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TABLE OF CONTENTS

MULTIPLE SUPERVISORS IN AUDIT: FAIRNESS AND THE MANY-TO-ONE PERFORMANCE APPRAISAL ENVIRONMENT

Rebecca Martin, University of Maryland & McNeese State University
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ABSTRACT

Auditing presents a unique environment in which associate auditors (lower-level auditors) are often managed by multiple supervisors. Prior research indicates that increased fairness can improve organizational outcomes such as job satisfaction and performance, but this has yet to be investigated in a setting with multiple supervisors. The present study examines the role of internal locus of control and consistent standards on perceptions of procedural justice, predicting organizational commitment and perceived learning in a multiple-supervisor environment. Using a student sample, we find support for this model and present implications of our findings.

INTRODUCTION

Recent accounting research has noted that when organizations create and foster an impression of fairness within organizations, as it leads to enhanced employee job satisfaction and performance (Lau & Martin-Sardesai, 2012). While research has investigated the impact of procedural justice, or the fairness of procedures, in the accounting environment (Lau, 2015; Seifert et al., 2014; Lau & Martin-Sardesai, 2012; Seifert et al., 2010; Burney et al., 2009, Lau et al., 2008, Lau & Moser, 2008; Rae & Subrimaniam, 2008; Lau & Tan, 2006; Staley et al., 2003; Wentzel, 2002; Lau & Lim, 2002) relatively fewer studies have investigated procedural justice in public accounting firms (Herda & Lavelle, 2012; Johnson et al., 2011; Miller et al., 2011; Johnson et al., 2008; Parker & Kohlmeyer, 2005; Siegel et al., 2001). To our knowledge, no study to date has investigated the unique impact of multiple supervisors on employee procedural justice perceptions in public accounting. Previous research in management and accounting assumes that the employee and supervisor are in a one-to-one relationship, i.e., that there is one employee receiving one supervisor rating (e.g. Lau & Moser, 2008; Lau et al., 2008; Korsgaard &Roberson, 1995; Greenberg, 1986). However, in public accounting employees, especially auditors at the associate level, are often rated by several supervisors (Herda & Lavelle, 2012; Kaplan & Reckers, 1993).

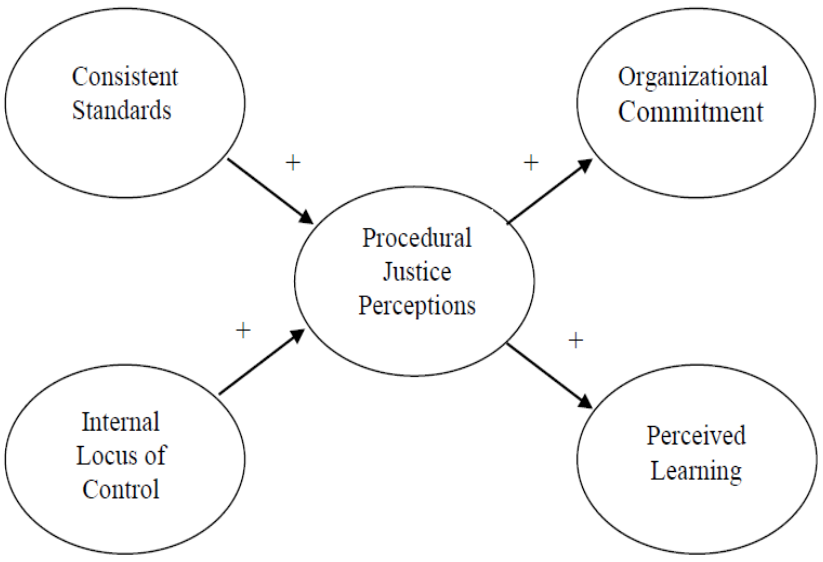
Associate auditors are lower-level auditors, usually in their first two years at an accounting firm. These auditors are normally rotated to many different types of audit clients (e.g. financial services, not-for-profits, and consumer markets). Different in-charge auditors, managers, and partners are assigned to each audit client. This diverse exposure is often designed to familiarize these lower-level auditors with all types of industries and accounting issues, as the young associates will eventually choose an industry group to focus on when they become an in-charge (Thibodeau, 2003). Associates are usually reviewed by their immediate supervisor on each audit after the completion of an audit engagement. In the current paper, the associate's reviewer is assumed to be the in-charge auditor, as the in-charge auditor is normally present every day at the

client's location throughout the engagement. Once or twice a year, these evaluations are compiled and reviewed as part of the decision-making process for compensation and promotion (Kaplan & Reckers 1993).

Recent research regarding audit firms has found that perceived fairness of the audit firm is directly related to lower levels of auditor burnout and turnover intentions (Herda & Lavelle, 2012). However, to our knowledge, no research has specifically studied the effects of the multiple reviewers on employee perceptions of fairness. Multiple reviewers in audit firms are an inherent part of the firm incentive structure, and prior literature has noted that in fact, overall, limited research exists on incentive structures of audit firms (Jenkins et al., 2008). As accounting firms rely on these performance appraisals as mechanisms of organizational control and determinants of compensation, research which analyzes employee perceptions of the fairness of these processes is crucial. As noted by Lau and Moser (2008), research on the determinants of procedural fairness identifies how procedural fairness can be enhanced, and investigation of the outcomes of procedural justice demonstrates the importance of fairness in the performance appraisal process.

This paper presents evidence regarding antecedents and consequences of employee perceptions of procedural justice in the many-to-one audit performance appraisal environment. Our theoretical model is presented in Figure 1. It proposes that consistent standards and internal locus of control directly related to procedural justice perceptions, which in turn relate to organizational commitment and perceived learning. We use structural equations modeling to evaluate responses from a directed survey to undergraduate students regarding multiple evaluators. Similar to auditors, students experience a many-to-one performance appraisal environment in the form of grades from university professors, instructors, and teaching assistants.

Figure 1
THEORETICAL MODEL



Our study has implications for the accounting research literature and audit practitioners in this many-to-one environment. We demonstrate that perceptions of procedural justice also increase when consistent standards among multiple supervisors increase. Our findings suggest that audit firms can improve associate auditors' procedural justice perceptions, and in turn improve organizational commitment and perceived learning, by encouraging consistent standards across audit supervisors. Audit firms are also likely to enjoy the additional benefits of perceived fairness including enhanced employee job satisfaction and performance noted by recent research in managerial accounting (Lau, 2015; Lau & Martin-Sardesai, 2012).

THEORY AND HYPOTHESES

Performance Appraisals and Procedural Justice

Appraisals are used extensively in organizations to evaluate employees' performance and provide a basis for compensation. Scholars have generally acknowledged that the process of appraisal consists of identification, observation, measurement, and development of human performance in organizations (Cardy & Dobbins, 1994). Given the significance of performance appraisals in business organizations, researchers in management and accounting have explored the perceived fairness of the performance evaluation process to employees (Lau et al., 2008; Lau & Moser, 2008; Konovsky, 2000; Greenberg, 1986).

These researchers have utilized the concept of organizational justice to examine the perceived fairness of the performance appraisal process. Organizational justice theories emerged from Adams' equity theory research (1965, 1963). Distributive justice, which represents the perceived fairness of outcomes, was first identified and researched. Procedural justice was defined in later research and represents the perceived fairness of the process used to arrive at outcomes. Leventhal (1980) posited six rules which must be followed to yield procedural justice: (1) consistency, (2) bias-suppression, (3) accuracy, (4) correctability, (5) representativeness, and (6) ethicality. A social aspect of procedural justice, labeled interactional justice, connects fairness to how employees are treated (Eskew, 1993).

Management literature studying organizational justice argues that procedural justice is important due to its "role as a fundamental organizational value" (Konovsky, 2000: 490). A meta-analysis of organizational justice research from 1975 to 2000 by Colquitt et al. (2001) noted that even after controlling for distributive justice, different manifestations of procedural justice were significant in organizational settings. Generally, management literature states that we do not know enough about the antecedents of procedural justice (Cohen-Charash & Spector, 2001). Some antecedents of procedural justice perceptions identified in the management literature are voice, relationship of informational justice (providing explanations or accounts for decisions made), and individuals' scope of justice (Konovsky, 2000). Recent research in management accounting literature has also revealed that goal adjustments can positively increase procedural justice perceptions and employee performance (Kelly et al., 2015).

The outcomes of procedural justice have been more widely studied in the management and accounting literature. Some outcomes identified in the management literature are positive attitudes about institutions or authorities representing employees, better leader-subordinate relationships, organizational citizenship behaviors (OCBs), job satisfaction, organizational commitment, and prevention of negative employee behaviors such as theft (Konovsky, 2000; Moorman et al., 1993; Tansky, 1993). Prior accounting research, primarily in managerial accounting, has identified several positive outcomes of procedural justice including job satisfaction,

organizational commitment, lower turnover intentions, and better quality auditor-supervisor relationships (Herda & Lavelle, 2012; Miller, et al. 2011: Lau et al., 2008; Staley et al., 2003).

Antecedents of Procedural Justice

Research in management has also specifically identified and tested antecedents of employee perceptions of procedural justice in a normal employee to supervisor relationship during the performance review process. Greenberg (1986) identified five determinants of fairness in performance appraisals. These include soliciting input prior to evaluation and using it, two-way communication during the review, the employee's ability to challenge the appraisal, the rater's familiarity with the employee's work, and the consistent application of standards. Additional studies have provided evidence that employees perceived the appraisal process as more fair when elements of due process were integrated into the appraisal, even when the fairer method resulted in lower evaluation ratings (Konovsky, 2000).

Consistent Standards

In this study, consistent standards are identified as an antecedent of procedural justice perceptions in the many-to-one performance appraisal environment. The unique aspect of many supervisors to one employee among auditors is created by different personalities and supervisory styles of audit engagement team management. Over fifty percent of respondents to a survey study about the workplace environment in a professional services firm by Hooks and Higgs (2002) stated that audit team management strongly influenced stop and start times when working at a client location. Additionally, Kalbers and Cenker (2008) stated that "As auditors advance in the firm, they are given more responsibility and control over their work and the work of others." The authors hypothesized and found that experience was positively significantly associated with autonomy among a sample of auditors at regional and national firms. Thus, in-charge auditors are given broad discretionary control not only over the environment of the audit "office" at the client location (i.e., when the engagement team should start and stop working), but also over the evaluation of the associate auditors' work and performance. This wide discretion could lead to variability in in- charge auditors' performance appraisals of associate auditors, creating inconsistencies in the many-to-one performance appraisal environment.

Another aspect of the many-to-one environment is that audit in-charges often have different expectations of performance from younger associates. Some in-charge auditors expect that younger associates will work autonomously with little supervision, while other in-charges may expect to interact continually with the young associates as part of their on-the-job training. These different expectations represent inconsistent applications of standards by the in-charge auditors across the firm. Such conflicting standards are likely to reduce procedural justice perceptions on the part of young associates. These inconsistent standards can arise based on the personality traits of in-charge auditors themselves and their interactions with the traits of younger associates. Johnson et al. (1998) provided evidence in an experimental setting that managers who were intolerant of ambiguity evaluated a female in-charge auditor's performance lower than a male in-charge's performance. The researchers also found the reverse to be true; managers scored as tolerant of ambiguity evaluated the female in-charge's performance higher. This type of intolerance for ambiguity could translate to in-charges' ratings of younger associates as well. As female audit associates have multiple raters throughout the year, they will notice an inconsistent application of performance standards to female as opposed to male associates if this intolerance of

ambiguity is present.

Additional studies have shown that auditors' cognitive styles significantly impact their performance on different tasks (Fuller & Kaplan, 2004). This research demonstrated that auditors with an analytical cognitive style performed better on an analytical task (a work paper review of another auditor's work). Auditors with an intuitive cognitive style performed better on an intuitive task (a comparative review of pre-report financials to those from the prior year). In-charge auditors may expect that younger associates have the same type of cognitive style that the in-charges do, and therefore expect similar performance on specific tasks such as comparative reviews. As younger associates will have multiple in-charge auditors as raters throughout the year, the younger associates will notice inconsistent standards if this cognitive bias is present, which will in turn affect younger associates' procedural justice perceptions.

In-charge auditors can also set different standards for younger associates based on their previous experiences with the associates. Several experimental studies found that audit reviewers relied more on workpapers completed by preparers they thought were more proficient and became more critical when they felt the preparers were less competent (Tan & Jamal, 2001; Asare & McDaniel, 1996; Bamber, 1983). Additionally, Gibbens and Trotman (2002) found that when managers generally knew that certain individuals produced higher quality workpapers, the managers spent less review effort on those audit associates' work papers. These expectations could also occur between multiple in-charge auditors and a younger audit associate. As younger associates work for various in-charge auditors throughout the year, spending less time with some than with others, a younger associate could notice an inconsistent application of performance standards between those different in-charge auditors that he/she works for less than others.

Greenberg (1986) identified the consistent application of standards as a significant determinant of fair performance appraisals. He noted that this factor "correspond[ed] closely with Leventhal, Karuza, and Fry's (1980) identification . . . consistency of allocation practices as determinants of fair procedures for the distribution of resources" (341). Consistent standards are of utmost concern in the audit environment, where younger audit associates' performance is reviewed by multiple in-charge auditors throughout the year. The literature discussed above provides examples of unique opportunities for inconsistent standards in the many-to-one performance appraisal environment. Attribution theory states that individuals search for causes of outcomes and attribute causes to events or behavior, and they do so in such a way that maintains their own positive self-image (Wiener, 1985). For example, if young associates perceive that standards are imposed inconsistently by different evaluators, they will attribute this lack of consistency to a lack of fair procedures at the firm. Alternatively, if they perceive that standards are imposed consistently, they will attribute those standards to high procedural justice within the firm. Thus, we propose that consistent standards will positively affect younger associates' perceptions of procedural justice in the many-to-one performance appraisal environment as demonstrated in Figure 1.

H1 *As consistent standards increase, perceptions of procedural justice will increase in the many-to-one performance appraisal environment.*

Locus of Control

We identify internal locus of control as a second determinant of procedural justice perceptions in the many-to-one performance appraisal environment. "Locus of control is defined as a generalized expectancy that rewards, reinforcements or outcomes in life are controlled either

by one's own actions (internality) or by other forces (externality)" (Spector, 1988: 335). Locus of control was initially advanced by Rotter (1966) and is considered a noteworthy personality trait. Individuals with an internal locus of control believe that their actions influence and change their environment, and thus are viewed as more self-motivated and often more successful in the business environment (Law; 2009; Law & Hung, 2009). Locus of control is also one of four traits subsumed by core self-evaluations, which is a person's evaluation of their own self-worth, competence, and abilities (Judge et al., 1997). A recent meta-analysis on the concept linked it to job fairness, and proposed that core self-evaluations were likely to be highly relevant in performance appraisal (Chang et al., 2012).

In accounting research, internal locus of control has been linked to many positive outcome variables (Hsieh & Wang, 2012; Kalbers & Fogarty, 2005; Donnelly et al., 2003; Shapeero et al., 2003; Hyatt & Prawitt, 2000). Several studies have specifically examined the internal locus of control personality trait in auditors. Donnelly et al. (2003) and Shapeero et al. (2003) both examined the acceptance of dysfunctional audit behaviors such as the underreporting of time and premature sign-off as a function of personality traits including internal locus of control. They found that auditors who exhibited internal control tendencies were less likely to disclose an acceptance of dysfunctional behavior. Kalpers and Fogarty (2005) demonstrated that auditors with internal locus of control tended to report fewer burnout symptoms like emotional exhaustion, reduced personal accomplishment, and depersonalization.

Hyatt and Prawitt (2001) linked internal locus of control in auditors to higher levels of employee performance. The authors specifically examined the interaction between audit firm structure and the auditor's locus of control on job performance. They theorized that auditors with high internal locus of control perform better in unstructured audit firms, i.e. firms that allow auditors more personal control and discretion over audit procedures, because individuals labeled as internals believe their behaviors make an impact. Their assertion was supported with survey data that captured individuals' self-reported locus of control with supervisor ratings of employee performance.

More recent research in accounting has demonstrated that internal locus of control acts a moderator between auditors' job stress and job burnout (Hsieh & Wang, 2012). These researchers found that under the same amount of stress, individuals with an internal locus of control were likely to have less job burnout than those individuals with an external locus of control. Given the demanding nature of the auditing profession, the resiliency that results from an internal locus of control may also lead the auditor to have more positive perceptions about the workplace overall, such as in their perceptions of fairness of performance review and appraisal.

Management research has demonstrated a direct link between internal locus of control and procedural justice perceptions. Lilly and Virick (2006) stated that while much of the historical research on justice perceptions has focused on the context of a situation in which research is conducted, more research is needed to determine if other elements such as individual personality traits impact individual justice perceptions. The authors noted that:

> *The relational model of justice proposes that individuals who perceive their contributions and opinions to be valued by others will be more likely to believe that decisions made by the group are fair because they perceive themselves as a valued member of the group. Thus, if individuals with a high internal work locus of control believe their contributions and opinions at works are valued, then individuals with a high internal work locus of control should believe that decisions made by the group are fair. (Lily and Virick 2006, 440-441)*

Using a longitudinal survey on work attitudes, Lilly and Virick (2006) found support for their hypotheses. The current study extends the accounting literature regarding locus of control by exploring this same link between personality and procedural justice perceptions. Additionally, we build upon Lily & Virick's (2006) research in management by examining the link between internal locus of control and procedural justice specifically in the many-to-one performance appraisal environment. As presented in Figure 1, our hypothesis formally stated is:

H2 *As internal locus of control increases, perceptions of procedural justice will increase in the many-to-one performance appraisal environment.*

Outcomes of Procedural Justice

As noted previously, perceptions of procedural justice have been linked to a number of positive outcomes in disciplines such as management, psychology, and accounting (Herda & Lavelle, 2012; Lau & Moser, 2008; Lau et al., 2008; Staley et al., 2003; Konovsky, 2000; Moorman et al., 1993; Tansky, 1993). Yet, the many-to-one appraisal environment is a unique context that has not been studied previously. While prior research in one-to-one settings support the links between procedural justice and the outcomes of organizational commitment and perceived learning, it is important to examine these relationships when multiple evaluators exist.

Organizational Commitment

The connection between an employee and his/her organization is described as organizational commitment (Mathieu & Zajac, 1990). In accounting research, organizational commitment has been related to low turnover intentions, job satisfaction, and auditor performance (Herda & Lavelle, 2012; Lau & Moser, 2008; Lau et al., 2008; Law, 2005; Parker & Kohlmeyer, 2005; Ferris & Larcker, 1983). Ferris and Larcker (1983) surveyed 90 staff-level auditors regarding behavioral characteristics such as organizational commitment and motivation and then related these characteristics to auditor performance. The authors' results indicated that organizational commitment of auditors was significantly related to auditor performance as represented by the most recent year-end overall performance rating. More recently, Lau and Moser (2008) found a significant positive relationship between organizational commitment and managerial performance using Mahoney et al.'s (1963) nine dimensions of performance. Law (2005) and Parker and Kohlmeyer (2005) both show that organizational commitment was significantly related to lower turnover intentions in large public accounting firms.

As organizational commitment has been significantly related to reduced turnover intentions and higher levels of employee performance, it is imperative to understand the antecedents of organizational commitment among auditors at large public accounting firms. Other studies have shown that procedural justice perceptions are significantly related to organizational commitment. Staley et al. (2003) surveyed federal managers responsible for a budget about their procedural justice perceptions. The authors hypothesized that managers who received a budget developed using fair procedures would have higher levels of organizational commitment to the Federal government. The authors noted that "governmental budget theory holds that decisions allocating the government's budgets are made on bases that may be analogous to distributive, procedural, and interactional justice" (Staley et al., 2003: 509). The results indicated that Federal managers focused almost exclusively on the procedural justice aspects of decision-making in budgeting, as reflected by their organizational commitment.

Parker and Kohlmeyer (2005) operationalized procedural justice perceptions as perceived discrimination within large public accounting firms; low procedural justice perceptions equated to higher levels of perceived discrimination. The authors stated that perceived discrimination is manifested in an organization's allocation decisions through pay and promotions. Parker and Kohlmeyer (2005) demonstrated that this perceived discrimination (low procedural justice) was negatively associated with organizational commitment.

Lau et al. (2008) studied the impact of procedural justice on organizational commitment in the performance appraisal environment for managers in the health care services sector of an Australian state. They found that the fairness of evaluation procedures in determining employee performance and compensation was positively related to organizational commitment on the part of these managers. The current study builds on the prior research in accounting and extends Lau et al.'s (2008) research by evaluating the relationship between procedural justice and organizational commitment in the many-to-one performance appraisal audit environment.

Herda and Lavelle (2012) investigated the auditor's relationship with the audit firm and its impact on burnout and turnover intentions. The authors surveyed over 200 auditors from public accounting firms. They found that auditors' perceptions of fairness from the audit firm were linked to perceived firm support, which in turn led to greater perceptions of firm commitment. While Herda and Lavelle (2012) focused on the relationship between the auditor and the audit firm as a whole, this study specifically address auditors perceptions within the many-to-one performance appraisal system within the audit firms. Thus we argue that procedural justice perceptions in the many-to-one performance appraisal environment are significantly positively related to organizational commitment as demonstrated in Figure 1.

H3 High levels of procedural justice will be positively related to organizational commitment in the many-to-one performance appraisal environment.

Perceived Learning

Auditors rely substantially on knowledge gained through on-the-job training to improve their performance (Libby & Luft, 1993). In the framework for judgment and decision making (JDM) research presented by Bonner (2008), knowledge is a key individual factor which creates differences in JDM quality. Auditors are expected to continually learn and increase their knowledge from new tasks and on-the-job instructions received from different management teams at each client location. Recent qualitative research confirmed that auditors primarily acquire technical knowledge on the job (Westermann et al., 2015), which highlights the need to ensure continued learning. We theorize that associate auditors' perceptions of procedural justice in this many-to-one performance appraisal affect their learning on the job. While new to the accounting literature, educational and business research has used perceived learning as a dependent variable to measure the impact of formal training, task domain, new technologies, and organizational culture (Klein et al., 2010; Hornick & Tupichy, 2006; Lim & Morris, 2006; Marks et al. 2005; Zhao et al., 2005).

Two recent studies examined the impact of organizational culture on perceived learning. Hornick and Tupichy (2006) studied the effect of the four dimensions of horizontal and vertical individualism and collectivism on technology-mediated learning. The authors used structural equations modeling to demonstrate that the cultural attributes of social presence, sense of community, and communication use were significantly related to perceived learning. Lim and Morris (2006) also observed effects of organizational culture on perceived learning.

They demonstrated that organizational variables such as responsiveness to change, educational support, and peer or supervisor feedback had strong correlations with perceived learning. These findings emphasize the relationship of supervisor feedback and communication to perceived learning.

Zhao et al. (2005) used social-cognitive theory to predict and demonstrate that perceived learning leads to greater entrepreneurial self-efficacy among MBA students in entrepreneurship-related courses. Self-efficacy is a psychological construct advanced by Bandura (1986) which represents people's beliefs about their abilities to perform and succeed in certain activities. The authors showed that perceived learning was significantly related to entrepreneurial self-efficacy and had the greatest indirect effect of the variables tested on entrepreneurial intentions by MBA students (Zhao et al., 2005). This finding highlights the importance of perceived learning as an outcome variable of educational experiences.

The literature reviewed demonstrates that organizational culture in the form of feedback and communication use significantly relates to perceived learning (Hornick & Tupchiy, 2006; Lim & Morris, 2006). In turn, perceived learning directly relates to entrepreneurial self-efficacy and indirectly impacts entrepreneurial intentions among MBA students (Zhao et al., 2005). Auditors are expected to continually learn on the job and apply that knowledge to improve their performance (Libby & Luft, 2003), and it is therefore exigent to understand the antecedents of on-the-job learning. Prior behavioral research in accounting has demonstrated that feedback enhances motivation and performance through perceived impact, especially for lower-level auditors (Drake et al., 2007; Miller et al., 2006); however to our knowledge performance appraisal in the many-to- one environment experienced by auditors has not been examined. We argue that in this environment, procedural justice will significantly relate to auditors' perceived learning as demonstrated in Figure 1. Formally stated:

H4 *High levels of procedural justice will be positively related to perceived learning in the many-to-one performance appraisal environment.*

RESEARCH METHOD

Design

This research employs a directed survey to accounting and finance students. Separate variables are include for assessing consistent standards, locus of control, procedural justice, organizational justice, and perceived learning. These variables are first examined using confirmatory factor analysis to ensure construct reliability and then the results of the hypotheses tests are assessed using structural equation modeling.

Respondents

Similar to auditors, college students experience a many-to-one performance appraisal environment in the form of grades from university professors, instructors, and teaching assistants. As with in-charge auditors, professors have autonomy as to how each class is structured and evaluated. Thus, there is the potential for variability in the perceptions of consistent standards, procedural justice, and their outcomes. Therefore this study utilizes students to identify determinants and consequences of procedural justice in this unique, many-to-one environment.

Procedure

A survey was distributed to accounting and finance students at a public southeastern university who had taken at least three introductory courses in accounting, finance, or economics at that university. For the first half of the survey, students were instructed both orally and in writing by the researchers to "think about the following courses: Principals of Financial Accounting, Principles of Managerial Accounting, Economic Principles and Problems 1, Economic Principles and Problems 2, and Business Finance. Choose the three courses from this list that you have taken most recently at [this University] . . . If you took more than three of these classes [at the same time], think about the three that you recall in the most detail. Keep these three classes in mind as you answer items on this page." Scrap paper was available for the students to write down the name of the course and/or professor, but the scrap paper was not collected as part of the survey to ensure complete anonymity of responses. By directing students to think only of five specific classes at this particular university, we were able to limit the context of the survey. That is, students did not compare standards across different disciplines or universities, but within only a very small set of related classes.

Instrument

The survey measures used in this study were mostly drawn from previously validated instruments and existing literature to create scales for the underlying constructs in order to minimize potential measurement error. A new scale was created by the researchers for consistent standards. All measures were then evaluated using confirmatory factor analysis. Confirmatory factor analysis provides a construct reliability score for each construct, and all of these met acceptable standards, as can be seen in Table 3 (Hair et al., 2006). Construct validity was also assessed, including convergent and discriminant validity, to ensure the measures were appropriate for further analysis. Once construct validity was established, the hypotheses tests were evaluated using structural equations modeling as depicted in Figure 1. See Appendix for a listing of all measured used.

Consistent Standards

These items were developed by the researchers who brainstormed items to fit the definition of consistent standards as presented in the business literature. The items were specifically tailored for a university student sample. As recommended by Anderson and Gerbing (1991), the items were pre-tested in a sorting task which included the procedural justice items to ensure the substantive validity of both constructs. The sorting task was distributed to six subject matter experts. One item in the consistent standards scale and one item in the procedural justice scale had a substantive - validity coefficient (c_{sv}) less than 1.0. These results demonstrated that these items did not capture the domain of interest for this research, and they were removed.

Locus of Control

The internal locus of control items were adapted from those contained in Hock (1999), as used by Drake et al. (2007).

Procedural Justice

The procedural justice items were adapted from McFarlin and Sweeney's (1992) scale. The items were re-worded to reflect a university environment as opposed to a work environment. One item was deleted based on the results of the Anderson and Gerbing (1991) pretest used to develop the scale for consistent standards described above.

Perceived Learning

Seven items were adapted from Marks et al. (2005) original ten items. The items were re-worded to reflect a classroom environment. Three items related only to online courses were not used.

Organizational Commitment

Seven items were adapted from the shortened form of the Organizational Commitment Questionnaire (OCQ) (Mowday et al., 1982), which originally included nine items. The items were re-worded to reflect a university environment as opposed to a work environment. Items which did not apply to a university environment were not used.

Structural Model Estimations and Hypotheses Tests

We estimate the structural path coefficients described in Figure 1 using structural equation modeling. In accordance with the method described by Hair et al. (2006) we first estimate a measurement model using the data and evaluate it for adequate fit and construct validity of the measures. After adequate fit has been determined, we estimate the structural model and evaluate the hypotheses tests.

DATA ANALYSIS AND RESULTS

One hundred and forty-four undergraduate accounting and finance students at a public southeastern university in the United States completed the survey. Five responses were eliminated due to missing data within the survey items used to conduct the structural model, resulting in a sample size of 139 usable responses. Table 1 presents the sample characteristics, including gender make-up, age, and grade point average. Items which had missing data within the demographic information were not eliminated from the sample, rather the missing demographic data was replaced with the sample average.

