THE IMPACT OF STOCK OPTION DEDUCTIONS ON THE TIMLINESS OF TAXABLE INCOME

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Abstract

I investigate the impact of stock option deductions on the timelines of taxable income. Specifically, I examine how stock option deductions impact conservatism in taxable income, where "conservatism" refers to conditional and unconditional conservatism per Basu (1997). By using hand-collected option data from Graham, Lang and Shackelford (2004), I find that stock option deductions (a) do not impact the conditional conservatism of taxable income, (b) lead to greater unconditional conservatism in taxable income and (c) cause a negative relation between contemporaneous economic gains and taxable income. These findings suggest that actual taxable income, which includes stock option deductions, is a lower quality earnings measure than taxable income estimated solely from Compustat data, which excludes the impact of stock option deductions.

1. INTRODUCTION

In this paper I investigate the impact of stock option deductions on the timeliness of taxable income. It is important to understand the timeliness of taxable income for a number of reasons. First, taxable income is increasingly used for valuation purposes, both alone and as a benchmark against book income. Examples of such research include Ayers, Jiang and LaPlante (2009), who examine firm characteristics that mitigate or enhance the ability of taxable income to inform investors regarding firm performance, and Lev and Nissim

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(2004), who find that book-tax differences ("BTDs") predict future earnings growth. Second, due to the increasing divergence between book income and taxable income, coupled with large financial accounting scandals (i.e. Enron), policy-makers are increasingly interested in using taxable income as a governance tool.[1] Academics have since been studying the potential governance capabilities of taxable income. Lenter, Slemrod and Shackelford (2003) outline the cases for full and limited public disclosure of taxable income. They do not support full disclosure, due to likely dilution of information and/or dissemination of proprietary information. They are, however, compelled by the case for limited disclosure, mostly due to perceived benefits of increased transparency of the tax system. Hanlon and Shevlin (2005) discuss potential governance issues surrounding the convergence of book income and taxable income. The authors raise the question: "Would financial accounting income be conformed to tax or would taxable income be conformed to financial accounting?" They answer: "We believe that the latter is unlikely because Congress would then be leaving the Treasury's revenue determination in the hands of the private sector Financial Accounting Standards Board (FASB)." Hanlon, Laplante, and Shevlin (2005) reveal a potential loss of information associated with book-tax conformity, by documenting that taxable income is incrementally beneficial, relative to book income, in explaining stock returns. In sum, taxable income plays an increasingly important role in firm valuation and policy issues. Thus, it is important

[1] In 2002 the Chairman of the Senate Finance Committee, Senator Grassley, wrote a letter to the Secretary of the Department of Treasury and the Chairman of the Securities and Exchange Commission questioning the governance benefits of taxable income. Senator Grassley wrote: "I am writing to raise the question of whether the information contained in the corporate tax returns of publicly traded companies could be of benefit to government regulators as well as shareholders and workers. Given recent events, it is important that we have a thoughtful discussion of this matter. Specifically, would there be a benefit to efforts to police corporate governance and providing a more accurate picture of a corporation's financial health of requiring corporate tax returns (or a summary version) to be available to the Securities and Exchange Commission (SEC)? In addition, would there be a benefit to shareholders and employees of requiring corporate tax returns (or a summary version) to be publicly available?"

for academics, practitioners and policy-makers to better understand the earnings recognition process of taxable income.

I study the impact of stock option deductions on the earnings recognition process of taxable income. Contemporaneous studies involving taxable income use Compustat data to estimate taxable income, and Compustat data does not include the tax impact of stock option deductions. Therefore, estimates of taxable income used in contemporaneous research are systematically overstated. Tax deductions from stock options are significant: Graham, Lang and Shackelford (2004) find that in the year 2000, stock option deductions reduce taxable income for their sample of S&P 100 and Nasdaq 100 firms by approximately $100 billion. This systematic overstatement of taxable income in contemporaneous studies may lead researchers, practitioners and policy-makers to reach misinformed conclusions.

By using hand-collected stock option deduction data from Graham et al (2004), I am able to correct for this systematic overstatement of taxable income. I examine how stock option deductions impact an important component of the earnings recognition process of taxable income: timelines. More specifically, this paper examines the impact of stock option deductions on conditional and unconditional conservatism in taxable income.[2] Conditional and unconditional conservatism are important measures of earnings quality, as they reveal valuable information about the earnings recognition process. Earnings quality is considered to be positively related to conditional conservatism, where conditional conservatism represents timelier recognition of economic losses (relative to economic gains). Conversely, earnings quality is considered to be negatively related to unconditional conservatism, where unconditional conservatism represents a decrease to earnings made unconditional upon the occurrence of a contemporaneous economic event.[3]

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[2] Throughout this paper, conditional and unconditional conservatism refer to conservatism in the financial statement context (as opposed to the taxable income context), as defined in Basu (1997).

[3] Ball and Shivakumar (2005) note that unconditional conservatism adds noise to earnings, thereby reducing contracting efficiency.

Heltzer (2009) examines the timeliness of taxable income, where taxable income is estimated solely from Compustat data, and therefore excludes the impact of stock option deductions. Heltzer finds that, similar to book income, taxable income exhibits significant conditional conservatism. All of the conditional conservatism in taxable income is attributed to cash flow and none is attributed to tax accruals, as the ultimate taxing authority, the United States Congress, does not allow for managerial estimations regarding the downward revisions of future cash flows in the determination of taxable income. Heltzer also finds that book income exhibits greater conditional conservatism than taxable income, and, at the same time, taxable income exhibits greater unconditional conservatism than book income. Thus, if conservatism is used to measure earnings quality, taxable income would be considered a lower quality earnings measure than book income. As noted in Heltzer (2009), if regulators pursue the possibility of book-tax conformity by replacing book income with taxable income, the difference in conservatism measures across book income and taxable income would lead to inefficiencies in multiple markets, as conditional conservatism is believed to increase contracting efficiencies and reduce litigation and political costs (Watts (2003a), (2003b)).

