

# EFFECTIVE TAX RATES AND CORPORATE GOVERNANCE

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## ABSTRACT

For all companies, maximizing profit is a key goal. Minimization of actual taxes paid is generally seen as a desirable component of that goal. However, most Chinese companies are in an unusual situation and actually pay more taxes than they actually report as tax expense. This unique tax-planning problem has resulted in Chinese firms having a cash effective cash rate being 14% higher than their GAAP effective tax rates. The goal of this paper is to investigate how incentive pay schemes for various groups and actual equity ownership for these groups affect tax-planning behavior by Chinese firms. Our results shed light on optimum compensation design for board of director members, executives and managers. We contribute to current literature by researching existing Board of Directors and executives' compensation and equity holding's effects on tax.

## INTRODUCTION

For all companies, maximizing profit is a key goal. Of course, this means minimizing expenses as well as maximizing revenue. While working on a previous paper [33], we noted that most Chinese companies actually pay more taxes that they report as tax expense, this struck us as unusual. We assumed most companies would like to minimize their tax payment, such that this amount would usually be less than GAAP tax expense reported. This is actually the case for many companies in the US. Reilly [32] analyzes reported tax expense and the actual amount of tax paid for the top 100 Standards & Poor's companies in 2015 and found that 61 of the 100 paid less in tax than they reported as tax expense. Since it seems clearly beneficial for companies to make an effort to minimize the tax they actually pay, we wondered what factors influence Chinese companies in this area.

Prior research shows that equity incentives link corporate performance with executives' personal wealth, which effectively aligns executives and shareholder interest [19]. This research shed light on how board members and executives' equity holdings alleviate book-tax differences (BTD) motivated by earnings management. Book-tax difference can result from mechanical differences in financial reporting and tax rules. However, it can also reflect managerial discretion [4] [20]. The goal of this research is to investigate how incentive pay schemes for various groups and actual equity ownership for these groups affect tax planning behavior by Chinese firms. We contribute to current literature by researching existing Board of Directors and executives' compensation and equity holding's effects on tax. We incorporate earnings management, Board of Supervisors and management equity holding in the analysis.

## LITERATURE REVIEW

The effect of equity-based compensation on book-tax differences (hereafter BTD) has been addressed previously in the literature. Xian, Sun & Zhang [37] find that discretionary BTDs related to tax planning

increase as the equity-based compensation of executives increases, and that earnings management-related BTDs decrease as the equity-based pay of executives increases. The research does not take into consideration managers' current equity holdings. Armstrong, Blouin, & Larcker [1] find that the incentive compensation of the tax director has a strong negative relationship with the GAAP effective tax rate (hereafter GAAP ETR), indicating that tax directors are provided with incentives to reduce the level of reported tax expense. Cornett et al. [10] find that when they adjust for the impact of earnings management, there is a substantial increase in the importance of variables related to governance while also find a substantial reduction in the importance of incentive-based compensation.

Earnings management can potentially influence tax rates and policies. Phillips, Pincus, & Rego [31] find that accruals were successfully utilized to avoid an earnings decline as well as a loss. Frank & Rego [17] find support for the idea that the Valuation Allowance Account (VAA) was used to manage earnings towards the average analyst forecast, but no evidence that the VAA was used to manage earnings to achieve positive profit, meet a prior year earnings level, or engage in a big bath.

There are various other related studies. Some show that institutional owners can improve corporate governance. Gillan & Starks [18] argue that institutional investors, often foreign institutional investors, play a central role in prompting change in many corporate governance systems. Gillan & Starks [18] observe that foreign investors are able to affect governance structures both directly and indirectly. Weak corporate governance structures may result in an inability to attract foreign investment. Karmin [23] identifies some of these problems. Gillan & Starks [18] conclude that institutional investors will increase the liquidity, volatility, and price informativeness of the markets and this should result in better monitoring of corporations and in better corporate governance structures. Empirical evidence on the impact of managerial entrenchment on financial reporting is mixed. Beasley et al. [5] note significant differences between fraud and no-fraud firms, particularly as it relates to corporate governance. Beasley et al. [5] find that including a larger proportion of outside members on the Board of Directors results in a significant reduction in fraud. Beasley [5] also study whether an audit committee would reduce the likelihood of fraud, but finds no evidence in support of this hypothesis. Lanis & Richardson [25] document a significant negative association between outside board membership and tax aggressiveness. They conclude that tax aggressiveness can be moderated through a more independent board composition.