Table 1
SAMPLE CHARACTERISTICS

Characteristic	N	Valid Percent
Gender:		
Male	80	58.82
Female	56	41.18
Missing Data	3	
Age in Years:		
Mean	22.01	
Median	21.00	
Standard Deviation	2.45	
Missing Data	1	
Ethnicity:		
Caucasian	99	71.74
African American	26	18.84
Asian	10	7.25
Hispanic	3	2.17
Missing Data	1	
Academic Major:		
Accounting	69	50.00
Finance	30	21.74
Business	30	21.74
Other	9	6.52
Missing Data	1	
Grade Point Average:		
Mean	3.09	
Median	3.00	
Standard Deviation	0.52	
Missing Data	2	
Attendance at University:		
Mean	2.79	
Median	2.75	
Standard Deviation	1.01	
Missing Data	2	

Demographic Information

Demographic information about the study is presented in Table 1. For applicable demographic data, the table displays the actual number of responses for individual categories and the percent of valid responses for each individual category. The valid percent measure represents the number of respondents who marked a particular category divided by all respondents for that category and is adjusted for missing responses. As Table 1 indicates, males and females were almost equally represented among the respondents, and the average age of participants was 22 years. The majority of subjects (72 percent) were Caucasian. On average, the students had attended the university 2.8 years. The mean self-reported grade-point average was 3.09. The survey was designed to capture perceptions of college students who experience a many-to-one performance appraisal environment in the form of grades from university professors, instructors, and teaching assistants. These students are used to identify determinants and consequences of procedural justice in this unique, many-to-one environment. In order to ensure the students did not compare standards across different disciplines or universities, but only within only a very small set of related classes, only students who were currently enrolled in accounting or finance students at one specific university were surveyed. The students were instructed to think only about three of the five specific introductory courses (listed above) they had taken at this specific university. The majority of the students was accounting or finance majors (72 percent), and the average attendance time at the university was 2.8 years.

Measurement Model

Of the 144 surveys completed, five had missing data for the measurement items and data for these participants were eliminated. Overall measurement quality was assessed using confirmatory factor analysis. See Table 2 for model summary statistics. Overall, the model appears to have a good fit. The χ^2 statistic is 344.26 with 242 degrees of freedom ($p<.001$). As noted by Hair et al. (2006), the χ^2 statistic is affected by sample size and number of indicator values. In models with this many observed variables (24) and observations (139), significant p-values can result even with good fit. Thus, Hair et al. (2006) recommend evaluating more than one goodness- of-fit measure. The CFI is .93 and the RMSEA is .06 for the measurement model, indicating an overall adequate fit.

Table 2
MODELS SUMMARY STATISTICS

	Measurement Model	**Structural Model**
Chi-square	344.26	368.34
Degrees of freedom	242	248
Probability level	.00	.00
CFI	0.93	0.91
RMSEA	0.06	0.06

Regarding construct validity of the measures, 23 of 24 standardized factor loadings exceed 0.5, and all are significant at $p < 0.01$. Standardized factor loadings, construct reliability estimates, and variance-extracted estimates are shown in Table 3. All variance-extracted estimates are greater than the corresponding interconstruct squared correlation estimates, providing evidence of appropriate discriminant validity (see Table 4). Finally, all standardized residuals were less than $|4.0|$, a recommended benchmark value that may indicate a problem with one of the measures (Hair et al., 2006). The measures generally appear appropriate for further analysis.

Table 3
STANDARDIZED MEASUREMENT COEFFICIENTS, VARIANCE EXTRACTED, AND RELIABILITY ESTIMATES

Construct					
Item Abbreviation	**Consistent Standards**	**ternal Locus of Control**	**Procedural Justice**	**Organizational Commitment**	**Perceived Learning**
CS1	0.49				
CS2	0.71				
CS3	0.72				
LOC1		0.59			
LOC2		0.72			
LOC3		0.64			
LOC4		0.74			
PJ1			0.71		
PJ2			0.68		
PJ2			0.78		
COM1				0.88	
COM2				0.71	
COM3				0.85	
COM4				0.78	
COM5				0.71	
COM6				0.57	
COM7				0.59	
PL1					0.72
PL2					0.79
PL3					0.82
PL4					0.69
PL5					0.76
PL6					0.68
PL7					0.60
Variance Extracted	41.72%	45.67%	52.63%	54.24%	52.50%
Construct Reliability	0.68	0.77	0.77	0.89	0.88

Structural Model Results

As noted in Table 2, the overall structural model exhibits good fit with a χ^2 statistic of 368.34 with 248 degrees of freedom ($p < 0.01$). The CFI is 0.91 and the RMSEA is 0.06, demonstrating a generally good fit (Hair et al., 2006). See Figure 2 for the standardized parameter estimates and Table 5 for a summary of the structural model results.

Table 4
CONSTRUCT CORRELATION MATRIX (STANDARDIZED)

	CS	**LOC**	**PJ**	**COM**	**PL**
Consistent Standards (CS)	1.00	*0.05*	*0.24*	*0.17*	*0.33*
Internal Locus of Control (LOC)	0.22	1.00	*0.06*	*0.02*	*0.02*
Procedural Justice (PJ)	0.49	0.24	1.00	*0.20*	*0.20*
Organizational Commitment (COM)	0.42	0.13	0.44	1.00	*0.17*
Perceived Learning (PL)	0.57	0.15	0.44	0.41	1.00

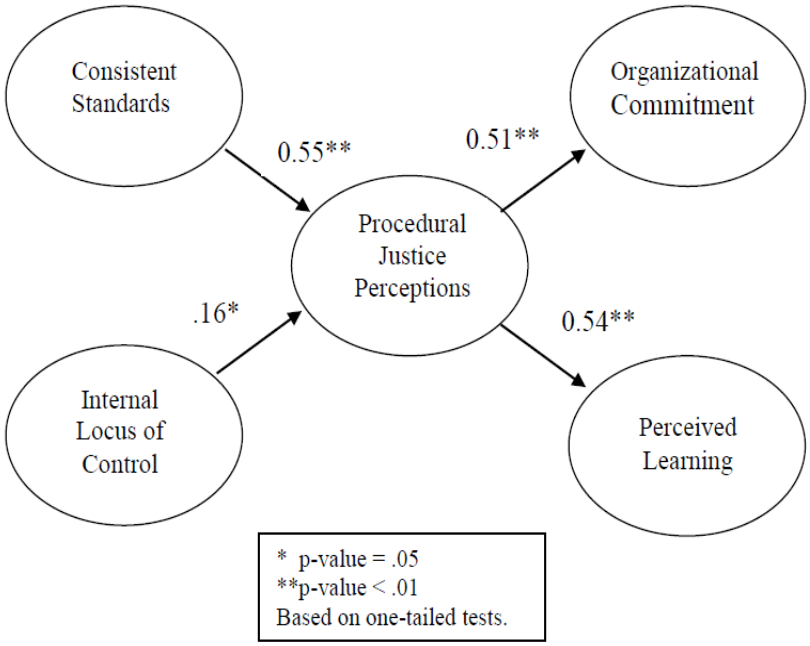
Note: Values below the diagonal are correlation estimates. Values in italics above the diagonal are squared correlations.

Hypothesis 1 is strongly supported, as the path estimate from consistent standards to procedural justice is positive and significant (0.56, $p < 0.01$). The path estimate from internal locus of control to procedural justice is positive and significant (0.16, $p = 0.05$), providing moderate support for H2. Both H3 and H4 are strongly supported, as the path estimates from procedural justice to organizational commitment and perceived learning are both positive and significant (0.51 and 0.54 respectively, both $p < 0.01$).

Table 5
STRUCTURAL MODEL RESULTS

Individual Path Coefficients	**Coeff.**	**S.E.**	**p-value**
CS → PJ	0.55	0.26	0.00
LOC → PJ	0.16	0.07	0.05
PJ → COM	0.51	0.15	0.00
PJ → PL	0.54	0.12	0.00

Figure 2
PATH ESTIMATES MODEL



DISCUSSION AND CONCLUSIONS

Overall, the results support the proposed model of antecedents and outcomes of procedural justice in the many-to-one performance appraisal environment. We contribute to the literature by developing and testing a scale to measure consistent standards among multiple evaluators. Consistent standards are strongly supported as a determinant of procedural justice in our structural model. Associate auditors experience a unique performance appraisal environment because they are regularly rotated between different audit teams and evaluated by different supervisors (Kaplan & Reckers, 1993). Previous research has demonstrated that there are many opportunities within the audit environment for these supervisors to impose different standards (Johnson et al., 1998; Gibbins & Trotman, 2002; Fuller & Kaplan, 2004). This study contributes to the accounting and management literature by demonstrating that consistent standards among supervisors are significantly related to procedural justice perceptions in the unique many-to-one performance appraisal environment.

We also theorized that an internal locus of control would be significantly related to procedural justice perceptions in the many-to-one audit environment. Audit research has demonstrated that internal locus of control is related to many positive outcomes such as lowered acceptance of dysfunctional behavior, lower levels of employee burnout, and higher levels of performance (Hyatt & Prawitt, 2001; Donnelly et al., 2003; Shapeero et al., 2003; Kalpers & Fogarty, 2005). Recent research in management has shown a direct link between internal locus of control and procedural justice perceptions (Lilly & Virick, 2006). However, our results provide only moderate support for this hypothesis. This could be due to a lack of statistical power or low variance in internal locus of control within our student sample. However,

future research investigating the role of individual characteristics in performance appraisal is important, as recent research indicates that it may be a more meaningful predictor of attitudes towards performance appraisal than are organizational practices (Gbadamosi & Ross, 2012). Perhaps measuring the broader concept of core self-evaluations could address this relationship more extensively.

We hypothesized two outcomes of procedural justice in the many-to-one performance appraisal environment: organizational commitment and perceived learning. Previous research in audit has demonstrated the link between organizational commitment and other important outcomes such as low turnover intentions, job satisfaction, and auditor performance (Ferris & Larcker, 1983; Law, 2005; Parker & Kohlmeyer, 2005; Lau & Moser, 2008; Lau et al., 2008). Our study extends the literature by demonstrating that procedural justice is strongly related to organizational commitment in the unique many-to-one audit environment.

We also found support for our hypothesis that procedural justice is related to perceived learning. While this is a new construct to accounting research, previous research in business and education has exhibited the link between organizational culture in the form of feedback and communication use and perceived learning (Hornick & Tupchiy, 2006; Lim & Morris, 2006). Given the importance of auditor on-the-job training (Libby & Luft, 2003), we contribute to accounting research by presenting evidence that procedural justice is related to perceived learning in the many-to-one performance appraisal environment.

The results of this study have implications for audit practitioners in this many-to-one environment. As consistent standards increase, perceptions of procedural justice also increase, which in turn are related to higher levels of organizational commitment and perceived learning. This suggests that audit firms can improve associate auditors' procedural justice perceptions by working to have consistent standards across audit in-charges and managers who are supervising audit engagements. Recent research in managerial accounting has noted that it is important for organizations to create and foster an impression of fairness within organizations, as it leads to enhanced employee job satisfaction and performance (Lau, 2015; Lau & Martin-Sardesai, 2012). Given the unique many-to-one performance appraisal environment, our findings suggest that upper firm management should encourage audit supervisors to use consistent standards across different types of client audit engagements. Higher procedural justice perceptions and subsequently higher levels of commitment and learning are vital to the audit firms, given the normally high turnover rate in large international firms (Law, 2005).

Our study has several limitations. First, we utilized a student sample, which could limit the generalizability of our findings. However, scholars have recently argued that student samples or other convenience samples can be appropriate for investigating behavior in organizations, especially when such investigations address theoretical generalizability, as the current study does (Highhouse & Gillespie, 2009). We structured our survey to reflect the aspect of multiple evaluators in a university environment, which is similar to the audit environment. Additionally, to the authors' knowledge, no previous studies have explored the many-to-one performance appraisal aspect of audit firms. Therefore we believe this student sample represents a good first step in this arena. The use of the student sample may also be a contributing factor to the weak findings regarding locus of control. As discussed previously, the weak findings regarding locus of control warrant further attention, perhaps with different scale or sample. A final limitation of this study is that the evidence for construct validity of the model could have been stronger. However, the metrics were acceptable (Hair et al., 2006), and not unacceptable for a first investigation of such topics.

There are many opportunities for further research in this area, primarily in terms of generalizing findings. An obvious extension is to survey lower-level auditors regarding their perceptions of the many-to-one performance appraisal environment. Additionally, experimental studies using accounting students could mimic the many-to-one system in a controlled setting and confirm our findings. Finally, once these findings have been confirmed via additional survey and experimental research, it would be interesting to match the many supervisor ratings of associate auditors with the associate's procedural justice perceptions, organizational commitment, and perceived learning.

Future research could also address constructs beyond those presented in the current study. For instance, recent research has emphasized the importance of all dimensions of justice (i.e., procedural, distributive, interpersonal, and informational justice) in the performance appraisal process (Palaiologos et al., 2010; Thurston & McNall, 2010). In conclusion, the current study provides an important first step in understanding the performance appraisal in the many-to-one environment.

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APPENDIX

A. Consistent Standards (developed by the researchers)
1. In my three courses, my professors had similar expectations of my ability in the classroom.
2. In my three courses, I had to participate in each class about the same amount in order to get a good grade.
3. In my three courses, my professors had similar numeric scales for what grade equaled an A, B, C, etc. *(Note that this item was removed from the final sample based pretesting results.)*
4. In my three courses. I had to complete about the same amount of work in each class to achieve an average grade.

B. *Internal Locus of Control* (items adapted from Hock [1999] as used by Drake et al. [2007])
1. Many of the unhappy things in people's lives are partly due to bad luck. (R)
2. Becoming a success is a matter of hard work; luck has little or nothing to do with it.
3. Most people don't realize the extent to which their lives are controlled by accidental happenings. (R)
4. There is really no such thing as "luck."

C. *Procedural Justice* (adapted from items contained in McFarlin and Sweeney [1992])
1. In my three classes, the procedures used to communicate the professors' expectations were fair.

Error! Bookmark not defined.
2. In my three classes, the procedures used to grade my tests were fair.
3. In my three classes, the procedures used to evaluate my class participation were fair.
4. In my three classes, the procedures used to grade my homework assignments were fair.

D. Perceived Learning (adapted from items contained in Marks [2005])
1. In my three classes, I learned to interrelate the important issues in the course materials.
2. In my three classes, I learned a great deal of factual material.
3. In my three classes, I gained a good understanding of the basic concepts of the materials in each class.
4. In my three classes, I learned to identify the central issues of the courses.
5. In my three classes, I developed the ability to communicate clearly about the subjects.
6. In my three classes, I improved my ability to integrate facts and develop generalizations from the course materials.
7. In my three classes, the quality of these classes compared favorably to my other business courses.

E. Organizational Commitment (adapted from items contained in Mowday et al. [1982])
1. I talk up this University to my friends as a great school to attend.
2. I find that my values and the University's values are very similar.
3. I am proud to tell others that I attend this University.
4. This University really inspires the very best in me in the way of performance in the classroom.
5. I am extremely glad I chose to attend this University over others I considered at the time I came here.
6. I really care about the fate of this University.
7. For me, this is the best of all possible Universities to attend.

Responses were obtained on a 5-point Likert-type scale where 1 = strongly disagree and 5 = strongly agree. (R) indicates reversed score.

THE EFFECTS OF CONFLICTING MESSAGES ON AUDIT ACCURACY AND EFFICIENCY

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ABSTRACT

In an increasingly competitive environment, auditors are faced with conflicting messages related to time pressure to finish an audit within an established time budget, while also ensuring a thorough and high quality audit. Most auditing firms have an official policy forbidding lower level auditors from underreporting the time (URT) they spend on an audit. However, middle level managers who are under pressure to meet strict time constraints often implicitly encourage their subordinates to URT to meet the pre-determined time budgets. This experimental study examines how different messages from the audit firm and its managers can have important effects on audit accuracy and efficiency. We find that the presence of conflicting messages results in lower accuracy on audit tasks than when subjects had only the message that firm policy forbade URT. However, such conflicting messages resulted in higher levels of audit efficiency than when subjects were given only the message that firm policy forbade URT. These results indicate the impact that different messages can have on alternative measures of audit performance.

INTRODUCTION

In today's marketplace, auditors face ever-increasing time pressure to ensure profitable audit engagements. Time pressure takes the form of deadlines and time budgets for specific audit areas (DeZoort & Lord, 1997; Bonner, 2008). This is especially true during economic downturns, which force audit firms to downsize personnel and reduce client engagement fees.

Oversight groups have long expressed concern that time pressure can cause auditors to engage in behaviors which compromise audit quality and ultimately lead to audit failure, and accounting research has noted that given the general acceptance of these behaviors, these concerns are justified (CAR, 1978; POB, 2000; Donnelly, Quirin, & O'Bryan, 2003). Dysfunctional audit behaviors include, but are not limited to, superficial review of client documents, failure to research an accounting principle, premature sign-off, and the underreporting of chargeable time (URT). URT occurs when the auditor does not report all the time spent working on a particular audit task.

Prior research has revealed that the vast majority of audit firms have formal policies forbidding URT, as URT leads to "unreliable time records and budgets, which are likely to lead to quality compromise in the long run" (Otley & Pierce, 1996, 79). Time budgets are used to plan and evaluate the performance of the audit team on each individual audit, and time budgets are normally created based on the number of hours recorded in the prior year's audit. When auditors engage in URT, time budgets are then artificially low for the next year's audit. Thus URT can lead to more severe behaviors in the future, such as premature signoff when auditors strive to meet artificially low budgets (Otley & Pierce, 1995).

Recent research has shown that audit managers, not audit partners, encourage entry-level auditors to engage in URT on engagements, creating "a subculture in public accounting that works counter to the interests of the firm. Such a subculture has the potential to leave engagement staff conflicted about appropriate conduct/behavior." (Agoglia, Hatfield, & Lambert, 2010, 19). This prior research highlights the fact that despite official firm policies prohibiting URT, it continues to be a recurring problem in today's audit environment.

The current study examines the effects of the conflicting messages between formal firm policies forbidding URT and implicit encouragement by audit managers to engage in URT on audit staff accuracy, efficiency, and actual URT. We theorize and find that these conflicting messages result in lower levels of accuracy, yet higher levels of efficiency. These results have important implications for audit practitioners.

Specifically, public accounting firms must carefully consider the overall effects of conflicting messages regarding URT, because while audit efficiency is increased, overall accuracy is decreased. The question remains as to how much auditing firms can sacrifice in terms of accuracy in the pursuit of increased efficiency and profit?

THEORY DEVELOPMENT AND HYPOTHESES

As mentioned above, auditors face ever-increasing time pressure to ensure profitable audit engagements, which takes the form of deadlines and time budgets for specific audit areas (Bonner, 2008). Prior research indicates that budget pressure is an accepted cultural aspect of auditing in public accounting firms (McDaniel, 1990; McNair, 1991; Otley & Pierce, 1996; Coram, Ng, & Woodliff, 2004; Bonner, 2008). Oversight groups have expressed concern that time pressure can cause auditors to engage in dysfunctional audit behaviors which compromise audit quality and possibly lead to audit failure (Rhode, 1978; POB, 2000). URT, which occurs when the auditor does not report all the time spent working on a particular task, is one such dysfunctional audit behavior.

Rhode (1978) was one of the earliest studies to identify URT as a dysfunctional audit behavior. Rhode surveyed 1,576 respondents from the AICPA membership database and found that approximately 47 percent of respondents said they had signed off an audit step without completing the work. In a follow-up question, the third-most cited reason for substandard audit performance was "time budget or fee pressure to retain clients" (425 responses). More than half of the participants also responded that they reacted to audit pressure by completing procedures on their own time without reporting the hours. Rhode (1978, 182) concluded his discussion of time pressure by stating, "The responses to objective questions dealing with substandard audit performance and the frequency of respondents alluding to time-budget pressure in many subjective responses, suggest that this [time pressure] is a significant cause of substandard audit performance." Further research supported and extended Rhode's work by discovering over half of all auditors surveyed engaged in URT and identified supervisors' requests as a significant variable which explained URT (Alderman & Deitrick, 1982; Lightner, Adams, & Lightner, 1982). These researchers noted that while URT can be viewed as a practical tool by accountants to appear productive and efficient, it can have detrimental outcomes on planning engagements and evaluating staff (Lightner, Leisenring, & Winters, 1983).

Margheim and Pany (1986) identified several antecedents of URT. They developed a case study which varied the reasons URT might occur: time pressure, quality control pressure, and materiality. The dependent variable was the expected mean of a probability distribution that

an assistant auditor would underreport between zero and seven hours of budget overrun. They found that the reason for time pressure significantly affected the mean number of hours reported: if the staff member in the case believed she had been inefficient, the case participants believed she was more likely to URT. In a related study using matching data from questionnaires distributed to seniors and staff, Kelley and Margheim (1990) found support for a statistical relationship between time budget pressure and URT in an inverted U-shape. In other words, very little dysfunctional behavior is likely to occur when there is either very little time budget pressure or the pressure is so extreme that URT would not result in meeting the audit budget anyway.

In a recent working paper presented at the American Accounting Association 2011 Audit Section Meeting, Agoglia, Hatfield and Lambert (2010) examined the acceptance of URT by audit managers who are evaluating staff. The authors used agency theory to assert that on an audit engagement, the manager acts as an agent for the audit partners (principals) of the firm. They hypothesized that managers would be more likely to request a senior who underreports on another engagement than a senior who reports accurately. Agoglia, Hatfield and Lambert (2010) constructed an experimental task where participants (100 practicing auditors, primarily managers and senior managers) were asked to assume the role of a manager on a simulated audit engagement. The managers were provided with background information on the client and information on the current year audit and engagement team. Agoglia, Hatfield and Lambert (2010) manipulated two variables, reporting accuracy and preference for the client. They found support for their prediction that *managers* were more likely to request staff that underreported time on a previous engagement. The authors conducted the experiment again with 119 partners, and consistent with their predictions, found that *partners* did not reward staff engaged in URT. Related research has also demonstrated that staff and senior level auditors are more likely to URT than managers or supervisors (Shapeero, Koh, & Killough, 2003).

Agoglia, Hatfield and Lambert (2010, 19) state that their findings indicate "a subculture in public accounting that works counter to the interests of the firm. Such a subculture has the potential to leave engagement staff conflicted about appropriate conduct/behavior." The results of this working paper highlight that despite official firm policies prohibiting URT, it continues to be a recurring problem in today's audit environment.

Conflicting Messages Regarding URT

In order to mitigate the effect of URT on audit quality, public accounting firms institute formal policies forbidding URT. Even given these formal policies, audit seniors have estimated they underreport as much as 12% of their total time spent on an audit, likely due to explicit or implicit pressure from managers (Otley & Pierce, 1995). Thus the current environment of conflicting messages within the audit firm exists: formal policies forbid the use of URT, yet managers provide explicit or implicit cues to entry-level auditors encouraging them to engage in URT (Otley & Pierce, 1996; Sweeney & Pierce, 2006; Sweeney & McGarry, 2011). Otley and Pierce (1996) developed regression models to explain URT, premature sign-off, and other audit quality reduction acts. The authors also conducted discussions with management of the firms, whereby they indicated that "each of the firms specifically prohibits underreporting, in recognition of the fact that it helps perpetuate unreliable time records and budgets, which are likely to lead to quality compromise in the long run" (Otley & Pierce, 1996, 79). However, the survey results from audit seniors showed that only 37% of respondents had never been requested

or encouraged by management to URT. Additionally, the survey results indicated that management encouragement of URT was more likely to be implicit encouragement as opposed to an explicit request.

Sweeney and Pierce (2006) performed a qualitative study in which they identified URT in terms of three different motivational influences: personal justification, external pressure, and instruction. The authors argued that personal justification URT could be considered beneficial to the firm, as it results when auditors did not report time due to inefficiency. External pressure adjustments occur when the auditors URT because they believe it will improve their performance ratings if they meet or beat the time budget. Instruction occurs when a supervisor, such as the manager, implicitly or explicitly encourages the senior to URT. Sweeney and Pierce (2006) state that both external pressure and instruction URT can be detrimental to the audit firm over time. External pressure can cause future audit quality issues as subsequent seniors might choose to use more direct dysfunctional audit behaviors (such as premature sign-off) to meet artificially deflated budgets. Instruction URT can lead to staff demotivation and higher turnover.

Recent research indicates that even though corporate scandals such as Enron and WorldCom have resulted in increased external importance placed by audit firms on audit quality, audit seniors do not perceive this as the primary internal goal of the firm (Sweeney & McGarry, 2011). Rather, seniors perceived the firms' primary internal goal to be profitability. Sweeney and McGarry (2011) suggest that this perception of audit partners and audit firms as revenue driven is likely to lead to further reduction in audit quality and possibly audit failures. They assert "further investigation is needed to understand how audit seniors are socialized into accepting a commercial orientation in audit firms" (Sweeney & McGarry, 2011, 317). Our examination of the effects of the conflict between firm policy forbidding URT and implicit manager encouragement to engage in URT contributes to this stream of research.

The Effect of Conflicting Messages on Auditor Performance

As discussed above, auditors are exposed to conflicting messages regarding URT which are (1) implicit pressure by managers to URT and (2) official firm policy forbidding URT. In their model of pressure effects, DeZoort and Lord (1997) identified time pressure as an organizational/environmental pressure which is common in accounting firms. They noted two different types of time pressure: pressure to complete audits by a certain date (time deadline pressure) and pressure to meet time budgets (time budget pressure). Implicit pressure by managers to URT is related to time budget pressure. DeZoort and Lord (1997) note that time budget pressure can have desirable and undesirable consequences. Desirable consequences include reducing the influence of irrelevant information on auditor judgment, and undesirable consequences include increased judgment instability.

Additional research examined the effect of time budget pressure on auditor behavior. McDaniel (1990) theorized that as time pressure increases, audit effectiveness would decrease, but audit efficiency would increase. The author's sample consisted of 179 staff auditors who participated in an experiment at a regional in- charge training school. The auditors' task was to complete a test of details regarding the audit assertions of valuation and completeness of inventory. Auditors were randomly assigned to one of four time pressure groups. The effectiveness variable measured the amount of errors planted in the test of details an auditor detected and proper selection of sample sizes based on professional standards. The efficiency score was calculated by dividing the effectiveness score by the amount of time spent

on the task.

McDaniel (1990) found support for her hypotheses that audit effectiveness decreased as time budget pressure increased, while audit efficiency increased.

Asare, Trompeter, and Wright (2000) extended McDaniel's (1990) research by examining the effects of accountability and time budgets on auditors' testing strategies. Specifically they were interested in the increases or decreases in the depth and breadth of testing strategies. A depth strategy is defined as additional tests to gather evidence about a previously tested hypothesis whereas a breadth strategy gathers evidence about other hypotheses. Consistent with prior research, the authors found that, under time budgets, auditors decreased the extent and depth of their testwork, but there was no effect on the breadth of testwork. In this study, accountability and time budgets were found to indirectly affect decision performance by influence testing strategies.

These previous studies indicate that time pressure can have mixed effects on auditor behavior. Time pressure was found to increase auditor efficiency, yet decrease auditor efficacy (i.e., successful identification of errors) as well as the extent and depth of testwork. The current study extends this prior research by specifically focusing on the effects of implicit manager pressure to URT, firm policy forbidding URT, and the conflict between these two messages on auditor accuracy and efficiency. This previous research suggests that auditors are likely to decrease accuracy on audit tasks when they are under implicit pressure from managers to URT.

Procedural Justice and Organizational Justice Theory

In order to predict the further effects of conflicting messages on auditor behavior, we examined organizational justice theory from psychology and management research. The theory of organizational justice emerged from Adam's (1963, 1965) equity theory. Equity theory argues that individuals determine the fairness of outcomes by comparing the fairness of their inputs (intelligence, skills, education, etc.) to those of their colleagues. If individuals perceive inequity between inputs and outcomes, equity theory posits that individuals will seek to reduce the inequity by adjusting inputs, outcomes, or by leaving the organization (Carrell & Dittrich, 1978). The understanding of equity theory first led to the identification and research regarding distributive justice, which represents the perceived fairness of outcomes. A second type of justice, procedural justice, was inferred by social psychologists who studied outcomes of court decisions and found that regardless of the outcome of the trial, defendants were more satisfied if they felt the trial procedure had been fair (Lind & Tyler, 1988).

Leventhal (1980, 34) specifically defined procedural justice as "an individual's perception of the fairness of procedural components of the social system that regulate the allocative process." Leventhal (1980) theorized that individuals use six justice rules to evaluate the fairness of procedures: (1) the consistency rule, (2) bias-suppression rule, (c) accuracy rule, (4) correctability rule, (5) representativeness rule, and (6) ethicality rule. Recently, management researchers have described the importance of procedural justice "as a fundamental organizational value" (Konovsky, 2000, 490), and meta-analyses have revealed that even after controlling for distributive justice, different manifestations of procedural justice were significant in organizational settings (Colquitt et al., 2001). Prior accounting research, primarily in managerial accounting, has identified several positive outcomes of procedural justice including job and budget satisfaction, organizational commitment, accountant whistleblowing, and better quality auditor-supervisor relationships (Lindquist, 1995; Siegel, Reinstein, & Miller, 2001; Wentzel, 2002; Staley et al., 2003; Parker & Kohlmeyer, 2005; Lau, Wong, & Eggleton,

2008; Burney, Henle, & Widener, 2009; Seifert et al., 2010; Miller, Siegel, & Reinstein, 2011).