This paper extends Heltzer (2009) by examining the impact of stock option deductions on conservatism measures in taxable income. As discussed in Section 2, non-qualified stock options create a tax deduction for the issuing firm, thereby increasing the overall conservatism in taxable income. Ideally, one would fully include the impact of stock option deductions in all estimates of taxable income for all sample firms. However, there is no method, outside of hand-collecting data, to estimate tax-deductions from stock options.[4] Thus, contemporaneous studies estimate taxable income without the inclusion of stock option deductions. Hanlon and Shevlin (2002)

[4] Hanlon, Laplante and Shevlin (2005) address this point in Footnote 62 by stating "...for a large sample like ours, it is not feasible to collect by hand the necessary data to estimate the annual tax savings each firm received from the exercise of employee stock options."

discuss the impact of this systematic error: "Because current tax expense overstates the current tax burden and hence taxable income, given the accounting for ESO tax benefits, book-tax differences and the EC ratio are both understated."[5]

While tax deductions caused by non-qualified stock options decrease taxable income, and therefore increase the overall conservatism in taxable income, it is not known whether such increase in conservatism is conditional or unconditional in nature. As mentioned above, the different forms of conservatism have different implications for the quality of earnings. Thus, it is not clear whether the inclusion of stock option deductions in the calculation of taxable income, which more accurately depicts actual taxable income, will lead to an increase or decrease in the quality of taxable income. Because taxable income is increasingly used to evaluate firm performance, and because of its potential as a governance tool, I conduct this empirical analysis to enhance our understanding of the use of taxable income as an assessment measure.

My results suggest that that inclusion of stock option deductions in the calculation of taxable income (a) has no impact on the conditional conservatism of taxable income, (b) increases the unconditional conservatism in taxable income, and (c) leads to a negative relation between economic gains and taxable income. Together these finding suggest that actual taxable income, which includes stock option deductions, is a lower quality earnings measure than taxable income estimated solely from Compustat data, which does not include stock option deductions. These findings are important to researchers and practitioners using taxable income as a valuation tool, as well as parties, especially regulators, concerned with the possibility of using taxable income as a governance tool.

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[5] The term "ESO" refers to employee stock options, the majority of which are non-qualified stock options. The term "EC ratio" refers to the earnings conservatism ratio mentioned in Revsine et al (1998), which suggests that the ratio of pretax book income to estimated taxable income is helpful to financial statement users in assessing the quality of financial statement earnings.

2. ACCOUNTING FOR STOCK OPTIONS

For tax purposes the treatment of stock options depends upon whether or not the options are qualified.[6] If stock options are qualified, the issuing firm does not receive a tax deduction at any point. If stock options are non-qualified, the issuing firm will receive a tax deduction at the time of exercise, equal to the difference between the stock price at the time of exercise and the strike price.[7] For financial reporting purposes, in general,[8] the tax benefit from stock options is reported as a decrease, or debit, to taxes payable/cash paid and a corresponding increase, or credit, to equity. Thus, the tax benefit from stock options deductions does not impact current tax expense. Estimates of taxable income using solely current tax expense from Compustat are therefore systematically overstated.

For example, consider a firm with pre-tax book income of $100.00 and a tax rate of 35%. Current tax expense for such firm would be $35.00. Further assume the firm has stock option deductions for tax purposes of $24.00,[9] and that this represents the only difference between book income and taxable income. Taxable income would therefore be $76.00 ($100.00 - $24.00), and taxes payable/cash payment would be $26.60 ($76.00 * 35%). The tax benefit from the stock option deduction is $8.40 ($24*35%, or $35.00 - $26.60). The journal entries to record taxes for the year would be twofold. First, there would be a debit to current tax expense of $35.00, with a corresponding credit to taxes payable/cash or $35.00. Second, there would be a debit to taxes payable/cash of $8.40 and a corresponding

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6 Employee stock options which meet the requirements of IRC Sec. 421 – 424 are referred to as statutory or "qualified" stock options, while those which do not are referred to as non-statutory or "non-qualified" stock options.

7 As such, stock option deductions are the result of employee exercise decisions, so they are not determined solely by the firm, but instead in concert with option holder decisions.

8 The financial reporting treatment will vary slightly if a firm is in a loss position for either book or tax purposes.

9 I have chosen $24 as the value of stock option deductions in this example because stock options deductions in the sample used herein represent approximately 24 percent of pre-tax book income.

credit to retained earnings of $8.40. Thus, using only Compustat data to calculate taxable income will lead to a $24.00 overstatement: estimated taxable income will be $100.00, while actual taxable income is $76.00.

3. TESTING AND HYPOTHESIS DEVELOPMENT

3.1. Testing

I employ the piecewise regression model introduced by Basu (1997):

$$INC_{i,t} = \alpha_o + \alpha_1 DRET_{i,t} + \alpha_2 RET_{i,t} + \alpha_3 DRET_{i,t} * RET_{i,t} \quad (1)$$

Where $INC_{i,t}$ is income per share scaled by beginning of year price, $RET_{i,t}$ is contemporaneous 12-month stock returns less the corresponding CRSP equal-weighted market return, and $DRET_{i,t}$ is an indicator variable equal to one when $RET_{i,t} < 0$, zero otherwise.

In equation (1) stock returns, or $RET_{i,t}$, proxy for economic events. Thus, the α_2 coefficient estimate captures the relation between income and economic gains, while the sum of the $\alpha_2 + \alpha_3$ coefficient estimates captures the relation between income and economic losses. Because these relations are *conditional* upon the occurrence of a contemporaneous economic event, they are considered to be *conditional* relations. *Conditional conservatism* is represented by a positive value for α_3: if α_3 is positive, the contemporaneous relation between economic losses and income is deemed to be stronger than the contemporaneous relation between economic gains and income. *Unconditional conservatism*, on the other hand, represents a change to income made *unconditional* upon the occurrence of an economic event. In equation (1) unconditional conservatism is represented by $\alpha_0 + (\alpha_1 *$loss frequency[10]$)$, as the α_0 and α_1 coefficient estimates capture a shift to income made *unconditional* upon the occurrence of a contemporaneous economic event.

[10] Loss frequency is the average of $DRET_{i,t}$, an indicator variable equal to one when returns are negative, zero otherwise.

3.2. Hypothesis Development

As discussed in Section 2, the exercise of non-qualified stock options causes taxable income to decrease, thereby causing an increase in the overall conservatism levels of taxable income. However, it is not known which form of conservatism is increased due to stock option deductions: conditional or unconditional. Because the different forms of conservatism have different implications for the quality of earnings, it is important to understand if stock option deductions increase conditional and/or unconditional conservatism in taxable income.

Stock option deductions occur at the time of exercise. Thus, cereris paribus, the corresponding decrease to taxable income should take place *independent of a contemporaneous economic loss*. As such, the decrease to taxable income caused by stock option deductions should not increase the conditional conservatism of taxable income. Instead, stock option deductions should increase in the unconditional conservatism of taxable income. It follows that my first two hypotheses are:

> **H1: The inclusion of stock option deductions in the calculation of taxable income will not impact the conditional conservatism of taxable income.**
>
> **H2: The inclusion of stock option deductions in the calculation of taxable income will lead to an increase in the unconditional conservatism of taxable income.**

Additionally, employees may choose to exercise their options after an increase in stock price (Heath, Huddart and Lang (1999) and Bens, Nagar and Wong (2002)). If a run-up in the price of the underlying stock occurs in the year of exercise, stock option deductions may lead to a negative relation between economic gains and taxable earnings. Thus, my third hypothesis is:

> **H3: The inclusion of stock option deductions in the calculation of taxable income will lead to a negative**

relation between contemporaneous economic gains and taxable income.

