The Impact of Effective Corporate Governance on the Relationship between Tax Gap and Future Profit Changes in Iranian Economy

*Rasoul Karami[a], seyed Ali Vaez[a, b, *], Ghasem Rekabdar[a,c]*

[a]Department of Accounting, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran
[b]Department of Accounting, Faculty of Economic, Shahid Chamran University, Ahvaz, Iran
[c]Department of Mathematics and Statistics, Faculty of Humanities ,Abadan Branch, Islamic Azad University, Abadan, Iran

ABSTRACT

The Iranian economy in recent years is due to the development of economic sanctions, a sharp decline in the price of oil and the deficit resulting from revenue - dependent on oil revenues and the trend towards tax revenues. While comparing the volume of the Iranian economy with the amount of tax income indicates the existence of a relatively significant tax gap. The tax gap is the difference between the collected taxes and the tax required by the law. The purpose of this study is to answer the question whether corporate governance is effective and strong on the relation between tax gap and future earnings changes? The statistical population of the research in Tehran Stock Exchange (TSE) firms and statistical sample consists of 120 companies in the period of 2007-2017. In order to test the hypotheses, multivariate regression using mixed data - data approach has been used. The results indicate that there is a significant inverse relationship between the tax gap and future earnings changes. It can be argued that increasing the difference between earnings accounting earnings can be associated with decreasing interest in the next year and less stability. On the other hand, significant positive relation between corporate governance is efficient and strong with future earnings changes. because corporate governance will ultimately lead to more sustainable future gains due to the decline of discretionary accruals in discretionary accruals. It is also reinforced by the effect of the tax gap on future earnings changes in firms that have efficient corporate governance, and this effect is only seen for a year later. And is not effective for the second and third years.

1 Introduction

In most countries, taxation plays a very significant role as one of the main means of government in the economy. As the major part of government revenue comes from taxes, which is used for the three purposes of allocation of economic benefits, income redistribution and economic stability. Income and economic stability are used. Due to differences between tax laws and regulations and accepted accounting principles, from the perspective of accounting theories, whatever is considered income and expense, may not necessarily be considered as income and expense according to the perspective of accounting theories. In other words, it should be noted that the purpose of determining interest in the

---

* Corresponding author. Tel.: +989166664702;
E-mail address: *sa.vaez@scu.ac.ir*

preparation of financial statements from the accounting point of view is different from the purpose of determining the profit of tax base calculation in tax law [24]. In recent years, the tax gap has been one of the greatest concerns of economists and underground economies. Studies show that the underground economy and the tax gap make up a huge share of Iran's GDP, so addressing it can play an important role in achieving the ultimate goals of macro policies [7]. By creating an agency relationship, a contradiction between the interests of executives, shareholders on the one hand, and other stakeholders (such as the government) on the other, will be started. Therefore, since the expressed taxation is not the same as the determined tax (tax gap), two targets are conceivable. First, despite this gap, it is expected that the quality of reported earnings for investors be impressed. That is, the greater the difference, the lower the profit sustainability of the companies and affect future profits of companies. Second, from a macro perspective, Corporate Governance of government, which is a corporate stakeholder, relies on tax returns that taxpayers make and adjust for tax identification which in turn requires effective and strong corporate governance mechanisms at corporate level. That is to say, the tax gap is more indicative of weaker corporate governance. Now, the question that arises is whether there is a significant relationship between the tax gap and corporate governance performance with future profits changes, despite the duality of the tax gap.

2 Theoretical Basis and Research Background

2.1 Principles of Research

In most countries, much of the government's revenue sources come from taxation. The issue of how much tax revenue covers total public revenue varies across countries and its amount depends on their level of development and economic structure.iIn the meantime, tax evasion in countries have made countries' tax revenues always lower than what is estimate . All countries are taking steps to reduce these two phenomena or, they choose the right solution by reforming the tax system. Considering the link between the tax policy and the tax collection system in the reform of the tax system of the country is an important and worthwhile consideration. In our country, because of the cultural and social structures and the intangible effects of taxation, the phenomenon of tax evasion or misrepresentation and having two ledgers, as one for the tax system to misrepresent income and make good for shareholders and partners and obtain facilities has become an indispensable part of our tax system. The tax gap consists of two main parts: tax evasion and tax avoidance. Tax evasion is a kind of violation of the law. Tax avoidance, results from legal gaps in the tax law [14]. In theory, inadequate tax collection in Iran, despite the high tax potential for various reasons, including tax evasion and tax breaks, is one of the most important problems facing the government. It is widely believed that high tax rates are one of the main causes of economic growth and strengthening while high tax rates, boost the incentive to enter the underground economy and tax evasion [4].

