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NEW EVIDENCE ON THE SUBSTITUTION BETWEEN ACCRUAL EARNINGS MANAGEMENT AND REAL EARNINGS MANAGEMENT IN UNITED STATES FIRMS

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ABSTRACT

This paper provides new evidence on the relation between accumulated accrual earnings management (AEM) and current real earnings management (REM) using new, more intuitive measures. It also investigates the time-series properties of REM and constructs a meaningful measure of accumulated REM to explore the relation between accumulated REM and current AEM. The results show that REM, like AEM, tends to reverse over time, and that while constraints on the ability to use AEM are associated with a shift toward REM, constraints on the ability to use REM are not associated with a shift toward AEM.

JEL: M40, M41

KEYWORDS: Earnings Management, Discretionary Accruals, Real Earnings Management

INTRODUCTION

In this paper, we examine the time-series properties of real earnings management (REM) and introduce new, more intuitive measures of cumulative accrual earnings management (AEM) and cumulative REM in a sample of United States (US) firms. We then use these measures to examine the bi-directional substitution between these two earnings management methods. We find that REM, like AEM, displays a strong pattern of reversal over subsequent periods, and that managers shift toward REM when accumulated AEM is high, but not vice versa. Walker (2013, 446) defines earnings management (EM) as "the use of managerial discretion over (within GAAP) accounting choices, earnings reporting choices, and real economic decisions to influence how underlying economic events are reflected in one or more measures of earnings." Surveys of Chief Financial Officers (CFOs) indicate that EM is more widespread than previously thought (Graham, Harvey, and Rajgopal, 2005, 2006, Dichev, Graham, Harvey, and Rajgopal, 2013, 2016). While EM can be used to boost earnings in a single period, it is not a sustainable strategy over time. The benefits of prior EM tend to reverse over future periods, and firms' ability to manage earnings using any given tool is limited. Earnings can be managed using (among other strategies) accruals or real activities (Schipper, 1989, Healy and Whalen, 1999, Xu, Taylor, and Dugan, 2007, Dechow, Ge, and Schrand, 2010, Walker, 2013). Under accrual-basis accounting, accruals necessarily reverse in future periods (Baber, Kang, and Li, 2011, Dechow, Hutton, Kim, and Sloan, 2012). The same is not true for REM, but REM may reverse over time as well. The three most commonly studied measures of REM (Roychowdhury, 2006) are excessive production of inventory, abnormal cuts to discretionary spending, and reduced abnormal cash flow from operations. While excessive production in one period does not necessarily mechanically reduce the ability to overproduce in the future, it may very well make excessive production less attractive and harder to justify (to boards, investors, and auditors, etc.) in future periods as inventory accumulates. Similarly, managers cannot make cuts to discretionary spending or allow cash flow from operations to decrease *ad infinitum* without negatively affecting firm performance. On the other hand, negative

implications for future firm performance are inherent in the definition of EM. It is unlikely that managers can continue to use REM costlessly, but it is possible that reporting negative earnings, missing analyst expectations, or other motivations for managing earnings are even more costly than continuing to use REM. Managers may be able to "kick the can down the road" indefinitely, and financial statement users may perceive "abnormal" levels of production, discretionary spending, or cash flow from operations as normal for a firm that consistently relies on REM. Thus, whether REM reverses over time remains an empirical question. Reversals of prior EM choices are important because they can influence EM choices in current and future periods. If prior-period discretionary accruals have accumulated and not yet reversed, managers' ability to use AEM in the current period becomes constrained (Baber, Kang, and Li, 2011, Barton and Simko, 2002). When managers reach a cap at which they can no longer use their preferred method of managing earnings (i.e., when accumulated EM of one type is high), they may shift to another form. Prior literature has found that managers shift toward REM when accumulated AEM is high (Ho, Li, and Ouyang, 2012), but it has not examined whether they shift toward AEM when accumulated REM is high. Without an understanding of whether REM should be expected to reverse over time, it is not clear *ex ante* whether a measure of accumulated REM would be meaningful. Thus, we begin by examining the time-series properties of REM and find that all three REM measures display significant patterns of reversal over time.

Next, we proxy for limitations on firms' ability to use AEM and REM in the current period by estimating their cumulative levels over prior periods. Using the modified Jones (1991) model, we estimate a measure of accumulated AEM that is more intuitive and direct than those used in prior research by summing discretionary accruals by firm across the time series for which the firm appears in our sample (excluding the current period). We show that this measure outperforms measures of past AEM from prior literature. To measure REM, we follow Roychowdhury (2006) in estimating abnormal production, discretionary expenses, and cash flow from operations. We then measure accumulated REM by summing these values over time for each firm, excluding the current period. Using our novel measures, we confirm the result from prior literature that accumulated AEM is associated with a shift toward REM in the current period. Our measure of accumulated AEM is associated with REM even when the measure from prior literature is included, indicating that it contains additional information.

We then investigate whether accumulated REM is associated with a shift toward AEM in the current period and find that it is not. Taken together, these findings suggest that managers shift toward REM when necessary, but all else being equal, would prefer to use AEM. Our study contributes to the existing literature in several ways. First, by investigating the time-series properties of REM, we provide insight on whether the ability to manage earnings through REM is unlimited, or if REM behaves analogously to AEM (albeit for different reasons). Second, we introduce a direct measure of cumulative discretionary accruals as a proxy for past AEM activity. This measure offers a more direct and intuitive way to estimate prior AEM activity compared to existing measures in the literature. Our measure does not rely on articulation between the income statement and the balance sheet and, by construction, captures the reversals of prior-period accruals, which prior literature has shown to affect the ability to use AEM. Our empirical design offers a more realistic multi-period model and results in inferences that generalize beyond just "suspicious" (potentially managed) firm-years. Our results reveal that existing measures of AEM constraints are not significantly related to REM activity when our more direct measure is included. Third, we also introduce a direct measure of cumulative REM as a proxy for past REM activity. To our knowledge, we are the first to examine cumulative levels of REM. Fourth, these measures allow us to examine not only the relation between accumulated AEM and current REM, but also the relation between accumulated REM and current AEM. From these relations, we provide evidence on managers' preference for AEM vs. REM by showing that there is no shift toward AEM when accumulated REM is high. The remainder of this study is organized as follows. In the next section, we provide a literature review and develop our research questions. The third section provides details on our sample selection procedures and research design. The fourth section reports the results, while in the fifth section we present the results of our robustness tests. We conclude in section six.

LITERATURE REVIEW AND RESEARCH QUESTIONS

Several definitions of EM exist in the prior literature. A recent definition states that EM is "the use of managerial discretion over (within GAAP) accounting choices, earnings reporting choices, and real economic decisions to influence how underlying economic events are reflected in one or more measures of earnings" (Walker, 2013, 446). In contrast to previous definitions, this definition is deliberately broad and does not presume all EM is bad but rather focuses on "legal accounting and economic choices that do not amount to fraudulent violations of generally accepted accounting principles (GAAP)" (Walker, 2013, 446). Arya, Glover, and Sunder (1998, 2003) show that EM can exist in equilibrium. A number of studies examine the decision to use AEM versus REM and the multitude of factors that can influence this decision (see, for example, Barton and Simko, 2002, Cohen, Dey, and Lys, 2008, Cohen and Zarowin, 2010, Badertscher, 2011, Ho et al., 2012, Zang, 2012, Wongsunwai, 2013, Chan, Chen, Chen, and Yu, 2015, Kothari, Mizik, and Roychowdhury, 2016, Ahmed, Duellman, and Grady, 2018, Cassell, Doucet, Johnson, and Myers, 2019, Cunningham, Johnson, Johnson, and Lisic, 2020).

Prior literature has also noted that the ability to manage earnings using accruals depends not only on the level of AEM in prior periods, but also on the reversal of prior accruals. Baber, Kang, and Li (2011, 1190) show that the ability to manage earnings through accruals is related to the speed at which prior accruals reverse, noting "earnings manipulations can accumulate on the balance sheet, creating a bank of cumulative discretionary accruals that carries forward into future periods and constrains the ability to manage future income when prior discretionary accruals eventually reverse back to the income statement." DeFond and Park (2001) suggest that abnormal accruals are particularly unlikely to be sustained. Beneish (1997) provides evidence that managers use EM to avoid the reversal of prior income-increasing accruals. Barton and Simko (2002, 2) note that "managers' generous assumptions about recognition and measurement in one period reduce their ability to make equally generous assumptions in later periods, if managers want to stay within the guidance provided by accounting regulators and professional groups."

Several prior papers have examined the substitution between AEM and REM. Barton and Simko (2002) use the level of net assets as a proxy for previous AEM activity, as the balance sheet accumulates the effects of prior accounting choices. As such, it becomes inflated as firms manage earnings upward and should reflect the cumulative level of prior-period AEM. This phenomenon is referred to as "bloated balance sheet" by Ho et al. (2012). Barton and Simko (2002) posit that higher levels of cumulative AEM in prior periods limit managers' ability to use AEM to inflate earnings in the future and show that this constraint is associated with less positive or more negative earnings surprises. Following Barton and Simko (2002), Ho et al. (2012) use the beginning balance of net operating assets relative to sales as a proxy for past use of AEM and show that this constraint on AEM is associated with greater use of REM in the current period. Cunningham et al. (2020) report that while total EM (defined as the sum of AEM and REM) is unchanged after the receipt of a Securities and Exchange Commission (SEC) comment letter, managers switch to REM upon coming under greater scrutiny by the SEC, indicating that "higher REM acts as a substitute for lower AEM." Other studies have examined the preference for AEM versus REM. Cohen et al. (2008), Ho et al. (2012), and Kothari et al. (2016) suggest that AEM is less costly than and thus preferred over REM, while Graham et al. (2005, 2006) report that managers prefer REM over AEM but caution that managerial opinions and actions may not coincide. Zang (2012) suggests that managers use AEM only to the extent that they have exhausted their ability to use REM, since AEM can be performed at the end of the period, whereas REM typically occurs throughout the period. Cohen and Zarowin (2010) report that performance after seasoned equity offerings suffers more when managers have used REM than when they have used AEM. In this study, we examine the time-series properties of REM to assess whether there is a logical foundation for examining accumulated REM. We then examine the substitution between AEM and REM in new ways. Using novel, more intuitive measures of cumulative AEM and cumulative REM, we examine the following research questions:

RQ1: Does REM reverse in subsequent periods?
RQ2: Is accumulated AEM associated with REM in the current period?
RQ3: Is accumulated REM associated with AEM in the current period?

DATA AND METHODOLOGY

Accrual Earnings Management (AEM)

While prior papers have used measures of the overstatement of net assets to capture accumulated AEM, we estimate a more straightforward and direct measure that we argue outperforms measures of "bloated balance sheet." As noted by Baber et al. (2011) and Dechow, Hutton, Kim, and Sloan (2012), the structure of double-entry accounting necessarily causes accruals to reverse in future periods. Thus, the ability to use AEM in the current period depends on not only the level of AEM in prior periods, but also the extent to which prior accruals have reversed. Accordingly, we directly examine firms' cumulative level of discretionary accruals, which by construction incorporates the reversals of prior accruals. Our proxy for accumulated AEM is the cumulative total of discretionary accruals over the entire time series for which the firm appears in our sample, excluding the current period. Cumulative discretionary accruals for firm *i* in period *t* are measured as the sum of firm *i*'s discretionary accruals from period *1* to period *t-1*:

$$cum\_da_{it} = \sum_{1}^{t-1} da_i \quad (1)$$

Discretionary accruals are measured based on a modified Jones (1991) model (based on DeFond and Park 1997), estimated at the 2-digit Standard Industrial Classification (SIC) code industry-year level:

$$\frac{TA_{it}}{assets_{it-1}} = \propto_0 + \propto_1 \frac{1}{assets_{it-1}} + \propto_2 \frac{\Delta revenue_{it} - \Delta AR_{it}}{assets_{it-1}} + \propto_3 \frac{PPE_{it}}{assets_{it-1}} + \varepsilon \quad (2)$$

where TA_{it} is total accruals, measured as income before extraordinary items minus operating cash flows; $assets_{it-1}$ is lagged total assets; $\Delta revenue_{it}$ is the change in revenue from period *t-1* to *t;* ΔAR_{it} is the change in accounts receivable from period *t-1* to *t;* and PPE_{it} is gross property, plant, and equipment. Discretionary accruals (da_{it}) are calculated as the difference between the reported value for total accruals and the fitted value of total accruals based on the coefficient estimates from equation (2).

Real Earnings Management (REM)

Our measures of real EM are based on Roychowdhury (2006), which focuses on three potential manipulations of real activities:

Firms may increase production, thereby spreading fixed overhead costs over a larger number of units and reducing the per unit cost. This decreases the cost of goods sold and increases earnings.

Firms may decrease discretionary expenditures such as advertising; research and development; and selling, general, and administrative expenses to increase current earnings.

Firms may temporarily increase sales by offering price discounts or relaxing credit terms. Though this will boost earnings in the current period, it will decrease cash flows.

Following Roychowdhury (2006), we estimate normal levels of production, discretionary expenses, and cash flow from operations and interpret any deviation from these normal levels as evidence of REM. We estimate the following regressions at the (2-digit SIC) industry-year level. Our three measures of REM are the residuals from each equation. For the second and third measures, the residuals are multiplied by negative

one so that in each case, a larger value for the measure can be interpreted as a higher level of REM:

$$production_{it} = \propto_0 + \propto_1 \frac{1}{assets_{it-1}} + \propto_2 \frac{sales_{it}}{assets_{it-1}} + \propto_3 \frac{\Delta sales_{it}}{assets_{it-1}} + \varepsilon \quad (3)$$

where $production_{it}$ is defined as the cost of goods sold plus the change in inventory from period *t-1* to *t,* $assets_{it-1}$ is lagged total assets, $sales_{it}$ is sales revenue, and $\Delta sales_{it}$ is the change in sales revenue from period *t-1* to *t*:

$$discretionary\_expenses_{it} = \propto_0 + \propto_1 \frac{1}{assets_{it-1}} + \propto_2 \frac{sales_{it}}{assets_{it-1}} + \varepsilon \quad (4)$$

where discretionary expenses are comprised of research and development; advertising; and selling, general, and administrative expenses and all other variables are defined as before:

$$CFO_{it} = \propto_0 + \propto_1 \frac{1}{assets_{it-1}} + \propto_2 \frac{sales_{it}}{assets_{it-1}} + \propto_3 \frac{\Delta sales_{it}}{assets_{it-1}} + \varepsilon \quad (5)$$

where CFO_{it} is cash flow from operations and all other variables are defined as before.

We measure the cumulative level of real EM for each firm over the entire time series during which it has appeared in our sample, excluding the current period:

$$cum\_REM_{it} = \sum_1^{t-1} REM_i \quad (6)$$

where REM_i is defined in turn as abnormal operating cash flow, abnormal discretionary expenses, or abnormal production, from equations 3 through 5.

Sample Selection

Our sample includes all US firms in the Compustat annual files from fiscal year 1988, the first year that cash flow statement data became available, through 2017. Following Barton and Simko (2002) and Baber et al. (2011), we exclude utilities and financial services firms (2-digit SIC codes 49, 60-67). To avoid bias introduced by sample attrition, we exclude firms that do not appear in our data in either 2016 or 2017. We examine a sample of potentially managed earnings observations, which we define as small positive earnings realizations, those with net income less than 1.5% of beginning-of-year market value, following Burgstahler and Dichev (1997). Data required for our main tests are available for 12,477 observations for 1,764 unique firms. Our tests of the time-series properties of REM include fewer observations, as a five-year time series is not available for all firms in our main sample. Following prior research, all variables are winsorized at the 1% and 99% levels to mitigate the effect of outliers.

Methodology

Our first test examines whether REM, like AEM, displays a pattern of reversing over subsequent periods (RQ1). We regress each measure of current-period REM in our sample of potentially managed firm-years on its four most recent lags, (indicated by F1. through F4. before the variable name). Our next set of tests examines the relation between accumulated AEM and current REM (RQ2). Following prior literature, we suggest that prior AEM activity reduces a firm's ability to use AEM in the current period. Using our novel measure of accumulated AEM, we investigate whether this reduced ability to use AEM is associated with greater use of REM in the current period. We estimate the following equation in our sample of potentially managed firm-years:

$$REM_{it} = \propto_0 + \propto_1 cum\_da_{it} + \propto_2 controls + \varepsilon \quad (7)$$

where REM_{it} represents, in turn, each of the three Roychowdhury (2006) measures of real EM and cum_da_{it} represents cumulative discretionary accruals (excluding the current period). Controls are adapted from Ho et al. (2012) and include the lagged value of the dependent variable ($L.abn\_prod, L.abn\_disx, or\ L.abn\_cfo$); noa_{it}, the observation's industry-adjusted scaled net operating assets; $bign$, an indicator equal to one if the observation has a Big-N auditor and zero otherwise; $loss$, an indicator equal to one if the firm had negative net income before extraordinary items in each of the past two years and zero otherwise; mkt_share, sales divided by total sales for the firm's 2-digit SIC code industry; $lnassets$, the natural log of lagged total assets; and firm fixed effects. Next, we examine the relation between accumulated REM and current AEM (RQ3). We estimate the following equation in our sample of potentially managed firm-years:

$$AEM_{it} = \propto_0 + \propto_1 cum\_REM_{it} + \propto_2 controls + \varepsilon \quad (8)$$

where AEM_{it} represents accrual EM in period *t*, measured using modified Jones (1991) discretionary accruals; cum_REM_{it} represents the cumulative level of real EM over the time series for which the firm appears in our sample (excluding the current period), measured in turn using each of the three REM measures; and controls are the same as those in equation (7). Taken together, these tests shed light on whether managers shift to REM only when their ability to use AEM is limited (or vice versa) or if the substitution between AEM and REM is bidirectional. If it is bidirectional, this may indicate that managers target a certain level of total EM and choose whichever method is less constrained, with no preference for one method over the other.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 1 presents descriptive statistics. Current-period EM measures are calculated based on residuals and thus are mean-zero at the industry level. As expected, they all have means and medians near zero. Net operating assets (i.e., "bloated balance sheet") are slightly negative on average. About 84 percent of our sample has Big-N auditors, and about 7 percent is made up of consecutive loss firm-years. The average market share is 7.5%. Our sample includes some very large firms, which results in the mean natural log of assets being positive while the median is negative.

Table 1: Descriptive Statistics

Variables	Mean	Std Dev	Median	Minimum	Maximum	Observations
da	0.4444	4.1583	-0.0132	-14.2903	32.8269	12,477
abn_prod	-0.1491	1.6701	-0.0670	-14.5385	4.7419	12,477
abn_disx	0.3772	3.5499	0.1044	-18.2293	15.7431	12,477
abn_cfo	-0.2498	1.4271	-0.0828	-11.1042	7.1735	12,477
cum_da	2.7278	12.1897	-0.2473	-43.4895	52.7634	12,477
cum_ap	-2.1308	9.8761	-1.1683	-26.7161	25.4759	12,477
cum_ds	4.4082	20.6176	0.8609	-43.7514	64.0955	12,477
cum_cfo	-2.5800	-7.1721	-1.1584	-28.1160	24.7441	12,477
noa	-1.5990	-12.7144	-0.1026	-98.5899	48.2311	12,477
bign	0.836	0.370	1.000	0.000	1.000	12,477
loss	0.073	0.261	0.000	0.000	1.000	12,477
mkt_share	0.075	0.133	0.014	0.000	0.591	12,477
da	6.604	2.131	-6.653	1.000	10.407	12,477

Table 1 presents descriptive statistics. See Appendix A for variable definitions.

Time-Series Properties of Real Earnings Management (REM)

The results of regressing each REM measure on its four most recent lags (RQ1) are presented in Table 2. In each specification, current-period REM is significantly negatively correlated with subsequent values of REM. This indicates that, although REM cannot be expected to mechanically reverse the way AEM does, it does in fact seem to reverse over subsequent periods for operational or other reasons. Thus, we answer our first research question (RQ1) in the affirmative. It is possible that persistently high levels of abnormal production or low levels of abnormal discretionary spending and cash flow from operations are unattractive to managers, boards of directors, investors, auditors, etc. and/or negatively impact firm performance. Consistent with the observation from DeFond and Park (2001) that high levels of AEM are unlikely to be sustained over time, we suggest that high levels of REM are also not likely sustainable. As such, this allows us to meaningfully measure limits on the ability to use REM in the current period using accumulated REM.

Table 2: Time-Series Properties of Real Earnings Management

	(1)	(2)	(3)
Variables	***abn_prod***	***abn_disx***	***abn_cfo***
f.abn_prod	-0.0844***		
	(-4.71)		
f2.abn_prod	-0.1207***		
	(-8.67)		
f3.abn_prod	-0.0300**		
	(-2.03)		
f4.abn_prod	-0.0847***		
	(-7.12)		
f.abn_disx		-0.0090	
		(-0.36)	
f2.abn_disx		-0.0836***	
		(-4.93)	
f3.abn_disx		-0.0492***	
		(-3.71)	
f4.abn_disx		-0.1173***	
		(-9.70)	
f.abn_cfo			-0.0878***
			(-4.67)
f2.abn_cfo			-0.0740***
			(-3.89)
f3.abn_cfo			-0.0771***
			(-5.30)
f4.abn_cfo			0.0322
			(1.38)
Constant	-0.2466***	0.4378***	-0.2392***
	(-9.42)	(9.13)	(-13.43)
Observations	6,848	6,848	6,848
Adjusted R-squared	0.2278	0.2732	0.2250
Firm Fixed Effects	Yes	Yes	Yes

*Table 2 examines the relation between current and future values of Real Earnings Management (REM) variables. REM refers to abnormal production in Column (1), abnormal discretionary expenses in Column (2), and abnormal cash flow from operations in Column (3). Robust t-statistics are presented in parentheses. ***, **, and * indicate significance at the one, five, and 10 percent levels, respectively. See Appendix A for variable definitions.*

Accumulated Accrual Earnings Management (AEM)

The results of estimating equation (7) are presented in Table 3. By two of the three measures of REM, current-period REM activity is significantly increasing in accumulated AEM. The coefficients on cumulative discretionary accruals are positive and significant in regressions of abnormal production (0.0098, p<0.01) and abnormal discretionary spending (0.0271, p<0.01), indicating that when the ability to use AEM is limited, managers shift toward REM. Thus, we answer our second research question (RQ2) in the affirmative – accumulated AEM over prior periods is associated with REM in the current period. The coefficient on noa, which measures "bloated balance sheet," is positive and significant, consistent with Ho et al. (2012). This indicates that our measure of accumulated AEM contains additional information beyond "bloated balance sheet." Interestingly, the coefficient on abnormal cash flow from operations is significantly negative. Ho et al. (2012) who show that "bloated balance sheet" (noa) is associated with greater use of REM, do not examine this third REM measure from Roychowdhury (2006). It is not clear why this measure is left out of prior literature or why it behaves differently from the other two REM measures here, but it is possible that accumulated abnormal cash flow from operations is related to accumulated AEM in a different manner than the other REM measures. Big-N auditors are not significantly associated with lesser REM by any of the three measures.

Table 3: Accumulated Accrual Earnings Management and Current Real Earnings Management

	(1)	(2)	(3)
Variables	**abn_prod**	**abn_disx**	**abn_cfo**
cum_da	0.0098***	0.0271***	-0.0129***
	(4.76)	(4.10)	(-4.43)
L.abn_prod	-0.0508***		
	(-4.91)		
L.abn_disx		0.0136	
		(0.74)	
L.abn_cfo			-0.0728***
			(-5.29)
noa	0.0059***	0.0174***	-0.0116***
	(5.76)	(5.31)	(-7.02)
bign	-0.0560	-0.1220	-0.0063
	(-0.68)	(-0.80)	(-0.09)
loss	0.0275	0.0065	0.1712***
	(0.35)	(0.05)	(3.14)
mkt_share	0.6012**	-0.8813	0.9240**
	(1.97)	(-1.04)	(2.30)
lnassets	-0.1541***	0.2743***	-0.1076***
	(-6.58)	(5.60)	(-5.38)
Constant	0.8447***	-1.3171***	0.3839***
	(5.36)	(-3.81)	(2.74)
Observations	12,477	12,477	12,477
Adjusted R-squared	0.1971	0.2873	0.2187
Firm Fixed Effects	Yes	Yes	Yes

*Table 3 presents the results of estimating equation (7), $REM_{it} = \propto_0 + \propto_1 cum\_da_{it} + \propto_2 controls + \varepsilon$. REM_{it} refers to abnormal production in Column (1), abnormal discretionary expenses in Column (2), and abnormal cash flow from operations in Column (3). Robust t-statistics are presented in parentheses. ***, **, and * indicate significance at the one, five, and 10 percent levels, respectively. See Appendix A for variable definitions.*

Accumulated Real Earnings Management (REM)

The results for estimating equation (8) are presented in Table 4. While the results reported in Table 3 provide evidence that limitations on the ability to use AEM are associated with a shift toward REM, the results reported in Table 4 provide only weak evidence that the reverse is true. Coefficients on accumulated REM are negative in two out of three cases and only significantly positive for accumulated discretionary spending. Thus, we answer our third research question (RQ3) in the negative – accumulated REM over prior periods is not associated with AEM in the current period. Consistent with prior literature, discretionary accruals are negatively associated with both their lagged values and "bloated balance sheet."

Table 4: Accumulated Real Earnings Management and Current Accrual Earnings Management

	(1)	(2)	(3)
Variables	***da***	***da***	***da***
cum_ap	-0.0023		
	(-0.32)		
cum_ds		0.0693***	
		(11.43)	
cum_cfo			-0.1022***
			(-8.06)
L.da	-0.0652***	-0.1082***	-0.0688***
	(-7.02)	(-9.78)	(-7.51)
noa	-0.0067*	-0.0061*	-0.0055
	(-1.79)	(-1.74)	(-1.50)
bign	-0.1760	0.1000	-0.0693
	(-0.84)	(0.49)	(-0.33)
loss	0.3320*	0.3615**	0.3352*
	(1.79)	(2.05)	(1.81)
mkt_share	2.5976*	3.6815**	2.6216*
	(1.73)	(2.57)	(1.78)
lnassets	0.4028***	0.0168	0.1935***
	(6.60)	(0.28)	(2.92)
Constant	-2.2756***	-0.3214	-1.2396***
	(-5.37)	(-0.77)	(-2.81)
Observations	12,477	12,477	12,477
Adjusted R-squared	0.1702	0.2088	0.1776
Firm Fixed Effects	Yes	Yes	Yes

Table 4 presents the results of estimating equation (8), $AEM_{it} = \propto_0 + \propto_1 cum\_REM_{it} + \propto_2 controls + \varepsilon$. *Robust t-statistics are presented in parentheses. ***, **, and * indicate significance at the one, five, and 10 percent levels, respectively. See Appendix A for variable definitions.*

Taken together, the results of Tables 3 and 4 indicate that a constrained ability to use AEM is associated with increased REM activity, but a constrained ability to use REM is *not* strongly associated with increased AEM activity. This suggests that all else being equal, managers prefer AEM, since their EM choices appear unchanged when the ability to use REM is limited.

Robustness Tests

Our results are robust to several different ways of specifying our tests and constructing our sample. We examine a sample of potentially managed earnings observations, which we define as small positive earnings realizations, those with net income less than 1.5% of beginning-of-year market value, following Burgstahler and Dichev (1997). Our results are qualitatively unchanged if we define these potentially managed earnings observations using other intervals or scaling variables. Our results are also robust to expanding our sample beyond potentially managed earnings observations – we remove the sample selection requirement that earnings scaled by beginning-of-year market value equal less than 1.5% of beginning-of-year market value and reexamine our main tests using this expanded sample for the period 1988-2017. Untabulated results indicate that interestingly, the relation between accumulated AEM and current-period REM persists even in observations that are not suspected of having been managed. Chen, Hribar, and Melessa (2018) point out that using residuals as dependent variables can lead to incorrect inferences. Following one of their suggested solutions, we include all first stage regressors in the second-stage regressions and reexamine our main tests. Untabulated results show that our inferences remain qualitatively unchanged. Lastly, in additional untabulated results, we find that our inferences are qualitatively unchanged when we accumulate our EM variables over only the past five or 10 years rather than the entire time series of the firm. This provides some assurance that firm age does not influence our inferences.

CONCLUSION

EM in any form cannot be used to inflate earnings in perpetuity. This paper investigates the substitution between EM methods using a data set of United States firms from 1988 to 2017. Using novel measures of EM constraints, we show that limitations on firms' ability to use AEM are associated with a shift toward REM, but limitations on firms' ability to use REM are *not* associated with a shift toward AEM. Together, these findings suggest that although managers will shift toward REM when necessary, they would prefer to use AEM. Our results contribute to the existing literature by providing evidence on managers' preference across types of EM and highlight the need for investors to monitor for evidence of AEM. While AEM and REM are the most well-studied EM methods, other methods exist. In addition, it is not clear whether our results generalize to international settings, where different regulatory environments may shape the preference for various EM methods. Future research could examine the substitution between EM methods beyond AEM and REM and in various geographical and regulatory settings.

APPENDIX A

Appendix A: Variable Definitions

Variable	Definition
da	discretionary accruals, estimated from a modified Jones (1991) model
abn_prod	abnormal production, estimated following Roychowdhury (2006)
abn_disx	abnormal discretionary expenses, estimated following Roychowdhury (2006)
abn_cfo	abnormal cash flow from operations, estimated following Roychowdhury (2006)
$l.abn\_prod$	the lagged value of abn_prod
$l.abn\_disx$	the lagged value of abn_disx
$l.abn\_cfo$	the lagged value of abn_cfo
$f.abn\_prod$	the leading value of abn_prod. $F2.abn\_prod$ represents the second leading value of abn_prod, $f3.abn\_prod$ represents the third leading value of abn_prod, and so on.
$f.abn\_disx$	the leading value of abn_disx. $F2.abn\_disx$ represents the second leading value of abn_prod, $f3.abn\_disx$ represents the third leading value of abn_disx, and so on.
$f.abn\_cfo$	the leading value of abn_cfo. $F2.abn\_cfo$ represents the second leading value of abn_cfo, $f3.abn\_cfo$ represents the third leading value of abn_cfo, and so on.
cum_da	modified Jones-model discretionary accruals, summed over the time-series for each firm, excluding the current period
cum_ap	abnormal production, summed over the time-series for each firm excluding the current period
cum_ds	abnormal discretionary expenses, summed over the time-series for each firm excluding the current period
cum_cfo	abnormal cash flow from operations, summed over the time-series for each firm excluding the current period
noa	industry-adjusted scaled net operating assets
$bign$	an indicator equal to one if the observation has a Big-N auditor and zero otherwise
$loss$	an indicator equal to one if the firm had negative net income before extraordinary items in each of the past two years and zero otherwise
mkt_share	sales divided by total sales for the firm's 2-digit SIC industry
$lnassets$	the natural log of lagged total assets
asset	lagged total assets
sale	sales revenue scaled by lagged total assets
dsale	change in sales revenue from year *t-1* to year *t* scaled by assets in year *t-1*
drev_dar	change in sales revenue from year *t-1* to year t minus the change in accounts receivable from year *t-1* to year *t*, scaled by assets in year *t-1*
ppe	gross property, plant, and equipment scaled by lagged total assets

REFERENCES

Ahmed, A. S., S. Duellman, and M. Grady (2018) "Corporate Lobbying, Political Protection, and Earnings Management," Working Paper, Texas A&M University and Saint Louis University. Available at https://ssrn.com/abstract=3219428

Arya, A., J. Glover, and S. Sunder (1998) "Earnings Management and the Revelation Principle," *Review of Accounting Studies* vol. 3(1-2), p. 7-34. https://doi.org/10.1023/A:1009631714430

Arya, A., J. Glover, and S. Sunder (2003) "Are Unmanaged Earnings Always Better for Shareholders?" *Accounting Horizons* vol. 17(Supplement), p. 111-116

Baber, W. R., S. Kang, and Y. Li. (2011) "Modeling Discretionary Accrual Reversal and the Balance Sheet as an Earnings Management Constraint," *The Accounting Review* vol. 86(4), p. 1189-1212. https://doi.org/10.2308/accr-10037

Badertscher, B. A. (2011) "Overvaluation and the Choice of Alternative Earnings Management

Mechanisms," *The Accounting Review* vol. 86(5), p. 1491-1518. https://doi.org/10.2308/accr-10092

Barton, J., and P.J. Simko (2002) "The Balance Sheet as an Earnings Management Constraint," *The Accounting Review* vol. 77(s-1), p. 1-27. https://doi.org/10.2308/accr.2002.77.s-1.1

Beneish, M. D. (1997) "Detecting GAAP violation: Implications for Assessing Earnings Management among Firms with Extreme Financial Performance," *Journal of Accounting and Public Policy* vol. 16 (3), p. 271-309. https://doi-org/10.1016/S0278-4254(97)00023-9

Burgstahler, D., and I. Dichev (1997) "Earnings Management to Avoid Earnings Decreases and Losses," *Journal of accounting and economics* vol. 24(1), p. 99-126. https://doi.org/10.1016/S0165-4101(97)00017-7

Cassell, C. A., A. J. Doucet, E. S. Johnson, and L. A. Myers (2019) "Chief Operating Officers and Real Earnings Management," Working Paper, University of Arkansas, University of Tennessee, Knoxville, and Virginia Polytechnic Institute and State University (Virginia Tech). Available at: https://ssrn.com/abstract=3234015

Chan, L. H., K. C. W. Chen, T. Y. Chen, and Y. Yu (2015) "Substitution between Real and Accruals-Based Earnings Management after Voluntary Adoption of Compensation Clawback Provisions," *The Accounting Review* vol. 90(1), p. 147–174. https://doi.org/10.2308/accr-50862

Chen, W., P. Hribar, and S. Melessa (2018) "Incorrect Inferences when Using Residuals as Dependent Variables," *Journal of Accounting Research* vol. 56 (3), p. 751-796. https://doi.org/10.1111/1475-679X.12195

Cohen, D. A., A. Dey, and T. Z. Lys (2008) "Real and Accrual-Based Earnings Management in the pre- and post-Sarbanes-Oxley Periods," *The Accounting Review* vol. 83 (3), p. 757–787. https://doi.org/10.2308/accr.2008.83.3.757

Cohen, D. A., and P. Zarowin (2010) "Accrual-Based and Real Earnings Management Activities around Seasoned Equity Offerings," *Journal of Accounting and Economics* vol. 50 (1), p. 2-19. https://doi.org/10.1016/j.jacceco.2010.01.002

Cunningham, L. M., B. A. Johnson, E. S. Johnson, and L. L. Lisic (2020) "The Switch-Up: An Examination of Changes in Earnings Management after Receiving SEC Comment Letters," *Contemporary Accounting Research* vol. 37(2), p. 917-944. https://doi.org/10.1111/1911-3846.12546

Dechow, P., W. Ge, and K. Schrand (2010) "Understanding Earnings Quality: A Review of the Proxies, their Determinants and their Consequences," *Journal of Accounting and Economics* vol. 50(2-3), p. 344-401. https://doi.org/10.1016/j.jacceco.2010.09.001

Dechow, P. M., A. P. Hutton, J. H. Kim, and R. G. Sloan (2012) "Detecting Earnings Management: A New Approach," *Journal of Accounting Research* vol. 50(2), p. 275-334. https://doi.org/10.1111/j.1475-679X.2012.00449.x

DeFond, M. L., and C. W. Park (1997) "Smoothing Income in Anticipation of Future Earnings," *Journal of Accounting and Economics* vol. 23 (2), p. 115-139. https://doi.org/10.1016/S0165-4101(97)00004-9

DeFond, M. L., and C. W. Park (2001) "The Reversal of Abnormal Accruals and the Market Valuation of Earnings Surprises," *The Accounting Review* vol. 76(2), p. 375-404.

https://doi.org/10.2308/accr.2001.76.3.375

Dichev, I. D., J. R. Graham, C. R. Harvey, and S. Rajgopal (2013) "Earnings Quality: Evidence from the Field," *Journal of Accounting and Economics* vol. 56(2–3), p. 1-33. https://doi.org/10.1016/j.jacceco.2013.05.004

Dichev, I. D., J. R. Graham, C. R. Harvey, and S. Rajgopal (2016) "The Misrepresentation of Earnings," *Financial Analysts Journal* vol. 72(1), p. 22-35. https://doi.org/10.2469/faj.v72.n1.4

Graham, J. R., C. Harvey, and S. Rajgopal (2005) "The Economic Implications of Corporate Financial Reporting," *Journal of Accounting and Economics* vol. 40(1–3), p. 3-73. https://doi.org/10.1016/j.jacceco.2005.01.002

Graham, J. R., C. R. Harvey, and S. Rajgopal (2006) "Value Destruction and Financial Reporting Decisions," *Financial Analysts Journal* vol. 62(6), p. 27-39. https://doi.org/10.2469/faj.v62.n6.4351

Healy, P. M., and J. M. Wahlen (1999) "A Review of the Earnings Management Literature and its Implications for Standard Setting," *Accounting Horizons* vol. 13(4), p. 365–383. https://doi.org/10.2308/acch.1999.13.4.365

Ho, J. L., C. Liu, and B. Ouyang (2012) "Bloated Balance Sheet, Earnings Management, and Forecast Guidance," *Review of Accounting and Finance* vol. 11(2), p. 120-140. https://doi.org/10.1108/14757701211228183

Jones, J. (1991) "Earnings Management during Import Relief Investigations," *Journal of Accounting Research* vol. 29(2), p. 193-228. https://doi.org/10.2307/2491047

Kothari, S. P., N. Mizik, and S. Roychowdhury (2016) "Managing for the Moment: The Role of Earnings Management via Real Activities versus Accruals in SEO Valuation," *The Accounting Review vol.* 91(2), p. 559-586. https://doi.org/10.2308/accr-51153

Roychowdhury, S. (2006) "Earnings Management through Real Activities Manipulation," *Journal of Accounting and Economics* vol. 42(3), p. 335-370. https://doi.org/10.1016/j.jacceco.2006.01.002

Schipper, K. (1989) "Commentary on Earnings Management," *Accounting Horizons* vol. 3(4), p. 91-102.

Xu, R. Z., G. K. Taylor, and M. T. Dugan. 2007. Review of real earnings management literature. *Journal of Accounting Literature* 26: 195-228

Walker, M. (2013) "How Far Can We Trust Earnings Numbers? What Research Tells Us about Earnings Management," *Accounting and Business Research* vol. 43(4), p. 445-481. https://doi.org/10.1080/00014788.2013.785823

Wongsunwai, W. (2013) "The Effect of External Monitoring on Accrual-Based and Real Earnings Management: Evidence from Venture-Backed Initial Public Offerings," *Contemporary Accounting Research* vol. 30(1), p. 296–324. https://doi.org/10.1111/j.1911-3846.2011.01155.x

Zang, A. Y. (2012) "Evidence on the Trade-off between Real Activities Manipulation and Accrual-Based Earnings Management," *The Accounting Review* vol. 87(2), p. 675-703. https://doi.org/10.2308/accr-10196

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STATEMENT ON AUDITING STANDARDS 145: WAS STAKEHOLDER FEEDBACK INCORPORATED IN THE FINAL STANDARD?

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ABSTRACT

Understanding the entity's environment and assessing the risk of material misstatement are fundamental components of the audit planning process that have been found deficient by regulators, peer reviews, and research studies. In 2020, the Auditing Standards Board of the American Institute of Certified Public Accountants issued an exposure draft of a Statement on Auditing Standards to clarify and enhance the requirements for auditors to understand an entity's system of internal controls and determine the risk of material misstatement. In addition, the proposal modernized the existing audit requirements regarding information technology use and addressing risks arising from such use. This paper analyzes the comment letters submitted to the Auditing Standards Board to assess the degree of stakeholder agreement with the proposed requirements. Next, the language of the exposure draft is compared to the text of the final standard to determine the degree of standard setters' responsiveness to the feedback they received during the standard-setting process. The analyses suggest general acceptance by respondents, with requests that additional clarifications be provided. The final text of the standard indicates that the standard setters agreed with respondent suggestions. While the final SAS is well received and achieves its aims, further clarification and guidance will be needed for its efficient and effective implementation.

JEL: M42

KEYWORDS: SAS No. 145, AICPA, Entity Environment, Risk Assessment, Material Misstatement, Audit Standards

INTRODUCTION

The auditor's responsibility for gaining an understanding of an entity's business environment (UEE) and assessing the risks of material misstatement (ARMM) forms the foundation of the audit planning process, drives the selection of audit procedures to be performed, and dictates the necessary evidence needed to support the audit opinion (AICPA, 2020). In recent decades, rapid advancements in information technology (IT) have resulted in an increase of the complexity of business environments as IT has become the infrastructure for corporate governance, entity risk management, and legal and regulatory compliance. Underlying the need to understand the IT environment and its risks is the fact that IT has become the primary medium through which audit evidence is gathered during engagements (AICPA, 2020). In addition to the growing complexities of UEE, the role of risk assessment has been highlighted as an area of audit deficiency, especially with regards to understanding and assessing inherent risks of material misstatement (AICPA, 2020). Miller, Cipriano, and Ramsay (2012) noted that there were wide variations between the requirements of the current standards and actual practice when determining inherent risk. They indicated that while standards require inherent risk to be assessed if controls are not present, practicing auditors generally assess inherent risk assuming an underlying baseline bias of expected IT control efficiency.

Authors suggested that such practices undermine audit efficiency and recommended that standards be updated to better emphasize and clarify the separation of inherent risk from control risk in the ARMM.

In an effort to target these perceived deficiencies in auditors' UEE and ARMM resulting from advances in and use of IT, on August 27, 2020, the Auditing Standards Board (ASB) of the American Institute of Certified Public Accountants (AICPA) announced a proposed standard in a news release on its website, encouraging interested parties to respond to the exposure draft by November 25, 2020, thereby soliciting input from all stakeholders, including public, private, and governmental organizations. The proposed standard aimed to revise the existing standards to clarify and enhance the audit requirements for gaining an understanding of the audit client's system of internal controls and determining the risk of material misstatement. In addition, the proposal included requirements for gaining an understanding of a business entity's use of IT as well as risks associated with the use of IT. Finally, the proposal sought to align the requirements for understanding internal controls with the framework developed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

The exposure draft provided supporting documents and other materials clarifying why an understanding of the entity's control environment was required, the procedures for obtaining an understanding of each component of the internal control framework, and the methods for determining when controls were relevant to the audit. In targeting the deficiencies in risk assessment, the ASB added specific requirements for assessing inherent risk and control risk separately from each other in relation to all risks of material misstatement, with an emphasis on assigning a maximum control risk level when assessing inherent risk of material misstatement. In addition, the ASB introduced requirements for gaining an understanding of additional inherent risks that arise from the auditor's reliance on IT in assessing control risk for controls that utilize automation or other IT applications.

Following the review of the literature, this paper first examines the comment letters submitted in response to the exposure draft issued by the ASB. The ASB posed 11 questions about how individual auditors, auditing firms, financial statement users, and other stakeholders viewed the contents of the proposal. Next, the paper provides insight into the due process of standard setting by analyzing how the comment letters impacted the final standard (AICPA, 2021) as compared to what was originally proposed. While there was general agreement with the proposed requirements, respondents offered several suggestions for further clarifications and enhancements that the ASB took into consideration in issuing the *Statement on Auditing Standards No. 145* (SAS 145, AICPA, 2021). In addition, the paper proposes a path forward, where the need for additional training and education is addressed related to the new requirements involving risks associated with the use of IT by both auditors and auditees and understanding the role IT plays in an entity's control environment. Finally, potential implementation concerns are discussed that result from the extensive amendments made to other sections of generally accepted auditing standards (GAAS), as the new standard becomes effective for audits conducted on or after December 15, 2023.

