Information Content of Income, Tax Avoidance and Taxable Income Management

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Abstract

Managers' prediction of users' decisions is economically valuable. Managers do manage income either to distort information or to defer and report the information related to future incomes. This investigation aims at examining the effects of taxable income management on future tax avoidance consequences as well as the information content of firms. Panel data models, multivariate regression model and Eviews econometric software Ver. 6 among 147 Tehran Stock Exchange-enlisted firms between 2002 and 2011 were used to test research hypotheses. Findings show that firms with managed taxable income present more desirable consequences of future tax avoidance activities and also the taxable income management decreases the information content of this kind of income.
Keywords: Earning Management, Tax Avoidance, Information Content.

1. Introduction

In today's world, where the humans' unlimited desires are in contrast with the limited economic resources and dramatic changes in commercial environment has brought haste and competition to the economy, achieving the expected incomes is also limited (Vahidi Elysseai & Hamedian, 2009). Today, income management is one of attractive and controversial issues in accounting investigation areas from both

investigations and regulatory view. Managers do manage income for various reasons. An important objective of income management in the economic literature is tax considerations. Income tax accounting is relatively complex and multifaceted and the foundation of this complexity lies in the difference between taxable income and accounting income. Since the application range of accounting standards is that of public purposes, the related accounting income is also calculated with the same purpose and because one of financial information users is the Tax Organization, the accounting income is deformed by adding the costs incompliant with articles 147and 148 of Direct Tax Act of Iran and related modifications and deducing legal exemptions raised by the modifications relating to taxable income.

Because of differences in the rules governing taxable income and accounting income calculations, there is always some difference between these two figures and therefore accounting income is converted to taxable income by some modifications. Such differences are classified as permanent discrepancies usually resulting from legal exemptions and temporary discrepancies resulting from timing and evaluation basis differences from an accounting theories view. Dealing with differences between accounting income and taxable income is so important that has forced professional accounting authorities to formulate and repeatedly change the accounting standards in its relation. In Iran, some differences of tax and accounting incomes are among temporary discrepancies which will be reflected in the future but exclusion of International Accounting standard No.12 (Accounting for Taxes on Income) from Iranian Accounting Standards leads to distortion of financial statements. This standard is an instrument for differentiating financial accounting sizes from the size of tax laws and assigning the difference of these sizes two financial periods of transitional life span which have created such differences. But this issue has not been criticized and introduced in Iran yet.

2. Theoretical Foundation

2.1. Income Management

Among researches in accounting and finance area, perhaps none is more attractive than income management because this issue has the potential capacity for delicacy, proficiency, judgment, wrongdoing, mischief, inconsistency and contradiction. Income management occurs when managers benefit from a judgment in financial

reporting and arrange transactions so that financial reports mislead some stakeholders about the firm's economic performance or results of agreements are affected based on accounting figures (Healy & Walen, 1999; Shaper, 1989). Income management is the selection of an accounting method which is opportunistic or has an economic efficiency (Watts et al., 1990).

2.2. Tax Avoidance

Avoiding taxes has its origin in legal voids in the Tax Act. When avoiding taxes, an individual is not worried that their action would be disclosed. There are many similarities between tax evasion and tax avoidance in terms of taxpayers' economic behavior : both aim at escaping from the tax payment. But their main difference is that tax avoidance is some kind of formal abuse of tax legislations, that is, economic agents tries to reduce their tax debts through the gaps in tax laws and revising their economic decisions, while tax evasion is an illegal behavior and a breach of law. The tax system in its ideal conditions, should be capable of fighting both types of tax escape.

2.3. Information Content

Information by itself is worthless. It is worth due to changes in decision-making. Suitable information refers to information which is relevant, reliable, accurate, up-to-date, conceivable and comparable and leads to better decisions. The main goal of information providers is that the information be perceived by users and bring changes into their decisions. Information presented in financial statements should be useful for users towards evaluating financial status, financial performance and financial flexibility of a business (par. 6 of Iranian Accounting Standard No.1). Therefore, the information content presented in financial statements is closely related to quality and value of information.