Some politicians believe that the tax gap is a major problem and if not addressed, it will be considered as a new financial aid. Fieg argues that the main reason that the underground economy has grown in the United States is the significant increase in the tax gap [7].One of the items that is deducted from Corporations profit to obtain dividable profits among Shareholders is the government's share of the profit which means tax. According to the laws and regulations, therefore, the government's share of the profits of the corporations precedes the division of profits among the shareholders. It means that the government places itself even higher than the major shareholders of corporations. Regarding these matters, the government also plays a role as one of the main beneficiaries, Thus, if the results of a

corporation's operations lead to profit, the government's share of that profit must be calculated and excluded before any decision is made on that profit, and the most important government share of that profit is tax. In most previous studies about the corporate governance, the role of the government as one of the main stakeholders has been ignored. In other words, what has been emphasized in this study, is to ensure that whether in accordance with the theoretical foundations of corporate governance which is claimed if it is sufficiently efficient and strong, all the rights of the beneficiaries (including the government) are also taken into consideration, and the tax gap should be treated in the same way. From a macro perspective, corporate governance of government, as one of the beneficiaries of corporations, relies on tax declarations that taxpayers make and adjust for tax identification, which in turn requires strong and efficient corporate governance mechanisms at the firm-level. It reflects the fact that the tax gap reflects more inefficient and weaker corporate governance. The existence of a corporate governance mechanism will also monitor managers' reaction to changes in rates and taxation. Inefficient and weak corporate governance reduces the chances for outsourced shareholders to take advantage of the tax decisions of managers. Corporate governance system is the regulatory mechanism that controls financial and managerial behavior which is responsible for controlling financial and managerial behaviors and it is developed in accordance with the legal and cultural system of each corporate (in other words, the organization). If these components work properly and the mechanisms are properly implemented, proper monitoring and control will also be achieved [13]. It is noteworthy about accounting profit and tax profit that none of them can accommodate economic realitiess Both financial accounting and taxation face challenges in defining the concept of profit, especially tax profit. Profit is one of the most important variables that both financial and tax accounting try to measure it. However, the concept of profit that they use is still far from the concept of economic profit and requires a more precise and clear definition. Interestingly, even economists have struggled for years to come up with a good definition of profit and the definitions provided by individuals such as Hicks and Higgs-Simmons are an alternative to the most fundamental concept of profit ([3, 32]). Theoretical Framework for Accounting and Tax Profit differences, Based on Two Principles, one category of these differences are permanent and the other are temporary differences. Tax-exempt earnings, such as export earnings and dividend yields and unacceptable expenses, such as tax-exempt income and non-tax expense-rll ate t th taxyayrr᾽ activitie ar emanll ss of these permanent differences. Losses related to the devaluation of existing goods, compensated absences, set up costs, depreciation costs, etc. are also examples of temporary differences. Despite this gap, it is expected to affect the quality of reported profits for investors. That is, the greater the difference, the lower the firm's profitability and it will affect the future corporate profits. Therefore, this study seeks to find a comprehensive answer to the usefulness of the tax gap in terms of reflecting on the quality and variations of future profits that can help the relevance of investor decision making models. It is also important to determine whether the variability between the tax gap and future profit changes can be adjusted by the corporate governance index.

2.2 Review of Previous Studies

Some scholars and experts such as Desai [10], Manzon & Plesco [26] and Hanlon [18] have shifted attention to the existing gap between tax profits and accounting profits that increased during the 1990s. In 2002, an article entitled "The Reality behind Enron's Collapse" claimed that tax profits could be used as a tool for checking reported profits and led this type of research into tax profit ac-

counting research. Of course, the idea of using tax profits as a tool to check the creditworthiness of accounting was not an innovative idea. Earlier, a researcher named Russin stated that the growing surplus of accounting profit on taxable profits could be a potential risk signal that should be considered, because it can represent a deteriorating profit quality. Investigations by the United States Congressional joint committee on taxation showed that Enron had not paid any taxes until several years before the bankruptcy in 2001. Blilock et al [6] investigated the relationship between tax avoidance, the difference between accounting and taxable profits, and profits sustainability. Their findings showed that when the difference between accounting and tax profits is due to profits management, profitability and accruals are reduced, but if the difference is due to tax avoidance, profitability is increased. In his Ph.D. dissertation, Jackson [23] studied the difference between accounting profit and tax source profits and profit growth for US corporates that its results showed that the temporary component of the difference between accounting and tax profits had a negative and significant relationship with pre-tax profit growth and the permanent component of the difference between accounting and tax profits is a positive and significant relationship with tax.

Satori [30] in his research stated that the reaction between corporate governance and taxation is reciprocal. In fact, on one hand, corporate governance rules have structural implications for meeting corporate tax obligations and on the other hand, tax plans (from the government's perspective) and linking them to tax strategies (from a corporate perspective) can have a huge impact on building a more dynamic corporate governance. Desai [11] in his study concluded that high tax rates lead to deterioration in corporate governance systems and on the contrary, low tax rates will improve corporate governance systems and increase tax revenues. In another research, Hanlon [18] studied the role of accounting and tax profit differences in reflecting profits continuity, accruals, and cash flows on subsequent year profits. He also investigates that whether the level of differences affects investor evaluations of profits sustainability. In that research, he cites financial accounting texts to prove his claim and he states that differences can provide extensive information on current profits. For example, the ratio of pre-tax accounting profit to tax profit can be seen as a measure of conservative or bold financial reporting, the market interpreting the increasing gap between accounting and tax profit as a red light.