BACKGROUND & LITERATURE REVIEW

Recent studies indicate that increases in IT investment have a marked effect on generating higher audit risk for external auditors (Han, Rezaee, Xue, & Zhang, 2016) and suggest a heightened need for auditors to develop a deeper understanding of an audit client's use of IT. In particular, auditors must examine the control activities that incorporate IT functions and additional risks that may arise from the use of IT. Finally, auditors must decide how to assess these inherent risks and the efficacy of the controls implemented to mitigate IT risks (Dzuranin & Mălăescu, 2016; Cangemi, 2016; Omoteso, Patel, & Scott, 2010; Schroeder & Singleton, 2010; and Sexton & Rudman, 2019). While auditors must obtain an understanding of the internal controls of an entity to plan appropriately for the audit, they must also document their understanding of internal controls and their assessment of the risks of using IT (Piercey, 2011; Sexton & Rudman, 2019; Weidenmier & Ramamoorti, 2006). Internal controls are designed by the board of directors and members

of management to provide reasonable assurance that financial information is reliable and mitigates the risks of financial misstatement and fraud (Brasel, Hatfield, Nickell, and Parsons, 2019; Carpenter, 2007). Additionally, internal controls provide reasonable assurance regarding the achievement of the objectives set by management, the effectiveness and efficiency of operations, and compliance with all applicable laws and regulations. To understand the client's environment of internal controls, an auditor must: 1) identify the types of possible misstatements; 2) consider the factors that affect the risks of material misstatements; 3) design tests of controls; and 4) design substantive procedures that address identified risks. In addition, the entity must have in place adequate and effective internal controls for business functions such as acquisition, payment cycle, and inventory control systems to reduce workplace fraud (Munoko, Brown-Liburd, and Vasarhelyi, 2020).

Internal Control Framework – Components of a System of Internal Controls

One of the goals of the proposed SAS was to align the requirements of the proposed standard with the COSO Framework (Framework) in guiding how auditors gain an understanding of and assess an entity's internal controls. The Framework describes five components of internal control that management designs and implements to provide reasonable assurance that its control objectives will be met (Janvrin et al., 2012). These components include: 1) control environment; 2) risk assessment; 3) control activities; 4) information and communication; and 5) monitoring. Each component contains many controls, but auditors concentrate on those designed to prevent or detect material misstatements in the financial statements. According to Janvrin et al. (2012), the Framework includes seventeen broad principles that provide more guidance to support each component and apply across all entities and to each internal control objective of reporting, operations, and compliance. All of the seventeen principles must be present and functioning for internal controls to be effective. The control environment serves as the umbrella for the other four components. The other four components are unlikely to result in effective internal control without an effective control environment, regardless of their quality. Thus, the essence of an effectively controlled organization lies in the attitude of its board of directors and senior management. If top management believes that internal control is important, others in the organization will sense this commitment and respond by implementing and properly carrying out the established controls.

The proposed standard (AICPA, 2020) required that auditors consider the following important control subcomponents to understand and assess the control environment: 1) integrity and ethical values of management, policy statements and codes of conduct; 2) board of directors or audit committee participation in the scrutiny of management's conduct and outcomes; 3) organizational structure and implementation of controls; 4) competence and trustworthiness of employees in general, and in particular of those who implement the primary controls; and 5) the accountability of management and the board of directors to stakeholders. In addition, the final standard (AICPA, 2021) requires that auditors identify and analyze risks that may prevent the organization from achieving its objectives, as follows: 1) identify and assess the risks relating to those entity's objectives; 2) determine how the risks should be managed; 3) consider the potential for fraudulent behavior; 4) monitor changes that could impact internal controls; and 5) identify specific risks related to information technology and financial records. Han, Rezaee, Xue, and Zhang (2016) provide examples of a company that frequently sells products below inventory cost because of rapid technology changes. In such a case, the company must incorporate adequate controls to address the risk of overstating inventory. While management assesses risks as a part of designing and operating internal controls to minimize errors and fraud, auditors assess risks to determine the nature, timing, and extent of audit procedures needed to be performed (Curtis, Jenkins, Bedard, & Deis, 2009). If management effectively assesses and responds to threats, the auditor can conduct a less rigorous audit than when management fails to identify or respond to significant risks. If the auditor is assured that controls will help ensure that necessary actions are taken to address risks to achieve the entity's objectives, the extent of substantive audit procedures will be reduced (Morrill, Morrill, & Kopp, 2012). Consequently, an auditor must identify control activities that: 1) mitigate risks to an acceptable level (e.g., adequate separation of duties and proper

authorization of transactions and activities); 2) establish general controls over technology (e.g., design, implementation, and use of IT); and 3) establish appropriate policies, procedures, and expectations (e.g., adequate documents and records). Thus, the auditor must be assured that the accounting system satisfies all transaction-related management assertions identified for each class of transaction (Eaton, Grenier, & Layman, 2019). In the assessment of risks, auditors must first consider inherent risk. This risk reflects the susceptibility of an assertion concerning an item of financial information to a misstatement that could be material before the consideration of any related controls. Importantly, inherent risk is to be assessed *before* consideration of any related internal controls, meaning that the auditor is to assume that no controls exist. A significant risk of material misstatement exists if the inherent risk is assessed at the high end of the spectrum of inherent risk (DiLeo, 2022). The final standard does not define the spectrum of inherent risk which was a great concern to stakeholders.

Overall, the revision of UEE and ARMM standards arose from the AICPA's Enhanced Audit Quality Initiative, which recognized deficiencies in auditor risk assessment with regards to the requirement of obtaining an understanding of the client's internal controls and factors of inherent risk of material misstatement (AICPA, 2020). Both the ASB exposure draft (AICPA, 2020) and the final standard SAS No. 145 (AICPA, 2021) addressed the perceived need to revise the existing standards to clarify and enhance the audit requirements for gaining an understanding of the audit client's system of internal controls and ARMM. In addition, both documents included requirements for gaining an understanding of a business entity's use of IT as well as risks associated with the use of IT. Furthermore, the ASB sought to align the requirements for understanding internal controls with COSO's internal control framework. When it becomes effective, *SAS No. 145: Understanding the Entity and Its Environment and Assessing the Risks of Material Misstatement* will supersede *SAS No. 122: Clarification and Recodification* and become the new section 315 of GAAS (AICPA, 2021).

DATA AND METHODOLOGY

The ASB requested standard user feedback by posing 11 questions within the exposure draft, with question 2 being divided into three sub-questions. These questions (presented verbatim in Table 1) focus on stakeholder perception of the clarity of requirements within the proposed standard and whether the updated definitions and application materials enhance the auditor's ability to assess an entity's control environment and inherent risk of material misstatement. The ASB requested that stakeholders submit their comments and feedback on the exposure draft by November 25, 2020. The ASB received a total of 33 comment letters in response to the exposure draft. Of the 33 comment letters submitted, 29 were useable for this study. The remaining four comment letters were excluded from our sample, as they did not follow the format requested by the ASB and therefore could not be accurately categorized. Respondents within the sample included 10 professional organizations, 11 accounting firms (including all Big 4 firms), 6 governmental organizations/state auditors, and 2 academics/other.

In quantifying stakeholder responses, answers to the questions in Table 1 for each respondent were categorized by level of agreement. For questions one through six, and nine through eleven, these categories included: 1) those agreeing with the question (*Agree*); 2) those partially or conditionally agreeing with the question given certain revisions be made prior to the final standard being issued (*Partially Agree*); and 3) those disagreeing with the changes to requirements or application material described in the question (*Disagree*). For questions seven and eight, which specifically focus on stakeholder views regarding the clarity of specific proposed requirements, levels of agreement were classified as: 1) those who viewed the requirements as sufficiently clear (*Sufficiently Clear*); 2) those who viewed the requirements as understandable but in need of some improvement or additional guidance to be sufficiently clear (*Needs Improvement*); and 3) those who viewed the language of the proposed SAS requirements and supporting material as being unclear and needing extensive revisions to language and supporting materials (*Unclear*). In cases where a stakeholder skipped or elected to refrain from answering a particular question, a category

of N/A was used. Stakeholder responses to the AICPA's exposure draft requests for comment are described and summarized by question in the next section.

Table 1: ASB Request for Comment Questions

Question 1	Are the requirements and application material of the proposed SAS sufficiently scalable, that is, is the proposed SAS capable of being applied to the audits of entities with a wide range of sizes, complexities, and circumstances?
Question 2	Do the Proposals made relating to the auditor's understanding of the entity's system of internal control assist with understanding the nature and extent of the work effort required and the relationship of the work effort to the identification and assessment of the risk of material misstatement? Specifically:
a	Have the requirements related to the auditor's understanding of each component of the entity's system of internal control been appropriately enhanced and clarified? Is it clear why the understanding is obtained and how this informs the risk identification and assessment process?
b	Have the requirements related to the auditor's identification of controls that address the risk of material misstatement been appropriately enhanced and clarified? Is it clear how the controls that addressed the risks of material misstatement are identified, particularly for audits of smaller and less complex entities?
c	Given that COSO's 2013 *Internal Control – Integrated Framework* (COSO framework) is often used by entities subject to the AICPA's generally accepted auditing standards, is the terminology in paragraphs 21 – 27 and related application materials of the proposed SAS clear and capable of consistent interpretation for audits of entities that use the COSO framework?
Question 3	Are the enhanced requirements and application materials related to the auditor's understanding of the IT environment, the identification of the risks arising from the entity's use of IT, and the identification of general IT controls clear to support the auditor's consideration of the effects of the entity's use of IT on the identification and assessment of the risks of material misstatement?
Question 4	Do you support the introduction in the proposed SAS of the new concepts and related definitions of significant classes of transactions, account balances, and disclosures, and their relevant assertions? Is there sufficient guidance to explain how they are determined (that is, that an assertion is relevant when there is a reasonable possibility of occurrence of a misstatement that is material with respect to that assertion), and how they assist the auditor in identifying where risks of material misstatement exist?
Question 5	Do you support the introduction of the spectrum of inherent risk into the proposed SAS?
Question 6	Do you support the separate assessment of inherent and control risk in relation to all risks of material misstatement at the assertion level?
Question 7	What are your views regarding the clarity of the requirement to assess the control risk, in particular, when the auditor does not plan to test the operating effectiveness of controls?
Question 8	What are your views regarding the clarity of the requirement in paragraph 26d of the proposed SAS to evaluate design and determine implementation of certain control activities (including, specifically, the requirement related to control over journal entries)?
Question 9	Do you support the revised definition, and related material, on the determination of significant risk? What are your views on the matters previously presented related to how significant risks are determined based on the spectrum of inherent risk?
Question 10	What are your views about the proposed stand-back requirement in paragraph 36 of the proposed SAS and the conforming amendments proposed to paragraph .18 of AU-C section 330?
Question 11	What are your views with respect to the clarity and appropriateness of the documentation requirements?

Table 1 exhibits a verbatim reproduction of the questions asked to stakeholders for feedback on the AICPA exposure draft 'Proposed Statement on Auditing Standards: Understanding the Entity and Its Environment and Assessing the Risk of Material Misstatement' (AICPA, 2020).

Impact of Stakeholder Comments on the Final Standard Issued

The exposure draft (AICPA, 2020) is compared and contrasted to the final standard issued by the AICPA (2021) and the analysis of the extent of stakeholder agreement with the proposed standard is used to determine the responsiveness of the standard-setting process to stakeholder input. The recommendations for revisions made in the comment letters are analyzed to see if the ASB amended the exposure draft to include stakeholder suggestions in the final standard issued. The aim is to understand the efficacy of constituent comments in shaping the standards that govern UEE and ARMM and describe the degree of general acceptance of *SAS 145*. General acceptance leads to high-quality audits which promote efficient financial markets by providing market participants the confidence they need to make informed decisions.

RESULTS

The exposure draft is subdivided into two key parts: 1) obtaining an understanding of the entity's control environment, and 2) identifying and assessing the risk of material misstatement. Questions and stakeholder responses have been sorted into these two categories along with a third category for questions that asked for stakeholder opinion regarding aspects of the entirety of the proposed standard. Each question is discussed below, alongside comparisons between the proposal (AICPA, 2020) and the final standard (AICPA, 2021) that highlight any modifications the ASB made in response to stakeholder comments and recommendations. Tables 2 and 3 present tabulations of stakeholder responses to exposure draft questions by stakeholder entity type (Professional Organization, Accounting Firm, Governmental Auditor, or Academic/Other) and by level of agreement for questions 1 through 6 and 9 through 11 (Agree, Partially Agree, or Disagree) and by perceived clarity for questions 7 and 8 (Sufficiently Clear, Needs Improvement, or Unclear). Questions which respondents did not answer are reflected in the N/A column of the respective tables.

Overall Acceptance of Proposed SAS

Of the 29 comment letters analyzed, only one – a governmental/state auditor – answered favorably (agree or sufficiently clear) to all posed questions. The remaining respondent answers varied across the questions. Tables 2 and 3 indicate that respondents had an overall favorable perception of the proposal, with all questions receiving more than 50% agreement from respondents. Questions 2c and 6 received the most favorable responses, while Questions 2b and 7 received the least favorable responses. This result held true regardless of respondent type. In aggregating respondent answers, the overall perception of clarity and the rate of agreement with all questions was approximately 67%. In discussing the entirety of the proposal, respondents were quick to point out that the length of the exposure draft - 38 requirement paragraphs, 263 application material paragraphs, and 7 appendices – increased the complexity and inhibited understanding. In their attempt to enhance and clarify all aspects of gaining an understanding of an entity's control environment, system of internal controls, and assessing risk of material misstatement arising from inherent risk, significant risks, and risks arising from the use of IT, the ASB drafted a standard that stakeholders viewed as overwhelming, unwieldly, and difficult to navigate. Several respondents expressed concerns that to appropriately apply the proposal would be cost prohibitive and time consuming for smaller firms and for audits of smaller or less complex entities. In looking at the individual parts of the proposed SAS, respondent consensus suggests agreement with adoption of new terms and enhanced definitions. At the same time, respondents gave mixed support when questioned on the clarity in the application materials, specifically with regards to minimum procedures and documentation needed to meet proposed requirements. Stakeholder perceptions of these individual parts are presented in Tables 2 and 3 and are further discussed below.

Obtaining an Understanding of the Entity's Control Environment

The first half of the requirements proposed within the exposure draft focused on enhancing and clarifying the auditor's responsibility to gain an understanding of the audit entity and its system of internal controls. With this goal in mind, question 2 and its subparts focused on asking respondents if the: a) requirements for understanding the components of an entity's system of internal controls had been appropriately enhanced and clarified; b) requirements for identifying controls addressing risk of material misstatement had been appropriately enhanced and clarified; and c) the proposal language is consistent and applicable for audits of entities that use the COSO framework.

Table 2 Stakeholder Response to AICPA Exposure Draft Questions - Level of Agreement

Question	Agree					Partially Agree					Disagree					N/A				
	P	F	G	A	T	P	F	G	A	T	P	F	G	A	T	P	F	G	A	T
	8	5	6	2		1	5	0	0		1	1	0	0		0	0	0	0	
Question 1					21 (72%)					6 (21%)					2 (7%)					0 (0%)
Question 2a	6	7	4	2	19 (66%)	3	3	1	0	7 (24%)	0	1	0	0	1 (3%)	1	0	1	0	2 (7%)
Question 2b	4	5	4	2	15 (52%)	3	3	0	0	6 (21%)	2	3	1	0	6 (21%)	1	0	1	0	2 (7%)
Question 2c	8	8	4	2	22 (76%)	0	1	0	0	1 (3%)	0	1	0	0	1 (3%)	2	1	2	0	4 (17%)
Question 3	10	4	5	2	21 (72%)	0	5	0	0	5 (17%)	0	2	0	0	2 (7%)	0	0	1	0	1 (3%)
Question 4	5	7	5	1	18 (62%)	4	2	0	0	6 (21%)	1	1	1	1	4 (14%)	0	1	0	0	1 (3%)
Question 5	4	9	4	0	17 (59%)	4	1	0	1	6 (21%)	2	1	2	0	5 (17%)	0	0	0	1	1 (3%)
Question 6	8	10	5	1	24 (83%)	1	1	0	0	2 (7%)	1	0	0	1	2 (7%)	0	0	1	0	1 (3%)
Question 9	7	8	3	0	18 (62%)	1	1	1	1	4 (14%)	1	1	2	0	4 (14%)	1	1	0	1	3 (10%)
Question 10	7	5	3	1	16 (55%)	1	4	0	0	5 (17%)	2	1	3	1	7 (24%)	0	1	0	0	1 (3%)
Question 11	6	5	4	2	17 (59%)	3	4	1	0	8 (28%)	1	2	0	0	3 (10%)	0	0	1	0	1 (3%)

Table 2 tabulates a breakdown of the 29 stakeholder comment letters by level of agreement for eleven questions analyzed from the AICPA exposure draft 'Proposed Statement on Auditing Standards: Understanding the Entity and Its Environment and Assessing the Risk of Material Misstatement' (AICPA, 2020). Counts are presented in total (T, n = 29) as well as by category of respondent: Professional Organization (P, n = 10), Accounting Firm (F, n = 11), Governmental Organization/State Auditor (G, n = 6), or Academic/Other (A, n = 2). Responses categorized as "Partially Agree" reflect those respondents who agreed with the principle of the question conditional on further clarification of requirements or application materials. A response of N/A indicates a respondent's non-response to the indicated question. See Table 1 for the text of the questions analyzed.

Table 3: Stakeholder Response to AICPA Exposure Draft Questions - Perception of Clarity

Question	Sufficient Clarity					Needs Improvement					Unclear					N/A				
	P	F	G	A	T	P	F	G	A	T	P	F	G	A	T	P	F	G	A	T
	4	7	3	1		3	2	1	0		1	2	0	1		2	0	2	0	
Question 7					15 (52%)					6 (21%)					4 (14%)					4 (14%)
Question 8	7	6	4	1	18 (62%)	2	4	1	0	7 (24%)	0	1	0	0	1 (3%)	1	0	1	1	3 (10%)

Table 3 tabulates a breakdown of the 29 stakeholder comment letters by respondents' perception of clarity for two questions analyzed from the AICPA exposure draft 'Proposed Statement on Auditing Standards: Understanding the Entity and Its Environment and Assessing the Risk of Material Misstatement' (AICPA, 2020). Counts are presented in total (T, n = 29) as well as by category of respondent: Professional Organization (P, n = 10), Accounting Firm (F, n = 11), Governmental Organization/State Auditor (G, n = 6), or Academic/Other (A, n = 2). Responses categorized as "Needs Improvement" reflect those respondents who agreed with the principle of the question conditional on further clarification of requirements or application materials. A response of N/A indicates a respondent's non-response to the indicated question. See Table 1 for the text of the questions analyzed.

Among the respondents to Question 2a, 66% agreed that the components of a system of internal controls had been appropriately enhanced and clarified within the application materials. Those in agreement noted that the ASB had taken great care to define each component and explain why it was necessary to gain an understanding of each component. Of the seven respondents who partially agreed, each argued that the proposal adequately explained why auditors should gain an understanding of an entity's system of internal controls but was ambiguous regarding the methods auditors should use to achieve that understanding. These seven, along with the lone dissenter, suggested the inclusion of application materials or requirement steps that outline how auditors can achieve the required level of understanding. In response, the ASB further addressed the procedural aspects of gaining an understanding for each component of the entity's system of internal controls in the final SAS through expanded application materials that target the evaluation of each component. Question 2b had one of the lowest rates of approval with only 52% of respondents viewing the

proposed requirements and application materials pertaining to auditors' identification of controls addressing the risk of material misstatement as being enhanced and clarified. The remaining respondents who provided feedback to the question were evenly split between partial agreement (6 respondents, 21%) and disagreement (6 respondents, 21%). Two stakeholders elected to not provide feedback to this particular question. Both those in partial agreement and in disagreement took issue with the formatting of the proposed requirements, stating that they were difficult to understand. The exposure draft presented the requirements as a single standard paragraph broken into four parts, with each of those parts being further divided into multiple sub-sections that frequently referenced each other. Those who disagreed with the clarity of the proposed standard suggested for the ASB to include more direct language in the requirements and application materials for significant classes of transactions, as well as specifically define what other controls are being required. These dissenters argued that the current language in the exposure draft was open to wide interpretation that would be difficult to implement in cases of smaller audit firms and/or audits of smaller or less complex entities.

In response to the feedback received, the ASB made significant edits to the requirements and application materials for identifying controls that address the risk of material misstatement. While keeping the language intact, the ASB separated the single proposed requirement into five separate requirements, which improved readability. Additionally, the ASB modified the application materials to highlight the extent of requirements for identifying and testing controls that address relevant assertions. In particular, the ASB added paragraphs indicating that as long as at least one control is tested for each relevant assertion, not all controls need to be tested. Last but not least, the ASB also added several paragraphs to the application materials to define other controls and introduced further scalability materials that discuss the limitations that may be encountered in audits of less complex or smaller entities.

For Question 2c, 76% of respondents agreed that the proposed terminology and application materials allowed for consistent interpretation for audits of entities that used the COSO framework. Five respondents elected to forgo commenting on the proposal's compatibility with the COSO framework, and only one respondent expressed disagreement. The lone dissenter stated that because of clarity issues with Questions 2a and 2b, consistent interpretation was not feasible. As described above, the ASB made efforts to further clarify the requirements and applicable materials for understanding and assessing an entity's system of internal controls, which should also improve the consistent interpretation of the standard when applying the requirements to entities using the COSO framework.

It should also be noted that while four of the governmental organization/state auditors agreed with the proposal's compatibility with the COSO framework and the other two abstained from answering Question 2c, all six specifically referenced the U.S. Government Accountability Office's (GAO) *Standards for Internal Control in the Federal Government* (the Green Book) in their response letters. The Green Book is the primary internal control framework utilized by governmental agencies. All six specifically suggested that the ASB include references to the Green Book framework in addition to COSO in the final SAS. These respondents argued that only referencing the COSO framework within the application materials limits the perceived adaptability of the standard for entities that utilize other control frameworks, and that referencing other frameworks, such as the Green Book, would allow for more efficient and effective integration of the updated requirements into future audits. In response to the suggestion, the ASB included references in its final standard to the GAO's Green Book within the application materials related to internal control systems and general IT controls. Regarding Question 3, 72% of respondents agreed with the notion that the requirements and application material related to understanding and assessing the client's IT environment and risks that arise from the use of IT were clear enough to support auditors' considerations of the effects of IT on the assessment of the risk of material misstatement. This positive response included all the professional organizations and academic/other respondents, but only about one third of accounting firm respondents. Accounting firm respondents made up all of those in partial agreement and disagreement with the posed question. Those in partial agreement understood the intention of the requirements and application

materials but indicated a lack of clarity concerning scope and scalability of the requirements between those pertaining to significant classes of transactions and other controls and those pertaining to assessing the client's IT environment. These respondents suggested that the ASB include requirements for gaining an understanding of and assessing direct controls over IT in conjunction with general IT controls when addressing risks arising from the use of IT. Both respondents who disagreed indicated a need for further clarification of the application materials and guidance relating to types of IT controls and scalability for understanding IT environments and IT controls in less complex business entities. In addressing these concerns, the ASB substantively edited Appendix E and Appendix F, both of which contain considerations for understanding IT and general IT controls, to improve applicability and clarity. In addition, in the final SAS, the ASB separated the requirements into their own paragraphs pertaining to assessing IT and the risks arising from the use of IT to improve readability. Question 8 sought feedback on the clarity of the requirements for evaluating the design and implementation of certain control activities. Sixty-two percent viewed the requirements as sufficiently clear. The seven respondents who suggested improvements argued that the clarity of the requirements was contingent upon improved clarification of the requirements and application materials defining other controls auditors should consider with respect to risks at the assertion level. As mentioned in the discussion of Question 2b, the ASB revised the final standard and provided greater detail in the application materials concerning other controls relevant to risk at the assertion level. The ASB also included more direct, procedural application materials for evaluating the design and implementation of control activities identified when addressing risks of material misstatement.

Identifying and Assessing Risk of Material Misstatement

Question 4 aimed to determine the level of respondents' support of new concepts and definitions concerning significant classes of transactions, account balances, disclosures, and relevant assertions, and asked whether there was sufficient guidance explaining how each is determined and assists in identifying where risks of material misstatement exist. Sixty-two percent of the respondents were in support of the new definitions and agreed that the proposal contained sufficient guidance. Twenty-one percent supported the new definitions but believed additional guidance was necessary to support the application of the new terms in identifying where risks of material misstatement exist. Fourteen percent of the respondents disagreed with the introduction of the new concepts and definitions, stating that new definitions further complicate the risk identification and assessment process. The ASB disagreed with the dissenters, keeping the new concepts and definitions in the final SAS, but did provide additional application materials to assist in guiding auditors in their determination and use in identifying where risks of material misstatement occur.

Regarding Question 5, 59% of the respondents fully supported the introduction of the spectrum of inherent risk, indicating that the concept helps establish a frame of reference for auditors as they assess an entity's inherent risk of material misstatement. Seven respondents partially agreed and suggested the use of a more explicit definition for the spectrum of inherent risk, requesting that the ASB provide examples of categories within the spectrum being identified. Respondents in disagreement with the introduction of the spectrum of inherent risk voiced concerns that the unclear definition in the proposal would lead to inconsistencies in practice which could further reduce audit quality across a given industry. Although a clear definition was not included in the key terms part of the requirements section, the ASB did expand the application materials regarding the spectrum of inherent risk in the final SAS and included examples for the classification of levels of inherent risk in each spectrum.

Question 6 had the highest rate of agreement out of all the request-for-comment questions, with 83% of respondents in support of requiring separate assessments for inherent risk and control risk in relation to all risks of material misstatements at the assertion level. The two respondents in disagreement argued that the decision to assess both inherent and control risk separately should be left up to professional judgement, while the two respondents in partial agreement raised concerns about consistency with requirements

prescribed by other SASs. The ASB elected to keep the separate assessment requirement in the final SAS but left the method of assessment up to the auditor's professional judgement.

Regarding Question 7, 52% of respondents viewed the requirements for assessing control risk to be sufficiently clear. Those respondents who viewed the requirement as being unclear voiced concerns about the ambiguity of language used in both the requirement and in the application materials, especially regarding the level of assessed control risk when controls are not being tested for operating effectiveness. Respondents requested that the ASB provide further application examples for completing the control risk assessment requirement proposed in the exposure draft. In response to respondent feedback, the ASB modified the requirement to explicitly require an assessed control risk of maximum when not planning to assess the operating effectiveness of controls. In addition, the ASB added additional examples into the application materials concerning levels of control risk and their implications on the reliability of controls and other audit procedures. For Question 9, 62% of respondents agreed with the revised definition and related application materials on the determination of significant risk. Four respondents expressed partial agreement for the revised definition and related materials, conditional on improving: 1) the definition of spectrum of inherent risk stated in the proposal; and 2) enhancing the relationship between the spectrum of inherent risk and the revised definitions of significant risks. The four respondents in disagreement viewed the introduction of the new concept of a spectrum of inherent risk alongside the new definition and application materials for significant risk as creating redundancy within the proposed standard. These respondents suggested that the ASB merge the two concepts within the application materials to enhance the clarity of both concepts and their relationship. In response to the stakeholder feedback, the ASB embedded additional content in the application materials for the definition of significant risks specifically indicating that significant risks are risks on the upper end of the spectrum of inherent risk and also added examples of sources of significant risks.

Stand-Back Procedure, Documentation, and Scalability

For Question 10, 55% of respondents agreed with the inclusion of a separate stand-back requirement related to the appropriateness of auditor determinations about material classes of transactions, account balances, or disclosures that had not been determined to be significant. Twenty-four percent of the respondents disagreed with the inclusion of the separate stand-back procedure, arguing that there are already sufficient requirements for auditors to step-back and reflect on the appropriateness of decisions made during the audit process. The respondents who partially agreed indicated that stand-back procedures are a necessary step in assuring audit quality and that a part of maintaining professional skepticism is reevaluating judgements made about what is and is not significant in the presence of acquired evidence. While these six respondents did not disagree with the addition of a separate stand-back requirement for the assessment of significant risks and risks of material misstatement, they viewed the application materials for this requirement to be vague on the nature of the requirement and how to satisfy it. Unfortunately, in the final SAS, the ASB provided no further clarification in response to stakeholder feedback for the stand-back requirement in the final SAS. For question 11, while 59% of the respondents agreed that the documentation requirements in the proposal were clear and appropriate, 28% partially agreed with the appropriateness but not with the clarity, especially regarding the scalability of the requirements. Three respondents indicated disagreement with both clarity and appropriateness and suggested that the ASB provide explicit examples and guidance for what should be documented to assure that the requirements have been met, especially regarding less complex and smaller entities for which available documentation of controls may be limited.

In response to stakeholder feedback, the ASB extended the application materials for the scalability of documentation and clarified that the minimum requirement is to enable an experienced auditor having no previous experience with the audit to understand the nature, timing, and extent of the risk assessment procedures performed. These minimum requirements include auditor conclusions made that result from risk

assessment procedures and the rationale for any judgements made. The ASB also provided clarification on the nature of documentation required for audits of less complex entities.

Finally, Question 1 asked respondents to comment on whether the proposed requirements and application materials could be applied to the audits of any entity regardless of size, complexity, or circumstance. This question was the only request-for-comment question that was answered by all respondents. Seventy-two percent of respondents agreed that the proposed SAS adequately addressed the issue of scalability, and 21% partially agreed on the condition that certain requirements be further clarified (these concerns are mentioned above in the discussion of questions 2b, 4, 5, 8, and 9). The two respondents who disagreed with the scalability took issue with the layout of scalability application materials being interspersed throughout the proposed SAS and the elimination of the "Considerations Specific to Smaller Entities" heading that had been intentionally removed by the ASB to focus on the complexity rather than the size of the entity as being the driving force for modifying audit procedures. The ASB took into account stakeholder feedback on scalability and made the requested changes to the application materials in the final standard.

A PATH FORWARD

Audit firms and private businesses must have governance structures that ensure high quality audits. Those in leadership positions must promote a system of quality management that emphasizes education and training, appropriate rewards, whistleblower policies, processes that eliminate non-compliance with policies, and ethical values. In addition, these systems must facilitate the understanding of an entity's environment and assessment of the risk of material misstatement in financial information. To ensure the proper application of these concepts in practice, professional standards and supporting materials must be unambiguous in defining these concepts and establishing how they are properly applied. The analysis of the proposal, constituent feedback, and the final standard demonstrates that the AICPA clearly emphasized the importance of understanding an entity's environment and assessing the risk of material misstatement in financial information and clarified those concepts and the manner of their implementation in financial audits. In addition, the AICPA was responsive to a vast majority of constituent feedback, disagreeing with them in only three respects. In our opinion, the AICPA was justified in keeping new concepts and definitions concerning significant classes of transactions, account balances, disclosures, and relevant assertions in the final standard. However, we believe that a clear definition for the spectrum of inherent risk should have been added to the inventory of key terms and concepts. Finally, we agree with the decision of leaving the assessment of inherent risk and control risk as separate tests. The AICPA will have further opportunities to revise the code and create materials that include the definition of the spectrum of inherent risk. At the same time, all stakeholders play a role in facilitating the proper implementation of *SAS No. 145*. In the following paragraphs, we explore other aspects that may assist auditors in this quest.

First, regulators, educators, and professionals must collaborate to develop applied guidance to implement *SAS No. 145*. In public and private organizations, boards of directors and audit committees can help auditors understand the entity's control environment, assess different types and levels of risk, and support them in their pursuit to gather appropriate and sufficient evidence that is persuasive to render an opinion. Board and committee members may ask probing questions during meetings and not shy away from disagreeing with management. Directors and committee members should be educated in the areas of IT controls and major areas of risk, along with accounting, auditing, technology, and financial practices. All stakeholders must understand that while different types of risks and levels of risk can be documented, it is difficult to document how these decisions were reached until they are manifested in the results of actions. It is unavoidable that the amount of time and effort dedicated to documentation will increase as auditors document actions taken, types of risks evaluated, the level of risk assigned to each type of risk, the nature of critical evidence underlying these decisions, and the decisions made to expand, reduce, or leave unchanged the nature, timing, and extent of procedures needed during the course of an audit. Since professional judgment in identifying areas of risk and assessing levels of risk occurs in the mind and is not directly observable, it is

important to include in the documentation a description of how the auditor overcame certain biases in forming their judgments and conclusions. Training professionals to document how professional judgment was exercised in making decisions and the level of professional skepticism applied in assessing risks will be difficult. Gissel (2018) describes the types of training best suited for audit professionals, which include mentoring by senior auditors, seminars and workshops, other continuing professional education, and cases that use actual audit information. While the education of professional accountants starts with academia and standard setters, training flows from professional firms. To properly implement *SAS No. 145* in audit practice, curricula of both undergraduate and graduate accounting programs must include updated topics of UEE and ARMM. In addition, there should be training in workplace settings. Both Brown-Liburd (2017) and Gissel (2018) show that applied practice of new audit concepts in varied situations is needed in both academic and professional audit classrooms in order to build the skills and abilities required by new standards. In addition, as recommended by Hayes (2016), direct classroom instruction on obtaining an understanding of the control environment and assessing the types and levels of risk better prepares students to be skilled professionals. One approach that can aid auditors in being more skeptical in assessing levels of risk and being less subject to biases is to train them to analyze a given situation from multiple perspectives. A multi-perspective analysis can be particularly useful for determining the types and quantity of evidence needed given a particular level of risk and for ensuring the consideration of both confirming and disconfirming evidence. In summary, stakeholders are asking for additional training and support aimed at clarifying an auditor's UEE and assessment of RMM. Auditors need direction to ensure that their documentation of audit decisions made when evaluating IT controls and assessing RMM will be acceptable during regulatory inspections and peer reviews. Stakeholders also want clarification on the definition of the spectrum of inherent risk introduced in the new audit standard as a needed step in the path forward. New education and training materials and research are needed to support auditors' implementation of *SAS No. 145.* This need provides an excellent opportunity for the AICPA, audit firms, and academics to work together and develop implementation examples and other material demonstrating the best practices in evaluating the IT environment and controls, and in assessing various types and levels of risk. Thankfully, the professional, academic, and business accounting environments have a long history of cooperation in such matters that will meet this challenge.

CONCLUDING COMMENTS

This paper presents an overview of *SAS No. 145* that enhances and clarifies the audit standards on obtaining an understanding of the business entity's control environment and assessing the risks of material misstatement. The comment letters submitted by stakeholders during the exposure draft stage of the standard setting process were examined. Respondent perspectives on the clarity and enhancement of the standard requirements were assessed by analyzing the stakeholder responses to the 13 request-for-comment questions by level of agreement (i.e., Agree, Partially Agree, and Disagree for questions 1 – 6 and 9 – 11; and Sufficient Clarity, Needs Improvement, and Unclear, for questions 7 and 8). These responses were tabulated by respondent entity type (Professional Organization, Accounting Firm, Governmental Auditor, or Academic/Other), as well as by agreement across all respondent types. Stakeholder comment letters were analyzed and based on stakeholder feedback, the exposure draft was compared to the final standard issued to assess the impact respondent input had on the final standard issued. While our findings suggest general stakeholder support for the proposed enhancements to the standards, nearly all respondents provided recommendations for further clarification. Our comparisons of the drafted proposal and final standard indicate a high degree of responsiveness on the AICPA's part in addressing the respondents' concerns regarding needed clarifications and enhancements. However, the AICPA was not responsive to respondent concerns about the application of the spectrum of inherent risk. The AICPA could address these concerns by issuing additional authoritative guidance for assessing inherent risk based on the concept of a spectrum of inherent risk, and by providing case studies and reference materials to properly implement the changes introduced in the standard. The generalization of our results is subject to certain limitations. As commentary on stakeholder clarity and reception of the exposure draft, this study is limited by the number of response

letters submitted to the ASB and the type of stakeholders who chose to respond to the AICPA's request for comment. The AICPA comment period was limited to three months – September through November of 2020 – during which time the AICPA received a total of 33 comment letters. The length of the exposure draft and the short response period may have been contributing factors for the limited number of respondents. In addition, the analysis in this study is limited by the questions posed by the AICPA in its request for comments. Thus, some of the requirements and application materials within the proposed standard may not have been addressed in the comment letters. Moreover, given that the AICPA's standard setting process and its procedures involved in developing and issuing new standards are not completely observable to the public, it is highly likely that the AICPA utilized inputs from sources other than stakeholder response letters when it revised the proposed requirements and issued the final standard. Taking into account the ever-evolving nature of information technology, further inquiry is needed to examine the effects of IT on the risk of material misstatement and its potential as a useful control device for the detection of misstatement. These further inquiries should focus on both the entity's use of IT in its control environment, and the auditor's use of IT applications in conducting risk assessments and other audit procedures. Additionally, with the introduction of new terminology and concepts regarding inherent risk, research into the establishment of a more explicit model for the spectrum of inherent risk may prove beneficial to ensure efficient and effective application of this new concept in future audits.

REFERENCES

American Institute of Certified Public Accountants. (2020, August). Proposed Statement on Auditing Standards: Understanding the Entity and Its Environment and Assessing the Risk of Material Misstatement. Exposure Draft. New York: AICPA.

American Institute of Certified Public Accountants. (2021, October). Understanding the Entity and Its Environment and Assessing the Risk of Material Misstatement. Statement o Auditing Standards (SAS) 145. New York: AICPA.

Brasel, K., Hatfield, R., Nickell, E., & Parsons, L. (2019). The Effect of Fraud Risk Assessment Frequency and Fraud Inquiry Timing on Auditors' Skeptical Judgements and Actions. *Accounting Horizons*, vol. 33(1), 1-15.

Brown-Liburd, H. (2017). Discussion of 'Encouraging Professional Skepticism in the Industry Specialization Era.' *Journal of Business Ethics*, vol. 142(2), 257–258.

Cangemi, M. (2016). Views on Internal Audit, Internal Controls, and Internal Audit's Use of Technology. *EDP Audit, Control and Security*, vol. 53(1), 1-9.

Carpenter, T. (2007). Audit Team Brainstorming, Fraud Risk Identification, and Fraud Risk Assessment: Implications of SAS No. 99. *The Accounting Review*, vol. 82(5), 1119-1140.

Curtis, M., Jenkins, J., Bedard, J., & Deis, D. (2009). Auditors' Training and Proficiency in Information Systems: A Research Synthesis. *Journal of Information Systems*, vol. 23(1), 79-96.

DiLeo, R. (2022). Audit Risk: SAS No. 145 Changes Coming to Risk-Based Audits. *Florida CPA Today*, vol. 38(3), 26-28.

Dzuranin, A., & Mălăescu, I. (2016). The Current State and Future Direction of IT Audit: Challenges and Opportunities. *Journal of Information Systems*, vol. 30(1), 7-20.

Eaton, T., Grenier, J., & Layman, D. (2019). Accounting and Cybersecurity Risk Management. *Current Issues in Auditing*, vol. 13(2), C1-C9.

Gissel, J. (2018). Professional Skepticism: Practitioners' Perceptions and Training Practices. *Review of Business Information Systems*, vol. 22(2), 1-14.

Han, S., Rezaee, Z., Xue, L., & Zhang, J. H. (2016). The Association between Information Technology Investments and Audit Risk. *Journal of Information Systems*, vol. 30(1), 93-116.

Hayes, T. (2016). Strategies for Teaching Professional Skepticism in the Classroom: Evidence from Senior-Level Auditing Students. *International Journal of Business, Accounting & Finance*, vol. 10(2), 110-121.

Janvrin, D. J., Payne, E., Byrnes, P., Schneider, G., & Curtis, M. (2012). The Updated COSO Internal Control--Integrated Framework: Recommendations and Opportunities for Future Research. *Journal of Information Systems*, vol. 26(2), 189-213.

Miller, T. C., Cipriano, M., & Ramsay, R. J. (2012). Do Auditors Assess Inherent Risk as if there are no Controls? *Managerial Auditing Journal*, vol. 27(5), 448-461.

Morrill, J., Morrill, C., & Kopp, L. (2012). Internal Control Assessment and Interference Effects. *Behavioral Research in Accounting*, vol. 24(1), 73-90.

Munoko, I., Brown-Liburd, H., & Vasarhelyi, M. (2020). The Ethical Implications of Using artificial Intelligence in Auditing. *Journal of Business Ethics*, vol. 167(2), 209-234.

Omoteso, K., Patel, A., & Scott, P. (2010,). Information and Communications Technology and Auditing: Current Implications and Future Directions. *International Journal of Auditing*, vol. 14(2), 147-162.

Piercey, M. (2011). Documentation Requirements and Quantified versus Qualitative Audit Risk Assessments. *Auditing: A Journal of Practice & Theory*, vol. 30(4), 223-248.

Schroeder, D., & Singleton, T. (2010). Implementing the IT-Related Aspect of Risk-Based Auditing Standards. *The CPA Journal*, vol. 80(7), 66-71.

Sexton, N., & Rudman, R. (2019). Audit Firms to Employ a Comprehensive Approach to Keep Pace with the Evolving Information Technology Control Environment. *Southern African Journal of Accountability & Auditing Research*, vol. 21(1), 1-13.

Weidenmier, M. L., & Ramamoorti, S. (2006). Research Opportunities in Information Technology and Internal Auditing. *Journal of Information Systems*, vol. 20(1), 205-219.

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THE ROLE OF VOLUNTARILY DISCLOSED INFORMATION ON CROWDFUNDING SUCCESS: EVIDENCE FROM KICKSTARTER

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ABSTRACT

Information crowdfunding discloses deviates from mainstream business disclosures in several important ways. In this study, we examine one aspect of this information phenomenon, i.e., the textual, nonmonetary, nonfinancial content of voluntary crowdfunding disclosures. We build on literature on voluntary disclosure, crowdfunding, and content analysis by examining how voluntary disclosure impacts funding success on one of the most successful crowdfunding websites, Kickstarter. Using a large sample of over two years of projects (102,967 projects), we find that the volume and content of voluntary disclosure impact funding success, and that those main effects differ based on discloser credibility and market competition in ways consistent with prior voluntary disclosure literature. Our results have implications for crowdfunding and regulators by providing new insight into crowdfunding stakeholder decision-making.

JEL: M41, M48, M13, G29

KEYWORDS: Agency Theory, Crowdfunding, Content Analysis, Voluntary Disclosure

INTRODUCTION

Business information disclosure is a primary function of accounting and therefore a primary area of accounting research (Feng Li, 2010, and Karim, Pinsker and Robin, 2013). In general, accounting and business disclosure research has focused on the following: (1) disclosure of financial information; (2) regulated and mandatory disclosure, (3) disclosure from publicly traded companies; (4) disclosure to a population knowledgeable of business transactions, and (4) disclosure using business information systems (Feng Li, 2010, Saxon and Guo, 2020). Crowdfunding is unique in that it deviates from all these mainstream trends. Crowdfunding disclosures are textual and nonfinancial, and significantly different than the nonfinancial information disclosed by companies (Ernst & Young LLP, 1998, and Wheeler and Zhang, 2021). Its disclosure content is less regulated, more voluntary, and more varied. It discloses to a population not typically savvy in business matters. Crowdfunding uses IT platforms much differently than business information systems. From this global overview, we investigate the content of the information voluntarily disclosed in crowdfunding. Specifically, our research question is: How do non-monetary nonfinancial aspects of crowdfunding disclosures (e.g., credibility and optimism) affect project funding success? Crowdfunding is an increasingly relevant part of the capital acquisition landscape for startups with over 1.2 billion dollars raised on the largest site (Kickstarter.com, 2015), a significant number of ongoing ventures resulting from the most successful projects (Mollick, 2014), and an increasingly high media profile (e.g., CNBC's Tech Crowd website, 2015). In addition to these economic and media impacts, the U.S. Congress (2012) and the SEC have taken note, as the JOBS Act of 2012 was influenced by the

success of Kickstarter and other crowdfunding sites. Reward-based crowdfunding (i.e. Kickstarter) regulations for disclosure are minimal, such that there are no mandatory disclosures, while regulations for equity-based crowdfunding, recently promulgated by the SEC in Title IV of the JOBS Act/ Reg A+ (SEC 2015), involve mandatory disclosure requirements for startups, however those requirements are lower than typical SEC registrants. Even with the recent revisions of the JOBS Act by the SEC (2015) regarding equity-based crowdfunding, news media have noted continued concerns about "insufficient regulation to monitor" (WSJ, 27 Oct. 2015) and that "the level of scrutiny and diligence in the crowdfunding market will likely be far weaker" (WSJ, 30 Oct. 2015) than in venture capital environments. Thus, reward-based crowdfunding provides an opportunity to investigate a unique environment for capital acquisition (i.e., one in which all disclosures are voluntary) that may also provide insight into how the less regulated equity-based crowdfunding market will operate. The reward-based crowdfunding environment entails exceptionally high agency costs and information asymmetry because disclosures are voluntary and not independently verified, however despite those frictions approximately 40 percent of Kickstarter projects reach their funding goals. Accordingly, we investigate the effect of voluntary disclosure on capital acquisition (funding) in a reward-based crowdfunding setting.