Most relevant to this study, prior research has also found that higher procedural justice perceptions lead to higher levels of accountant performance (Fisher, Frederickson, & Peffer, 2002; Lau & Lim, 2002; Lau & Moser, 2008). The conflicting messages of firm policy and manager implicit pressure regarding URT violate the consistency rule of procedural justice as presented by Leventhal (1980). Given the research demonstrating that procedural justice perceptions generally lead to an increase in employee performance, we theorize that this violation of procedural justice will result in a decrease in auditors' accuracy on audit tasks. This leads to our first hypothesis regarding the relative accuracy of auditors under our three conditions: (1) a firm policy forbidding URT, (2) implicit pressure to URT, and (3) both a firm policy forbidding URT and implicit pressure to URT. Specifically, accuracy on audit tasks will decrease from 1 to 2 to 3, where audit accuracy is defined as the number of errors identified correctly. Stated more formally:

H1 Audit task accuracy will be highest with only a firm policy forbidding URT (i.e. no conflicting messages); lowest with a firm policy forbidding URT and manager pressure to URT (i.e. conflicting messages); and, between the extremes with only manager pressure to URT.

McDaniel (1990) found that auditors' efficiency increased in response to time budget pressure, even though efficacy (i.e., successful identification of errors) decreased. This suggests that auditors' efficiency is also likely to increase on audit tasks when they are under implicit time pressure from managers to URT. We again incorporate procedural justice theory to predict the nuanced effect of conflicting messages on auditors' efficiency. Given that previous research has shown procedural justice perceptions generally lead to an increase in employee performance we theorize that this violation of procedural justice will have a nuanced effect on auditors' efficiency on audit tasks as compared to conditions of firm policy or implicit pressure alone. In our context, efficiency is measured as the number of errors correctly discovered divided by the actual time taken. When there is only the firm policy forbidding URT, we predict that auditors will not feel as much time pressure as under the other two conditions. Thus, although accuracy will be higher, actual time taken will also be the greatest. Therefore, we expect that efficiency will be the lowest in this scenario. In contrast, when auditors are given an implicit message to URT, and no firm policy forbidding it, we expect efficiency to be significantly higher. Conflicting messages will likely result in efficiency falling somewhere in between. Stated formally:

H2 Audit task efficiency will be highest with only manager pressure to URT; lowest with only a firm policy forbidding URT; and, between the extremes with a firm policy forbidding URT and manager pressure to URT (i.e. conflicting messages).

Overall, we predict that differences in the messages received by auditors will have differing impacts on our two measures of audit performance – accuracy and efficiency.

The Effect of Conflicting Messages on Actual URT

McNair (1991) used an interpretive framework and data collected through interviews to explore the cost/quality dilemma inherent in the auditing environment. As noted: "Quality concerns push toward increasing levels of analyses (e.g. effort), while cost constraints initiate the search for effort-reducing techniques" (McNair, 1991, 638). Junior auditors are encouraged to perform thorough procedures and maximize audit quality yet to avoid reporting any budget overruns which will result in additional costs to the audit firm. The author argues that time budgets used to plan the audit and to evaluate the performance of the audit team, are a specific technical control tool which reflect these conflicting goals of quality and cost. Through evaluating prior research and responses from audit staff at all levels, McNair (1991) argues that auditors are gradually socialized to internalize the conflict between cost and quality by engaging in URT. URT allows auditors to complete all the appropriate audit steps, i.e., increase quality, and obtain rewards by meeting performance goals, i.e., minimize cost, but still avoid more severe dysfunctional audit behaviors such as premature audit signoff, superficial review and accepting weak client explanations.

McNair (1991) notes that more senior level auditors often justify URT by stating that they only charge the client for 100% efficiency and implying that time waiting for the client to provide appropriate documentation should not be charged. She notes that senior auditors are socialized into this "double bind" situation:

A double bind exists when an individual is faced with a "lose-lose" situation, namely the pressures of the control process force them to take actions which are prohibited by the system, yet the situation itself is undiscussable; discussing it would bring to light the inner contradictions of the control process (e.g. ambivalence). (McNair, 1991, 644)

The author states that if the acceptance of the double bind situation is gradual through a socialization process, junior members of the audit team are less likely to be accepting of the pressures to URT. McNair (1991, 647) notes through interviews that younger staff members appear to "enter the firm with a set of beliefs, instilled during the education process, that encourage truthful reporting and personal integrity," and that these younger auditors view the implicit encouragement to URT when waiting on client documentation as unfair.

Ponemon (1992) was the first researcher found to date who observed actual URT. He conducted a laboratory experiment, utilizing 88 staff-level auditors from a national public accounting firm as participants. In a between-subjects design, Ponemon administered his manipulations to a control group and to two experimental groups (time- budget and peer-pressure). All subjects were required to self-report their completion time (under conditions of no observable supervision). Ponemon (1992) observed actual completion for all subjects via a one-way window to the classroom not visible to the participants. He found that while both the time-budget and peer-pressure manipulations affected URT behavior, peer pressure had the most significant impact on URT.

Another recent 2x2 experimental study examined the effect of incentives and time reporting delays on URT. In a computerized experimental setting, Reffett, Eaton, and Gannod (2014) also captured actual URT by comparing subjects' self-reported time and the actual time provided by the computer. They provided incentives to URT whereby participants earned more lottery tickets the less time they self-reported on the task. The authors also introduced a time delay as one condition between when participants self-reported the time spent on the task.

Utilizing motivated reasoning theory, the authors predicted that individuals who are incentivized to underreport time will likely do so, and to a greater extent when there is a significant time reporting delay. Reffett, Eaton, and Gannod (2014) found that participants were more likely to URT when they reported time one week after task completion, but not when they reported time immediately after completing the task.

The current study explores the additional effects of implicit manager pressure to URT, formal firm policy forbidding URT, and the conflict of these two on actual URT. The prior results of experimental examinations of URT were tied specifically to peer pressure (Ponemon, 1992) and time delay (Reffett, Eaton, & Gannod, 2014), however, the current paper incorporates a new experimental aspect of conflicting messages from firm management. Thus we include a non-directional hypothesis for this variable but still predict there will be significant differences in URT between our conditions. Stated formally:

H3 URT will be significantly different between the three conditions of: 1) only a firm policy forbidding URT; 2) only manager pressure to URT; and, 3) firm policy forbidding URT and manager pressure to URT.

RESEARCH METHOD

Upper division undergraduate and graduate accounting students from several different universities participated in a laboratory experiment to test the hypotheses. The universities range in size from small private schools to large public universities. As most entry-level auditors are hired directly from undergraduate and masters accounting programs and may not yet be a CPA (Bennett & Hatfield, 2013), these students are good proxies for newly hired auditors in large public accounting firms.

Experimental Design

The computerized experiment was extensively pilot tested to develop the final design and inclusion of control variables. The results from the last pilot were included in the final experimental results, as there were only minor changes to control and demographic variables. Table 1 provides a summary of the experimental conditions and manipulations including financial payments. The experimental conditions are (1) explicit firm policy forbidding URT coupled with a financial penalty if statement errors are not found (2) the presence of implicit encouragement to URT along with financial penalties if errors are not found or the time budget is not met and (3) explicit firm policy forbidding URT, presence of implicit encourage to URT, and financial penalties if errors are not found or the time budget is not met. Participants are randomly assigned to one of the three conditions. The 1st condition, labeled in Table 1 as "FIRM POLICY ONLY" should induce participants to focus only on accurately performing the audit task, given that there is no implicit pressure to meet a time budget and subjects only face a financial penalty related to accuracy.

The 2nd condition, labeled "URT PRESSURE ONLY" includes implicit encouragement from the engagement manager to URT (i.e. meet the time budget) and with financial incentives to both report accurately and to complete the task within the given budget. There is no formal firm policy forbidding URT. Under this condition, we expect subjects to underreport time so as to meet the time budget and to work diligently to accurately identify errors.

Table 1
SUMMARY OF EXPERIMENTAL CONDITIONS

Each participant received an email from the audit manager and from the ABC Audit Firm Partners. In order to properly manipulate participants under the two conditions, participants were instructed that they would be paid between $5 and $10 based on accuracy and their reported time. (Though participants were instructed that they would be paid between $5 and $10 based on their performance, in actuality all participants were paid $10 at the end of the experiment.) They were instructed that $10 was their assumed payment and certain amounts would be deducted based on accuracy and their reported time (see descriptions below in each cell). Subjects in all conditions received the same time budget for the audit tasks.

		Email from Audit Manager: Implicit Pressure to URT	
		Absent	**Present**
Email from Partners: Formal Policy Forbidding URT	**Absent**	*Null cell—not tested*	**(URT PRESSURE ONLY)** Instructed that financial deductions for: Accuracy *($2.50 deducted if the check reveals the errors were not identified correctly)* & Reported time is less than or equal to the budgeted time *($2.50 deducted if reported time is greater than budgeted time)*
	Present	**(FIRM POLICY ONLY)** Instructed that financial deduction for: Accuracy *($5 deducted if the check reveals the errors were not identified correctly)*	**(CONFLICT)** Instructed that financial deductions for: Accuracy *($2.50 deducted if the check reveals the errors were not identified correctly)* & Reported time is less than or equal to the budgeted time *($2.50 deducted if reported time is greater than budgeted time)*

The 3rd condition, labeled "CONFLICT", includes mixed messages from the firm and the audit manager. The firm policy forbids URT, but there is implicit pressure to URT (i.e. meet the time budget) by the audit manager. In this cell we expect fewer subjects to URT, but instead simply use the time allotted to do the best they can on the audit task. Thus, time budgets are likely to be met, but accuracy may suffer as subjects may not put in the extra time needed to accurately identify all the errors.

The main dependent variables are "accuracy," "efficiency" and URT. Accuracy is calculated as the number of errors that were found by the subject, minus any "errors" that were wrongly identified. Efficiency is calculated by dividing accuracy by the actual amount of time spent on the task. URT is calculated as the actual amount of time spent on the task, minus the reported time spent on the task.

The experimental procedure consists of three main parts. First, participants respond to a pre-questionnaire consisting of items from Hurtt's (2010) Professional Skepticism scale. This scale, which measures professional skepticism as an internal trait, was used as a control variable. Second, the subjects participate in two auditing tasks playing the role of a new audit associate for the client, Brown Manufacturing. Finally, they answer a series of survey, debriefing and demographic questions.

After the participants complete the pre-questionnaire, the experiment portion begins. They read an introduction on the computer where they are informed that they are playing the role of a new audit associate at ABC Audit Firm. Participants are informed that they will be paid between $5 and $10 based on their performance during the audit tasks. For the FIRM POLICY ONLY condition, participants are instructed that they will receive the full $10 if a subsequent check of their work reveals that they correctly identify any and all errors if they exist. If the check reveals they did not identify all the errors, they are instructed their pay will be reduced by $5. For URT PRESSURE ONLY and CONFLICT, participants are instructed that they will receive the full $10 if a subsequent check of their work reveals that they correctly identify any and all errors if they exist and if their reported time spent on the task is less than or equal to the budgeted time for the task. If the check reveals they did not identify all the errors, they are instructed their pay will be reduced by $2.50. If their reported time is greater than the budgeted amount of time, they are instructed their pay will also be reduced by $2.50. The penalties were presented in this manner to strengthen the experimental manipulations. In actuality, all participants are paid $10 upon completing the task. The experiment is conducted at each school over one to two days and participants are instructed not to discuss their payment with any other students in order to maintain the integrity of the financial incentive manipulations.

After reading the introduction each participant receives an email from the Brown Manufacturing audit engagement manager Terry and an email from the ABC firm partners. These emails, which are shown in the Appendix, manipulate the environment and specifically introduce the audit task. The participants are instructed by Terry that their tasks are to re-perform the mathematical calculations for the balance sheet and income statement for Brown Manufacturing to ensure their accuracy. Participants are told that the schedules and statements should be free of any mathematical errors as the schedules have been prepared and checked by the client, but it is their job as the auditor to ensure the accuracy of the presentation of the financial statements and schedules. Participants in FIRM POLICY ONLY and CONFLICT receive a welcome email from the firm partners which includes a strong statement that firm policy forbids URT. Participants in URT PRESSURE ONLY simply receive a welcome email from the firm partners. Participants in URT PRESSURE ONLY and CONFLICT receive an email from the engagement manager Terry implicitly encouraging them to URT. Participants in FIRM POLICY ONLY simply receive a welcome email from the manager.

In all conditions, the manager's email instructs participants that the time budget is eight minutes for the income statement and ten minutes for the balance sheet. The recalculation tasks were pre-tested to calculate average completion times, which were 15 minutes (income

statement) and 20 minutes (balance sheet). By instructing the participants that the budgeted time for the recalculations is significantly less than the pre-tested times, the task simulates time pressure in the audit environment where work is usually expected to be completed in an unreasonably short period of time (Sweeney & Pierce, 2006). The participants are instructed to use the clock on the computer screen to keep track of their time to email Terry after completing the tasks.

After the initial instructions and emails are read, the computerized instrument provides a brief demonstration of how to recalculate the schedules and check radio buttons "correct" or "incorrect" for each total. The participants then complete the experimental tasks. Each financial statement is in a separate envelope, and the computer instructs the participants when to open each envelope, remove the hard-copy financial statement, and begin their recalculations. At the end of each task, the computer program provides the participants with a pre-written email to Terry in which the participants simply fill in the amount of time it took them to complete the task. The computerized instrument also tracks the actual amount of time it takes the participants to complete the task in order to calculate the amount of URT.

The third and final part of the experiment consists of manipulation/reading comprehension checks, survey items to measure participants' perceptions, debriefing questions, and demographic questions. Details regarding these items are contained in the data analysis and results section.

DATA ANALYSIS AND RESULTS

225 undergraduate and graduate accounting students at eight different universities completed the experimental instrument. Table 2 presents the sample characteristics, including gender make-up, age, GPA, and audit experience.

Manipulation Checks

Seven reading comprehension/manipulation checks were included at the end of the experimental instrument to ensure that participants understood and were influenced by the manipulation emails. Participants' responses to the manipulation checks in each experimental cell were reviewed separately. If a respondent answered two or more manipulation check questions incorrectly, that participant's response was deleted from the final data analysis. In total, four responses were deleted from the FIRM POLICY ONLY condition, one from URT PRESSURE ONLY, and four from CONFLICT, resulting in a sample size of 216 usable responses.

Demographic Information and Control Variable

Demographic information about the study participants is presented in Table 2. For applicable demographic data, the table displays the actual number of responses for individual categories and the percent of valid responses for each individual category. The valid percent measure represents the number of respondents who marked a particular category divided by all respondents for that category and is adjusted for missing responses.

As Table 2 indicates, males and females were almost equally represented among the respondents, and the average age of participants was 25.83 years. The majority of respondents (82.7 percent) were Caucasian and pursuing undergraduate degrees (74.0 percent). In addition,

most were accounting majors (97.7 percent). The mean self-reported grade point average was 3.37.

Table 2
SAMPLE CHARACTERISTICS

Characteristic	N	Valid Percent
Gender:		
Male	96	44.7
Female	119	55.3
Missing Data	1	
Age in Years:		
Mean	25.83	
Median	23.00	
Standard Deviation	7.11	
Ethnicity:		
Caucasian	177	82.7
African American	15	7.0
Hispanic	10	4.7
Asian	10	4.7
Other	2	0.9
Missing Data	2	
Degree Pursuing:		
Undergraduate	159	74.0
Graduate	56	26.0
Missing Data	1	
Academic Major:		
Accounting	211	97.7
Finance	3	1.4
Other	2	0.9
Grade Point Average:		
Mean	3.37	
Median	3.40	
Standard Deviation	0.42	
Missing Data	3	
Accounting Classes Completed:		
1-2	4	1.8
3-5	31	14.4
6-9	100	46.3
10 or more	81	37.5

Table 2 (continued) SAMPLE CHARACTERISTICS		
Characteristic	**N**	**Valid Percent**
Audit Firm Experience:		
None	184	86.8
1 year or less	21	9.9
1 to 3 years	6	2.8
Greater than 5 years	1	0.5

The experiment was designed to utilize upper division undergraduate and graduate accounting students as proxies for first year auditors in a large firm. In order to ensure the respondents fell into these categories, only students who had completed Intermediate Accounting I or the equivalent were solicited. The majority of respondents had completed at least three accounting classes (98.2 percent). In addition, demographic data related to previous audit firm experience was collected. As expected, the majority of participants (96.7 percent) had less than one year or no previous audit experience. We also measured professional skepticism using Hurtt's (2010) scale. Including this variable had no significant effect on the results reported below.

Dependent Variables – Descriptive Statistics

Table 3 presents the means, standard deviations and sample sizes for the dependent variables for each of the three experimental conditions. Recall that subjects performed the audit tasks (i.e. recalculating various totals) for both an income statement and a balance sheet. For each statement, subjects received a time budget, performed the recalculations, and then submitted an e-mail in which they reported the time they spent on the statement. The income statement was always given first, and to allow for potential learning effects given the complexity of the task, we calculate the dependent variables using only responses related to the balance sheet.

The balance sheet task had a time budget of ten minutes and contained a total of 17 errors. As shown in Table 3, the mean actual time spent completing the task varied from a low of 13.5 minutes under the URT PRESSURE ONLY condition to a high of 15.3 minutes under the FIRM POLICY ONLY condition. Similarly, the mean reported time was highest under the FIRM POLICY ONLY (14.4 minutes) and lowest under the URT PRESSURE ONLY condition (12.9 minutes). URT, which is measured as the actual time minus the reported time, was the highest on average under the FIRM POLICY ONLY condition (1.17 minutes) and lowest under the CONFLICT condition. It bears noting that URT values are only coded as 0 or greater, i.e., if participants over report their completion time, 0 was used rather than including a negative number. Table 3 also shows the averages for accuracy and efficiency. Accuracy is measured as the number of errors found (minus any errors that were falsely reported). On average, the most errors were found under the FIRM POLICY ONLY condition (14.76), while the fewest were found under the CONFLICT condition (13.94). Efficiency is calculated as “Accuracy” divided by the “Actual Time” taken to complete the Balance Sheet task. Efficiency was highest under URT PRESSURE ONLY (1.12) and lowest under FIRM POLICY ONLY (1.00).

Table 3
DESCRIPTIVE STATISTICS FOR DEPENDENT VARIABLES

Condition	Actual Time	Reported Time	URT	Accuracy	Efficiency
FIRM POLICY ONLY					
Mean	15.29	14.43	1.17	14.76	1.00
N	70	70	70	70	70
Std. Deviation	3.60	3.76	2.11	2.27	.22
URT PRESSURE ONLY					
Mean	13.53	12.86	1.00	14.32	1.12
N	76	76	76	76	76
Std. Deviation	3.21	3.92	1.65	2.05	.33
CONFLICT					
Mean	13.64	12.97	.84	13.94	1.08
N	70	70	70	70	70
Std. Deviation	3.33	3.41	1.42	2.51	.33
Total					
Mean	14.14	13.40	1.00	14.34	1.07
N	216	216	216	216	216
Std. Deviation	3.46	3.76	1.75	2.29	.31

Where:
Actual time = actual time in minutes taken to complete task
Reported time = reported time to complete task in minutes
URT = actual time minus reported time
Accuracy = Absolute number of errors found
Efficiency = Absolute number of errors found divided by actual time

Hypotheses Tests

Table 4 shows the ANOVA results for the dependent variables, while Table 5 contains Tukey test results for comparisons among the three experimental conditions. Recall that Hypothesis 1 related to predictions regarding the overall accuracy levels among the three conditions. Specifically, H1 predicts that accuracy will be highest under FIRM POLICY ONLY and lowest under CONFLICT, while the accuracy level under URT PRESSURE ONLY will fall between the extremes. The pattern of the means for accuracy shown in Table 3 is consistent with this prediction. The marginal significance of the ANOVA (F-statistic=2.246, p-value=.108) shown in Table 4 indicates that there may be significant differences between some conditions, but not others. To test H1, we conducted a Tukey analysis of our multiple groups. As shown in Table 5, the mean accuracy difference between FIRM POLICY ONLY and CONFLICT is significant at the .10 level (p-value = .089), providing partial support for H1. However, the mean accuracy level under the URT PRESSURE ONLY condition is not significantly different from either the FIRM POLICY ONLY (p-value = .472) condition or the CONFLICT condition (p-value=.584). Thus, we find only partial support for H1. Overall, with only the firm

policy forbidding URT, accuracy is significantly higher than when participants received conflicting messages regarding URT.

Table 4
ANOVA RESULTS

Dependent Variable		Sum of Squares	df	Mean Square	F	Sig.
Actual Time	**Between Groups**	138.465	2	69.233	6.058	.003
	Within Groups	2434.265	213	11.428		
	Total	2572.730	215			
Reported Time	**Between Groups**	109.465	2	54.732	3.981	.020
	Within Groups	2928.494	213	13.749		
	Total	3037.958	215			
URT	**Between Groups**	3.819	2	1.909	.624	.537
	Within Groups	652.058	213	3.061		
	Total	655.876	215			
Accuracy	**Between Groups**	23.265	2	11.632	2.246	.108
	Within Groups	1103.064	213	5.179		
	Total	1126.329	215			
Efficiency	**Between Groups**	.540	2	.270	2.937	.055
	Within Groups	19.600	213	.092		
	Total	20.140	215			

Hypothesis 2 related to efficiency levels among the three conditions. Specifically, H2 predicts that efficiency will be highest under URT PRESSURE ONLY and lowest under FIRM POLICY ONLY, while the efficiency level under CONFLICT will fall between the extremes. The pattern of the means for efficiency shown in Table 3 is consistent with this prediction. Again, the marginal significance of the ANOVA (F-statistic=2.937, p-value=.055) shown in Table 4 indicates that there may be significant differences between some conditions, but not others. To test H2, we conducted a Tukey analysis of our multiple groups. As shown in Table 5, the mean efficiency difference between FIRM POLICY ONLY and URT PRESSURE ONLY is significant (p-value = .047), providing partial support for H2. However, the mean efficiency level under the CONFLICT condition is not significantly different from either the FIRM POLICY ONLY (p-value = .249) condition or the URT PRESSURE ONLY condition (p- value=.733). Thus, we find only partial support for H2.

Overall, subjects were significantly more efficient when they received only implicit pressure to URT than when they were given only the firm policy forbidding URT.

Table 5
MULTIPLE GROUP (TUKEY) COMPARISON TESTS

Dependent	Group A	Group B	Mean Difference (A-B)	Std. Error	Sig.
Actual Time	0	1	1.76182	.56003	.005
		2	1.64923	.57143	.012
	1	0	-1.76182	.56003	.005
		2	-.11259	.56003	.978
Reported Time	0	1	1.573	.614	.030
		2	1.457	.627	.055
	1	0	-1.573	.614	.030
		2	-.116	.614	.980
URT	0	1	.16345	.28985	.839
		2	.33030	.29575	.505
	1	0	-.16345	.28985	.839
		2	.16685	.28985	.833
Accuracy	0	1	.44135	.37699	.472
		2	.81429*	.38466	.089
	1	0	-.44135	.37699	.472
		2	.37293	.37699	.584
Efficiency	0	1	-.11971	.05025	.047
		2	-.08196	.05127	.249
	1	0	.11971*	.05025	.047
		2	.03775	.05025	.733

Where:
Group 0 = FIRM POLICY ONLY
Group 1 = URT PRESSURE ONLY
Group 2 = CONFLICT

Hypothesis 3 relates to the issue of URT. The means for URT demonstrate the following pattern. The most URT occurred under FIRM POLICY ONLY, while the least occurred under CONFLICT. However, the ANOVA results shown in Table 4 are not even marginally significant (F-statistic = .624, p-value = .537), indicating that there may be no significant differences in URT among any of the groups. Tukey tests among the groups, shown in Table 5, confirm that there are no significant differences in URT between any two of the groups. Thus, we find no support for H3. Examination of URT revealed that the variable was significantly different than a normal distribution. Data transformations failed to result in a normal distribution. Nonparametric tests also failed to find significant differences.

SUMMARY AND CONCLUSIONS

Most auditors today face high time pressure in the form of deadlines and time budgets for specific audit areas (McDaniel, 1990; McNair, 1991; Otley & Pierce, 1996; Coram et al., 2004; Bonner, 2008). Additionally, while almost all audit firms have official policies prohibiting URT, prior research indicates that management provides explicit or implicit cues to entry-level auditors encouraging them to engage in URT (Otley & Pierce, 1996; Sweeney & Pierce, 2006).

Our study has several important contributions to this stream of research. Firstly, we examine this apparent conflict between policy and practice in an experimental setting. We provide evidence that these conflicting messages result in lower levels of accuracy, yet higher levels of efficiency. Also, to the best of our knowledge, only two prior studies capture actual URT in an experimental setting (Ponemon, 1992; Reffett, Eaton, & Gannod, 2014). Given the limited experimental manipulations in the previous studies, clear predictions about the directions and amount of URT in audit settings are difficult. Our study provides future researchers further information to study this aspect of the audit environment.

These results also raise significant questions for audit practitioners. Recent research has indicated that audit seniors continue to perceive audit partners and audit firms as revenue driven even though the espoused external goal of audit firms is audit quality (Sweeney & McGarry, 2011). Our research indicates that the conflict of firm policy and implicit pressure to URT results in increased audit efficiency yet decreased accuracy. In combination with a perceived internal emphasis on profitability, an overall decrease in accuracy could lead to further reductions in audit quality and possibly audit failures.

One limitation of this study is the use of students as proxies for entry-level auditors. Given that most new auditors at the larger firms are hired directly from undergraduate and masters accounting programs, the upper division undergraduate and graduate accounting students used in this study should serve as appropriate proxies for entry-level auditors in these firms (Bennett & Hatfield, 2013). However, there is always a possibility that actual entry-level auditor would respond differently to the experimental task and follow up questions than did the subjects in this study. This limitation may affect the external validity of the results.

A second limitation of this study is that selection bias may have occurred in those students who participated in the experiment outside of class. Even though participants were randomly assigned to each treatment group, it is likely that only students who were most interested in the research study chose to attend the experiment. This limitation may affect the internal validity of the results.

There is much room for future research regarding this study, as we find only partial support for our theory. We note that given the nuances involved in these conditions in an audit

firm, this is likely a reflection of low power and indicates that a larger sample would provide stronger results. Finally we note that the findings are based on one specific shortened audit task involving recalculation of financial statements. In attempting to generalize the results or complete a new study, a different audit task would be helpful in confirming the findings of this study.

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APPENDIX

Panel A: Emails from the ABC Audit Firm Partners

FIRM POLICY ONLY and CONFLICT

To all new associates:

Welcome to the ABC Audit Firm! You each have been assigned to an audit team and will receive a welcome email from your team manager. Please be sure to email your time worked on each task to your manager.

Our firm policy is that audit associates should report all time spent completing audit tasks, regardless of the time budget for the task. "Eating time," or not reporting all the time you worked on an audit task, is not acceptable. "Eating time" creates problems in subsequent years when constructing appropriate time budgets for audit engagements.

We will have a welcome reception this Friday afternoon in the main conference room at 5pm after your first week of work. We hope to see all of you there!

ABC Audit Firm Partners

URT PRESSURE ONLY

To all new associates:

Welcome to the ABC Audit Firm! You each have been assigned to an audit team and will receive a welcome email from your team manager. Please be sure to email your time worked on each task to your manager.

We will have a welcome reception this Friday afternoon in the main conference room at 5pm after your first week of work. We hope to see all of you there!

ABC Audit Firm Partners

Panel B: Emails from the audit manager Terry

FIRM POLICY ONLY

Welcome to the Brown Manufacturing audit team! My name is Terry, and I'm your audit manager. Your audit tasks today are to recalculate the totals on Brown Manufacturing's Income Statement and Balance Sheet. These statements should be correct, but it is our job to make sure there are no errors. It is very important that we perform a quality audit to reduce the risk of errors being published in the financial statements.

You will be evaluated and compensated on your ability to find any errors if they exist. The budgeted times are 8 minutes for the income statement and 10 minutes for the balance sheet recalculations. Please send me an email of your reported time after completing each task.

Terry
Brown Manufacturing Audit Engagement Manager
ABC Audit Firm

URT PRESSURE ONLY and CONFLICT

Welcome to the Brown Manufacturing audit team! My name is Terry, and I'm your audit manager. Your audit tasks today are to recalculate the totals on Brown Manufacturing's Income Statement and Balance Sheet. These statements should be correct, but it is our job to make sure there are no errors. It is very important that we perform a quality audit to reduce the risk of errors being published in the financial statements.

You will be paid based on your ability to find any errors if they exist, as well as your ability to complete the task in the budgeted amount of time. The budgeted times are 8 minutes for the income statement and 10 minutes for the balance sheet recalculations. Please send me an email of your reported time after completing each task.

It is very important that your reported time is less than or equal to the budgeted time for the task.

Terry
Brown Manufacturing Audit Engagement Manager
ABC Audit Firm.

STICKINESS OF FUNDRAISING AND ADMINISTRATIVE EXPENSES OF NONPROFIT ORGANIZATIONS

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ABSTRACT

The stickiness of nonprofit organization (NPO) fundraising and administrative expenses, the equivalent of selling, general and administrative (SG&A) expenses of companies, is estimated for some of the largest U.S. NPOs. Stickiness is the percent increase in an expense associated with a one percent increase in total revenues (or total expenses) in the prior year less the percent decrease in an expense associated with a one percent decrease in total revenues (or total expenses) in the prior year. This is the first paper to estimate the stickiness of NPO fundraising and administrative expenses. Results show that administrative expenses and fundraising expenses are very sticky. A one percent increase in total expenses is associated with a 0.36% increase in administrative expenses, but a one percent decrease in total expenses is associated with only a 0.12% decrease in administrative expenses. A one percent increase in total expenses is associated with a 0.46% increase in fundraising expenses, but a one percent decrease in total expenses is associated with only a 0.01% decrease in fundraising expenses. NPO expenses appear to be much stickier than SG&A expenses of companies.