Internal researches are mainly concerned with taxation and the causes of the tax differences that are definite and expressed and the role of these differences as an indicator for measuring other accounting concepts such as profit forecasting, company value, information content, etc. is not very prominent. In the following, some internal research has been done in the area of accounting and taxation which seems to be partially related to this study. In a study, Sameti and Khandani [29] estimated the contribution of tax evasion and Lags in tax Collection in creating a tax gap during the period 1971 to the beginning of 2013. To achieve this goal, the Tanzi-Model is used to evaluate the reduction in tax revenue from lags in Tax Collection and the multiple index approach is also used to estimate the tax evasion caused by the underground economy. The results of their research illustrate this fact that accelerating the collection of tax revenues is important in countries where the price elasticity of taxation is low, such as Iran.in a study, Didar et al [14] examined the effect of corporate governance mechanisms on the tax gap in corporates listed in Tehran Securities and Exchange Organization that the relationship between board independence, government ownership, type of audit opinion, auditor change, and financial leverage with the tax gap is negative and internal audit variables and company size have a positive relationship with the tax gap. Also, the dichotomous variables of CEO, institutional shareholder and affiliate relationship have no significant relationship with tax gap and internal audit variables and firm size had a positive relationship with company size. Moreover, the dichotomous variables of CEO, institutional shareholder and affiliate relationship have no significant relationship with

tax gap. Karbasi Yazdi and Saleh [24], in a study entitled "The Relationship between Accounting Profit and Source Profit", have calculated taxation with profits growth and sustainability. The results show that decreases with the positive or negative difference between accounting profit and taxable profit.

The results indicate that the high degree of discrepancy between accounting profit and tax base profit, whether positive or negative, will reduce Corporate Profit Stability. Rahmani and Arbabi Bahar [28] conducted a study entitled "The Relationship between Diagnostic Taxes and Profit Taxes with Profit Management" results show that these differences are related to profit management where it is concluded that these differences are related to profit management, but it is not affected by different profit management models. In another study, Modares and Zarei Tower [27], entitled "Investigating the Information Content of the Difference between Expressed Taxes and Definitive Taxes and Their Relationship to Corporate Profit Quality", concluded that there is no significant relationship between the difference between the taxation and the definitive tax on the stock market value and the stock return. In low-profit quality corporates, the difference in the performance evaluation of firms does not play a significant role. Also, Babajani and Abdi [5] examined the relationship between corporate governance and taxable profits of listed corporates in Tehran Stock Exchange. The assessment was conducted by examining the relationship between some of the important corporate governance measures, which took into account with respect to the percentage difference between the expressed tax and the definitive tax profit. Taking 38 corporates as an example, they concluded that there was no significant difference between the mean percentages of profit difference with the group of corporates that did not meet the criteria, however, in both groups of corporates, there was a significant difference between the expressed and definitive taxable profits.

3 Research Method

In term of the purpose, this research is supposed as a practical study and it falls into the realm of positive research. In terms of nature and content, it is a correlational study that is used to discover the correlation between the variables by the post-event method. The statistical population of this research is listed corporates in Tehran Stock Exchange that have been active in Tehran Stock Exchange from 2007 to 2017. The statistical sample was selected using systematic stepwise regression method taking into consideration the following conditions:

1. Companies whose financial year ends on March 29 and do not change the financial year during the research period.

2. Companies that were actively members of the stock exchange during the years 2007-2017 and fully disclosed their financial information.

3. Those companies shall be other than those operating in the fields of finance, investment, insurance, banking and holding.

By applying the above restrictions, the sample companies will be 120 companies and 1320 years - companies. It is worth noting that regression equation was used to analyze data and test hypotheses. In order to do the research, the required information and data were collected from the financial statements and report of the activity of the Board of Directors to the general meeting as well as the market information related to their share .This information was obtained from the Stock Exchange Infor-

mati   Cttt er a   t   Iraii a nnnanii al Infrr mati   rr eeessigg Cttt er a   hhahaharee -Novi   Data-base.

Models and Variables

The following models (1) to (4) have been used to test the research hypotheses.

$$\Delta NI_{i,t+1} = \beta_0 + \beta_1 TG_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 ROA_{i,t} + \varepsilon_{i,t} \tag{1}$$

$$TG_{i,t} = \beta_0 + \beta_1 CG_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 ROA_{i,t} + \varepsilon_{i,t} \tag{2}$$

$$\Delta NI_{i,t+1} = \beta_0 + \beta_1 BCG_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 ROA_{i,t} + \varepsilon_{i,t} \tag{3}$$

$$\Delta NI_{i,t+1,3} = \beta_0 + \beta_1 TG_{i,t} + \beta_2\ CG_{i,t} + \beta_3\ TG_{i,t}*CG_{i,t} + \beta_4 Size_{i,t} + \beta_5 Lev_{i,t} + \beta_6 ROA_{i,t} + \varepsilon_{i,t} \tag{4}$$

The operational definitions and the role of variables in the above models are as follows:

Changes in future profits (dependent variable): Future changes in net profit, are calculated from the difference between the profit of the next year and the profit of the current year on the aggregate scale of the company's assets:

$$\Delta NI_{i,t+1} = \frac{NI_{i,t+1} - NI_{i,t}}{TA_{i,t}} \tag{5}$$

In relation (5) we have, $\Delta NI_{i,t+1}$: future changes in net profit after tax, $NI_{i,t+1}$: net profit of next fiscal year, $NI_{i,t}$: Net profit for the current year and $TA_{i,t}$: the total assets of the company.