In addition to all reward-based crowdfunding disclosures being voluntary, there is little in the way of clear, concrete penalties for project creators who fail to deliver. Despite the success of reward-based crowdfunding sites, the creation of new businesses they support, and the uniquely high agency cost setting, little research has been done on the matter. In this paper, we utilize the crowdfunding setting to investigate the role of voluntary disclosure, specifically the volume of disclosure and the content of the disclosure on funding outcomes. In addition, we consider whether the credibility of the discloser and competition level in the project market conditionally impacts the main effects of disclosure on funding outcomes.

Based on prior research and theory on voluntary disclosure and agency theory, we hypothesize that the volume of voluntary disclosure (Francis, Nanda and Olsson, 2008) and the content of voluntary disclosure (Davis, Piger and Sedor, 2012, Davis and Tama-Sweet, 2012, and Huang, Zang and Zheng, 2014), along with the credibility of the discloser (Lii and Lee, 2012, and Frankel, Johnson and Skinner, 1999), in the Kickstarter project website will impact project funding outcomes. We perform a detailed analysis of over 102,967 Kickstarter projects covering October 2012 to October 2014, examining the amount of voluntary disclosure, the content of the voluntary disclosure, and the credibility of the discloser (Williams, 1996). We find strong support for the hypotheses that volume of voluntary disclosure and content of voluntary disclosure impact three key project funding outcomes: whether the project is fully funded, the dollar amount raised, and the number of backers attracted. The volume of disclosure is significantly positively associated with our crowdfunding success variables in all tests; for the content of disclosure, all our variables of interest are significant in the expected direction in our main tests. Optimistic and specific content positively impacts funding, while uncertain content negatively impacts funding. Project creator credibility also impacts outcomes significantly in the expected direction. In sensitivity analyses, we find that several attributes of our model have differential effects based on the credibility of the project creators; specifically, we find that the volume of disclosure has a greater impact when the discloser lacks credibility. This finding is consistent with voluntary disclosure serving a substitute role in the absence of credibility (Graham, Harvey and Rajgopal, 2005, Einhorn and Ziv, 2008, and Armstrong, Guay and Weber, 2010). Additionally, we find evidence suggesting that some of the effects of the content of voluntary disclosure on crowdfunding success vary conditionally on discloser credibility. More specifically, optimistic content is only significant when the discloser is credible, while specific content has a greater positive effect when the project creator lacks credibility. Finally, we examine the conditional impact of competition in the product market on our main effects, finding that the volume of voluntary disclosure, optimistic content, and specific content have a larger positive effect when the product market is more competitive.

Our study answers Verrecchia's (2001) call for more empirical research for insight into and theory development of disclosure. We answer this call by investigating a highly unique real world disclosure

environment in which all disclosures for raising funding are voluntary, unverified, and minimally regulated, and in which there are minimal means of enforcing the funding agreement. Accordingly, our study makes several contributions to the disclosure literature. First, unlike studies of publicly traded companies in which unverifiable disclosure is minimal and there are numerous legal means of contract enforcement, our results are from a setting in which all disclosures available to the capital provider at the crowdfunding website are unverified and there are few, if any remedies if the capital seeker fails to honor the promise to reward the capital provider. In turn, this creates an environment with unusually high agency costs. Information asymmetry is extremely, if not absolutely, slanted in the deficit to the principal (capital provider). Further, adverse selection problems in crowdfunding are myriad because of a near total lack of enforcement of the agreement between capital provider and capital seeker. And again, these conditions are occurring in a real world setting as opposed to an artificial laboratory experiment.

Second, we contribute to research on the role of unverifiable and nondiagnostic information in decision making. Since the disclosures are unverified, stakeholders (i.e., prospective funders of projects) should rationally discount the disclosures as being without value for decision making and therefore totally disregarded as nondiagnostic. However, our results indicate that stakeholders take the unverifiable disclosures provided as informative and diagnostic. Third, our study contributes by examining an environment that is unique regarding the relationships stakeholders have with each other, compared to stakeholders in publicly traded companies' settings. There is no competition among the stakeholders in our study, and they share no joint liability since they have little legal recourse should project creators renege on their promises to the stakeholders. Fourth, we contribute to disclosure research by studying an environment in which we have a complete set of the disclosures made by the founders/project creators, whereas public companies have numerous means of disclosure (e.g., annual statements, management forecasts, and conference calls) of which only an incomplete subset can be investigated in any one study. With this complete disclosure set, we are also able to establish causality with greater clarity than in prior public company research. That is, we have all the information available to the stakeholders since there are no alternative sources of information. Fifth, our study contributes to disclosure research by using content analysis to examine numerous aspects of the disclosures and in more detail than prior studies. Sixth, we examine how variation in market competition impacts the main effects of voluntary disclosure.

Finally, we contribute to the debate over how credibility interacts with voluntary disclosure as a complementary or substitutive effect. This study's results have implications for crowdfunding and regulators. Our results allow for a more detailed and varied understanding of crowdfunding, which is rapidly becoming a more broadly available mechanism for selling equity since the promulgation of JOBS Act/Reg A+ in 2015 (SEC, 2015) and has already resulted in over a billion dollars raised on Kickstarter alone. Our findings suggest that regulators may not need to be overly strict in regulating crowdfunding because even with minimal oversight and reliance on entirely voluntary and unverified disclosures, crowdfunding is to a surprising degree an effective capital market despite the severe agency costs. Finally, we believe that our findings can provide crowdfunding project creators insight into how best to design crowdfunding project websites for success. The remainder of the paper is organized as follows. Section II outlines prior research related to disclosure and develops hypotheses. Section III describes the data source. Section IV discusses the research design. Section V details the results, while Section VIII concludes.

LITERATURE REVIEW AND RESEARCH HYPOTHESES

Crowdfunding Literature

Peer-to-peer crowdfunding is a fairly new approach to financing a wide variety of activities. These activities range from purely personal (e.g., paying off personal credit cards) to social (e.g., raising funds for victims of natural disasters) to business (e.g., financing start-up ventures). Crowdfunding is also a rapidly changing and evolving phenomenon, and difficult to define (Mollick, 2014). For this paper we use Mollick's

definition: "Crowdfunding refers to the efforts by entrepreneurial individuals and groups – cultural, social, and for-profit – to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries" (2014, p. 2). Prior research has investigated disclosure mostly in traditional business information environments, e.g., small, medium, and large companies using enterprise systems (Feng, 2010, Karim, Pinsker and Robin, 2013) However, crowdfunding information is significantly different from mainstream business information. Crowdfunding information (for the period we cover, 2012-2014) is usually textual and nonfinancial. Additionally, whereas companies, when disclosing nonfinancial information, tend to use monetary and quantitative information, crowdfunding nonfinancial information is primarily nonmonetary and qualitative. (Ernst & Young LLP, 1998, and Wheeler and Zhang, 2021). Further, for our research period (2012-2014), crowdfunding disclosure content is less regulated, more voluntary, and more varied. The target population for such disclosures are less knowledgeable of business matters than the typical financial statements reader. Crowdfunding IT platforms are much different than business information systems.

Crowdfunding is a way for project creators to raise funds from peers outside of the usual means, e.g., banks loans or the stock market, typically done via the Internet. The exchange between the creator and the funder may be categorized into four types (Mollick, 2014). In all cases, the funder provides cash. The difference among the four types is what the funder expects in return. First, the funder may provide cash without expecting anything in return, e.g., to a charity (donation-based). Second, the funder expects a cash return, usually with interest (loan-based). Third, the funder expects a non-cash reward, e.g., the item to be produced or service to be provided by the project (reward-based). Fourth, the funder expects ownership in the project (equity-based). Equity-based funding is currently rare—less than 5% of all crowdfunding according to Massolution's 2013 Crowdfunding Report (Massolution, 2013)—but is expected to significantly increase since the release Reg A+ in 2015 (SEC, 2015).

To date, there is little research on crowdfunding, especially in accounting. Michels (2012) examines the loan-crowdfunding website Prosper.com, finding that voluntary disclosure of biographical and financial information by prospective lendees increases bid activity on their loan and lowers the cost of debt. Using content analysis, we examine the more entrepreneurial, project-oriented Kickstarter (rewards-based crowdfunding). Beyond the nature of the activity underlying the crowdfunding, significant other differences exist between Prosper and Kickstarter, most critically that disclosures on Kickstarter project listings are completely unverified, while some disclosures are verified on Prosper (2023). Thus, Kickstarter presents a market setting that is completely reliant on unverified voluntary disclosure, which entails exceptionally high agency costs. Kickstarter does perform an upfront screening of initial listings in an effort to minimize outright scams, however that does not guarantee rewards will be delivered or that the project if funded will succeed. With regard to voluntary disclosure in project listings, information provided at Kickstarter FAQ's (2015) webpage makes explicit mention of the importance of creator credibility, and suggests creators provide as much information as possible about the project, their plan to complete the project, and their background. They also state that "If a creator…. Doesn't share key information, backers should take that into consideration" (Kickstarter FAQ, 2015). Despite these suggestions to provide a high volume of voluntary disclosure, there is considerable variation in the amount and content of disclosure actually provided. Additionally, we note considerable project market competition in the Kickstarter setting, as there are typically several thousand project listings live at any time. Taken as a whole, the above information suggests that Kickstarter is a highly competitive marketplace with very high agency costs and minimal oversight, making it a unique and interesting setting in which to examine voluntary disclosure.

Non-diagnostic and Diagnostic Content

According to the economics-based rational choice model and utility theory, decision makers should not incorporate non-diagnostic or irrelevant content into the decision-making process (Camerer and Fehr, 2006). However, robust streams of research in psychology (cognitive and social), accounting (auditing) and

IT (decision aids) have demonstrated that decision makers do not ignore non-diagnostic content and thereby allow it to influence their decisions. Findings by Gilbert (1991) and Gilbert, Tafarodi and Malone, (1993) suggest that when presented with irrelevant information, the decision maker's first reaction is to believe it to be credible. Kahneman, Slovic and Tversky (1982) and Nisbett, Zukier and Lemley (1981) find that decision makers do not completely ignore irrelevant information and include it in their information processing. These results are found to hold true in accounting/auditing (Glover, 1997, and Hackenbrack, 1992) and IT/decision aid (Murthy and Wheeler, 2018, and Wood, 2012) contexts.

While we acknowledge the salience of the previously discussed research showing that non-diagnostic or irrelevant content significantly affects decision making, and therefore that irrelevant content in a Kickstarter website may impact funding success, we also point to a rich research stream indicating that truly informative or diagnostic content also affects decision making (and by extension Kickstarter funding success). Examples of research streams demonstrating the importance of relevant, diagnostic content to human decision making include rational choice theory (Camerer and Fehr, 2006, and Jones, 1999), elaboration likelihood model (Petty and Cacioppo, 1986) and argument quality research (Chaiken and Maheswaran, 1994, and O'Keefe, 1998). Thus, the significant effect of non-diagnostic content does not exclude the significant effect of diagnostic content, and vice versa. Both types of content can be present in a Kickstarter project listing, and both may affect funding success, in the same or opposite direction.

Voluntary Disclosure and Source Credibility

Research on voluntary disclosure suggests that such disclosures can affect decision making. This is surprising since voluntary disclosures are generally unverifiable and therefore should not be considered diagnostic. However, analytical research in accounting suggests that managers disclose private information voluntarily because rational market participants would interpret nondisclosure as bad news and then discount the value of firm (Grossman and Hart, 1980, Milgrom, 1981, Verrecchia, 1990, and Verrechia, 2001). Archival research supports this argument with empirical results that indicate that voluntary disclosure lowers cost of capital, increases trading volume, and increases investor following. For example, Sivakumar and Waymire's (1994) study of the New York Stock Exchange from 1905–1910 find significant changes in price and trading volume associated with voluntary disclosures, suggesting that these disclosures were seen by decision makers as sources of credible information. Similarly, results from Botosan (1997), Sengupta (1998), and Francis, Nanda and Olsson, (2008) indicate that cost of capital decreases in relation to the amount of voluntary disclosure. Eng and Mak (2003) find that firms with greater agency concerns (less independent boards, less managerial ownership) provide greater voluntary disclosure. Related papers find that voluntary disclosures can affect decision making in relation to "hype" around equity offerings (Lang and Lundholm, 2000), franchisee fees (Price, 2000), and the pricing of initial public offerings (IPOs) (Leone, Rock and Willenborg, 2007). Overall, these analytical and empirical studies suggest that many different types of decision makers find different types of voluntary disclosures credible sources of information. Prior literature using analytical approaches also provides several relevant conjectures to this setting. Lang and Lundholm (2000) find that disclosure increases investor following. In contrast, several of the elements that serve to mitigate information asymmetry available in a conventional capital market setting, are not available in a crowdfunding environment (e.g., analysts, blockholders, board of directors). As a consequence, crowdfunding voluntary disclosures via the project listing are the primary mechanism that a project creator has to mitigate the adverse selection concern of prospective funders (Lang and Lundholm, 2000, Glosten and Milgrom, 1985, and Diamond and Verrecchia, 1991). Based on these various findings from prior literature, we make the following prediction:

H1: The volume of voluntary disclosure will positively impact funding success.

Recent literature on voluntary disclosure in accounting has examined the information content of disclosures using textual-analysis software (Davis, Piger and Sedor, 2012, Davis and Tama-Sweet, 2012, Li, 2008, Li,

2010, Huang, Zang and Zheng, 2014, Mayew, Sethuraman and Venkatachalam, 2015, Merkley, 2014, and Huang, Teoh and Zhang, 2014). This literature suggests that capital market participants react to the "style" or "tone" of communications (Davis, Matsumoto and Zhang, 2015, and Huang, Zang and Zheng, 2014), and that the optimistic content in these communications can contain information signals about future performance (Davis, Piger and Sedor, 2012, and Mayew, Sethuraman and Venkatachalam, 2015). Given that Kickstarter offers exclusively voluntary, unverified disclosure, one content-based signal of quality or viability of a project may relate to the degree of optimism conveyed in the voluntary disclosure. Capital markets literature has long debated whether "good news" disclosures are informative or biased, with Verrechia (2001) concluding that a biased forecast can still be informative. Consistent with that, prior capital markets literature has found that optimistic content in voluntary disclosures may be informative and predictive of future performance (Davis, Piger and Sedor, 2012, Demers and Vega, 2009, and Price, Doran, Peterson and Bliss, 2012), but also that optimism in voluntary disclosure may be biased or misleading (Huang, Teoh and Zhang, 2014, Cho, Roberts and Patten, 2010, and Aboody and Kasznik, 2000). Given the conflicting results found in prior literature, we make the following non-directional prediction:

H2a: Optimistic content in project listings will impact funding success.

Another aspect of voluntary disclosure that has been examined in prior literature is the precision or specificity of the disclosure. Baginski, Conrad and Hassell (1993) find that specific point estimate forecasts receive a larger market reaction, while Lansford, Lev and Tucker (2013) find that more detailed disaggregated earnings guidance is associated with an improved information environment. Prior literature also suggests that managers will disclose more when their information is more precise (Verrecchia, 1990, and Tasker, 1998), particularly when existing public information is less informative, and that such disclosure will improve capital market outcomes. Given minimal existing public information in our setting, the importance of specific content may take an even greater role. We consider content that is more detailed with regard to timing, measurements, and quantities, and more tangible and material to be more specific. Such specific content may convey information about the viability of the project and the creator's capability to complete the project; conversely, a dearth of such specific content may be a negative signal about the viability of the project. Thus, we predict the following:

H2b: Specific content in project listings will positively impact funding success.

In addition to optimism (H2a) and specificity (H2b), we examine a third component of the content of project listings: uncertainty. Uncertainty is reflected in a conventional discounted cash flows model via discount rates. Further, using Diction software for content analysis, Cho, Roberts and Patten (2010) find that worse performing companies tend to use less certain content in disclosures. We consider uncertain content in a project listing to be content conveying a lack of control over outcomes, inability to commit to the verbalization being made, inexactness, hedges, or inactivity. Based on the above findings, we expect such uncertain content to signal bad news about the project's potential. Presuming prospective backers pick up on this uncertain content, we predict the following:

H2c: Uncertain content in project listings will negatively impact funding success.

A key finding in the voluntary disclosure literature is that the credibility of the disclosing party impacts market response (Williams, 1996, Stocken, 2000, and Healy and Palepu, 2001). Related behavioral literature supports this (Camerer and Fehr, 2006, Jones, 1999, O'Keefe, 1998, and Petty and Cacioppo, 1986), suggesting that source credibility impacts decision-making by increasing the perceived diagnostic value of the information and by extension increasing the decision weight of the information. These finding facilitates differentiating the effects of biased or opportunistic disclosure (Aboody and Kasznik, 2000, and Brockman, Khurana and Martin, 2008) from the effects of informative disclosure (Core 2001, and Hutton, Miller and Skinner, 2003) on decision making. Specifically, research found that disclosing parties with a

higher credibility for accuracy (Williams, 1996, and Ng, Tuna and Verdi, 2013) or frequency of disclosure (Hutton and Stocken, 2009) receive a larger capital market response than those with lower credibility. Consistent with these findings, Graham, Harvey and Rajgopal (2005) find that top level executives show significant concern with developing and maintaining credibility in the capital market for quality disclosure. A related stream of literature documents an asymmetric response to disclosure, where bad news is accepted as credible while good news that is unexpected (McNichols, 1989) or unsupported by supplementary disclosure (Hutton, Miller and Skinner, 2003) is treated more skeptically. In light of the importance of discloser credibility, we therefore re-examine the effects of the volume of voluntary disclosure and the content of voluntary disclosure on funding outcomes while conditioning on the credibility of the disclosing party:

H3a: The effect of the volume of disclosure on funding success will vary conditionally on project creator credibility.

H3b: The effect of disclosure content (optimistic, specific, uncertainty) on funding success will vary conditionally on project creator credibility.

Prior literature has also examined the impact of market competition on corporate decisions (Harris and Raviv 1991, Xu 2012, and Valta 2012), accounting attributes (Dhaliwal, Huang, Khurana and Pereira, 2014), and disclosure (Li 2010, Clinch and Verrecchia 1997, and Darrough and Stoughton, 1990). These disclosure papers generally find that greater competition may increase disclosure, lead to more conservative accounting, and impact corporate decisions. Accordingly, we re-examine the effect of the volume of voluntary disclosure (H1) and the content of voluntary disclosure (H2a, H2b, H2c) on funding outcomes while conditioning on the competition level of the project category:

H4a: The effect of the volume of disclosure on funding success will vary conditionally on competition level in the project category.

H4b: The effect of disclosure content (optimistic, specific, uncertainty) on funding success will vary conditionally on competition level in the project category.

Given the lower threshold of credibility necessary for bad news disclosures, compared to that of good news disclosures, to merit a capital market reaction (Skinner 1994, and Mercer, 2005), we expect less support for H3b and H4b with respect to uncertainty than for optimism and specificity.

DATA AND METHODOLOGY

Data

Our dataset was obtained from Kickstarter, considered the largest and dominant crowdfunding site (Mollick, 2014). Kickstarter uses a reward-based model predominantly, but also allows for donation-based crowdfunding. It does not use loan-based Michels (2012); Gao and Lin, (2013) or equity-based crowdfunding. Kickstarter began in 2009. Funders must be US residents, with US addresses and credit cards. As of December 29, 2014, Kickstarter, which reports overview statistics at its website, lists 76,488 successful and 115,515 failed projects. Kickstarter uses an all-or-nothing funding approach. That is, no funding is received by the project creator until 100% funding has been pledged. Kickstarter reports that of projects that receive over 20% of their requested funding, 79% go on to achieve complete funding.The population of project listings used in our study starts from all Kickstarter listings starting on or after October 1st, 2012 and ending on or before October 31st, 2014. We limit that population to only projects whose outcome was known as of October 31st, 2014. Lastly, we truncate the population at the 1st and 99th percentile of words used in the project description to remove projects with extreme values (i.e., less than 27 words in

the description and more than 2,928 words in the description. This results in a sample of 102,967 unique project observations (38.9% of which were successful) from 89,725 unique project creators. In terms of project category, we note that film & video, music, and publishing projects are the most popular categories of projects listed (at 18%, 15%, and 12% of project observations, respectively), with no other project category providing more than 10% of the sample. Among the subsample of successful (fully funded) projects, film & video and music comprise approximately 20% each of all successful projects, with no other category comprising 10% of successful projects.

Voluntary Disclosure and Project Success Variables

Summary definitions of independent and dependent variables are given in Appendix A and descriptive statistics are presented on Table 1. All continuous variables are winsorized at the first and 99th percentile. Below we describe the variables in more detail. We also discuss predicted relationships between independent and dependent variables.

Table 1: Descriptive Statistics

Variable	Mean	Std Dev	Lower Quartile	Median	Upper Quartile
Backers	2.8648	1.8317	1.3863	2.8904	4.2195
Funded	0.3896	0.4877	0	0	1
Pledge	6.1052	3.1128	4.1897	6.7957	8.4606
Description	4.6167	0.6619	4.1897	4.6250	5.0626
Optimism	0.0283	0.0142	0.0188	0.0265	0.0357
Specificity	0.1075	0.0320	0.0861	0.1044	0.1258
Uncertainty	0.0266	0.0130	0.0178	0.0253	0.0340
Creator website	0.7965	0.4026	1	1	1
created	1.4658	1.1294	1	1	1
backed	3.4272	8.1183	0	1	3
proven	0.0706	0.2562	0	0	0
Facebook shares	3.4479	2.2051	1.3863	3.9512	5.2983
duration	3.4183	0.3363	3.4012	3.4012	3.4965
Goal	8.5832	1.6066	7.6014	8.5174	9.6159
Faq	0.2342	0.5376	0	0	0
comments	0.7892	1.2668	0	0	1.0986
picture	0.4578	0.4982	0	0	1
video	0.0650	0.2465	0	0	0
Updates	3.3669	5.2973	0	1	5
Rewards	9.5124	5.3100	6	9	12
TOTAL	102,967				

This table provides descriptive statistics for all completed Kickstarter projects between October 2012 and October 2014. See Appendix A for variable definitions.

Independent Variables: Disclosure Attributes

Description: The natural log of the number of words in the project description section (main section) of the Kickstarter.com website is counted using content analysis software. Based on research on the effect of voluntary disclosure on capital market outcomes (Francis, Nanda and Olsson, 2008, Verrecchia 2001, and Milgrom 1981), in H1 we predict a positive relationship between the number of words in this section and project success. We focus on the primary disclosure area, the project description (*Description*), as it is explicitly presented on the project listing pages, in contrast to other disclosures that may be made via the

FAQ, updates, or comments section (they require additional navigation to reach). While we control for those other sections (see *Control Variables* below), an informal review of several listings suggests that comments and updates tend to be reactive, with many occurring after the project duration has expired, and either overtly positive or overtly negative (generally indicative of success in initial funding or subsequent problems in delivery of rewards or project completion) in terms of content. We also note that controlling for the volume of disclosure in the risks and challenges section does not alter our inferences.

Optimism: Using the Praise, Satisfaction and Inspiration word lists from Diction 7.0, we measure the number of optimistic words used in the project description section and scale it by the number of words in the project description (Davis, Piger and Sedor, 2012, and Davis and Tama-Sweet, 2012). Based on research on the effect of optimistic content on capital market outcomes that suggests optimistic content can be informative (Davis, Piger and Sedor, 2012) or biased (Huang, Teoh and Zhang, 2014), in H2a we predict a significant relationship between the number of optimistic words and project success.

Specificity: Using the word lists from concreteness, temporal awareness, numerical terms, and spatial awareness from Diction 7.0, we sum the number of words from those lists in the project description and scale by the total number of words in the project description. Content from these dictionaries provides greater detail on timing, quantitative matters, and measurements as well as content that is tangible and material. Based on research on the precision of information and disclosure on capital market outcomes (Verrecchia, 1990, Tasker, 1998, and Baginski, Conrad and Hassell, 1993), in H2b we predict a positive relationship between the number of specific words and project success.

Uncertainty: Using the words lists from Diction 7.0's ambivalence and passivity dictionaries, we sum the number of words from those lists in the project description and scale by the number of words in the project description. Content from these dictionaries suggests uncertainty, hesitation, or an inability to act. In H2c we predict a negative relationship between our measure of *uncertainty* and funding success (Cho, Roberts and Patten, 2010).

Dependent Variables: Funding Success Metrics

Funding success metrics are proxies for measuring how successful the project was in attracting funding. Recall that Kickstarter has an all-or-nothing approach to funding in that a project must first reach at least 100% of its funding goal before it can receive any of the pledged funds. Accordingly, our *Funded* variable determines if 100% has been achieved and is a 0/1 dummy variable. We also consider two continuous measures that are strongly correlated with receiving full funding and consistent with the goal of attracting significant funding from a wide array of individuals: the total amount of funding pledged (.60 correlation) and the number of backers attracted (.65 correlation).

Funded: A dummy variable of one is used if the project was at least 100% funded; otherwise, zero. Projects can receive over 100% funding. This information is provided at the Kickstarter project website.

Pledged: Pledged is the amount of money in USD raised by the project to date as shown at the Kickstarter project website. This information is regularly updated. We use the natural log of this number due to skew in the distribution of the amount of funding provided (ranges from zero to in excess of 13 million dollars).

Backers: Backers is the number of backers or funders funding the project to date as shown at the Kickstarter project website and captures how successful the project was in attracting a wide array of supporters. This information is regularly updated. We use the natural log of this number due to skew in the distribution in the number of backers providing funding (ranges from zero backers to more than 62,000).

Model

$$Funding\ Success\ (Funded, Pledged, Backers) = b0 + b1 * Description + b2 * Optimism + b3 * Specificity + b4 * Uncertainty + b5 * Creator\_Website + b6 * Proven + b7 * Facebook\_Shares + b8 * Created + b9 * Backed + b10 * Duration + b11 * Global + b12 * FAQs + b13 * Comments + b14 * Pictures + b15 * Video + b16 * Updates + b17 * Rewards + Project\ Category\ dummies + e \quad (1)$$

Kickstarter.com (2015) lists fourteen categories of projects, which we control for with a series of dummy variables. Models run using the *Funded* dependent variable utilize a logit specification, while the models utilizing continuous dependent variables are run using heteroskedasticity-adjusted ordinary least squares. Given our H1, we predict a positive significant coefficient on b1. H2a is tested via b2, for which we predict a significant coefficient this is positive (negative) if optimistic content is informative (biased). H2b is tested via b3 and H2c is tested via b4, for which we predict a positive significant coefficient for b3 and a negative significant coefficient for b4.

Control Variables

We also include other measurable attributes of the project, project listing, and project creator as reported by Kickstarter. We control for the project creator listing a website (*creator_website*), as this may serve as additional credibility for the project or an alternate source of information. Additionally, we control for whether the project creator has at least one other successful project during our sample (*Proven*). We control for the length of time that the project is live for (*Duration*), the number of rewards available to funders (*Rewards*), the number of Facebook shares (*Facebook*), and the magnitude of funding required to be deemed fully-funded (*Goal*), as longer durations, greater rewards, broader social media exposure, and more modest goals may impact our outcome variables. We also control for the number of subsequent disclosures (*Updates*) that could be either positive (i.e. thanks to donors, updates on specifications) or negative (delay in product ETA, etc.), the number of comments made on the project listing (that again could be negative or positive), the number of items listed in the *FAQ* (perhaps indicative of a more complicated project), the use of videos in the listing (*videos*), the number of pictures used in the listing (*pictures*), and categorical dummy variables for the project type. All variables are more formally defined in Appendix A.

Univariate results are presented on Table 2 and suggest that successful (*Funded* =1) projects differ significantly from unsuccessful projects (*Funded* = 0) regarding most of our explanatory variables at less than the 1% level. These results suggest that successfully funded projects attract more money and more backers, offer more rewards, disclose more in multiple areas (*Description*, *FAQ*), have more specific content with less uncertainty and optimistic content, have a shorter duration and a more modest goal, attract more comments, provide more updates, attract broader social media interest, are more likely to use some pictures (but not 15+) and some video. The creator attributes also differ between successful and unsuccessful projects, as the creators of successful projects tend to create more projects, back more projects, are more likely to have gotten another project successfully funded. In terms of project category (untabulated), funded projects are more (less) likely to be categorized as film, music, comics, dance, and art (tech, design, journalism, games, publishing, food, photography, crafts, and fashion).

Table 2: Univariate Tests of Differences in Means by *Funded*

	Funded	**Unfunded**	
Backers	4.4020	1.8835	***
Pledge	8.5146	4.5672	***
Description	4.6925	4.5683	***
Optimism	0.0280	0.0285	***
Specificity	0.1094	0.1063	***
Uncertainty	0.0257	0.0271	***
Creator_website	0.8815	0.7422	***
created	1.5962	1.3826	***
backed	5.7409	1.9503	***
proven	0.1493	0.0203	***
Facebook_shares	4.3815	2.8519	***
duration	3.3637	3.4530	***
Goal	8.1731	8.8449	***
Faq	0.3428	0.1649	***
comments	1.4055	0.3957	***
picture	0.5014	0.4299	***
video	0.0779	0.0567	***
Updates	6.3540	1.4602	***
Rewards	11.0941	8.5028	***
TOTAL	40,119	62,848	

*This table examines the difference between Kickstarter projects that reached their funding goals (Funded) and those that did not (Unfunded). The sample period is from October 2012 and October 2014. All Kickstarter.com projects that had closed funding as of the end of October 2014 are included in the analysis. *, **, *** Represent a 10 percent, 5 percent, and 1 percent level of significance, respectively.*
See Appendix A for variable definitions.

RESULTS

Primary analyses of H1 and H2a through H2c using multivariate tests are presented in Table 3.

H1 predicts that the volume of disclosure will positively impact Kickstarter project funding success. We test this prediction using regression analysis with *Funded*, *Pledged* and *Backers* as dependent variables and *Description* as the independent variable. H2a through H2c are tested in the same regressions with the same dependent variables, utilizing *Optimism*, *Specificity*, and *Uncertainty* as independent variables. We note that our models have significant explanatory power, with pseudo r-squared values ranging from .4523 to .6888. As shown in Table 3, *Description* significantly affects in the predicted direction *Funded* ($p < 0.0001$), *Pledged* ($p < 0.0001$) and *Backers* ($p < 0.0001$). Thus, H1 is robustly supported for all our funding outcome dependent variables, suggesting that the volume of disclosure positively impacts funding outcomes in the crowdfunding Kickstarter setting despite being unverified and voluntary. In addition to statistical significance, our results are also economically significant as moving from the 25th percentile to the 75th percentile of *Description* increases the magnitude of pledges dollars attracted by 22.8%, increases the number of backers attracted by 6.8%, and increases the likelihood of reaching fully-funded status by 7.8%.

Table 3: Multivariate Tests of the Effect of the Volume and Content of Voluntary Disclosure on Funding Success

	DV - Funded			DV - Pledged			DV - Backers		
	Coeff	**z**		**Coeff**	**T-stat**		**Coeff**	**T-Stat**	
Intercept	5.3460	40.71	***	1.3014	14.5	***	0.9001	20.26	***
Description	0.1242	8.08	***	0.2352	22.59	***	0.0750	14.15	***
Optimism	1.6747	2.44	**	1.9430	4.17	***	0.9532	4.19	***
Specificity	3.3262	10.89	***	2.0205	9.68	***	0.5977	5.76	***
Uncertainty	-11.9795	-15.85	***	-8.2779	-16.25	***	-3.2466	-13.09	***
Creator_website	0.3959	15.32	***	0.4917	28.67	***	0.2478	30.54	***
created	-0.4087	-34.84	***	-0.1328	-19.52	***	-0.0909	-24.7	***
backed	0.0149	10.15	***	0.0091	11.12	***	0.0113	22.25	***
proven	2.3572	43.97	***	0.5263	19.15	***	0.3482	22.06	***
Facebook_shares	0.3571	74.75	***	0.5103	148.89	***	0.2402	129.02	***
Duration	-0.7782	-27.94	***	-0.3422	-17.35	***	-0.2151	-22.09	***
Goal	-0.8228	-99.02	***	0.1178	25.05	***	0.0204	9.04	***
FAQ	-0.1011	-5.08	***	0.1645	13.14	***	0.1042	14.11	***
Comments	0.9339	79.39	***	0.8131	122.84	***	0.6733	167.05	***
Pictures	0.2652	13.84	*	0.4733	37.01	***	0.2469	36.18	***
Video	-0.2734	-7.22	***	-0.0538	-2.23	**	-0.0386	-2.85	***
Updates	0.2201	71.71	***	0.0815	52.48	***	0.0569	58.62	***
Rewards	0.0535	24.8	***	0.0924	63.44	***	0.0493	61.37	***
Model	Logit			Ordinary Least Squares			Ordinary Least Squares		
Project Category dummies:	Yes			Yes			Yes		
Pseudo R-square:	0.4523			0.6015			0.6888		
Total	102,967			102,967			102,967		

*This table examines the association between the length of project description (H1), optimism (H2a), specificity (H2b), and uncertainly (H2c) on project creators' ability to meet funding goals (Funded), how much funding they raised (Pledged), and how many backers they attracted to the project (Backers). The sample period is from October 2012 and October 2014. All Kickstarter.com projects that had closed funding as of the end of October 2014 are included in the analysis. *, **, *** Represent a 10 percent, 5 percent, and 1 percent level of significance, respectively. All models presented include standard errors that are adjusted for heteroskedasticity. See Appendix A for variable definitions.*

H2a, H2b, and H2c predict that the content of disclosure will impact Kickstarter project funding success. We test this prediction using regression analysis with *Funded, Pledged* and *Backers* as dependent variables and *Optimism, Specificity* and *Uncertainty* as independent variables. Our hypotheses predict a non-directional impact on funding outcomes associated with *Optimism,* a positive impact for *Specificity*, and a negative impact associated with *Uncertainty*. As shown in Table 3, *Optimism* significantly positively affects *Funded* ($p = 0.015$), *Pledged* ($p<0.0001$), and *Backers* ($p < 0.0001$) as predicted by the informativeness argument underlying H2a. We note the economic significance of these results as a move from the 25th percentile to the 75th percentile of *Optimism* increases pledge magnitude by 3.3%, increases the number of backers attracted by 1.6%, and increases the likelihood of reaching fully-funded status by 2%.

Table 3 also shows that *Specificity* has a positive significant impact on *Funded* ($p < 0.0001$), *Pledged* ($p < 0.0001$) and *Backers* ($p < 0.0001$), consistent with H2b. This finding is both statistically significant and economically significant, as moving from the 25th percentile of *Specificity* to the 75th percentile increases the magnitude of dollars pledged by 8.4%, increases the number of backers attracted by 2.4%, and increases the likelihood of reaching fully-funded status by 9.6%. Consistent with H2c, *Uncertainty* has a negative significant coefficient on all three dependent variables ($p<0.0001$) on Table 3. This finding is both statistically significant and economically significant, as moving from the 25th percentile of *Uncertainty* to the 75th percentile decreases the magnitude of dollars pledged by 12.5%, decreases the number of backers attracted by 5.2%, and decreases the likelihood of reaching fully-funded status by 12.3%. Thus, H2 is

supported in all of our main tests, suggesting that in addition to the volume of disclosure (as noted in H1), the content of that unverified voluntary disclosure impacts funding outcomes as follows: more optimistic and more specific disclosure content positively impact funding outcomes, while uncertain disclosure content negatively impact funding outcomes.

We find that the additional disclosure mechanism or additional credibility provided by a website (*creator_website*) is significantly positively associated with all of our dependent variables ($p<0.0001$). We also note that social media activity (Facebook_Shares) is consistently positively associated with our outcomes, while a more ambitious goal is associated with more backers and dollars pledged, but also with a lower likelihood of reaching the goal. A longer duration appears to negatively impact outcomes, while activity in the comments section is positively associated with the outcomes. A proven project creator is positively associated with all three of our funding outcomes. A greater number of rewards appears to help attract backers, pledges, and reach fully-funded status. We find mixed evidence regarding involvement in the Kickstarter community: the number of projects the creator has attempted is negatively associated with our outcomes, while contributing to other creators' projects is positively associated with our outcomes. We find evidence that use of some pictures (but not excessive use) is positively associated with funding success, while video is negatively associated with funding success. Comments and updates are positively associated with funding success, while the effect of items listed in the FAQ is mixed. Table 4 presents testing of H3 using subsample analysis.

Table 4: Tests of the Differential Effects of Creator Credibility

Panel A: Descriptive Statistics and Univariate Tests of Means					
			Creator Website		
	CW=1		**CW=0**	**Difference**	
Funded	0.4312		0.2269	0.2043	***
Pledged	3.1255		1.8444	1.2811	***
Backers	6.5632		4.3121	2.2511	***
Description	4.6769		4.3809	0.296	***
Optimism	0.0280		0.0294	-0.0014	***
Specificity	0.1080		0.1056	0.0024	***
Uncertainty	0.0261		0.0285	-0.0024	***
Created	1.5087		1.2977	0.211	***
Backed	3.9074		1.5476	2.3598	***
Proven	0.0783		0.0406	0.0377	***
Facebook	3.7008		2.4578	1.243	***
Total	82,014		20,953		
Panel B: Multivariate Tests of H3a and H3b					
			Backers		
	CW=1		**CW=0**		
	Coefficient		**Coefficient**	**Difference**	
Description – H3a	0.0616	***	0.1032	*** -0.0416	***
Optimism – H3b	1.2524	**	0.1210	1.1314	***
Uncertainty – H3b	-3.1917	***	-2.6756	*** -0.5161	
Specificity – H3b	0.5139	***	0.8249	*** -0.311	
			Pledged		
Description	0.1844	***	0.3456	*** -0.1612	***
Optimism	2.2614	***	0.2224	2.0390	**
Uncertainty	-7.7587	***	-7.7127	*** -0.0460	
Specificity	1.8095	***	2.6110	*** -0.8015	*

*This table examines whether project creator credibility has a differential effect on the main effects of the volume and content of voluntary disclosure on project funding success. We partition projects by whether the project creator disclosed a website (CW=1) on the Kickstarter page or not (CW=0). Panel B reports the results of multivariate analysis to test H3a (Description), and H3b (Optimism, Uncertainty, Specificity). *, **, *** Represent a 10 percent, 5 percent, and 1 percent level of significance, respectively. See Appendix A for variable definitions.*

To test H3, we split our sample into two subsamples by the *creator_website* dummy variable. The rationale behind this analysis is that project creators with a website may have a greater credibility than project creators not reporting a website, or alternatively may use the website as an additional disclosure mechanism to enhance credibility. Such credibility or additional disclosure may alter the impact of both the volume and content of disclosure on project funding outcomes. Using *creator_website* as a partition allows for a split of the data that is not too extreme (79.7% of projects list a creator website, while 21.3% do not). Panel A of Table 4 presents univariate results of tests of means when partitioning by *creator_website*. These tests suggest that on average, projects listed by creators with a website are more likely to be 100% funded, attract more backers, attract more funding, disclose more (*Description)*, use more specific content, and use less uncertain and less optimistic content. Creators disclosing a website also attracts more Facebook shares, are more likely to be *Proven* and more likely to create other projects and back other projects. Variance-inflation factor (VIF) concerns preclude us from considering interactions between *Creator_Website* and our measures of the volume of voluntary disclosure and the content of voluntary disclosure. We therefore opted to run our regression models separately on the subsamples of *Creator_website*=1 and *Creator_website*=0. We present the coefficients and statistical significances for our independent variables (*Description, Optimism, Specificity, Uncertainty*) for each continuous dependent variable (*Funded, Pledge*) as well as tests of the differences in coefficients across the subsamples on Panel B of Table 4 for our continuous dependent variables. Multivariate analyses of these partitions show that while the volume of disclosure consistently has a positive significant impact on both continuous project funding outcomes, the impact of voluntary disclosure is greater when the creator lacks the credibility or additional disclosure outlet provided by a website (where *Creator_website*=0).

This suggests that the volume of disclosure takes on additional importance when the discloser lacks credibility, mitigating the absence of credibility or substituting for that credibility. This subsample partition analysis also shows that the coefficient on *Optimism* varies between our subsamples, and is only positive and statistically significant when the project creator has the credibility or additional disclosure mechanism of a website (the subsample where *Creator_website*=1), suggesting that one component of the content of voluntary disclosure is complemented by creator credibility (Karamanou and Vafeas, 2005), or more plainly that *Optimism* is only viewed as diagnostic to the prospective funder when the project creator is more credible. *Specificity* has a positive significant coefficient for both attracting backers and pledge dollars across both subsamples. The coefficient on the low credibility / no website group is mathematically larger for both continuous dependent variables, however it is only statistically significantly larger for *Pledged*. The effect of *Uncertainty* is consistently negative and significant for all dependent variables and in both subsamples, suggesting that overly vague, uncertain, or passive content has a similarly negative effect regardless of project creator credibility. This is consistent with related voluntary disclosure literature that finds that bad news is viewed as unconditionally relevant or informative, while good news requires additional attributes to be informative (Hutton and Stocken, 2009, Hutton, Miller and Skinner, 2003, Ng, Tuna and Verdi, 2013). Taken as a whole, these results suggest that less credible project creators benefit more from greater disclosure and more specific content, while optimistic disclosure content is only effective when used by more credible project creators. In contrast, disclosure content with greater uncertainty decreases funding success, regardless of the discloser's credibility.

We take a similar subsample approach for H4, partitioning the sample by more and less competitive project categories. We consider a category more (less) competitive if the projects category's average value of *Funded* is below (above) the overall sample average. Therefore, projects in a high (low) competition category are less likely (more likely) to reach fully-funded status relative to the overall population average. For example, projects in the music category (designated low competition) constitute 15.3% of all projects but 21.3% of successful projects and reach fully-funded status 54.1% of the time. This higher unconditional success rate would suggest less competition for limited resources relative to publishing (designated high competition), which is 11.8% of the overall sample but only 9.4% of successful projects and reach fully-funded status 31.1% of the time. Thus, the projects in publishing are fighting longer odds and more intense

competition to get fully funded. As shown in Table 5, we split the sample into a more competitive group (where the unconditional odds of success are low) and a less competitive group (where the unconditional odds of success are high), and run our model on each subsample, dropping the project category variables (that create the partition). Accordingly, Table 5 presents multivariate analyses of related variable means in Panel A, and of H4a and H4b in Panel B.

Table 5: Tests of the Differential Effects of Market Competition

Panel A: Descriptive Statistics and Univariate Tests of Means

Panel A: Descriptive Statistics and Univariate Tests of Means						
	Competition Level					
	Low		**High**		**Difference**	
Funded	0.4527		0.3186		0.1341	***
Pledged	6.3746		5.8022		0.5724	***
Backers	2.9825		2.7324		0.2501	***
Description – H4a	4.6356		4.5954		0.0402	***
Optimism – H4b	0.0281		0.0285		-0.0004	***
Specificity – H4b	0.1088		0.1061		0.0027	***
Uncertainty – H4b	0.0261		0.0271		-0.0010	***
Created	1.4387		1.4962		-0.0575	***
Backed	3.18		3.7051		-0.5251	***
Proven	0.0696		0.0718		-0.0022	
Creator_website	0.8263		0.7631		0.0632	***
Total	54,499		48,468			
Panel B: Multivariate Tests of H4a and H4b						
	Competition Level					
	Backers					
	Low Coeff.		**High Coeff.**		**Difference**	
Description	0.0545	***	0.1027	***	-0.0482	***
Optimism	1.1456	***	2.0642	***	-0.9186	**
Specificity	0.3015	**	1.5347	***	-1.2332	***
Uncertainty	-4.0701	***	-3.1709	***	-0.8992	*
	Pledged					
Description	0.1893	***	0.3058	***	-0.1165	***
Optimism	2.3005	***	3.8453	***	-1.5448	*
Specificity	1.2631	***	3.7956	***	-2.5325	***
Uncertainty	-9.3433	***	-8.8172	***	-0.5261	

*This table examines the differential effect of project market competition on the main effects of the volume and content of voluntary disclosure on project funding success. Competition level is assessed at Low (High) for the following project categories: music, film and video, art, comics, dance (tech, publishing, photography, journalism, design, crafts, food, and games). Panel B reports the results of multivariate analysis to test H4a (Description), and H4b (Optimism, Uncertainty, Specificity) via project market competition subsamples. *, **, *** Represent a 10 percent, 5 percent, and 1 percent level of significance, respectively.*
See Appendix A for variable definitions.