In the wake of calls for regulatory reform of BTD, Hanlon, Laplante, & Shevlin [21] conclude that requiring conformity (between book and tax income) would result in a 50 percent loss in the explanatory power of earnings. Atwood et al. [2] conclude that as book-tax conformity increased, the persistence of current earnings decreased. Lev & Nissim [27] find that before the implementation of SFAS 109, the book-tax income ratio was unrelated to P/E ratios, but strongly related to market returns. Following the implantation of SFAS 109, they find opposite results. Ayers, et al. [3] find that positive changes in book-tax differences were negatively associated with changes in credit ratings.

## METHODOLOGY

Our data is from China Stock Market & Accounting Research Database (CSMAR). The data range is from 2011-2016. We start this section by defining tax rates.

### **Effective Income Tax Rate (GAAP EITR and Cash EITR)**

We use two standard measures to define effective tax rate, which have been adopted by many other studies [14][15]. First, the effective corporate income tax rate is as defined under GAAP, total income tax expense

divided by pre-tax accounting income. Second, the effective corporate income tax rate is defined on a cash basis as cash income taxes paid divided by pre-tax accounting income. The first measure will capture tax expense for financial reporting purposes (hereafter GAAP EITR). The second measure will capture cash basis tax expense (hereafter cash EITR). There are only two tax items reported on the cash flow statement, that is cash paid for taxes and cash refund. We cannot separate how much is paid for income tax and how much is paid for sales tax and addition. Due to this limitation, we have to make the assumption that sales tax and addition expense roughly equals cash paid for sales tax and addition.

### **Effective Sales Tax and Addition Rate (ESTAR)**

There are very few studies about sales tax and addition. We venture to define effective sales tax and addition the same way as effective income tax. Effective sales tax and addition rate is sales tax and addition expense divided by pre-tax accounting income (hereafter ESTAR). As we mentioned earlier, we are unable to identify how much cash is paid for sales tax and addition, we thus make the assumption that cash paid for sales tax and addition equals sales tax and addition expense. ESTAR serves as both cash and GAAP ESTAR.

### **Overall Effective Tax Rate (GAAP ETR and Cash ETR)**

We define a company's overall GAAP ETR as sales tax and addition and income tax expense divided by pre-tax accounting income. We define a company's overall cash ETR as total cash paid for taxes divided by pre-tax accounting income.

### **Book-Tax Difference(BTD)**

Prior studies look at both long and short term BTD [35] [4] [20]. BTD is estimated and divided into temporary and permanent components [3] [16] [20]. This study focuses on temporary BTD and uses the difference between reported cash and GAAP ETR as the BTD measure. Due to the unique situation in China where Cash ETR is higher than GAAP ETR, we define BTD as Cash ETR-GAAP ETR.

### **Earnings Management**

Earnings management has been the subject of extensive accounting research. Healy & Wahlen [22] define earnings management as the alteration of a firm's financial reports by insiders in order either to mislead some stakeholders or to influence contractual outcomes that are dependent on numbers in the financial reports. Leuz et al. [26] adopt this definition as do we.

Measuring the degree of earnings management has presented challenges, and researchers have devised various methods. In this study, we use the methods developed by Leuz et al. [26], which were based on previous work [13] [22] [12].

Earnings management is generally understood to mean attempts by company insiders to protect their positions and benefits by manipulating the financial information provided to outsiders. This often takes the form of income smoothing or income manipulation.

We use the method defined by Leuz et al. (2003) to quantify earnings management. We first introduce accruals and cash flow.