Tax gap (independent variable): Difference between Taxes Expressed with definitive taxes [14].[19] or the difference between the pre-tax profit reported in the case of profit or loss and taxable profit is defined as the tax gap[25].

In other words, the tax gap is the ratio of the difference between net profit and taxable profit to total assets.

$$TG_{i,t} = \frac{NI_{i,t} - TI_{i,t}}{TA_{i,t}} \tag{6}$$

In the abovementioned equation (6), $NI_{i,t}$: net profit for the current year, $TA_{i,t}$: total assets of the current year,

Taxable profit that is calculated through the following equation (7):

$$TI_{i,t} = \frac{CTE_{i,t}}{t} \times (1 - t) \tag{7}$$

Also in equation (7), $CTE_{i,t}$: is current year tax expense (from profit and loss list) and t is legal tax rate for stock companies which is 22.5% [9].

Corporate Governance: In this study, following the method proposed by [31] new indicators were used to calculate corporate governance variables. Corporate governance mechanisms were first classified into three different aspects including ownership structure, corporate governance factors, and firm characteristics, each of which has different metrics as follows:

Table 1: How to Measure Corporate Governance (CG)

Corporate governance mechanisms	Variable	How to measure
Corporate governance factors	Institutional owners	The existence of institutional owners above the middle in the capital structure
	Management owners	Existence of above-average management owners in the capital structure
	Blockholder Owners	The existence of major owners above the middle in the capital structure
Corporate ownership factors	Board size	The size (number) of the board is higher than the middle of the community
	Board Composition	The composition of the board of directors should be less than 5 people
Characteristic factors of the company	Auditory Institution	The audit firm is one of the largest institutions
	disclosure quality score	The company's disclosure score is higher than average

Control variables

Firm size: Big companies have political costs. In other words, they are more visible. Therefore , it is to be expected that governments will be more inclined to receive more taxation from larger firms. Corporate information is also more widely available than small companies and as analysts and investors look at corporate data more closely, their executives are more inclined to publish information and less to earnings management [7]. Therefore, the corporate tax gap is expected to be lower, which was used to calculate the natural logarithm of total assets.

Return on assets: Since tax is calculated on the basis of taxable income, therefore, profitability is a factor affecting the performance tax of a corporate which was calculated by dividing the profit before deducting the tax on total assets[15].

Financial leverage: Given that financial costs and interest expenses that are not subject to tax laws, for tax purposes, they are considered as unacceptable expenses. As a result, financial leverage is a factor affecting tax differences. In other words, it is expected that companies that have acquired a large amount of their assets from debts will not report detailed accounting information in order to preserve the company's resources as much as possible and in the future, they will reduce their debt, As a result, the tax gap in them will increase. In this study, the method of dividing total debt into total assets was calculated.

4 Findings

4.1 Descriptive Statistics

Table 3 below provides a summary of the descriptive statistics of the research variables. Combining the data, the total number of observations was 1320. Investigation of quantitative results of descriptive statistics of research variables and with respect to the above graph, value is 0.363 for mean tax gap

and the difference between the minimum and the maximum indicates a great deal of heterogeneity in the corporate reporting gap. The mean variables of financial leverage and firm size were 5.65 and 5.9091, respectively. In other words, much of the company's assets are financed from debt and it indicates that for every Rials invested in assets, a profit of 0.136 Rials will be generated. The ownership structure of the company includes institutional ownership and management ownership with an average of 0.7767 and 0.8391. According to the results, the percentage of informed investors, that is, investors who have private information about the corporates mentioned above.

Table 2: Symbol of research variables

Variable	Symbol	How to measure
future earnings changes	ΔNI	$$\Delta NI_{i,t+1} = \frac{NI_{i,t+1} - NI_{i,t}}{TA_{i,t}}$$
Tax gap	TG	$$TG_{i,t} = \frac{NI_{i,t} - TI_{i,t}}{TA_{i,t}}$$ $$TI_{i,t} = \frac{CTE_{i,t}}{t} \times (1 - t)$$
Firm Size	$Size$	Ln (total assets)
Return on Asset	ROA	profit / assets
Financial Leverage	Lev	mTotal debts/total assets