Panel A of Table 5 presents univariate tests of means of the subsamples generated using the competition partition. These tests suggest that relative to the more competitive project categories, the less competitive project categories are more likely to be fully funded (by construction), attract more backers and funding, disclose more, use less optimistic content and less uncertain content, but more specific content. Project creators in the less competitive project categories also create and back fewer other projects and are more likely to disclose a website. The multivariate results of that analysis, presented on Panel B of Table 5, test H4a and H4b. Results indicate that the volume of disclosure has a consistently positive impact on both continuous measures of project funding success across both subsamples. However, it has a larger positive

impact in more competitive projects market, consistent with prior literature (Darrough and Stoughton, 1990, Harris, 1998, Botosan, 1997, and Li, 2010). In terms of the content of the disclosure, specific content also consistently positively impacts project funding success across both subsamples, however it has a larger positive impact in the high competition subsample, consistent with the idea that product market competition can influence disclosure (Li, 2010). Optimistic content positively and significantly impacts both subsamples as well, however the magnitude of the effect is larger in the more competitive subsample. *Uncertainty* is consistently negative and significant across subsamples for both dependent variables, however the differential effect is not significant when considering competition intensity for the dependent variable *Pledged* and is marginally significant for *Backers*. These results suggest that in more competitive project markets, volume of disclosure, specific content, and optimistic content matter even more than in less competitive environments.

Robustness Checks

We considered a limited sample univariate and multivariate comparison of only unproven creators. This analysis suggests that our main findings are not driven by proven creators, as the coefficients on our variables of interest are qualitatively similar in terms of significance and signed direction when removing proven creators from the sample.

CONCLUSIONS

We examine the impact of voluntary disclosure on capital acquisition success in a crowdfunding setting. Crowdfunding is a relatively new method for seeking financing that has extremely high agency costs, i.e., severe information asymmetry and high adverse selection concerns. Further, crowdfunding information has many unique features compared to mainstream business disclosures. Information disclosures on Kickstarter and other crowdfunding sites are largely voluntary and unverified. On Kickstarter, in particular, the only formal oversight is an initial screening of project listings to minimize outright scams and projects promising rewards of products where there is not a working prototype. Further, there is no independent verification of or mandatory requirements for the disclosures provided by the Kickstarter project creator. Additionally, Kickstarter does not follow up with successfully funded projects to ensure that the rewards promised in the project are actually delivered, leaving it wholly up to the project creator to manage and deliver the promised rewards. Accordingly, we conjecture that unverified projects and lack of oversight of the delivery of rewards on Kickstarter projects conflictedly incentivize project creators to both transparency and opacity in disclosing the true nature of the project and the risk and challenges associated with it. Consequently, we examine whether the volume of voluntary disclosures, the content of voluntary disclosures, and attributes of the project creator are associated with crowdfunding success as indicators of how project funders use the information provided by project creators on Kickstarter.

We analyze 102,967 projects posted on the crowdfunding site Kickstarter.com between October 1, 2012 and October 31, 2014. Since crowdfunding regulations have increased after 2014 (Cascino, Correia and Tamayo, 2019), our dataset is especially interesting because it contains a less regulated and more voluntary disclosure environment than subsequent data. We consider the impact of voluntary, unverified disclosures along with the credibility of the discloser and market competition on crowdfunding outcomes using this large dataset. We find that despite the disclosures being unverified, greater volume of voluntary disclosure is positively associated with the three project outcomes measured: a greater likelihood of achieving funding success, attracting more backers, and attracting a larger amount of funding. Additionally, results indicate that the content of the disclosure also influences those same project funding outcomes: optimistic content and specific content improve the outcomes, while uncertain content negatively impacts them. We also find that discloser credibility and greater market competition influences these outcomes. Specifically, optimistic content requires creator credibility to be effective, while uncertain content is negatively effective regardless of such credibility; and specific content as well as disclosure volume has a larger impact when the creator

lacks credibility suggesting a substitution effect of greater specificity or more disclosure for credibility. The product market competition analysis suggests that the positive impact of the volume of voluntary disclosure, optimistic content, and specific content increases in a more competitive project market.

These results suggest that in the absence of typical mechanisms to overcome agency costs (e.g., corporate governance, blockholders, mandated disclosures, etc.), and despite disclosures on the Kickstarter website being completely unverified, voluntary disclosure aids in reducing information asymmetry and mitigating adverse selection concerns. We interpret this evidence to suggest that project creators use content in the project description as well as fuller disclosure to communicate important diagnostic information regarding the project to potential backers. These results suggest that potential backers consider project creators' disclosures to be at least partially credible signals and accordingly believe themselves to be able to make more informed funding decisions. Overall, our results suggest that project creators use disclosure volume and content within the disclosure to signal the credibility of the project, despite the disclosure being voluntary and unverified. While the possibility still exists that promised rewards may not materialize to capital providers, this unique capital market is operating effectively and not suffering from a severe "lemons" problem (Akerlof, 1970) despite relying on unverified voluntary disclosure and minimal oversight. Limitations to our paper include the proxies we used voluntary disclosure, i.e., volume, content and creator attributes. Different proxies may give different results, although we have no reason to expect this. A second limitation stems from using Kickstarter as the source of our data. Kickstarter is reward-based primarily and does not allow cash or equity funding.

Data derived from loan-based or equity-based crowdfunding sites may result in different findings. A third limitation is that we are able to measure project success only to the point of whether the project is fully funded and are not able to follow projects into the production stage. However, if reward delivery failure were prevalent or rampant, we would expect a significantly lower percentage of projects to reach fully-funded status (Akerlof, 1970). Finally, since we use 2012-2014 data, our analysis is limited by subsequent changes to crowdfunding, especially regarding disclosure requirements and regulations. After 2014, there have been significant changes in mandatory crowdfunding disclosures and US Federal regulations have eased requirements for legal action of investors against crowdfunding projects (Cascino, Correia and Tamayo, 2019). We believe that the results of this study can contribute to increasing successful crowdfunding efforts by providing insights to both those seeking funding and prospective backers into the information environment of crowdfunding. Specifically, our results suggest that increased regulation and oversight of crowdfunding markets may not be a critical factor in making those markets an effective avenue for raising capital.

APPENDIX A

Dependent Variables

Funded: Dummy variable =1 if the project was at least 100% funded; zero otherwise.
Pledged: Pledged is the natural log of the amount of money in USD raised by the project as shown at the Kickstarter project website.

Backers: Backers is the natural log of the number of backers or funders funding the project as shown at the Kickstarter project website

Independent Variables

Description: The natural log of the number of words in the project description section (main section) of the Kickstarter.com website, counted using content analysis software.

Optimism: Using the Praise, Satisfaction and Inspiration word lists from Diction 7.0, we measure the number of optimistic words used in the project description section (Davis and Tama-Sweet, 2012) and scale it by the number of words analyzed.

Specificity: Using the word lists from concreteness, temporal awareness, numerical terms, and spatial awareness from Diction 7.0 scaled by the number of words analyzed.

Uncertainty: The Diction 7.0 variables relating to ambivalence and passivity, as this content suggests uncertainty, hesitation, or an inability to act. The sum of ambivalence plus passivity is scaled by the number of words analyzed.

Control Variables

creator_website – categorical variable represented by 1 if the project creator linked to a website on the Kickstarter page and 0 otherwise.

Backed – the number of Kickstarter projects the project creator has supported in the past.

Proven – categorical variable designated as 1 if the project creator has had one or more Kickstarter projects successfully funded before the project was created, 0 otherwise.

Duration – the natural log of the number of days the project is live.

Rewards – the number of rewards available to funders

Facebook – the natural log of the number of Facebook shares,

Goal – the natural log of the magnitude of funding required to be deemed fully-funded
Updates – the number of disclosures subsequent to the project creation

FAQ – natural log of the number of items listed in the *FAQ*

Comments – the natural log of the number of comments made on the project listing
Videos – one if the project description included videos, 0 otherwise.

Pictures – a dummy equal to one if the project uses between 1 and 15 pictures, zero otherwise.

project_type – 1 if project was in the category: Art, Comics, Crafts, Dance, Design, Fashion, Film & Video, Food, Games, Journalism, Music, Photography, Publishing, Technology, Theater and 0 otherwise.

REFERENCES

Aboody, D. and R. Kasznik (2000) "CEO Stock Option Awards and the Timing of Corporate Voluntary Disclosures," *Journal of Accounting and Economics*, vol. *29*(1), p. 73-100.

Akerlof, G. (1970) "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *The Quarterly Journal of Economics*, vol. 84(3), p. 488-500.

Armstrong, C. S., W. R. Guay and J. P. Weber (2010) "The Role of Information and Financial Reporting in Corporate Governance and Debt Contracting," *Journal of Accounting and Economics*, vol. *50*(2), p. 179-234.

Baginski, S. P., E. J. Conrad and J. M. Hassell (1993) "The Effects of Management Forecast Precision on Equity Pricing and on the Assessment of Earnings Uncertainty," *The Accounting Review*, vol. 68(4), 913-927.

Botosan, C. A. (1997) "Disclosure Level and the Cost of Equity Capital," *The Accounting Review*, vol. 72(3), 323–349.

Brockman, P., I. K. Khurana and X. Martin (2008) "Voluntary Disclosures Around Share Repurchases," *Journal of Financial Economics*, vol. *89*(1), p. 175-191.

Camerer, C. and E. Fehr (2006) "When Does 'Economic Man' Dominate Social Behavior?" *Science*, vol. 311(5757), p. 47-52.

Cascino, S., M. M. Correia and A. Tamayo (2019) "Doe Consumer Protection Enhance Disclosure Credibility in Reward Crowdfunding" *Journal of Accounting Research*, vol. 57(5), p. 1247-1302.

Chaiken, S. and D. Maheswaran (1994) "Heuristic Processing Can Bias Systematic Processing: Effects of Source Credibility, Argument Ambiguity, and Task Importance on Attitude Judgment," *Journal of Personality and Social Psychology*, vol. 66(3), p. 460-473.

Cho, C. H., R. W. Roberts and D. M. Patten (2010) "The Language of US Corporate Environmental Disclosure," *Accounting, Organizations and Society*, vol. *35*(4), p. 431-443.

Clinch, G. and R. E. Verrecchia (1997) "Competitive Disadvantage and Discretionary Disclosure in Industries," *Australian Journal of Management*, vol. *22*(2), p. 125-137.

CNBC Tech Crowd Website (2015) Accessed July 10, 2015 at: www.cnbc.com/id/101816719
Core, J. E. (2001) "A Review of the Empirical Disclosure Literature: Discussion," *Journal of Accounting and Economics*, vol. 31(1), p. 441-456.

Darrough, M. and N. Stoughton (1990) "Financial Disclosure Policy in an Entry Game," Journal *of Accounting and Economics,* vol. 12(1-3), p. 219-243.

Davis, A., J. Piger and L. Sedor (2012) "Beyond the Numbers: Measuring the Information Content of Earnings Press Release Language," *Contemporary Accounting Research,* vol. 29(3), p. 845-868.

Davis, A. and I. Tama-Sweet (2012) "Managers' Use of Language Across Alternative Disclosure Outlets: Earnings Press Releases versus MD&A," *Contemporary Accounting Research*, vol. *29*(3), p. 804-837.

Davis, A., W. Ge, D. Matsumoto and J. Zhang (2015) "The Effect of Manager-Specific Optimism on the Tone of Earnings Conference Calls," *Review of Accounting Studie*s, vol. 20(2), p. 639-673.

Dhaliwal, D., S. Huang, I. K. Khurana and R. Pereira (2014) "Product Market Competition and Conditional Conservatism," *Review of Accounting Studies*, vol. 19(4), p. 1309-1345.

Demers, E. and C. Vega (2008) *Soft Information in Earnings Announcements: News or Noise?* Federal Reserve Board.

Diamond, D. W. and R. E. Verrecchia (1991) "Disclosure, Liquidity, and the Cost of Capital," *The Journal of Finance*, vol. 46(4), p. 1325-1359.

Einhorn, E. and A. Ziv (2008) "Intertemporal Dynamics of Corporate Voluntary Disclosures," *Journal of Accounting Research*, vol. 46(3), p. 567-589.

Eng, L.L. and Y. T. Mak (2003) "Corporate Governance and Voluntary Disclosure," *Journal of Accounting and Public Policy*, vol. 22(4), p. 325-345.

Ernst & Young LLP (1998) *Measures that Matter*, Cambridge. MA.
Fing, Li. (2010) "Textual Analysis of Corporate Disclosures: A Survey of the Literature," *Journal of Accounting Literature,* vol. 29, p. 143-165.

Francis, J., D. Nanda and P. Olsson (2008) "Voluntary Disclosure, Earnings Quality, and Cost of Capital," *Journal of Accounting Research,* vol. 46(1), p. 53-99.

Frankel, R., M. Johnson and D. Skinner (1999) "An Empirical Examination of Conference Calls as a Voluntary Disclosure Medium," *Journal of Accounting Research,* vol. 37(1), p. 133-150.

Gao, Q. and M. Lin (2013) "Linguistic Features and Peer-to-Peer Loan Quality: A Machine Learning Approach," Working paper, University of Arizona.

Gilbert, D. T. (1991) "How Mental Systems Believe," *American Psychologist,* vol. 46(2), p. 107–119.

Gilbert, D. T. R. W. Tafarodi and P. S. Malone (1993) "You Can't Not Believe Everything You Read," *Journal of Personality and Social Psychology,* vol. 65(2), p. 221–233.

Glosten, L. R. and P. R. Milgrom (1985) "Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders," *Journal of Financial Economics*, vol. 14(1), p. 71-100.

Glover, S. M. (1997) "The Influence of Time Pressure and Accountability on Auditors' Processing of Nondiagnostic Information," *Journal of Accounting Research*, vol. 35(2), p. 213-226.

Graham, J., C. Harvey and S. Rajgopal (2005) "The Economic Implications of Corporate Financial Reporting," *Journal of Accounting and Economics*, vol. 40(1), p. 3-73.

Grossman, S. J. and O. D. Hart (1980) "Takeover Bids, the Free-rider Problem, and the Theory of the Corporation," *The Bell Journal of Economics*, vol. 11(1), p. 42-64.

Hackenbrack, K. (1992) "Implications of Seemingly Irrelevant Evidence in Audit Judgment," *Journal of Accounting Research*, vol. 30(1), p. 126-136.

Harris, M. and A. Raviv (1991) "The Theory of Capital Structure," *The Journal of Finance*, vol. 46(1), p. 297-355.

Harris, M. S. (1998) "The Association between Competition and Managers' Business Segment Reporting Decisions," *Journal of Accounting Research*, vol. 36(1), p. 111-128.

Healy, P. M. and K. G. Palepu (2001) "Information Asymmetry, Corporate Disclosure, and the Capital Markets: A Review of the Empirical Disclosure Literature," *Journal of Accounting and Economics*, vol. 31(1), p. 405-440.

Huang, A., A. Zang and R. Zheng (2014) "Evidence on the Information Content of Text in Analyst Reports," *The Accounting Review*, vol. 89(6), p. 2151-2180.

Huang, X., S. H. Teoh and Y. Zhang (2014) "Tone Management," *The Accounting Review*, vol. 89(3), 1083-1113.

Hutton, A. P., G. S. Miller and D. J. Skinner (2003) "The Role of Supplementary Statements with Management Earnings Forecasts," *Journal of Accounting Research*, vol. 41(5), p. 867-890.

Hutton, A. and P. Stocken (2009) "Prior Forecasting Accuracy and Investor Reaction to Management Earnings Forecasts," Working Paper, Boston College and Dartmouth College.

Jones, B. (1999) "Bounded Rationality," *Annual Review of Political Science*, vol. 2(1), p. 297-321.

Kahneman, D., P. Slovic and A. Tversky (1982) *Judgment Under Uncertainty: Heuristics and Biases*, Cambridge, UK: Cambridge University Press.

Karamanou, I. and N. Vafeas (2005) "The Association between Corporate Boards, Audit Committees, and Management Earnings Forecasts: An Empirical Analysis," *Journal of Accounting Research*, vol. 43(3), p. 453-486.

Karim, K. E., R. Pinsker and A. Robin (2013) "Firm Size and Voluntary Disclosure of Nonfinancial Information by Private versus Public Firm Managers," *Managerial Auding Journal*, vol. 28(9), p. 866-892.

Kickstarter.com (2015) Accessed July 10, 2015 at: www.kickstarter.com.

Kickstarter FAQ. (2015) Accessed July 10, 2015 at: www.kickstarter.com/help/faq/kickstarter%20basics#Acco.

Lang, M. H. and R. J. Lundholm (2000) "Voluntary Disclosure and Equity Offerings: Reducing Information Asymmetry or Hyping the Stock?" *Contemporary Accounting Research,* vol. 17(4), p. 623–662.

Lansford, B., B. Lev and J. W. Tucker (2013) "Causes and Consequences of Disaggregating Earnings Guidance," *Journal of Business Finance & Accounting,* vol. 40(1-2), p. 26-54.

Leone, A. J., S. Rock and M. Willenborg (2007) "Disclosures of Intended Use of Proceeds and Underpricing in Initial Public Offerings," *Journal of Accounting Research,* vol. 45(1), p. 111–153.

Li, F. (2008) "Annual Report Readability, Current Earnings, and Earnings Persistence," *Journal of Accounting and Economics,* vol. 45(2), p. 221-247.

Li, F. (2010) "The Information Content of Forward-looking Statements in Corporate Filings—A Naïve Bayesian Machine Learning Approach," *Journal of Accounting Research,* vol. 48(5), p. 1049-1102.

Lii, Y. S. and M. Lee (2012) "Doing Right Leads to Doing Well: When the Type of CSR and Reputation Interact to Affect Consumer Evaluations of the Firm," *Journal of Business Ethics,* vol. 105(1), p. 69-81.

Massolution. (2013) "Crowdfunding Report of 2013," Massolution.com.

Mayew, W., M. Sethuraman and M. Venkatachalam (2015) "MD&A Disclosure and the Firm's Ability to Continue as a Going Concern," *The Accounting Review,* vol. 90(4), p. 1621-1651.

McNichols, M. (1989) "Evidence of Informational Asymmetries from Management Earnings Forecasts and Stock Returns," *The Accounting Review,* vol. 64(1), p. 1-27.

Mercer, M. (2005) "The Fleeting Effects of Disclosure Forthcomingness on Management's Reporting Credibility," *The Accounting Review,* vol. 80(2), p. 723-744.

Merkley, K. (2014) "Narrative Disclosure and Earnings Performance: Evidence from R&D Disclosures," *The Accounting Review,* vol. 89(2), p. 725-757.

Michels, J. (2012) "Do Unverifiable Disclosures Matter? Evidence from Peer-to-Peer Lending," *The Accounting Review,* vol. 87(4), p. 1385-1413.

Milgrom, P. R. (1981) "Good News and Bad news: Representation Theorems and Applications," *The Bell Journal of Economics,* vol. 12(2), p. 380-391.

Mollick, E. (2014) "The Dynamics of Crowdfunding: An Exploratory Study," *Journal of Business Venturing,* vol. 29(1), p. 1-16.

Murthy, U. and Patrick Wheeler (2018) "The Effects of Decision-Aid Design on Auditor Performance in Internal Control Evaluation Tasks," *Journal of Information Systems,* vol. 32(2), p. 95-113.

Ng, J., I. Tuna and R. Verdi (2013) "Management Forecast Credibility and Underreaction to News," *Review of Accounting Studies,* vol. 18(4), p. 956-986.

Nisbett, R. E., H. Zukier and R. E. Lemley (1981) "The Dilution Effect: Nondiagnostic Information Weakens the Implications of Diagnostic Information," *Cognitive Psychology,* vol. 13(2), p. 248-277.

O'Keefe, D. (1998) "Justification Explicitness and Persuasive Effect: A Meta-analytic Review of the Effects of Varying Support Articulation in Persuasive Messages," *Argument and Advocacy,* vol. 35(Fall), p. 61-75.

Petty, R. and J. Cacioppo (1986) *Communication and Persuasion: Central and Peripheral Routes to Attitude Change,* New York: Springer-Verlag.

Price, R. (2000) "Voluntary Earnings Disclosures in Uniform Franchise Offering Circulars," *Journal of Accounting and Economics,* vol. 28(3), p. 391–423.

Price, S. M., J. S. Doran, D. R. Peterson and B. A. Bliss (2012) "Earnings Conference Calls and Stock Returns: The incremental informativeness of textual tone," *Journal of Banking & Finance,* vol. 36(4), p. 992-1011.

Prosper.com (2023) Accessed June 29, 2023 at: www.prosper.com.

Skinner, D. J. (1994) "Why Firms Voluntarily Disclose Bad News," *Journal of Accounting Research,* vol. 32(1), p. 38-60.

Saxon, Gregory and Chao Guo (2020) "Social Media Capital: Conceptualizing the Nature, Acquisition, and Expenditure of Social Media-based Organizational Resources," *International Journal of Accounting Information Systems,* vol. 36, p. 1-18.

Security and Exchange Commission (SEC) (2015) "Crowdfunding 17 CFR Parts 200, 227, 232, 239, 240, 249, 269, and 274," Accessed June 29, 2023 at: www.sec.gov/rules/final/2015/33-9974.pdf.

Sengupta, P. (1998) "Corporate Disclosure Quality and the Cost of Debt," *The Accounting Review,* vol. 73(4), p. 459–474.

Sivakumar, K. and G. Waymire (1994) "Voluntary Interim Disclosure by Early 20th Century NYSE Industrials," *Contemporary Accounting Research,* vol. 10(2), p. 673–698.

Stocken, P. C. (2000) "Credibility of Voluntary Disclosure," *The RAND Journal of Economics,* vol. 31(2), p. 359-374.

Tasker, S. C. (1998) "Bridging the Information Gap: Quarterly Conference Calls as a Medium for Voluntary Disclosure," *Review of Accounting Studies,* vol. *3*(1), p. 137-167.

U.S. Congress, 112th (2012) "Jumpstart Our Business Startups (JOBS) Act.".
Valta, P. (2012) "Competition and the Cost of Debt," *Journal of Financial Economics,* vol. 105(3), p. 661-682.

Verrecchia, R. E. (1990) "Information Quality and Discretionary Disclosure," *Journal of Accounting and Economics,* vol. 12(4), p. 365-380.

Verrecchia, R. E. (2001) "Essays on Disclosure," *Journal of Accounting and Economics,* vol. *32*(1), p. 97-180.

Wall Street Journal (WSJ) (27 October 2015) "SEC Set to Approve Final Rules on Crowdfunding," Accessed June 29, 2023 at: http://search.proquest.com/wallstreetjournal/docview/1727470463/fulltext/.

Wall Street Journal (WSJ) (30 October 2015) "SEC Opens Way for Wider Pool of Investors to Take Stakes in Startups," Accessed June 29, 2023 at: http://search.proquest.com/wallstreetjournal/docview/1728306467/fulltext/.

Wheeler, Patrick and Yibo Zhang (2021) "The Impact of Data Type and Graphical Presentation Type on Financial and Non-financial Information Literacy in Undergraduate Accounting Students: Two Experiments with Business Analytics Dashboards," *The Accounting Educators' Journal,* vol. 31, p. 1-28.

Williams, P. (1996) "The Relation between A Priori Earnings Forecast Management and Analyst Response to a Current Management Forecast," *The Accounting Review,* vol. 71(1), p. 10-113.

Wood, L. I. (2012) "The Impact of Decision Aid Use on the Dilution Effect When Assessing Fraud," *Journal of Finance & Accountancy,* vol. 9, p. 23-42.

Xu, J. (2012) "Profitability and Capital Structure: Evidence from Import Penetration," *Journal of Financial Economics,* vol. 106(2), p. 427-446.

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STRATEGIES FOR PUBLISHING IN PEER-REVIEWED JOURNALS: A PATH FOR CAREER SUCCESS

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ABSTRACT

Professors face relentless pressure to publish while simultaneously meeting teaching and service demands. This paper provides career guidance on balancing these activities and provides one senior academic's thoughts and experiences on strategies for publishing in peer-reviewed journals. Aspiring authors can use information provided here to improve their chances of publication and the quality of journal in which they publish. Seasoned authors can use information here to augment the tools in their research arsenal.

JEL: A20, I23, I25, I26

KEYWORDS: Peer-Reviewed Journals, Promotion, Tenure, Journal Quality, Research Partners

INTRODUCTION

Many faculty struggle to navigate their careers and experience difficulties producing an appropriate research agenda. As a once struggling author, I relate to the challenges faculty face. New faculty sometimes struggle with effectively developing a research program. Often Ph.D. programs provide limited training on effectively creating research beyond that necessary to complete the dissertation. Older faculty, who served in administrative roles and later return to the faculty frequently struggle to re-develop a research program. Still others possess master's degrees, receiving limited exposure to the academic research machine in their formal education. Nevertheless, employers expect them to publish research. This paper provides a primer to help faculty at all levels successfully publish research.

The author presented elements of this research at numerous Global Conference on Business and Finance academic meetings. This work benefits from session attendee comments. Many individuals, including both junior and senior faculty, indicated benefits from the presentation and encouraged me to publish a paper on the topic. One anonymous friend and colleague wrote: "I honestly think your presentation and underlying paper on publishing is, as I told you at the time, the best I've seen or read on this topic. I too wish something like this had been around when I was an assistant professor. Do please take the time to assemble and publish it, it would be a real public service." The same colleague suggested the manuscript would receive many citations. I am awe struck and humbled by the vote of confidence and hope to meet this substantial expectation. However, only time will reveal the quality of this work and accuracy of his predictions. With this encouragement I endeavored to complete the task.

Advice comes cheap. Moreover, the value of any advice requires measurement against knowledge and experience of the advice-giving individual. The work provided here is no exception. Thus, the paper begins with a brief author introduction. I earned a Ph.D. in Finance with Economics and Statistics minors from Texas Tech University, MBA from North Dakota State University, and BS in Accounting and Agriculture from Dickinson State University. I am currently Professor of Finance at the University of Hawaii at Hilo (UHH). I have worked at UHH for 27 years progressing through the ranks of Assistant and Associate to Full Professor. I also briefly taught for the Naval Postgraduate School. I teach sophomore, junior, senior and graduate level finance courses. I earned several teaching awards including the prestigious University

of Hawaii, Board of Regents Medal for Excellence in Teaching, given to about 1 in 500 faculty members at the University of Hawaii each year. My ratemyprofessors (www.ratemyprofessors.com) overall quality rating equals 4.8 out a 5.0 possible, with a difficulty rating of 4.0 out of 5.0 possible across 103 ratings. Some 98 percent of students indicate a willingness to take additional courses from me.

I am author or co-author on more than eighty articles appearing in business and finance journals including thirteen manuscripts in journals ranked A or A- by at least one ranking organization. I completed 100 presentations at academic meetings and published in many proceedings. I rank among the top one half of one percent (4,863rd from 1,331,553 authors) among all academics, all time, for research impact by the Social Science Research Network (www.ssrn.com). Further, based on a recent study, my combined research and teaching performance places me among the top finance professors nationally (Jalbert, 2019).

My record involves substantial service including working on personnel committees at the department, college and university levels. I also served as external tenure reviewer for thirteen universities. I worked as arbitrator for the Financial Industry Regulatory Authority (FINRA) where I adjudicated disputes between stockbrokers and their clients. I served as Editor in Chief, or Co-Editor in Chief for eight journals continuously for seventeen years. In this role, I participated in the production of more than 250 journal issues. I also co-organized 35 conferences. Prior to my time in academics, I worked for a geology company in the oil and gas industry; and operated a grain farm.

The remainder of this paper is organized as follows. The next section contains a review of the relevant literature. The following section discusses the need for faculty to conduct research, and why doing so is in their best interest. The article continues by suggesting methods authors might use to generate research ideas. Next, the paper discusses issues related to identifying time to complete research and continues by discussing some preliminary considerations in conducting research. The following section discusses how to write and organize the paper itself followed by noting some common grammar and writing errors. Next the paper discusses post submission efforts and the revise and resubmit process. A section related to documenting and tracking the research follows. The paper closes with some concluding comments.

LITERATURE REVIEW

There exists a moderate sized literature providing advice on publishing research. Much of the extant literature appears in books along with some journal articles. The existing research involves senior faculty providing advice acquired after years of success and frustrations in the publication process. This literature review provides a survey of selected literature.

Day (2017) provides a book outlining how to get published. The book addresses issues such as getting time to conduct research, the fear of rejection, and conflicting priorities. Most interestingly, she outlines a process to complete a paper in a week. This work is arguably the most comprehensive source available.

Hauptman (2005) provides advice for publishing and a list of suggestions for authors. He specifically notes the value of writing and publishing workshops for the uninitiated. He further argues that faculty should not publish exclusively in peer-reviewed journals. Boellstorff (2011) suggests that faculty avoid producing chapters in edited volumes until after achieving tenure. He discusses a journal triangle, including three types of journals: general, area and topic. He argues that publishing in each area more effectively builds a career than publishing in only one journal type.

A great deal of attention focuses on publishing in high-level journals. Choi (2002) provides a discussion of how to publish in top journals. He notes with a journal acceptance rate of 15 percent, an author needs about seven papers under review at all times to achieve one accepted paper per year. He advises untenured authors to strive to for six manuscripts continuously under review.

Some authors including Busse and August (2021) provide some best practices for publishing research. Much like the current research, they discuss how authors might best organize their paper. They specifically encourage research teams to identify author roles early in the research process. Klingner, Scanlon and Pressley (2005) present a strong discussion that walks readers through the publication process including a substantial discussion of the review process and managing the revise and resubmit element.

While academic type articles represent the backbone of academics, practitioner articles provide valuable insights as well. Boyle, Boyle and Hermanson (2020) provide guidance on publishing in practitioner journals, dividing practitioner journal articles into five types. They discuss opportunities to produce practitioner articles, including by involving graduate students. Finally, they discuss issues related to securing academic credit for publishing these articles. Specifically, they note the need for vocal faculty who advocate for the value of practitioner articles in tenure processes.

How and why journals accept various articles constitutes an ongoing mystery. McKercher (2015) discusses how journals select appropriate manuscripts for publication. He argues there exist a disproportionately large number of papers in lower tier journals with sufficient quality for publication in higher tier journals. He also argues recent trends in publication resulted in many papers being published related to oversaturated topics. He argues these papers lack suitability for publication in top-tier journals. Haley (2023) furthers this point in discussing the Law of Triviality proposed by Parkinson (1957). She argues the trend toward triviality stems partly from changes in academic institutions and incentives where business school face pressure to produce visible credentials including research rankings.

Ahlstrom (2017) provides advice for publishing with focus on introduction sections. He argues that articles commonly receive rejections not because of theory, data or methods applied, but rather because of framing and organizational issues.

The current paper extends existing literature by providing another viewpoint on best practices in publishing. This paper touches on some topics not commonly addressed by other authors including how to carve time out of a busy schedule to produce publications, and implications of taking on service roles like department chairperson.

THE NEED FOR RESEARCH

With the increasing popularity of AACSB accreditation, and the corresponding demand for research by universities, most every faculty faces pressure to research. Universities desire faculty members who meet AACSB standards of academically qualified, or professionally qualified. Faculty unable to meet these standards become undesirable. Remaining valuable to universities, and having prospects at other institutions, requires a continuous research agenda that meets established standards.

Successful tenure and promotion applications almost always require research. Further, an active research agenda promises an element of job security. Often, research relates to special salary adjustments that substantially impact career earnings. Moreover, in the event of a necessary move, a strong research agenda increases the quality and quantity of job opportunities. Further, prestige associated with an active research agenda affords a faculty additional authority in department meetings.

Some individuals elect not to conduct research. These individuals typically focus on teaching to the exclusion of research. Others take on leadership roles that consume time which precludes research. This approach is not without peril. For those possessing a master's degree, a career without research provides a reasonable career path. These individuals typically hold instructor or lecturer level positions and commonly teach 4 or perhaps 5 courses per semester. While a solid career, these faculty generally receive comparatively low salaries and experience limited job security. There exist few paths for promotion and

the route to a better career is complex. Given limited time availability due to heavy teaching commitments, completing research becomes difficult. These individuals should leverage their teaching efforts by converting innovative teaching materials and approaches they develop into research papers. They might also work toward achieving a Ph.D., thereby increasing earning potential and job security greatly.

Limited career paths exist for Ph.D. level professors unable or unwilling to conduct research. They can take instructor or lecturer types of jobs. However, doing so fails to capitalize on investments made to earn the Ph.D. and results in substantially lower earnings than otherwise available. Sometimes individuals experience research fatigue after completing their dissertation. However, failing to continue a research agenda implies limited future career prospects.

Some faculty achieve tenure and stop their research agenda. They lose their academically qualified status and become an accreditation liability. Still others take on heavy service commitments to the exclusion of a research agenda. While taking a non-research path has appeal for some, substantial caution is warranted. Faculty assuming heavy service roles must often return to the faculty at some point in their career. These faculty find themselves in a predicament, no longer being academically qualified. They must quickly produce research.

GETTING AN IDEA

An idea represents the starting point for any research. Ideas come from many sources and occur at any time. As most know, left undocumented, these ideas quickly give way to other thoughts. Document ideas to preserve them for those moments when research time exists. For convenience, list ideas in a special section of the vita. Remove the ideas section when distributing the vita.

The dissertation represents an easy publication opportunity when coming out of a Ph.D. program. Sometimes individuals set their dissertation aside and never publish work from it. They may be burnt out on the project or have received discouraging negative comments. Set those concerns aside and move forward. Authors realize substantial value for pushing the dissertation through to publication.

Individuals too burnt out to complete the work might seek a co-author willing to finish the necessary editing and submit the paper to a journal. Often newly minted Ph.D.'s misestimate the quality of their work. Some submit their dissertation to top journals and repeatedly get rejected. Do not be discouraged. Others view their dissertation negatively and fear rejection. The dissertation represents your first work. Flaws and limitations in dissertations occur. Submit the paper. When rejections happen, do not despair, continue the effort to publish your work in a lower-level journal.

In addition to the dissertation, newly minted Ph.D.'s should examine papers written for Ph.D. program classes to identify publication opportunities. These papers may provide a limited contribution but nevertheless meet the standards for publication in lower-level journals.

Perhaps the most daunting research situation occurs when you simply don't have an idea to begin working on. In this situation, reading newspapers, periodicals, discipline related news outlets and journal articles help produce ideas. Look at new developments in the field for research opportunities. Attending academic conferences and lectures also provides a potential idea source. Examine your teaching materials for publishable innovative teaching approaches. Gear everything you work on toward becoming a publication. Viewing your work through this lens helps one identify opportunities that otherwise go unnoticed. In the absence of your own idea, consider working with a colleague with an idea you can contribute positively to. This approach gets you into research production faster and buys you time to develop your own ideas.

When selecting an idea keep in mind the targeted journal's quality. Some ideas offer the potential for top journals while others lack that potential. For example, case studies rarely, if ever, qualify for publication in a field's top journals. If your university demands high-end journals, only work on ideas with potential for top journal publication.

MAKING TIME TO CONDUCT RESEARCH

Time is a necessary input to produce research. In a busy world, finding time to conduct research requires focus and involves making tradeoffs. Achieving tenure constitutes an overriding goal for junior faculty. Avoid summer and overload teaching until fully meeting research requirements for promotion. Moreover, some projects require time in large blocks. Summer breaks offer the best opportunity to secure that block of time. Future earnings power available through additional research offsets summer teaching money.

Sabbaticals offer an excellent opportunity to conduct research. Many faculty eligible for sabbatical forego the opportunity. Passing on a sabbatical opportunity detracts from future earnings. Do not let administrators or others guilt you into passing on a sabbatical. Universities adopt sabbatical policies because they offer positive benefits. Faculty eligible for sabbatical should take the opportunity. Sabbaticals refresh you, give you new perspectives on your work and provide an opportunity to advance your career. When planning a sabbatical consider doing something different and out of your ordinary routine. Conducting special research, living in a different destination, raising a newborn child, and simply stepping away from your department, all represent positive opportunities.

While large blocks of time provide a great research opportunity, authors should also capitalize on small time blocks. Large time blocks occur infrequently. Often, time to conduct research comes in 10 to 30-minute increments. Effectively utilizing these short breaks accommodates a great deal of research. Some faculty use small time increments to take a break or focus on a non-productive task. Rather than doing that, use those brief increments to conduct research. Do a literature review search, search for a data source or write a paragraph of the paper.

Teaching often comprises the primary goal of a university and of faculty. Nevertheless, efficiently manage teaching efforts to deliver a quality product while controlling time expended. To the extent possible simplify and automate elements of teaching. Prepare class materials in ways that afford repetition in subsequent semesters. Rather than rewriting an entire test, use some elements from old tests. When possible, utilize multiple choice exams rather than essay tests.

Most universities offer faculty two or three day per week teaching schedules. Two day per week teaching schedules prove most time efficient. Regardless of which schedule you have, properly managing teaching efforts provides substantial time for research. Focus all your efforts on teaching on two-day teaching schedules. Schedule office hours between classes. During office hours, focus on preparing classes for the next day of teaching, writing exams and grading papers. Remain at the office on teaching evenings until fully prepared for the following teaching day. Completing teaching tasks exclusively on teaching days allows faculty to focus on research and other activities on the remaining days.

There exists no limit to available service opportunities in a university. Some service activities consume exorbitant amounts of time, drawing from time normally available for research. While every university adopts different standards, faculty service activities should not exceed three committees of which one involves a leadership role. Decide on your committee assignment limit and stick to it. Sometimes that implies declining requests, even those coming from upper-level administrators. Senior faculty sometimes point out that serving on XXX committee looks good on your tenure application. While potentially true, additional service assignments rarely, if ever, offsets the absence of a required publication on tenure applications.

Consider carefully before accepting administrative roles. Become a leader in your college only if you want that career path and wish to progress through the leadership roles to dean and beyond. Serving as a department chair or dean is usually all time consuming, precluding research activities. Administration often functions as a one-way street. Difficulties occur when reversing course and returning, voluntarily or involuntarily, to a faculty position. After several years away from the faculty role, teaching tools and skills become rusty and require refreshing. Further, a research plan must be redeveloped. Reinitiating a research program proves difficult for many returning administrators. Further returning to faculty without being academically or professionally qualified creates problems for the college and implies pressure to requalify.

PRELIMINARY CONSIDERATIONS

Selecting Research Partners

Research partners can provide skills that augment your own and lead to stronger research. Someone with weaker statistical skills might partner with someone possessing strong statistical skills. Some faculty partner with someone having a strong reputation and higher end journal publications experience. They have experience dealing with top journals and bring valuable reputation capital to the project. However, selecting a research partner involves risk. While research partners can enhance a project, they can also doom a project to failure.

There exists an infinite supply of individuals happy to co-author papers, provided someone else does all the work. Even worse, on occasion these individuals, who have marginally contributed to a paper, demand submission to a high-end journal of their choosing. And of course, someone else must complete the work to get the paper to that level. Sometimes individuals use their positions as dean, department chair, or other positions of authority to coerce individuals into a co-authorship arrangement. They have little interest in research production but leverage their power in tenure and other decisions to secure a publication. Situations like these create ethical issues, conflicts, and other problems in completing the research.

To avoid these and other pitfalls, carefully screen candidate co-authors. Quality co-authors make positive contributions to the project and pleasantly work with you. Positive contributions come in many ways. Valuable expertise includes writing modeling and statistical analysis. Some co-authors secure access to necessary proprietary datasets. Still others, as noted earlier, possess name recognition helpful in the journal submission phase.

Table 1 identifies some items to consider when selecting research partners. Identify what motivates an individual to participate in research. Authors working to achieve tenure typically work with high degrees of motivation. Senior faculty, for whom a publication is not critical, possess less motivation. Gaining an understanding of individual capabilities provides important insights. In the absence of prior knowledge, examining an individual's previous research reveals much about their abilities. Pay special attention to first author efforts.

Table 1: Issues to Consider in Selecting Coauthors

Motivation of the individual.
Abilities to contribute positively.
Access to required proprietary datasets.
Availability of time to conduct research.
Compatible time frames.
Integrity to reciprocate.
Compatible personalities.
Willingness to complete a significant part of the project.

This table identifies issues to evaluate when selecting a co-author.

Some scholars secure access to proprietary datasets required for a project. Faculty from smaller schools generally lack access to expensive datasets like Compustat and CRSP. Co-authors from schools with access to appropriate databases bring valuable benefits to the project. However, use caution when pursuing this approach. Often data-providing co-authors view data access the extent of their project commitment.
Some individuals have the desire to conduct research and need publications, however they lack the necessary time availability. As an example, a junior faculty approaches a senior faculty about working together on a research project. The senior faculty expresses a high level of interest in being included in the project. However, when the junior faculty inquires regarding time availability to work on the project, the senior faculty responds they have no time. These individuals frequently intend to do nothing on the project, or at most dictate how others conduct the research. When confronted with this situation consider abandoning the prospect and pursuing other opportunities.

While some faculty enjoy available time to work on research you may have inconsistent time frames.
A non-tenured faculty faces an imposing tenure requirement, with the tenure clock representing an inflexible target date. Publication ahead of the target date sometimes requires project sacrifices. Full professor co-authors have different time frames. They sometimes object to those sacrifices and delay the project beyond a tenure date.

People enjoy lives outside of academia. Evaluate non-work lives of potential long-term co-authors. Sometimes life intervenes with activities more important than research, such as the birth of a child, or incapacitation of a family member. As a result, on some papers you will need to take the lead and complete most of the work. Look for research partners with integrity to reciprocate your efforts on later papers.

Identify potential co-authors with a personality compatible with yours. Some individuals achieve satisfaction by arguing every point in a paper. In many instances, these arguments consume a great deal of time but ultimately make little difference in the project. While this approach suits some personalities, it proves frustrating for other individuals. Personality conflicts can become sufficiently problematic to entirely doom projects. For these and other reasons, start only one project with a new co-author. Should personality or other differences make the partnership untenable abandon only one paper rather than an entire research agenda.

Working with former Ph.D. professors confers potential benefits. However, this approach also requires some caution. Some former professors view you as a full partner in the project. Others see you as their student and direct your efforts like they would a Ph.D. student. Understand the relationship nature with former professor co-authors prior to engaging in a project.

At the outset, discuss roles of each co-author to identify a work distribution plan. Doing so clarifies expectations and identifies co-author problems early. Agreeing on the type of journal, or specific journal, for submission in advance resolves potential future problems.

Once you initiate a paper, or become co-author on another's paper, it is imperative to perform honorably. Clearly communicate and take responsibility for significant parts of the work. Complete tasks in a timely fashion. Be cooperative with co-authors. Present your opinions but show flexibility to accept the views of others. Listen carefully and respond courteously to co-author opinions. Pay a fair share of submission and publication costs, even if your university doesn't reimburse the fees.

Quality co-authors occur infrequently. Working with a quality author confers many benefits. Once identified, treat the individual fairly and with respect. Temptation exists to take advantage of quality co-authors. Avoid doing so. Quality co-authors easily secure other opportunities. Continuing to work with a quality author depends critically on reciprocating as a quality co-author. Frustrated co-authors will not invite you, or express unwillingness to join you, on future projects. Faculty quickly develop a reputation that enhances or precludes their research partner desirability.

Sole author papers avoid issues of author order and contribution percentages. Muti-author papers must address these issues. Three authors on a paper generally receive little scrutiny. More than three paper authors raise suspicions regarding who did the work. Author order matters. Assign author order based on contribution made to the research. Some faculty argue names should appear in alphabetical order. This approach is non-standard. Certainly, those making this argument possess a last name starting with the letter 'A'. If forced to accept such a scheme, the document should state that authors are listed by last name and that author order does not reflect levels of contribution. Further, for non-standard author orders, note the percentage contribution by author in notes to the paper.

In many instances adding research partners provides valuable benefits. However, benefits also accrue to individuals who research independently. Researching independently gives you control of the research agenda. You control the time frame with which the work gets completed. You save time required to correspond with co-authors. Indeed, in some instances individuals spend more time corresponding with an inactive co-author than the co-author spends working on the paper.