3. Literature Review

Managers use numerous instruments to manage income which includes optional accrual items (Jones, 1991), changing in depreciation methods (Archibald, 1967), research and development costs (Dosscher et al., 1970), unexpected items (Barnea et al., 1976) etc.

Previous research shows that managers have some incentives to manage accounting income and this provides evidence to recognize whether managers have

any incentives to manage taxable income (Healy et al., 1985 & Dechow et al., 2010). In some cases, firms should increase their costs to obtain future incomes (Kanagaretnam et al., 2004). Defend et al., 1997 found that managers saved the income when the performance of current period was more reliable and it was expected that performance of future periods would weaken. To determine whether income management is useful, managers perform cost-benefit analysis most probably when determining whether the present value of future benefits is higher than current period's costs, and final report smaller income figures for the current period (Koch, 1981; Moses, 1987). In other words, they create income reserves and using these reserves they will be able to manage the firm's future income (Ababanell et al., 2000). Particularly, previous research showed that firms change the taxable income detection time (Smith et al., 1985; Lev et al., 2004). Also, Shackelford and colleagues (2001) concluded that firms do not focus only on minimizing the taxes in the current period. According to Francis et al. (1987), Shevlin (1990) and Dhaliwal et al. (1994), taxable income prediction plays an important role in the firms' tax planning process because prediction of future tax benefits requires estimating future taxable income using tax marginal rates. Lev et al. (2004) predicted that taxable income and financial statement income both contained unique information to the extent that any assessment of their performance indicated different shocks in management components for evaluation of any of these incomes.

Any investigation in Iran has not yet examined taxable income management, tax avoidance and tax income's information content but some papers are somewhat related to the subject. Noravesh et al., 2005 in a study of income management in Tehran Stock Exchange-enlisted firms found that large firms in Iran do manage their incomes and their managers use accrual items to reduce their taxes. Haghighat and Rayegan (2008) in a study of the role of income smoothing in the income's information content found that the current price of stocks of firms that did income smoothing more frequently contained less information on future incomes and cash flows.

4. Question Statement

According to previous research (Myers et al., 2007; Mayberry et al., 2012), as far as financial reporting is concerned, accounting income management leads to decreased

current period income. But regarding taxable income, management may require increasing the current taxable income to obtain future benefits and suspicious reductions in taxes. Firms replace current period costs rationally and by specific measures to achieve future periods' benefits. Taxable income management is most likely to increase future benefits of tax avoidance that will be realized and therefore it enhances the efficiency of the firm's tax avoidance strategy. On this basis, we expect that firms with managed taxable income will have more desirable tax outcomes.

Also we investigated whether taxable income management influenced the information content of taxable income. Overall, financial accounting studies found that income management increased the value of accounting income information. Therefore it is assumed that income management is likely to increase the information content of taxable income. Since taxable income is not the main mechanism for conveying information to shareholders, managing the taxable income potentially contain less information than taxable income variation. On this basis, we do not predict whether taxable income management will increase or decrease the information content of taxable income.

5. Research Hypotheses

Researchers expect that taxable income management increases the future tax avoidance outcomes through the permission it gives managers to invest in tax strategies to have a higher present net value due to saving and tax reserve. Therefore, the first hypothesis are formulated as:

H1. Taxable income management is related to more desirable outcomes in future tax avoidance (a higher level of future tax avoidance). Managers may aim at reducing taxable income's information content because this reduces the information available to tax officials. Given the contradictory expectations on how to manage taxable income, the information content of taxable income should be also influenced. Thus the second hypothesis are formulated as:

H2. Taxable income management is not related to taxable income's information content.

6. Data Analysis

6.1. Data Collection Method

Library method was used to collect data for this paper. The data were gathered through a collection of sample firms' data by reference to financial statements, explanatory notes, and audit reports.