Table 3: Descriptive statistics of research variables

Variables	Average	Middle	Standard deviation	Max	Min
Profitability indicators					
Profitability changes this year	0.0155	0.0026	0.1804	0.9794	-0.9929
Profitability changes first year	0.0099	0.0007	0.2391	1.7215	-1.4391
Profitability changes second year	0.0025	0.0003	0.2731	1.7215	-1.7799
Profitability changes third year	0.0024	0.0002	0.2736	1.7215	-1.7799
Tax gap					
Tax gap	0.0363	0.0143	0.0746	0.7600	-0.2492
Control variables					
Financial Leverage	0.6589	0.6666	0.2208	1.8244	0.0405
Return on Asset	0.1364	0.0657	0.1883	0.8868	-0.2786
size of the company	5.9091	5.8521	0.6091	8.5200	4.2549
Corporate governance indicators					
disclosure quality score	19.4104	7.5882	0.7323	126.3365	-79.5169
The size of the audit firm	0.7334	1.0000	0.4423	1.0000	0.0000
Institutional ownership	0.7767	0.8000	0.4238	0.9900	0.0100
Management ownership	0.8391	0.7050	0.8277	0.9910	0.0100
Concentration of ownership	0.7629	0.7494	0.1793	0.9900	0.1000
Board size	5.1976	5.0000	0.7114	11.0000	5.0000
Board Independence	0.6478	0.60000	0.1945	0.9091	0.0909

As a result of their ownership percentage, it is possible to manage the core activities of the company, which may increase their market efficiency and reduce information fraud due to their information or, given the access of these people to private information, it could lead to an increase in information rent, which is one of the instances of information asymmetry. The mean value for the concentration of

ownership is 0.76 it indicates that much of the focus of corporate ownership is on legal entities (institutional owners). Also, the values of 0.015 and 0.0099 for profitability current year and next year (as well as 13% return on assets) showed a low profitability and it can indicate the irrelevance of balance sheet information as well as the conservative approach of corporates.

Much of this changes can be attributed to inflation. To justify this conclusion, it can be stated that the growth of companies and the lack of expansion of these companies can be considered as the reason for the low profitability. On the other hand, given the macroeconomic constraints as well as being in the growth stage, limits the changes in corporate earnings. The mean values of variables related to firm size and board independence were 5.19 and 0.64, respectively which indicate the presence of non-executive and independent members within the board of directors to control management activities in the business unit. The mean value for the disclosure score and size of the audit firm were 19.4104 and 0.7334, respectively. This indicates the use of large audit firms among the corporates under study.

4.2 Results of Lemaire and Hausman Tests

The Lemaire test is performed to select between panel method and regression method (null hypothesis of this test is regression method) and if the test result is the panel method, (that is, the null hypothesis is rejected), the Hausman test will be performed to choose between the fixed effects panel and the random effects panel [1]. The results of the Chow test are presented in Table 4:

Table 4: Leimer **F** test results for research patterns

Incontinence criterion	Statistic	P-value	Accepted method
Model 1	1.4118	+0.0038	Panel data
Model 2	α4.0115	0.0001	Panel data
Model 3	1.0008	0.4828	Integrated data
Model 4-1	1.7245	0.0001	Panel data
Model 4-2	0.5169	0.9000	Integrated data
Model 4-3	0.3823	0.9900	Integrated data

As can be seen in Table 4, the statistic F is significant at the 5% error level for patterns 1, 2 and 1-4. Thus, in the chow test, the similarity of intercept has been strongly rejected in all periods. Therefore, in this test, the fixed effects method is adopted. Next, the fixed effects method is tested against the random effects method using the Hausman test. If the computational statistic is significant at the 5% error level, the random effects hypothesis is rejected and the fixed effects model will be accepted.

In order to evaluate the choice of estimation method, the results of the Hausman test are presented in Table 5. According to Table 5, the computational statistic of the Hausman test is significant at the 5% error level in all models, thus, the lack of relationship between individual effects and explanatory variables has not been ruled out in this model. Therefore, fixed effects method will be used to evaluate models.

Table 5: Hausman test results for research patterns

Incontinence criterion	Statistic	P-value	Accepted method
Model 1	71.2194	10.0000	Panel data (Fixed effects)
Model 2	5.1679	0.0005	Panel data (Fixed effects)
Model 3	-	-	-
Model 4-1	171.2183	0.0000	Panel data (Fixed effects)
Model 4-2	-	-	-
Model 4-3	-	-	-

4.3. Results of Testing Hypotheses

First hypothesis: There is a significant relationship between the tax gap and future earnings changes.

In order to test the first hypothesis, the estimation results of model (1) presented in Table (6) are used. According to Table (6), the statistic F is significant at the 0.01 level of error which indicate the significance of the regression. Also, the adjusted coefficient of determination is 16%. In addition, VIF statistics, indicate no linearity between the explanatory variables. T-test was used to test the first hypothesis; to accept the first hypothesis, the independent variable regression coefficient, that is, the tax gap, must be significant which confirms the first hypothesis.

Table 6: Model Estimation Results of Model (1)

$$\Delta NI_{i,t+1} = \beta_0 + \beta_1 TG_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 ROA_{i,t} + \varepsilon_{i,t}$$

Variable	Coefficient	t-Statistic	P-value	VIF
CG	-0.1185	-2.0152	0.0441	1.28
ROA	-0.3997	-9.6722	0.0001	1.30
SIZE	-0.0517	-6.2995	0.0001	1.12
LEV	-0.0412	-2.1989	0.0014	1.08
C	0.4102	7.9877	0.0001	-
R-squared	0.2505			
Adjusted R-squared	0.1642			
Durbin-Watson Statistic	1.9952			
F Statistic	2.9046			
Prob(F-statistic)	0.0001			

For the control variables, the effect of all three variables on size, return on assets and financial leverage is significant. The empirical evidence from the present study suggests that tax differences have a significant inverse relationship with future earnings changes, it can be claimed that increasing the gap between accounting and taxable profits could be associated with a decline in profits in the coming year. Therefore, sustainability is less profitable. Because increasing distance means a multitude of optional accruals that can be due to opportunistic profit management.

