *American Economic Review*, 53, 433–443.
- Nanik, L., & Ratna, W. (2015). The effect of the tax planning to firm value with moderating board diversity. *International Journal of Economics and Financial Issues*, 5, 315–323.
- Omer, Z., Molloy, H., & Ziebart, A. (1993). An investigation of the firm size/effective tax rate relationship in the 1980. *Journal of Accounting, Auditing and Finance*, 8, 167–182.
- Santoro, M., & Wei, C. (2011). Taxation, investment and asset pricing. *Review of Economic Dynamics*, 14(3), 443–454.
- Slemrod, J. (2004). Are corporate tax rates, or countries, converging? *Journal of Public Economics*, 88, 1169–1186.
- Sulong, Z., Gardner, J., Hussin, A., Mohd Sanusi, Z., & McGowan, C. B., Jr. (2013).
 Managerial ownership, leverage and audit quality impact on firm performance:
 evidence from the Malaysian ACE market. Accounting & Taxation, 5.
- Tang, T., & Firth, M. (2010). Can book—tax differences capture earnings management and tax Management? Empirical evidence from China. *The International Journal of Accounting*, 46, 175—204.

- Warfield, T., Wild, J., & Wild, K. (1995). Managerial ownership, accounting choices, and informativeness of earnings. *Journal of Accounting and Economics*, 20, 61–92.
- Wilson, M. (2008). An empirical analysis of the decline in the information content of earnings following restatements. *The Accounting Review*, 83, 519–548.
- Wilson, R. (2009). An examination of corporate tax shelter participants. *The Accounting Review*, 84, 969–999.
- Zhou, X. (1999). Executive compensation and managerial incentives: a comparison between Canada and the United States. *Journal of Corporate Finance*, 5, 277–301.
- Zhou, & Elder. (2001). Audit firm size, industry specialization and earnings management by initial public offering firms. Working Paper Syracuse University, Syracuse, NY.
- Zimmerman, J. L. (1983). Taxes and firm size. *Journal of Accounting and Economics*, 5, 119–149.