6.2. Population and Sample

All firms listed on the Tehran Stock Exchange form the population. Because of some inconsistencies among population numbers, the following conditions were applied to select the sample and thus the sample was selected by systematic and targeted elimination method. Sample conditions included the following:

1. Firms' fiscal years ending 21st of March

2. The changes have not been made for the firms' fiscal year during the 10-year research period that is from 2002 to 2011.

3. Firms are listed by the end of the 2001 fiscal year.

4. Firms' stock trade has been continuously performed in Tehran Exchange and trade pauses longer than 3 months have not occurred.

5. Given the different nature of incomes and costs, all services, investment and financial intermediary firms were excluded.

6. Previous research differentiated the firms into two categories of managed income and unmanaged income. Thus a considerable portion of firms was excluded from the sample whose incomes were defined as unmanaged. In recent years, many researchers worldwide arranges the firms by their managed incomes from most -to least –managed and then they test research hypotheses on all firms (Stoloy et al., 2004). In the present paper, too, this approach was adopted. Given the foregoing, a sample of 147 firms was selected.

6.3. Data Analysis Method

In this section, necessary estimations and econometric analyses were performed using the data collected by Exchange Organization and with the help of Eviews Ver. 6 software and then, using conventional statistical indexes, the results of statistic estimation were analyzed along with economic and financial theories.

This investigation used integrated model method (Panel Data Models) to estimate the coefficient and to test the hypotheses. Therefore, the research is performed

based on empirical methods, based on econometric and by using multivariate regression analysis, t-test, Wilcoxon total ranks and specifically using the panel data model. In this research, income management tool has been studied based on actual financial events and optional accrual items also were used in the tests. Also, the rejection level for each hypothesis was considered to be a probability level of $P > 0.05$.

6.4. Evaluating Taxable Income Management

Previous research assumed that firms managing their incomes present less variations in incomes (Leuz et al., 2003; Barth et al., 2008). Therefore, calculating the standard deviation of the firms' taxable incomes between the year t-9 and year t , we examine whether the firms manage their taxable incomes (TAXMANAG). Here we ranked TAXMANAG into deciles so that higher values of TAXMANAG represent higher levels of taxable income management. Consistent with previous research (Hanlon et al., 2005; Ayers et al., 2009; Mayberry et al., 2012), in this investigation the taxable income was calculated by differentiating the taxable income from total current internal tax cost (TXINT) and current external tax cost (TXFO) and was scaled by total assets (AT) at the end of year t.

Since estimations of taxable income are based on financial statement disclosure, previous research showed that TAXMANAG potentially undergoes measurement error (Hanlon et al., 2003; McGill et al., 2004). Thus, the secondary income management evaluation (TAXMANAG2) was used which is based on cash tax payment. Payment of cash taxes is not affected by the tax related to financial accounting accrual items and appropriately reflects the effect of shares purchase option cost deductions on the firm's tax debts (Dyreng et al., 2008; Mayberry et al., 2012). TAXMANAG2 is defined as the standard deviation from the firms' cash tax payments and was scaled based on total assets (AT) from the year t-9 to the year t. As with TAXMANAG, TAXMANAG2 was ranked into deciles.

However in the primary evaluation of TAXMANAG and TAXMANNAG2, the taxable income is not split into cash flow and accrual items because the purpose of this investigation is to evaluate the taxable income based on real financial events.

6.5. Tax Avoidance Evaluation

Previous research defined tax avoidance as any strategy that reduces a firm's tax debt (Mayberry et al., 2012). Tax avoidance literature has developed a broad range of components for tax avoidance which use tax avoidance in various places of the income chain (Hanlon et al., 2010). In this paper two extended components of tax avoidance have been assessed in the firms' taxable income management.