Second hypothesis: There is a significant relationship between efficient corporate governance and the tax gap.

In the present study, the Durbin-Watson Test was used to detect model autocorrelation. In addition, Fisher's test was used to examine the significance of the whole model.

Table 7: Model Estimation Results of Model (2)

$TG_{i,t} = \beta_0 + \beta_1 CG_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 ROA_{i,t} + \varepsilon_{i,t}$				
Variable	Coefficient	t-Statistic	P-value	VIF
CG	0.0005	-2.8831	0.0040	1.01
ROA	0.1834	3.7749	0.0001	1.04
SIZE	-0.0142	-17.3645	0.0001	1.13
LEV	0.0174	8.1577	0.0001	1.08
C	0.0971	20.7448	0.0001	-
R-squared	0.8788			
Adjusted R-squared	0.8654			
Durbin-Watson Statistic	1.5441			
F-statistic	65.4107			
Prob(F-statistic)	0.0001			

Table 7 shows the results of evaluation the Model 2 of the research. According to the results presented in Table 7, the level of probability error associated with the fourth null hypothesis that there is no significant relationship between efficient corporate governance and the tax gap is 0.0040 which is less than 0.05, Therefore, the null hypothesis is rejected. On the other hand, in the present research, statistics VIF indicate that there is no correlation between the variables under study. As a result, there is a significant relationship between efficient corporate governance and the tax gap. Effective corporate governance, therefore, has the structural effects of meeting corporate tax obligations that the tax gap will be reduced by fulfilling these obligations and tax revenue will increase.

Third hypothesis: There is a significant relationship between efficient corporate governance and future earnings changes.

In the present study, Durbin-Watson Test was used to detect model autocorrelation. In addition, Fisher's test was used to examine the significance of the whole model.

Table 8: Model Estimation Results of Model (3)

$\Delta NI_{i,t+1} = \beta_0 + \beta_1 CG_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 ROA_{i,t} + \varepsilon_{i,t}$				
Variable	Coefficient	t-Statistic	P-value	VIF
CG	-0.0027	-2.7669	0.0058	1.01
ROA	-0.8990	-10.4147	0.0001	1.04
SIZE	-0.1122	-9.0586	0.0001	1.13
LEV	-0.0138	-0.4673	0.6404	1.08
C	0.8117	9.1282	0.0001	-
R-squared	0.3314			
Adjusted R-squared	0.2556			
Durbin-Watson stat	2.3830			
F-statistic	4.3696			
Prob(F-statistic)	0.0001			

Table 8 shows the results of the evaluation of model 3 mentioned in the research. According to the results presented in Table 8, the level of probability error associated with the fourth null hypothesis that there is no significant relationship between efficient corporate governance and future earnings changes is 0.0058, which is less than 0.05, Therefore, the null hypothesis is rejected. On the other hand, in the present research, statistics VIF indicate that there is no correlation between the variables

under study. As a result, there is a significant relationship between efficient corporate governance and the future earnings changes. Therefore, it can be argued that efficient and strong corporate governance, makes Discretionary Accruals less likely to be manipulated and ultimately, the future profits will be more stable.

Fourth Hypothesis: Effective corporate governance moderates the relationship between the tax gap and future earnings changes.

In the present study, Durbin-Watson Test was used to detect model autocorrelation. In addition, Fisher's test was used to examine the significance of the whole model.

Table 9: Model Estimation Results of Model (4)

$\square \Delta NI_{i,t+1,3} = \beta_0 + \beta_1 TG_{i,t} + \beta_2\ CG_{i,t} + \beta_3\ TG_{i,t}*CG_{i,t} + \beta_4 Size_{i,t} +\ \beta_5 Lev_{i,t} + \beta_6 ROA_{i,t} +\ \varepsilon_{i,t}$

Variable	earnings changes in the first year			earnings changes in the second year			earnings changes in the third year		
	Coefficient	t-Statistic	P-value	Coefficient	t-Statistic	P-value	Coefficient	t-Statistic	P-value
TG	-0.7448	-3.4680	0.0005	0.0478	0.4203	0.6743	-0.0555	-0.4663	0.6410
CG	-0.0049	-2.7483	0.0061	-0.0001	-0.0408	0.9674	0.0004	0.1292	0.8971
TG*CG	0.1072	2.0781	0.0379	0.0153	0.4715	0.6373	0.0357	1.0650	0.2871
ROA	-0.8011	-17.2848	0.0001	-0.0426	-1.3399	0.1806	0.0809	2.3759	0.0177
SIZE	-0.1295	-8.9600	0.0001	-0.0058	-0.7248	0.4687	0.0093	1.1001	0.2715
LEV	0.0250	1.0929	0.2747	-0.0219	-1.0691	0.2852	-0.0181	-0.8502	0.3954
C	0.9017	10.2512	0.0001	0.0535	0.9887	0.3230	-0.0540	0.9528	0.3409
R-squared	0.3253			0.3414			0.3142		
Adjusted R-squared	0.2460			0.3369			0.3094		
Durbin-Watson stat	2.3638			2.3660			2.2548		
F-statistic	4.1032			76.3627			66.6311		
Prob (F-statistic)	0.0001			0.0001			0.0001		