My combined hypotheses suggest that inclusion of stock option deductions in the calculation of taxable income reduces the quality of taxable income, relative to taxable income calculated solely from Compustat data.

4. DATA

I very gratefully received the hand-collected stock option data used in Graham et al (2004). The authors hand-collected stock deduction data for Nasdaq 100 and S&P 100 firms for the years 1998, 1999 and 2000 from footnote disclosures. Therefore, the potential sample size is 600 observations. Seven firms (21 observations) are included in both the Nasdaq 100 and S&P 100, reducing the potential sample size to 579 observations. Of the 579 observations, 14 are missing data necessary to estimate the stock option deductions, reducing the potential sample size to 565 observations. Next, I eliminate firm-years missing data necessary to construct test variables (93 observations), financial institutions (30 observations), utilities (17 observations) and foreign-incorporated firms (16 observations).[11] The final sample size of 409 observations is hereinafter referred to as the "Condensed GLS Sample."

[11] In Section 6.2 I examine the impact of these eliminations. My main results are not altered by such exclusions.

TABLE 1
Sample Selection

	No. Obs.	*Explanation*
Potential Sample	600	S&P 100 and Nasdaq 100 firms for years 1998 1999 and 2000.
Elimination 1	(21)	Seven firms listed on both the S&P 100 and Nasdaq 100 indexes.[12]
Elimination 2	(14)	Missing necessary data to estimate stock option deductions.
Elimination 3	(93)	Missing necessary data to construct test variables.
Elimination 4	(47)	Elimination of financial institutions and utilities.
Elimination 5	(16)	Elimination of firms not incorporated in the United States.
Condensed GLS Sample	409	Sample of firm-years used herein.

Taxable income is calculated two ways. First, I estimate taxable income solely from Compustat data. This variable, referred to as unadjusted taxable income ($UNADJ\_TI_{i,t}$) does not include the impact of stock option deductions. I calculate $UNADJ\_TI_{i,t}$ by grossing-up total current tax expense (the sum of current federal tax expense (*Compustat #*63) and current foreign tax expense (*Compustat #*64)) by the applicable statutory tax rate, and then subtracting the change in net operating loss (NOL) carryforward (*Compustat #*52).[13]

[12] The seven firms listed on both the S&P 100 and Nasdaq 100 during the sample period are (1) Amgen Inc., (2) Cisco Systems, Inc., (3) Intel Corp., (4) Medimmune Inc., (5) Microsoft Corp., (6) Nextel Communications Inc. and (7) Oracle Corp.

[13] If current federal tax expense is missing total current tax expense is estimated to be total income tax (*Compustat* #16) less deferred taxes (*Compustat Data* #50), state income taxes (*Compustat* #173) and other income taxes (*Compustat* #211).

Second, I calculate taxable income by adjusting for the impact of stock option deductions. Annual stock option deductions are subtracted from unadjusted taxable income to create adjusted taxable income ($ADJ\_TI_{i,t}$). Because adjusted taxable income takes into account tax deductions from stock options it is believed to be a more accurate reflection of actual taxable income than unadjusted taxable income.

In order to compare the earnings recognition processes of the Condensed GLS Sample with those of larger studies, I additionally estimate book income ($BI_{i,t}$) as pre-tax book income (*Compustat* #170) less minority interest (*Compustat* #49), book-tax differences ($BTD_{i,t}$) as the difference between book income and taxable income, operating cash flows ($CFO_{i,t}$) as cash flows from operations (*Compustat* #308) plus income taxes paid per the statement of cash flows (*Compustat* #317) less extraordinary items and discontinued operations (*Compustat* #124), and accruals ($ACC_{i,t}$) as the difference between income and cash flows.

TABLE 2
Summary Statistics

Panel A: Condensed GLS Sample

	Mean	*Std. Dev.*	*Min*	*Median*	*Max*
$BI_{i,t}$	1,676.95***	3,438.64	-7,439.80[15]	425.18***	27,081.00
$STK\_DED_{i,t}$	404.81***	1,074.83	0.00	101.37***	13,925.34[14]
$UNADJ\_TI_{i,t}$	1,400.82***	2,805.28	-2,012.78	352.29***	26,513.31
$ADJ\_TI_{i,t}$	996.01***	2,420.93	-3,234.01	228.32***	25,685.34
$UNADJ\_BTD_{i,t}$	271.13***	1,445.53	-7,439.80	55.69***	18,929.86
$ADJ\_BTD_{i,t}$	675.94***	1,824.11	-7,384.14	213.50***	19,451.83
$CFO_{i,t}$	2,417.12***	4,780.41	-1,165.00	543.42***	31,916.00
$ACC_{i,t}^{BI}$	-745.17***	2,262.64	-20,716.00	-141.20***	6,223.89
$ACC_{i,t}^{UNADJ\_TI}$	-1,016.30***	2,921.49	-26,124.57	-215.79***	5,605.34
$ACC_{i,t}^{ADJ\_TI}$	-1,421.11***	3,169.47	-26,466.55	-426.72***	4,355.16

[14] The maximum $STK\_DED_{i,t}$ observation is the year 2000 tax deduction for Microsoft. Please see Graham et al (2004) for a detailed explanation as to how this stock option deduction is calculated using footnote data.

[15] The minimum $BI_{i,t}$ observation, At Home Corp. in 2000, has estimated $UNADJ\_TI_{i,t}$ of zero. Therefore, it is also the minimum $UNADJ\_BTD_{i,t}$ observation.

TABLE 2 (Continued)
Summary Statistics

Panel B: Compustat Universe for Sample Period, Years 1998 – 2000

	Mean	*Std. Dev.*	*Min*	*Median*	*Max*
$BI_{i,t}$	133.87***	827.39	-12,267.26	5.79***	27,081.00[16]
$UNADJ\_TI_{i,t}$	129.85***	759.85	-3,602.86	3.30***	26,513.31
$UNADJ\_BTD_{i,t}$	5.78*	418.87	-22,272.00	0.32***	18,929.86[17]
$CFO_{i,t}$	217.81***	1,279.02	-27,535.00	10.76***	35,315.49[18]
$ACC_{i,t}^{BI}$	-85.92***	827.78	-31,979.30	-5.60***	35,263.00
$ACC_{i,t}^{UNADJ\_TI}$	-96.03***	914.41	-3,0784.00	-5.89***	34,980.71

Note:

Book Income ($BI_{i,t}$) is pre-tax book income (*Compustat* #170) less minority interest (*Compustat* #49).