Current effective tax rate (CURETR) is the primary assessment of tax avoidance outcomes. As we were interested in identifying the effect of taxable income management on future tax avoidance outcomes, according to Dyreng et al., 2008; Mayberry et al., 2012, we defined CURETR as total current tax costs (TXC) for a 10-year period from t+1 to t+10 and compared with total accounting income before tax deduction (PI) minus special items [1](SPI) during a similar time period. Since CURETR has some limitations [e.g., it does not calculate changes in evaluation reserves and changes in probable tax reserves both affecting current tax costs (Dyreng et al., 2012)], thus CURETR is the product of both tax accrual items management and tax avoidance activities. In addition, CURETR excludes also the benefits of share purchase option therefore the current tax cost becomes exaggerated somehow for the firms with shares purchase option deductions (Mayberry et al., 2012).

The cash effective tax rate CASHETR, the second component, is to assess the future tax avoidance outcomes. According to Dyreng, et al. (2008) and Mayberry et al. (2012), CASHETR is defined as total payments of cash taxes (TXPD) from the year t+1 to t+10 divided by total accounting income before tax deduction (PI) minus

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[1] Special items consist of various items representing unusual or non-continuous items which is presented before calculating the accounting income by the firms. For example, special items used in this paper include: bad debts cost, doubtful debts accounts reserve, non-continuous losses reserve, damages and losses due to natural and unexpected disasters, income and loss due to debts liquidation, goodwill reduced value, non-depreciated intangible assets, devalued goods inventory when a separate method is specified for representing these items or they are considered as non-continuous, displacement of firm and its assets and costs associated with such displacements, reserve for legal litigations in judiciary and trade courts and any of non-continuous items with considerable size. For more information see Mc Way (2006), Burgstahler et al.(1997), Dechow et al.(2006), and also Compustat #17 and ABP#30.

special items (SPI) during a similar time period. CASHETR representational managers' view on minimization of cash taxes payment by using tax planning during a long period (Dyreng, et al. 2008).

Contrary to CURETR, CASHETR does not influence tax accounting accrual items and reflects any activity that reduces the cash tax payment within a certain time period while it may not influence net income (Dyreng, et al. (2008).

6.6. Testing the Relationship between Taxable Income Management and Tax Avoidance-H1

In order to test the relationship between taxable income management and tax avoidance outcomes, the following OLS regression, adopted from Mayberry et al. (2012) was evaluated:

Eq. (1):

$$TAXOUTCOME_{i,t+10} = \alpha_0 + \beta_1 MANAG_{i,t} + \beta_2 PIMANAG_{i,t} + \beta_2 LEV_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 MTB_{i,t} + \beta_6 ROA_{i,t} + \beta_7 R\&D_{i,t} + \beta_8 CAPINT_{i,t} + \beta_9 FORINC_{i,t} + \beta_{10} NOL_{i,t} + \beta_{11} \Delta NOL_{i,t} + \beta_K INDFE_t + \varepsilon$$

All variables of above formula are defined in the appendix and are discussed below. The TAXOUTCOME dependent variable is one of two research components for assessment of tax avoidance. MANAG variable represents separate components of taxable income management (TAXMANAG and TAXMANAG2). Eq. (1) is assessed for any combination of tax avoidance and income management components. Testing H1, the coefficient of MANAG, which indicates income management components, has been examined. According to H1 we expect a negative coefficient on MANAG.

In addition, while testing whether MANAG incrementally leads to firms' tax avoidance outcomes, other factors related to tax avoidance have been controlled. In order to manage the financial accounting income, (PIMANAG) was examined and controlled in the calculations for the probability that the taxable income management is a product of accounting income management. Also the capital structure (LEV), firm size (SIZE), foreign activities income (FORING), capital intensity (CAPINT), research and development activities (R&D), and growth opportunities (MTB) have been controlled. In addition, as previous research showed that economic scales and firm

complexities influence tax avoidances (Mills et al., 1998; Rego et al., 2003; Chen et al., 2010 & Mayberry et al., 2012), in the component where the firms follow tax avoidance, return on assets (ROA) and deferred net operating loss (NOL & ΔNOL) have been controlled. Finally we introduced industrial constant effects (INDFE) because previous research provided evidence that make tax avoidance different based on various industries (Dyreng, et al. 2008).