Table 9 shows the results of the evaluation of model 4 mentioned in the research. According to the results presented in Table 9, the level of probability error associated with the fourth null that efficient corporate governance has a significant effect on the relationship between the tax gap and future earnings changes for the first, second, and third years, respectively, is 0.0005, 0.6743 and 0.6410, respectively, Which is less than 0.05 for first-year profitability changes and greater than 0.5 for other years, Therefore, the null hypothesis is rejected. On the other hand, in the present research, statistics VIF indicate that there is no correlation between the variables under study. As a result, the impact of the tax gap on future earnings changes in corporates that have effective corporate governance is reinforced and this effect can only be seen for a year a   itsssss s'twwork frr t   eeoontttattt tt ryyyears.

5 Conclusion

The results show that in the Iranian capital market, the tax gap has a significant inverse relationship with changes in future earnings of corporates. So that it can be claimed that increasing the gap between accounting profit and tax profit can be associated with decline in earnings next year. Therefore, they have less profitability. Because increasing the gap means the discretionary accruals resulting from opportunistic profit management. The above results are consistent with results from previous

research, including [18] and other aforementioned research in the external background section of research. The results indicate a significant inverse relationship between the tax gap and changes in future profits. It can be argued that an increase in the difference between accounting and taxable profits could be associated with lower earnings in the next year and lower profitability. On the other hand, a significant positive relationship was observed between efficient and strong corporate governance and future earnings changes. Because efficient corporate governance will ultimately lead to more sustainable future profits, due to reduced manipulation of discretionary accruals. It also reinforces the impact of the tax gap on future earnings changes in corporates that have effective corporate governance and this effect can only be seen for a year a it ssss ''t wrr k frr t scc a third year.. Based on the findings of the study, the following suggestions are offered:

1) According to the results of the earnings change model test in this study, which shows the significant effect of accounting and tax profit differences on corporate earnings changes, it is suggested to shareholders and investors of Tehran Stock Exchange:

Consider this in their decisions about buying, holding and selling stocks and pay more attention to the differences in accounting profit and tax profit and which can be mentioned as a criterion of profit quality. In other words, examining this gap will create value added for financial analysts.

2. Establish a work-group of members of the Society of Certified Public Accountants and tax officers to examine Article 272 direct taxation act (subject to corporate exemptions) as well as to reach a common ground and remove barriers to reducing the differences in accounting profits and tax benefits in order to better implement tax audit and preventing tax evasion and avoidance.

3. In the accounting education system and tax courses of workshops, incorporate relevant tax regulations that are largely inconsistent with the law to reduce the tax gap.

4) Based on the results of the research, pay particular attention to corporate governance disclosure mechanisms and requirements for the tax administration's activities and optimal decision-making.

References

[1] Aflatooni, A., *Econometrics in Financial and Accounting Research with Eviews Software*, Tehran, Termeh Publishin,2018. (In Persian).

[2] Alfonso, C., Rosaria, V. P., Stefano, P., *Spatial dynamic modelling of tax gap: the case of Italy*, European Spatial Research and Policy, 2018, **25**(1), P.7-28. Doi:10.18778/1231-1952.25.1.02.

[3] Alley, C. & Simon, J., *The interface between financial accounting and tax accounting: a summary of current research*, the University of Waikato, 2005, Working paper, **84**, Hdl.handle.net/10289/1681.

[4] Arab Mazar, M., Taleb Nia, Q., Vakilifard, H., Samadi, M., *Explaining the Relationship between Financial Reporting Transparency and Tax Reporting in Iran*. Journal of Accounting Research, 2011, **90**, (In Persian).

[5] Babajani, J., Abdi, M., *The relationship between corporate governance and corporate income tax*, Financial Accounting Research, Second Year, 2010, **8**, P. 25-32, (In Persian).

[6] Blaylock, B., Shelvin, T.,Wilson, R. J., Tax avoidance, large positive temporary book – tax differences, and earnings persistence. The Accounting Review, 2011, **87**(1), P.91-120 ,Doi:10.2139/ssrn.1524298.

[7] Bozorg Asl, M., *Cash Profit Tax Accounting; Periodic Tax Assignments*, Auditor's Journal, 1379, **8**, P.49-45, (In Persian).

[8] Danquah, M., Osei-Assibey, E., *The extent determinants of tax gap in the informal sector: evidence from Ghana*, Journal of International Development, 2018, **30**(6), P.992-1005,Doi:10.1002/jid.3361.

[9] Davani, G, H., *Collection of Direct Tax Laws*, Kiomars Publications, 2015, 31st Edition, Tehran, (In Persian).