INTRODUCTION

Stickiness of an expense is the percent increase in the expense associated with a one percent increase in total revenues (or total expenses) in the prior year less the percent decrease in an expense associated with a one percent decrease in total revenues (or total expenses) in the prior year. Numerous papers find that selling, general, and administrative (SG&A) expenses of firms are sticky (e.g., Anderson et al., 2003, Calleja et al., 2006, He et al., 2010, Chen at al., 2012). Bradbury and Scott (2014) find that expenses of local governments in New Zealand are sticky. However, no prior paper estimates the stickiness of nonprofit organization (NPO) expenses.

The current paper extends the managerial accounting literature and the literature on NPOs by providing evidence on the stickiness of NPO fundraising and administrative expenses using relatively recent data on some of the largest U.S. NPOs. Estimating the extent to which NPO expenses are sticky provides insight into how NPOs respond to cuts and increases in total expenses and revenues. Furthermore, unlike companies, NPOs report fundraising expenses (roughly equivalent to selling expenses of companies) separately from administrative expenses (roughly equivalent to general and administrative expenses of companies). Therefore, this paper also estimates the stickiness of NPO "selling" expenses separately from "general and administrative" expenses. Although, how NPOs adjust expenses in response to changes in revenue or expenses may differ from how companies adjust expenses, evidence on the stickiness

of NPO fundraising expenses provides at least a hint of how companies might manage selling expenses in response to increases or decreases in revenues.

LITERATURE REVIEW

Anderson et al. (2003), the seminal paper on stickiness of expenses, develops a methodology for testing stickiness. They find that sales, general, and administrative expenses (SG&A) of U.S. companies are sticky: SG&A increases by .55% when revenues increase by one percent but decreases only by .35% when revenues decrease by one percent. i.e., stickiness is 0.20%. Calleja et al. (2006) find that operating costs of U.S., UK, French and German companies are sticky, but much less so than what Anderson et al. (2003) find for their sample of U.S. companies. They report stickiness of only .05% for U.S. firms, and .02%, .09%, and .09% for UK, German, and French companies, respectively. They also find that firm-specific and industry-specific characteristics impact stickiness. He et al. (2010) estimate the stickiness of SG&A of Japanese companies to be .14%. They also find capital intensiveness of firms and general economic growth positively associated with stickiness and declines in revenue in the preceding year negatively associated with stickiness. Chen et al. (2012) estimate stickiness of SG&A of U.S. companies to be .04%, which is closer to the estimates of Calleja et al. (2006). They also find that asset intensity significantly increases stickiness and successive decreases in revenues reduce stickiness. Furthermore, they test proxies for the "agency problem", finding stickiness strongly and positively related to the agency problem. Dalla Via and Perego (2013) find mixed evidence on cost stickiness for small and medium-sized Italian companies. They examine the stickiness of different cost components and find that stickiness prevailed for total labor costs, but not for SG&A, cost of goods sold, or operating costs. Bradbury and Scott (2014) is the only paper that tests changes in expenses associated with changes in total revenues (or total expenses) for entities other than companies. They estimate the stickiness of expenses of local governments in New Zealand to be .40%, a degree of stickiness much higher than that of companies. They also find that asset intensity does not have a significant effect on stickiness but a decrease in revenue of the prior year does reduce stickiness significantly.

DATA

The data tested are from the NonProfit Times 100 for 2003-12. This is a list, published annually by the NonProfit Times, of the 100 U.S. non-education NPOs receiving the most total revenues, at least ten percent of which is from donations. These data are used because the quality of this data is relatively high; the data are compiled and reviewed by Grant Thornton, a major international accounting firm, and the financial statements of all NPOs in the sample are subject to an independent audit. In addition, the largest NPOs are more likely than small NPOs to have significant fundraising and administrative expenses.

Because the model requires lagged values of some variables, only NPOs for which there is data three years in a row can be used. The lists for 2003-2012 report some NPO data as "not available", and some NPOs are not on the list three years in a row. Therefore, from a possible 800 observations (10 years less 2 years of lagged data times 100), 644 are available. Relevant descriptive statistics are indicated in Table 1.

METHODOLOGY

Following Anderson et al. (2003) and others, the following model is tested to identify whether administrative expenses and fundraising expenses (combined) and the NPO expenses equivalent to SG&A of corporations are sticky. OLS corrected for heteroscedasticity is used. Multi-collinearity is not an issue since there is only one independent variable. Cook's distance test indicates three influential outlier observations, which are removed from the sample tested.

$$\ln((ADMIN_t + FREXP_t) / (ADMIN_{t-1} + FREXP_{t-1})) = \alpha + \beta_1 * \ln(TREV_t / TREV_{t-1}) + \beta_2 * DUM1_t * \ln(TREV_t / TREV_{t-1}) + u_t \quad (1)$$

where ADMIN is administrative expenses, FREXP is fundraising expenses, TREV is total revenues, DUM1 is a dummy variable that equals 1 when $TREV_t$ is less than $TREV_{t-1}$ and 0 otherwise, and u is the error term.

β_1 is interpreted as the percentage change in combined administrative and fundraising expenses associated with a one percent increase in total revenue. The percentage change in combined fundraising and administrative expenses associated with a one percent decrease in total revenue is $\beta_1 + \beta_2$. Therefore, the stickiness of combined fundraising plus administrative expenses is $\beta_1 - (\beta_1 + \beta_2) = - \beta_2$.

Following Anderson et al. (2003) and others, whether the change in revenue in the preceding year affects the stickiness of expenses in the current year, is tested using the following model. Condition indices show no significant collinearity among the independent variables, and Cook's distance test indicates four influential outlier observations, which are removed from the sample tested.

$$\ln((ADMIN_t + FREXP_t) / (ADMIN_{t-1} + FREXP_{t-1})) = \alpha + \beta_1 * \ln(TREV_t / TREV_{t-1}) + \beta_2 * DUM1t * \ln(TREVt / TREVt\text{-}1) + \beta_3 * \ln(TREV_{t-1} / TREV_{t-2}) + \beta_4 * DUM2_{t-1} * \ln(TREV_{t-1} / TREV_{t-2}) + u_t \quad (2)$$

where all variables are the same as in equation (1) above, and DUM2 is a dummy variable that equals 1 when $TREV_{t-1}$ is less than $TREV_{t-2}$ and 0 otherwise.

β_1 is interpreted as the percentage change in combined administrative and fundraising expenses associated with a one percent increase in total revenue. The percentage change in combined fundraising and administrative expenses associated with a one percent decrease in total revenue is $\beta_1 + \beta_2$. Therefore, the stickiness of combined fundraising plus administrative expenses is $\beta_1 - (\beta_1 + \beta_2) = - \beta_2$. Furthermore, the effect on stickiness of combined fundraising and administrative expenses from changes in total revenues in the preceding year is $\beta_3 - (\beta_3 + \beta_4) = - \beta_4$.

Jones et al., (2013) find that many NPOs save most of their marginal revenue, which weakens the relation between changes in expenses and changes in revenue. Therefore, equations (1) and (2) are tested substituting total expenses for total revenues, as shown in equations (3) and (4). For both models, Cook's distance test indicates four influential outlier observations, which are removed from the sample tested. Condition indices show that collinearity is not significant for equation (4).

$$\ln((ADMIN_t + FREXP_t) / (ADMIN_{t-1} + FREXP_{t-1})) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + u_t \quad (3)$$

where ADMIN is administrative expenses, FREXP is fundraising expense, TEXP is total expenses, DUM1 is a dummy variable that equals 1 when $TEXP_t$ is less than $TEXP_{t-1}$ and 0 otherwise, and u is the error term.

$$\ln((ADMIN_t + FREXP_t) / (ADMIN_{t-1} + FREXP_{t-1})) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + \beta_3 * \ln(TEXP_{t-1} / TEXP_{t-2}) + \beta_4 * DUM2_{t-1} * \ln(TEXP_{t-1} / TEXP_{t-2}) + u_t \quad (4)$$

where all variables are the same as in equation (3) above and DUM2 is a dummy variable that equals 1 when $TEXP_{t-1}$ is less than $TEXP_{t-2}$ and 0 otherwise

Since NPOs report fundraising expenses separate from administrative expenses, one can also test the stickiness of each of these expenses, by using only administrative expenses as the dependent variable, and then only fundraising expenses as the dependent variable, as shown in equations (5) through (8). For all of these models, Cook's distance test indicates four influential outlier observations, which are removed from the sample tested. Condition indices show that collinearity is not significant for equations (6) or (8).

$$\ln(ADMIN_t / ADMIN_{t-1}) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + u_t \quad (5)$$

$$\ln(ADMIN_t / ADMIN_{t-1}) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + \beta_3 * \ln(TEXP_{t-1} / TEXP_{t-2}) + \beta_4 * DUM2_{t-1} * \ln(TEXP_{t-1} / TEXP_{t-2}) + u_t \quad (6)$$

and

$$\ln(FREXP_t / FREXP_{t-1}) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + u_t \quad (7)$$

$$\ln(FREXP_t / FREXP_{t-1}) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + \beta_3 * \ln(TEXP_{t-1} / TEXP_{t-2}) + \beta_4 * DUM2_{t-1} * \ln(TEXP_{t-1} / TEXP_{t-2}) + u_t \quad (8)$$

Equations (5) through (8) were also tested using total revenues in place of total expenses, but none of the coefficients were significantly different from zero, so results are not reported.

RESULTS

Table 1 presents summary statistics for firms in the sample.

Table 1
DESCRIPTIVE STATISTICS
Table 1 presents summary statistics for firms in the sample. The sample includes all 100 in. TREV is total revenues, TEXP is total expenses, FREXP is fundraising expenses, ADMIN is administrative expenses. All numbers are in thousands of dollars except where otherwise indicated.

Variables	Mean	Standard Deviation
TREV	610,051	919,353
TEXP	565,695	869,452
FREXP	28,482	43,289
ADMIN	48,631	104,189
FREXP/TEXP	6.5%	5.9%
ADMIN/TEXP	7.7%	5.3%

As indicated in Table 2, results from testing equations (1) and (2), in which the independent variable is the change in total revenues, show no significant coefficients. This is consistent with the assertion of Jones et al. (2013), who find that many NPOs save most marginal revenue, which weakens the relation between changes in expenses and changes in total revenues.

Results from testing equation (3), in which the independent variable is the change in total expenses, show that combined fundraising and administrative expenses are very sticky. The coefficient β_1 is significantly positive, .31, and β_2 is significantly negative, -.28. This indicates that a one percent increase in total expenses from the prior year is associated with a .31 percent increase in combined fundraising and administrative expenses, but a one percent decrease in total expenses is associated with only a .03 percent decrease in combined fundraising and administrative expenses.

Results from testing equation (4), in which the lagged change in total expenses is included, shows similar results for the stickiness of fundraising and administrative expenses, combined. The coefficients on β_3 and β_4 are not significant, indicating that changes in total expenses from $year_{t-2}$ to $year_{t-1}$, and in particular, decreases in total expenses from $year_{t-2}$ to $year_{t-1}$, do not have an effect on the stickiness of expenses in year t. These results differ from results for companies, where a decrease in total revenues from $year_{t-2}$ to $year_{t-1}$ is found to have a significant dampening effect on the stickiness of expenses in year t (He et al., 2010). The reasoning for this is that companies are more likely to perceive two years of declining revenues to be less temporary than just one year of declining revenue, and therefore, reduce SG&A expenses more (making them less sticky) after two years of declining revenues. NPOs do not exhibit this behavior. This suggests that NPOs are as reluctant to cut fundraising and administrative costs when faced with cuts in total expenses two years in succession as they are when faced with a decrease in total expenses following a year of increases in total expenses.

Results from testing equation (5), in which the dependent variable is the change in administrative expenses alone, show that administrative expenses are sticky. The coefficient β_1 is significantly positive, .36, and β_2 is significantly negative, -.24. This indicates that a one percent increase in total expenses from the prior year is associated with a .36 percent increase in administrative expenses, but a one percent decrease in total expenses from the prior year is

associated with only a .12 percent decrease in administrative expenses. Interestingly, administrative expenses are not as sticky as combined fundraising and administrative expenses. Similar to the results for combined fundraising and administrative expenses, results from testing equation (6) show that lagged change in total expenses does not significantly impact the stickiness of administrative expenses; coefficients β_3 and β_4 are not significant.

Results from testing equation (7), in which the dependent variable is the change in fundraising expenses alone, show that fundraising expenses are extremely sticky. The coefficient β_1 is significantly positive, .46, and β_2 is significantly negative, -.45. This indicates that a one percent increase in total expenses from the prior year is associated with a .46 percent increase in fundraising expenses, but a one percent decrease in total expenses from the prior year is associated with only a .01 percent decrease in fundraising expenses. This suggests that fundraising expenses are so sticky that fundraising expenses barely decrease when total expenses decrease. This is the first test in the literature of how "selling" expenses behave when total expenses decrease. Fundraising expenses increase when total expenses decrease implies that NPOs are very reluctant to cut fundraising expenses. This could be because NPOs recognize that cutting fundraising expenses could decrease future revenues, principally donations.

Results from testing equation (8) shows that lagged total expenses do not have a significant effect on the stickiness of fundraising expenses; coefficients β_3 and β_4 are not significant.

Table 2
RESULTS FROM TESTING THE FOLLOWING MODELS

(1) $\ln((ADMIN_t + FREXP_t) / (ADMIN_{t-1} + FREXP_{t-1})) = \alpha + \beta_1 * \ln(TREV_t / TREV_{t-1}) + \beta_2 * DUM1_t * \ln(TREV_t / TREV_{t-1}) + u_t$

(2) $\ln((ADMIN_t + FREXP_t) / (ADMIN_{t-1} + FREXP_{t-1})) = \alpha + \beta_1 * \ln(TREV_t / TREV_{t-1}) + \beta_2 * DUM1_t * \ln(TREV_t / TREV_{t-1}) + \beta_3 * \ln(TREV_{t-1} / TREV_{t-2}) + \beta_4 * DUM2_{t-1} * \ln(TREV_{t-1} / TREV_{t-2}) + u_t$

(3) $\ln((ADMIN_t + FREXP_t) / (ADMIN_{t-1} + FREXP_{t-1})) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + u_t$

(4) $\ln((ADMIN_t + FREXP_t) / (ADMIN_{t-1} + FREXP_{t-1})) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + \beta_3 * \ln(TEXP_{t-1} / TEXP_{t-2}) + \beta_4 * DUM2_{t-1} * \ln(TEXP_{t-1} / TEXP_{t-2}) + u_t$

(5) $\ln(ADMIN_t / ADMIN_{t-1}) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + u_t$

(6) $\ln(ADMIN_t / ADMIN_{t-1}) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + \beta_3 * \ln(TEXP_{t-1} / TEXP_{t-2}) + \beta_4 * DUM2_{t-1} * \ln(TEXP_{t-1} / TEXP_{t-2}) + u_t$

(7) $\ln(FREXP_t / FREXP_{t-1}) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + u_t$

(8) $\ln(FREXP_t / FREXP_{t-1}) = \alpha + \beta_1 * \ln(TEXP_t / TEXP_{t-1}) + \beta_2 * DUM1_t * \ln(TEXP_t / TEXP_{t-1}) + \beta_3 * \ln(TEXP_{t-1} / TEXP_{t-2}) + \beta_4 * DUM2 * \ln(TEXP_{t-1} / TEXP_{t-2}) + u_t$

Equations	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
β_0	45*** (4.3)	42*** (6.2)	28*** (3.1)	25*** (2.4)	34*** (3.2)	32*** (2.8)	.009 (.7)	.008 (.6)
β_1	.073 (1.1)	.097 (1.5)	14*** (4.4)	96*** (4.1)	60*** (4.4)	88*** (4.9)	60*** (5.8)	20*** (4.9)
β_2	-.073	-.088	-.281**	-.245**	-.238**	-.267**	-.449***	-.394**
	(-.7)	(-.8)	(-2.7)	(-2.3)	(-2.0)	(-2.2)	(-3.5)	(-2.9)
β3		.047 (.8)		.020 (.4)		-.007 (-.1)		.033 (.7)
β4		.059 (.6)		-.150 (-1.6)		.073 (.6)		-.133 (-1.0)
R-squared	.00	.00	.03	.03	.04	.05	.05	.05

t-statistics are in parentheses
*** significant at the .01 level or better
**significant at the .05 level
*significant at the .10 level
ADMIN is administrative expenses, FREXP is fundraising expenses, TREV is total revenues, TEXP is total expenses, DUM1 is a dummy variable that equals 1 when $TREV_t$ (or $TEXP_t$) is less than $TREV_{t-1}$ (or $TEXP_{t-1}$) and 0 otherwise, DUM2 is a dummy variable that equals 1 when $TREV_{t-1}$ (or $TEXP_{t-1}$) is less than $TREV_{t-2}$ (or $TEXP_{t-2}$) and 0 otherwise, u is the error term.

DISCUSSION AND CONCLUSIONS

This is the first paper to examine the stickiness of NPO expenses, specifically administrative and fundraising expenses. Combined administrative expenses and fundraising expenses are found to have stickiness of .28%. This is greater than the .20% estimate for SG&A of U.S. companies by Anderson et al. (2003) but less than the .40% stickiness of New Zealand local government expenses reported by Bradbury and Scott (2014). Fundraising expenses are substantially stickier (0.45%) than administrative expenses, so much so that decreases in total expenses are associated with virtually no decrease in fundraising expenses. This may be because NPOs recognize that decreasing fundraising expenses may affect future revenues, especially for NPOs dependent on donations. Since fundraising expenses are roughly the equivalent of selling expenses of companies, this is indirect evidence that selling expenses of companies may be stickier than general and administrative expenses of companies.

This paper also finds that, unlike for companies, decreases in NPO total revenues or total expenses in $year_{t-2}$ to $year_{t-1}$ do not affect the stickiness of NPO expenses in $year_t$. This interestingly suggests that NPOs consider decreases in total expenses or total revenues from $year_{t-1}$ to $year_t$ no more or less permanent when following a decrease in total expenses or revenues from $year_{t-2}$ to $year_{t-1}$. Prior papers on the stickiness of SG&A expenses find that companies do consider decreases in total revenue from $year_{t-1}$ to $year_t$ more permanent when following a decrease in total revenues from $year_{t-2}$ to $year_{t-1}$, and decrease stickiness; that is, show larger percentage decreases in SG&A.

There are limitations of the current paper. Only the largest U.S. NPOs are tested, and the sample is somewhat biased against including observations in which total expenses or total revenues decrease from the prior year. This is because only the 100 non-education NPOs with the highest total revenues are included. Some organizations, low on the list in a given year, drop off the list for the next year and, therefore, are not included in the data. However, it is unclear how this would bias, if at all, the results for stickiness. Furthermore, since this is the first paper examining the stickiness of NPO expenses, testing factors, other than lagged changes in total expenses, found to impact stickiness are left to future papers. Additional research on the stickiness of NPO expenses could examine additional determinants of stickiness of company SG&A expenses in the NPO context, identify and test additional determinants unique to NPOs, examine stickiness of expenses of smaller NPOs, and examine the stickiness of educational NPOs, which are not included in the data used for the current paper.

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HOW DID EMERGING AND DEVELOPED MARKET NASDAQ - LISTED ADRS PERFORM IN THE 1990S AND 2000S?

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ABSTRACT

American Depository Receipts (ADRs) allow US investors to buy stock in foreign firms by allowing those firms to list their securities in US equity markets. ADR performance studies examine ADRs in a similar manner as initial public offerings (IPOs) by subtracting the returns of a US benchmark from the ADR returns to determine the excess returns of the ADR. The ability to invest in ADRs provides investors with flexible international diversification opportunities at the individual company level rather than by solely using foreign index funds.

In order to determine how well smaller firm ADRs performed versus small firms in the US, the returns of ADRs listed on the NASDAQ from 1990 through 2009 were compared to that of the NASDAQ index for both a short-term investment window and a long-term. The sample includes ADRs segmented by date of issue (1990s versus 2000s) and the level of development of the country where the issuing firm resides (emerging versus developed market issues).

Results indicate NASDAQ-listed ADRs from countries headquartered in emerging and developed regions performed relatively differently versus the NASDAQ index for the 1990s and 2000s decades. Short-term results suggest 1990s issues performed better than 2000s issues versus the index in the first month of trading after the listing date (driven mostly by the developed market issues). Long-term excess returns for the first 3 years of trading relative to the NASDAQ suggest the 2000s issues performed better than those listed in the 1990s (driven mostly by the emerging market ADRs).

INTRODUCTION

An American Depository Receipt (henceforth ADR) represents ownership in foreign shares that trade in US markets. The investment design allows for buying the foreign companies without the hassles of engaging in FOREX transactions or dealing with stock exchanges in other countries. Although investors may diversify internationally by purchasing mutual fund shares including exchange-traded funds, the ADR still allows for the picking and choosing of individual firms over others. Also, having the foreign firm's stock listed in the US makes investing in an ADR as easy as investing in a US firm.

Performance studies emphasize the returns of an investment relative to an appropriate benchmark. These gained popularity in the examining of IPOs and have remained useful in looking at ADRs. Some ADR studies give mixed results. For example, Callaghan, Kleiman and Sahu (1999), Foerster and Karolyi (2000), and Schaub (2003) differed in their conclusions about whether ADRs outperform or underperform the US benchmark. The inconsistent results were probably due to using different samples and different market benchmarks. Stock market timing affected the results as well (this is addressed in Schaub, 2004). However, evidence shows ADRs can provide beneficial diversification outcomes by outperforming a US index (especially in times when the US market is in correction) and reducing exchange rate risk as indicated by Officer and

Hoffmeister (1988), Jiang (1998), and Schaub (2004). Schaub and Brown (2015) confirms that ADR returns for large company firms listed on the New York Stock Exchange (NYSE) do not just simply mirror US or even regional index returns, indicating that ADRs retain usefulness in portfolio selection decisions.

Much of the mentioned ADR research provided relevant information when first published, but the results have become dated. Most sample periods stop in the 1990s or early 2000s, thus ignoring the rapid development of once emerging economies and the impact of increased informational efficiency provided by technological advancement. Also, these studies tend to only look at large firms or mix small and large firms together in the sample. As a result, the literature lacks a good long-term examination of predominantly small firm ADRs that includes more recent listings.

In addressing these issues, this study examines how all the ADRs listed on the NASDAQ from 1990 through 2010 performed in the short-term and long-term relative to the NASDAQ index (examining both short-term and long-term ADR performance addresses the differing holding periods desired by investors suggested by Schaub, 2015). This solves the short sample period problem by looking at 20 full years of ADR listings. It also solves the outdated sample problem by utilizing a much more recent sample. Finally this study solves the large firm only (or exclusively) problem by only including firms listing their ADRs on the NASDAQ (rather than the NYSE). Excess performance results are broken down by issue date, capturing the timing effect of listing ADRs during periods of stable US markets (1990s) versus volatile (2000s). The further segmenting of the results based on emerging versus developed issues will provide a better understanding as to whether diversification benefits vary based on where the listed firms are headquartered.

The study contains several more sections. A review of background and relevant literature emphasizing ADR performance studies is next, followed by the methodology section and another presenting the results. A final section concludes the study.

BACKGROUND

Large banks create ADRs by bundling shares of a foreign stock until its dollar translated value represents what US shares normally sell for. Once bundled, a receipt backed by the shares trades on US exchanges or in the over-the-counter market much like a domestic stock. Any cash dividends issued by the foreign firm are translated into US dollars before being passed along to the ADR owner. Foreign shares may be sold at the request of the foreign firm (called sponsored ADRs) or without the firm's involvement (called unsponsored ADRs). Because the underlying foreign shares of an ADR sell for the issuing firm's domestic currency, US investors encounter a degree of foreign exchange risk (there may be country risk involved as well). Studies have shown that ADRs have currency risk but also that this risk can largely be diversified away by investing in ADRs from different countries and regions. For currency risk literature based on ADR samples please see De Santis and Gerard (1998), Liang and Mougoue (1996), Karolyi (1998, 2004), Jiang (1998) and Phylaktis and Ravazzolo (2005).

Table 1
RESULTS OF ADR SHORT-TERM AND LONG-TERM RETURN ANALYSIS STUDIES

Study	Sample	Results
Callaghan et al. (1999)	66 ADRs from NYSE, AMEX, NASDAQ (1986-1993)	Outperformed US index on average by 5.3% on first day and 2.4% the first month in the short term; in the long term NYSE-listed ADRs outperformed the US index by nearly 20% and AMEX and NASDAQ outperformed by about 7.5% in the first year of trading
Foerster and Karolyi (2000)	333 ADRs from NYSE, AMEX, NASDAQ (1982-1996)	In the short-term, underperformed US index by 1.1% for first month; underperformed the Datastream index by 15% for first 36 months of trading in long term; both emerging and developed ADRs underperformed during the 3-year holding period
Schaub (2003)	179 NYSE ADRs (1987- mid 1998)	Outperformed US index by 1% the first month in the short term; in long-term the sample underperformed by over 19% for first 3 years, also emerging underperformed by 28% and developed underperformed by 11%
Schaub and Highfield (2006)	242 NYSE ADRs (1987-2000) 119 Emerging, 123 Developed 175 bull market issues, 67 bear market issues	In the long-term (3-year) Emerging market results all ADRs underperformed by over 12% but bull market ADRs underperformed by over 32% while bear market ADRs outperformed the US index by 38%; Developed market ADRs underperformed overall by 10% with bull and bear underperforming by 10.7% and 8.7% respectively
Schaub (2006)	100 NASDAQ ADRs (1985-2001); 19 emerging and 81 developed ADRs	Entire sample outperformed NASDAQ by 2.4% on first day and by 4.5% for first month; Emerging outperformed by 0.5% on first day and underperformed by 8.9% in first month; Developed outperformed by 2.9% on first day and by 7.6% for first month
Schaub (2007)	102 NASDAQ ADRs (1990-2002); 44 bull market ADRs, 58 bear market ADRs	In short term (1 month) full sample outperformed by 6.2%, emerging sample underperformed by 5.9% and developed sample outperformed index by 9.1%; in long term (3 years) full sample outperformed by 22%, emerging outperformed by 28% and developed outperformed by 21%; bull market ADRs underperformed by 15% while bear market ADRs outperformed the index by 51% on average
Bandopadhyaya et al. (2009)	ADR breakout of the S&P Global 700 (1998-2007); no specific number listed	Found that over the January 1998 to June 2007 period, an ADR portfolio consisting of ADRs taken from the S&P Global 700 outperformed the S&P500, but that the ADR portfolio underperformed the broader S&P Global 700 by 2.7%.
Kiymaz et al. (2009)	167 ADRs from 14 emerging and 17 developed markets (31 markets in total) for the period 2000–2004	Maximized returns from emerging markets' ADRs resulted in investment in small firms from countries that have low economic risk and expanding local market capitalization. This contrasts with maximized holding period return for developed markets' ADRs, which results from investing in firms that are smaller but from countries with low foreign-exchange volatility, a depreciating currency, and growing market capitalization.
Abuaf (2011)	72 ADRs from emerging markets of Brazil, China, Argentina, Chile, Mexico, Russia, Greece, Indonesia, Portugal, and Turkey for the period 2005-2010.	US dollar returns on emerging market ADRs highly dependent on returns of the S&P 500 and on the corresponding country's credit default swap (CDS) spreads.
Bhattacharjee and Reddy (2011)	9 Indian ADRs, also traded in Indian market, from the day of the first trading day in US market from 1999 – 2004.	Findings suggest the US market had more influence than Indian market on ADRs returns and premium levels of the Indian ADRs change over time in tandem with the changing levels of market indices. Inverse relationship exists between domestic market turnover and ADRs premiums.
Esqueda and Jackson (2012)	74 ADRs from Argentina, Brazil, Chile, and Mexico May 1994 to May 2009 analyzing behavior of ADR returns during the 300-day period surrounding currency crises in the originator's country.	Findings suggest ADRs generate significant negative abnormal returns during currency crises, due to translation exposure. Abnormal returns remain statistically significant even in crises triggered by miniscule currency depreciation. Show ADR prices determined primarily by the underlying stock, exchange rates, and host country index, in that order.
Liu and Wang (2013)	29 Eurozone-originated ADRs from Portugal, Ireland, Italy, Greece and Spain 2008 – 2012.	Found classification of PIIGS insignificant in determining the sensitively of ADR returns to home country index returns, U.S. index returns, and euro exchange rates, indicating that the Eurozone ADRS are priced similarly. Significant differences emerge after the start of the crisis. ADR investors apparently rely less on local factor and exchange rates for PIIGS countries than for non-PIIGS countries.
Schaub (2013a, 2013b)	193 Emerging NYSE ADRs, 113 listed in 1990s and 80 in 2000s 169 Developed NYSE ADRs, 101 listed in 1990s 68 in 2000s	In long term (36 months) Emerging ADRs outperformed index by 8.5% with 1990s issues underperforming by 18% and 2000s issues outperforming by 41%; Developed ADRs outperformed by 1.8% with 1990s issues underperforming by 9.9% and 2000s issues outperforming by 19.3%

For simplicity, Table 1 presents relevant literature covering this particular topic of interest. Previous studies, while emphasizing ADR performance versus a US index, tend to have shorter, and

now outdated, sample periods. Most of those listed in Table 1 have sample periods shorter than 10 or 15 years and may have been impacted overwhelmingly by severe short-term events (and even investor attitudes). This paper utilizes a sample consisting of all ADRs listed on the NASDAQ for a complete 20-year sample period to help reduce the large impacts of several major short-term events.