6.7. Testing the Relationship between Taxable Income Management and Taxable Income's Information Content-H2

In order to test the relationship between taxable income management and information content of taxable income, the following OLS regression, adopted from Tucker et al. (2006) was assessed:

Eq. (2):

$$RET_{i,t} = \alpha_0 + \beta_1 MANAG_{i,t} + \beta_2 PIMANAG_{i,t} + \beta_3 \Delta TI_{i,t} + \beta_4 \Delta PTBI_{i,t} + [\beta_5 \Delta TI_{i,t} * MANAG_{i,t}] + [\beta_6 \Delta PTBI_{i,t} * PIMANAG_{i,t}] + \varepsilon$$

All variables of above formula are defined in the appendix and are discussed below. The dependent variable (RET) is the return on stock purchases and maintenance in a16-month modified market. According to Ayers et al. (2009) also in this paper, return on stocks has been assessed from the beginning of the fiscal year until 4 months after the end of the fiscal year when the firms are allowed to declare their returns on stock and submit their tax returns. We used the change in taxable income (ΔTI) and change in accounting income (ΔPTBI) measured by firms from equity's market value. In order to assess the effect of taxable income management on the information content of taxable income, we analyzed the coefficient ΔTI*MANAG. To the extent that income management increases the information content of taxable income , one expects a significant and positive coefficient on ΔTI*MANAG and to the extent that income management decreases the information content of taxable income, one expects a significant and negative coefficient on ΔTI*MANAG.

Moreover, in order to control the effect of accounting income management on the information content of accounting income, ΔPTBI*PIMANAG was examined. According to previous research (Tucker et al., 2006) which found that accounting

income management increased its information content, one expects a significant and positive coefficient on ΔPTBI*PIMANAG.

6.8. Descriptive Statistics

We began examining research sample from 2002. Because this was the first fiscal year after amending Direct Taxes Act in Iran on February 16, 2002. Since the test of H1 requires an assessment of future outcomes of tax avoidance, the sample used in H1 test was limited to year-firm observations among firms with positive total accounting income from the year t+1 to t+10 (profitable firms)

The final sample used in estimation Eq. (1) is based on availability of any of future tax avoidance outcome components. Specifically, the samples used in estimating Eq. (1) include 780 and 860 years-firm observations, respectively, when CURETR and CASHETR are used as future tax avoidance outcome components.

Eq. (2) requires year-firm observations of subsequent 16-month return to stock to calculate the dependent variable. For the test of H2, sample requirements have been used according to overall firm-year observations in order to have available enough data in estimating Eq. (2). The final sample used in estimating Eq. (2) included 1470 firm-year observations. Table (1) represents the results of descriptive statistics for all variables used in Eq. (1) and Eq. (2). Calculated averages and medians for tax avoidance components CURETR and CASHETR are in accordance with previous research. Specifically, average and median CURETR are 0.321 and 0.338, respectively. While the average and median CASHETR are 0.302 and 0.296, respectively, which according to Dyreng et al. (2008) and Mayberry et al. (2012), CASHETR is less significant than CURETR. Ultimately, the results of descriptive statistics of control variables are similar to previous research.

6.9. Inferential Statistics

6.9.1. Tax Avoidance Analysis Results (H1)

Test results for H1 are presented in Table (2). As mentioned earlier, lower values of CURETR and CASHETR indicate higher levels of tax avoidance. Columns (1) and (2) in Table (2) are the results of primary assessment of taxable income management raised by TAXMANAG while columns (3) and (4) are the results of secondary assessment raised by TAXMANAG2.