The operational definition of accruals is:

$$Accruals = (\Delta CA - \Delta Cash) - (\Delta CL - \Delta STD - \Delta TP) - Dep \quad \text{Equation (1)}$$

Where:

$\Delta CA$  = change in total current asset;  
 $\Delta \text{Cash}$  = change in cash/cash equivalents;  
 $\Delta CL$  = change in total current liabilities;  
 $\Delta \text{STD}$  = change in short-term debt included in current liabilities;  
 $\Delta \text{TP}$  = change in income taxes payable;  
 $\text{Dep}$  = depreciation and amortization expense.

We then calculate cash flow from operations:

$$\text{Cash flow from operations} = \text{Operating earnings} - \text{Accruals} \quad \text{Equation (2)}$$

$$\text{EarningsManagement} = \frac{\text{Accruals}}{\text{Cash flow from operations}} \quad \text{Equation (3)}$$

The larger EarningsManagement is indicative of large-scale use of discretion to manipulate reported accounting earnings. Leuz et al. (2003) identify other measures of earnings management. However, these other measures are not applicable for purposes of this paper.

## Model Development

We assume increased insider equity holding incentivize better tax management and thus lower tax rates. As you can see from table 1, Cash ETR is significantly higher than GAAP ETR. Due to china's special situation, we define BTD as cash ETR minus GAAP ETR. We assume more insider equity holding will increase the incentive for tax planning and thus reduce cash ETR. Reduced cash ETR leads to lower BTD. Generally speaking, earnings management related activities will inflate earnings. Lower earnings management means lower artificially inflated book income. BTD will be bigger with reduced discretionary income since GAAP ETR will be smaller while cash ETR stays the same. In our analysis, we control for firm-specific characteristics, including industry, size, asset mix, leverage, and previous year loss. We thus devise our models.

$$\text{Model 1: BTD} = \beta_0 + \beta_1 \text{Top3BODPay} + \beta_2 \text{Top3ExecutivePay} + \beta_3 \text{ManagementOwnership\%} + \beta_4 \text{BODOwnership\%} + \beta_5 \text{BOSOwnership\%} + \beta_6 \text{ExecutiveOwnership\%} + \beta_7 \text{EarningsManagement} + \beta_8 \text{Financial} + \beta_9 \text{Utilities} + \beta_{10} \text{RealEstate} + \beta_{11} \text{Manufacturing} + \beta_{12} \text{Wholesale\&Retail} + \beta_{13} \text{Size} + \beta_{14} \text{AssetMix} + \beta_{15} \text{Leverage} + \beta_{16} \text{PreviousYearLoss} + \varepsilon$$

Models 2-4: We use GAAP EITR, Cash EITR, and ESTAR as the dependent variable instead of BTD, respectively.

Where:

BTD is Cash ETR minus GAAP ETR.

Top3BODPay is the natural log of the top three BOD members' compensation.

Top3ExecutivePay is the natural log of the top three executives' compensation.

ManagementOwnership% is management's equity holding percentage.

BODOwnership% is Board of Directors' equity holding percentage.

BOSOwnership% is B of Supervisors' equity holding percentage.

ExecutiveOwnership% is executives' equity holding percentage.

EarningsManagement is the earnings management measure calculated using equation 3.

Financial, Utilities, RealEstate, Manufacturing, and Wholesale&Retail are different industries. The baseline industry is complex industry.

Size is the natural log of sales.

AssetMix is capital asset scaled by total asset.

Leverage is beginning total debt divided by beginning total asset

Previous year loss equals 1 if previous year has a loss and 0 otherwise.

## CONCLUSION

Overall, China listed firms have a unique tax planning problem with cash ETR being 14% higher than GAAP ETR. Top three BOD compensation significantly increases BTM, cash ETR and ESTAR while top three executive pay significantly increases GAAP ETR. BOD and executive equity holdings significantly decrease BTM and cash ETR while management equity holding significantly increases BTM and cash ETR. Earnings management does not contribute to tax planning process. Our results shed light on optimum compensation design for BOD members, executives and managers. Companies can consider shift BOD and executives' compensation from cash to equity based and restrict equity compensation for middle level management. While we do not document any link between earnings management and tax, further research is warranted in this area. Different earnings management detection methods can be applied.

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