Stock Option Deductions ($STK\_DED_{i,t}$) are hand collected stock-option deductions from Graham et al (2004) stated in absolute value terms.

16 The maximum $BI_{i,t}$ and $UNADJ\_TI_{i,t}$ observations relate to Exxon Mobile Corp (year 2000), an S&P 100 firm, and therefore are included in the Condensed GLS Sample as well.

17 The maximum $UNADJ\_BTD_{i,t}$ observation relates to Ford Motor Co (year 1998), an S&P 100 firm, and therefore is included in the Condensed GLS Sample as well.

18 The maximum $ACC_{i,t}^{BI}$ and $ACC_{i,t}^{UNADJ\_TI}$ observations are greater than the maximum $BI_{i,t}$ and $UNADJ\_TI_{i,t}$ observations due to negative $CFO_{i,t}$, relating to Morgan Stanley (year 1999). Morgan Stanley is eliminated from the Condensed GLS Sample because it is a financial institution.

Note (Continued)

Unadjusted Taxable Income ($UNADJ\_TI_{i,t}$) is grossed-up total current tax expense less the change in net operating loss (NOL) carryforward (*Compustat* #52), where total current tax expense is the sum of current federal tax expense (*Compustat* #63) and current foreign tax expense (*Compustat* #64).[19]

Adjusted Taxable Income ($ADJ\_TI_{i,t}$) is $UNADJ\_TI_{i,t}$ less $STK\_DED_{i,t}$.

Unadjusted Book-Tax Differences ($UNADJ\_BTD_{i,t}$) are the differences between $BI_{i,t}$ and $UNADJ\_TI_{i,t}$.

Adjusted Book-Tax Differences ($ADJ\_BTD_{i,t}$) are the differences between $BI_{i,t}$ and $ADJ\_TI_{i,t}$.

Cash Flows From Operations ($CFO_{i,t}$) are cash flows from operations from the statement of cash flows (*Compustat* #308) less extraordinary items and discontinued operations (*Compustat Data* #124) plus income taxes paid (*Compustat* #317).

Unadjusted Tax Accruals ($ACC_{i,t}^{UNADJ\_TI}$) are $UNADJ\_TI_{i,t}$ less $CFO_{i,t}$.

Adjusted Tax Accruals ($ACC_{i,t}^{ADJ\_TI}$) are $ADJ\_TI_{i,t}$ less $CFO_{i,t}$.

All values are stated in millions of dollars.

*, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

[19] If current federal tax expense is missing, total current tax expense is estimated to be total income tax (*Compustat* #16) less deferred taxes (*Compustat Data* #50), state income taxes (*Compustat* #173) and other income taxes (*Compustat* #211).

Table 2 contains summary statistics for the Condensed GLS Sample. As expected, book income is, on average, greater than both unadjusted taxable income and adjusted taxable income. Further, book income exhibits greater left skewness than taxable income. Specifically, the maximum book income observation of $27,081 million is similar in magnitude to the maximum unadjusted (adjusted) taxable income observation of $26,513 million (25,685 million) while the minimum book observation of -$7,440 million is over three (two) times smaller than the minimum unadjusted (adjusted) taxable income observation of -$2,013 million (-$3,234 million). This is consistent with the expectation that book income will exhibit greater conditional conservatism than taxable income. Additionally consistent with previous research (Dechow (1994)) all of my accrual variables exhibit a negative mean and median.

The average stock option deduction for the Condensed GLS Sample is $405 million, which is approximately 24 percent of average book income. The inclusion of stock option deductions causes taxable income to decrease, on average, 29 percent, from $1,401 million to $996 million.

Panel B of Table 2 reports summary statistics for tests variables for the Compustat universe. While the maximum $BI_{i,t}$, $UNADJ\_TI_{i,t}$ and $UNADJ\_BTD_{i,t}$ observations are the same in the Compustat universe and the Condensed GLS Sample,[20] as expected, test variables in the Condensed GLS Sample are, on average, larger than those from the relevant Compustat universe. This is supported by the additional descriptive statistics in Table 3.

[20] The maximum $BI_{i,t}$ and $UNADJ\_TI_{i,t}$ observations in the Compustat universe relate to Exxon Mobile Corp (year 2000), an S&P 100 firm. Therefore, they are also the maximum $BI_{i,t}$ and $UNADJ\_TI_{i,t}$ observations in Condensed GLS Sample. Additionally, the maximum $UNADJ\_BTD_{i,t}$ observation relates to Ford Motor Co (year 1998), an S&P 100 firm. Therefore, it is also the maximum $UNADJ\_BTD_{i,t}$ observation in the Condensed GLS Sample.

TABLE 3
Additional Descriptive Statistics

	Condensed GLS Sample			
	n	*Mean*	*Std. Dev.*	*Median*
$AveAssets_{i,t}$	409	18,432.38***	46,453.23	5,043.69***
$MVE_{i,t}$	409	4,0651.01***	73,453.01	11,893.16***
Asset $Growth_{i,t}$	409	4.59*	48.32	0.17***
$Sales_{i,t}$	409	0.93***	0.52	0.86***
Special $Items_{i,t}$	397	-0.01**	0.10	0.00***

	Compustat Universe for Years 1998 – 2000			
	n	*Mean*	*Std. Dev.*	*Median*
$AveAssets_{i,t}$	18,496	3.944.10***	25,767.29	255.33***
$MVE_{i,t}$	21,996	2582.61***	14,851.08	139.05***
Asset $Growth_{i,t}$	18,496	18.39	2,117.02	0.07***
$Sales_{i,t}$	18,480	0.98***	0.97	0.80***
Special $Items_{i,t}$	18,139	-0.02***	0.24	0.00***

Note:

Average Assets ($AveAssets_{i,t}$) are the average of total assets (*Compustat* #9) at period *t* and period *t-1*.

Market Value of Equity ($MVE_{i,t}$) is stock price (*Compustat* #199) times common stock outstanding (Compustat #25).

Asset Growth (*Asset* $Growth_{i,t}$) is the growth in total assets (*Compustat* #9) from period *t-1* to period *t.*

Sales ($Sales_{i,t}$) are total period sales (*Compustat* #12) divided by $AveAssets_{i,t}$.

Special Items ($Special\ Items_{i,t}$) is special items (*Compustat* #17) divided by $AveAssets_{i,t}$.

All variables other than *n* are stated in millions of dollars.

*, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Table 3 shows that the firm-years in the Condensed GLS Samples are larger than those in the relevant Compustat universe, in

terms of average assets and market value of equity. Further, due to their established nature, firms in the Condensed GLS Sample have lower growth than those in the Compustat universe. Firms in the Condensed GLS Sample have similar sales and special items, relative to the Compustat universe. This gives credence to the general applicability of my results as negative special items contribute to conservatism in earnings (Basu (1997)).

5. RESULTS

Before I examine the impact of stock option deductions on the timeliness of taxable income, I first estimate equation (1) using the Condensed GLS Sample to make sure this smaller sample exhibits earnings recognition processes similar to those in larger studies. Results of these preliminary regressions may be found in Table 4.[21]

Regarding book income (in both Panel A and Panel B), results from the Condensed GLS Sample are consistent with Basu (1997). Specifically, book income in the Condensed GLS Sample exhibits no significant relation between earnings and economic gains, as α_2 in the $BI_{i,t}$ regression is insignificant. Additionally, book income in the Condensed GLS Sample exhibits significant conditional conservatism, as α_3 in the $BI_{i,t}$ regression is positive and significant. Further, book income in the Condensed GSL Sample exhibits an unconditional increase to income, as α_0+ (α_1*loss coefficient) in the $BI_{i,t}$ regression is positive and significant.

[21] Because of the limited sample period, I do not use the Fama-Macbeth estimation method. Instead, I use the ordinary least squares regression estimation method. Further, because the same firms show up in the data for each of the three sample years, I adjust the standard errors by clustering by firms.

Table 4
Relative Conservatism Measures

This table contains the results from estimating equation (1):

$$INC_{i,t} = \alpha_0 + \alpha_1 DRET_{i,t} + \alpha_2 RET_{i,t} + \alpha_3 DRET_{i,t} * RET_{i,t}$$

Panel A: Unadjusted Taxable Income

	$INC_{i,t}$ *Proxies*				
	$BI_{i,t}$	$UNADJ\_TI_{i,t}$	$UNADJ\_BTD_{i,t}$	$CFO_{i,t}$	$ACC_{i,t}^{UNADJ\_TI}$
$Intercept_{i,t}$	0.0466***	0.0400***	0.0067	0.0763***	-0.0363***
	(8.37)	(10.47)	(1.63)	(11.83)	(-6.76)
$DRET_{i,t}$	0.0030	-0.0003	0.0033	0.0062	-0.0065
	(0.37)	(-0.06)	(0.48)	(0.49)	(-0.55)
$RET_{i,t}$	-0.0038	-0.0021	-0.0016	-0.0060**	0.0039**
	(-1.58)	(-1.06)	(-1.42)	(-2.35)	(2.46)
$DRET_{i,t} * RET_{i,t}$	0.0368*	0.0313***	0.0055	0.0489**	-0.0174
	(1.95)	(3.23)	(0.33)	(2.11)	(-0.86)
No. Obs.	409	409	409	409	409
Adj-R^2	0.87%	1.39%	0.00%	1.74%	0.15%

Table 4 (Continued)
Relative Conservatism Measures

Panel B: Adjusted Taxable Income

	$INC_{i,t}$ *Proxies*				
	$BI_{i,t}$	$ADJ\_TI_{i,t}$	$ADJ\_BTD_{i,t}$	$CFO_{i,t}$	$ACC_{i,t}^{ADJ\_TI}$
$Intercept_{i,t}$	0.0466*** (8.37)	0.0294*** (6.75)	0.0173*** (4.07)	0.0763*** (11.83)	-0.0469*** (-9.00)
$DRET_{i,t}$	0.0030 (0.37)	0.0017 (0.31)	0.0013 (0.18)	0.0062 (0.49)	-0.0045 (-0.38)
$RET_{i,t}$	-0.0038 (-1.58)	-0.0051** (-1.99)	0.0013 (1.01)	-0.0060** (-2.35)	0.0009 (-0.71)
$DRET_{i,t}$* $RET_{i,t}$	0.0368* (1.95)	0.0342*** (3.28)	0.0026 (0.15)	0.0489** (2.11)	-0.0147 (-0.71)
No. Obs.	409	409	409	409	409
Adj-R^2	0.87%	2.48%	0.00%	1.74%	0.00%

Note:

Where $INC_{i,t}$ is income, $RET_{i,t}$ is the contemporaneous 12-month cumulative stock returns, less the corresponding CRSP equal-weighted market return., $DRET_{i,t}$ is an indicator variable equal to one when $RET_{i,t}$ is negative, zero otherwise. Adjusted Taxable Income ($ADJ\_TI_{i,t}$) is $UNADJ\_TI_{i,t}$ less $STK\_DED_{i,t}$.

Proxies for $INC_{i,t}$ include: book income ($BI_{i,t}$), unadjusted taxable income ($UNADJ\_TI_{i,t}$), book-tax difference using unadjusted taxable income ($UNADJ\_BTD_{i,t}$), pre-tax cash flows from operations ($CFO_{i,t}$), unadjusted tax accruals ($ACC_{i,t}^{UNADJ\_TI}$), adjusted taxable income ($ADJ\_TI_{i,t}$), book-tax differences using adjusted taxable income ($ADJ\_BTD_{i,t}$) and adjusted tax accrual ($ACC_{i,t}^{ADJ\_TI}$).

All INC_{it} proxies are measured in per share values, scaled by beginning of period prices.

Values in parenthesis represent t-statistics.

*, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Regarding unadjusted taxable income (see Panel A), results from the Condensed GLS Sample are consistent with Heltzer (2009). Specifically, unadjusted taxable income exhibits significant conditional conservatism, as α_3 in the $UNADJ\_TI_{i,t}$ regression is positive and significant. All of the conditional conservatism in unadjusted taxable income is related to cash flows, and unadjusted tax accruals lack conditional conservatism. Specifically, α_3 in the $CFO_{i.t}$ regression is positive and significant, while α_3 in the $ACC_{i,t}^{UNADJ\_TI}$ regression is statistically insignificant. Finally, in the Condensed GLS Sample the conditional conservatism of book income is greater than that of unadjusted taxable income (α_3 in the $BI_{i,t}$ regression is greater than α_3 in the $UNADJ\_TI_{i,t}$ regression), and at the same time the unconditional conservatism in unadjusted taxable income is greater than that of book income, as α_0 + (α_1*loss frequency) in the $UNADJ\_TI_{i,t}$ regression is less than α_0 + (α_1*loss frequency) in the $BI_{i,t}$ regression. However, unlike Heltzer (2009), in the Condensed GSL Sample these differences in conservatism measures across income forms are not statistically significant.[22]