Other Considerations

When conducting research on humans or animals, contact your university to identify and secure any required permissions prior to initiating the research. Proper authorization represents an important step. Failure to obtain proper advanced authorization potentially results in mandated destruction of the research and other disciplinary actions. Typically, a university committee reviews and authorizes human and animal subject research. The committee develops processes and standards that faculty must adhere to when conducting the research. The approval process commonly requires completion of a simple application form describing the proposed research. The committee formally approves or disapproves the research activity. In the event a university lacks a human and animal subjects research committee, check international standard setting bodies and organizations for guidance. These organizations include: The U.S. Department of Health and Human Services Office for Human Research Protections (www.hhs.gov/ohrp/), the Association for the Accreditation of Human Research Protection Programs, Inc (www.aahrpp.org), and The American Association for Laboratory Animal Science (www.aalas.org).

Assure legal access to any data used. When using borrowed data, such as from a magazine, familiarize yourself with any data use limitations. This information usually appears on the organization's website. Unauthorized data use potentially results in legal issues, required research destruction and disciplinary actions.

Authors targeting specific journals should check their requirements for word processing tools. Most journals accept documents created in Microsoft Word. However, some disciplines require the use of LaTeX software for document creation. Google Docs also continuously grows in popularity. Under most circumstances use Microsoft Word Software with the standard equation editor provided by Microsoft. Sometimes journals accept Microsoft Word equations editor add-ins, including MathType.

Develop a file naming convention. Mislocating files wastes time. Lost files cost relocation time, or worse the file becomes irrecoverably lost. Organizing files properly allows users to easily track relevant documents. Table 2 provides a suggested file format. Set up a folder in the computer exclusively for research. Within the research folder, create subfolders for Working Papers, Papers Under Review, Completed Papers and Archive. Further, within the folders, create a separate folder for each project. Finally, within the project folder create folders for Data, Analysis, Literature and Text. Add subfolders when necessary.

Include dates on file names such as "Project CEO 10-21-2023". Do not rely on automatically generated computer file dates. While informative, an inadvertently opened file changes the automatic date resulting in confusion. Hard entered file dates provide a permanent indicator. Resave files with new dates often allowing one to return to an earlier version if necessary. Regularly back up files. A corrupt or lost hard drive implies the loss of days or months of work. A simple rule of thumb applies: If losing a file implies loss of more than one day of work, back it up.

Table 2: Suggested File Organization

Research
Working Papers
Project A
Data
Analysis
Literature Review
Text
Project B
Data
Analysis
Literature Review
Text
Under Review
Completed Papers
Archived

This table shows suggested computer folder organization.

For those with a specific target journal, check the journal guidelines to identify appropriate article length. In the absence of a target journal consider the following: Many journals seek articles in the 5,000-10,000 word range. Shorten manuscripts with more than 13,000-15,000 words or divide the manuscript into multiple papers.

PREPARING THE PAPER

Paper Structure: Properly organizing the paper substantially improves chances for publication. Experience reveals a frequent lack of knowledge regarding proper paper organization. Thus, some guidance seems appropriate. In nearly every instance, papers should be organized into the sections shown in Table 3. Papers

developed in this format meet the expectations of most journals. Moreover, this format easily adapts for journals requiring non-standard organizations.

Table 3: Paper Organization

Title
Abstract
Introduction
Literature Review
Data and Methodology
Results
Concluding Comments
References
Appendix (optional)
Acknowledgements (optional)
Author Biography

This table shows the proper ways to organize an academic paper.

Paper Title: The paper always begins with a title. The title constitutes the most important element of a paper. Far more people view the paper title than read the paper. When developing a title, consider how it looks on your Vita. Often tenure and promotion committees lack familiarity with journals. They rely on the paper title for a first impression of research. Similarly, when submitting your vita for job applications, initial reviews rely heavily on paper titles.

Strong titles convey positive images of the research. Titles should not exceed fifteen words in length. It should convey the concept of your research. However, considerable latitude exists regarding how authors frame the title. Some words convey positive images of research while others convey negative images. For example, the words "evidence" and "empirical" communicate a strong paper. The words "analysis" and "case" communicate a weak paper. Discipline keywords, especially addressing recent issues, convey a timely topic image. However, some caution applies because keywords related to topics that ultimately become obsolete, later suggest irrelevant research. Avoid using acronyms in titles whenever possible. While acronyms form a discipline's vocabulary, general audiences frequently lack familiarity.

Abstract: Create an abstract up to 200 words in length. Abstracts concisely communicate what the paper does. Avoid using acronyms in abstracts whenever possible. Do not cite other papers in the abstract. Common practice involves noting a result in the abstract. However, avoid exposing the entire story in the abstract. Leave some mystery that motivates readers to examine the full paper. Repositories, such as the Social Science Research Network (SSRN) show paper abstracts but require users to click an additional link to view the full paper. These clicks improve author rankings.

Instruction: The introduction section begins with a statement presenting the problem being addressed. Next, include summary statistics that communicate the problem's magnitude. Subsequent paragraphs provide a general discussion of the state of the literature. Next tell the reader what the current work does to advance existing literature. Indicate why the research is important. The introduction closes with a paragraph indicating how the remainder of the paper is organized. Introduction section length varies. At minimum, introduction sections should extend through the first page of the article and onto the second page. An introduction section that ends on the first page of the manuscript communicates a weak paper.

Literature Review: Literature review sections sometimes feel monotonous to write. Nevertheless, they constitute an important element of the paper. Narrow the literature to articles directly related to issues examined in the paper. Literature reviews usually include between 750 and 2,000 words. Literature reviews

shorter than 750 words suggest insufficient author investigation. On the other hand, literature reviews longer than 2,000 words indicate an excessively broad review.

Limit citing magazines in the literature review. There exist many sources to identify relevant journal-level research such as Google Scholar (scholar.google.com) and Social Science Research Network (SSRN). Provide a current literature review, with no less than half the works cited published in the most recent ten years. Make sure the reference section includes everything cited in the text. Make sure to cite everything included in the reference section. Reference original creators of information. Avoid citing webpages unless the webpage constitutes an original source of information.

Some authors incorporate hypotheses in the literature review section. Others incorporate hypotheses into the data and methodology section. Both methods appear effectively in practice. My preference involves incorporating hypotheses into the data and methodology section.

Data and Methodology: Data and methodology sections begin by discussing data collected. Information incorporated in the data and methodology section depends upon paper type. Standard empirical papers and surveys each require unique data and methodology sections. Table 4 shows minimum relevant information for each paper type. Addressing each issue clarifies the research to readers. When collecting data, consider carefully which variables to collect data for. Collecting data for an additional variable might provide additional insights or might facilitate an additional publication. Candidates for segregating data include by gender, age, country, region, year, industry, before and after a crisis or event. Balance the potential benefit of additional data collection against the additional time and energy necessary to complete the task. Collecting data for a variable at the outset proves easier than returning to the master dataset later to retrieve additional data.

Table 4: Data and Methodology Section Components

Standard Papers	**Survey's**
Data source.	Who was surveyed.
Authorization to use the data.	How the survey was conducted.
Time period covered.	When the survey was conducted.
Frequency of data observations.	Where the survey was conducted.
Total number of observations.	The Response Rate.
Variables for which data were collected.	Total number of useable observations.
Summary statistics.	Hypotheses being tested.
Hypotheses being tested.	Indication you have human or animal subject research authorization.
Regression and other equations estimated.	

This table shows issues addressed in the data and methodology section. Column one shows requirements for empirical papers. Column two shows requirements for surveys.

Results: Results sections report the analysis outcome. Present results in tables, then discuss those tables in the document text. Use table creation tools provided by Microsoft Word or other text editing programs. Some authors create tables without the benefit of a tables tool. Doing so causes problems in the publication process and requires recreation prior to publication.

Tables must have a title and should include a two to eight-line note describing the table. Readers should understand table contents without referring back to the document text. Indicate equations estimated both in the text and in the table note. Redundancy between the document text and table notes is acceptable.

Include at least one full paragraph of discussion to accompany each table. Introduce tables in the text before their appearance in the document. The text should reference the table such as "Table 1 shows:….". Do not refer to the table's location in the text. For example: Table 1 *below* shows…..". Tables are often relocated in press. Any location specified may ultimately prove inaccurate. Select an observation in the table and explain that observation to readers.

Tables should include several lines of data. Single-line tables appear poorly in journals. Combine small tables with other tables. Alternatively, remove the table and report the result directly in the document text. Use standard numeric notation. Do not use exponential notation. Use appropriate precision in tables. Start with the following precision levels: 0.0021, 1.132, 10.22, 100.6, 1,049. Use leading zeros on numbers: 0.1238 rather than .1238.

Conclusions: The conclusion section summarizes your work. Do not introduce new results or concepts in the conclusion section. Results and concepts should appear earlier in the paper. Typical conclusion sections run three to six paragraphs in length. Conclusion sections should include several common features. Start by reiterating the paper's goal. Next, briefly describe the data and test methodology used in the paper. Summarize major findings. Discuss how managers and firms might benefit from your results. Discuss any limitations of the work. Finally provide suggestions for future research.

Acknowledgements and Biography: Authors might optionally include an acknowledgement section. Acknowledge anyone actively involved with the paper. Include colleagues, administrators, funding agencies, assistants, reviewers and editors. Acknowledging reviewers is a nice courtesy as they provide a valuable, but relatively thankless service. An additional advantage of acknowledging reviewers occurs from a subtle communication to colleagues the journal is peer reviewed. The peer-reviewed nature of a journal may be well known within your circle, but members of university wide tenure committees often lack journal familiarity. Do not acknowledge someone who has materially contributed to the paper. Material contributors must be co-authors. Include standard verbiage to indicate any remaining errors are yours.

Many journals require author biographies. In the biography indicate the author's employer, a brief publication history, and any other important information. Be cautious about including contact information in a journal article, as spammers scalp journals to ascertain this information. Do not make biographies excessively detailed. Biographies should not exceed eight lines.

Formatting Requirements: Check the journal's requirements to assure your paper meets formatting guidelines. While journals require unique formatting, some standard formatting considerations accommodate most journals. Do not use text boxes, section breaks, or text levels. These formatting options cause problems in publication and require removal.

Create Microsoft Word editable figures and tables. Anything created or imported as an image or scanned creates problems. Anything not editable in Microsoft Word requires recreation. When copying Microsoft Excel elements into Word, use the Word "Paste Special" command. Within the "Paste Special" menu, select a format that allows editing. The "Paste as Chart" option often works well. Confirm the resulting table's editable properties.

Avoid one sentence paragraphs. Create paragraphs 3-15 lines in length and include at least two sentences. Include at least two paragraphs in any identified section. Combine single paragraph sections with other information. Bullet lists appear poorly in journals. Place longer lists in a table. Then reference tables in the document text. Incorporate shorter lists directly into the document without bullets.

Confirm references include all relevant information. For each journal article, indicate author names, article title, journal name, volume, issue and page numbers. Format references consistent with journal guidelines.

Writing: Writing issues regularly occur in manuscript preparation. Modern document editors, like Microsoft Word provide some grammar and writing assistance. Advanced writing editors such as Stylewriter or Grammarly provide considerably better assistance and can help substantially improve writing. While writing tools noted above provide considerable benefits, they do not replace the human eye.

Consider giving the paper to a friend for review. When you think the paper is completed, set it down for several days. Re-reading the paper with fresh eyes always reveals valuable edits.

Write in third person active voice when possible. Limit use of the verbs is, are and were. For example, "is equal to" can simply be replaced with "equals". Further, reduce wordiness whenever possible. Consider the sentence "The results of the test shows that the CEO listened carefully," which stated more concisely becomes: "Test results show the CEO listened carefully."

Define acronyms on first use. Redefining acronyms on first use in each subsequent section facilitates improved readability. A common error involves using the words "that the" together. Instead, use either the word "the" or the word "that" in isolation. Avoid excessive use of the word "the". Limit use of "the" to no more than once, or perhaps twice per sentence.

Do not plagiarize. Before submitting the paper check to ensure an absence of, intentional or unintentional, unoriginal text. Most universities subscribe to software services that complete the task. Grammarly.com tools facilitate the process. Most journals electronically check manuscripts for unoriginal text, the presence of which may result in mandatory rewrites or an outright rejection.

SELECTING A JOURNAL AND SUBMITTING THE MANUSCRIPT

Evaluate multiple parameters to determine where to submit a manuscript. Consider the probability your paper gets accepted at the journal. Targeting journals at a higher level than the manuscript submitted produces desk rejections. Time is a luxury in publication work, so select a journal consistent with the quality of your paper.

Consider copyright taken by the journal. Obtaining maximum exposure for research increases the chances of obtaining citations and higher impact factors. Some journals hold restrictive copyrights that prohibit distributing the research through secondary outlets. Oher journals allow distribution of the work after journal publication. Two common post-publication distribution outlets are Social Science Research Network (SSRN) and Research Papers in Economics (RePEC). Distributing through these, and other, outlets increase exposure, provides additional citations, and metrics to demonstrate the work's impact. Fully acknowledge the original journal publication when making post-publication distributions.

Review time is imperative, especially for untenured faculty. Some journals evaluate papers rapidly, providing reviews in a month or less. Other journals review papers slowly with papers languishing beyond a year, sometimes approaching three years. Those facing tenure or promotion decisions should make this known to the editor. Some editors will inform you the review will exceed your time frame. Others work to accommodate your needs.

A critical issue relates to the journal's standing relative to university and aspirational university tenure and promotions standards. Make yourself aware of these standards and submit work to journals that meet the criteria. In the absence of a specific standard, read papers from the journal's previous issues to personally assess quality. Consider indexing, rankings, distribution, acceptance rates and other criteria. In my opinion, the best method to evaluate a journal is through h and g-rating data provided by Harzing's Publish or Perish. H and g ratings provide a quantitative and generally unbiased measure of journal performance. Harzing's calculates ratings based on the top 200, previously top 1000, articles a journal publishes. This approach disadvantages newer journals. Universities might standardize the ratings to reflect paper count.

Much commotion concerns so called blacklisted or predatory journals. In my opinion, these journal classifications are poorly conceived, poorly executed and, in a word, nonsense. A full discussion of the issue exceeds the scope of this paper. Regardless, authors should familiarize themselves with their

university's stance on this issue. If your university excludes journals classified as blacklisted or predatory, play by their rules and seek other outlets meeting university expectations.

Confirm journals you submit papers to meet your professional need prior so submission. Declining a paper acceptance post review is unprofessional. Never submit a paper to two journals simultaneously. Doing so shows a lack of professionalism. When submitting your manuscript, indicate the paper is not under review elsewhere and has not been published elsewhere. Identify the journal's submission and publication fees. Submit papers to journals only when you are prepared to pay the publication and review fees.

Post Submission

After submitting the manuscript, waiting for reviews requires patience. Contacting a journal editor at appropriate frequencies proves useful. Sometimes an editor forgets about the paper and a reminder gets the ball rolling. However, excessively contacting a journal editor annoys. When communicating with an editor, use submission numbers to facilitate easy tracking. Always be courteous when corresponding with an editor.

Make the first inquiry about three months after manuscript submission. Inquire about any additional information the editor requires. After six and nine months, ask the editor to kindly remind the reviewers. After one year, send the editor a status check email. If a review timeframe remains uncertain, consider withdrawing the paper and pursuing a different outlet. To withdraw a manuscript, send a formal communication to the editor withdrawing the paper including a request for acknowledgment. Do not submit to another journal until you have fully withdrawn the previous submission.

Respond to revise and resubmit requests expeditiously but take sufficient time to fully address requested changes. Never return a paper to an editor without addressing the requested changes and appropriately revising the manuscript. Doing so results in paper rejections, or a frustrated editor spending time to return the paper back to authors. Prepare a document indicating how you addressed each reviewer concern. It should look something like the following for each concern noted:

> Reviewer Comment: "In your data section please indicate the number of useable observations obtained from the survey."
>
> Author Response: "Thank you for the suggestion. We have incorporated a sentence indicating the number of observations on page 12 of the revised manuscript as follows: "Data includes 1,125 useable observations."

Always respond politely to reviewer comments. A positive and accommodating approach works better than a confrontational approach. Editors and reviewers hold all power in the journal publication process. Responding rudely results in more difficult reviews.

In some instances, you may be unable to accommodate change requests. In this case, explain carefully why you cannot make the change. To appease the editor, acknowledge the issue in the paper and note it as a limitation or area for future research. On other occasions, reviewers offer incorrect comments. In this eventuality, carefully point out the reviewer error. Then take responsibility. Indicate you apparently did not adequately explain the issue and added more explanation to clarify this point. Again, set the revised paper aside for a few days then give it a final read prior resubmission.

After paper acceptance there remain several steps. In many instances publication fees apply. Pay the fee expeditiously. Do not request publication fee price breaks. Doing so at this stage reveals unprofessionalism. Some journals send page proofs to identify incorrect changes or omissions that occur

in the publication preparation process. The temptation is to assume a lack of errors. However, errors do occur. Take time to fully review the page proofs.

In the event of rejection, do not be disgruntled. Rejections constitute part of the process and simply imply you selected the wrong journal, experienced some bad luck in the review process, or need to make improvements to the paper. Incorporate any useful changes noted in rejections and submit the paper elsewhere. Learn from the process and always move forward positively.

DOCUMENTATION, PROMOTING AND TRACKING YOUR WORK

Document all research and other activities you complete on your vita immediately upon completion. Undocumented efforts did not happen. Relying on memory to document the work later poses significant risk for most individuals.

Consider promoting your work beyond that achieved through the journal publication. If permitted by the journal, place the publication in repositories, such as SSRN, RePeC, a university repository, or a personal repository. Doing so increases the impact of your work through additional views, citations, and other recognitions. Consider writing a summary of the research for submission to popular news outlets such as CNN and Forbes. Presenting papers at conferences promotes both the work and your skills and may provide ideas to extend the work. Use caution when presenting working papers at conferences to avoid idea snitching. Instead, present published papers in a promotional effort and to identify potential future research avenues.

Tracking performance of publications proves valuable to demonstrate the quality of your work. This demonstration pays dividends for promotion and hiring applications. Document the quality of journals in which you publish through rankings and metrics. You want to address issues like: Indexes listing the journal, Harzing's Publish or Perish g and h ratings, any journal rankings, percentage of work associated with each author and citations of the work. Create a spreadsheet to display this information in a matrix. Consider a table that looks something like Table 5. Report important metrics for your field especially positive portraying metrics.

Table 5: Journal Quality Matrix

Pub.	My Contribution	Journal Name	Cabell's Listed	Scopus Listed	ABDC	g/h Value	ACE Journal Ranking	Johnson's Journal classification
#1	70%	J. of Hypothetical	Yes	No	Yes, B	58.45 / 75.35	125 from 900	B
#2	40%	J. of Gift Giving	Yes	Yes	Yes, A-	154.5 / 263.3	40 from 900	A

This table provides data on journals where my work has been published.
#1. Jalbert, T., and M. Jalbert, 2023, "How Immigration can Save Social Security," Journal of Hypothetical, vol. 16(1) p. 99-105
#2. M. Jalbert and T. Jalbert, 2022, "Evidence on the Popularity of Mother's Day Gifts," Journal of Gift Giving, vol. 63(3), p. 68-77

CONCLUDING COMMENTS

This paper provides guidance for successfully publishing in peer reviewed journals. The paper also provides advice for navigating an academic career and increasing the chances and quality of publication. The nature of an advice article necessitates provision of author background. I have 27 years of experience at the assistant, associate and full professor levels. I am highly ranked for both teaching and research. My work involves publishing more than 80 peer-reviewed journal articles and receipt of multiple teaching and research awards. I served as editor in chief or co-editor in chief for eight journals continuously over a 17-year period and co-organized 35 conferences.

The work here covers the process from initiating a research project through promoting and documenting the work. The paper provides advice on how to get time to complete research, selecting and working with co-authors, and the impact of major service commitments on careers. New researchers, as well as seasoned researchers, might benefit from ideas presented here.

This research has limitations. This paper represents the viewpoints of a single individual. Further discussion of issues presented here by additional researchers would provide additional insights and prove valuable to others. The advice here comes from the perspective of a finance professor. The work is believed to be generalizable, but significant differences by field could exist. As such, the advice here could have limited value to faculty in other fields. Additional discussion by individuals in other fields would certainly provide valuable insights.

REFERENCES

Ahlstrom, D. (2017) "How to Publish in Academic Journals: Writing a Strong and Organized Introduction Section," *Journal of Eastern European and Central Asian Research*, vol. 4(2), p. 1-9.

Association for the Accreditation of Human Research Protection programs, Inc. Accessed August 6, 2023 at www.aahrpp.org

Boellstorff, T. (2011) "Submission and Acceptance: Where, Why and How to Publish Your Article," *American AnthropologistI,* vol. 113(3), p. 383-388.

Boyle, D.M., J.F. Boyle and D.R. Hermanson (2020) "How to Publish in Peer-Reviewed Practitioner Accounting Journals," *Issues in Accounting Education,* vol. 35(2), p. 19-30.

Busse, C. and E. August (2021) "How to Write and Publish a Research Paper for a Peer-Reviewed Journal," *Journal of Cancer Education,* vol. 36, p. 909-913.

Choi, K. (2002) "How to Publish in Top Journals," *Working Paper,* 47 pages.

Day, A. (2017). How to Get Research Published in Journals. 2nd ed. Routledge, 154 pages.

Grammarly (2023) available at www.grammarly.com

Haley, C.V. Usha (2023), "Triviality and the Search for Scholarly Impact," *Organization Studies, Sage Journals Oline First,* May 2. https://doi.org/10.1177/01708406231175292

Harzing's Publish or Perish, 2023, available at www.harzing.com

Hauptman, R. (2005) "How to Be a Successful Scholar: Publish Efficiently," *Journal of Scholarly Publishing,* vol. 36(2), P. 115-119

Jalbert, Terrance (2019) "Do Business Professors Who Excel at Both Teaching and Research Exist? *Research in Higher Education Journal,* vol. 37, p. 23-47

Klingner, J.K., D. Scanlon and M. Pressley (2005), "How to Publish in Scholarly Journals," *Educational Researcher*, vol. 34(8), p. 14-20.

McKercher, B. (2015), "Why and Where to Publish," *Tourism Management,* vol. 51, p. 306-308

Parkinson, C.N. (1957) Parkinson's Law and Other Studies in Administration. Bostom MA: Houghton Mifflin

Research Papers in Economics. (2023), available at repec.org

Scholar.google.com (2023). Available at scholar.google.com

Social Science Research Network (SSRN), 2023, available at www.ssrn.com

Stylewriter (2023), available at www.stylewriter-usa.com

The American Association for Laboratory Animal Science Accessed August 6, 2023 at www.aalas.org

U.S. Department of Health and Human Services Office for Human Research Protections, Accessed August 6, 2023 at www.hhs.gov/ohrp/

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WHAT WAS LACKING AT LUCKIN? A CASE STUDY OF ETHICS AND FRAUD IN A U.S. LISTED FOREIGN COMPANY

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CASE DESCRIPTION

This case provides students an opportunity to analyze fraud and ethical issues in the context of global capital markets. Luckin Coffee, a China-based retail coffee chain, gained prominence with a record IPO in 2019 and fell into disrepute the next year as a major fraud was uncovered. An internal investigation revealed employees engaged in improper behaviors, including falsifying transactions data that led to gross overstatements in revenue for the first three quarters of 2019. Luckin was charged with issuing materially false registration statements and prospectuses for its IPO in 2019 and secondary offering in January 2020. The company was delisted and investigated by the SEC for the accounting fraud, settling for $180 million in December 2020. This is a multi-purpose case with an abbreviated version (Question Set A) appropriate for an introductory financial accounting course, and an extended version (including Question Set A and Question Set B) appropriate for an upper-level or graduate course in financial accounting or fraud/forensics. Prior classroom instruction on the navigation of the SEC's Edgar database, the PCAOB and the U.S. regulatory framework, and Yahoo Finance or another stock price tracking website may be beneficial at the higher course levels. The case should be assigned as a group project due to its length and required level of analysis. Students at all levels should be given at least one full class period (60-90 minutes or more) to work on the case and an additional one to two weeks outside of class to complete the questions. Classroom discussion after the due date should be at least one hour.

JEL: M40, M41

KEYWORDS: Accounting Fraud, Ethics, Enforcement Action, Luckin

CASE INFORMATION

Luckin Coffee is a retail coffee chain founded in Beijing in 2017 by Jenny Qian. It sells coffee, tea and other food and beverage items to customers throughout China, operating a web-centric business model that allows customers to order and pay through apps and mobile wallets (Barrett, 2020). Specifically, the company utilized mobile apps and offered a 100% cash-less environment and network of pick-up stores located in areas with high demand for coffee, like office buildings, commercial areas, university campuses (Luckin 2019a). Additionally, Luckin aimed to gain market share quickly by offering deep discounts.

Luckin's major competitor is Starbucks, which operates more than 4,000 retail locations in China and has found success by offering a comfortable place for people to work, study, or hang out. Luckin's strategy is the opposite: the majority of its locations are kiosks with limited or no seating, and the orders have to be placed and paid for on its app. By January 2020, Luckin managed more than 4,500 retail locations (Bloomberg 2020). Luckin's mobile app was central to its growth strategy. The company used it to send

vouchers and coupons for free or discounted coffee to its customers. The vouchers/coupons reduced the price of Luckin's beverages and caused the company to operate at a loss, but was part of a larger strategy to win market share, expand brand awareness, and increase customer base (Luckin 2019a).

Luckin grew rapidly in its first years of business. It opened its first store in 2017, followed by an additional 2,370 stores in the next 18 months (Luckin 2019a). This rapid growth attracted attention from investors in China and abroad. Luckin raised $150 million in April 2019 from private investors which increased its enterprise valuation to $2.9 billion (CNBC 2019).

In May 2019, Luckin made an initial public offering of American Depositary Receipts (ADRs) on the Nasdaq, raising approximately $600 million. At that time, the company reported operating 2,370 stores in 28 cities across China and claimed to be the "second largest and fastest growing coffee network" in China (SEC 2020a). In its prospectus, Luckin disclosed total revenues of $125 million for 2018, and $71.3 million for the quarter ending March 31, 2019. It repeated the goal of becoming the largest coffee chain in China, crediting its disruptive retail model, strong technology capabilities and superior customer value proposition of high quality, high affordability and high convenience (Luckin 2019a).

The pre-IPO valuation of the company continued its rapid climb, from $1 million in July 2018 to $2.9 billion in April 2019. The IPO in May 2019 was priced at $17 per ADR and considered a success, raising $651 million and valuing the company around $5 billion on its first trading day (Yang, 2020a).

THE FRAUD SCHEME

After the IPO, analysts following Luckin focused on the revenue growth trajectory of the company, ignoring the fact that it wasn't profitable and didn't estimate when it would be (Bloomberg 2020). During this time, Luckin was unable to meet its own earnings guidance or the revenue and growth expectations of the market. Beginning in April 2019, Luckin artificially inflated its revenue and growth using fabricated coupon sale transactions through three fraudulent schemes, outlined below (SEC 2020b). See Appendix A for a more detailed explanation of each fraud scheme.

1. Luckin employees created fake customer accounts using their cell phone numbers and those of their family members, and fabricated coupon sales and redemptions by these fictitious customers. Sales of several millions of dollars were connected with this scheme.
2. Luckin created fake corporate accounts and used them to fulfill fictitious bulk orders. These transactions were recorded alongside bonafide voucher sales to regular corporate clients like airlines and banks. Tens of millions of dollars of sales were fabricated this way.
3. Luckin entered into sham coupon purchase agreements with third-party shell companies. Luckin recognized nearly $280 million dollars of fabricated sales this way.

Certain employees at Luckin were aware of the fraud and even maintained separate databases to track the fictitious and legitimate transactions. The "Business Operations Database" tracked legitimate coupon sales and redemptions, while the "Fabricated Database" included both legitimate and fabricated sales numbers. The same Luckin employees would switch the database used to generate reports, depending on what reporting was required. Luckin's Finance Department only had access to the Fabricated Database and therefore unknowingly incorporated fictitious transactions into Luckin's financial statements.

The total amount of sales transactions associated with these schemes was at least $311 million from April 2019 to January 2020. During this time, Luckin was able to keep perpetrating the fraud by recycling the money from fabricated coupon sales back to the funding companies (controlled by or associated with Luckin employees) and fictitious corporate customers, using bank transfers and fictional business-related expense payments to vendors (SEC 2020a).

Before Luckin's first earnings release as a public company (in the second quarter of 2019), analysts were predicting quarterly revenues of around $130 million. Luckin's 2019 Form 6-K filed with the SEC in August reported total net revenues in the second quarter of $132 million, with net revenues from products at $126 million, a 698% increase compared to Q2 of 2018 (Luckin 2019b). Approximately $36 million of these sales were fabricated. At the same time, Luckin's expenses were also overstated because of the fraudulent expense transactions necessary to return money used in the scheme back to the funding companies, although not proportionately. Luckin thus materially misstated its net loss, reporting a net loss of $99 million, which was understated by about $14 million (SEC 2020a).

By the third quarter of 2019, analysts were predicting around $190 million in earnings for Luckin. In its third quarter 6-K filing, Luckin reported net revenues of $216 million, a year-over-year increase of nearly 540%. The company also projected a nearly 400% rise for the upcoming fourth quarter (Luckin 2019c). These revenues included approximately $103 million in fabricated coupon sales and redemptions, as well as about $76 million in overstated expenses. Overall, the company materially understated its Q3 2019 net loss by $26 million (SEC 2020a).

Luckin continued to fabricate coupon sales and redemptions as well as inflate and fabricate related expenses through the fourth quarter of 2019. During this same time, Luckin's stock price continued to increase. About two months after the third quarter results were reported, the stock price had more than doubled from its IPO level and Luckin announced it had opened more retail locations than Starbucks (Sebastian, 2019).

On January 14, 2020, Luckin raised an additional $418 million through a follow-on equity offering and $447 million through a convertible bond issuance. These offering filings included the materially misstated financials previously released in 2019 (SEC 2020a). The stock price hit an all-time high of $50.02 per ADR in mid-January, nearly tripling its original offer price. Two weeks later the short-selling firm Muddy Waters released an unattributed 89-page document accusing Luckin of inflating its sales (Bloomberg 2019). The report included the investigative work of more than 1,500 individuals who visited about 15% of Luckin's retail locations across China. They counted customers in Luckin's stores, recorded thousands of hours of video and collected receipts from customers. The sales observed at these locations were far lower than what was reported by Luckin and after analyzing all the data, the authors of the report concluded Luckin must be inflating its own sales numbers (Yang et al. 2020).

Around this same time, Luckin's fraud was discovered by Ernst & Young (EY) through the annual external audit. The accounting firm reported that it found, "management personnel engaged in fabricated transactions which led to the inflation of the Company's income, costs and expenses" from Q2 to Q4 of 2019 (Webb and Chiu, 2020). EY reported its findings to the Audit Committee and an internal investigation was started.

On April 2, 2020, Luckin announced the formation of "… a special committee to oversee an internal investigation into certain issues raised to the Board's attention during the audit of the consolidated financial statements for the fiscal year ended December 6, 2019" (Luckin 2020a). The company disclosed that beginning in the second quarter of 2019, the chief operating officer and several employees had engaged in misconduct which included fabricating certain transactions. Luckin disclosed that $310 million of its 2019 revenue had been fabricated, and warned investors that they could not rely on the 2019 reports or earnings guidance (SEC 2020a).

Investors lost billions of dollars following the fraud disclosure, with the stock price rapidly declining in response to the news. On April 6, 2020 Nasdaq ordered to halt the trading of Luckin shares for pending news. The stock had plummeted to a closing price of $6.40 by that time, more than an 80% decrease from its all-time high (Lucas 2020).

AFTERMATH

After the misconduct was discovered, Luckin self-reported the fictitious sales and expenses to the SEC and cooperated with the investigation. The company "… promptly undertook significant remedial efforts", including additional internal investigations, terminating certain personnel and relationships with third parties and adding additional internal accounting controls (SEC 2020a).

On December 16, 2020, the SEC charged Luckin with violating the antifraud provisions of Section 17(a) of the Securities Act of 1933 and Section 10(b) of the Securities Exchange Act of 1934. The SEC Complaint alleged that Luckin intentionally and materially overstated its reported revenue and expenses, and materially understated its net loss in publicly disclosed financial statements in 2019, in order to give the impression of rapid growth and to meet/exceed analyst expectations of revenues and earnings (SEC 2020a). Luckin also violated the reporting, books and records and internal control provisions of the Exchange Act (SEC 2020b).

Luckin did not admit or deny the charges, but agreed to pay a $180 million fine to settle with the SEC. According to the current CEO, "This settlement reflects our cooperation and remediation efforts and enables the company to continue with the execution of its business strategy. The Company's Board of Directors and management are committed to a system of strong internal financial controls and adhering to best practices for compliance and corporate governance" (Luckin 2020b).

On February 5, 2021 Luckin filed for Chapter 15 bankruptcy in New York. Since then, it has slowly begun to recover its business operations. Most recently, Luckin filed its annual report of 2020 with the SEC and continued to show signs of improvement, in the aftermath of the fraud and despite the pandemic (Luckin 2021). It currently trades on the Over-the-Counter (OTC) market under the ticker LKNCY. Appendix B provides a more detailed explanation of the charges, remediation efforts and aftermath of the Luckin fraud, suitable for an upper-level or advanced course.

QUESTIONS

Question Set A: Introductory Level

1. What are the key allegations of fraud in this case?

2. Who are the parties to the fraud? Were the actions of these individuals unethical, illegal or both?

3. Who are the stakeholders in this case – i.e., who are all directly or indirectly affected by this fraud? How are these parties affected by fake financial information?
4. Discuss the importance of internal controls and explain how an effective internal control system could have prevented or mitigated fraudulent activities at Luckin (tone at the top, control environment, collusion, etc.) Do you think a strong internal control system can prevent ALL fraud?

5. The fraud triangle is a model that explains why an individual commits fraud. It outlines three factors that contribute to the risk of fraud and other unethical behaviors: opportunity, incentives/pressure and rationalization. Apply the fraud triangle to analyze the fraud at Luckin.

6. List 2-3 internal control activities that could have helped uncover the fraud.

7. Discuss the role of the company management and auditor in ensuring that financial statements are accurately presented. Who is primarily responsible for providing accounting information and preparing financial statements? What is the role of the external auditor?

8. The fraud scheme at Luckin was widespread and many employees knew of the fraud and either helped perpetuate it or failed to report it. What are some of the options available to employees who observe unethical or illegal behavior and wish to report it?

Question Set B: Advanced Questions

1. Locate Luckin's Press Release made on July 1, 2020 regarding the completion of its internal investigation (you can find press releases on its website under News & Events). What did the company find regarding the fraud and what remedial actions did they take or plan to take?

2. Using YahooFinance, find the closing stock price of Luckin (ticker: LKNCY) for the dates below. Explain how Luckin's exaggerated earnings and subsequent fraud disclosure affected its stock price. Is this type of market manipulation unethical, illegal or both?

   May 17, 2019 (IPO date):
   November 20, 2019 (Q3 financial results announced):
   January 14, 2020 (Secondary offering):
   January 17, 2020 (High price):
   April 2, 2020 (Day of fraud disclosure):
   June 26, 2020 (Last day of trading on Nasdaq):
   Today:

3. Find Luckin's registration statement (Form F-1) filed with the SEC in 2019.
   A. What are the ownership percentages reported for the individuals that were terminated after the fraud was revealed (the Chairman, CEO and COO)?
   B. When the fraud was first revealed, the COO was blamed and terminated. Founder and CEO Jenny Qian and Board Chairman of the Board Charles Zhengyao Lu denied any knowledge of the scheme. Given the above ownership information, do you think this is likely?

4. Public companies incur additional costs for regulatory compliance to enter the marketplace (for example the costs associated with disclosure and governance requirements of SOX or compliance with PCAOB audits).
   A. Describe some of the benefits of the increased regulation for public companies.
   B. Explain why SOX or the PCAOB did not play a larger role in the Luckin case.

5. Research the recently passed Holding Foreign Companies Accountable Act (HFCAA) and explain how this Act is related to the Luckin case.

6. Discuss the role of the company management and the external auditor in fraud prevention and detection, including the limitations of each party. Explain in the context of the Luckin case.

7. EY claimed that it had discovered Luckin's fraudulent activities during the annual audit of the 2019 financial statements, but instead of issuing an adverse opinion report, it chose to withdraw as Luckin's independent auditor. What do you think might be the reason?

8. After being delisted from Nasdaq, Luckin's stock continues to trade on the Over-the-Counter (OTC) market under a new ticker. Research the OTC market. Explain the advantages and disadvantages of OTC trading for Luckin and for investors.

9. It appears that the regulatory structure in the US did not prevent this fraud. Why do foreign companies seek to list on NASDAQ? Discuss broadly NASDAQ listing requirements and why these failed to

detect the fraud at Luckin prior to its IPO listing? What types of new controls should NASDAQ and other exchanges put in place to prevent these types of fraudulent activities and shore up investor confidence in its listings? What action should FINRA and the SEC take in this regard?

10. Do you think that employees and others held responsible in the fraud should be personally held liable?

REFERENCES

Barrett, E. (2020) "China's Coffee Disruptor Wants to Raise $800 Million to Challenge Starbucks," *Fortune*, April 26, 2019. Available at: https://fortune.com/2019/04/26/china-coffee-disruptor-starbucks/

CNBC (2019) "China's Luckin Coffee Raises $150 Million in Funding From BlackRock and Other Investors," *CNBC News*, April 18, 2019. Available at: https://www.cnbc.com/2019/04/18/chinas-luckin-coffee-raises-150-million-from-blackrock-and-others.html

Ghosh, P. (2021) "Luckin Coffee Files for Bankruptcy Seven Months After Nasdaq Delisting," *Forbes,* February 5, 2021. https://www.forbes.com/sites/palashghosh/2021/02/05/luckin-coffee-files-for-bankruptcy-seven-months-after-nasdaq-delisting/?sh=1a84d895558a

Lucas, A. (2020) "Luckin Coffee's Stock Has Been Halted for Pending News Since Tuesday," *CNBC News*, April 8, 2020. Available at: https://www.cnbc.com/2020/04/08/luckin-coffees-stock-has-been-halted-for-pending-news-since-tuesday.html

Luckin (2019a) "Luckin Coffee Inc. Form F-1 Registration Statement for Certain Foreign Private Issuers," *Luckincoffee.com,* April 2, 2019. Available at: https://investor.luckincoffee.com/sec-filings/sec-filing/f-1/0001047469-19-002450

Luckin (2019b) "Luckin Coffee Inc. Form 6-K Report of Foreign Private Issuers Pursuant to Rule 13a-16 OR 15d-16 Under the Securities and Exchange Act of 1934," *Luckincoffee.com,* August 14, 2019. Available at: https://investor.luckincoffee.com/static-files/5b597fba-c052-4c17-a34d-f8c7db86c790

Luckin (2019c) "Luckin Coffee Inc. Form 6-K Report of Foreign Private Issuers Pursuant to Rule 13a-16 OR 15d-16 Under the Securities and Exchange Act of 1934," *Luckincoffee.com,* November 20, 2019. Available at: https://investor.luckincoffee.com/node/6546/html

Luckin (2020a) "Luckin Coffee Announces Formation of Independent Special Committee and Provides Certain Information Related to Ongoing Internal Investigation," *Luckincoffee.com,* April 2, 2020. Available at: https://investor.luckincoffee.com/news-releases/news-release-details/luckin-coffee-announces-formation-independent-special-committee

Luckin (2020b) "Luckin Coffee Reaches Settlement with U.S. Securities and Exchange Commission," *Luckincoffee.com,* December 16, 2020. Available at: https://investor.luckincoffee.com/news-releases/news-release-details/luckin-coffee-reaches-settlement-us-securities-and-exchange

Luckin (2021) "Luckin Coffee Files Annual Report for Fiscal 2020," *Luckincoffee.com,* September 21, 2021. Available at: https://investor.luckincoffee.com/news-releases/news-release-details/luckin-coffee-files-annual-report-fiscal-2020

Luckin (2022) "Code of Business Conduct and Ethics, Governance Documents," *Luckincoffee.com*. Available at: https://investor.luckincoffee.com/corporate-governance/governance

Securities and Exchange Commission (SEC), (2020a) "SEC Complaint: Luckin Coffee, Inc.," *Sec.gov,* December 16, 2020. Available at: https://www.sec.gov/litigation/complaints/2020/comp-pr2020-319.pdf

Securities and Exchange Commission (SEC), (2020b) "Luckin Coffee Agrees to Pay $180 Million Penalty to Settle Accounting Fraud Charges," December 16, 2020. *Sec.gov.* Available at: https://www.sec.gov/litigation/litreleases/2020/lr24987.htm

Sebastian, D. (2019) "Luckin Coffee Sales Rise Sixfold," *Wall Street Journal*, November 13, 2019. Available at: https://www.wsj.com/articles/luckin-coffee-sales-rise-sixfold-11573664959?mod=article_inline

Stempel, J. (2021) "Luckin Coffee in $175 Million Class Action Settlement Over Accounting Fraud," *Reuters*, October 26, 2021. Available at: https://www.reuters.com/business/retail-consumer/luckin-coffee-reaches-175-million-class-action-settlement-over-accounting-fraud-2021-10-26/

Wang, S. and M. Campbell (2020) "Luckin Scandal is Bad Timing for U.S.-Listed Chinese Companies," *Bloomberg Businessweek*, July 29, 2020. Available at: https://www.bloomberg.com/news/features/2020-07-29/luckin-coffee-fraud-behind-starbucks-competitor-s-scandal

Webb, Q. and J. Chiu (2020) "Ernst & Young Says it First Found Accounting Issues at Luckin," *Wall Street Journal*, April 3, 2020. Available at: https://www.wsj.com/articles/ernst-young-says-it-first-found-accounting-issues-at-luckin-11585927403?mod=article_inline

Yang, J. (2020a) "Behind the Fall of China's Luckin Coffee: a Network of Fake Buyers and a Fictitious Employee," *Wall Street Journal*, May 28, 2020. Available at: https://www.wsj.com/articles/behind-the-fall-of-chinas-luckin-coffee-a-network-of-fake-buyers-and-a-fictitious-employee-11590682336

Yang, J. (2020b) "Luckin Coffee Drops Nasdaq Appeal; Shares to Be Delisted," *Wall Street Journal*, June 26, 2020. Available at: https://www.wsj.com/articles/luckin-coffee-drops-nasdaq-appeal-shares-to-be-delisted-11593188282?mod=article_inline

Yang, J. (2020c) "Nasdaq Moves to Delist China's Luckin Coffee," *Wall Street Journal*, May 19, 2020. Available at: https://www.wsj.com/articles/nasdaq-moves-to-delist-chinas-luckin-coffee-11589896619?mod=article_inline

Yang, J., J. Chung and J. Steinberg (2020) "Coffee's for Closers: How a Short Seller's Warning Helped to Take Down Luckin Coffeee," *Wall Street Journal*, June 29, 2020. Available at: https://www.wsj.com/articles/coffees-for-closers-how-a-short-sellers-warning-helped-take-down-luckin-coffee-11593423002

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TEACHING NOTES

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CASE DESCRIPTION

This case provides students an opportunity to analyze fraud and ethical issues in the context of global capital markets. Luckin Coffee, a China-based retail coffee chain, gained prominence with a record Nasdaq-listed IPO in 2019 and fell into disrepute in 2020 as a major fraud was uncovered. An internal investigation revealed employees engaged in improper behaviors, including falsifying transactions data that led to gross overstatements in revenue for the first three quarters of 2019. Luckin was charged with issuing materially false registration statements and prospectuses for its IPO in 2019 and secondary offering in January 2020. The company was delisted from Nasdaq and investigated by the SEC for the accounting fraud. Luckin settled with the SEC in December 2020 for $180 million and has been working to regain investor confidence under new management. This is a multi-purpose case with an abbreviated version (Question Set A) appropriate for an introductory financial accounting course, and an extended version (including Question Set A and Question Set B) appropriate for an upper-level or graduate course in financial accounting or fraud/forensics. Prior classroom instruction on the navigation of the SEC's Edgar database, the PCAOB and the U.S. regulatory framework, and Yahoo Finance or another stock price tracking website may be beneficial at the higher course levels. Due to the length of the case and the required level of analysis, this case should be assigned as a group project. Students at all levels should be given at least one full class period (60-90 minutes or more) to work on the case and an additional one to two weeks outside of class to complete the case questions. Classroom discussion after the due date should be at least one hour.