Another major problem surrounding previous ADR performance studies results from sample periods that do not go very far into the 21st century. Major technological changes starting in the late 1990s created more efficient information dissemination systems. As a result, more information is available to more people allowing them to make better investing choices in a timely manner. This study examines all NASDAQ ADRs listed in the first decade of the 21st century. This automatically incorporates the effects of these new efficient information processes in the performance results.

The studies from Table 1 also include those that emphasized only ADRs listed on the New York Stock Exchange (NYSE) or mixed ADRs listed on all exchanges together (NYSE, AMEX and NASDAQ). Some others only focus on certain countries and regions affected by specific short-term events. While mixing small and large firms together may provide relevant information, there have been periods in the US when, simultaneously, large firms were in a bull market and small firms were in a bear market (or vice versa). The NYSE-listed ADR studies have the large firm effects covered. This study similarly expands the literature of small firm ADR investing by only including NASDAQ-listed firms (many of these firms tend to be smaller and less well known than those listed on the NYSE). Although some NASDAQ-listed firms can be large, the majority of them are smaller firms. Using a NASDAQ-only sample serves to avoid mixing in too many large firms that tend to reduce the measurement of small firm investing effects and benefits.

Finally, this study deviates from past NASDAQ-listed ADR performance examinations by utilizing a sample period where the ability to list ADRs actually aided emerging countries in their development as suggested by Karolyi (2004). The Schaub (2006, 2007) studies of NASDAQ-listed ADRs included a much smaller sample of ADRs from emerging markets because the sample periods ended in 2001 and 2002 respectively. This study, by utilizing a sample period that ends in 2010, incorporates many more emerging market firms as shown in Table 2 (in the 1990s there were 10 emerging market NASDAQ-listed ADRs while in the 2000s there were 50).

Since some studies show ADRs provided investors with index-beating diversification benefits, the question arises as to whether those listed on the NASDAQ would also provide similar positive excess returns. The sample period of this study includes ADRs listed over a two-decade period (the last decade of the 20th century and the first decade of the 21st century). This provides an honest analysis of return behaviors over an extended listing period and includes more listings that are recent (and from emerging markets). Also, results segmented by both, decade of issue and emerging versus developed market ADRs, capture which, if any, NASDAQ- listed ADR portfolios provided US investors with early and long-term positive excess returns during times of US market stability (the 1990s) and volatility (the 2000s). The practical implications of this study will be whether NASDAQ-listed ADRs can aid the performance of a portfolio and whether the timing of the issues or the level of development of the issuing firms' countries has any effects on this performance that persist for an entire decade or more. Finally, these results can be compared to the Schaub (2013a, 2013b) studies that examined NYSE-listed ADR performance for the same sample period to determine whether the smaller firms on the NASDAQ performed similarly versus the US index as the larger firms.

DATA AND METHODOLOGY

This study examines the return behavior of NASDAQ-traded ADRs versus the performance of the NASDAQ index itself. The sample includes all foreign firms that listed on the NASDAQ from 1990 until the end of 2009 according to the NASDAQ website. This provides two decades worth of ADR listings.

In Table 2, the sample of NASDAQ-traded ADRs is broken down by date of listing and whether the ADR was headquartered in a country with an emerging economy or a developed one. As pointed out in Schaub (2013a, 2013b), the 1990s decade was characterized by stable growth while the 2000s decade incurred tremendous volatility in US equity markets (due to the bursting of the technology bubble, the terrorist attacks and then the bursting of the mortgage bubble). Analyzing excess performance one decade versus the other highlights whether ADRs provide true diversification benefits by doing well while the US market is in turmoil and may capture the added effects of better information availability.

Table 2
SAMPLE DESCRIPTION BY ECONOMIC DEVELOPMENT AND DATE

Development of Issue	Number of Observations	Date of Issue	
		1990s	2000s
Emerging	60	10	50
Developed	109	74	35
Totals	169	84	85

Table 2 shows that during the process of developing, there were far fewer firms from emerging economies listing their securities on the NASDAQ in the 1990s (10 ADRs) than in the 2000s (50 ADRs). The opposite is true for the developed issues. More than twice as many of these listed in the 1990s (74 ADRs) than the 2000s (35 ADRs). This shows an obvious difference in the samples based on economic development while, overall, the number of 1990s and 2000s issues is nearly the same (84 versus 85).

Schaub (2003) provides the standard methodology normally used for excess performance studies of IPOs and ADRs utilized in this study. Excess returns measure how an asset or portfolio of assets performs relative to an appropriate benchmark. For this study, the NASDAQ composite serves as the relevant benchmark to assess the performance of NASDAQ-listed ADRs.

Daily and monthly excess returns reflect the difference between the ADR return and the NASDAQ return each day for the first 21 days and each month for the first 36 months. This is shown in Equation 1 where the return of the respective market index for day/month t (r_{mt}) is subtracted from the return of the ADR for day/month t (r_{it}) to obtain the excess return for ADR i for day/month t (xr_{it}).

$$xr_{it} = r_{it} - r_{mt} \quad (1)$$

In Equation 2, the average excess return for the sample of ADRs for day/month t (XR_t) is calculated by dividing the sum of the excess returns by the number (n) of securities in the sample(s).

$$XR_t = \frac{1}{n}\sum_{i=1}^{n} xr_{it} \quad (2)$$

Average excess returns are then cumulated on a daily/monthly basis in Equation 3. Cumulative excess returns (CXR) as of day/month s is the sum of the average excess returns starting at day/month 1 until day/month s (where s ends at 21 days and 36 months).

$$CXR_{1,s} = \sum_{t=1}^{s} XR_t \quad (3)$$

Daily and monthly average excess returns and cumulative excess returns are tested to determine significance at an alpha level of .10. Reported P-values determine if results are significant.

RESULTS AND DISCUSSION

Tables 3 through 10 provide results of the study. The first four tables (3 through 6) show the short-term analysis while the remaining four tables (7 through 10) present the results of the long-term excess returns. Each table consists of three panels describing a different aspect of the sample dominating the table.

Table 3 shows the results for the entire sample and the 1990s and 2000s segments. In the first panel, the entire sample of NASDAQ-traded ADRs outperformed the NASDAQ index by 1.23 percent on average for the first day of trading. By the end of day 21 (the first month) the cumulative excess performance was 2.2 percent higher than the index. The second and third panels show that regardless of the decade of issue, the ADRs' average returns exceeded that of the NASDAQ by 1.4 percent in the 1990s and just over 1 percent for the 2000s sample on the initial day of trading. However, at the end of the first month of trading the ADRs listed in the 1990s had significantly outperformed the index by 5.78 percent while the 2000s issues underperformed on average by 1.3 percent.

In Table 4, the entire sample is broken down into specific ADR issues listed from emerging economies (2nd panel) versus developed economies (3rd panel). Results indicate the developed market ADRs significantly outperformed the NASDAQ on the first day of trading by nearly 2 percent on average while those from emerging economies performed roughly the same as the index (if not slightly worse). By the end of the first month of trading the emerging market ADRs underperformed the index by 1.5 percent while the developed market ADRs significantly exceeded the index by over 4 percent suggesting the developed market ADRs were better received in the short term trading overall than those from emerging economies.

Table 3
DAILY EARLY RETURN PERFORMANCE BEFORE AND AFTER JAN. 2000 FOR NASDAQ ADRS LISTED JANUARY 1990 THROUGH DECEMBER 2009

	Entire ADR Sample (Obs = 169)				ADRs Before Jan. 2000 (Obs = 84)				ADRs After Jan. 2000 (Obs = 85)			
Day	XR	p-value	CXR	p-value	XR	p-value	CXR	p-value	XR	p-value	CXR	p-value
D1	1.23%	0.14	1.23%	0.14	1.41%	0.17	1.41%	0.17	1.05%	0.28	1.05%	0.28
D2	-0.33%	0.29	0.90%	0.24	0.48%	0.28	1.89%	0.13	-1.13%	0.10	-0.08%	0.48
D3	0.00%	0.50	0.90%	0.25	-0.39%	0.21	1.50%	0.19	0.38%	0.27	0.30%	0.44
D4	-0.13%	0.37	0.77%	0.29	0.04%	0.47	1.55%	0.20	-0.29%	0.31	0.01%	0.50
D5	-0.55%	0.09	0.22%	0.44	0.09%	0.44	1.64%	0.19	-1.18%	0.02	-1.18%	0.30
D6	-0.47%	0.15	-0.25%	0.43	-0.55%	0.18	1.09%	0.29	-0.40%	0.28	-1.58%	0.25
D7	-0.45%	0.13	-0.70%	0.33	-0.75%	0.04	0.34%	0.43	-0.14%	0.41	-1.72%	0.24
D8	0.13%	0.36	-0.56%	0.36	0.14%	0.39	0.48%	0.41	0.12%	0.40	-1.60%	0.26
D9	-0.63%	0.01	-1.20%	0.23	-0.50%	0.09	-0.02%	0.50	-0.77%	0.04	-2.37%	0.17
D10	0.05%	0.45	-1.15%	0.25	0.39%	0.26	0.37%	0.43	-0.29%	0.27	-2.66%	0.15
D11	0.31%	0.31	-0.84%	0.32	1.35%	0.12	1.72%	0.25	-0.72%	0.09	-3.38%	0.10
D12	0.12%	0.38	-0.73%	0.35	0.87%	0.03	2.59%	0.15	-0.63%	0.14	-4.01%	0.07
D13	-0.18%	0.32	-0.91%	0.31	-0.17%	0.36	2.42%	0.17	-0.19%	0.37	-4.20%	0.06
D14	0.21%	0.33	-0.69%	0.36	0.33%	0.32	2.76%	0.15	0.09%	0.44	-4.11%	0.07
D15	-0.39%	0.09	-1.09%	0.29	0.00%	0.50	2.76%	0.15	-0.78%	0.04	-4.89%	0.04
D16	0.00%	0.50	-1.09%	0.29	-0.04%	0.46	2.72%	0.16	0.03%	0.48	-4.86%	0.05
D17	0.61%	0.06	-0.48%	0.41	0.61%	0.15	3.33%	0.12	0.60%	0.14	-4.25%	0.07
D18	1.77%	0.00	1.29%	0.27	1.87%	0.00	5.21%	0.03	1.67%	0.01	-2.58%	0.20
D19	0.52%	0.10	1.81%	0.20	0.89%	0.06	6.09%	0.02	0.16%	0.39	-2.43%	0.22
D20	-0.25%	0.25	1.55%	0.24	-0.42%	0.19	5.67%	0.03	-0.09%	0.44	-2.51%	0.21
D21	0.65%	0.04	2.21%	0.16	0.11%	0.41	5.78%	0.03	1.19%	0.02	-1.32%	0.34

The computation of average excess returns (XR) is described in equation 2 in the text and the computation of cumulative excess returns (CXR) is described in equation 3 in the text. P-values in bold italics represent returns that are significant at the 10% alpha level.

Table 4
DAILY RETURN PERFORMANCE FOR EMERGING AND DEVELOPED NASDAQ ADRS ISSUED FROM JANUARY 1990 THROUGH DECEMBER 2009

	Entire ADR Sample (Obs = 169)				Emerging Market ADRs (Obs = 60)				Developed Market ADRs (Obs = 109)			
Day	XR	p-value	CXR	p-value	XR	p-value	CXR	p-value	XR	p-value	CXR	p-value
D1	1.23%	0.14	1.23%	0.14	-0.13%	0.48	-0.13%	0.48	1.98%	0.06	1.98%	0.06
D2	-0.33%	0.29	0.90%	0.24	0.59%	0.31	0.46%	0.43	-0.84%	0.11	1.14%	0.22
D3	0.00%	0.50	0.90%	0.25	0.80%	0.16	1.26%	0.32	-0.44%	0.15	0.70%	0.32
D4	-0.13%	0.37	0.77%	0.29	-0.30%	0.34	0.96%	0.36	-0.03%	0.48	0.67%	0.34
D5	-0.55%	0.09	0.22%	0.44	-1.62%	0.00	-0.67%	0.41	0.04%	0.47	0.71%	0.33
D6	-0.47%	0.15	-0.25%	0.43	-0.52%	0.21	-1.19%	0.34	-0.45%	0.23	0.27%	0.44
D7	-0.45%	0.13	-0.70%	0.33	-0.01%	0.49	-1.20%	0.34	-0.69%	0.10	-0.42%	0.41
D8	0.13%	0.36	-0.56%	0.36	-0.58%	0.16	-1.78%	0.28	0.53%	0.12	0.10%	0.48
D9	-0.63%	0.01	-1.20%	0.23	-1.23%	0.01	-3.01%	0.16	-0.30%	0.17	-0.20%	0.46
D10	0.05%	0.45	-1.15%	0.25	0.17%	0.39	-2.84%	0.18	-0.02%	0.48	-0.22%	0.46
D11	0.31%	0.31	-0.84%	0.32	-0.61%	0.13	-3.45%	0.14	0.81%	0.19	0.59%	0.39
D12	0.12%	0.38	-0.73%	0.35	-0.35%	0.25	-3.80%	0.12	0.37%	0.23	0.96%	0.33
D13	-0.18%	0.32	-0.91%	0.31	-0.15%	0.39	-3.96%	0.11	-0.19%	0.35	0.77%	0.37
D14	0.21%	0.33	-0.69%	0.36	-0.52%	0.22	-4.48%	0.09	0.62%	0.17	1.39%	0.28
D15	-0.39%	0.09	-1.09%	0.29	-1.11%	0.01	-5.58%	0.05	0.00%	0.50	1.39%	0.28
D16	0.00%	0.50	-1.09%	0.29	0.81%	0.10	-4.77%	0.08	-0.45%	0.10	0.94%	0.35
D17	0.61%	0.06	-0.48%	0.41	1.09%	0.07	-3.68%	0.15	0.34%	0.23	1.28%	0.30
D18	1.77%	0.00	1.29%	0.27	1.89%	0.00	-1.79%	0.31	1.71%	0.00	2.98%	0.12
D19	0.52%	0.10	1.81%	0.20	0.43%	0.23	-1.36%	0.35	0.57%	0.15	3.55%	0.09
D20	-0.25%	0.25	1.55%	0.24	-0.53%	0.19	-1.89%	0.30	-0.10%	0.42	3.45%	0.10
D21	0.65%	0.04	2.21%	0.16	0.38%	0.29	-1.51%	0.34	0.81%	0.03	4.26%	0.06

The computation of average excess returns (XR) is described in equation 2 in the text and the computation of cumulative excess returns (CXR) is described in equation 3 in the text. P-values in bold italics represent returns that are significant at the 10% alpha level.

Comparing the results from Table 4 to Schaub (2006, 2007) reveals that expanding the time period for the sample and including more recent issues stabilized the short-term results. In those studies the one day performance was 2.4 percent more than the US index (emerging outperformed by 0.5 percent and developed outperformed by 2.9 percent). Also, the one-month excess returns were over 6 percent compared to 2.2 percent here and the emerging market underperformance was nearly 9 percent versus 1.5 percent here. Adding the extra emerging market ADRs listed in the 2000s shows those newer issues performed better as those economies became more and more developed (it brought the total average underperformance down by over 7 percent for the first month of trading).

Tables 5 and 6 break the emerging economy ADRs and developed economy ADRs down by the decade of issue to capture any differences in performance during stable versus volatile US market conditions. The emerging market ADRs excess returns on average exceeded the NASDAQ by 0.66 percent on the first day of trading and by just over 2 percent by the end of the first month for the issues listed in the 1990s. By contrast, those listed in the 2000s underperformed slightly on the first day and returned 2.2 percent less on average than the index by the end of the first month of trading. This suggests emerging market ADRs listed during the 1990s were better received in the short term (although there were only 10 issues during that decade). Perhaps the early success of those listed in the 1990s paved the way for the many more firms listed in the 2000s; however, some of those from the 2000s obviously were not received quite as well.

Table 5
DAILY RETURN PERFORMANCE OF EMERGING NASDAQ ADRS LISTED BEFORE AND AFTER JAN. 2000

	Entire EMG ADR Sample (Obs = 60)				ADRs Before Jan. 2000 (Obs = 10)				ADRs After Jan. 2000 (Obs = 50)			
Day	XR	p-value	CXR	p-value	XR	p-value	CXR	p-value	XR	p-value	CXR	p-value
D1	-0.13%	0.48	-0.13%	0.48	0.66%	0.43	0.66%	0.43	-0.29%	0.46	-0.29%	0.46
D2	0.59%	0.31	0.46%	0.43	2.94%	0.22	3.60%	0.25	0.12%	0.46	-0.17%	0.48
D3	0.80%	0.16	1.26%	0.32	-0.98%	0.29	2.62%	0.32	1.16%	0.10	0.99%	0.37
D4	-0.30%	0.34	0.96%	0.36	-1.75%	0.17	0.87%	0.44	-0.01%	0.49	0.98%	0.38
D5	-1.62%	0.00	-0.67%	0.41	0.20%	0.40	1.08%	0.43	-1.99%	0.00	-1.01%	0.37
D6	-0.52%	0.21	-1.19%	0.34	-0.69%	0.20	0.39%	0.47	-0.49%	0.26	-1.50%	0.32
D7	-0.01%	0.49	-1.20%	0.34	-0.77%	0.06	-0.38%	0.47	0.14%	0.41	-1.36%	0.34
D8	-0.58%	0.16	-1.78%	0.28	0.41%	0.34	0.03%	0.50	-0.77%	0.13	-2.14%	0.26
D9	-1.23%	0.01	-3.01%	0.16	0.01%	0.50	0.04%	0.50	-1.48%	0.01	-3.62%	0.15
D10	0.17%	0.39	-2.84%	0.18	1.89%	0.11	1.93%	0.38	-0.17%	0.40	-3.79%	0.14
D11	-0.61%	0.13	-3.45%	0.14	0.67%	0.32	2.60%	0.34	-0.87%	0.07	-4.66%	0.09
D12	-0.35%	0.25	-3.80%	0.12	-0.48%	0.34	2.12%	0.37	-0.33%	0.29	-4.99%	0.08
D13	-0.15%	0.39	-3.96%	0.11	-1.76%	0.06	0.36%	0.48	0.17%	0.39	-4.82%	0.09
D14	-0.52%	0.22	-4.48%	0.09	0.32%	0.27	0.68%	0.46	-0.69%	0.20	-5.51%	0.07
D15	-1.11%	0.01	-5.58%	0.05	-1.33%	0.03	-0.65%	0.46	-1.06%	0.03	-6.57%	0.04
D16	0.81%	0.10	-4.77%	0.08	0.08%	0.47	-0.58%	0.47	0.96%	0.10	-5.61%	0.07
D17	1.09%	0.07	-3.68%	0.15	2.06%	0.17	1.48%	0.42	0.89%	0.13	-4.72%	0.12
D18	1.89%	0.00	-1.79%	0.31	0.57%	0.38	2.06%	0.39	2.15%	0.00	-2.56%	0.26
D19	0.43%	0.23	-1.36%	0.35	1.08%	0.21	3.14%	0.34	0.30%	0.32	-2.26%	0.29
D20	-0.53%	0.19	-1.89%	0.30	0.49%	0.25	3.63%	0.31	-0.73%	0.15	-2.99%	0.23
D21	0.38%	0.29	-1.51%	0.34	-1.56%	0.24	2.06%	0.40	0.76%	0.14	-2.23%	0.30

The computation of average excess returns (XR) is described in equation 2 in the text and the computation of cumulative excess returns (CXR) is described in equation 3 in the text. P-values in bold italics represent returns that are significant at the 10% alpha level.

Results presented in Table 6 show the developed market ADRs listed in the 2000s significantly exceeded the NASDAQ index by nearly 3 percent on average in the first day of trading while those listed in the 1990s exceeded the NASDAQ by a lesser margin (1.5 percent on average). In either decade the developed market ADRs performed well on the first day.

By the end of the first month however the 2000s issues negligibly underperformed while those listed in the 1990s exceeded the index by over 6 percent on average. The combined results of Tables 5 and 6 may suggest NASDAQ-traded ADRs provided better early performance in the 1990s.

The remaining tables provide long-run excess return results for the ADR samples. In Tables 7 through 10, the excess return results are presented on a month-by-month basis for 3 full years. The cumulated returns shown on the right side of the monthly returns indicate how an investor's total return versus the US index changed over time throughout the three-year holding period of the ADRs starting with the day each was listed.

Table 6
DAILY RETURN PERFORMANCE OF DEVELOPED NASDAQ ADRS LISTED BEFORE AND AFTER JAN. 2000

	Entire DEV ADR Sample (Obs = 109)				ADRs Before Jan. 2000 (Obs = 74)				ADRs After Jan. 2000 (Obs = 35)			
Day	XR	p-value	CXR	p-value	XR	p-value	CXR	p-value	XR	p-value	CXR	p-value
D1	1.98%	0.06	1.98%	0.06	1.51%	0.17	1.51%	0.17	2.96%	0.08	2.96%	0.08
D2	-0.84%	0.11	1.14%	0.22	0.15%	0.42	1.66%	0.17	-2.93%	0.01	0.03%	0.49
D3	-0.44%	0.15	0.70%	0.32	-0.31%	0.27	1.35%	0.23	-0.72%	0.20	-0.69%	0.40
D4	-0.03%	0.48	0.67%	0.34	0.29%	0.30	1.64%	0.19	-0.69%	0.21	-1.38%	0.31
D5	0.04%	0.47	0.71%	0.33	0.08%	0.45	1.71%	0.20	-0.03%	0.49	-1.41%	0.32
D6	-0.45%	0.23	0.27%	0.44	-0.53%	0.22	1.18%	0.29	-0.27%	0.41	-1.68%	0.30
D7	-0.69%	0.10	-0.42%	0.41	-0.75%	0.07	0.44%	0.42	-0.55%	0.34	-2.23%	0.26
D8	0.53%	0.12	0.10%	0.48	0.11%	0.43	0.54%	0.40	1.41%	0.02	-0.82%	0.41
D9	-0.30%	0.17	-0.20%	0.46	-0.57%	0.06	-0.02%	0.50	0.25%	0.34	-0.57%	0.44
D10	-0.02%	0.48	-0.22%	0.46	0.19%	0.39	0.16%	0.47	-0.46%	0.24	-1.03%	0.39
D11	0.81%	0.19	0.59%	0.39	1.44%	0.13	1.60%	0.28	-0.51%	0.31	-1.54%	0.34
D12	0.37%	0.23	0.96%	0.33	1.05%	0.02	2.66%	0.17	-1.07%	0.17	-2.62%	0.25
D13	-0.19%	0.35	0.77%	0.37	0.05%	0.47	2.70%	0.17	-0.70%	0.26	-3.32%	0.21
D14	0.62%	0.17	1.39%	0.28	0.34%	0.34	3.04%	0.15	1.21%	0.13	-2.10%	0.31
D15	0.00%	0.50	1.39%	0.28	0.18%	0.33	3.22%	0.14	-0.38%	0.30	-2.49%	0.28
D16	-0.45%	0.10	0.94%	0.35	-0.05%	0.44	3.17%	0.14	-1.30%	0.05	-3.79%	0.19
D17	0.34%	0.23	1.28%	0.30	0.41%	0.24	3.58%	0.12	0.19%	0.40	-3.59%	0.21
D18	1.71%	0.00	2.98%	0.12	2.05%	0.00	5.63%	0.03	0.98%	0.26	-2.61%	0.29
D19	0.57%	0.15	3.55%	0.09	0.86%	0.09	6.49%	0.02	-0.05%	0.48	-2.66%	0.29
D20	-0.10%	0.42	3.45%	0.10	-0.54%	0.16	5.95%	0.03	0.83%	0.20	-1.83%	0.35
D21	0.81%	0.03	4.26%	0.06	0.34%	0.22	6.28%	0.03	1.80%	0.02	-0.02%	0.50

The computation of average excess returns (XR) is described in equation 2 in the text and the computation of cumulative excess returns (CXR) is described in equation 3 in the text. P-values in bold italics represent returns that are significant at the 10% alpha level.

Table 7 breaks the entire sample into 1990s and 2000s issues. Overall the sample significantly outperformed the index by 2.7 percent on average in the first month. These results were driven by the 1990s issues that exceeded the index by 6.9 percent on average as opposed to the 2000s issues that underperformed by 1.4 percent on average. By the end of the first 36 months of trading however, the entire sample exceeded the NASDAQ by 10 percent on average. The 2000s issues drove this result in that they exceeded the NASDAQ by nearly 25 percent on average as opposed to the 1990s issues that underperformed by 4.6 percent.

These overall results differ drastically from those shown in Schaub (2007). In that study the NASDAQ-listed ADRs outperformed the US index by 22 percent for the first three years of trading while this sample only outperformed by 10 percent. Obviously the sample period makes a big difference in determining how well these ADRs perform. The Schaub (2007) sample only went through 2002 and did not include 67 new ADRs listed in the 2000s decade.

Table 8 provides the breakdown of the sample into emerging and developed market ADR listings. In the first month of trading the emerging market ADRs underperformed by 2 percent on average while the developed ADRs significantly exceeded the index by over 5 percent on average. However, after holding the ADRs for 36 months, the emerging market ADRs had exceeded the index by nearly 22 percent on average versus the 4 percent for developed market ADRs. In

essence, the developed market ADRs seemed a better investment in the short-term while the emerging market ADRs did much better in the long-term. Compared to Schaub (2007) the emerging market ADRs did not perform much differently (28 percent versus 22 percent here) while the developed market ADRs did (21 percent versus 4 percent here).

Table 7
LONG-TERM RETURN PERFORMANCE BY MONTH FOR ADRS LISTED ON THE NASDAQ (JANUARY 1990 – DECEMBER 2009)[A]

	Entire ADR Sample (169 Observations)				ADRs Issued Before January 1, 2000 (84 Observations)				ADRs Issued After January 1, 2000 (85 Observations)			
Month	XR	P-value	CXR	P-value	XR	P-value	CXR	P-value	XR	P-value	CXR	P-value
+ 1	2.73%	0.09	2.73%	0.09	6.91%	0.01	6.91%	0.01	-1.41%	0.30	-1.41%	0.30
+ 2	-0.29%	0.44	2.44%	0.19	1.31%	0.36	8.22%	0.04	-1.87%	0.12	-3.28%	0.15
+ 3	3.31%	0.02	5.74%	0.04	5.22%	0.02	13.44%	0.01	1.42%	0.24	-1.86%	0.31
+ 4	-0.67%	0.35	5.07%	0.09	-0.51%	0.43	12.93%	0.02	-0.82%	0.36	-2.69%	0.27
+ 5	-0.21%	0.45	4.86%	0.11	-1.10%	0.28	11.83%	0.03	0.67%	0.40	-2.02%	0.34
+ 6	-2.71%	0.03	2.15%	0.31	-3.23%	0.08	8.59%	0.10	-2.18%	0.11	-4.21%	0.22
+ 7	0.28%	0.43	2.43%	0.30	-0.90%	0.33	7.69%	0.14	1.44%	0.26	-2.77%	0.32
+ 8	-2.15%	0.09	0.28%	0.48	-4.75%	0.01	2.95%	0.34	0.42%	0.43	-2.35%	0.35
+ 9	-1.42%	0.16	-1.13%	0.41	-0.45%	0.42	2.50%	0.37	-2.38%	0.09	-4.72%	0.24
+10	1.00%	0.21	-0.13%	0.49	0.39%	0.42	2.89%	0.36	1.61%	0.17	-3.11%	0.32
+11	-1.91%	0.07	-2.04%	0.35	-3.54%	0.03	-0.65%	0.47	-0.30%	0.44	-3.40%	0.31
+12	-2.26%	0.08	-4.30%	0.22	-5.06%	0.00	-5.71%	0.25	0.50%	0.43	-2.90%	0.35
+13	-2.07%	0.04	-6.36%	0.13	-0.61%	0.34	-6.32%	0.23	-3.50%	0.03	-6.40%	0.20
+14	0.54%	0.34	-5.82%	0.16	-0.63%	0.36	-6.95%	0.21	1.70%	0.20	-4.70%	0.28
+15	-2.16%	0.04	-7.98%	0.09	0.43%	0.41	-6.52%	0.23	-4.72%	0.00	-9.42%	0.12
+16	-0.52%	0.36	-8.50%	0.08	-1.63%	0.22	-8.15%	0.18	0.59%	0.38	-8.84%	0.15
+17	1.49%	0.36	-7.01%	0.17	-1.32%	0.28	-9.48%	0.16	4.27%	0.30	-4.57%	0.35
+18	-0.15%	0.46	-7.16%	0.17	-0.45%	0.41	-9.93%	0.15	0.16%	0.47	-4.41%	0.35
+19	2.62%	0.06	-4.53%	0.28	2.95%	0.11	-6.98%	0.24	2.30%	0.17	-2.11%	0.43
+20	-0.92%	0.25	-5.45%	0.25	-0.98%	0.32	-7.96%	0.22	-0.86%	0.31	-2.97%	0.40
+21	-1.91%	0.08	-7.37%	0.18	-3.38%	0.04	-11.34%	0.14	-0.47%	0.40	-3.44%	0.39
+22	-1.90%	0.07	-9.26%	0.13	-1.95%	0.17	-13.28%	0.10	-1.84%	0.13	-5.29%	0.34
+23	1.00%	0.28	-8.27%	0.16	-0.70%	0.38	-13.99%	0.10	2.67%	0.14	-2.61%	0.42
+24	1.15%	0.28	-7.11%	0.20	2.60%	0.22	-11.38%	0.16	-0.28%	0.44	-2.90%	0.41
+25	5.24%	0.00	-1.88%	0.41	3.10%	0.10	-8.28%	0.24	7.35%	0.00	4.45%	0.37
+26	-1.93%	0.09	-3.81%	0.33	-2.65%	0.10	-10.94%	0.17	-1.22%	0.28	3.23%	0.40
+27	2.17%	0.10	-1.64%	0.43	1.49%	0.30	-9.44%	0.22	2.83%	0.08	6.07%	0.33
+28	2.75%	0.03	1.11%	0.45	3.58%	0.05	-5.86%	0.32	1.92%	0.15	7.99%	0.28
+29	0.44%	0.39	1.54%	0.43	-0.62%	0.37	-6.48%	0.30	1.48%	0.29	9.47%	0.25
+30	-0.12%	0.47	1.43%	0.44	-0.11%	0.48	-6.59%	0.30	-0.12%	0.48	9.35%	0.25
+31	3.71%	0.16	5.14%	0.31	0.36%	0.44	-6.23%	0.31	7.02%	0.16	16.37%	0.15
+32	0.15%	0.46	5.29%	0.30	0.95%	0.35	-5.28%	0.34	-0.63%	0.36	15.73%	0.16
+33	0.19%	0.44	5.48%	0.30	0.68%	0.37	-4.60%	0.36	-0.29%	0.42	15.44%	0.16
+34	2.07%	0.13	7.55%	0.24	-0.31%	0.45	-4.91%	0.36	4.42%	0.04	19.86%	0.11
+35	0.51%	0.37	8.06%	0.22	-2.49%	0.13	-7.40%	0.29	3.47%	0.04	23.34%	0.07
+36	2.19%	0.12	10.24%	0.17	2.77%	0.16	-4.63%	0.37	1.61%	0.25	24.95%	0.06

[a]The computation of average excess returns (XR) is described in equation 2 in the text and the computation of cumulative excess returns (CXR) is described in equation 3 in the text. P-values in bold italics represent returns that are significant at the 10% alpha level.