Panel B demonstrates that when taxable income is adjusted to include the impact of stock option deductions, results from previous studies hold. Specifically, adjusted taxable income exhibits significant conditional conservatism, as α_3 in the $ADJ\_TI_{i,t}$ regression is positive and significant. All of the conditional conservatism in adjusted taxable income is related to cash flows, and adjusted tax accruals lack conditional conservatism. Specifically, α_3 in the $CFO_{i.t}$ regression is positive and significant, while α_3 in the $ACC_{i,t}^{ADJ\_TI}$ regression is statistically insignificant. Further, in the Condensed GLS Sample the conditional conservatism of book income is greater than that of adjusted taxable income (α_3 in the $BI_{i,t}$ regression is greater than α_3 in the $ADJ\_TI_{i,t}$ regression), and at the same time the unconditional

[22] This lack of statistical significant may be due to different sample sizes and/or different estimation methods. Heltzer (2009) employs a sample size of 36,165 observations (compared to the sample of 409 observations contained herein) and uses the Fama-Macbeth regression estimation method (compared to the OLS regression estimation method employed herein).

conservatism in adjusted taxable income is greater than that of book income (α_0 + (α_1*loss frequency) in the $ADJ\_TI_{i,t}$ regression is less than α_0 + (α_1*loss frequency) in the $BI_{i,t}$ regression). Similar to the difference in conditional conservatism across earnings forms in Panel A, in Panel B the difference in conditional conservatism is insignificant (α_3 in the $ADJ\_BTD_{i,t}$ regression is insignificant). However, unlike the difference in unconditional conservatism across earnings forms in Panel A, the difference in unconditional conservatism in Panel B is statistically significant (α_0 in the $ADJ\_BTD_{i,t}$ regression is positive and significant). This suggests that the inclusion of stock options deductions in the calculation of taxable income does not lead to an increase in conditional conservatism, but does lead to an increase the unconditional conservatism, as suggested by my first two hypotheses. I directly test these hypotheses below.

My main results may be found in Table 5. Table 5 outlines the difference between conservatism measures across unadjusted and adjusted taxable income. The significance of the differences in conservatism levels are captured in the $STK\_DED_{i,t}$ regressions.

TABLE 5
The Impact of Stock Option Deductions on the Conservatism of Taxable Income

This table contains the results from estimating equation (1):

$$INC_{i,t} = \alpha_0 + \alpha_1 DRET_{i,t} + \alpha_2 RET_{i,t} + \alpha_3 DRET_{i,t} * RET_{i,t}$$

	$INC_{i,t}$ *Proxies*		
	$UNADJ\_TI_{i,t}$	$ADJ\_TI_{i,t}$	$STK\_DED_{i,t}$
$Intercept_{i,t}$	0.0400***	0.0294***	0.0106***
	(10.47)	(6.75)	(9.20)
$DRET_{i,t}$	-0.0003	0.0017	-0.0020
	(-0.06)	(0.31)	(-1.18)
$RET_{i,t}$	-0.0021	-0.0051**	0.0030***
	(-1.06)	(-1.99)	(4.21)
$DRET_{i,t} * RET_{i,t}$	0.0313***	0.0342***	-0.0029
	(3.23)	(3.28)	(-1.20)
No. Obs.	409	409	409
Adj-R^2	1.39%	2.48%	15.41%

Note:

Where $INC_{i,t}$ is income, $RET_{i,t}$ is the contemporaneous 12-month cumulative stock returns, less the corresponding CRSP equal-weighted market return, and $DRET_{i,t}$ is an indicator variable equal to one when $RET_{i,t}$ is negative, zero otherwise.

Proxies for $INC_{i,t}$ include: unadjusted taxable income ($UNADJ\_TI_{i,t}$), adjusted taxable income ($ADJ\_TI_{i,t}$) and the differences between $UNADJ\_TI_{i,t}$ and $ADJ\_TI_{i,t}$, which is equal to the absolute value of stock option deductions ($STK\_DED_{i,t}$).

Values in parenthesis represent t-statistics.

*, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Regarding conditional conservatism, as hypothesized in H1, the inclusion of stock option deductions has no impact on the conditional conservatism of taxable income. Specifically, the difference in conditional conservatism across taxable income measures, captured by α_3 in the $STK\_DED_{i,t}$ regression, is insignificant. Thus, despite exhibiting greater overall conservatism, adjusted taxable income does not appear to measures losses in a timelier manner than unadjusted taxable income.

Regarding unconditional conservatism, as hypothesized in H2, the inclusion of stock option deductions increases the unconditional conservatism in taxable income. Specifically, α_0 in the $STK\_DED_{i,t}$ regression is positive and significant. Because unanticipated unconditional conservatism is deemed to add noise to earnings and reduce contracting efficiency (Ball and Shivakumar (2005)), this finding suggests that actual taxable income is a lower quality earnings measure than unadjusted taxable income.

Finally, as hypothesized in H3, the inclusion of stock option deductions leads to a negative relation between economic gains and taxable income. Specifically, α_2 in the $UNADJ\_TI_{i,t}$ regression is insignificant, suggesting there is no relation between economic gains and unadjusted taxable income, while α_2 in the $ADJ\_TI_{i,t}$ regression is negative and significant, suggesting there is a negative relation between economic gains and adjusted taxable income. Additionally, α_2 in the $STK\_DED_{i,t}$ regression is positive and significant, suggesting that this difference in the earnings recognition process is significant. This finding further supports the notion that actual taxable income is a lower quality earnings measure than unadjusted taxable income, as this negative relation may lead investors to believe that a firm is underperforming in times of economic prosperity.

In sum, the results in Table 5 show that inclusion of stock option deductions in the calculation of taxable income (a) has no impact on conditional conservatism of taxable income, (b) increases unconditional conservatism of taxable income, and (c) leads to a negative relation between economic gains and taxable income. These combined results deepen our understanding of the actual distribution

of taxable income, which in turn serves to aid in the use of taxable income as a valuation measure and potential governance tool.

6. ADDITIONAL TESTS

6.1. The Impact of SFAS 123(R)

The treatment of stock option deductions varies across book income and taxable income. For book purposes, APB Opinion 25, Accounting for Stock Issued to Employees, issued in 1972, provided the original guidance for accounting for stock options. Under APB Opinion 25, compensation expense due to stock options was equal to the excess of the stock price at the grant date over the exercise price. This valuation method, referred to as the intrinsic valuation method, rarely lead to an expense on the income statement, as most options have an exercise price at least equal to the grant date stock price. In 1995, FASB supported the expensing of the fair value of stock option compensation by issuing SFAS 123, Accounting for Stock-Based Compensation. Per SFAS 123, the fair value of the options is determined using an options-pricing model, such as lattice-based models, and is expensed over the vesting period. When SFAS 123 was originally issued companies were allowed to continue applying APB Option 25 and were simply required to disclose the impact of fair value reporting for stock option compensation in their footnotes. SFAS 123 was revised in December of 2004, to be adopted in 2006 for calendar year-end firms. The revised statement, SFAS 123(R), Share-Based Payment, requires companies to include the impact of fair value reporting for stock option compensation in their income statements directly, thereby superseding APB Option 25 completely.