GENERAL COMMENTS

There are ten learning objectives in the case. At the introductory level, there are six learning objectives which are applicable to all students (Question Set A). At the advanced level, there are an additional four learning objective that may be utilized in an upper-level or masters-level course (Question Set B). Table 1 maps the learning objectives to the case questions.

The Luckin fraud is one of the most high-profile public accounting scandals in recent years in both the US and China. It took the company less than two years to go from startup to IPO, setting a speed record for a Chinese company seeking capital in the US market. Then it quickly fell into disgrace by fabricating hundreds of millions of dollars in revenues. The Luckin fraud has facilitated the passage of the Holding Foreign Companies Accountable Act (HFCAA), which mandates that if the PCAOB is unable to inspect a foreign company's audit work papers, the company's stock can be prohibited from trading in the US. Thus, we believe this is a timely and relevant case for not only the accounting students but also the other business major students.

Table 1: Learning Objectives Mapped to Case Questions

Learning Objectives (Question Set A)	**Case Questions**
(1) Students will describe the fraud at Luckin and identify the parties to the fraud.	**QA1, QA2**
(2) Students will identify the stakeholders involved in the case and explain how they were affected by the fraud.	**QA3**
(3) Students will apply the fraud triangle to the Luckin case.	**QA5**
(4) Students will describe the role of management and the external auditor in financial reporting.	**QA7**
(5) Students will explain the importance of implementing and maintaining a system of internal controls in connection with the prevention and detection of fraud.	**QA4, QA6**
(6) Students will identify options for reporting unethical or fraudulent activities.	**QA8**
Advanced Learning Objectives (Question Set B)	
(7) Students will describe the remediation efforts taken by Luckin in order to promote compliance with regulatory agencies.	**QB1**
(8) Students will investigate how the allegation and disclosure of the fraud impacted Luckin's stock price and how it is traded.	**QB2, QB8, QB9**
(9) Students will research SOX and HFCAA in the context of the Luckin case.	**QB4, QB5**
(10) Students will discuss the role of auditors, management and corporate governance in the detection and prevention of fraud.	**QB3, QB6, QB7, QB10**

This table shows the learning objectives of the case mapped to case questions.

This case can be used in either an introductory or upper-level financial accounting course as well as an upper-level fraud or forensics course. If used in the intro-level course, Question Set A focuses on the basic concepts of fraud, the fraud triangle, internal control system and internal control activities. If used in at the upper-level, Question Set B focuses on more research and analysis, including external auditing, corporate governance and how different regulatory regimes can help detect and prevent fraud.

Because this case goes beyond what would be included in a traditional textbook, there are many different aspects instructors may choose to focus on - the individuals who committed the fraud (who, why, how), the lack of oversight of blatantly illegal behavior, the illegal vs unethical components of the case, the timing of the fraud and how it affected the stock price and IPO, the anonymous report alleging the fraud (who, why, how), the speed of the IPO, the effect of this fraud on the HFCAA, how Luckin is planning to come back from the controversy, etc. The case is designed to provide flexibility to the instructor, so different discussion questions or topics can be emphasized depending on areas of student interest or engagement.

QUESTIONS:

Question Set A: Introductory Level

Note: Exhibit 1 maps the case questions to specific learning objectives for instructors looking to emphasize (or omit) a specific topic or area.

Question 1: What are the key allegations of fraud in this case?

Solution 1: Students should be able to describe the following activities and their consequences:

A. Creating fictitious employees, entities and transactions with a view to artificially inflate revenue.

B. Making false financial statements and presenting a fraudulent picture of financial performance to support an IPO as well as subsequent stock and bond sales.
C. Filing false financial statements with the SEC.
D. Failure to maintain an effective or even adequate system of internal controls.
E. These actions constituted "fraud" – as the company had knowledge and intent of misleading investors and other stakeholders.

Question 2: Who are the parties to the fraud? Were the actions of these individuals unethical, illegal or both?

Solution 2:

A. *Top management:* Management sets the tone at the top and had a fiduciary responsibility towards shareholders as well as employees and third-party vendors with whom they did business. They encouraged fabricating transactions to meet unrealistic sales targets and did everything to boost short term performance [possibly to maximize their bonuses or the value of their stock options], encouraging and directing unethical and fraudulent behavior across the firm.
B. *Employees:* According to Luckin's internal investigation, more than 20 employees either participated in the fraud or had knowledge of it. Employees may have faced pressure to commit illegal or unethical acts as a condition of career security or advancement within the company.
C. *The Board of Directors and its Audit Committee:* Responsible for monitoring senior management, ensuring an effective system of internal controls, and supervising the external audit process to make sure that financial statements were accurately presented. The board of directors did not perform their functions effectively and it is not clear that they questioned the aggressive strategic plans set by top management which prioritized short term profits at all cost. The audit committee, required for SEC-listed firms in the US, also did not perform its functions in this case. The board failed in its fiduciary duties to ensure that management acted in the best interests of shareholders.
D. *External Auditors:* It appears that EY did not perform their role with due diligence. First, prior to the audit of the 2019 fiscal year end statements, EY sent a private letter to large investors stating that it did not have an issue with the financial information for the first three quarters of 2019. This was inappropriate as it was not based on a detailed audit, and was taken to represent a guarantee by investors that there were no problems with Luckin's financial statements. Such a statement also compromised the independence – both perceived and actual – of the audit firm. While a regular audit is not specifically designed to uncover fraud, EY in this instance did not act in the best interest of the public or the profession. It acted unethically as it failed in its duty to act with integrity and objectivity. It is possible that EY was motivated by obtaining other business from Luckin (like capital markets or consulting) and let this compromise its objectivity in this audit.
E. *External parties and entities with ties to Luckin's senior management*: These are "related parties" and they also had an ethical responsibility to come forward if they knew of irregularities at the firm. Any such external party that had a business relationship to Luckin had to also be disclosed in the notes to the financial statements. The fact that these ties were obscured points to the fraudulent intent of management in this case.

Question 3: Who are the stakeholders in this case – i.e., who are all directly or indirectly affected by this fraud? How are these parties affected by fake financial information?

Solution 3:

A. *Shareholders:* both current and potential shareholders. Current shareholders who are unaware of the fraud being perpetrated as well as potential shareholders making buy, sell and hold decisions based on public information that is misleading.
B. *Employees*: faced pressure to act unethically, fearing for their livelihood.

C. *Analysts:* were misled by false financial statement information and made incorrect recommendations on the stock.
D. *External auditors:* EY, who faced potential monetary fines, lawsuits and reputational consequences as their function involves safeguarding public trust.
E. *Regulators:* including the SEC, Nasdaq and PCAOB.
F. *Creditors:* $447 million convertible bond issuance was based on false financial information.
G. *Current US-listed Chinese companies and Chinese companies seeking IPO opportunities in the U.S.*: This high-profile scandal is a wake-up call for U.S. regulators and investors regarding the risk of fraud that foreign companies pose to the U.S. capital market. Chinese companies may face tightened scrutiny which makes it more difficult for them to gain capital from the U.S. market.

Question 4: Discuss the importance of internal controls and explain how an effective internal control system could have prevented or mitigated fraudulent activities at Luckin (tone at the top, control environment, collusion, etc.) Do you think a strong internal control system can prevent ALL fraud?

Solution 4: Internal controls are the policies, methods and procedures implemented by a company to protect its assets, enhance the accuracy and reliability of its financial records, promote operational efficiency and ensure compliance with laws and regulations. Without good internal controls, companies put themselves at risk of theft, embezzlement, revenue loss, liabilities and public scandals. An effective internal control system can prevent fraudulent activities by minimizing the opportunity to commit fraud and increasing the perception of detection. It can also help detect and catch fraudulent activities sooner, and help management take remedial actions.

This case demonstrates clearly that no internal control system is perfect. Collusion (two or more individuals work together to overcome the prescribed controls) among management, employees and third parties can reduce the effectiveness of a well-designed system. Luckin's internal investigation found evidence that more than 20 employees had worked together to create fake sales orders and even maintained an entire Fabricated Database to produce financial reports. This level of collusion can be hard to be detected by any internal control system.

In addition, top management has the responsibility to support internal control and make it clear that unethical activities will not be tolerated. This is known as the "tone at the top"-one of five primary components of internal control systems. However, as per Luckin's internal investigation, several top executives including its former CEO and COO were directly involved in the fabricated transactions, making its own internal control system vulnerable and ineffective.

Question 5: The fraud triangle is a model that explains why an individual commits fraud. It outlines three factors that contribute to the risk of fraud and other unethical behaviors: opportunity, incentives/pressure and rationalization. Apply the fraud triangle to analyze the fraud at Luckin.

Solution 5:

Opportunity: There was a lack of effective internal controls at Luckin as well as large scale collusion among management and employees. The company directors failed to establish or enforce an ethical culture. Additionally, because Luckin is a foreign issuer, the submission and disclosure requirements existing at the time it went public allowed for less oversight than a similar domestic company would have faced (specifically the inability of the PCAOB to oversee the audits of public companies; and the exemption from SOX provisions for foreign issuers). This has since been addressed with the passage of the Holding Foreign Companies Accountable Act.

Incentives/pressure: Luckin faced pressure to meet its own unrealistic earnings targets as well as analyst and investor expectations. Management had personal incentives to profit from the increase in the stock price since the top executives received stock-based compensation (stock ownership and stock options).

Rationalization: The top management may have felt that they were helping the company meet various targets in order to grab market share from competitors like Starbucks as fast as possible. The attitude that "management is also doing it" or that "management was in the know" sets the tone to lower level employees who may have felt that management permitted or even instructed them to cook the books and they were just following orders.

Question 6: List 2-3 internal control activities that could have helped uncover the fraud.

Solution 6:

A. *Documentation procedures:* Documents provide evidence that certain transactions have occurred. Luckin inflated sales by creating fake customer orders. Good documentation procedures can help detect the orders that have never been actually placed and coupons that have never been redeemed.
B. *Segregation of duties:* Responsibility for receiving cash, checks, etc. from customers should be separate from the responsibility of employees to transfer funds for payment to the funding companies or the corporate accounts. Additionally the responsibility for bank reconciliations should be separate from the responsibility for authorizing or controlling transfers to funds from Luckin's bank accounts.
C. *Independent internal verification:* Internal auditors should continuously evaluate the effectiveness of Luckin's internal control procedures. Reconciliations and reviews of the business activities (sales, coupons, bank transfers, etc.) should be performed. Any discrepancies should be reported to a management level on a timely basis.
D. *Physical Controls:* Conducting timely and accurate physical inventory count/audit can help uncover the falsified transactions- the inflated number of fake orders will not be supported by the actual inventory turnover.
E. *Human resources controls*: Rotating employee duties and mandatory vacations will make it difficult to maintain the Fabricated Database; Conducting thorough background checks can help identify employees who were associated with those third-party entities involved in the fraud.

Question 7: Discuss the role of the company management and auditor in ensuring that financial statements are accurately presented. Who is primarily responsible for providing accounting information and preparing financial statements? What is the role of the external auditor?

Solution 7: Luckin's management is primarily responsible for providing accounting information and overseeing the preparation of various accounting reports including the financial statements. Company management has a responsibility to ensure the integrity and accuracy of the financial statements. The external auditor's job is to inspect and review the firm's financial statements and express an opinion on whether such statements are presented fairly in accordance with GAAP or IFRS. They also assess and evaluate the firm's internal control system.

Question 8: The fraud scheme at Luckin was widespread and many employees knew of the fraud and either helped perpetuate it or failed to report it. What are some of the options available to employees who observe unethical or illegal behavior and wish to report it?

Solution 8:

A. Several options for employees are outline in Luckin's Code of Business Conduct and Ethics (Luckin 2022), including an email account for whistleblowing: 1000@luckincoffee.com, reporting suspected loss, misuse of assets or theft to their manager and the Compliance Department or reporting fraud to

the Director of Internal Audit or the Compliance Department. The Direct of Internal Audit is independent of management.

B. Report the suspected wronging directly to the Audit Committee of the Board of Directors. The chairman of the Audit Committee considers all allegations of fraud.
C. Report the suspected wrongdoing through the SEC's online Tips, Complaints and Referrals (TCR) system. Available at: https://www.sec.gov/tcr.

Case Question Set B: Advanced Questions

Question 1: Locate Luckin's Press Release made on July 1, 2020 regarding the completion of its internal investigation (you can find press releases on its website under News & Events). What did the company find regarding the fraud and what remedial actions did they take or plan to take?

Solution 1: Luckin found in its internal investigation that the fabrication of transactions began in April 2019. Both revenues and expenses were significantly inflated. It also disclosed that the former COO and CEO as well as certain employees participated in the fraud and that funds supporting the fraud were funneled to the company through related parties and third parties associated with Luckin's employees.

As remedial actions, the company:

A. Terminated former CEO and COO;
B. Required the Chairman of the Board to resign and be removed;
C. Would terminate 12 other employees who participated in, and/or had knowledge of, the fabricated transactions, including previously suspended employees;
D. An additional 15 employees were subject to other disciplinary actions;
E. Terminated relationships with all third parties involved in the fraud;
F. Implemented immediate enhancements to finance functions;
G. Engaged an internal control consultant to evaluate the existing controls and recommend enhancements to detect and prevent future misconducts;
H. Chartered an internal audit function to test and evaluate control functions;
I. Would strengthen ongoing compliance training to employees.

Question 2: Using YahooFinance, find the closing stock price of Luckin (ticker: LKNCY) for the dates below. Explain how Luckin's exaggerated earnings and subsequent fraud disclosure affected its stock price. Is this type of market manipulation unethical, illegal or both?

Solution 2:
May 17, 2019 (IPO date): $20.38
November 20, 2019 (Q3 financial results announced): $27.26
January 14, 2020 (Secondary offering): $45.80
January 17, 2020 (High price): $50.02
April 2, 2020 (Day of fraud disclosure): $6.40
June 26, 2020 (Last day of trading on Nasdaq): $1.38
Today: Answers will vary.

Luckin's exaggerated earnings inflated its stock price to a high of $50.02. By deceiving investors, Luckin was able to raise more money more quickly after its IPO through a follow-on equity offering and convertible bond issuance. Lucking knowingly and recklessly violated several securities laws and as well as professional and ethical standards.

Question 3: Find Luckin's registration statement (Form F-1) filed with the SEC in 2019.

A. What are the ownership percentages reported for the individuals that were terminated after the fraud was revealed (the Chairman, CEO and COO)?

Solution 3: Charles Zhengyao Lu (Chairman of the Board): 30%, Jenny Zhiya Qian (founder and CEO): 20% and Jian Liu (COO): options, no ownership.

B. When the fraud was first revealed, the COO was blamed and terminated. Founder and CEO Jenny Qian and Board Chairman of the Board Charles Zhengyao Lu denied any knowledge of the scheme. Given the above ownership information, do you think this is likely?

No, it is not likely. The Chairman and CEO owned 50% of the company and therefore had the most "skin in the game". It is unlikely such a large-scale fraud would have been committed without their knowledge. The COO Jian Liu had no ownership stake in the company, therefore he had less immediate financial motivation to commit fraud, although he could have benefited from the reputational effect of a successful company.

Question 4: Public companies incur additional costs for regulatory compliance to enter the marketplace (for example the costs associated with disclosure and governance requirements of SOX or compliance with PCAOB audits).
A. Describe some of the benefits of the increased regulation for public companies.
B. Explain why SOX or the PCAOB did not play a larger role in the Luckin case.

Solution 4:
A. Describe some of the benefits of the increased regulation for public companies:
- Increased levels of investor confidence.
- Less stock volatility, creating greater liquidity and improving a company's ability to raise capital.
- Stronger internal controls, greater auditor understanding of those controls.
- Fewer incentives and opportunities to commit fraud since companies are subject to greater fines/penalties. Company officers can be held personally responsible and face imprisonment if they fail to comply.

B. Explain why SOX or the PCAOB did not play a larger role in the Luckin case: SOX aims to prevent financial fraud and requires management to maintain an effective internal control system and certify accuracy of financial disclosures; Luckin's management would have been in violation of these provisions of SOX.

PCAOB oversees the external audit process by setting auditing standards and ensuring its compliance. During the time Luckin went public, U.S. regulators had difficulties monitoring financial reporting by foreign companies, due to fewer disclosure requirements for foreign issuers and a lack of access to necessary documentation. Due to political factors, Chinese issuers were exempt from compliance with SOX provisions. In addition, their audits did not come within the purview of the PCAOB. Investors in Luckin did not have the same level of protection that US issuers enjoy. These events contributed ultimately to the HFCAA.

Question 5: Research the recently passed Holding Foreign Companies Accountable Act (HFCAA) and explain how this Act is related to the Luckin case.

Solution 5: Sox requires the PCAOB to inspect the audits of all U.S. listed companies, including those located in foreign jurisdictions. However, for many years China has not been cooperative and has prohibited audit firms located in mainland China and Hong Kong from submitting audit work papers to the PCAOB

because the local government believes that doing so would leak state secrets. Luckin's collapse led to renewed scrutiny of Chinese companies that sell shares on U.S. exchanges without adhering to the rules that require their audits be inspected by U.S. regulators, and facilitated the passage of the HFCAA. Under this new Act, the SEC can ban companies from trading and delist them if the PCAOB is unable to perform audit inspection for three consecutive years. The fallout associated with Luckin prompted fresh concerns about corporate governance in China.

Question 6. Discuss the role of the company management and the external auditor in fraud prevention and detection, including the limitations of each party. Explain in the context of the Luckin case.

Solution 6: Management and/or the governing body of the company are mainly responsible for preventing and detecting fraud. However, as per the U.S. auditing standards, auditors do have a responsibility to obtain reasonable assurance regarding whether the firm's financial statements are free from material misstatement, due to either error or fraud, and to appropriately identify, assess, and respond on fraud risks with due care and professional skepticism.

When performing audits, auditors first assess the internal control system of the firm and then rely on the information and documents produced and provided by the firm's accounting department and management. In Luckin's case, top managers were either directly involved in or had knowledge of the fraud, and even permitted/instructed certain employees to fabricate transactions. Some of the original accounting records were generated from a deliberately maintained Fabricated Database. This makes it difficult for auditors to identify evidence of fraud. In addition, auditors are generally not trained or paid to detect fraud. Thus, they may not have the incentives or ability within the scope of a regular audit to do so. In Luckin's case, it was Muddy Waters (a famous short-seller that would have profited from a drop of Luckin's stock price) who published the anonymous report that first triggered the questioning of Luckin's operations. This warning is what led to the fraud being uncovered by the auditor at that time.

Question 7: EY claimed that it had discovered Luckin's fraudulent activities during the annual audit of the 2019 financial statements, but instead of issuing an adverse opinion report, it chose to withdraw as Luckin's independent auditor. What do you think might be the reason?

Solution 7: EY's decision may have been driven by reputational and/or legal considerations – the angry investors may see it as Luckin's accomplice or at least blame the scandal on its inability to detect the fraud sooner, because EY was not only Luckin' auditor at the time of the fraud but also audited its 2017 and 2018 financial results which were included in the IPO Prospectus.

Question 8: After being delisted from Nasdaq, Luckin's stock continues to trade on the OTC market under a new ticker. Research the OTC market. Explain the advantages and disadvantages of OTC trading for Luckin and for investors.

Solution 8: OTC securities are securities that are traded directly between counterparts via a broker-dealer network instead of being listed on a formal exchange such as Nasdaq or NYSE. The OTC markets give smaller companies and companies that do not meet the requirements to be listed on a standard market exchange an opportunity to still trade their stocks. However, OTC trading is less regulated and requires less publicly available information.

For Luckin: Advantages: Less regulation, fewer filing requirements, less costly than major exchange.
Disadvantages: Less publicity and exposure, fewer potential investors, less liquidity, increased cost of capital.

For investors: Advantages: opportunity to invest in Luckin before it re-lists on a major exchange, lower costs to invest. Disadvantages: Less regulation, unaudited financial statements, lack of dependable publicly available information and transparency around company operations, growth, etc., increased risk of error and fraud.

Question 9: It appears that the regulatory structure in the US did not prevent this fraud. Why do foreign companies seek to list on NASDAQ? Discuss broadly NASDAQ listing requirements and why these failed to detect the fraud at Luckin prior to its IPO listing? What types of new controls should NASDAQ and other exchanges put in place to prevent these types of fraudulent activities and shore up investor confidence in its listings? What action should FINRA and the SEC take in this regard?

Solution 9: Students have the opportunity to critically explore NASDAQ listing requirements as well as the role of the SEC and other markets regulatory bodies like FINRA. Some key points include:

A. NASDAQ listings are much sought after by global companies as it facilitates superior liquidity, active trading and attractive valuations for growth companies.
B. In order to qualify for a NASDAQ listing, companies have to meet the threshold in at least one of the following areas (1) Income; (2) Market Capitalization and Cash Flow (3) Market Capitalization and Revenue; (4) Market Capitalization and Assets. [See https://listingcenter.nasdaq.com/assets/initialguide.pdf]. NASDAQ listing requirements are primarily focused on liquidity and investor interest.
C. On NASDAQ listing requirements - these were originally developed in the context of U.S companies and markets. As such, its listing requirements complement the existing structure that regulates corporations and capital markets in the US. In 2020, following the Luckin Coffee experience, the NASDAQ filed a proposal with the SEC to tighten its listing standards for foreign issuers from a jurisdiction "that has secrecy laws, blocking statutes, national security laws, or other laws or regulations restricting access to information by regulators of U.S. listed companies." [See https://listingcenter.nasdaq.com/assets/rulebook/nasdaq/filings/SR-NASDAQ-2020-027.pdf] The new proposals focus on greater liquidity requirements as well as higher accountability standards to qualify for listing. While this is a good step, it still may not have been sufficient to prevent the kind of fraud that the Luckin promoters perpetrated. NASDAQ governance rules like having a majority of independent directors on the board and an independent audit committee are not enforced for foreign companies, which are generally permitted to have their home country practice. From a business perspective, exchanges, as competitors for listings, have to adopt a cost-benefit perspective on listing controls. Most control systems unfortunately are not able to prevent all frauds.
D. On the role of the SEC - while the NASDAQ focuses on liquidity and the markets, the SEC monitors financial information and disclosure during the registration and review process. Foreign issuers have more leeway in this process – for instance, (1) they can use IFRS or US GAAP; (2) they only need to disclose aggregate rather than individual executive compensation. Thus, the SEC generally defers to the home country practice with regard to reporting requirements. Foreign issuers may have weaker corporate governance standards. Rules for US companies including SOX provisions are generally not required for foreign issuers. The SEC is responsible for overseeing the financial reporting and registration process. Any misstatements of financial information would come within the SEC's purview. In this case, the SEC investigated the company, charged Luckin with fraud and Luckin company had to ultimately pay a $180 million fine to settle the case.
E. FINRA oversees the broker-dealers involved in the IPO. It should investigate the brokers who served as underwriters for the Luckin IPO.

Question 10: Do you think that employees and others held responsible in the fraud should be personally held liable?

Solution 10: Luckin did fire the CEO and the COO, and suspended some key employees following the fraud being uncovered. But what about the rank-and-file employees who played along? This is a tougher call, and student responses may vary, so it should make for a good discussion. Key discussion points:

A. Organizational culture and tone at the top – employees may have felt compelled to go along and be a team player
B. For an employee, easy to rationalize with the "everyone around me is doing it" argument.
C. Employees may have perceived that their job success was correlated with putting up large revenue numbers.
D. Lack of governance and oversight made this easy.
E. The fraud appeared as a continuous loop – difficult to step off.
F. So, to an extent employees were a cog in the wheel. There must be a consequence for aiding in committing fraud. However, it is a difficult task for the US legal system to extend its reach to Chinese citizens.

APPENDIX A: Advanced Level Explanation of Fraud Schemes

Luckin's Fraud Schemes:

1. Luckin employees created fake customer accounts with their cell phone numbers and those of their family members and fabricated sales and coupon redemptions by these fictitious customers. Beginning in April 2019, certain Luckin employees transferred money from individual bank accounts to mobile accounts on WeChat and Alipay that were associated with the fake customer accounts. They used these transferred funds to make purchases on the Luckin app. The fake customer orders were placed in order to "redeem" coupons and fabricate sales, even though real orders were never placed and the coupons were never actually redeemed. Luckin recognized several million dollars of revenue from these fake customer transactions (SEC 2020a).

2. Starting in May 2019, Luckin created fake corporate accounts and used these accounts to fulfill fictitious bulk orders. All of the fictitious corporate accounts were controlled by or associated with Luckin employees or related entities. The corporate entities were all little-known, sham companies that transferred money directly to Luckin from a corporate Alipay account in order to purchase coupons on Luckin's app. Similar to the first scheme, the corporations placed fake retail orders, often in large amounts, to redeem coupons, which were recorded alongside bonafide voucher sales to regular corporate clients like airlines and banks (Yang, 2020a). Again, no real orders were placed for the companies, and the coupons were not redeemed. Luckin recognized tens of millions of dollars of sales this way, dwarfing legitimate purchases made during this period (SEC 2020a).

3. Beginning in 2019, Luckin entered into sham coupon purchase agreements with third-party shell companies. These shell companies were alleged to be intermediary agents that would resell coupons to individual customers. Certain Luckin employees were aware of the fraud and attempted to conceal the scheme by removing Luckin employees involved with the third parties (SEC 2020a). As part of the fraud, seven funding companies were utilized, including two of the fictitious corporate entities involved in the second scheme. These funding companies were controlled by (or associated with) Luckin employees and transferred money into Luckin's bank accounts. Luckin altered the bank statements to give the appearance that the funds were originating from the fictitious third party agents and not the funding companies. Following the transfer of funds, Luckin employees would generate fake coupons and fabricate coupon sales to the fictitious agents. Additionally, Luckin created more fake orders, to account for the individual customers who had supposedly purchased the coupons from the fictitious agents, in order to redeem the coupons. As above, real orders were never placed and the coupons were never redeemed. This scheme had the largest effect on Luckin's financial statements, fabricating more than $280 million dollars of sales.

Certain employees at Luckin were aware of the fraud and even maintained separate databases to track the fictitious and legitimate transactions. The "Business Operations Database" tracked legitimate coupon sales and redemptions, while the "Fabricated Database" included both legitimate and fabricated sales numbers. The same Luckin employees would switch the database used to generate reports, depending on what reporting was required. For example, Luckin's Finance Department only had access to the Fabricated Database and therefore unknowingly incorporated fictitious transactions into Luckin's financial statements.

The total amount of sales transactions associated with these schemes was at least $311 million from April 2019 to January 2020. During this time, Luckin was able to maintain the fraud scheme by recycling the funds from fabricated coupon sales back to the funding companies (controlled by or associated with Luckin employees) and fictitious corporate customers, using bank transfer and fabricated business-related expense payments to vendors (SEC 2020a).

APPENDIX B: Advanced Summary of Aftermath

After the misconduct was discovered, Luckin self-reported the fictitious sales and expenses to the SEC and cooperated with the investigation. The company "… promptly undertook significant remedial efforts", including additional internal investigations, terminating certain personnel and relationships with third parties and adding additional internal accounting controls (SEC 2020a).

Some of these efforts included terminating the Chief Executive Officer and Chief Operating Officer in May 2020, as well as overhauling the Board of Directors. The stock resumed trading on Nasdaq on May 20, but was shortly delisted due to "public interest concerns" as well as Luckin's failure to publicly disclose material information (Yang, 2020c). In July 2020, the Chairman of the Board was removed, and in September, Luckin was fined by China's top commerce regulator for its accounting misconduct (Yang, 2020b).

On December 16, 2020, the SEC charged Luckin with violating the antifraud provisions of Section 17(a) of the Securities Act of 1933 and Section 10(b) of the Securities Exchange Act of 1934. The SEC Complaint alleges that Luckin intentionally and materially overstated its reported revenue and expenses, and materially understated its net loss in publicly disclosed financial statements in 2019, in order to give the impression of rapid growth and to meet/exceed analyst earnings expectations (SEC 2020a).

Luckin also violated the reporting, books and records and internal control provisions of the Exchange Act (SEC 2020b). Specifically, the company failed to make and keep books, records, and accounts which accurately and fairly reflected the transactions of the business. It also failed to devise and maintain a system of internal accounting controls sufficient to provide reasonable assurance that transactions were recorded as necessary to allow for preparation of financial statements in conformity with generally accepted accounting principles (GAAP) (SEC 2020a).

Luckin did not admit or deny the charges, but agreed to pay a $180 million fine to settle with the SEC. According to the current CEO, "This settlement reflects our cooperation and remediation efforts and enables the company to continue with the execution of its business strategy. The Company's Board of Directors and management are committed to a system of strong internal financial controls and adhering to best practices for compliance and corporate governance" (Luckin 2020b).

The impact of the scandal was widespread. Investors, including some extremely large and reputable institutional investors were stung by the financial loss. Luckin became another public failure for the Big Four - it had been audited by EY. The fraud also served as the trigger for political controversy around Chinese listed firms, leading to new legislation for all foreign-listed companies.

On February 5, 2021 Luckin filed for Chapter 15 bankruptcy in New York. Since then, it has slowly begun to recover its business operations. It has used the bankruptcy and reorganization to abandon some of its debt, shut down unprofitable and underperforming locations, and outsource the running of nearly 25% of its locations to third parties (Ghosh 2021). A $175 million class action settlement with shareholders was reached in October 2021 related to the fraud (Stempel, 2021). Luckin hired a new audit firm after EY resigned and recently filed its 2022 annual report with the SEC. The company continues to show signs of improvement and growth prospects, despite the fraud and pandemic (Luckin 2021). It currently trades on the OTC market under the ticker LKNCY and its market value has climbed back up to $3 billion.

BIOGRAPHY

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AUDITOR RATIFICATION, STOCK PRICES, AND AUDITOR CHANGE: A COMPARATIVE STUDY IN PUBLICLY TRADED COMPANIES

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ABSTRACT

This study investigates the complicated relationships among auditor ratification, stock prices, and auditor change within publicly traded companies. We analyzed 44,398 observations spanning 2010 to 2023. We find that factors influencing auditor ratification include total shares outstanding, net income, audit benefits fees, and Russell 2000 index membership. Factors that affect stock prices include the total number of votes cast by shareholders, book value, and audit fees. This study also reveals that ratification year and audit benefits fees are related to auditor change. This study adds to the shareholder impact on corporate governance and stock price discussion.

JEL: M42, M48, M49

KEYWORDS: Auditor change, Auditor Ratification, Audit-related outcomes, Investor Confidence, Ratification Year, Russell 2000 Index, Shareholder Perceptions, Shareholder Voting

INTRODUCTION

The role of shareholders in ratifying auditor appointments has been of interest and debate among researchers, practitioners, and regulators. An auditor ratification vote gives shareholders a chance to express their opinions regarding the auditors selected by the company, but historically, less than 2% of shareholders vote negatively (Cunningham, 2017). However, even small numbers voting negatively have been found to influence the dismissal of auditors (Barua et al., 2017). Auditor ratification impacts how publicly traded firms are governed (Tanyi et al., 2021), as well as stock prices (Tanyi & Roland, 2017) and bond ratings (Bao & Tanyi, 2020), indicating a complex relationship between corporate governance and the financial landscape. Auditors play a role in reducing agency costs by providing independent verification of financial statements, enhancing the credibility of accounting information, and facilitating external monitoring and contracting, thereby reducing information asymmetry and agency problems between shareholders and managers. The percentage of outside directors, the rate of institutional ownership, and the number of shareholders positively impact the significance of independent auditors in reducing agency issues between managers and shareholders (Watts & Zimmerman, 1983). Section 301 of the Sarbanes-Oxley Act (SOX) requires audit committees to select and oversee auditors. Auditor ratification significantly impacts how publicly traded firms are governed and the transparency of their financial reporting (Tanyi et al., 2021). High-quality auditors lower the risk of falling stock prices (Robin & Zhang, 2015), and investor opinion has been found to impact stock prices (Firth et al., 2015). Thus, audit committees are interested in investor perceptions of the auditors' quality. Shareholder disapproval of auditors may lead the audit committee to seek new auditors or to an adverse market reaction (Tanyi & Roland, 2017).

Despite its importance, there is little or no research directly associating auditor ratification, stock prices, and auditor change. This study uses financial and nonfinancial measures to examine the underlying factors that drive these relationships. The remainder of this paper is organized as follows. First, existing literature on auditor ratification, stock prices, and auditor change is reviewed, followed by a methodology section describing our research hypotheses and analysis. Results are then presented, followed by implications and associated limitations of the study, as well as thoughts for future research.

LITERATURE REVIEW

Auditors ensure financial reporting credibility and maintain investor confidence; however, dissatisfied shareholders may signal possible issues with a company's financial reporting quality, governance, or management through auditor ratification (Tanyi et al., 2020). During annual meetings, shareholders may express their satisfaction or dissatisfaction with the current external audit firm, which can impact how the company and the auditor work together moving forward. Auditor ratification may reflect shareholders' confidence and satisfaction with the auditor's independence, quality, and performance. Positive auditor ratification votes may signal higher trust and credibility in the auditor's work. In contrast, lower approval may indicate a lower level of trust and credibility or a higher level of dissatisfaction, signaling underlying issues within a company. If a company is performing well, advisors are less likely to recommend a negative vote (Cunningham, 2017). SOX 2002 requires publicly traded companies to have an independent audit committee to hire and oversee the firm's independent auditor. Agency theory suggests that shareholders may use their voting rights to express concerns about the auditor's quality and credibility (Watts & Zimmerman, 1983). However, auditor ratification by shareholders is not required by the SEC. Tanyi and Cathey (2020) found that foreign cross-listed companies in the U.S. are more likely to hold ratification votes when they have U.S.-based auditors. Auditor ratification may influence the auditor's behavior and incentives in an audit engagement; higher auditor ratification votes may increase the auditor's reputation capital and bargaining power with the client, while lower auditor approval votes may increase the auditor's litigation risk and pressure from the client. Therefore, auditor ratification may affect audit costs, quality, and independence (Purohit & Desai, 2023).

Shareholders' dissatisfaction raises concerns about auditor independence and objectivity, potentially impacting auditor ratification and audit costs. Dao et al. (2012) found firms that held a shareholder ratification vote had less likelihood of a subsequent restatement and resulting stock price decline. Additionally, firms holding shareholder votes generally paid higher audit fees and received higher quality audits (Dao et al., 2012). When shareholders strongly support the current auditors, it indicates a higher level of trust in the company's financial reporting and auditing outcomes (Martin et al., 2023). A high proportion of non-audit services, long auditor tenure, announcement of a restatement, and perceived lack of audit quality are potential causes of negative shareholder votes (Raghunandan, 2003; Tanyi & Cathey, 2020; Tanyi et al., 2021). In a study on the influence of proxy advisors on ratification votes, Cunningham (2017) found that significant non-audit fees, high discretionary accruals, and restatements were related to the likelihood of a recommendation to vote against the auditor. Additionally, longer auditor tenure was associated with increased "against" recommendations, implying concerns about auditor independence. Auditor tenure disclosure, which became mandatory in 2017, has been found to increase shareholder dissent rates, suggesting that shareholders view longer auditor tenure as compromising auditor independence (Dunn et al., 2021; Tanyi et al., 2021). Mandatory auditor tenure disclosures also increase the likelihood of auditor dismissal and decrease audit fees for companies with longer auditor tenure (Dunn et al., 2021), although there is no clear relationship between auditor tenure and audit quality (Defond & Zhao, 2014).

A decrease in non-audit services, increased audit fees, and improved audit quality, as evidenced by lower discretionary accruals and a higher likelihood of receiving a going-concern opinion, have been found to follow low ratification votes, indicating that shareholder disapproval may have a disciplinary effect motivating the auditor to improve (Tanyi et al., 2020). For example, disappointing ratification results have

been found to lead to lower non-audit fees as a proportion of total audit fees, especially in firms with a more significant proportion of institutional shareholders (Purohit & Desai, 2023; Tanyi et al., 2020). Higher audit fees may be associated with audit committees demanding increased quality from auditors, as well as auditors increased effort during the audit engagement (Martin et al., 2023), although they may also be merely a cost built-in for high-risk clients (DeFond & Zhang, 2014). However, the market may also react negatively to increased shareholder displeasure, and audit committees may change audit firms (Barua et al., 2017; Tanyi & Roland, 2017). Research on the direction of the impact of a change in auditor on stock prices has been inconclusive (Stunda, 2012). The impact of auditor ratification on stock prices, as measured by abnormal returns around the date of the shareholder meeting, indicates that auditor ratification can convey information to the market about the value and reputation of the auditor and the expected quality and reliability of the financial reporting process (Cunningham, 2017). High shareholder disapproval has been found to trigger greater market negativity if there have been no previous signals of auditor quality issues or problems. However, market negativity is less when there have been prior signals of audit quality or independence problems, such as high non-audit fee ratios, restatements, or longer auditor tenure (Tanyi & Roland, 2017). Prior research suggests that auditor ratification votes are relevant and consequential for auditors, audit committees, shareholders, regulators, and researchers in different settings and contexts. However, there are still gaps and limitations in the literature, such as the relationships between stock price, auditor ratification, and auditor change.

DATA AND METHODOLOGY

Investors may perceive auditor changes as a signal of lower audit quality and higher audit risk (Stunda, 2012). This study explores the relationship between auditor ratification, stock prices, and auditor change in publicly traded companies and addresses the following hypotheses. In publicly traded companies:

H1: Auditor ratification is correlated with stock prices
H2: Auditor ratification is correlated with auditor change
H3: Stock price is correlated with auditor change
H4: Auditor ratification, auditor change, and stock price will share common predictor variables.

Using a quantitative research approach, 54,725 annual observations with 356 variables from 2010 to 2023 were obtained from Wharton WRDS Audit Analytics. A VIF of 10 reduced the sample size to 44,398 observations. The relationship between auditor ratification, auditor change, and stock price was first tested using pairwise correlation. Predictor variables were separately regressed on each of the three dependent variables. Finally, Multivariate Multiple Regression (MVreg) was used to simultaneously compare the interdependencies among the three dependent variables: Auditor Ratification, Stock Prices, and Auditor Change, following Izzalqurny et al. (2019), Kurniawan et al. (2021), and Weiss and Kalbers (2008). The Faccini et al. (2023) methodology was used to analyze the relationship between auditor change, stock prices, and auditor ratification and included the statistically significant explanatory variables in determining their respective influences. The following models were used to analyze the data. Since three dependent variables were examined, three models were used. Results of the independent regressions are presented in Tables 1 and 2, and the multivariate multiple regression results are presented in Table 3. Variable definitions can be found in the Appendix.

Model 1:

$$\begin{aligned}\text{Auditor}_{\text{\_Ratification}} &= \alpha 1 + \beta 1(\text{TOTAL\_SHAREHOLDER\_VOTES}) + \beta 2(\text{TOTAL\_SHARES\_OUTSTANDING}) \\ &+ \beta 3(\text{MARKET\_CAP}) + \beta 4(\text{BOOK\_VALUE}) + \beta 5(\text{TOTAL\_ASSETS} \\ &+ \beta 6(\text{CASH\_AND\_CASH\_EQUIVALENTS}) + \beta 7(\text{REVUE\_TTM}) + \beta 8(\text{NET\_INCOME\_TTM}) \\ &+ \beta 9(\text{EBITDA\_TTM}) + \beta 10(\text{CASH\_FROM\_INVESTING\_ACTIVITIES\_TTM}) \\ &+ \beta 11(\text{CASH\_FROM\_FINANCING\_ACTIVITIES\_TTM}) \\ &+ \beta 12(\text{CHANGE\_IN\_CASH\_AND\_CASH\_EQUIV\_TTM}) + \beta 13(\text{TOTAL\_AUDIT\_FEES}) \\ &+ \beta 14(\text{TOTAL\_NON\_AUDIT\_FEES}) + \beta 15(\text{TOTAL\_AUDIT\_BENEFITS\_FEES}) \\ &+ \beta 16(\text{TOTAL\_AUDIT\_TAX\_FEES}) + \beta 17(\text{TOTAL\_AUDIT\_OTHER\_FEES}) \\ &+ \beta 19(\text{RUSSELL\_2000}) + \varepsilon 1\end{aligned}$$

Model 2:

$$\begin{aligned}\text{Auditor}_{\text{Change}} &= \alpha 2 + \beta 20(\text{TOTAL\_SHAREHOLDER\_VOTES}) + \beta 21(\text{TOTAL\_SHARES\_OUTSTANDING}) \\ &+ \beta 22(\text{MARKET\_CAP}) + \beta 23(\text{BOOK\_VALUE}) + \beta 24(\text{TOTAL\_ASSETS}) \\ &+ \beta 25(\text{CASH\_AND\_CASH\_EQUIVALENTS}) + \beta 26(\text{REVENUE\_TTM}) \\ &+ \beta 27(\text{NET\_INCOME\_TTM}) + \beta 28(\text{EBITDA\_TTM}) \\ &+ \beta 29(\text{CASH\_FROM\_INVESTING\_ACTIVITIES\_TTM}) \\ &+ \beta 30(\text{CASH\_FROM\_FINANCING\_ACTIVITIES\_TTM}) \\ &+ \beta 31(\text{CHANGE\_IN\_CASH\_AND\_CASH\_EQUIV\_TTM}) + \beta 32(\text{TOTAL\_AUDIT\_FEES}) \\ &+ \beta 33(\text{TOTAL\_NON\_AUDIT\_FEES}) + \beta 34(\text{TOTAL\_AUDIT\_BENEFITS\_FEES}) \\ &+ \beta 35(\text{TOTAL\_AUDIT\_TAX\_FEES}) + \beta 36(\text{TOTAL\_AUDIT\_OTHER\_FEES}) \\ &+ \beta 37(\text{RATIFICATION\_YEAR}) + \beta 38(\text{RUSSELL\_2000}) + \varepsilon 2\end{aligned}$$

Model 3:

$$\begin{aligned}\text{Stock\_Price} &= \alpha 3 + \beta 39(\text{TOTAL\_SHAREHOLDER\_VOTES}) + \beta 40(\text{TOTAL\_SHARES\_OUTSTANDING}) \\ &+ \beta 41(\text{MARKET\_CAP}) + \beta 42(\text{BOOK\_VALUE}) + \beta 43(\text{TOTAL\_ASSETS}) \\ &+ \beta 44(\text{CASH\_AND\_CASH\_EQUIVALENTS}) + \beta 45(\text{REVENUE\_TTM}) \\ &+ \beta 46(\text{NET\_INCOME\_TTM}) + \beta 47(\text{EBITDA\_TTM}) \\ &+ \beta 48(\text{CASH\_FROM\_INVESTING\_ACTIVITIES\_TTM}) \\ &+ \beta 49(\text{CASH\_FROM\_FINANCING\_ACTIVITIES\_TTM}) \\ &+ \beta 50(\text{CHANGE\_IN\_CASH\_AND\_CASH\_EQUIV\_TTM}) + \beta 51(\text{TOTAL\_AUDIT\_FEES}) \\ &+ \beta 52(\text{TOTAL\_NON\_AUDIT\_FEES}) + \beta 53(\text{TOTAL\_AUDIT\_BENEFITS\_FEES}) \\ &+ \beta 54(\text{TOTAL\_AUDIT\_TAX\_FEES}) + \beta 55(\text{TOTAL\_AUDIT\_OTHER\_FEES}) \\ &+ \beta 56(\text{RATIFICATION\_YEAR}) + \beta 57(\text{RUSSELL\_2000}) + \varepsilon 3\end{aligned}$$

RESULTS AND DISCUSSION

Hypotheses 1, 2, and 3 were first tested by pairwise correlation of the three variables of interest – auditor change, ratification, and stock price. As can be seen in Table 1, none of the correlations were statistically significant, although all but the correlation of stock price with auditor change were positive. Table 1 also presents the statistically significant explanatory variables in the independent regressions.