In Table 9, the emerging market issues outperformed the index on average by 5.45 percent in the first month for the 1990s issues while the 2000s issues underperformed by 3.6 percent. However, by the end of the 36 month long-term trading window, the 10 emerging ADRs listed on the NASDAQ in the 1990s underperformed the index by over 47 percent on average while the 50 ADRs listed in the 2000s outperformed the index by 35 percent on average. This is a significant difference in performance by the 1990s issues versus the 2000s issues of emerging market ADRs. Although the 47 percent underperformance for the 1990s issues is not statistically significant due to the low number of observations it was certainly significant to the wealth of those that held on to them and lost that much value.

Table 8
LONG-TERM RETURN PERFORMANCE BY MONTH FOR ADRS LISTED ON THE NASDAQ (JANUARY 1990 – DECEMBER 2009)[A]

	Entire ADR Sample (169 Observations)				Emerging Market ADRs (60 Observations)				Developed Market ADRs (109 Observations)			
Month	XR	P-value	CXR	P-value	XR	P-value	CXR	P-value	XR	P-value	CXR	P-value
+ 1	2.73%	0.09	2.73%	0.09	-2.10%	0.24	-2.10%	0.24	5.39%	0.02	5.39%	0.02
+ 2	-0.29%	0.44	2.44%	0.19	0.15%	0.48	-1.95%	0.33	-0.53%	0.41	4.85%	0.09
+ 3	3.31%	0.02	5.74%	0.04	3.10%	0.12	1.15%	0.41	3.42%	0.05	8.27%	0.02
+ 4	-0.67%	0.35	5.07%	0.09	-0.72%	0.41	0.43%	0.47	-0.64%	0.38	7.63%	0.05
+ 5	-0.21%	0.45	4.86%	0.11	2.89%	0.18	3.32%	0.31	-1.92%	0.14	5.71%	0.13
+ 6	-2.71%	0.03	2.15%	0.31	-2.80%	0.09	0.52%	0.47	-2.65%	0.09	3.06%	0.29
+ 7	0.28%	0.43	2.43%	0.30	2.65%	0.18	3.16%	0.34	-1.03%	0.28	2.03%	0.36
+ 8	-2.15%	0.09	0.28%	0.48	-2.35%	0.18	0.81%	0.46	-2.03%	0.16	0.00%	0.50
+ 9	-1.42%	0.16	-1.13%	0.41	-3.34%	0.05	-2.54%	0.38	-0.36%	0.42	-0.36%	0.48
+10	1.00%	0.21	-0.13%	0.49	1.33%	0.29	-1.20%	0.45	0.82%	0.28	0.46%	0.47
+11	-1.91%	0.07	-2.04%	0.35	1.68%	0.25	0.47%	0.48	-3.88%	0.00	-3.42%	0.30
+12	-2.26%	0.08	-4.30%	0.22	-4.15%	0.09	-3.68%	0.35	-1.22%	0.25	-4.64%	0.25
+13	-2.07%	0.04	-6.36%	0.13	-1.98%	0.16	-5.66%	0.28	-2.11%	0.08	-6.75%	0.17
+14	0.54%	0.34	-5.82%	0.16	1.07%	0.33	-4.59%	0.32	0.25%	0.44	-6.50%	0.18
+15	-2.16%	0.04	-7.98%	0.09	-3.61%	0.02	-8.20%	0.21	-1.36%	0.21	-7.86%	0.14
+16	-0.52%	0.36	-8.50%	0.08	1.20%	0.32	-7.00%	0.25	-1.46%	0.20	-9.32%	0.11
+17	1.49%	0.36	-7.01%	0.17	-5.22%	0.01	-12.22%	0.13	5.18%	0.21	-4.14%	0.34
+18	-0.15%	0.46	-7.16%	0.17	-1.98%	0.14	-14.20%	0.10	0.87%	0.32	-3.28%	0.37
+19	2.62%	0.06	-4.53%	0.28	7.42%	0.00	-6.79%	0.28	-0.01%	0.50	-3.29%	0.38
+20	-0.92%	0.25	-5.45%	0.25	-2.97%	0.09	-9.75%	0.20	0.21%	0.45	-3.09%	0.38
+21	-1.91%	0.08	-7.37%	0.18	0.00%	0.50	-9.75%	0.21	-2.97%	0.03	-6.06%	0.28
+22	-1.90%	0.07	-9.26%	0.13	-2.50%	0.13	-12.25%	0.15	-1.56%	0.16	-7.62%	0.24
+23	1.00%	0.28	-8.27%	0.16	2.95%	0.15	-9.29%	0.23	-0.08%	0.48	-7.70%	0.24
+24	1.15%	0.28	-7.11%	0.20	2.41%	0.21	-6.88%	0.29	0.46%	0.43	-7.24%	0.26
+25	5.24%	0.00	-1.88%	0.41	6.15%	0.03	-0.73%	0.48	4.73%	0.01	-2.51%	0.41
+26	-1.93%	0.09	-3.81%	0.33	-0.14%	0.48	-0.86%	0.47	-2.92%	0.04	-5.43%	0.32
+27	2.17%	0.10	-1.64%	0.43	2.02%	0.18	1.16%	0.47	2.25%	0.17	-3.18%	0.39
+28	2.75%	0.03	1.11%	0.45	-0.23%	0.45	0.93%	0.47	4.39%	0.01	1.20%	0.46
+29	0.44%	0.39	1.54%	0.43	2.65%	0.22	3.58%	0.40	-0.78%	0.31	0.42%	0.49
+30	-0.12%	0.47	1.43%	0.44	1.58%	0.31	5.16%	0.36	-1.05%	0.29	-0.63%	0.48
+31	3.71%	0.16	5.14%	0.31	10.76%	0.14	15.92%	0.18	-0.17%	0.47	-0.80%	0.47
+32	0.15%	0.46	5.29%	0.30	-2.34%	0.18	13.58%	0.22	1.52%	0.20	0.72%	0.48
+33	0.19%	0.44	5.48%	0.30	0.36%	0.42	13.95%	0.22	0.10%	0.48	0.82%	0.47
+34	2.07%	0.13	7.55%	0.24	4.16%	0.06	18.10%	0.16	0.92%	0.35	1.74%	0.45
+35	0.51%	0.37	8.06%	0.22	2.15%	0.20	20.25%	0.13	-0.40%	0.42	1.35%	0.46
+36	2.19%	0.12	10.24%	0.17	1.40%	0.33	21.65%	0.12	2.62%	0.12	3.96%	0.38

[a]The computation of average excess returns (XR) is described in equation 2 in the text and the computation of cumulative excess returns (CXR) is described in equation 3 in the text. P-values in bold italics represent returns that are significant at the 10% alpha level.

Comparing the results shown in Table 9 to Schaub (2013a) suggests the existence of more variability in the excess returns for the small firm NASDAQ issues than larger firm NYSE ADRs. Schaub (2013a) found the NYSE-listed emerging ADRs to outperform the US index by 8.5 percent with the 1990s ADRs underperforming by 18 percent and the 2000s issues outperforming by 41 percent.

The final table (Table 10) examines the return behavior by decade of the developed market ADRs in the long run. In the first month of trading both samples outperformed the NASDAQ index on average by 7.1 percent for the 1990s issues and 1.75 percent for those listed in the 2000s decade. However, by the end of the 36 month trading window the issues listed in the 1990s performed about the same as the index while those listed in the 2000s exceeded the index by nearly 10 percent on average.

Table 9
LONG-TERM PERFORMANCE BY MONTH FOR EMERGING ADRS LISTED ON THE NASDAQ (JANUARY 1990 – DECEMBER 2009)[A]

	Entire Emerging ADR Sample (60 Observations)				ADRs Issued Before January 1, 2000 (10 Observations)				ADRs Issued After January 1, 2000 (50 Observations)			
Month	XR	P-value	CXR	P-value	XR	P-value	CXR	P-value	XR	P-value	CXR	P-value
+ 1	-2.10%	0.24	-2.10%	0.24	5.45%	0.28	5.45%	0.28	-3.62%	0.11	-3.62%	0.11
+ 2	0.15%	0.48	-1.95%	0.33	4.58%	0.40	10.03%	0.30	-0.73%	0.36	-4.35%	0.12
+ 3	3.10%	0.12	1.15%	0.41	5.88%	0.23	15.91%	0.22	2.54%	0.18	-1.81%	0.35
+ 4	-0.72%	0.41	0.43%	0.47	0.66%	0.48	16.58%	0.25	-0.99%	0.37	-2.80%	0.30
+ 5	2.89%	0.18	3.32%	0.31	4.46%	0.21	21.03%	0.20	2.57%	0.24	-0.23%	0.51
+ 6	-2.80%	0.09	0.52%	0.47	-5.86%	0.10	15.17%	0.27	-2.19%	0.17	-2.42%	0.36
+ 7	2.65%	0.18	3.16%	0.34	-5.27%	0.25	9.90%	0.35	4.23%	0.09	1.82%	0.41
+ 8	-2.35%	0.18	0.81%	0.46	-10.20%	0.03	-0.30%	0.50	-0.78%	0.39	1.03%	0.45
+ 9	-3.34%	0.05	-2.54%	0.38	-7.59%	0.14	-7.90%	0.39	-2.49%	0.12	-1.46%	0.43
+10	1.33%	0.29	-1.20%	0.45	-2.15%	0.40	-10.04%	0.37	2.03%	0.20	0.56%	0.47
+11	1.68%	0.25	0.47%	0.48	12.46%	0.11	2.42%	0.47	-0.48%	0.41	0.09%	0.50
+12	-4.15%	0.09	-3.68%	0.35	-18.82%	0.00	-16.41%	0.30	-1.22%	0.37	-1.13%	0.45
+13	-1.98%	0.16	-5.66%	0.28	0.52%	0.46	-15.88%	0.31	-2.48%	0.13	-3.62%	0.36
+14	1.07%	0.33	-4.59%	0.32	-2.53%	0.36	-18.41%	0.29	1.79%	0.24	-1.82%	0.43
+15	-3.61%	0.02	-8.20%	0.21	-5.03%	0.10	-23.45%	0.24	-3.33%	0.04	-5.15%	0.31
+16	1.20%	0.32	-7.00%	0.25	7.13%	0.24	-16.31%	0.32	0.02%	0.50	-5.14%	0.32
+17	-5.22%	0.01	-12.22%	0.13	-7.99%	0.06	-24.31%	0.24	-4.67%	0.03	-9.80%	0.19
+18	-1.98%	0.14	-14.20%	0.10	-3.10%	0.24	-27.41%	0.22	-1.76%	0.19	-11.56%	0.15
+19	7.42%	0.00	-6.79%	0.28	7.87%	0.07	-19.53%	0.29	7.32%	0.01	-4.24%	0.36
+20	-2.97%	0.09	-9.75%	0.20	-8.86%	0.04	-28.39%	0.22	-1.79%	0.23	-6.02%	0.31
+21	0.00%	0.50	-9.75%	0.21	-5.28%	0.21	-33.67%	0.18	1.06%	0.35	-4.96%	0.34
+22	-2.50%	0.13	-12.25%	0.15	-15.82%	0.00	-49.49%	0.09	0.17%	0.47	-4.80%	0.35
+23	2.95%	0.15	-9.29%	0.23	2.70%	0.36	-46.79%	0.11	3.01%	0.16	-1.79%	0.44
+24	2.41%	0.21	-6.88%	0.29	10.92%	0.17	-35.87%	0.18	0.71%	0.40	-1.08%	0.47
+25	6.15%	0.03	-0.73%	0.48	11.29%	0.23	-24.58%	0.28	5.12%	0.02	4.04%	0.38
+26	-0.14%	0.48	-0.86%	0.47	1.45%	0.58	-23.13%	0.29	-0.46%	0.44	3.59%	0.40
+27	2.02%	0.18	1.16%	0.47	-3.95%	0.24	-27.07%	0.26	3.22%	0.09	6.80%	0.31
+28	-0.23%	0.45	0.93%	0.47	-8.72%	0.00	-35.80%	0.20	1.47%	0.25	8.28%	0.28
+29	2.65%	0.22	3.58%	0.40	3.56%	0.18	-32.24%	0.23	2.47%	0.28	10.75%	0.23
+30	1.58%	0.31	5.16%	0.36	1.91%	0.45	-30.33%	0.25	1.51%	0.29	12.26%	0.20
+31	10.76%	0.14	15.92%	0.18	-3.57%	0.15	-33.90%	0.23	13.62%	0.12	25.88%	0.09
+32	-2.34%	0.18	13.58%	0.22	4.06%	0.36	-29.85%	0.26	-3.61%	0.05	22.27%	0.12
+33	0.36%	0.42	13.95%	0.22	0.02%	0.50	-29.83%	0.26	0.43%	0.41	22.70%	0.12
+34	4.16%	0.06	18.10%	0.16	-3.88%	0.23	-33.71%	0.24	5.76%	0.03	28.47%	0.07
+35	2.15%	0.20	20.25%	0.13	-7.54%	0.12	-41.26%	0.19	4.08%	0.07	32.55%	0.05
+36	1.40%	0.33	21.65%	0.12	-6.09%	0.16	-47.34%	0.16	2.90%	0.21	35.45%	0.04

[a]The computation of average excess returns (XR) is described in equation 2 in the text and the computation of cumulative excess returns (CXR) is described in equation 3 in the text. P-values in bold italics represent returns that are significant at the 10% alpha level.

Comparing the results from tables 9 and 10 suggests the returns of the emerging market ADRs were significantly more volatile in both decades than the ADRs from developed regions. For NYSE-listed ADRs, Schaub (2013b) found the total developed sample performance to exceed the US index by 1.8 percent with 1990s issues underperforming by 9.9 percent and 2000s listing outperforming by 19.3 percent. Thus the large firm NYSE-listed developed ADRs fared better in the new millennium (2000s decade), while they did worse in the 1990s compared to the NASDAQ-listed ADR excess returns.

Table 10
LONG-TERM PERFORMANCE BY MONTH FOR DEVELOPED ADRS LISTED ON THE NASDAQ (JANUARY 1990 – DECEMBER 2009)[A]

	Entire Developed ADR Sample (109 Observations)				ADRs Issued Before January 1, 2000 (74 Observations)				ADRs Issued After January 1, 2000 (35 Observations)			
Month	XR	P-value	CXR	P-value	XR	P-value	CXR	P-value	XR	P-value	CXR	P-value
+ 1	5.39%	0.02	5.39%	0.02	7.11%	0.01	7.11%	0.01	1.75%	0.36	1.75%	0.36
+ 2	-0.53%	0.41	4.85%	0.09	0.87%	0.40	7.98%	0.04	-3.50%	0.09	-1.75%	0.38
+ 3	3.42%	0.05	8.27%	0.02	5.13%	0.03	13.10%	0.01	-0.20%	0.47	-1.95%	0.38
+ 4	-0.64%	0.38	7.63%	0.05	-0.67%	0.40	12.43%	0.02	-0.58%	0.44	-2.53%	0.36
+ 5	-1.92%	0.14	5.71%	0.13	-1.85%	0.18	10.58%	0.05	-2.06%	0.27	-4.59%	0.28
+ 6	-2.65%	0.09	3.06%	0.29	-2.88%	0.13	7.70%	0.13	-2.17%	0.23	-6.76%	0.21
+ 7	-1.03%	0.28	2.03%	0.36	-0.31%	0.44	7.39%	0.15	-2.55%	0.22	-9.31%	0.15
+ 8	-2.03%	0.16	0.00%	0.50	-4.01%	0.03	3.39%	0.33	2.14%	0.31	-7.17%	0.24
+ 9	-0.36%	0.42	-0.36%	0.48	0.52%	0.41	3.91%	0.31	-2.21%	0.24	-9.38%	0.18
+10	0.82%	0.28	0.46%	0.47	0.73%	0.34	4.64%	0.28	1.02%	0.33	-8.36%	0.22
+11	-3.88%	0.00	-3.42%	0.30	-5.70%	0.00	-1.07%	0.45	-0.03%	0.50	-8.39%	0.23
+12	-1.22%	0.25	-4.64%	0.25	-3.20%	0.04	-4.26%	0.31	2.96%	0.24	-5.43%	0.32
+13	-2.11%	0.08	-6.75%	0.17	-0.77%	0.31	-5.03%	0.28	-4.96%	0.07	-10.39%	0.20
+14	0.25%	0.44	-6.50%	0.18	-0.37%	0.42	-5.40%	0.27	1.57%	0.31	-8.82%	0.25
+15	-1.36%	0.21	-7.86%	0.14	1.17%	0.28	-4.24%	0.32	-6.71%	0.01	-15.53%	0.12
+16	-1.46%	0.20	-9.32%	0.11	-2.81%	0.08	-7.05%	0.22	1.40%	0.34	-14.13%	0.15
+17	5.18%	0.21	-4.14%	0.34	-0.42%	0.43	-7.47%	0.22	17.03%	0.19	2.90%	0.45
+18	0.87%	0.32	-3.28%	0.37	-0.09%	0.48	-7.57%	0.22	2.90%	0.20	5.80%	0.40
+19	-0.01%	0.50	-3.29%	0.38	2.28%	0.20	-5.28%	0.30	-4.88%	0.06	0.92%	0.52
+20	0.21%	0.45	-3.09%	0.38	0.08%	0.49	-5.20%	0.31	0.46%	0.57	1.38%	0.52
+21	-2.97%	0.03	-6.06%	0.28	-3.12%	0.06	-8.32%	0.22	-2.66%	0.10	-1.27%	0.48
+22	-1.56%	0.16	-7.62%	0.24	-0.07%	0.49	-8.39%	0.22	-4.72%	0.01	-5.99%	0.40
+23	-0.08%	0.48	-7.70%	0.24	-1.16%	0.31	-9.55%	0.19	2.20%	0.30	-3.79%	0.44
+24	0.46%	0.43	-7.24%	0.26	1.48%	0.34	-8.07%	0.24	-1.71%	0.28	-5.49%	0.41
+25	4.73%	0.01	-2.51%	0.41	1.99%	0.15	-6.08%	0.30	10.53%	0.02	5.04%	0.42
+26	-2.92%	0.04	-5.43%	0.32	-3.20%	0.07	-9.29%	0.22	-2.32%	0.19	2.72%	0.46
+27	2.25%	0.17	-3.18%	0.39	2.23%	0.24	-7.06%	0.28	2.29%	0.26	5.01%	0.42
+28	4.39%	0.01	1.20%	0.46	5.25%	0.01	-1.81%	0.44	2.57%	0.21	7.58%	0.39
+29	-0.78%	0.31	0.42%	0.49	-1.19%	0.27	-3.00%	0.41	0.06%	0.49	7.64%	0.39
+30	-1.05%	0.29	-0.63%	0.48	-0.38%	0.44	-3.38%	0.40	-2.45%	0.19	5.19%	0.42
+31	-0.17%	0.47	-0.80%	0.47	0.89%	0.36	-2.49%	0.43	-2.42%	0.77	2.77%	0.46
+32	1.52%	0.20	0.72%	0.48	0.53%	0.41	-1.96%	0.44	3.62%	0.10	6.40%	0.41
+33	0.10%	0.48	0.82%	0.47	0.77%	0.36	-1.19%	0.47	-1.33%	0.31	5.07%	0.43
+34	0.92%	0.35	1.74%	0.45	0.17%	0.48	-1.01%	0.47	2.50%	0.29	7.57%	0.39
+35	-0.40%	0.42	1.35%	0.46	-1.81%	0.22	-2.83%	0.42	2.60%	0.19	10.17%	0.36
+36	2.62%	0.12	3.96%	0.38	3.97%	0.10	1.14%	0.47	-0.23%	0.46	9.94%	0.36

[a]The computation of average excess returns (XR) is described in equation 2 in the text and the computation of cumulative excess returns (CXR) is described in equation 3 in the text. P-values in bold italics represent returns that are significant at the 10% alpha level.

CONCLUDING COMMENTS

This study examined excess returns of ADRs listed on the NASDAQ in the 1990s and 2000s decades from emerging and developed regions. The decade and regional breakdowns provide interesting insights into how foreign firms listed on the NASDAQ performed versus the NASDAQ index for firms headquartered in economies that were in the process of development (emerging) and those already developed while the NASDAQ was encountering sustained growth (1990s) and volatile corrections (2000s). The 1990s saw large numbers of IPO listings and the dot-com bubble in the US while several emerging countries experienced severe currency problems. During that period, emerging market ADRs underperformed the NASDAQ in long-term trading even though they performed slightly better than the benchmark in the early trading. The sample of emerging market ADRs listed in the 2000s differed in that it underperformed in the short term but significantly outperformed in the long-term as those countries became more developed. Based on these findings, NASDAQ-traded emerging market ADRs provided exceptional

diversification benefits when the US market was volatile. This shows NASDAQ-listed ADRs from emerging markets helped diversify away risk associated with uncertainty in US markets.

Developed market ADRs outperformed the market index for the first day of trading, especially for those listed in the 2000s decade. However, in the long run, these ADRs performed about the same as the US index regardless of when listed. This may suggest that developed countries' stock markets track similar to each other.

Overall, these results give valuable insight into how attractive ADR investing can be. In particular, these investments outperformed the US index in the most recent decade. Since the future may more resemble the 2000s than the 1990s when it comes to investment performance (due to changes in technology and advancement in emerging economies), the findings of this study should encourage portfolio managers and even individual investors to include small company NASDAQ-listed ADRs in their portfolios.

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THE EFFECTS OF INTERNATIONAL FINANCIAL REPORTING STANDARDS DISCLOSURE FOR SMALL AND MEDIUM ENTERPRISES (IFRS FOR SMEs) ON PROFITABILITY UNDER THE RETAIL SECTOR

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ABSTRACT

At the dawn of the 21st century, businesses from all over the globe started crossing geographical boundaries to compete in the international market. Several breakthroughs impacted not only on the firms' ability to generate profits but also their ability to provide accounting information to various stakeholders. As business innovations continue to push through, globalization further necessitated transparency and comparability across entities regardless of geographical location. Hence, the IASB published international standards tailored for established and large corporations. This, however, posed burden to small and medium sized entities. As a proactive response, the IASB subsequently crafted a firm-specific standard now known as the IFRS for SMEs. This set of standards was later adopted by the Philippines and renamed it to PFRS for SMEs.

This study determined that on a general level, compliance level among entities in the retail trade industry had increased by adapting the PFRS for SMEs. However, further testing suggests that such increase was insignificant. After assessing the compliance level through testing the disclosure indices, this study tested whether there has been a significant difference on the financial performance of the entities before and after adapting the PFRS for SMEs as evidenced by the entities' financial ratios. The result of the test indicated that there is no significant difference.

Keywords: *International Financial Reporting Standard, Accounting Standards for Small and Medium Enterprises, Disclosure Index and Profitability.*

INTRODUCTION

The International Accounting Standards Board (IASB) established the International Financial Reporting Standards (IFRS) in April 2001 with the purpose of employing comparative financial reporting among countries. These accounting standards are principle-based rather than rule-based. Also, the IFRS removed certain discretions that were once present before its promulgation. In the Philippines, it was adopted in 2004 and was renamed to the Philippine Financial Reporting Standards (PFRSs) and the Philippine Accounting Standards (PASs). The Philippine Securities and Exchange Commission mandates publicly-listed companies to apply these standards in the financial statements that they submit. However, full compliance has presented problems to corporations, even the biggest ones. Besides the ever-increasing complexities, the cost of compliance cast significant doubt as to whether it is cost-beneficial to comply.

Considering the challenges of full compliance faced even by the well-established large corporations, it is certain that smaller-scale companies face the same dilemma. Perhaps, it is safe to assume that the degree of difficulty is greater for them because of the limited resources they

have. Philippines, as a country, is dominated by small and medium-sized entities (SMEs). In fact, more than 99% of the businesses in the Philippines are classified as SMEs (DTI, 2011). Indeed, the importance of SMEs in nation building is unquestionable as they provide employment to a lot of Filipinos. This trend of being dominated by SMEs is apparent not just in the Philippines, but in the whole world as well. Hence, a set of accounting standards specifically tailored for these entities is of great necessity thereby giving birth to International Financial Reporting Standards for SMEs (IFRS for SMEs) and Philippine Financial Reporting Standards for SMEs (PFRS for SMEs).

Considering that most companies are relatively small to medium in size, complying with all of the provisions seems impractical and costly, and sometimes impossible due to certain circumstances present. The solution to this was the creation of a more simplified version of the IFRS, which is the International Financial Reporting Standard for SMEs. The IASB removed unnecessary requirements which bore little relevance to small and medium entities. This will make financial reporting for them easier and less costly while still maintaining the high quality of information reported. The Philippines welcomed the new standard and officially took effect last January 2010, renaming it to the Philippine Reporting Standard for SMEs (PFRS for SMEs).

Noting that the PFRS for SMEs is just a mere simplification of the Full PFRS, the nuts and bolts of the latter should still be intact to the former. However, the certain accounting treatments, one of which is accounting for provisions, may pose differences in the figures presented in the financial statement. Thus, this may result to variances on financial ratios calculated on both standards. According to Palka and Svitakova (2011) in the "Impact of IFRS for SMEs Adoption on Performance of Czech Companies", the conversion of statements from the Czech Accounting Standards to International Financial Reporting Standard for Small and Medium-sized-Entities showed that the results of the financial ratios were affected by the said conversion. However, it was proven that the overall effect on the financial ratios were insignificant since the average deviation of the financial ratios were too low, which are below 1.5% of the value of the indicators. This paper aims to answer the question, what was the extent of the effect of compliance with PFRS for SMEs on profitability of companies belong to retailing industry?

THEORETICAL FRAMEWORK

Agency Theory

In relation to stakeholder theory, the agency theory assumes that the interest of the principal (the stakeholder) and the agent (the manager) diverges (Hill & Jones, 1992). The conflict between the interests of the former and latter could produce an undesirable outcome for the company which could put one party at a disadvantage over the other through possible biased financial information. The stakeholders have no option but to trust the manager on handling the affairs of the company and in providing the right information, since they rely on the published documents that are available for the public to view from authorized and legal sites. The risk of conflict of interests with the manager can be reduced by offering incentives in order for him to have a motivation to consider alternatives that would benefit most, if not all, stakeholders. This study enables the management to see the benefit of abiding with the PFRS for SMEs through the determination of the relation of the new standard with the financial ratios. A positive relationship between compliance and ratios will encourage managers to present their information according

to the standards because it is in their interest to display a good company performance to shareholders and potential business partners.