The Condensed GLS Sample spans years 1998, 1999 and 2000. Thus, for the years in this study, firms were not required to include the impact of fair value reporting for stock option compensation in their income statements directly. Instead, they were required to report the impact of fair value reporting for stock option compensation in a footnote disclosure.[23]

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[23] Only one observation in the Condensed GSL Sample, Network Appliance Inc. (year 2000) has a positive value for stock option compensation. The reduction to

The adoption of SFAS 123(R) in 2006 does not impact my main finding concerning the impact of stock option deductions on the timeliness of taxable income, as the Standard does not impact the treatment of stock option deductions for purposes of determining taxable income. SFAS123(R) may, however, impact the relative conservatism levels across book income and taxable income, as the adoption of SFAS 123(R) leads to an increase in conservatism levels of book income.[24] While the differences in conservatism levels across book income and taxable contained herein remain relevant for any researcher, policy-maker or practitioner who used or will use panel data in years 2005 and earlier to compare book income and taxable income, I investigate how SFAS 123(R) will impact the relative levels of conservatism across book income and taxable income in later years to increase the applicability of my findings.

Compustat #399, Implied Option Expense ($IOE_{i,t}$), captures the difference between reported net income and pro-forma net income, where pro-forma net income is determined after expensing the fair value of stock option compensation.[25] Thus, $IOE_{i,t}$ measures, in absolute value terms, the post-tax impact of stock option deductions on book income, per SFAS 123.[26] Of the 409 observations in the Condensed GLS Sample, 403 contained non-missing values for $IOE_{i,t}$.

Network Appliance's 2000 earnings due to stock option compensation per APB 25 was $6.223 million. As disclosed in the footnotes to the Company's 10-K, the reduction to Network Appliance's 2000 earnings due to stock option compensation per SFAS 123, had the Company chosen to apply the Standard, would have been $6.223 million.

[24] See Heltzer (2010) for an in-depth discussion and analysis of the impact of SFAS 123(R) on the conservatism levels of financial statement earnings.

[25] Compustat obtains $IOE_{i,t}$ data from footnotes disclosures.

[26] As a result of the mandatory adoption of fair value reporting per SFAS 123(R), certain changes may ensue regarding the usage of stock options as compensation. There may be a shift in the usage of stock options in the post-SFAS 123(R) period, due to the direct impact of such options on earnings. Additionally, firms may have outstanding non-vested stock options granted prior to 1996, which may be excluded from the pro-forma calculations per SFAS 123. Thus, while $IOE_{i,t}$ provides insight into the impact of stock option compensation in the post-SFAS 123(R) period, the actual impact may vary slightly.

I estimated adjusted book income ($ADJ\_BI_{i,t}$) as reported book income less the impact of implied stock option expense. I then compare conservatism levels of $ADJ\_BI_{i,t}$ with those of both $UNADJ\_TI_{i,t}$ and $ADJ\_TI_{i,t}$ in order to gain insight into the impact of SFAS 123(R) on the relative differences in conservatism across earnings forms. Results may be found in Table 6.

TABLE 6
The Impact of SFAS 123(R) on the Differences in Conservatism Measures across Income Forms

This table contains the results from estimating equation (1):

$$INC_{i,t} = \alpha_0 + \alpha_1 DRET_{i,t} + \alpha_2 RET_{i,t} + \alpha_3 DRET_{i,t} * RET_{i,t}$$

	BTDs Determined Using $UNADJ\_TI_{i,t}$		
	$INC_{i,t}$ Proxies		
	$ADJ\_BI_{i,t}$	$UNADJ\_TI_{i,t}$	$UNADJ\_BTD_{i,t}$
$Intercept_{i,t}$	0.0381***	0.0395***	-0.0014
	(6.24)	(10.37)	(-0.33)
$DRET_{i,t}$	0.0060	0.0002	0.0058
	(0.71)	(0.04)	(0.82)
$RET_{i,t}$	-0.0052*	-0.0020	-0.0032**
	(-1.75)	(-0.99)	(-2.20)
$DRET_{i,t} * RET_{i,t}$	0.0412**	0.0313***	0.0099
	(2.11)	(3.23)	(0.57)
No. Obs.	403	403	403
Adj-R^2	1.45%	1.29%	0.61%

	BTDs Determined Using $ADJ\_TI_{i,t}$ $INC_{i,t}$ Proxies		
	$ADJ\_BI_{i,t}$	ADJ_TI_{i}	$ADJ\_BTD_{i,t}$
$Intercept_{i,t}$	0.0381***	0.0289***	0.0093**
	(6.24)	(6.62)	(2.17)
$DRET_{i,t}$	0.0060	0.0022	0.0038
	(0.71)	(0.39)	(0.54)
$RET_{i,t}$	-0.0052*	-0.0050*	-0.0002
	(-1.75)	(-1.93)	(-0.14)
$DRET_{i,t}*RET_{i,t}$	0.0412**	0.0342***	0.0070
	(2.11)	(3.28)	(0.40)
No. Obs.	403	403	403
Adj-R^2	1.45%	2.37%	0.00%

Note:

Where $INC_{i,t}$ is income, $RET_{i,t}$ is the contemporaneous 12-month cumulative stock returns, less the corresponding CRSP equal-weighted market return, and $DRET_{i,t}$ is an indicator variable equal to one when $RET_{i,t}$ is negative, zero otherwise.

Proxies for $INC_{i,t}$ include: adjusted book income ($ADJ\_BI_{i,t}$), unadjusted taxable income ($UNADJ\_TI_{i,t}$), the difference between adjusted book income and unadjusted taxable income ($UNADJ\_BTD_{i,t}$), adjusted taxable income ($ADJ\_TI_{i,t}$), and the difference between adjusted book income and adjusted taxable income ($ADJ\_BTD_{i,t}$).

Values in parenthesis represent t-statistics.

*, **, and *** denote significance at the 10%, 5% and 1% levels, respectively.