According to H1, when CURETR is used as a component of future tax avoidance outcomes, a significant and negative coefficient on TAXMANAG (P<0.05) and TAXMANAG2 (P<0.05) is obtained. Also when CASHETR is used as another component of future tax avoidance outcomes, it has a negative coefficient and is significant (P<0.05). Specifically, addition of one decile due to taxable income management and payment of cash taxes on average lead to 1.8% and 0.3% reduction in CURETR and 2.7% and 0.9% in CASHETR, respectively. Overall, the findings indicate that taxable income management decreases the uncertainty associated with future tax benefits and allows firms to develop tax avoidance strategies more successfully. In addition, the coefficients of control variables are broadly consistent with previous research (Dyreng et al. (2008); Ayres et al. (2009) and Mayberry et al. (2012).

6.9.2. Information Content Analysis Results (H2)

Table (3) presents the test results of taxable income's information content. Results indicate that ΔTI and ΔPTBI in column (1) are positive and significant which is consistent with Hanlon et al. (2005) who found that taxable income contains information that increase accounting income and ΔPTBI (2.111) is more significant than ΔTI (0.712) which shows that shareholders primarily rely upon information contained in accounting income.

Columns (2) and (3) of Table (3) demonstrate test results of H2 which speculates whether income management influences the information content of taxable income. In order to test H2, the coefficients on ΔTI*TAXMANAG and ΔTI*TAXMANAG2 were examined and therefore a negative and significant coefficient on both ΔTI*TAXMANAG (P<0.05) and ΔTI*TAXMANAG2 (P<0.05) was obtained which, consistent with Mayberry et al. (2012), shows that taxable income management reduces the information content of taxable income. Also the present paper tested the effect of accounting income management on the information content of accounting income by using ΔPTBI*PIMANAG coefficient. Consistent with previous research (Tucker et al. 2006), a positive and significant coefficient (P<0.05) in columns (2) and (3) for ΔPTBI*PIMANAG is obtained which indicates that accounting income management increases the information content of accounting income.

Results indicate particularly that firms manage accounting income to defer information, which is consistent with Tucker et al (2006). In addition, the results indicate that taxable income management reduces the information content of taxable income.

7. Conclusion

Previous research showed that firms have incentives to manage taxable income (Lev et al. 2004; Graham et al. 1996). Also, firms manage taxable income to achieve future benefits including income achievement measures higher than conventional income (Myers et al. 2007); to reduce capital costs (Francis et al. 2004); to increase investment schemes (Barton, 2001); and for a possibility of more successful development of tax avoidance (Mayberry et al. 2012).

This paper examined and tested the outcomes of taxable income management associated with tax avoidance in future periods as well as the intensity of the effect of managing this kind of income on the information content of taxable income. Using year-firm observations of sample between 2002 and 2011, it was concluded that firms with managed taxable income present more desirable outcomes of their future tax avoidance activities or higher levels of tax avoidance which is associated with taxable income management and reduced uncertainty in relation to future benefits and allows the firms to develop tax avoidance strategies. Also, similar to Mayberry et al. (2012) it was revealed that taxable income management reduces the information content of this kind of income which is inconsistent with previous research that found that accounting income management improves financial statement income information content (Tucker et al. 2006). This is consistent with the assumption that managers do manage taxable income in order to achieve specific tax objectives and are more likely to distort the information contained in taxable income. Therefore, although this leads to reduction of information conveyance to investors and shareholders, it potentially reduces the information amount conveyed to tax authorities in relation to taxable income which may be due to firms' underlying objectives and influences the managers' reporting choices.

Previous research regarding tax avoidance determination, tested the level-firm indexes (Frank et al. 2009; Wilson 2009 and Lisowsky 2010), management

incentives and rewards (Robinson et al. 2010; Rego et al. 2012), and corporate ownership structure (Chen et al. 2010; McGuire et al. 2011). But in this paper we developed research methods by providing evidence consistent with the notion that firms manage their taxable income to help avoid future tax; and presented the firms' incentives in managing such incomes by examining the outcomes of this kind of income management.