Stewardship Theory

In contrast, the stewardship theory sees the relationship between the principal and agent with confidence. Managers are believed to be stewards whose motives are aligned with the objective of company principles and are not motivated by their individual thoughts. Maximizing their authority as managers, they strive to protect both the shareholders' and stakeholders' wealth. They are trusted to deliver the right information to the owners and to others who have interest in the firm. This is the ideal situation for the stakeholders so that they would not have any doubts regarding the information presented to them.

The agency theory and the stewardship theory are the ideas which pertain to the perception of those who rely on another to do what is deemed appropriate. The relationship in the stewardship theory is the type of affiliation that the stakeholders would want to have with the management with regard to the information disclosed to the public. It is in contrast with the agency theory, which is characterized by the lack of trust between the stakeholders and the management. The management will only be able to release financial statements and reports that are free from material error and fraud if they are truly concerned not only with the owners' interest but also with the investors' and other users' interests. In order for it to be achieved, the prescribed standards of the Securities and Exchange Commission, which are unbiased, must be complied with by the companies. This also led to the concept of harmonization. Harmonization is achieved through the uniformity of the standards complied with by the companies. It is a growing trend due to the expansion of business transactions for company growth. Through harmonization, investors and other stakeholders all over the world would be able to easily compare business entities due to uniformity of the preparation of the financial statements on which the financial ratios are based from.

SIGNIFICANCE OF THE STUDY

Anchored on continuous development of Financial Reporting, this study aims to provide insights and useful information to various stakeholders, such as the firm itself, the users of financial information and the regulatory bodies.

It seeks to inform and assist the SMEs in the retail industry to improve their performance with regard to increased compliance with the standards. This serves as a motivational tool to use various discretionary privileges permitted by the standard to produce more appealing financial statements without violating the fundamentals of the conceptual framework for financial reporting.

External users of the financial statements may refer to the results of this study as a guiding tool in assessing the impact of adopting the standard to key profitability ratios. This, in turn, guarantees that they make proper decisions which directly affect the firm itself. The time span in which the data were gathered may provide useful information regarding the ability of the firm to sustain its operations in the long run.

Moreover, the study also aims to facilitate future local researches and scholarly studies alike on the topic PFRS for SMEs as the study rests in the Philippine setting.

In a broader context, the regulatory bodies can utilize and consider the findings of this study to determine whether the supposed benefits of applying the PFRS for SMEs have been

attained. Specifically, it aims to respond to several issues, such as whether more stricter or relaxed compliance is needed, what further amendments, if there may be, can be adopted to fully optimize the promised advantage of the standards, or whether a new and complete set of standards should be crafted to best suit the needs of SMEs in the Philippines.

Lastly, accountants and auditors may be more aware and alert on the possible audit implications of conversion from adopting full IFRS to PFRS for SMEs. It may also provide them with factual data in helping firms correct errors in applying the standards which are already identified in this study.

PANEL ANALYSIS, EMPIRICAL FINDINGS AND FINAL LINEAR REGRESSION TABLE FOR FINACIAL RATIOS, FULL IFRS DISCLOSURE INDEX AND IFRS DISCLOSURE INDEX FOR SMEs

Table 1
TEST OF DIFFERENCE – DISCLOSURE COMPLIANCE

PERIOD	MEAN DIFFERENCE	P-value
Degree of Compliance with Full IFRS vs. Degree of Compliance with IFRS for SMEs	- 0.0693	0.1104

The Paired T-test is utilized to identify whether there is a significant change between the applications of the two standards. As shown in Table 1, the resulting mean of - 0.0693 and p-value of 0.1104 is considered not significant at the 95% level of confidence. As evidenced by the resulted p-value, it can be concluded that there is no significant change between the degree of compliance with the full PFRS and the PFRS for SMEs under the Other Retail Sale in Non-Specialized Stores – Department Stores class. With the outcome of statistical tests showing an insignificant difference in terms of the degree of disclosure compliance prior and subsequent to PFRS for SMEs implementation, a conclusion can be made in contrast to the expected effect of the implementation of PFRS for SMEs. The insignificant increase in compliance with the PFRS for SMEs suggests the non-achievement of the objectives of the said standard, which is to ease the burden and to address the needs of small and medium-sized entities. The provisions in the PFRS for SMEs are complied with due to the benefits it promised to those who adopt the standards.

Table 2
SUMMARY OF PAIRED T-TEST ON KEY FINANCIAL RATIOS

VARIABLES	BEFORE	AFTER	P-value
Return on Equity	.1326239	.1516534	0.6614
Return on Assets	.0430901	.0341789	0.0805
Gross Profit	.1131944	.0870462	0.1494
Net Profit	.0866552	.0797653	0.1225
Operating Profit	.0962538	.0865691	0.1696

Based on Table 2, all of the ratios used in Test of Difference have come up with p-values greater than the critical p-value of 0.05. This means that there is no significant difference in the ten key financial ratios prior and subsequent to the implementation of the new standard, the PFRS for SMEs. It can be inferred that the increases and decreases in the financial ratios are not substantial enough to acknowledge that the transition from full PFRS to PFRS for SMEs has influenced its movements. To sum it all up, it can be concluded that there is no significant

change in the firm performance as measured by the financial ratios between the use of the full PFRS and the PFRS for SMEs.

These findings are supported by the study of Palka and Svitakova (2011), which performed a similar research to determine the impact of IFRS for SMEs adoption to company performance as opposed to the local Czech Republic standards. The study concludes that there is a change in the key financial ratios after PFRS for SMEs implementation; however, such changes are statistically insignificant.

Table 3
SUMMARY OF DISCLOSURE COMPLIANCE WITH FULL IFRS VS FINANCIAL RATIOS

	MODEL	P-value	INTERPRETATION
Return on Equity	Random Effects	0.2326	Not significant
Return on Assets	Random Effects	0.1480	Not significant
Gross Profit	OLS	0.0012	Significant
Net Profit	Random Effects	0.0618	Not significant
Operating Profit	Random Effects	0.5297	Not significant

With the exception of one ratio, namely the gross profit margin, the analysis with the use of different tests shows that financial ratios generally has not produced any significant effects as to the degree of compliance prior to the application of PFRS for SMEs as presented in Table 3. It can be construed that small and medium-sized entities merely used the standard for compliance purposes and not as a means to improve their financial performance. A study of Mutawaa and Hewaidy (2010), which determines the possible effects of disclosure compliance by listed companies on the full IFRS to financial performance, discover that leverage ratios are negatively correlated with the degree of disclosure compliance but are statistically insignificant. The profitability ratio, as measured by the Return on Equity is positively associated with the disclosure compliance level, but not significant. Their conclusion expounded on their selected indicators, which are independent variables, as to have both positive and negative effects in relation to the level of compliance, but these are statistically insignificant. The result of their study, although conducted on listed companies, supports the results obtained in this study wherein ratios are not significantly affected by the degree of compliance.

In relation to Philippine listed companies, the study of Ferrer and Ferrer (2011) entitled "The Relationship Between Profitability and the Level of Compliance to the International Financial Reporting Standards (IFRS): An Empirical Investigation on the Publicly Listed Corporations in the Philippines" proved that there was no significant relation between company profitability, as measured by the Return on Assets, Return on Equity, Basic Earnings per Share, Return on Sales, and Revenues, and the degree of compliance to PFRS. Another study by the same authors, Ferrer and Ferrer (2011), entitled "Liquidity and Financial Leverage Ratios: Their Impact on Compliance with International Financial Reporting Standards (IFRS)" concluded that there was no significant relationship between company liquidity and financial leverage ratios and the degree of compliance to PFRS. Longer periods were used in these studies so that irregularities in events may be minimized to observe the true outcome. Nevertheless, both studies resulted in an insignificant relationship even if they were conducted on Philippine listed companies and not on SMEs.

Table 4
SUMMARY OF DISCLOSURE COMPLIANCE WITH STANDARDS FOR SMEs VS FINANCIAL RATIOS

	MODEL	p-value	INTERPRETATION
Return on Equity	Random Effects	0.8080	Not significant
Return on Assets	OLS	0.0011	Significant
Gross Profit	Random Effects	0.1752	Not significant
Net Profit	OLS	0.8677	Not significant
Operating Profit	Random Effects	0.1420	Not significant

For years 2010-2011, the applicability of PFRS for SME has been imposed. With the corresponding tests conducted, it is concluded that the degree of compliance has no significant effect on the key financial ratios with the exception of the return on assets. There were reported differences in the figures in the financial statements, especially during the year of transition; nonetheless, these fluctuations in amounts generally did not make way for a significant change to take effect. While there have been changes in the degree of compliance, it was not in connection with financial ratios.

A separate study conducted by Chyzhevska, Müllerová, Paseková, and Strouhal (2010) suggested that a substantial number of SMEs in the Czech Republic and Ukraine are not interested in reporting accurate and factual information for management purpose; rather, they merely produce reports to comply with tax regulations. The lack of significant impact resulted from the degree of disclosure compliance on financial ratios can also be supported by the intention of the PFRS objective and framework which is to provide transparent financial information and not to improve financial performance. However, one particular ratio exhibited a significant effect in relation to the degree of compliance to the PFRS for SMEs.

CONCLUSION

When the degree of compliance with full PFRS was related to the firm performance during 2008-2009, it was determined that there were no significant effects on the financial ratios due to the degree of compliance with the full PFRS with an exception to three ratio namely the Gross Profit Margin. With the given results, it cannot be ultimately assumed that a significant effect is present in relating the degree of compliance with the full PFRS to the key financial ratios. Therefore, the significant relationship between the three ratios mentioned as exceptions and the degree of compliance to the full PFRS could have been produced by other factors such as company specific characteristics and the internal behavior of the companies which are unique across the entities. On another hand, the assessment on whether there is a significant effect on the relationship between the degree of compliance and the PFRS for SMEs on firm performance has generally concluded that there is no significant effect, with an exception of one particular ratio, which is the Return on Assets. This is aligned with the initial objectives of the creation and implementation of PFRS for SMEs. The objectives of the PFRS for SMEs do not include the goal of improving company performance. The primary purpose of the PFRS for SMEs is to provide relevant and reliable information to users of the financial statements of small and medium-sized entities. Disclosing the necessary financial and non-financial information is for the benefit of the public, especially for those who would use this information to come up with vital business decisions. Lastly, the determination of the substantial relationship of the firm

characteristics with the firm performance has been evaluated. The statistical results have produced an insignificant relationship between the variables. The asset size did not have any substantial relevance with the key financial ratios. It can be inferred that maintaining abundant resources for the company does not necessarily result to high or good and profitability ratios.

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FINANCIAL PERFORMANCE, LIQUIDITY, FINANCIAL LEVERAGE AND THE EXTENT OF THEIR COMPLIANCE WITH IFRS3 BUSINESS COMBINATION BETWEEN 2006-2010: A TEST ROSS' SIGNALING THEORY

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ABSTRACT

This study focused on how compliance with International Financial Reporting Standards regarding Business Combination Index is related with and its impact on the financial performance, liquidity and financial leverage of publicly listed companies. The compliance audit output was used by the author to calculate the financial statement disclosure index using a dichotomous procedure to score each of the company indices.

Using panel analysis, the author regressed each of the variables, namely, financial performance, liquidity and financial leverage of publicly listed companies against IFRS 3 Index, the latter being the main components of the disclosure indexed that capture the IFRS requirements. The IFRS Index served as proxy variables to test whether Ross' signaling theory can be validated or not in the Philippine equity market. Findings suggest that the IFRS 3 disclosure index of merger and acquisition exhibited a significant positive relation with the current ratio. Hence, this resulted to the rejection of the null hypothesis that the exogenous variable has no relation with the endogenous variable. Furthermore, merger and acquisition disclosure index denoted an insignificant relation with the asset turnover ratio and debt to equity ratio, as evidenced by the insignificant p-value.

Applying the signaling theory by Ross, the companies would be disclosing financial information as their managers want to show off the firm's financial position and the results of the operations to different stakeholders like the investors to be reassured that the company is into going concern status and relieving market pressures.

It can be further deduced that the results of the dichotomous procedure of attaining the level of compliance among PLCs with IFRS disclose requirements are anchored with Signaling Theory. It must be noted that financial statement serves as a mode of communicating with different stakeholders. Signaling theory conveys information such as financial information disclosed on the face of the financial statements to wide range of different users. Thus, companies would be disclosing information with the help of their auditors in providing sufficient data to different stakeholders. Signaling hypothesis, was used by different companies, refers to the proposition that signaling motivates corporate disclosure.

Keywords: *Liquidity, Financial Leverage and Compliance with Merger and Acquisition Disclosure Requirements*

INTRODUCTION

In recent years, the business world has seen an increase of corporate frauds and scandals which rocked its very foundation. As a result, numerous investigations and lawsuits have been

made against erring companies who, in collaboration with their auditing firms, entered into "dubious" financial transactions. These were discovered, admitted commission of bribery and other mistakes that tarnished the integrity of very well established companies and their auditors.

This has prompted considerable attention and importance given to the extent of compliance with international financial statement disclosure requirements and revision of accounting standards to rectify the failures or weaknesses of improper disclosure of the true value of a firm and other relevant financial information that may affect the decision of different stakeholders who are largely dependent on audit reports prepared by these companies' auditing firms.

Signaling theory helps stakeholders realize how important are the financial information a company discloses. The owner of a high-quality firm must be able to send a signal to their investors that will make clearly distinguish it from a low-quality firm. The transacting parties will reach equilibrium when investors accept the signal and pay a higher price to the high-quality firm; while the low-quality firm has no incentive to mimic the high-quality firm's signaling.

A majority of people in the business sector may only be familiar with the financial audit since it is routinely done in big companies. However, operational audit, if the entity has various departments, may be of benefit as well. Meanwhile, information systems audit is also very useful especially in electronic data processing systems. Investigative or forensic audit is a more in-depth approach to discovering spurious transactions that management seeks to uncover; while compliance audit ascertains that the company conforms to disclosure requirements based on the international accepted accounting standards particularly accounting for business combination.

The International Accounting Standards (IAS) 22 was first drafted on September 1981 in response to the great number of mergers and acquisitions that took place. IAS 22, entitled Accounting for Business Combinations, was then first implemented on 1983. Prior to this, Accounting Principles Board (APB) Opinion 16 served as the primary guidance on accounting for business combinations. On June 1992, an exposure draft was released namely the Exposure Draft E54. This exposure draft eventually contained various revisions and amendments. During late 1993, IAS 22 was then revised as part of the "Comparability of Financial Statements" project of the International Accounting Standards Board (IASB) which was put into effect on January 1, 1995. Another exposure draft, Exposure Draft E61, was then released on August 1997 and this was followed by the amendment of IAS 22 on September 1998 to be effective on July 1, 1999. Finally, IAS 22 was superseded by the International Financial Reporting Standard (IFRS) 3. The supersession of the IAS 22 was triggered by the adoption of Statement of Financial Accounting Standards (SFAS) 141 by the Financial Accounting Standards Board (FASB) in 2001. Major changes found in the new standard included the removal of the pooling of interest method and the replacement of the goodwill depreciation by an impairment only approach. IFRS 3 was then revised in order to unify the treatment of business combinations at a worldwide level. The revised IFRS 3 was to be applied on mergers whose acquisition date is on or after July 1, 2009 (http://www.iasplus.com/standard/ias22.htm).

With regard to these revisions of accounting standard, this study also aims to obtain a clearer understanding of the extent of International Financial Reporting disclosure on Business Combination of publicly listed corporations in the Philippines. Furthermore, this study also seeks to empirically determine the magnitude of financial disclosures by Philippine companies with IFRS 3 and to study relationship between IFRS 3 compliance index and different financial performance measures among publicly listed corporations in the Philippines.

STATEMENT OF THE PROBLEM

This study wants to answer the question: *How does the IFRS 3 disclosure index affect financial performance, liquidity and financial leverage?*

NULL HYPOTHESES

H1 *The current ratio is not significantly affected by International Financial Reporting Standard 3 Business Combination Disclosure Index.*

H2 *The quick asset ratio is not significantly affected by International Financial Reporting Standard 3 Business Combination Disclosure Index.*

H3 *The basic earnings ratio is not significantly affected by International Financial Reporting Standard 3 Business Combination Disclosure Index.*

H4 *The return on equity is not significantly affected by International Financial Reporting Standard 3 Business Combination Disclosure Index.*

H5 *The debt to equity ratio is not significantly affected by International Financial Reporting Standard 3 Business Combination Disclosure Index.*

H6 *The interest coverage/ earned ratio is not significantly affected by International Financial Reporting Standard 3 Business Combination Disclosure Index.*

ASSUMPTIONS, SCOPE AND LIMITATIONS

This study is limited to a study of the relationship between degree of compliance of publicly listed corporations (PLCs) in the Philippines with IFRS 3 Business Combination Disclosure Requirement and their relative financial performance, liquidity and financial leverage based on the 2006-2010 compliance audit findings.

The International Financial Reporting Standard 3 Business Combination – Disclosure Checklist of Pricewaterhouse Coopers used by Securities and Exchange Commission is to be considered in this study.

The calculation of the disclosure index is limited only to 68 items of IFRS 3 Business Combination Disclosure Checklist.

Only selected publicly listed corporations in the Philippines are covered in this study. Stocks listed in the Philippine Stock Exchange (PSE) are classified into six sectors, namely Financials, Industrial, Holding Firms, Property, Services, and Mining & Oil. Companies are classified according to the business that generates the bulk of their revenues.

Publicly listed companies engaged in the business of banking, investments, and finance are classified under the Financials sector. The Industrial sector includes companies active in electricity, energy, power and water; food, beverage and tobacco; construction, infrastructure & allied services; chemicals; and diversified industrials. Diversified companies engaged in three or more businesses classified in different industries, any of which does not dominate revenue, are classified under Holding Firms. Companies engaged in land and property development are classified under the Property sector. The Services sector includes companies involved in media, telecommunications, information technology, transportation services, hotel and leisure, education and diversified services. The Mining & Oil sector includes companies engaged in mineral extraction and in oil exploration, extraction and production (http://www.pse.com.ph).

THEORETICAL FRAMEWORK AND RELATED LITERATURE

The study on signaling theory by Ross, as supplemented by the Agency Theory of Jensen and Meckling, inspired and motivated the undertaking of this study on how compliance with IFRS of a publicly listed company may be connected with its financial performance. Signaling Theory is relevant in the context of financial disclosure as it is a reaction to information asymmetry in markets. In such a case, companies have information that investors do not have. Asymmetries can be reduced if the party with more information provides signals to others.

Signaling theory explains why firms have the incentive to report voluntarily to the capital market even if there were no mandatory reporting requirements: firms compete with one another for scarce risk capital, and voluntary disclosure is necessary in order to compete successfully in the market for risk capital. This economic incentive to report is at the heart of signaling theory for voluntary financial reporting. (Wolk,et al, 2001)

Stakeholders estimate the value of a company not only in terms of financial measure but also by its nonfinancial and strategic performance. Annual reports are now seen as the primary source of corporate information disclosure. Additionally, annual reports may also provide voluntary information. The efficiency of the disclosure process is dependent upon the needs of the stakeholders and of the interests of the management of the corporation (Debreceny, Gray, Mock, 2001).

Roberts (2004) explained that agency theory has a number of related manifestations. As with neoclassical economics, the basic unit of analysis is the 'individual' who is preoccupied with maximizing or at least satisfying utility, conceived typically in terms of a trade-off between work and leisure. It is this combination of assumed autonomy and self-interested motivation that creates the problems within agency relationships, the relationship between a principal and those employed as 'agents' to serve their interests.

As applied to corporate governance, it is the shareholder who is cast as the 'principal' and the problem, following the separation of ownership and control, is how the principal can ensure that his 'agents' – company directors – serve the shareholders' interests rather than their own. Either in the form of 'shirking' which in the governance context can be seen in terms of a lack of attention to maximizing shareholder returns, or in terms of 'self-interested opportunism' – accruing wealth to themselves rather than shareholders – the principal is vulnerable to the self-interest of their agents.

The remedies to this conception of the agency problem within corporate governance involves the acceptance of certain 'agency costs' involved either in creating incentives/sanctions that will align executive self-interest with the interests of shareholders, or incurred in monitoring executive conduct in order to constrain their opportunism.

In the USA, the Sarbanes-Oxley act can be read almost as a perfect mirror of the collapse of Enron and perhaps suggests a loss of faith in the self-regulatory capacities of both boards and markets by increasing the criminal liabilities of directors. In the UK the response has been more muted but has involved the further strengthening of the role of the non-executive within boards (Higgs, 2003).

The annual reports of the company include notes to financial statement which discuss quantitative and qualitative information. Client firm characteristics, auditing firm characteristics, client firm financial performance are the information needed by stakeholders to decide whether the company is doing well or doing poorly. Baseline information about the company could really help the stakeholders become more aware about the company's financial position and financial performance.

According to Christensen et al. (2007), German companies who voluntarily adopt IFRS decreased their earning management and have more timely loss recognition (as cited by Cormier et. al.). Similarly, in Portugal, the researchers made some quantitative analysis of the effects of the IFRS on their performance through the use of least square regression. Their statistical analysis showed that the employee benefits and cumulative translation differences have negative impact on equity. It is because IFRS disclosures charge unrecognized actuarial gains or losses to equity on the opening IFRS balance sheet. However, this has a positive impact on net income because by not using the corridor approach firms can avoid future decreases in net income by eliminating the need to amortize the unrecognized losses in excess of the corridor (Cormier, D. et.al., 2009). While fair value or revaluation as deemed cost, the designation of previously recognized financial instruments, and business combinations have a positive impact on equity. It is because IFRS valuation method credits every revaluation transactions to equity and debits to an asset account. But it reduces net income because of the fair value recognition of the asset. Also financial instrument disclosure decreases net income because a portion of the unrealized gain on the financial asset is recognized directly in equity at the transition date.

Also, based on IFRS 8, which gives an option of disclosing or not geographic earnings, non-disclosure of geographic earnings reduces shareholders' ability to monitor the foreign operations of the firm, causing the manager to aggressively grow the firm, which reduces firm performance. This is because managers may have incentives to take actions that reduce the value of the firm. Also, this is consistent with the idea that financial disclosures can be useful in reducing agency costs by providing shareholders with a tool for monitoring, which improves their ability to relate managerial decisions to firm performance and with the idea that enhanced disclosure can mitigate the overinvestment problem (Hope & Thomas, 2008).

Financial ratios can be divided, for convenience, into five (5) categories; liquidity, activity, debt, profitability and market ratios. Liquidity, activity, and debt ratios primarily measure risk. Profitability ratios measure return. Market ratios capture both risk and return (Gitman, 2008). The liquidity of a firm is measured by its ability to satisfy its short-term obligations as they come due. Liquidity refers to the solvency of the firm's overall financial position - the ease with which it can pay its bills. Because a common precursor to financial distress and bankruptcy is low or declining liquidity, these ratios can provide early signs of cash flow problems and impending business failure. The two basic measures of liquidity are the ratio and the quick (acid-test) ratio (Gitman, 2008).

Activity ratios measure the speed with which various accounts are converted into sales or cash-inflows outflows. With regard to current accounts, measures of liquidity are generally inadequate because differences in the composition of a firm's current assets and current liabilities can significantly affect its "true" liquidity and to assess the activity (liquidity) of specific current accounts. A number of ratios are available for measuring the activity of the most important current accounts, which include inventory, accounts receivable, and accounts payable. The efficiency with which total assets are used can also be assessed (Gitman, 2008).

The debt position of a firm indicates the amount of other people's money being used to generate profits. In general, the financial analyst is most concerned with long-term debts, because these commit the firm to a stream of contractual payments over the long run. The more debt a firm has, the greater its risk of being unable to meet its contractual debt payments and becoming bankrupt. Because creditors' claim must be satisfied before the earnings can be distributed to shareholders, current and prospective shareholders pay close attention to the firm's

ability to repay debts. Lenders are also concerned about the firm's indebtedness. Management obviously must be concerned with indebtedness (Gitman, 2008).

In general, the more debt a firm uses in relation to its total assets, the greater its financial leverage. Financial leverage is the magnification of risk and return introduced through the use of fixed-cost debt a firm uses, the greater will be its expected risk and return.

There are many measures of profitability. As a group, these measures enable the analyst to evaluate the firm's profit with respect to a given level of sales, a certain level of assets, or the owners' investment. Without profits, a firm could not attract outside capital. Owners, creditors and management pay close attention to boosting profits because of the great importance placed on earnings in the marketplace (Gitman, 2008).

Market ratios relate the firm's market value, as measured by its current share price, to certain accounting values. These ratios give insight into how well investor in the marketplace feel the firm is doing in terms of risk and return. They tend to reflect, on a relative basis, the common stockholders' assessment of all aspects of the firm's past and expected future performance (Gitman, 2008). Earnings per share is the ratio between earnings number of shares outstanding. Diluted earnings per share, on the other hand, takes into account any dilutive potential ordinary shares. This is important to stockholders because it enables them to measure the performance of the firm while taking into account the effect of dilutive potential ordinary shares outstanding during the period. This ratio also gives an indication on future profit distribution.

Signaling theory is needed to convey information when transacting parties do not know each other well – that is, the reporting company to its various users (Tan, 2003). It must be noted that it is a mode of comments via financial statement. As for the analysis of the relationship between the degree of compliance with IFRS and profitability, this was shown in a recent study made by Ferrer and Ferrer (2011) on publicly listed corporations in the Philippines. The pair used an econometric model to estimate the degree and significance of the association between profitability and the IFRS disclosure index for companies listed under Food, Beverage & Tobacco, Telecommunication, and Information Technology Industries. The econometric model that was employed to estimate the degree and significance of the association between profitability and the IFRS disclosure index as well as its significance was the multiple regression model. The researchers performed disclosure scoring on 981 items of the IFRS disclosure checklist that was issued by Pricewaterhouse Coopers Alfaraih (2009), on the other hand, conducted a study on compliance with International Financial Reporting Standards and the value relevance of accounting information in emerging stock markets. The purpose of his study was to "investigate whether companies produced financial statements that provided users both high-quality and valuable accounting information." First, he determined the degree to which Kuwait Stock Exchange (KSE)-listed firms comply with IFRS. In addition to that, Alfaraih also identified several factors, such as firm attributes and industry categorization, which contributes to variations in compliance levels. Next, he addressed the importance IFRS-based financial statements to investors. Finally, after measuring the degree of compliance and value relevance, he established the relationship between the two variables. Alfaraih's research design consisted of two parts. First, the researcher examined the level of compliance using a disclosure index. Second, the researcher evaluated the earnings and book value of KSE-listed companies using the price and return models in order to determine the value relevance of financial statement information.

Another important factor to consider in assessing disclosure compliance is the type of auditor engaged by a company. Auditor type can be classified into those belonging to the big four firms and those belonging to small firms. It was revealed that a company's type of auditor is closely associated with its disclosure compliance (Street & Gray, 2002). Companies being audited by the big four firms are likely to have more extensive disclosures on their financial statements as compared to those companies which were audited by small auditing firms. Street and Gray (2002) contradicted the positive association by revealing that there is indeed no association between a company's profitability and level of disclosure compliance. As observed, the link between profitability and level of disclosure compliance has not been clearly established. In a research conducted by Mutawaa (2010), he identified specific characteristics that were also identified by other researchers that might affect the level of disclosure compliance of companies. Company size is one of the factors that are greatly considered by most in assessing the degree of a company's disclosure compliance. However, contrary to what was revealed earlier, Street and Gray (2002), conducted a similar study and revealed that company size is not related with disclosure compliance. Aside from company size, profitability is also another characteristic that might affect disclosure compliance. Profitability, as measured by financial ratios such as Return on Total Assets and Return on Equity were already related by prior researches to level of disclosure compliance. In a study conducted by Owusu-Ansah and Yeoh (2005), a positive association was made between profitability and the level of a company's disclosure compliance.

In a study conducted by Horton, Serafeim and Serafeim (2010) regarding the effect of IFRS adoption into the information environment of an entity, it was revealed that during the mandatory IFRS transition, quality of information provided in the financial statements significantly improved as evidenced by more accurate forecasts generated after mandatory adoption. Forecast errors were significantly reduced after using financial statements prepared under IFRS. This implied an improved and more reliable set of financial statements that can be used in meeting various needs of an entity.

In a study conducted by Stuart Deming (2005), he specifically mentioned two glaring advantages of having a single set of standards such as that of IFRS. First, it reduces the cost of capital since the same standards will apply regardless of location. Aside from that, the time and expense spent on applying a different set of standards will be reduced by the use of a single consistent standard. "In essence, it is like using the same language. Translation costs are eliminated" (Deming, 2005). Another benefit as mentioned by Deming is the enhancement of information used for decision-making.

RESEARCH METHODOLOGY AND MODEL SPECIFICATION

A descriptive-correlation approach was adopted in this study. The descriptive aspect focused on identifying the magnitude of financial disclosures by Philippine companies listed with the Philippine Stock Exchange (PSE) with the end in view of developing a strategy to maximize compliance with International Financial Reporting Standard 3 particularly on business combination. The correlation aspect refers to a determination if a relationship exists between the IFRS 3 disclosure indices and the financial ratios of publicly listed companies in the Philippines.