Concerning conditional conservatism, similar to my main findings, adjusted book income exhibits greater conditional conservatism than taxable income, regardless of whether taxable income is adjusted to include the impact of stock option deductions (α_3 in the $ADJ\_BI_{i,t}$ regression is greater than α_3 in both the $UNADJ\_TI_{i,t}$ and $ADJ\_TI_{i,t}$ regressions). Also similar to my main findings, this difference is not statistically significant, regardless of which estimate of taxable income is used (α_3 is insignificant in both the $UNADJ\_BTD_{i,t}$ and $ADJ\_BTD_{i,t}$ regressions). Concerning

unconditional conservatism, results are again similar to my main findings. Specifically, there is no statistical difference between the unconditional conservatism of unadjusted book income and unadjusted taxable income, as both α_0 and α_1 in the $UNADJ\_BTD_{i,t}$ regression are insignificant. However, once the impact of stock option deductions is included in calculation of taxable income, taxable income exhibits significantly greater unconditional conservatism than adjusted book income (α_0 in the $ADJ\_BTD_{i,t}$ regression is positive and significant). Thus, it does not appear as if my results concerning the relative differences in conservatism across earnings forms change in the post-SFAS 123(R) period.

6.2. Robustness Checks

In this section I outline a number of different robustness tests, none of which impact my main results. Specifically, throughout the tests outlines below, the inclusion of stock option deductions in the calculation of taxable income leads to (a) no change in the conditional conservatism of taxable income, (b) an increase in the unconditional conservatism of taxable income and (c) a negative relation between economic gains and taxable income.

The first set of robustness tests involves NOLs. It may be the case that stock option deductions contribute, in part, to an increase in a current period NOL. As outlined in Section 4, taxable income is estimated by subtracting an increase in a current period NOL from grossed-up current tax expense. If stock option deductions contribute to an increase in a current period NOL, estimates of adjusted taxable income may be understated, as the impact of stock option deductions will have been included twice. There are 84 firm-years in the Condensed GLS Sample with increases in their current period NOLs. I re-estimate adjusted taxable income by including stock option deductions in the calculation of taxable income only if a firm-year does not have an increase in its current period NOL. My main results are not altered by this adjustment. Additionally, there are 125 firm-years in the Condensed GLS Sample with positive NOL balances. Because of offsetting events, an option deduction can contribute to a current period NOL without leading to an increase in a current period

NOL. Thus, I re-estimate adjusted taxable income by only including stock option deductions in the calculation of taxable income if a firm-year does not have a positive NOL balance. My main results are not altered.

Second, to be consistent with prior and contemporaneous research involving taxable income, I exclude all financial institutions (SIC codes 6000 – 6999) and utilities (SIC codes 4900 – 4999) from the Condensed GLS Sample, as these firms are subject to significantly different income recognition laws. There are 10 firms (30 observations) in the Condensed GSL Sample which are classified as financial institutions. Further, there are seven firms (17 observations) in the Condensed GLS Sample which are classified as utilities. I re-estimate my sample three times including (1) the 30 firm-years relating to financial institutions, (2) the 17 firm-years relating to utilities and (3) the 47 firm-years relating to financial institutions and utilities. My main results are not altered.

Third, consistent with prior and contemporaneous research, I exclude firms which are not incorporated in the United States, as this study involves United States accounting and tax laws. There are six firms (16 observations) in the Condensed GLS Samples not incorporated in the United States. I re-estimate my main results including these observations and my results are not altered.

Finally, I combine the robustness checks above and re-estimate my main results including the 63 firm-years relating to financial institutions, utilities and foreign-incorporated observations. Again, my main results are not altered.

7. CONCLUSIONS

In this paper I examine the impact of stock option deductions on the timelines of taxable income. Contemporaneous studies involving the earnings recognition process of taxable income use Compustat data to estimate taxable income, which does not include the impact of stock option deductions. Because stock option deductions are large, estimates of taxable income used in contemporaneous research are systematically overstated by a significant amount. As noted in Hanlon and Shevlin (2002) this systematic error affects many

analyses. In this paper I include the impact of stock option deductions in my estimates of taxable income, using hand-collected stock option data per Graham et al (2004). Thus, the taxable income estimates contained herein more accurately reflect actual taxable income.

Because stock options are not timed to be exercised in periods of economic loss, I hypothesize that the inclusion of stock option deductions in the calculation of taxable has no impact on the conditional conservatism of taxable income, but instead causes an increase in unconditional conservation of taxable income. The data supports these hypotheses. Additionally, because stock options tend to be exercised in periods of run-ups in stock price, I hypothesize that the inclusion of stock option deductions in the calculation of taxable leads to a negative relation between contemporaneous economic gains and taxable income. Again, the data supports this hypothesis. Taken together, these finding suggest that more accurate estimates of taxable income (those including stock option deductions) do not exhibit timelier loss recognition, which is deemed to be a positive earnings quality, relative to estimates of taxable income from Compustat data (which does not include the impact of stock option deductions). Instead, my finding suggest that the inclusion of stock option deductions in the calculation of taxable income weakens the quality of taxable income (relative to taxable income calculated without the inclusion of stock option deductions), due to the relative increase in unconditional conservatism and negative relation between economic gains and taxable income.

The findings contained herein enhance our understanding of the true earnings recognition process of taxable income. As such, they are of importance to parties who use taxable income as a valuation tool, as my findings suggest that actual taxable income exhibits traits of lower quality earnings, relative to taxable income calculated without adjusting for the impact of stock option deductions. Additionally, my findings may be important to regulators interested in using taxable income as a governance mechanism. My findings suggest that disclosure of taxable income will not aid investors in determining timely loss recognition. My findings also support the notion that a convergence of book income and taxable income (where taxable

income will likely become the dominant earnings form) will lead to a loss of conditional conservatism in earnings, leading to inefficiencies in multiple markets, as conditional conservatism is believed to increase contracting efficiencies and reduce litigation and political costs.

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APPENDIX A
Example of Financial Accounting for Stock Option Deductions

Purpose

To illustrate how Compustat data will lead to a systematic overstatement of taxable income.

Assumptions

- Pre-Tax book income: $100.00
- Tax rate: 35%
- Current tax expense: $100.00*35% = $35.00
- Stock option deduction: $24.00
- Taxable income: $76.00 (it is assumed that there are no differences between pre-tax book income and taxable income other than treatment of stock options deductions)
- Taxes payable/cash payment: $76.00 * 35% = $26.60
- Tax benefit from stock option deductions: $24*35% = $8.40, or $35.00 - $26.60 = $8.40

Journal Entries

Journal Entry 1: Dr. Current Tax Expense $35.00
Cr. Taxes Payable/Cash $35.00

Journal Entry 2: Dr. Taxes Payable/Cash $8.40
Cr. Retained Earnings $8.40

Conclusion

Current tax expense of $35.00 overstates taxes payable/cash payment of $26.60 by $8.40, where $8.40 represents the tax benefit from the stock option deduction. Taxable income estimated solely from Compustat data will be systematically overstated. Specifically, taxable income will be overstated by $24.00, as taxable income will be estimated to be $100.00 ($35.00/35%), while actual taxable income is $76.00.