[10] Desai, M., *The divergence between book income and tax income*, 2002, SSRN Working Paper, Doi: 10.1086/tpe.17.20140508.

[11] Desai, M.A., Dharmapala, D., Corporate Tax Avoidance and high Powered Incentives. Journal of Financial Economics,2006 , **79**, 145–179, Doi.org/10.1016/j.jfineco.2005.02.002.

[12] Desai, M. & Dharmapala, D. *Earnings management, corporate tax shelters, and book-tax alignment*, National tax Journal, 2009, **62**(1), P.169-186, Doi: 10.2307/41790634.

[13] Didar, H., Mansourfar, G., Kafami, M., *Investigating the effect of corporate governance mechanisms on tax gaps in companies listed on the Tehran Stock Exchange*, Accounting and Auditing Reviews, 2014, **21**(4), P.430-409, Doi : 10.22059/acctgrev.2014.52901.

[14] Didar, H., Abdi, S., and Tutunchi Asl, M, R., Impact of tax gap on asymmetric cost behavior, 2018,16th National Iranian Accounting Conference, University of Isfahan, Iran.Coi : IAAC16_047.

[15] Edwards, A., Schwab, C., Shevlin, T., *Financial constraints and cash tax savings*, The Accounting Review, 2016, **91**(3), P.859–881, Doi.org/10.2308/accr-51282.

[16] Guenther, D. S., Matsunaga, R., Williams, B. M., *Tax avoidance, tax aggressiveness, tax risk and firm risk, working paper university of Oregon*, Department of Accounting, 2014, Doi: 10.2139/ssrn.2153187.

[17] Hanlon, M., Shevlin, T., Book-Tax Conformity for Corporate Income: An Introduction to the issues, Tax Policy and the Economy, 2005, **19**, P.101-134, Doi:10.1086/tpe.19.20061897.

[18] Hanlon, M., *The persistence and pricing of earnings, accruals, and cash flows when firms have large book-tax differences*, The Accounting Review, 2005, **80**(1), P.137-166, Doi: 10.2307/4093164.

[19] Hendrickson, A., Vancouver, M., *Accounting Theory*, translated by Dr. Ali Parsaiyan, third edition: 2009, Tehran, Termeh Publications, (In Persian).

[20] Izadikhah, M., Saen, R.F., Roostaee, R., How to assess sustainability of suppliers in the presence of volume discount and negative data in data envelopment analysis?. Annals of Operations Research, 2018, **269**, P. 241–267, Doi: 10.1007/s10479-018-2790-6

[21] Izadikhah, M., *Improving the Banks Shareholder Long Term Values by Using Data Envelopment Analysis Model*, Advances in Mathematical Finance and Applications, 2018, **3**(2), P.27-41, Doi: 10.22034/amfa.2018.540829

[22] Jackson, M., *Book-Tax Differences and Future Earnings Changes*, 2015, DOI: 10.2308/atax-51164.

[23] Jackson, M., *Book-Tax Differences and Earnings Growth* , 2010, Ph. D. theses, University of Oregon Dept of Accounting, Doi: 10.2139/ssrn.1410790.

[24] Karbasi Yazdi, H., Rasekh Saleh, S., *The Relationship between Accounting Profit and Profit Based on Tax Calculation with Profit Growth and Sustainability*, Financial and Auditing Accounting Research, 2013, **5**(4), P.236-203, (In Persian).

[25] Khani, A., Imani, Karim and Yousefi, Amin, Tax avoidance, how to measure and the factors affecting it, Accounting Research, 2014, **4**(3), P.142-121, Doi: 10.22051/IJAR.2015.2013 (In Persian).

[26] Manzon, G., Plesko, A., *The relation between financial and tax reporting measures of income*, The Law Review, 2002, **55**, P.175-214, Doi.org/10.2139/ssrn.264112.

[27] Modarres, A., Zareian Borji, H., *Investigating the information content of the difference between the expressed and definite tax and its relationship with the profit quality of companies*, Management Accounting, 2013, **6**(17), P.28-15, (In Persian).

[28] Rahmani, A., Arbabi Bahar, Z., *Relationship between the difference between diagnostic taxation and profit management*, Experimental Accounting Research, 2014, **3**(4), P.83-61, (In Persian).

[29] Samati, M., Khandani, H.,*Estimating the share of tax breaks and tax evasion in creating tax gaps*, Quarterly Journal of Economic Research and Policy, 2017, **25**(84), (In Persian).

[30] Satori, N., *Effects of strategic tax behaviors on corporate governance*. University of Michigan, 2008, Doi.org/10.2139/ssrn.1358930.

[31] Soo Y.K., Nam R.L. and Eunsun K., *Effects of agency costs on the relationship of corporate governance with audit quality and accounting conservatism in the Korean audit market*, Asia-Pacific Journal of Accounting & Economics, 2014, **21**(2), P.157-185, Doi:10.1080/16081625.2012.762970.

[32] Wildasin, D., Communications, R. M., *Haig: pioneer advocate of expenditure taxation?* Journal of Economic Literature, 1990, **28**(2), P.649-660, Doi: 10.2307/2727267.