Overall, the above results show that every assessment of performance from financial statements (accounting) and taxable income, have different basic and underlying objectives, which lead to the potential influence of managers of economic units on income reporting options. Therefore, according to the results of this paper and previous research, managers in every class of income, engage in high levels of tax avoidance and manage and influence the information content of every kind of income, either accounting or taxable, in a targeted manner.

8. Research Limitations

- Most tax investigations require examination of issues and behaviors the documentations of which are not available due in Iran to confide. While in scientific and industrial societies of the world, necessary provisions have been implemented to facilitate investigation.
- Obligating the firms to follow Iranian auditing standards since March 21, 2002, and Direct taxes Act since February 16, 2002, is most likely to lead to qualitative asymmetry of data before and after this date.
- Lack of control over the mutual effects of performance and management change, which may have a great effect on income management.

9. Suggestions

It is suggested that financial statements of Iranian firms be prepared based on tax intentions in addition to accounting principles, and accounting income be modified against permanent discrepancies, and inter-periodic allocations be performed against temporary discrepancies. In other words, International Accounting Standard #12 should be implemented in Iran.

Appendix: Variable Definitions

Variables	Descriptions
Dependent Variables	
CURETR Currently Effective Tax Rate	$CURETR = \dfrac{\sum_{i}^{n} TXC_{it}}{\sum_{i}^{n}(PI_{it}-MII_{it})}$
CASHETR Cash Effective Tax Rate	$CASHETR = \dfrac{\sum_{i}^{n} TXPD_{it}}{\sum_{i}^{n}(PI_{it}-MII_{it})}$
RET	16-month market-adjusted buy-and-hold returns, We measure returns from the start of the fiscal year until four months following the end of the fiscal year to allow earnings to be announced.
Variables of Interest	
MANAG	MANAG = TAXMANAG+TAXMANAG2
TAXMANAG	The standard deviation of taxable income from year *t-9* to year *t* multiplied by negative one. We scale taxable income by total assets (AT).
TAXMANAG2	The standard deviation of cash taxes paid (TXPD) scaled by total assets (AT) from year *t-9* in year *t*, multiplied by negative one.
ΔTI	The change in taxable income from period t-1 to period t, scaled by a lagged market value of equity (PRCC_F*CSHO)
ΔPTBI	The change in pretax income (PI) less minority interest (MII) from period t-1 to period t, scaled by a lagged market value of equity (PRCC_F*CSHO)
Control Variables	
PIMANAG	The standard deviation of PI less MI scaled by AT over years t-9 in year t, multiplied by negative one
LEV	LEV= $\dfrac{DLC+DLTT}{AT}$
SIZE	The natural log of total assets (AT)
MTB	The ratio of a firm's market value of equity (PRCC_F*CSHO) to book value of equity (CEQ)
ROA	The ratio of pretax income (PI) to total assets (AT)
R&D	The ratio of research and development expenses (XRD) to sales (SALE)
CAPINT	The ratio of gross property, plant, and equipment (PPEGT) to assets (AT)
FORINC	An indicator variable equaling one if a firm has a non-missing value of PIFO and zero otherwise.
NOL	Current period net operating loss carryforward scaled by total assets (TLCF/AT). We set missing values of TLCF equal to zero.
ΔNOL	The change in TLCF from period t-1 to period t scaled by total assets (AT)
INDFE	Represents business training and records in the most important industries which is obtained based on the number of sample observations of economic, commercial, legal, scientific, financial, international commerce areas etc.
α: Intercept	*ε: Residual Error*