Table 1: Dependent Variable Correlations and Regression Results

Pairwise Correlations	**Stock Price**	**Auditor Ratification**	**Auditor Change**
Stock Price	1.000		
Auditor Ratification	0.008	1.000	
Auditor Change	(0.003)	0.002	1.000
Explanatory Variable Regression Coefficients			
TOTAL SHAREHOLDER VOTES			
TOTAL SHARES OUTSTANDING	0.022**	(0.026)	(0.002)
MARKET CAP	0.195**	(0.021)	(0.006)
BOOK VALUE	0.083**	(0.010)	(0.006)
TOTAL ASSETS	0.044**	(0.025)	(0.004)
CASH AND CASH EQUIVALENTS	0.022**	(0.014)	0.001
REVENUE TTM	0.168**	(0.019)	(0.011)
NET INCOME TTM	0.135**	(0.017)	(0.010)
EBITDA TTM	0.142	(0.023)**	(0.008)
CASH FROM INVESTING ACTIVITIES TTM	(0.066)**	0.010	0.003
CASH FROM FINANCING ACTIVITIES TTM	(0.014)	0.004**	0.004
CHANGE IN CASH AND CASH EQUIV TTM	0.013	(0.002)**	0.006
TOTAL AUDIT FEES	0.114**	(0.019)**	(0.004)
TOTAL NON-AUDIT FEES	0.076**	(0.041)**	0.001
TOTAL AUDIT BENEFITS FEES	0.022	(0.005)**	(0.008)**
TOTAL AUDIT TAX FEES	0.070**	(0.046)**	0.000
TOTAL AUDIT OTHER FEES	0.028	(0.006)**	0.007

*Table 1 shows the correlation between Auditor Ratification Rates, Stock Prices, and Auditor Change and the regression coefficients of the statistically significant explanatory variables (** p<0.05). All financial and fee variables, stock prices, total votes, and shares outstanding were measured at the end of the most recent fiscal year (F.Y.). AUDITOR RATIFICATION is the % of "yes" ratification votes for current auditors. Auditor change was coded "1" if the auditor changed during the F.Y. and "0" if there was no change. "TTM" is trailing 12 months.*

The correlation coefficient for the stock price and auditor ratification is 0.008; this supports previous research (Dao et al., 2012; Firth et al., 2015, suggesting that investor trust and corporate governance, as indicated by auditor ratification, may exert a marginal influence on stock prices. The weak positive correlation signifies a minimal tendency for companies with higher auditor ratification to have slightly higher stock prices. The stock price and auditor change have a negative correlation coefficient of -0.003, a weak relationship, but showing a change in auditors may be associated with a slight reduction in stock prices. Auditor ratification and auditor change had a 0.002 correlation coefficient, showing little, if any, relationship between auditor ratification and auditor change, as discussed by Kurniawan et al. (2021). The only statistically significant explanatory variable for auditor change is TOTAL AUDIT BENEFITS FEES (total audit benefit fees paid as of the fiscal year-end). Stock Price was positively related to all its statistically significant explanatory variables, except cash flow from investing activities for the trailing 12 months (CASH FROM INVESTING ACTIVITIES TTM). In contrast, auditor ratification was negatively related to all its statistically significant variables except CASH FROM FINANCING ACTIVITIES TTM (cash flow from financing activities for the trailing 12 months).

Table 2 presents regression results incorporating RATIFICATION YEAR (the year of the ratification vote) and RUSSELL 2000 (membership in the Russell 2000 index) as control variables. TOTAL AUDIT BENEFITS FEES and RATIFICATION YEAR were the only variables statistically significant for Auditor Change. TOTAL AUDIT BENEFITS FEES had a negative coefficient, and RATIFICATION YEAR had a positive coefficient. The TOTAL AUDIT BENEFITS FEES is statistically significant, supporting the relevance of audit benefits fees in auditor-related decisions (Dao et al., 2012) Auditor Ratification had seven statistically significant explanatory variables emphasizing the findings by Tanyi and Roland (2017) and Dao et al. (2012). TOTAL NON-AUDIT FEES (total non-audit fees paid as of the fiscal year-end), EBITDA TTM (income statement earnings before interest, taxes, depreciation, and amortization trailing 12 months), CASH FROM FINANCING ACTIVITIES TTM, and TOTAL AUDIT TAX FEES (total audit tax fees paid as of the fiscal year-end) all had negative coefficients. NET INCOME TTM (Net Income trailing 12 months), TOTAL AUDIT FEES (total audit fees paid as of the fiscal year-end), and RUSSELL 2000 all had positive coefficients.

Stock Price had 13 statistically significant variables. Three explanatory variables, TOTAL SHARES OUTSTANDING (number of fiscal year-end outstanding shares), TOTAL ASSETS (total fiscal year-end assets), and TOTAL NON-AUDIT FEES, had negative coefficients. The other ten variables had a direct impact, with nine of them, MARKET CAP (market capitalization at the end of the fiscal year), CASH AND CASH EQUIVALENTS TTM (trailing 12 months cash and cash equivalents), REVENUE TTM (trailing 12 months revenue), NET INCOME TTM, CHANGE IN CASH AND CASH EQUIV TTM (trailing 12 months change in cash and cash equivalents), TOTAL AUDIT FEES (total audit fees paid as of the fiscal year-end), TOTAL AUDIT BENEFITS FEES, TOTAL AUDIT TAX FEES, and TOTAL AUDIT OTHER FEES (total other audit fees paid as of the fiscal year-end) having less than one percent coefficient. RUSSELL 2000 had a positive coefficient of 8.481; being part of the Russell 2000 index is associated with increased stock prices during the ratification year (Firth et al., 2015). Table 2 shows the results of each dependent variable analyzed with the control variables without the correlation of the other dependent variables.

Table 2: Regression Results with Control Variables

	Stock Price	**Auditor Ratification**	**Auditor Change**
Adj R-squared	0.1189	0.0050	-0.000
R-squared	0.1185	0.0045	0.0005
TOTAL SHAREHOLDER VOTES	(0.000)	0.000	0.000
TOTAL SHARES OUTSTANDING	(0.000)**	(0.000)	0.000
MARKET CAP	0.000**	(0.000)	(0.000)
BOOK VALUE	0.000	0.000	(0.000)
TOTAL ASSETS	(0.000)**	(0.000)	0.000
CASH AND CASH EQUIVALENTS	0.000**	0.000	0.000
REVENUE TTM	0.000**	(0.000)	(0.000)
NET INCOME TTM	0.000**	0.000**	(0.000)
EBITDA TTM	(0.000)	(0.000)**	0.000
CASH FROM INVESTING ACTIVITIES TTM	0.000	0.000	0.000
CASH FROM FINANCING ACTIVITIES TTM	0.000	(0.000)**	0.000
CHANGE IN CASH AND CASH EQUIV TTM	0.000)**	0.000	(0.000)
TOTAL AUDIT FEES	0.000**	0.000**	(0.000)
TOTAL NON-AUDIT FEES	(0.000)**	(0.000) **	0.000
TOTAL AUDIT BENEFITS FEES	0.000)**	(0.000)	(0.000) **
TOTAL AUDIT TAX FEES	0.000**	(0.000)**	(0.000)
TOTAL AUDIT OTHER FEES	0.000**	0.000	0.000
RUSSELL 2000	8.481**	0.004**	(0.000)
RATIFICATION YEAR	(0.000)	0.000	0.000**
cons	28.360**	0.976**	1.061**

*Table 2 shows the tabulation of the regression models with the control variables. Overall, the statistically significant variables were the same; however, introducing the control variables (RUSSELL 2000 and the RATIFICATION YEAR) reduced the coefficients of the significant variables (** p<0.05). All financial and fee variables, stock prices, total votes, and shares outstanding were measured at the end of the most recent fiscal year (F.Y.). AUDITOR RATIFICATION is the % of ratification vote "for" current auditors. Auditor change was coded "1" if the auditor changed during the F.Y. and "0" if there was no change. RUSSELL 2000 membership was coded as "1"; lack of membership as "0". RATIFICATION YEAR is the F.Y. of the ratification vote.*

Next, multivariate multiple regression was used to compare the three dependent variables with and without the control variables (RATIFICATION YEAR, and RUSSELL 2000). Table 3 presents a comparison of the results for the three dependent variables.

Auditor Ratification

TOTAL SHARES OUTSTANDING, TOTAL ASSETS, CASH AND CASH EQUIVALENTS, and MARKET CAP were statistically significant for Auditor Ratification with negative coefficients without the control variables; however, when the control variables were included, these variables were not statistically significant. NET INCOME TTM, EBITDA TTM, CASH FROM INVESTING ACTIVITIES TTM, TOTAL AUDIT FEES, TOTAL NON AUDIT FEES, and TOTAL AUDIT TAX FEES all had statistically

significant but weak (less than 0.001) negative coefficients both with and without the control variables. The RUSSELL 2000 control variable is positive and statistically significant.

Auditor Change

TOTAL AUDIT BENEFITS FEES and RATIFICATION YEAR are the only variables statistically significant for auditor change; however, the coefficients are weak. TOTAL AUDIT BENEFITS FEES has a negative coefficient under both models, indicating an increase in audit benefits fees is associated with no Auditor Change. RATIFICATION YEAR was positive and statistically significant for Auditor Change. These findings on auditor change offer valuable insights into auditor changes driven by shareholders, building upon the research conducted by Dao et al. (2012).

Table 3: Ratification Multivariate Multiple Regression Coefficients

	Auditor Ratification		**Auditor Change**		**Stock Price**	
R-squared	0.005	0.014	0.001	0.018	0.119	0.122
	No Control	**With Control**	**No Control**	**With Control**	**No Control**	**With Control**
TOTAL SHAREHOLDER VOTES	0.000	0.000	0.000	0.000	(0.000)**	(0.000)**
TOTAL SHARES OUTSTANDING	(0.000)**	(0.000)	0.000	0.000	0.000**	0.000**
MARKET CAP	(0.000)**	(0.000)	0.000	(0.000)	0.000**	0.000**
BOOK VALUE	0.000	0.000	(0.000)	(0.000)	(0.000)**	(0.000)**
TOTAL ASSETS	(0.000)**	(0.000)	0.000	0.000	0.000**	0.000**
CASH AND CASH EQUIVALENTS	(0.000)**	0.000	0.000	0.000	0.000**	0.000**
REVENUE TTM	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)**	(0.000)**
NET INCOME TTM	0.000**	0.000**	(0.000)	(0.000)	(0.000)	(0.000)
EBITDA TTM	(0.000)**	(0.000)**	0.000	0.000	0.000	0.000
CASH FROM INVESTING ACTIVITIES TTM	0.000	0.000	0.000	0.000	0.000	0.000
CASH FROM FINANCING ACTIVITIES TTM	(0.000)**	(0.000)**	0.000	0.000	0.000**	0.000**
CHANGE IN CASH AND CASH EQUIV TTM	0.000	0.000	(0.000)	(0.000)	0.000**	0.000**
TOTAL AUDIT FEES	0.000**	0.000**	(0.000)	(0.000)	(0.000)**	(0.000)**
TOTAL NON-AUDIT FEES	(0.000)**	(0.000)**	0.000	0.000	0.000**	0.000**
TOTAL AUDIT BENEFITS FEES	(0.000)	(0.000)	(0.000)**	(0.000)**	0.000**	0.000**
TOTAL AUDIT TAX FEES	(0.000)**	(0.000)**	(0.000)	(0.000)	0.000**	0.000**
TOTAL AUDIT OTHER FEES	0.000	0.000	0.000	0.000	0.000*	(0.001)
RATIFICATION YEAR		0.000		0.000**		(0.000)
RUSSELL2000		0.004**		(0.000)		8.481**
cons	0.982**	0.976**	1.825**	1.061**	35,726.000	28.306**

*Table 3 presents the results of the multivariate multiple regressions for each dependent variable, run both with and without control variables. The simultaneous run of the three dependent variables yielded different results than when each was run separately. The significant variables were not the same for the two models; introducing the two control variables, RUSSELL 2000 and RATIFICATION YEAR, also reduced the number of significant variables. (** p<0.05). All financial and fee variables, stock prices, total votes, and shares outstanding were measured at the end of the most recent fiscal year (F.Y.). AUDITOR RATIFICATION is the % of ratification vote "for" current auditors. Auditor change was coded "1" if the auditor changed during the F.Y. and "0" if there was no change. RUSSELL 2000 membership was coded as "1"; lack of membership as "0". RATIFICATION YEAR is the F.Y. of the ratification vote.*

Stock Price

The total number of shareholder votes (TOTAL SHAREHOLDER VOTES), BOOK VALUE (total fiscal year-end Book Value), REVENUE TTM, and TOTAL AUDIT FEES were significant and inversely related to Stock Price. TOTAL SHARES OUTSTANDING, TOTAL ASSETS, CASH AND CASH EQUIVALENTS, CASH FROM INVESTING ACTIVITIES TTM, CASH FROM FINANCING ACTIVITIES TTM, TOTAL AUDIT FEES, TOTAL AUDIT BENEFITS FEES, and TOTAL AUDIT TAX FEES had weak statistically significant positive coefficients with and without the control variables. RATIFICATION YEAR and RUSSELL 2000 were also statistically significant and positively related to the stock price, respectively, with 8.48 and 28.26 coefficients. The positive coefficients of RUSSELL 2000 membership and RATIFICATION YEAR emphasize their impact on stock prices, aligning with prior research that has explored the influence of market categorization (Russell, 2000) and the temporal aspects (Ratification Year) on stock prices (Faccini et al., 2023). Auditor Ratification and Stock Price have a weak

(0.008) positive correlation, suggesting auditor ratification can be associated with slightly higher stock prices. Organizations with consistent auditor ratification are thought to have more investor trust because they demonstrate good corporate governance. These results are consistent with other research emphasizing the value of shareholder voting to voice concerns about audit quality and auditor independence. Auditor Ratification and Auditor Change have a weaker positive correlation (0.002), suggesting higher auditor ratification levels may lead to an auditor change, which is unexpected and warrants further investigation. When control variables are included, TOTAL AUDIT BENEFITS FEES and RATIFICATION YEAR are both significant for Auditor Change, elucidating the intricacies of shareholder sentiment and expectations. Lower audit benefits fees are associated with an increased likelihood of change in auditors, and the positive Ratification Year coefficient suggests a temporal impact on Auditor Change, which can be explored further in future research. Stock Price has a positive correlation of 0.008 with Auditor Ratification and a negative correlation of 0.003 with Auditor Change. The correlations were all less than one percent, signaling weak correlations; however, under all the models, including the simultaneous comparison of the three dependent variables, stock prices had 14 statistically significant explanatory variables, including both control variables (RATIFICATION YEAR and the RUSSELL 2000).

Thus, Stock Price emerges as a potential mediator between auditor ratification and auditor change: this implies that changes in stock prices, which reflect investor confidence, may affect how shareholders view auditor ratification and how audit committees may react to market signals. The positive coefficients of variables (TOTAL SHARES OUTSTANDING, TOTAL ASSETS, CASH AND CASH EQUIVALENTS, CASH FROM INVESTING ACTIVITIES TTM, CHANGE IN CASH AND CASH EQUIV TTM, TOTAL NON AUDIT FEES, TOTAL AUDIT BENEFITS FEES, TOTAL AUDIT TAX FEES, TOTAL AUDIT FEES, RATIFICATION YEAR, and RUSSELL 2000) indicate that these factors may contribute to increasing stock prices. Improved stock prices may contribute to the overall sentiment around auditor ratification and influence Auditor Change. Stock price movements may potentially convey information to the market about the implications of auditor changes and ratifications, thus affecting investor perceptions and market reactions. Future studies are needed to explore this potential mediating relationship further. However, as Martin et al. (2023) explained, the potential mediator further explains our understanding of the dynamics among auditor-related decisions, investor sentiments, and market reactions.

TOTAL SHAREHOLDER VOTES, BOOK VALUE, REVENUE TTM, and TOTAL AUDIT FEES had weak negative statistically significant coefficients; an inverse relationship suggests that a significant increase in these variables may lead to lower stock prices. Most of our discussion is based on agency theory, which suggests shareholders may use their voting rights to voice concerns over audit quality and auditor independence. Lower auditor ratification may represent shareholder disapproval and act as retribution for auditors and audit committees. The negative coefficients linked to particular variables support the idea that shareholders see specific actions undermining auditor independence, signaling the need for proactive action from auditors and firms. These research findings impact multiple stakeholders, including regulators, businesses, investors, and researchers. The observed associations highlight the importance of shareholder perceptions and market responses. Auditor Ratification may affect market sentiment and financial performance; thus, companies and auditors should be aware of this possibility. Investors and regulators can learn more about how shareholders carry out their oversight responsibilities to affect audit quality and costs.

CONCLUDING COMMENTS

This study explores the intricate relationships among auditor ratification rates, stock prices, and auditor change for publicly traded companies. Agency theory was used to motivate the discussion and study the nexus of form stock price, auditor ratification, and auditor change. A quantitative analysis of 44,398 observations (2010 to 2023) was used to identify the statistically significant variables affecting the relationships between auditor ratification, stock prices, and auditor change. The study did not find a strong correlation between the three dependent variables; however, the study's results suggest that factors like total

shares outstanding, net income, audit benefits fees, and membership in the Russell 2000 index influence auditor ratification rates. Additionally, total shareholder votes, book value, and audit fees influence stock prices. The study uncovers that audit benefits fees and the ratification year impact auditor change. The findings also highlight stock prices as potential mediators between auditor ratification rates and auditor change. Managers should recognize that auditor ratification potentially influences market sentiment and financial performance. This study suggests that consistent auditor ratification may instill investor trust and positively affect stock prices, emphasizing the value of fostering robust corporate governance practices to maintain investor confidence. Investors can use their voting rights effectively to express concerns about audit quality and auditor independence. Investors can hold companies accountable for their financial transparency and integrity by engaging actively in auditor ratification decisions.

The study offers valuable insights into auditor ratification with certain limitations. For example, Auditor Ratification was based on shareholders' votes, which generally are proxy votes. Thus, future research is needed to understand shareholders' voting rationale. Additionally, longitudinal studies could provide insights into how auditor ratification rates, stock prices, and auditor change evolve over time, capturing changing market dynamics and regulatory environments. The study is based on quantitative analysis, limiting a deeper exploration of qualitative aspects surrounding auditor ratification; further research is needed to understand shareholders' voting rationale comprehensively and to capture evolving market dynamics and regulatory environments over time. This study has advanced and contributed to the literature on the complex relationships between auditor ratification rates, stock prices, and audit costs. The findings underscore the relevance of shareholder perceptions, market reactions, and financial decisions within corporate governance.

APPENDIX – VARIABLE DEFINITIONS

AUDITOR CHANGE: Coded "1" if auditors changed during the FY following the ratification vote and "0" if there was no change.

BOOK_VALUE: The book value of the company at the fiscal year-end.

CASH_AND_CASH_EQUIVALENTS: The amount of cash and cash equivalents at the fiscal year-end.
CASH_FROM_FINANCING_ACTIVITIES_TTM: The cash flow from financing activities for the trailing 12 months.

CASH_FROM_INVESTING_ACTIVITIES_TTM: The cash flow from investing activities for the trailing 12 months.

CHANGE IN CASH AND CASH EQUIVALENTS TTM: The change in cash and cash equivalents for the trailing 12 months.

EBITDA_TTM: The trailing 12 months earnings before interest, taxes, depreciation, and amortization.
MARKET_CAP: The market capitalization at the fiscal year-end.

NET_INCOME_TTM: The trailing 12 months' net income.

RATIFICATION: The percentage of shareholders voting "for" ratification of the current auditors.

RATIFICATION_YEAR: The fiscal year of the auditor ratification vote.

REVENUE_TTM: The trailing 12 months' revenue.

RUSSELL2000: Coded "1" if the company belonged to the Russell 2000 and "0" if it did not.

STOCK PRICE: Closing stock price at the end of the fiscal year in which the ratification vote was held.

TOTAL_ASSETS: The total assets at the fiscal year-end.

TOTAL_AUDIT_BENEFITS_FEES: The total audit benefits fees paid as of the fiscal year-end.

TOTAL_AUDIT_FEES: The total audit fees paid as of the fiscal year-end.

TOTAL_AUDIT_OTHER_FEES: The total other audit fees paid as of the fiscal year-end.

TOTAL_AUDIT_TAX_FEES: The total audit tax fees paid as of the fiscal year-end.

TOTAL_NON-AUDIT_FEES: The total non-audit fees paid as of the fiscal year-end.

TOTAL_SHAREHOLDER_VOTES**:** The total number of shareholder votes in the annual vote.
Total_Shares_Outstanding: The number of outstanding shares at the fiscal year-end.

ε (Epsilon): This represents the error term or the unexplained variation in the dependent variable due to factors not included in the model.

REFERENCES

Audit Analytics. (2101-2023). Auditor Ratification. Wharton Research Data Service [https://wrds-www.wharton.upenn.edu/].

Bao, M. X., & Tanyi, P. (2020). Does auditor ratification matter to bondholders? Evidence from new bond issues. *Journal of Accounting and Public Policy*, 39(4), 106765.

Barua, A., K. Raghunandan and D.V. Rama (2017) "Shareholder Votes on Auditor Ratification and Subsequent Auditor Dismissals," *Accounting Horizons*, vol. 31(1), March, p. 129-139.

Cunningham, L. M. (2017) "Auditor Ratification: Can't Get No (Dis)satisfaction," *Accounting Horizons*, vol. 31(1), March, p.159-175.

Dao, M., K. Raghunandan and D.V. Rama (2012) "Shareholder Voting on Auditor Selection, Audit Fees, and Audit Quality," *The Accounting Review*, vol. 87(1), August, p. 149-171.

DeFond, M., & Zhang, J. (2014). A review of archival auditing research. *Journal of Accounting and Economics*, 58(2-3), 275-326.

Dunn, R.T., N.G. Lundstrom, M.S. Wilkins (2021) "The Impact of Mandatory Auditor Tenure Disclosures on Ratification Voting, Auditor Dismissal, and Audit Pricing," *Contemporary Accounting Research*, vol. 38(4), June, p. 2871-2917.

Faccini, R., R. Matin and G. Skiadopoulos (2023) "Dissecting Climate Risks: Are They Reflected in Stock Prices?" Journal of Banking and Finance, 155, July, p.106948.

Firth, M., Wang, K. and Wong, S.M.L. (2015) "Corporate Transparency and the Impact of Investor Sentiment on Stock Prices," *Management Science*, vol. 61(7), July, p. 1630-1647.

Izzalqurny, T. R., B. Subroto and A. Ghofar (2019) "Relationship Between Financial Ratio and Financial Statement Fraud Risk Moderated by Auditor Quality," *International Journal of Research in Business and Social Science (2147-4478)*, vol. 8(4), July, p. 34-43.

Kurniawan, R, H. Ruslak and W. Indah (2021) "Factors That Influence Voluntary Auditor Change in Companies Registered in Indonesia Stock Exchange in 2018," *American International Journal of Business Management*, vol. 4(02), February, p.1-11.

Martin, G. W., D.V. Rama, K. Raghunandan and P. Tanyi (2023) "Do Shareholder Ratification Votes Impact Subsequent Audit Outcomes?" *Current Issues in Auditing*, vol. 17(1), August, p. 19-25.

Purohit, S. and N. Desai (2023) "Voting on Auditor Ratification by Shareholder Type: Impact of Institutional Shareholder Dissent on NAS Fees and Audit Quality," *Journal of Accounting, Auditing and Finance*, January, 0148558X221142798.

Raghunandan, K. (2003) "Nonaudit Services and Shareholder Ratification of Auditors," *Auditing: A Journal of Practice & Theory*, vol. 22(1), March, p. 155-163.

Robin, A.J. and H. Zhang (2015) "Do Industry-Specialist Auditors Influence Stock Price Crash Risk?" *Auditing: A Journal of Practice & Theory*, vol. 34(3), August, p. 47-79.

Studna, R.A. (2012), "Auditor Switches in a Post-SOX Environment, Does the Change in Auditor Mean a Change in Stock Price?" *Journal of Business and Behavioral Sciences, 24*(3), 58-67.

Tanyi, P., and Cathey, J. (2020). "Why do firms seek shareholders ratification of the independent audit function? The case of foreign cross-listed companies in the United States," *International Journal of Auditing*, *24*(1), 24-36.

Tanyi, P. N., D.V. Rama and K. Raghunandan (2021) "Auditor Tenure Disclosure and Shareholder Ratification Voting," *Accounting Horizons*, vol. 35(4), December, p. 167-190.

Tanyi, P. N., D.V. Rama, K. Raghunandan and G.W. Martin (2020), "Shareholder Dissatisfaction and Subsequent Audit Outcomes," *Accounting Horizons*, vol. 34(4), December, p. 181-200.

Tanyi, P.N. and K.C. Roland (2017) "Market Reaction to Auditor Ratification Vote Tally. *Accounting Horizons,* vol. 31(1), March, p. 141-157.

Watts, R. L. and J.L. Zimmerman (1983) "Agency Problems, Auditing, and the Theory of the Firm: Some Evidence," *The Journal of Law and Economics*, vol. 26(3), October, p. 613-633.

Weiss, R. E. and L.P. Kalbers (2008) "Causes and Consequences of Auditor Changes: A Comparison of Accelerated and Non-accelerated Filers." Available at SSRN 1270711.

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THE IMPACT OF DEBT STRUCTURE ON AUDITOR CHOICE

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ABSTRACT

We investigate the impact of a firm's debt structure on its choice of an auditor. Auditor choice is measured along two dimensions: brand name reputation and auditor industry specialization. Debt structure includes debt level and debt sources. We find that firms with high leverage are less likely to have brand name/specialist auditors, consistent with managerial opportunism. Prior studies document that brand name/specialist auditors are more effective at constraining income-increasing accruals. Because the likelihood and cost of covenant violations increase with leverage, firms avoid brand name/specialist auditors to keep their financial reporting flexibility. We further investigate whether the negative relation between auditor choice and client leverage differs between firms with only private debt and firms that also have access to the public debt market. While it holds for firms that have only private debt, the negative relation turns positive for firms that also have public debt. This difference suggests the dominant role of the debt contracting hypothesis for firms that have public debt. Firms bond themselves to brand name/specialist auditors to access the public debt market. This paper extends the auditor differentiation and auditor choice literature and contributes to the growing literature on the impact of the debt market on firms' financial reporting attributes.

JEL: M420

KEYWORDS: Auditor Choice, Debt Structure

INTRODUCTION

Previous studies identify factors that affect a firm's choice of an external auditor (Francis and Wilson 1988; DeFond 1992; Francis et al. 1999; Lennox 2005; Godfrey and Hamilton 2005). One stream of research models the choice of high-quality auditors as an increasing function of agency costs between debt holders and managers. Since auditing is a mechanism that mitigates agency conflicts between a firm and its capital providers, there is more demand for high-quality auditors when the agency conflicts are more severe. Auditor quality in these papers is generally captured by auditor size or brand name reputation (Big N vs non-Big N). Financial leverage is generally a proxy for the level of agency conflicts between debt holders and managers/shareholders. The results of prior auditor choice studies are inconsistent. For example, Francis and Wilson (1988) find a negative association between a firm's leverage level and the likelihood of a change to a brand name auditor and DeFond (1992) finds a positive relation. The inconsistent results across these studies are not adequately explained. Using larger and more recent samples, we provide a more comprehensive analysis of the impact of debt structure on a firm's choice of an auditor. Specifically, we explore two related research questions. First, we re-examine the relation between debt level and auditor choice. The purpose is to test whether the relation has evolved and to identify the theory that best explains the relation. Second, because the demand for and the incentive to supply high-quality audits differ between public and private debt, we analyze whether the relation varies with debt composition. The variation could partially explain the inconsistent results in prior studies.

The development of our hypotheses is based on two streams of literature that link firms' accounting choices to the presence of accounting numbers in debt contracts. One is the efficient debt contracting hypothesis and the other is the effect of managerial opportunism in complying with debt covenants. The debt contracting hypothesis, based on the general agency cost theory of Jensen and Meckling (1976), argues that when agency costs are high, managers will bond themselves to higher-quality reporting and signal to the debt market that they are committed to protecting debt holders' interests. Since the auditor differentiation literature finds that Big N/specialist auditors provider higher-quality audits, firms with high leverage are more likely to have Big N/specialist auditors. The managerial opportunism hypothesis, however, argues that there are direct and indirect costs associated with covenant violation. Therefore, firms have strong incentives to make income-increasing accounting choices to avoid violating accounting-based covenants. Because the likelihood and cost of covenant violation increase with leverage, the incentive to manage earnings is stronger for firms with high leverage. So, firms with high leverage are more likely to avoid Big N/specialist auditors in order to maintain their financial reporting flexibility. It is an empirical question to examine which theory dominates the relation between auditor choice and leverage.

We find that firms with high leverage are less likely to have Big N/specialist auditors and firms with an increase in leverage are less likely to switch to Big N auditors. This negative relation is consistent with the managerial opportunism hypothesis. Our second research question explores whether the relation between auditor choice and leverage varies with the sources of debt. This research question is motivated by the institutional differences between the public and private debt markets in monitoring functions and covenant features. Compared with public debt holders, private debt holders are argued to have better access to private information, better information processing ability, and more efficient monitoring of debt contracts. The differences in monitoring functions give rise to differences in the demand for higher-quality audits. Public debt holders should have more demand for the monitoring provided by high-quality external auditors. The differences in covenant features give rise to differences in the likelihood and costs of violating accounting-based covenants and hence to different incentives for providing higher-quality audit. Because there are more accounting-based covenants in private debt and the covenants are generally set tighter, firms with only private debt have more incentives to avoid Big N/specialist auditors.

We find that public and private debt has different impacts on auditor choice. For firms with only private debt, the likelihood of choosing a Big N/specialist auditor decreases with leverage. This negative relation does not hold, or even turns positive, for firms that also have public debt. Overall, the results suggest that firms avoid Big N/specialist auditors to retain their financial reporting flexibility, but bond themselves to brand name/specialist auditors to access the public debt market. Therefore, the managerial opportunism hypothesis dominates the relation between auditor choice and leverage for firms that only have private debt and the debt contracting hypothesis better explains the relation for firms that also have access to the public debt market. Our study extends the auditor differentiation and auditor choice literature. Rather than focus only on the demand from the debt market for high-quality audit as in prior studies, we consider managers' incentives to supply high-quality audits and provide a detailed explanation for the negative relation. Furthermore, we differentiate the impact that debt composition has on a firm's auditor choice decision. Our results suggest the potential difference in debt composition in the samples of prior studies might contribute to the inconsistent results.

BACKGROUND LITERATURE AND HYPOTHESIS DEVELOPMENT

Prior research that examines the relation between auditor choice and the agency conflict between managers/shareholders and debt holders produces mixed results that are not adequately explained. One problem is that the theoretical arguments in these papers focus only on the demand from the debt market for high-quality audit. But the choice of auditor is eventually made by management. Their incentives to supply high-quality audit are not adequately discussed. In addition, these studies do not consider the impact of debt composition, while the interaction between demand for and supply of high-quality audit differs for

firms with different types of debt. Our analyses are based on two streams of literature that link firms' accounting choices to the presence of accounting numbers in debt contracts. Debt contracts typically contain affirmative and negative covenants to enhance debt holders' ability to monitor the lending. These restrictions are conditional on firms' financial positions that are typically measured in such accounting numbers as debt to EBITDA, interest coverage, tangible net worth and current ratio (Leftwich 1983; Dichev and Skinner 2002). The debt contracting hypothesis focuses on the positive role of having accounting numbers in debt contracts. Specifically, to access the debt market and signal to the debt market that they are committed to protecting debt holders' interests, managers have incentives to bond themselves to high-quality financial reporting. The managerial opportunism literature, on the other hand, focuses on the negative impact of having accounting numbers in debt covenants. It relies on the argument that there are significant costs associated with covenant violations. Several studies find that the costs associated with covenant violations can be substantial including increased collateralization, increased interest rates, restricted borrowing, future financing options, investment opportunities and corporate governance (Beneish and Press 1993; Sweeney 1994; Chava and Roberts 2008; Nini et al. 2009)

A number of studies provide evidence on the relation between leverage and covenant violation. Leverage is frequently used as a proxy for the closeness to covenant violation (Press and Weintrop 1990, Dichev and Skinner 2002), although it might be a noisy one as suggested by Dichev and Skinner (2002). In addition, Billett et al. (2007) and Christensen and Nikolaev (2012) provide evidence that leverage is positively associated with the use of restrictive covenant protection and negative covenants that constrain managers' actions. As to the relation between cost of violating accounting-based covenant and leverage, Chen and Wei (1993) finds that creditors are more likely to grant a waiver to the firm with a lower leverage ratio. To summarize, because the likelihood and cost of violating accounting-based covenants increase with leverage, the managerial opportunism hypothesis suggests that managers with high leverage have strong incentives to make income-increasing accounting choices to avoid covenant violation. In summary, the two streams of literature described above make opposing predictions about managerial reporting behavior. Given the important monitoring role auditing has in the debt contracting process, we expect the opposing reporting incentives to have different impacts on firms' choice of auditors. We express the following hypotheses in alternative forms:

Hypothesis 1 (a): Firms with high leverage are more likely to have Big N/specialist auditors.

Hypothesis 1 (b): Firms that increase leverage are more likely to change to Big N/specialist auditors.

Hypothesis 1 (c): Big N audited firms with high leverage are more likely to have industry specialist auditors.

Segregating The Effect of Public and Private Debt on Auditor Choice

Public and private debt markets differ in monitoring functions and covenant features. The difference causes differences in demand for monitoring by external auditors and in managers' incentives to supply high-quality audits. Private debt holders have better access to the borrower's private information. They are typically monitoring experts and have better information processing capacity. In contrast, the incentive to engage in monitoring is weak for diffuse creditors of public debt due to the "free rider" problem. In terms of covenant features, there are generally more accounting-based negative covenants in private debt contracts and the covenants are set tighter. Technical violation of private debt covenants is more prevalent. Any technical violation hands over part of the control rights to debt holders who can then step in and enforce their preferred actions (Dichev and Skinner 2002). Even if a waiver of violation might be the likely response from the lender, the waiver is not costless. The Federal Trust Indenture Act limits the flexibility the trustee of the public debt has in renegotiation. Unanimous consent is required for major revision of the debt contracts. Partially due to the high renegotiation cost in public debt issuance, there are less accounting-based debt covenants in public debt and they are set looser. As a result, technical violation of debt covenant

is rare. Due to their information and monitoring advantage, private debt holders are expected to have less demand for the monitoring of external auditors compared to the public debt holders. In addition, since there are more accounting-based covenants in private debt and the covenants are set tighter, managers have more incentive to keep their reporting flexibility by choosing non-Big N auditors when leverage is higher. In contrast, public debt holders rely more on other monitoring forces including auditing and their demand for Big N auditors is high. Furthermore, because for public debt, the likelihood of violating accounting-based debt covenants is low, firms have less incentive to avoid Big N for the purpose of avoiding covenant violation. In summary, we have the following hypotheses regarding how the relation between auditor choice and leverage varies with debt sources:

Hypothesis 2 (a): firms with high leverage are less likely to have Big N/specialist auditors if they only have private debt.

HypothesiS 2 (b): firms with high leverage are more likely to have Big N/specialist auditors if they also have public debt.

DATA AND METHODOLOGY

Measures of Auditor Choice

We use two measures of auditor choice. The first, Big N, is a dichotomous variable that equals 1 if financial statements are audited by one of the Big N and 0 otherwise. The second, Specialization, is calculated as the audit firm's market share of the client firm's two-digit SIC industry, following prior literature (Craswell et al. 1995; Ferguson and Stokes 2002; Godfrey and Hamilton 2005; Lim and Tan 2008).

$$Specialization_{ik} = \frac{\Sigma_{j=1}^{Jik} Sales_{ijk}}{\sum_{i=1}^{Ik} \sum_{j=1}^{Jik} Sales_{ijk}}$$

Sales refers to the client firm's sales revenue. The numerator is the sum of sales of all clients of an auditor i in industry k for a specific year. The denominator is the sum of sales of all firms (clients and non-clients of i) in industry k for the same year. The results presented have industry specialization as a continuous variable to avoid the ambiguity of arbitrarily using a cut-off point for dichotomous variables. As a robustness check, we also use two alternative measures that are based on the market share but coded as dichotomous variables. First, an industry specialist auditor is defined as the auditor with the largest industry market share and second it is defined as any auditor with a market share of 24% or more.

Auditor Choice and Leverage

We use both level and change models to test the relation between auditor choice and leverage. The level specification takes on the following form (We omit subscripts t and i from equations for presentation simplicity).

$$\text{Big N/Specialization} = \alpha_0 + \alpha_1\text{Leverage} + \alpha_2\text{Size} + \alpha_3\text{Fixed assets} + \alpha_4\,\text{Cycle} + \alpha_5\text{P-E ratio} + \alpha_6\text{Issue} + \alpha_7\text{Loss} + \alpha_8\text{Regulation} + \alpha_9\text{R\&D} + \text{Industry} + \text{Year} + \varepsilon \quad (1)$$

A logistic regression is used when the dependent variable is Big N and an ordinary least square regression is used when the dependent variable is Specialization. The definitions of the variables are as follows. Big N and Specialization are as previously defined. Leverage is the sum of short-term debt and long-term debt divided by total assets. Size is the natural logarithm of total assets; Fixed Assets is gross property, plant and equipment divided by total assets; Cycle is the sum of days' inventory and days' accounts receivable divided

by 30. P/E is price/earnings ratio at fiscal yearend; Issue is the amount of net new equity issues during the year scaled by total assets; Loss is an indicator variable that equals one if current income is negative and zero otherwise; Regulation equals one if an observation is in a regulated industry and zero otherwise. Following Francis et al. (1999), the following industries are considered as regulated: railroads (4011 and 4100), telephone communications (4812 and 4813), electric companies (4911), gas companies (4922, 4923 and 4924), personal credit (6141), insurance (6311). R&D is research and development expenses scaled by total assets. Based on prior research, the model includes several control variables that are found to be correlated with auditor choice. We include Size because large firms are more likely to choose large auditors due to their operational complexity and geographic diversification. We include Fixed assets and Cycle because Francis et al. (1999) find that firms with higher capital intensity and longer operating cycle (measurements of firms' propensities to generate accruals) are more likely to hire Big N auditors. P-E ratio is used to measure a firm's growth potential. Firms with growth opportunities are more likely to issue securities and thus have more incentives to use Big N auditors. We include the variable Issue to further control the effect of equity issuance on auditor choice. We control for Loss because Big N auditors are less willing to audit firms in financial distress due to litigation concerns. We include Regulation because Francis et al. (1999) posit that regulation might induce demand for Big N auditors. We include R&D because Godfrey and Hamilton (2005) argue that R&D, their proxy for discretionary expenditure, increases agency cost and therefore increases the demand for Big N/Industry specialist auditors.

A change specification is used because it can mitigate the correlated omitted variable problem. In the level analyses, the results can be biased if we omit variables that affect auditor choice but differ between firms. As long as these omitted variables remain relatively constant over time, a change model reduces their impact because the difference from year to year for these variables is small and thus they do not affect the dependent variable. Another reason of including a change model is that it directly measures the impact of temporal changes in leverage on changes in auditors. Since we measure changes in leverage using years prior to the specific year of auditor change, including the change model provides a necessary condition to infer a causal relation between auditor choice and financial leverage. Our test of auditor change and change in leverage takes on the following logistic regression model:

$$\Delta\text{Big N}/\Delta\text{Specialization} = \alpha_0 + \alpha_1\Delta\text{Leverage} + \alpha_2\Delta\text{Size} + \alpha_3\Delta\text{Fixed assets} + \alpha_4\Delta\text{Cycle} + \alpha_5\Delta\text{P-E ratio} + \alpha_6\Delta\text{Issue} + \alpha_7\Delta\text{Loss} + \alpha_8\Delta\text{R\&D} + \text{Industry} + \text{Year} + \varepsilon \quad (2)$$

ΔBig N takes on values of 1, 0 or -1. If the change in auditor is from a non-Big N to a Big N auditor, ΔBig N is coded as 1; if it is from a Big N to a non-Big N, ΔAuditor is -1, 0 represents no change in auditor or change within brand name. Changes in leverage and in other control variables are measured as changes over the two years PRIOR TO the specific year in which auditor changes occur.

Segregating The Effect of Public and Private Debt on Auditor Choice

To examine the different impact of private and public debt on a firm's auditor choice decision, we augment model 1 with an indicator variable Pubic and expect α_3 to be positive.

$$\text{Big N/Specialization} = \alpha_0 + \alpha_1\text{Public} + \alpha_2\text{Leverage} + \alpha_3\text{Leverage*Public} + \alpha_4\text{Size} + \alpha_5\text{Fixed assets} + \alpha_6\text{Cycle} + \alpha_7\text{P-E ratio} + \alpha_8\text{Issue} + \alpha_9\text{Loss} + \alpha_{10}\text{Regulation} + \alpha_{11}\text{R\&D} + \text{Industry} + \text{Year} + \varepsilon \quad (3)$$

Public is an indicator variable that is coded as 1 if a firm has an S&P long-term domestic issuer credit rating or a short-term domestic issuer credit rating for that year, 0 otherwise. The other variables are defined as in model 1. We follow the practice of Faulkender and Peterson (2006) that use the availability of S&P credit ratings to identify the availability of public debt. This method of segregating public and private debt is also justified by Cantor and Packer (1997) who report that " both agencies (S&P and Moody's) currently have

a policy of rating ALL taxable corporate bonds publicly issued in the United States regardless of whether they have been asked by an issuer for a rating". This statement suggests that there are rarely public debt issues that are covered by other rating agencies but not by S&P. We select our sample from COMPUSTAT North America Fundamental Annual 1988 to 2013 that include initially 285,726 observations. Observations with missing test or control variables are deleted (143,544 observations left). We truncate observations falling into the top and bottom 1 percent of continuous independent variables. After this procedure, the full sample has 130,307 firm-years, of which 25,163 observations have both public and private debt and 105,144 observations have private debt only. 97,334 are audited by Big N and 32,973 are audited by non-Big N auditors. Table 1 presents the descriptive statistics for variables used in the auditor choice and leverage models. For the full sample, 77.6 percent use Big N auditors and the mean industry market share is 17 percent. Firms on average have a leverage 0.251, P-E ratio 10.745, and operating cycle of 5.179 months. The total assets are on average $1.7 billion, 53.6 percent are fixed assets. Net new equity issuance is 5.6 percent and R&D expenses are 4 percent of total assets. Firm-years with losses comprise 36.3 percent of the sample. Comparison of the private sample and the public-private sample suggests that 96.5 percent of observations in the public-private sample use Big N auditors and 73.1 percent of observations in the private sample use Big N auditors. The public-private sample also uses more of industry specialist auditors (24.4 percent vs 15.2 percent). They have higher leverage. The average P/E ratio of the public-private sample is higher, suggesting more growth. The net equity issuance and R&D spending as a percentage of total assets is much higher for the private debt sample (6.9 percent vs 0.2 percent for net equity issuance and 4.7 percent vs 1.4 percent for R&D spending).

Table 1: Descriptive Statistics

	Full Sample			**Public Debt**			**Private Debt**		
Variable	**Mean**	**Median**	**SD**	**Mean**	**Median**	**SD**	**Mean**	**Median**	**SD**
Big N	0.776	1.000	0.417	0.965	1.000	0.185	0.731	1.000	0.444
Specialize	0.170	0.141	0.141	0.244	0.223	0.149	0.152	0.131	0.132
Leverage	0.251	0.202	0.272	0.354	0.328	0.212	0.226	0.155	0.279
Size	1699	146	5668	6629	2512	10805	519	83	2162
Fixed assets	0.536	0.442	0.411	0.672	0.635	0.407	0.504	0.401	0.405
Cycle	5.179	3.708	6.723	4.097	3.255	4.116	5.438	3.844	7.184
P-E ratio	10.745	10.526	33.045	14.294	14.300	30.412	9.896	9.019	33.589
Issue	0.056	0.001	0.176	0.002	0.000	0.058	0.069	0.001	0.191
Loss	0.363	0.000	0.481	0.224	0.000	0.417	0.396	0.000	0.489
Regulation	0.038	0.000	0.191	0.111	0.000	0.314	0.021	0.000	0.142
R&D	0.040	0.000	0.090	0.014	0.000	0.033	0.047	0.000	0.098

The samples cover the time horizon of 1988 to 2013. There are 130307 observations in the full sample. The public debt sample has 25,163 observations and the private debt sample has 105,144 observations Big N is an indicator variable that equals one if an auditor is one of the Big N and zero otherwise. Specialize is the proportion of two-digit SIC industry sales for a year audited by each audit firm. Leverage is the sum of short-term debt and long-term debt divided by total assets. Size is the natural logarithm of total assets. Fixed assets is the gross property, plant and equipment divided by total assets. Cycle is the sum of days' inventory and days' accounts receivable divided by 30. P-E ratio is the close price per share divided by earnings per share excluding extraordinary items. Issue is the net new equity issue during the year scaled by total assets. Loss is an indicator variable that equals one if current income is negative and zero otherwise. Regulation is an indicator variable that equals one if a firm is a member of regulated industries and zero otherwise. R&D is the research and development expense scaled by total assets.