Table 1
Descriptive Statistics

Variable	N	Mean	SD	P25	Median	P75
TAXMANAG	1470	-0.027	0.031	-0.059	-0.037	-0.013
TAXMANAG2	1360	-0.014	0.017	-0.016	-0.014	-0.008
CURETR	780	0.321	0.146	0.241	0.338	0.388
CASHETR	860	0.302	0.161	0.174	0.296	0.336
RET	1470	0.102	0.814	-0.304	-0.016	0.317
ΔTI	1470	-0.002	0.105	0.004	0.008	0.024
ΔPTBI	1470	0.011	0.108	-0.018	0.011	0.017
PIMANAG	1470	-0.032	0.051	-0.081	-0.029	0.008
LEV	1470	0.197	0.183	0.043	0.203	0.312
SIZE	1470	5.348	2.004	4.211	5.286	6.849
MTB	1470	2.086	2.518	1.099	1.971	2.807
ROA	1470	0.057	0.086	0.042	0.064	0.111
R&D	1470	0.022	0.049	0.000	0.000	0.011
CAPINT	1470	0.571	0.379	0.212	0.389	0.728
FORINC	1470	0.480	0.521	0.000	0.000	0.917
NOL	1470	0.018	0.082	0.000	0.000	0.008
ΔNOL	1470	0.004	0.027	0.000	0.000	0.000
INDFE	1120	0.071	0.096	0.037	0.061	0.103

Table 2
Influence of Earning management on Future Tax Avoidance Outcomes

Variable	(1) CURETR Coefficient (P-Value)	(2) CASHETR Coefficient (P-Value)	(3) CURETR Coefficient (P-Value)	(4) CASHETR Coefficient (P-Value)
Intercept	0.397	0.348	0.413	0.372
	(0.000)	(0.000)	(0.000)	(0.000)
TAXMANAG	-0.018	-0.027		
	(0.000)	(0.000)		
TAXMANAG2			-0.003	-0.009
			(0.000)	(0.000)
PIMANAG	0.024	0.027	0.019	0.022
	(0.000)	(0.000)	(0.000)	(0.000)
LEV	-0.048	-0.037	-0.046	-0.031
	(0.000)	(0.000)	(0.000)	(0.001)
SIZE	-0.002	-0.004	-0.003	-0.004
	(0.002)	(0.000)	(0.000)	(0.000)
MTB	-0.001	-0.007	-0.001	-0.008
	(0.046)	(0.000)	(0.079)	(0.001)
ROA	0.108	0.101	0.098	0.087
	(0.002)	(0.000)	(0.000)	(0.003)
R&D	-0.036	-0.207	-0.039	-0.219
	(0.037)	(0.002)	(0.444)	(0.002)
CAPINT	-0.022	-0.011	-0.024	-0.012
	(0.000)	(0.038)	(0.000)	(0.027)
FORINC	0.004	0.002	0.006	0.003
	(0.288)	(0.889)	(0.198)	(0.654)
NOL	-0.049	-0.046	-0.057	-0.042
	(0.000)	(0.002)	(0.000)	(0.001)
ΔNOL	0.054	0.031	0.028	0.028
	(0.041)	(0.017)	(0.062)	(0.029)
INDFE	-0.012	-0.009	-0.019	-0.011
	(0.027)	(0.019)	(0.034)	(0.026)
Observations	780	860	740	830
R-Squared or R^2	0.047	0.045	0.013	0.049

Table 3

Influence of Earning management on the Information Content of Taxable Income

Variable	(1) RET Coefficient (P-Value)	(2) RET Coefficient (P-Value)	(3) RET Coefficient (P-Value)
Intercept	0.082	0.204	0.201
	(0.028)	(0.000)	(0.000)
TAXMANAG		-0.024	
		(0.318)	
TAXMANAG2			0.000
			(0.694)
PIMANAG		-0.030	-0.041
		(0.031)	(0.032)
ΔTI	0.712	1.121	1.089
	(0.000)	(0.000)	(0.000)
ΔPTBI	2.111	1.455	1.437
	(0.000)	(0.000)	(0.000)
ΔTI*TAXMANAG		-0.281	
		(0.012)	
ΔTI*TAXMANAG2			-0.181
			(0.029)
ΔPTBI*PIMANAG		0.342	0.274
		(0.001)	(0.001)
Observation	1470	1470	1360
R-Squared or R^2	0.045	0.049	0.048

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