RESULTS

Auditor Choice and Leverage

The Pearson correlation analysis presented in table 2 indicates a high level of correlation between choice of Big N auditors and industry specialization (over 50 percent). Therefore, in this paper, we also use a subsample consisting of only Big N audited firm-years to identify the additional impact on industry specialization. The univariate analysis indicates a negative relation between auditor choice and leverage.

Table 2: Pearson Correlation Matrix

Variables	Big N	Specialize	Leverage	Size	Fixed Assets	Cycle	P-E Ratio	Issue	Loss	Regulation	R&D
Big N	1										
Specialize	0.537*	1									
Leverage	-0.054*	-0.014*	1								
Size	0.138*	0.207*	0.040*	1							
Fixed assets	0.059*	0.074*	0.193*	0.102*	1						
Cycle	-0.072*	-0.061*	0.012*	-0.036*	-0.195*	1					
P-E ratio	0.085*	0.056*	-0.066*	0.047*	0.004	-0.048*	1				
Issue	-0.079*	-0.099*	-0.078*	-0.102*	-0.135*	0.052*	-0.081*	1			
Loss	-0.170*	-0.126*	0.154*	-0.135*	-0.035*	0.100*	-0.533*	0.228*	1		
Regulation	0.043*	0.071*	0.103*	0.187*	0.189*	-0.047*	0.010*	-0.043*	-0.058*	1	
R&D	-0.021*	-0.045*	-0.111*	-0.075*	-0.159*	0.079*	-0.089*	0.219*	0.259*	-0.085*	1

This table presents the Pearson correlation matrix for the full sample that has 130,307 observations covering the time horizon of 1988 to 2013.
** indicates significance at the 0.01 level or better.*

Table 3 presents the results of testing the impact of leverage on auditor choice for all years. The multivariate analysis confirms a significantly negative relation between choice of Big N/specialist auditors and leverage. The coefficient on leverage is -0.743 for the brand name regression and -0.020 for the industry specialization regression. Both are highly significant. Table 3 also presents the results of testing the additional impact on industry specialization by estimating the model separately for the Big-N audited firm-year sub-sample. For this sub-sample, the negative relation between the choice of industry specialist auditor and leverage still holds. The results using the two alternative measures of industry specialization (not tabulated here) are qualitatively the same as using the continuous measure. Overall, the results show that it is less likely that a firm with high leverage will have a Big N/specialist auditor, which is consistent with the managerial opportunism hypothesis.

Table 3: Auditor Choice and Leverage: Pooled Regressions

Variables	Pred. Sign	Big N		Specialization		Specialization (Big-N Audited Firm-Years)	
Intercept	*?*	-3.804	(0.00)	0.029	(0.00)	0.180	(0.00)
Leverage	*?*	-0.743	(0.00)	-0.020	(0.00)	-0.006	(0.00)
Size	+	0.861	(0.00)	0.025	(0.00)	0.008	(0.00)
Fixed assets	+	0.227	(0.00)	0.006	(0.01)	0.003	(0.02)
Cycle	+	-0.012	(0.00)	0.000	(0.00)	0.000	(0.56)
P-E ratio	+	0.001	(0.00)	0.000	(0.29)	0.000	(0.28)
Issue	+	0.101	(0.03)	0.002	(0.33)	0.001	(0.74)
Loss	-	0.160	(0.00)	0.002	(0.04)	-0.001	(0.21)
Regulation	+	-0.527	(0.00)	-0.007	(0.00)	-0.002	(0.37)
R&D	+	3.969	(0.00)	0.101	(0.00)	0.018	(0.00)
Adj. R^2		0.085		0.074		0.079	

The full sample has 125,483 observations, among which 97,334 are audited by Big N and 28,149 are audited by non-Big N auditors. The samples cover the time horizon of 1988 to 2013. A logistic regression is used for the brand name test and an ordinary least square regression is used for the industry specialist regression.

Table 4 presents the results of using a change model. The coefficient for ΔLeverage is significantly negative for brand name measure of auditor choice. It indicates that it is less likely for a firm that increases its leverage to change to a Big N auditor, confirming the results in table 4. We do not find significant relation between change in leverage and change to industry specialist auditor though.

Table 4: Auditor Change and Leverage Change

Variables	Big N		Specialization	
Intercept1	-4.443	(0.00)	-0.005	(0.00)
Intercept0	3.745	(0.00)		
Δ*Leverage*	-0.383	(0.00)	-0.004	(0.02)
Δ*Size*	0.519	(0.00)	0.006	(0.00)
Δ*FixedAssets*	0.027	(0.83)	-0.001	(0.49)
Δ*Cycle*	0.007	(0.06)	0.000	(0.03)
Δ*PE*	0.000	(0.65)	0.000	(0.79)
Δ*Issue*	0.159	(0.10)	-0.010	(0.00)
Δ*Loss*	-0.037	(0.40)	-0.001	(0.42)
Δ*R&D*	-0.376	(0.27)	0.005	(0.42)

This table presents the results of using a change model to test the auditor choice and leverage relation. The sample covers the time horizon of 1988 to 2013. For our sample, there are 1,267 changes from a non-Big N to a Big N and 2,414 from a Big N to a non-Big N. The dependent variable is ΔBig N. ΔBig N takes on values of 1, 0, or -1. If the change in auditor is from a non-Big N to a Big N, then ΔBig N is coded as 1; if it is from a Big N to a non-Big N, then ΔBig N is coded as -1, 0 for the rest observations. Leverage is the sum of short-term debt and long-term debt divided by total assets. Size is the natural logarithm transformation of total assets. Fixed assets is the gross property, plant and equipment divided by total assets. Cycle is the sum of days' inventory and days' accounts receivable divided by 30. P-E ratio is the close price per share divided by earnings per share excluding extraordinary items. Issue is the net new equity issue during the year scaled by total assets. Loss is an indicator variable that equals one if current income is negative and zero otherwise. R&D is the research and development expense scaled by total assets. We also control for year and industry fixed effects. P-values are reported in parentheses.

Segregating the Effect of Public and Private Debt on Auditor Choice

Table 5 presents the results of testing the different impact of public and private debt on the choice of auditors. The coefficient of Leverage represents the effect of leverage on auditor choice when firms have only private debt. We expect it to be negative. Firms with high leverage are less likely to have Big N/specialist auditors when they only have private debt. The coefficient of Leverage*Public represents the incremental effect of leverage on auditor choice when the firms also have public debt. We expect it to be positive. The results are largely consistent with our predictions. The coefficients on Leverage and Leverage*Public are -0.850 and 1.023 respectively for the brand name measure, -0.028 and 0.048 respectively for the industry specialization measure, and -0.011 and 0.009 respectively for specialization (Big-N audited firm-years), all statistically significant.

The statistical significance of the coefficient on Leverage*Public confirms different sources of financing have different impact on firms' auditor choice decision. The managerial opportunism hypothesis better explains auditor choice behaviors when firms have only private debt. Because there are more accounting-based covenants and covenants are set tighter in private debt, firms with high leverage avoid brand name/specialist auditors to keep their financial reporting flexibility. In addition, because private debt holders have better access to private information and are monitoring experts, there is less demand for external monitoring from auditors. The debt contracting hypothesis dominates the relation between leverage and auditor choice when firms have public debt. The incentive to engage in monitoring is weak for diffuse creditors of public debt due to the "free rider" problem, so there is more demand for monitoring from high-quality external auditors. In addition, because there are less accounting-based covenants in public debt and technical violation is rare, managers have less incentive to avoid Big N/specialist auditors. Instead, they bond themselves to high-quality audits to access the public debt market.

Table 5: Segregating the Effect of Public and Private Debt on Auditor Choice

Variables	Pred. Sign	Big N		Specialization		Specialization-Big-N Audited Firm-Years	
Intercept	*?*	-3.720	(0.00)	0.036	(0.00)	0.189	(0.00)
Public	*?*	-0.108	(0.13)	-0.005	(0.01)	0.010	(0.00)
Leverage	*?*	-0.850	(0.00)	-0.028	(0.00)	-0.011	(0.00)
Leverage*Public	+	1.023	(0.00)	0.048	(0.00)	0.009	(0.03)
Size	+	0.845	(0.00)	0.024	(0.00)	0.006	(0.00)
Fixed assets	+	0.229	(0.00)	0.006	(0.00)	0.003	(0.01)
Cycle	+	-0.012	(0.00)	0.000	(0.00)	0.000	(0.40)
P-E ratio	+	0.001	(0.00)	0.000	(0.04)	0.000	(0.29)
Issue	+	0.086	(0.07)	0.001	(0.67)	0.001	(0.82)
Loss	-	0.155	(0.00)	0.001	(0.23)	0.001	(0.42)
Regulation	+	-0.547	(0.00)	-0.007	(0.01)	-0.002	(0.38)
R&D	+	3.954	(0.00)	0.101	(0.00)	0.015	(0.01)
Adj. R^2		0.121		0.113		0.1340	

This table presents the results of testing whether the impact of leverage on firms' choice of auditor differs between firms that have access to the public debt market (with S&P ratings available) and firms that only have private debt (without S&P ratings). The public debt sample has 25,163 observations and the private debt sample has 105,144 observations. The samples cover the time horizon of 1988 to 2013. A logistic regression is used for the brand name test and an ordinary least square regression is used for the industry specialist regression.

CONCLUSION

Based on the debt contracting theories, we examine the relation between a firm's financial leverage and its auditor choice decision and whether the relation varies with its debt sources. We find that financial leverage is negatively associated with the likelihood of having a Big N/specialist auditor and that firms with an

increase in leverage are less likely to switch to a Big N auditor. The results suggest a dominant role of the managerial opportunism hypothesis over the debt contracting hypothesis. We further find that this negative relation holds for firms that only have private debt. For firms that also have public debt, the auditor choice and leverage relation becomes positive. The results suggest that borrowers balance the cost and benefit of having Big N/specialist auditors in each type of debt structure and yield to the demand from the public debt market for Big N/specialist auditors, but avoid such auditors when they only have private debt. The results suggest that monitoring functions and covenant features of different types of debt play a role in a firm's auditor choice decision. This paper extends the auditor differentiation and auditor choice literature. It provides an explanation for the negative relation between the choice of Big N/specialist auditor. Furthermore, this paper differentiates the impact of different debt sources on a firm's auditor choice decision. This is important because the distinction between debt of different sources in covenant features and monitoring functions has long been recognized in the finance literature. A potential future extension of our paper is to examine auditor industry expertise on an office level and provide more accurate classification of public and private debt samples by going beyond the availability of S&P credit ratings.

REFERENCE

Beneish, M. D. and E. Press (1993), "Costs of technical violation of accounting-based debt covenants", *The Accounting Review*, vol. 68 (2), p. 233 – 257.

Billett, M. T., T. D. King, and D. C. Mauer (2007), "Growth opportunities and the choice of leverage, debt maturity, and covenants", *The Journal of Finance*, vol. LXII (2), p. 697 – 730.

Cantor, R. and F. Packer (1997), "Differences of opinion and selection bias in the credit rating industry", *Journal of Banking and Finance*, vol. 21, p. 1395 – 1417.

Chava, S. and M. R. Roberts (2008), "How does financing impact investment? The role of debt covenants", *The Journal of Finance*, vol. 63 (5), p. 2085-2121.

Chen, K. C. W. and K. C. J. Wei (1993), "Creditors' decisions to waive violations of accounting-based debt covenants", *The Accounting Review*, vol. 68 (2), p. 218 – 232.

Christensen, H. B. and V. V. Nikolaev (2012), "Capital versus performance covenants in debt contracts", *Journal of Accounting Research*, vol. 50 (1), p. 75 – 116.

Craswell, A. T., J. R. Francis, and S. L. Taylor (1995), "Auditor brand name reputations and industry specializations", *Journal of Accounting and Economics*, vol. 20 (3), p. 297-322.

DeFond, M. L. (1992), "The association between changes in client firm agency cost and auditor switching", *Auditing: A Journal of Practice & Theory*, vol. 11 (1), p. 16-31.

Dichev, I. D. and D. J. Skinner (2002), "Large-sample evidence on the debt covenant hypothesis", *Journal of Accounting Research*, vol. 40 (4), p. 1091-1123.

Faulkender, M. and M. A. Petersen (2006), "Does the source of capital affect capital structure?", *Review of Financial Studies* vol. 19 (1), p. 45-79.

Ferguson, A. and D. Stokes (2002), "Brand name audit pricing, industry specialization, and leadership premium post-Big 8 and Big 6 mergers", *Contemporary Accounting Research* vol.19 (1), p. 77-110.

Francis, J. R. and E. R. Wilson (1988), "Auditor changes: a joint test of theories relating to agency costs and auditor differentiation", *The Accounting Review*, vol. LXIII (4), p. 663-682.

Francis, J. R., E. L. Maydew, and H. C. Sparks (1999), "The role of big 6 auditors in the credible reporting of accruals", *Auditing: a Journal of Practice and Theory*, vol.18 (2), p. 17-34.

Godfrey, J. M. and J. Hamilton (2005), "The impact of R&D intensity on demand for specialist auditor services", *Contemporary Accounting Research*, vol. 22 (1), p. 55 – 93.

Jensen, M. C. and W. H. Meckling (1976), "Theory of the firm: managerial behavior, agency costs, and ownership structure", *Journal of Financial Economics*, p. 305-360.

Leftwich, R. (1983), "Accounting information in private markets: evidence from private lending agreements", *The Accounting Review*, vol. LVIII (1), p. 23 – 41.

Lennox, C. (2005), "Management ownership and audit firm size", *Contemporary Accounting Research*, vol. 22 (1), p. 205 - 227.

Lim, C., and H. Tan (2008), "Non-audit service fees and audit quality: the impact of auditor specialization", *Journal of Accounting Research*, vol. 46 (1), p. 199 – 246.

Nini, G., D. C. Smith, and A. Sufi. (2009), "Creditor control rights and firm investment policy", *Journal of Financial Economics,* vol. 92, p. 400 – 420.

Press, E. and J. Weintrop (1990), "Accounting-based constraints in public and private debt agreement: their association with leverage and impact of accounting choice", *Journal of Accounting and Economics*, vol. 12, P. 65 – 95.

Sweeney, A. P. (1994), "Debt-covenant violations and managers' accounting responses", *Journal of Accounting and Economics*, 17: 281-308.

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THE EFFECT OF A LAST-MINUTE CHANGE IN THE INFLATION REDUCTION ACT: ESTIMATES FROM LARGE CORPORATIONS' DEFERRED TAX LIABILITIES

Mingjun Zhou, DePaul University

ABSTRACT

This study examines the legislative process of the Inflation Reduction Act of 2022 and focuses on a last-minute change in the new Corporate Alternative Minimum Tax (CAMT) proposal, which allows tax deprecation in determining the Adjusted Financial Statement Income and the tentative minimum tax. I collect detailed form 10-K data for a subset of S&P 500 companies that are potentially subject to the new CAMT. For these firms, the total deferred tax liabilities that can be attributed to accelerated tax depreciations are approximately $ 188 billion at the end of fiscal 2021. The results show that firms in the utilities and telecommunication sector, as well as the healthcare and information technology sector, are most likely to benefit from this last-minute change.

JEL: M41, M48

KEYWORDS: Deferred Tax liability, Inflation Reduction Act, OECD Pillar Two, Global Minimum Tax, Tax Depreciation

INTRODUCTION

The Inflation Reduction Act (IRA) first emerged from the U.S. House of Representatives as the "Build Back Better Act" in November 2021. This was the key legislative agenda of President Biden on clean energy and fighting global warming. The cost of the legislation would be "paid by additional tax revenues from large corporations (The White House 2021), such as the 15% Corporate Alternative Minimum Tax (CAMT) on Adjusted Financial Statement Income (AFSI). Using AFSI for tax purposes is a major shift from the myriad of exclusions and deductions traditionally given to calculate the taxable income under the Internal Revenue Code, which does not necessarily present the underlying economic performance of a firm when compared with the financial statement income (book income) prepared under the Generally Accepted Accounting Principles (GAAP).

Based on a Joint Committee on Taxation (JCT) memorandum dated July 28, 2022, the initial proposals for the CAMT in the Inflation Reduction Act "as is" would affect about 150 large corporations and raise 52.6 billion in revenue in the first year alone. Moreover, the JCT staff report informed the Senate Finance Committee that the majority of this additional tax revenue would come from industrial sectors, such as manufacturing. This is probably due to the fact that, under the initial proposal of the IRA (the "Build Back Better" plan), the "accelerated recovery system" under the Internal Revenue Code Section 168 would be no longer be applicable for AFSI and CAMT purposes. In other words, those corporations would need to use book depreciation method under GAAP for calculating AFSI starting in fiscal 2023.

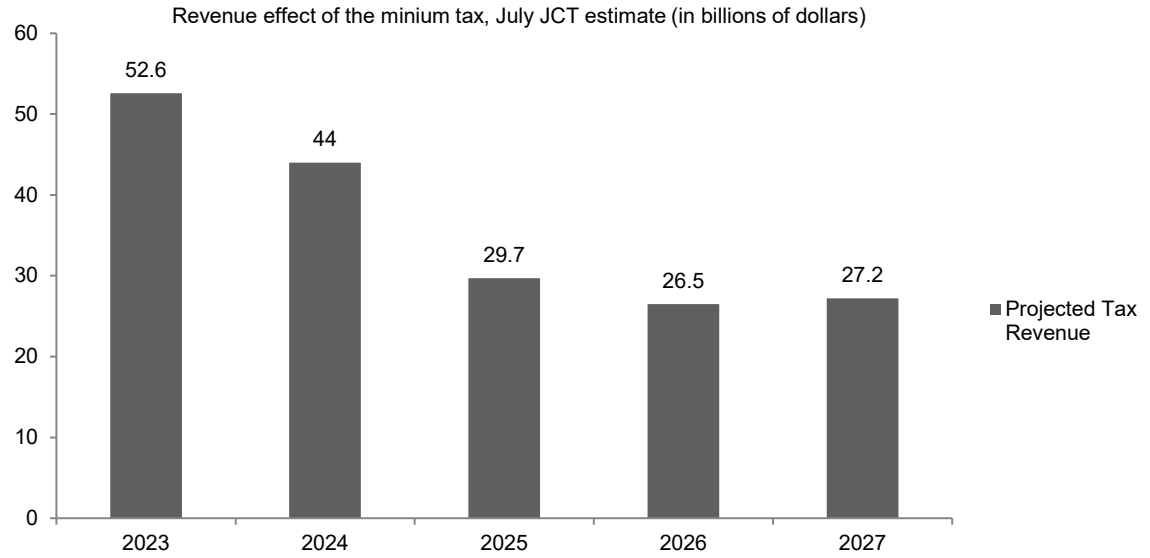
The final version of the IRA (H.R. 5376), however, was passed by the Senate on August 8th, 2022, after last-minute negotiations were reported in the press between Senate Majority leader Chuck Schumer and Senator Kyrsten Sinema from Arizona. It made changes to the initial provisions in the new 15% minimum tax to allow "accelerated cost recovery" (tax depreciation) in computing AFSI.

Using the methodology described in Sullivan (2022), I first identify a list of large corporations that may be subject to upcoming CAMT. Different from the Sullivan study, I made improvements by hand-collecting fiscal year 2021 10-K annual filings from the SEC Edgar website and analyzing detailed data on deferred taxes from large corporations. The results show that the total deferred tax liabilities on the balance sheet that can be attributed to accelerated tax depreciation is about $ 188 billion for 47 firms on the S&P 500 Index. The up-front impact on the additional tax revenue side (in terms of the tentative minimum tax under CAMT) could be 5.6 billion per year for the first five years with a 15% tax rate.

This is a rough estimate, given the many other variables involved. However, all else being equal, these numbers shed some light on the magnitude of the negative effect of potential up-front tax revenue lost for the U.S. government from a last-minute change by keeping the tax depreciation methods and reducing the tax base for the minimum tax.

Figure 1 shows the incoming revenue estimate by the JCT on July 22, 2022 for 2023-2027 before the final change in the CAMT on August 15, 2022. In this context, the $5.6 billion is more than 10% of the first year incoming revenue estimate. In other words, the federal government would need to find some other revenue source to offset this 10% deficit should it insist that the Inflation Reduction Act is "fully paid for". The effects on the firms are also substantial. The average cash tax paid per year for the 47 companies between 2019 and 2020 in the sample is $28.5 billion. The 5.6 billion represents almost 20% of addition cash tax to be paid.

Figure 1: July 2022 JCT Estimate



The estimate by the Joint Committee on Taxation on the Federal budget receipts brought by the corporate minimum financial statement income tax as contained in the "Inflation Protection Act of 2022"

This study also expands the scope of extant knowledge by investigating how the political processes interact with accounting methods in different sectors. The data show that not only the "manufacturing" sector, as emphasized by Sen. Sinema in her negotiations to change the initial settings of the IRA, but also many other

sectors, such as utilities, healthcare, information technology, and telecommunication services, would have been impacted by the "Build Back Better Act" introduced in September 2021. At a policy level, it is may be inferred from this set of data that firms in these sectors may have a large lobbying influence for a last-minute change in the IRA.

Overall, the objective of this study is to calculate the potential effect of a last-minute change in a new tax proposal. The size of the deferred tax liabilities associated with Section 168 business properties can inform policy-makers of the underlying incentives facing large U.S companies in different sectors, and lead to further research on corporate behaviors facing a major tax law change. The background of the new corporate minimum tax is explained next in the literature review section, as well as the related research on deferred tax positions. The Data and Methodology section explains the data collection steps, followed by a discussion of the Results. Before conclusion, I also provide some comments under "A Path Forward" on the new corporate minimum tax and the Inflation Reduction Act of 2022.

LITERATURE REVIEW

The tax policy guiding the CAMT within the IRA is informed by the "Global Anti-Base Erosion Model Rules" project initiated by the Organization for Economic Cooperation and Development (OECD). It establishes a system of taxation based on financial accounts and applies a minimum rate of 15 percent on a country-by-country basis. This is known as "Pillar Two" of the grand strategy to prevent income shifting by large corporations in a digital economy (OECD 2021). The analysis by the Joint Committee on Taxation in June 2023 shows that the effect of "Pillar Two" can be highly uncertain (Reuters 2023, JCT 2023). Indeed, this study shows that billions of potential tax revenue may be lost in the negations in order to finally pass the Inflation Reduction Act in the Senate to implement a global minimum tax regime.

Prior research has established that a firm's deferred tax positions may bring substantial changes in short-term effective tax rates when there is a major change in tax law (Porteba et al. 2011). This study collects data from firms' 10-K filings and identifies those with large deferred tax liabilities that would be affected by the initial minimum tax proposal in the IRA, disallowing accelerated depreciation methods under the Internal Revenue Code Section 168. As Porteba et al (page 29) stated, "The presence of deferred tax assets and liabilities not only matters for understanding the transitional impact of statutory tax rate changes on different firms, but also complicates the task of estimating the revenue impact of a corporate tax change." In this study, I collect deferred tax liability data on companies that would be most likely affected by the CAMT under the original draft of the Inflation Reduction Act, and show aspects of the revenue effects with regard to accelerated depreciation methods between the initial CAMT proposal and its final enacted version.

The Political Process for the Inflation Reductions Act

The proposal to impose a 15% minimum tax on U.S. large corporations' book income appeared first in the "Build Back Better Act" (H.R. 5376) passed by House Democrats on November 19, 2021. It is one of the largest spending bills in the past decades, and has been on President Biden's main political agenda in 2021. The bill expands social programs, such as child tax credit and universal pre-school programs, and incentivizes energy transitions through tax credits to fight climate change. The estimated cost of "Build Back Better" was approximately 2 trillion dollars (Tankersley 2021). It is intended to be "fully paid for" by the 15% minimum tax on large corporations, increased tax rates on the wealthy, and expanded IRS enforcement (White House, 2021).

In addition to the minimum tax proposal, the price tag for the initial version of the IRA made the political process of passing it in the Senate highly uncertain. Democrats only have a slim majority in the senate. Thus, Senator Joe Manchin (West Virginia) and Kyrsten Sinema (Arizona) hold the final votes on the fate of H.R. 5376. For example, after the passage of the House version of the bill, President Biden and Senate

Democrat leaders were unsuccessful to alleviate Sen. Machin's concern on the effect of "Build Back Better" on federal deficit and inflation pressures. The negotiations seemingly reached a dead end in the late fall (Tanksley et al. 2022, Rathi and Dlouhy 2022) and it took much behind-the-scene effort by prominent business leaders and economists (Rathi and Dlouhy 2022) to win over Sen. Machin.

Table 1 lists the key events surrounding the passage of the Inflation Reduction Act. On September 27, 2021, the initial draft of the IRA is introduced to the House and the House version was passed in November 2021. Between the late fall of 2021, and the spring and early summer of 2022, not much officially happened on the legislative progress. Finally, there was a flurry of activities in August 2022 to push the legislation through the finish line.

Table 1: Key Legislative Dates for H.R. 5376

September 27, 2021	"Build Back Better Act", including the new Corporate Alternative Minimum Tax was introduced in the House of Representatives. (H.R. 5376 House Report No. 117-130)
November 19, 2021	House passage.
August 8, 2022	The Senate amended and passed H.R. 5376 as the Inflation Reduction Act of 2022
August 12, 2022	House agreed to the Senate amendments.
August 15, 2022	President Biden signed the Inflation Reduction Act (Public Law 117-169)

Table 1 shows the timeline for the passage of the Inflation Reduction Act. Between the late fall of 202 through the early summer of 2022, not much officially happened on the legislative progress. Finally, there was a flurry of activities in August 2022 to push the legislation through the finish line.

Last-minute Change on the Depreciation Deduction

The plan for the 15% Corporate Alternative Minimum Tax proposal and the use of financial reporting income instead of traditional taxable income has brought significant controversy across the political aisle and business community. In response to the fact that the CAMT is blueprinted from the OECD Pillar Two model, Finance Committee Ranking Member Crapo and Ways and Means Committee Chairman Smith said: "The Biden Administration unilaterally surrendered to the OECD tax cartel by agreeing to a global tax code that will extract more than $120 billion in US tax revenue over the next decade……"

However, one important change between the initial introduction of H.R. 5376 and its final form is how the accelerated or depreciation methods are considered when computing the adjusted financial statement income. Senator Kyrsten Sinema (Arizona) was the last swing vote required for the passage of the IRA. She pushed for changes in the CAMT proposal in August 2022 so that companies could keep using accelerated tax depreciation instead of using financial reporting depreciation methods to calculate taxable income. The New York Times reported that there was a flurry of lobbying activities in that August, and Sen. Sinema urged her Democratic colleagues to keep a "valuable depreciation deduction" that is tied to machinery and equipment. In the last-minute negations leading to the final text, Section 56A(c)(13) of the Inflation Reduction Act allowed non-GAAP accelerated depreciation deductions on business properties to calculate corporations' adjusted financial statement income. In other words, the CAMT system would keep intact the difference between book and tax income due to differences in the depreciation methods. On this aspect, the chief policy officer of the U.S. Chamber of Commerce said vividly:

> "Taxing capital expenditures — investments in new buildings, factories, equipment, etc. — is one of the most economically destructive ways you can raise taxes… while we look forward to reviewing the new proposed bill, Senator Sinema deserves credit for recognizing this and fighting for changes." (Rappeport, 2022)

In her statement on August 4, 2022 Sen. Sinema announced that she is ready to "move forward" on the final version of the Inflation Reduction Act after making changes to "protect advanced manufacturing and boost our clean energy economy" (McPherson, 2022). On August 8, 2022 the Senate passed the Inflation Reduction Act, and President Biden signed it into law one week later.

In the next section, the potential revenue effects of this last-minute change in the Inflation Reduction Act and the implementation of the new corporate minimum tax will be discussed based on data collected from firms' 10-K disclosures.

DATA AND METHODOLOGY

The main sample in this study is collected based on the procedures described in Sullivan (2022) to identified firms that are most likely subject to the new CAMT. Beyond the company list in the prior research, this study contributes by collecting detailed new data from firms' 10-K filings from the SEC Edgar website, specifically on their fiscal 2021 deferred tax liabilities based on the balance sheets. There are various presentation formats in the 10-K, requiring the author to read and manually classify the deferred tax liabilities that are associated with accelerated depreciation and potentially affected by the initial CAMT proposal that emerged in September 2021. The deferred tax liabilities are balance sheet numbers at the end of fiscal 2021.

Table 2 presents the section criteria to screen the firms on the S&P 500 index based on the preceding three years' revenues and cash effective tax rates. Firms that are Real-estate Investment Trusts (REIT) are excluded as they are regarded as flow-through entities in the tax code. So are financial companies as they are subject to a different set of accounting rules. The new CAMT proposal will be effective for companies that have a three-year average revenue greater than the one-billion-dollar threshold, which is not indexed for inflation. Once a firm's revenue is above this threshold starting from their fiscal year 2023, the CAMT will apply even if the firm's revenue in the future periods drops below this threshold.

Table 2: Sample Selection

Selection Criteria	Number of Firms
Firms listed on the S&P 500 Index as of 12/31/2021	500
Step 1: Firms that are REIT or have insufficient data for cash effective tax rates for 2019, 2020 and 2021	(39)
	461
Step 2: Firms that have three-year average revenue > 1 billion and cash effective tax rate below 15%	
	77
Step 3: Financial companies	(14)
Final sample size to manually search for deferred tax position disclosures in 2021 10-K filings	64
Final Sample size with detailed deferred tax liability data associated with depreciation methods	47

Table 1 shows the sample selection process to start the process of manually collecting form 10-K data. The final sample includes 47 firms through different sectors.

To be selected, all firms should have sufficient data for calculating the cash effective tax rates based on the most recent three calendar years and then ranked by the three-year average before-tax profits (2019, 2020, and 2021). Finally, 64 companies are identified as the most likely to be subject to the new CAMT. They have average revenue greater than one billion and a cash effective tax rate below 15%. I then manually collect detailed data on the deferred tax liabilities in their fiscal year 2021 form 10-K disclosures from the SEC Edgar website.

RESULTS

Table 3 shows firms' deferred tax positions related to accelerated tax depreciation. Out of the 64 firms identified in the previous section, 47 companies reported detailed the amount of deferred tax liabilities (DTL) that can be attributed to accelerated tax depreciation.

The summary result in Table 3 shows that the total amount of DTL associated with tax depreciation is about $188 billion for the 47 companies in fiscal 2021. This is the total amount of potential accelerated tax deductions that these companies may lose under the new CAMT and AFSI system, had the initial version of the IRA persisted without the last-minute change in August 2022. Given the 15% minimum tax rate, the initial impact on additional tax revenue in terms of tentative minimum tax could be reach $5.6 billion annually for the first five years.

Table 3: List of Companies That Features Detailed Information on Their Deferred Tax Liabilities Based on Fiscal 2021 10-K Forms (n=47)

	Amount of DTL on the Balance Sheet That Can Be Attributed to Accelerated Depreciation, in Millions	2019-2021 Average Cash Tax Paid	GIS	NAICS
Adobe Inc.	49	555	45	518210
Alphabet Inc.	5,237	8,868	50	518210
Amazon.com Inc.	3,562	2,094	25	455219
Ameren Corp.	4,129	8	55	2211
American Electric Power Co. Inc.	7,020.3	10	55	2211
American Water Works Co. Inc.	3,087	7	55	221310
Applied Materials Inc	93	638	45	333242
Aptiv	55	156	25	336320
Archer-Daniels-Midland Co.	875	339	30	31122
AT&T Inc.	47,433	1,038	50	517112
Biogen Inc.	250.9	74	35	325414
Bio-Rad Laboratories Inc.	35	82	35	334516
Celanese Corp.	312	180	15	325199
Consolidated Edison Inc.	8,298	7	55	22111
Davita Inc.	283.91	174	35	621492
Devon Energy Corp	1,630	20	10	2111
Dish Network Corp.	858.71	131	50	516210
Dominion Energy Inc.	6,017	186	55	22111
Edwards Lifesciences Corp.	64.1	147	35	339113
Entergy Corp	6,136.56	9	55	22111
Exelon Corp.	14,429	185	55	22111
FirstEnergy Corp.	5,670	4	55	22111
Ford Motor Co.	2,881	529	25	33611
Garmin Ltd	27.970	141	25	334511
General Motors Co.	1,775	687	25	336110
Intel Corp.	4,213	2,270	45	334413
Intuitive Surgical Inc.	79.4	124	35	334510

Table 3: List of Companies That Features Detailed Information on Their Deferred Tax Liabilities Based on Fiscal 2021 10-K Forms (n=47) (continued)

	Amount of DTL on the Balance Sheet That Can Be Attributed to Accelerated Depreciation, in Millions	2019-2021 Average Cash Tax Paid	GIS	NAICS
Kinder Morgan Inc.	166	203	10	486210
KLA Corp	407.692	237	45	333314
Moderna	49	160	35	325414
Netflix Inc.	388.115	401	50	532282
Nextera Energy Inc.	10,018	117	55	2211
Northrop Grumman Corp	755	645	20	334511
Oneok Inc	84.692	4	10	221210
Paramount Global	171	466	50	516210
Qualcomm Inc./DE	111	1,143	45	334413
Republic Services Inc.	949.2	152	20	562111
Skyworks Solutions Inc.	38.6	140	45	334413
Southern Co.	2301	144	55	2211
Texas Instruments Inc.	197	830	45	334413
T-Mobile US Inc.	380	158	50	517112
Union Pacific Corp.	12657	1,418	20	482111
Valero Energy Corp	4866	252	10	324110
Verizon Communications	19893	3,116	50	517312
Vertex Pharmaceuticals Inc.	118.2	231	35	325412
WEC Energy Group	3909	12	55	2211
Xcel Energy Inc.	6231	20	55	2211
Subtotal	188,192	28,512		

Table 3 shows that the total amount of DTL associated with tax depreciation is about $188 billion for the 47 companies in fiscal 2021. This is the total amount of potential accelerated tax deductions that these companies may lose under the new CAMT and AFSI system.

The scope in Sullivan (2022) does not include any analyses on DTLs that are vulnerable to the initial proposal in the CAMT. This study, on the other hand, breaks down the deferred tax section in the 10-K forms, and identifies each dollar amounts associated with subtitles such as "Depreciation and Amortization" and "Plant and equipment" or "Plant and equipment associated with depreciation method and basis differences" that are most likely to be affected by the CAMT proposal to use book depreciation only. The Appendix shows an example of the 10-K disclosure by Dominion Energy on the amount of DTL attributable to depreciation methods.

These numbers add to the extant literature on firms that are potentially subject to the CAMT starting from fiscal 2023, and provide insights into the significant negative consequences of potential immediate tax revenue reduction for the U.S. government. The prior literature also do not analyze the legislative process and the lobbying effects that lead to a last-minute decision to retain the current tax depreciation methods to narrow the tax base for the minimum tax. We now know that more than 10% of the projected first-year revenue (based on the July 2022 JCT report) is negatively affected by this last-minute change. To put it differently, the federal government would need to identify alternative revenue sources to compensate for this shortfall.

This study also shows a sector-based analysis beyond a cursory look of non-REIT, non-financial firms in the prior research. Out of the 64 non-REIT, non-financial companies, Table 4 shows the detailed analysis at the Sector level (under both the Global Industry Classification Standard). Telecommunications and

Utilities are the two most affected sectors, accounting for 39 and 41% of the total amount of DTL on companies' balance sheet that can be attributed to accelerated depreciation. It suggests that companies that are most capital-intensive benefited the most from the last-minute change in the IRA.

Table 4 shows that the sectors that have the most DTL due to depreciations are Utilities and Telecommunications. 41% of the total DTL in the Utilities section can be attributed to depreciation, and 39% of the DTL in the Telecommunications. In terms of the number of firms, both the Healthcare and the Information technology sector also have a large share of DTLs.

Table 4: Sector Analysis on Deferred Tax Liabilities (DTL)

GIS Sectors	Number of Firms		Amount if DTL on the Balance Sheet That Can Be Attributed to Accelerated Depreciation, in Millions	
10-Energy	4	8.51%	6746.692	3.58%
15-Materials	1	2.13%	312	0.17%
20-Industrials	3	6.38%	14361.2	7.63%
25-Consumer Discretionary	5	10.64%	8300.97	4.41%
30-Consumer Staples	1	2.13%	875	0.46%
35-Healthcare	7	14.89%	880.513	0.47%
45-Information Technology	7	14.89%	5109.292	2.71%
50-Telecommunications	7	14.89%	74360.82	39.51%
55-Utilities	12	25.53%	77245.86	41.05%
Total	47		188192.4	

Table 4 shows that the sectors that have the most DTL due to depreciations are Utilities and Telecommunications. In terms of the number of firms, both the Healthcare and the Information technology sector also have a large share of DTLs

A PATH FORWARD

The Inflation Reduction Act of 2022 is crucial on the nation's agenda to implement measures for the green transition and fighting global climate change. Its essence is less about inflation but more on the spending and taxation programs. The legislative process discussed here showed that efforts critical for a green future hinged on some arcane details in the accounting methods and depended on the vote of one particular senator at the last minute. The 47 companies discussed above, especially in the utilities sector, are mostly capital intensive and to a larger extent contributed to the CO2 emissions leading to global warming. The Congress could have used the time between late 2022 and the first half of the 2023 to share its wisdom and fine-tune the details in the depreciation methods for this sector to incentive capital investment in green and renewable energies.

Using the Adjusted Financial Statement Income for corporate minimum tax purposes also creates pressure on the financial reporting standard setters to consider the additional stakeholders when contemplating changes in the GAAP. The lobbying efforts by the large corporations leading to the passage of the IRA have already shown that they can tip the balance of power on Capitol Hill. Rather than pegging the taxation power to the private accounting standard setters such as the FASB on financial statement income, Congress could have improved on the definition of taxable income itself and designate the Treasury to write detailed regulations.

CONCLUDING COMMENTS

The aim of this research is to assess the possible impact of a last-minute change in the text of the new corporate minimum tax within the legislative process of the Inflation Reduction Act of 2022. I collect detailed form 10-K data for a subset of S&P 500 companies that are potentially subject to the new CAMT. For these firms, the total deferred tax liabilities that can be attributed to accelerated tax depreciations are approximately $188 billion at the end of fiscal 2021. The results show that firms in the utilities and telecommunication sector, as well as the healthcare and information technology sector, are most likely to benefit from this last-minute change. The up-front impact on the additional tax revenue side (in terms of the tentative minimum tax under CAMT) could be 5.6 billion per year for the first five years with a 15% tax rate. These are benefits to the large corporations, and potential tax revenues lost to the US government. This study provides data on the extent of deferred tax liabilities linked to Section 168 business properties and how large U.S. companies across various industries may be affected by a last-minute change in the provisions of the IRA. From a policy perspective, it also illustrates that a change in an accounting method can have heavy influence on the fate of the landmark legislation on green transition and climate change in this country.

One limitation of this study is the small sample size and the manual collection of data. There is no uniform format on the deferred tax liabilities in form 10-K and it is time intensive to collect data. The numbers in this study are also based on fiscal 2021 10-K forms. Future effort is needed to follow up with these firms to confirm that they are actually subject to the CAMT. We expect to see more data coming in on fiscal 2023 10-K forms filed in the first quarter of 2024.

The findings in this study suggest several possibilities for future research. This may help further test the relationship between the valuation relevance of deferred tax liabilities and their components, such as depreciation and amortization methods. Researchers could also focus on this panel of companies and observe their lobbying efforts when the Congress considers the renewal of Tax Cut and Jobs and Act at the end of 2025. The fact that large utility companies benefited from a last-minute change in the Inflation Reduction Act will also spark further interest in a closer look at their ESG behaviors in fighting climate change.

Appendix: Dominion Energy's Fiscal 2021 10-K

The Companies' deferred income taxes consist of the following:

At December 31, (millions)	Dominion Energy 2021	2020
Deferred income taxes:		
Total deferred income tax assets	**$ 3,025**	$ 3,285
Total deferred income tax liabilities	**9,397**	9,069
Total net deferred income tax liabilities	**$ 6,372**	$ 5,784
Total deferred income taxes:		
Plant and equipment, primarily depreciation method and basis differences	**$ 6,017**	$ 5,824
Excess deferred income taxes	**(1,107)**	(1,142)
Unrecovered NND Project costs	**508**	529
DESC rate refund	**(113)**	(140)
Toshiba Settlement	**(189)**	(204)
Nuclear decommissioning	**1,114**	991
Deferred state income taxes	**857**	702
Federal benefit of deferred state income taxes	**(179)**	(147)
Deferred fuel, purchased energy and gas costs	**189**	(28)
Pension benefits	**362**	239
Other postretirement benefits	**73**	(14)
Loss and credit carryforwards	**(1,571)**	(1,534)
Valuation allowances	**140**	155
Partnership basis differences	**398**	593
Other	**(127)**	(40)
Total net deferred income tax liabilities	**$ 6,372**	$ 5,784
Deferred Investment Tax Credits – Regulated Operations	**286**	169
Total Deferred Taxes and Deferred Investment Tax Credits	**$ 6,658**	$ 5,953

This appendix shows the total amount of deferred tax liability that is attributable to depreciation methods is $6,017 million at the end of fiscal 2021.

REFERENCES

Reuters. June 22, 2023 "JCT: Revenue Effects of Global Minimum Tax Highly Uncertain"
Joint Committee on Taxation. July 2022. "Proposed Book Minimum Tax Analysis by Industry". https://www.finance.senate.gov/imo/media/doc/jct_analysis_book_minimum.pdf

Joint Committee on Taxation. June 2023 "Possible Effects of Adopting the OECD's Pillar Two, Both Worldwide and In the United States". https://www.finance.senate.gov/imo/media/doc/118-0228b_june_2023.pdf

McPherson, L. ""Sinema ready to advance budget bill after tax changes," https://rollcall.com/2022/08/04/sinema-ready-to-advance-budgetbill-after-tax-changes/,

OECD (2021), Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalization of the Economy, OECD, Paris

Pomerleau, K. 2021. "The Minimum Book Tax is Not a Second Best Reform". Bloomberg Daily Tax Report. December 24, 2021.

Poterba, J. N. Rao and J. Seidman. 2011. "Deferred Tax Positions and Incentives for Corporate Behavior around Corporate Tax Changes". National Tax Journal. 64(1) 27-58.

Rapperport. A. “Democrats Eye a Major Shift in How Corporations Are Taxed”. The New York Times. August 6, 2022.

Rappeport, A. “How a Last-Minute Lobbying Blitz Watered Down a Climate Bill Tax”. The New York Times. August 8, 2022.

Rappeport, A. “New Corporate Minimum Tax Ushers In Confusion and a Lobbying Blitz”. The New York Times. Sept 7, 2023.

Rathi, A and J. Dlouhy. 2022. “Bill Gates and the secret push to save Biden’s Climate Bill”. Bloomberg News. August 16, 2022.

Sullivan, Martin. “Identifying Corporations Likely to Pay the New Corporate AMT”. Tax Notes. Aug 8, 2022.

The White House. 2021. “The Build Back Better Framework”. ttps://www.whitehouse.gov/build-back-better/

Tankersley, Jim. 2021. “How much does Biden’s spending bill actually cost?”. The New York Times. Nov 29, 2021.

Tankersley, J. L. Friedman, and C. Davenport. 2022 “Biden Concedes Defeat on Climate Bill as Manchin and Inflation Upend Agenda”. The New York Times. July 15, 2022.

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