To achieve the objective, an econometric model was employed. Econometrics is an application of mathematical and statistical techniques to economics in the study of problems, the analysis of data, and the development and testing of theories and models. Economic modeling technique that seeks to explain in mathematical terms the relationships between key economic variables such as capital spending, wages, bank interest rates, population trends, and also

government fiscal and monetary policies. Even though the main focus of econometric models has been economic data, econometrics can still be employed using data that are not used in economic terms.

The multiple regression analysis allows the users to explicitly control many other factors that affect the dependent variable. Compared to simple linear regression model, the multiple regression analysis allows us to correlate more independent variables to our dependent variable which in turn will be useful in determining the true relationship between the independent variable and the dependent variable.

The following regression has been estimated:

IFRS 3 Disclosure Index and Liquidity ratios

$$CA = ß_0 + ß_1 FRSDISC3Ind_i + e_i$$

$$QA = C_0 + C_1 FRSDISC3Ind_i + e_i$$

IFRS 3 Disclosure Index and Financial Performance

$$EPS = D_0 + D_1 FRSDISC3Ind_i + e_i$$

$$ROE = E_0 + D_1 FRSDISC3Ind_i + e_i$$

IFRS 3 Disclosure Index and Financial Leverage

$$DE = F_0 + F_1 FRSDISC3Ind_i + e_i$$

$$IC = G_{0 + G1} FRSDISC3Ind_i + e_i$$

where:

FRSDISC3Ind = IFRS 3 Disclosure Index of a firm;
CA = current ratio of the a firm;
QAR = quick asset ratio of a firm;
EPS = basic earnings per share of a firm;
ROE = return on total equity of a firm;
DE = debt equity ratio of a firm;
IC = interest coverage/ earned ratio of a firm;
Bs, Cs, Ds, Es, Fs and Gs = parameters of the model or the estimated marginal effects of individual explanatory variables on the dependent variables;
e1 = error term or disturbance term attributable to unknown factors.

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

The only predictor variable is the merger and acquisition disclosure index (MADINDEX) while all the other variables are predicted variables. The average value of MADINDEX is 0.78, which portrays that the respective companies, on average, comply with about 78% of the disclosure requirements of IFRS 3. The minimum value of 0.55 shows that, at the very least, firms are obeying 55% of the disclosure requirements as set forth in IFRS 3. In contrast, the maximum value of 0.98 displays that companies, despite of all its efforts to comply with the requirements of IFRS 3, are only able to follow up to 98% of the required disclosures. The endogenous variables are the current ratio, quick ratio, return on equity, return on assets, asset turnover ratio, payables turnover ratio, debt to equity ratio, asset to equity ratio, price per earnings ratio and the dividends payout ratio.

Table 1
DESCRIPTIVE STATISTICS

VARIABLE	OBS	MEAN	STD. DEV.	MIN	MAX
CA	1,146	49	552	100	13,900
QA	1,138	55	569	99.963	13,900
ROE	1,146	93	2,116	13,200	56,710
ROA	1,154	59.023	1,019	28,565.52	2,520
AT	990	13	190	100	4,286
PT	752	27	300	100	5,614
DE	1,151	1,654.654	56,926	1,931,180	18,115
ER	1,153	2	167	1,559.483	4,791
PER	752	13	173	120.846	4,427
DPR	380	4	80	100	1,499
MADINDEX	1,275	0.779	0.098	55	983

The current ratio and quick ratio are used to measure the companies' liquidity. The average current ratio is 48.74, which means that the current assets of the companies in average are more than 48 times higher than the amount of their current liabilities. On the other hand, the quick ratio depicts a mean value of 54.89, which signifies that the amount of current assets less inventory is more than 54 times greater than the amount of current liabilities possessed by the company. At initial glance, these averages between current ratio and quick ratio may seem incomprehensive, since it is anticipated that the average quick ratio would be smaller. This expectation is due to the fact that the current assets would be smaller in the quick ratio rather than the current ratio, as a result of excluding inventory from the current assets in a quick ratio. However, the number of observation shows that there are fewer samples in the quick ratio than the current ratio, which could have been the cause that resulted to the higher average of the quick ratio.

Return on equity and return on assets are measures of the firms' profitability while the asset turnover ratio and payables turnover ratio are activity ratios. The average value of the return on equity is 93.41, which means that, on average, the net income after tax of the respective businesses are more than 93 times greater than their equity. In contrast, the average return on assets ratio is -59.02, which signifies that some observations displayed heavy losses. On the other hand, the asset turnover ratio of 13.02 shows that the average size of the firms' revenue is 13 times the amount of their assets. The mean payables turnover ratio is 27.46. This depicts that the amount of purchases made by the firms are 27 times greater than their average accounts payable.

Finally, the last group of predicted variable is the leverage ratios. The leverage ratios comprise the debt to equity ratio and equity to assets ratio. The debt to equity ratio has a mean value -1654.65, which connotes that many companies are highly leveraged. This is due largely to the fact that there is an average of 1654 amount of debt per peso of equity. In contrast, the mean value of the equity to assets ratio is 1.62.

Table 2
CORRELATION ANALYSIS

VARIABLE	CA	QA	ROE	ROA	AT	PT	DE
CA	1.0001						
QA	0.8842	1.0000					
ROE	0.0721	0.0577	1.0000				
ROA	0.0730	0.0578	0.9999	1.0000			
AT	0.2037	0.3356	-0.0104	-0.0096	1.0000		
PT	-0.0772	-0.1025	-0.0462	-0.0465	0.1317	1.0000	
DE	-0.4603	-0.3403	0.0226	0.0176	-0.5446	-0.1158	1.0000
ER	0.3781	0.2631	-0.0311	-0.0267	0.4670	0.1272	-0.8827
MADINDEX	0.0084	0.0483	-0.0625	-0.0615	0.0198	-0.0567	-0.0121

The correlation table displayed the relation of the different variables with each other. All of the endogenous variables depicted a low correlation with the merger and acquisition disclosure index. This is evidenced by their correlation coefficient that is lower than 0.20. On the other hand, some of the predicted variables denoted a moderate to high correlation with the other dependent variables. A high correlation is exhibited when the correlation coefficient is greater than 0.80. Thus, this means that a correlation coefficient between 0.20 and 0.80 displays a moderate correlation. Specifically, there is a high correlation between current ratio and quick ratio, return on assets and return on equity, as well as equity to assets ratio and debt to equity ratio. Current ratio portrayed a high positive relation with quick ratio, as shown by its correlation coefficient of 0.88. In contrast, return on assets signified a very high positive correlation with return on equity, as provided by its correlation coefficient of almost 1. Lastly, equity to assets ratio manifested a high negative relation with the debt to equity ratio, as displayed by its coefficient of -0.88. As opposed to the high correlation, there are more variables that exhibited a moderate correlation with each other.

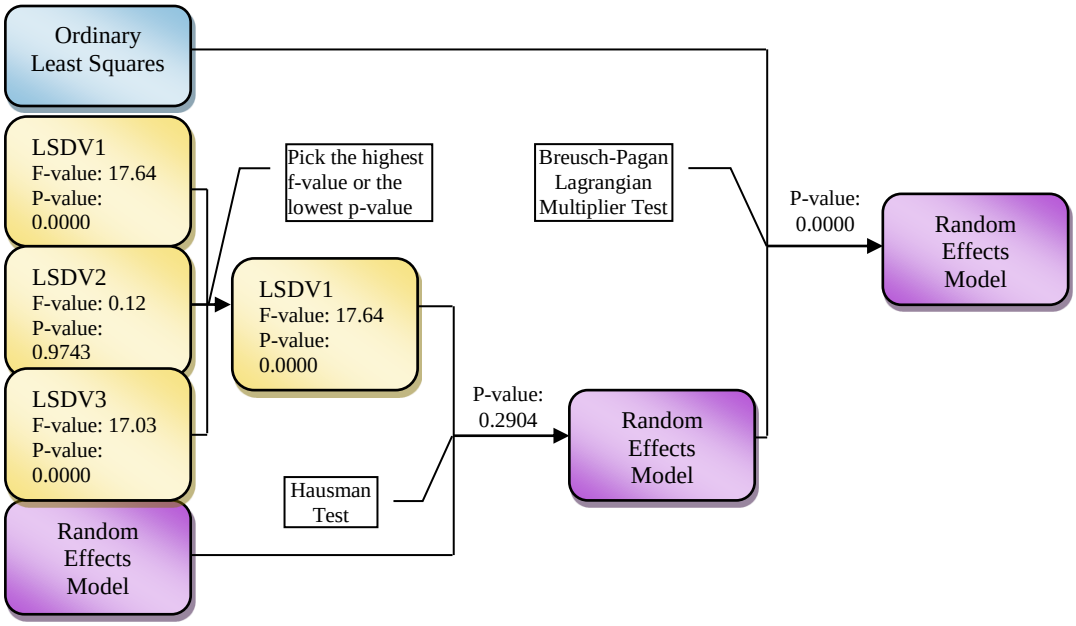
Current assets presented a moderately positive relation with the asset turnover ratio and equity to assets ratio while a moderately negative correlation with the debt to equity ratio. On the contrary, quick ratio demonstrated a moderately positive relation with the asset turnover ratio and equity to assets ratio while a moderately negative correlation with the debt to equity ratio. Asset turnover ratio revealed a moderately positive relation with the debt to equity ratio and a moderately negative correlation with the debt to equity ratio.

Panel Analysis, Empirical Findings and Final Linear Regression Table for the Liquidity Ratios and IFRS Disclosure Index

This section explains the results of the panel analysis, as well as the analysis of the final regression model for each of the activity ratios, namely the current ratio and the quick ratio.

Panel analysis was conducted in order to determine which among the three models: ordinary least squares, fixed effects model and random effects model was appropriate for the study. The data was first run using the OLS model and the appropriate sum of the squares of the residuals was noted. Afterwards, the data was run under each of the three variations of the fixed effects model, namely LSDV 1, LSDV 2 and LSDV 3. The model with the highest f-value or lowest p-value among the three LSDV models was used to represent the FEM. The test of overall significance of the dummies revealed that LSDV 1 has the highest f-statistics and the lowest p-value. As a consequence, LSDV 1 was the model used to represent FEM.

Figure 1
PANEL ANALYSIS WITH CURRENT RATIO AS THE ENDOGENOUS VARIABLE



In order to find out whether FEM or REM is the more appropriate model for the data, Hausman test was performed. The null hypothesis under the Hausman test provides that REM is the better model. Consequently, the alternative hypothesis indicates that FEM is the more fitted model for the data. Hausman test displayed a resulting p-value of 0.29, which is insignificant at alpha equals 0.05. Hence, this means that the null hypothesis would be accepted. As a result, REM is the chosen model.

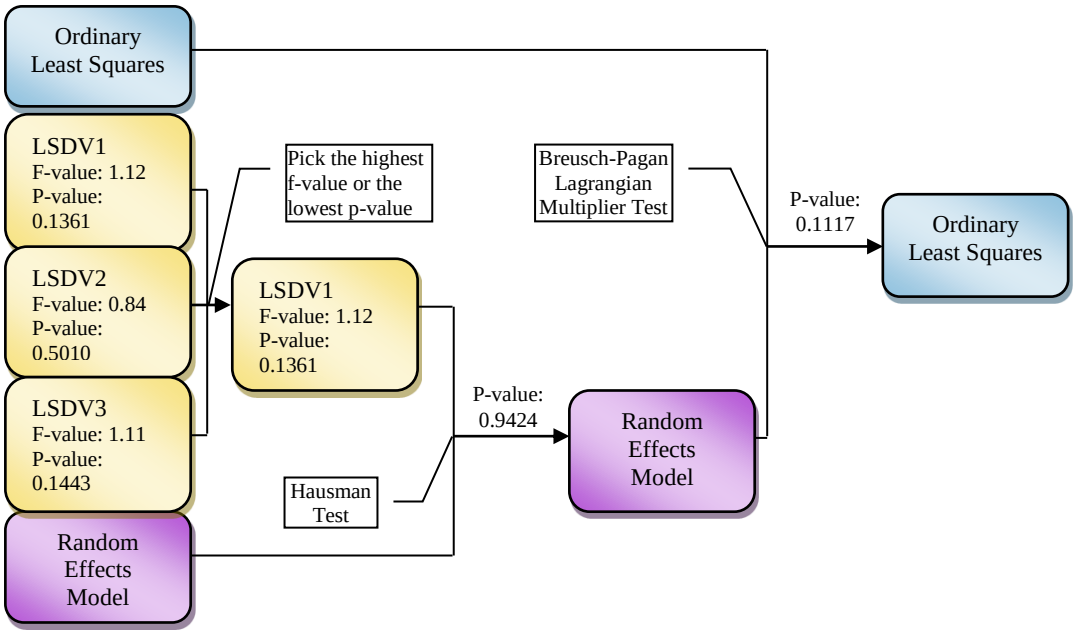
Since the result of the Hausman test indicate that REM is the better model, Breusch and Pagan Lagrangian multiplier test was subsequently conducted to examine whether OLS or REM is the better model. The result, as shown in the above figure, indicated a p-value of more than 0.00, which is significant at α equals 0.05. This implies the rejection of the null hypothesis that OLS is the better model. As a result, this denotes that the alternative hypothesis that REM is the more fitted model for the data is accepted. Hence, REM is the accepted model from the panel analysis, which indicates that this is the model that would be used for the regression analysis.

Table 3
LINEAR REGRESSION MODEL FOR CURRENT RATIO
Random-effects GLS regression on Current Ratio

INDEPENDENT VARIABLE	COEFF. EST.	STD. ERROR	z	p-value
MADINDEX (β_2)	0.559	0.277	2.020	0.044
Intercept (β_1)	0.502	0.226	-2.220	0.026
No. of observations	597			
Overall Chi^2 Square Test	0.0435			
Overall R^2	0.0067			
Coefficient estimates in bold; the standard error estimates are robust				

The disclosure index of merger and acquisition exhibited a significant positive relation with the current ratio, as shown by its p-value. The z-score of 2.02 denoted a p-value of 0.04, which is significant at α equals 0.05. Hence, this resulted to the rejection of the null hypothesis that the exogenous variable has no relation with the endogenous variable. As a consequence, this implied that the predictor variable has a significant relation with the predicted variable. Since the coefficient of MADINDEX portrayed a positive sign, this indicates that the said variable is positively related with the current ratio. As a result, merger and acquisition disclosure index has a significant positive relation with the current ratio.

Figure 2
PANEL ANALYSIS WITH LIQUIDITY RATIO AS THE ENDOGENOUS VARIABLE



Panel analysis was conducted in order to determine which among the three models: ordinary least squares, fixed effects model and random effects model was appropriate for the study. The data was first run using the OLS model and the appropriate sum of the squares of the residuals was noted. Afterwards, the data was run under each of the three variations of the fixed effects model, namely LSDV 1, LSDV 2 and LSDV 3. The model with the highest f-value or lowest p-value among the three LSDV models was used to represent the FEM. The test of overall significance of the dummies revealed that LSDV 1 has the highest f-statistics and the lowest p-value. As a consequence, LSDV 1 was the model used to represent FEM. In order to find out whether FEM or REM is the more appropriate model for the data, Hausman test was performed. The null hypothesis under the Hausman test provides that REM is the better model. Consequently, the alternative hypothesis indicates that FEM is the more fitted model for the data. Hausman test displayed a resulting p-value of 0.94, which is insignificant at alpha equals 0.05. Hence, this means that the null hypothesis would be accepted. As a result, REM is the chosen model.

Since the result of the Hausman test indicate that REM is the better model, Breusch and Pagan Lagrangian multiplier test was subsequently conducted to examine whether OLS or REM is the better model. The result, as shown in the above figure, indicated a p-value of more than

0.11, which is insignificant at α equals 0.05. This implies the failure to reject the null hypothesis that OLS is the better model. Hence, OLS is the resulting model from the panel analysis, which indicates that this is the model that would be used for the regression analysis.

Table 4
LINEAR REGRESSION MODEL FOR QUICK RATIO
Ordinary Least Squares Estimation on Quick Ratio

INDEPENDENT VARIABLE	COEFF. EST.	STD. ERROR	t-statistic	p-value
MADINDEX (β_2)	208.474	198.647	1.050	0.295
Intercept (β_1)	-107.515	141.444	-0.760	0.448
No. of observations	1138			
Overall F-test	0.2950			
R^2	0.0013			
Coefficient estimates in bold; the standard error estimates are robust				

Merger and acquisition disclosure index has no relation with the quick ratio, as provided by the insignificant p-value. The t-statistic of 1.05 depicted a p-value of 0.295, which demonstrate that the variable is insignificant at α equals 0.05. Although the coefficient of the index connotes a positive relation with the dependent variable, its true relation is zero. This is the result of failing to reject the null hypothesis that the independent variable has no relation with the dependent variable. Hence, changes in the merger and acquisition disclosure index have no effect on the changes of the quick ratio.

Regression Table for the Profitability Ratios and IFRS Disclosure Index

Table 5
LINEAR REGRESSION MODEL FOR RETURN ON EQUITY
Ordinary Least Squares Estimation on Return on Equity

INDEPENDENT VARIABLE	COEFF. EST.	STD. ERROR	t-statistic	p-value
MADINDEX (β_2)	-190.049	569.504	-0.330	0.739
Intercept (β_1)	241.392	458.936	0.530	0.599
No. of observations	1146			
Overall F-test	0.11			
R^2	0.0001			
Coefficient estimates in bold; the standard error estimates are robust				

There is no significant relation between merger and acquisition disclosure index and the return on equity ratio, as displayed by the insignificant p-value. The t-statistic of -0.33 signified a p-value of approximately 0.74, which is insignificant at α equals 0.05. As a consequence, the null hypothesis that the independent variable has no explanatory power over the dependent variable is accepted. This manifests that although the coefficient of the disclosure index shows a negative relation; its true coefficient is actually zero. As a result, there is no relation between the merger and acquisition disclosure index and the return on equity ratio.

The insignificant relation between the disclosure index and the return on equity denote that the level of compliance of the listed companies to the disclosures required by PFRS 3 is independent of its return on equity. It is a common belief that profitable companies are more compliant with the disclosures of PFRS 3 while less profitable companies are more reluctant because they are trying to make their financial statements “look better” in order to prevent the market value of its stocks from falling. The reason behind the fall of the stock price stems to the

representations made by management prior to the business combination. Most business combinations occur with the consideration given as the shares of stock of the acquirer. Hence, this would increase the number of shares outstanding of the acquiring company, which would lower the ownership interest of its incumbent owners, which made business combinations an unattractive strategy from the stockholders' point of view. However, before engaging in business combination, one of the requirements is the approval of such action by at least two-thirds of the stockholders of the company. In order to convince the stockholders to agree to the proposed act, management would often portray this to enhance the company's profitability and return on equity. Hence, if the post-acquisition company reported an income lower than what the management projects, this would provide management with the incentive to engage in earnings manipulation in order to prevent the company's stock price from falling due to the disappointment of its stockholders. As a consequence, this result denounces the notion of earnings manipulation and provides evidence that there is no relation between the companies' profitability and the degree of compliance to the disclosures of PFRS 3.

Table 6
LINEAR REGRESSION MODEL FOR RETURN ON ASSET
Ordinary Least Squares Estimation on Return on Asset

INDEPENDENT VARIABLE	COEFF. EST.	STD. ERROR	t-statistic	p-value
MADINDEX (β_2)	-447.300	374.770	-1.190	0.233
Intercept (β_1)	389.313	264.749	1.090	0.275
No. of observations	1154			
Overall F-test	0.2329			
R^2	0.0018			
Coefficient estimates in bold; the standard error estimates are robust				

Similar to the results on the preceding variables, merger and acquisition disclosure index also exhibited an insignificant relation with the return on total assets ratio. The t-statistic indicated a value of -1.19 or an equivalent p-value of more than 0.23. This p-value is insignificant at α equals 0.05. As a result, the null hypothesis is once again accepted, which translates that the true coefficient of the disclosure index is 0. For that reason, merger and acquisition disclosure index has no relation with the return on total assets ratio.

The insignificant relation exhibited by the return on assets with regards to the disclosure index provides that the degree of compliance to the disclosures of PFRS 3 is independent of the companies' profitability. This result simply reinforces the implication of the previous variable, which actually provides evidence against the notion of earnings manipulation on the part of less profitable companies through less compliance to the disclosure requirements of PFRS3. Earnings manipulation takes advantage of the flexibility present in the accounting standards, which is often concealed through fewer disclosures. When the companies engage in business combinations, this often creates an anticipation on the part of various stakeholders, especially to the investors, that the post-acquisition company would be more profitable than the combined earnings of the two separate companies. In other words, there is an expectation that the return on assets of the company would increase. However, not all post-merger companies portray this pattern. Some companies indicate difficulties in its combination and, as a result, plunged its reported income. As a consequence, less profitable firms have an incentive to engage in earnings management in order to boost their earnings and prevent the decline of its stock price resulting from investor's dissatisfaction. Hence, this result provides evidence against the notion of earnings management through less compliance to the disclosure requirements of PFRS 3.

Regression Table for the Activity Ratios

Table 7 LINEAR REGRESSION MODEL FOR ASSET TURNOVER RATIO Random-effect GLS regression on Asset Turnover Ratio				
INDEPENDENT VARIABLE	COEFF. EST.	STD. ERROR	z	p-value
MADINDEX (β_2)	-45.920	57.888	-0.790	0.428
Intercept (β_1)	50.036	50.564	0.990	0.322
No. of observations	990			
Overall Chi^2 Square Test	0.4276			
R^2	0.0004			
Coefficient estimates in bold; the standard error estimates are robust				

Merger and acquisition disclosure index denoted an insignificant relation with the asset turnover ratio, as evidenced by the insignificant p-value. The z-score of -0.79 is equivalent to a p-value of approximately 0.43, which is insignificant at α equals 0.05. This means that the null hypothesis stating that the exogenous variable is not related to the endogenous variable is accepted. As a result, the true coefficient of the disclosure index with regard to the asset turnover ratio is zero. In other words, this implies that merger and acquisition disclosure index does not contribute to changes in the asset turnover ratio.

The insignificant relation portrayed by the merger and acquisition disclosure index and the asset turnover ratio indicates that the degree of compliance to the disclosures of PFRS 3 has no connection to the efficiency of a company's use of its assets in generating sales revenue. In other words, the level of disclosure has no relation to the operating effectiveness of the company. Management of companies with low asset turnover ratio may have the incentive to disclose fewer requirements of PFRS 3 in order to prevent blame for the company's ineffective operation. As a consequence, it is anticipated that a low asset turnover ratio would parallel a low disclosure index. However, the result indicated otherwise. Hence, this finding provides evidence that companies with low asset turnover ratio do not necessarily have a low merger and acquisition disclosure index.

Regression Table for the Leverage and IFRS Disclosure Index

Table 8 LINEAR REGRESSION MODEL FOR PAYABLES TURNOVER RATIO Random-effect GLS regression on Payable Turnover Ratio				
INDEPENDENT VARIABLE	COEFF. EST.	STD. ERROR	z	p-value
MADINDEX (β_2)	2.818	55.208	0.050	0.959
Intercept (β_1)	28.173	41.365	0.680	0.496
No. of observations	752			
Overall Chi^2 Square Test	0.9593			
R^2	0.0000			
Coefficient estimates in bold; the standard error estimates are robust				

The merger and acquisition disclosure index has no significant relation with the payables turnover ratio, as indicates by the insignificant p-value. The z-score of 0.05 provides an equivalent p-value of 0.96, which is insignificant at α equals 0.05. Although the coefficient indicates a positive relation between the disclosure index and the payables turnover ratio, its p-value failed to reject the null hypothesis that the independent variable has no explanatory

power over the predicted variable. Hence, there is, in reality, no relation between the merger and acquisition disclosure index and the payables turnover ratio.

The insignificant relation between the disclosure index and the payables turnover ratio denote that the degree of compliance to the disclosures of PFRS 3 has no association with the rate at which the company pays off its suppliers. The payables turnover ratio would give management an idea as to the company's float, which would help them make more effective use of the firm's funds. Some of the uses would be to invest in marketable securities, as additional working capital or as a cheap source of short term financing. When two companies engage in business combination, the post-acquisition company may experience some liquidity problems, since it would have to disburse a substantial amount of cash in order to finance the acquisition. Such disbursement may include the cash payment to the acquired business or payment to the retrenched employees. As a consequence, management may attempt to prolong the payment period in order to have a cheaper source of financing for its working capital. However, such action would not normally affect the level of compliance of the company to the disclosure requirements of PFRS 3, since the disclosure requirements pertain to the business combination of the firms, not to the subsequent actions after the combination. Hence, this evidence shows that the degree of compliance to the disclosure requirements of PFRS 3 has no relation with changes in the payables turnover ratio.

Table 9
LINEAR REGRESSION MODEL FOR DEBT-TO-EQUITY RATIO
Ordinary Least Squares Estimation on Debt-to-Equity Ratio

INDEPENDENT VARIABLE	COEFF. EST.	STD. ERROR	t-statistic	p-value
MADINDEX (β_2)	26,492.420	26,077.340	1.020	0.311
Intercept (β_1)	-22,284.470	21,982.100	-1.010	0.312
No. of observations	1151			
Overall F-Test	0.3107			
R^2	0.0021			
Coefficient estimates in bold; the standard error estimates are robust				

There is no significant relation between merger and acquisition disclosure index and the debt to equity ratio, as provided by the insignificant p-value. The t-statistic of -1.02 signified a p-value of more than 0.31, which is insignificant at α equals 0.05. As a consequence, the null hypothesis that the independent variable has no explanatory power over the dependent variable is accepted. This manifests that although the coefficient of the disclosure index shows a positive relation; its true coefficient is actually zero. As a result, there is no relation between the merger and acquisition disclosure index and the debt to equity ratio.

The insignificant relation of the debt to equity ratio and the merger and acquisition disclosure index provides that the degree of compliance exhibited by the companies to the disclosure requirements of PFRS 3 has no effect on the company's leverage. Some acquisitions occur with the acquiring company purchasing a company that is staggering at the brick of bankruptcy. Oftentimes, this is because the acquirer could see an opportunity to make use of the acquiree's assets in order to boost its profitability, such as, for example, through operating synergies and other economies of scale. However, the acquiree would most often be insolvent, which would plunge the acquirer into huge liability and, consequently, increase its debt to equity ratio. The increase in the acquirer's leverage may provide a negative signal to its investors, which would lead to the decline of its stock price, due to the higher risk possessed by the company. Hence, some companies try to conceal the additional debt by creating special purpose

entities and using other propaganda. In addition, these companies would most likely be less critical to the disclosure requirements of PFRS 3. Therefore, companies with high debt to equity ratio have an incentive to comply less with the disclosure requirements of PFRS 3 in order to conceal their liabilities or to make the company appear less risky to its investors. As a result, this finding provides evidence that the level of compliance to the disclosure requirements of business combinations is not affected by the degree of leverage possessed by the companies.

Table 10
LINEAR REGRESSION MODEL FOR EQUITY TO ASSET RATIO
Ordinary Least Squares Estimation on Equity to Asset Ratio

INDEPENDENT VARIABLE	COEFF. EST.	STD. ERROR	t-statistic	p-value
MADINDEX (β_2)	-3.079	34.949	-0.090	0.930
Intercept (β_1)	4.014	23.962	0.170	0.867
No. of observations	1153			
Overall F-Test	0.9298			
R^2	0.0000			
Coefficient estimates in bold; the standard error estimates are robust				

Merger and acquisition disclosure index implied an insignificant relation with the equity to assets ratio, as evidenced by the insignificant p-value. The z-score of -0.09 is equivalent to a p-value of exactly 0.93, which is insignificant at α equals 0.05. This translates that the true coefficient of the disclosure index with regards to the equity to total assets ratio is zero. In other words, this connotes that changes in the merger and acquisition disclosure index does not contribute to changes in the equity to total assets ratio.

The disclosure index exhibited an insignificant relation with the equity to assets ratio, which portrays that the level of compliance to the disclosure requirements of a business combination is independent of the companies' leverage. This finding reinforces the result of the previous variable and strengthens the evidence against the notion of more leveraged companies complying less with the disclosure requirements of PFRS 3 in order to conceal their liabilities and make their companies appear less risky. One example of such company is Enron. Enron created several special purpose entities, which it used to hide its liabilities. During the economic downturn in the United States, Enron tried to engage in a "big bath" by recognizing all the losses and liabilities that it hid in the special purpose entities. However, this led to a SEC investigation and, consequently, to the company's demise. Nonetheless, despite the example provided by Enron and the response made by the government to the issue (e.g. passage of the Sarbanes-Oxley Act), many companies are still engaging in creative accounting in order to boost its stock price. This is often associated with fewer disclosures in order to prevent suspicion. As a result, it is anticipated that there would be a direct relation between the disclosure index and the equity to assets ratio, since the higher the equity to assets ratio, the less leverage is the company. Hence, this result provides evidence against this expectation and, as a consequence, indicates that the disclosure requirements of PFRS 3 have no relation with the equity to assets ratio.

CONCLUSIONS

Following the signaling theory by Ross, companies would disclose financial information since their managers desire to relay the firm's financial position and the results of its operations to different stakeholders such as investors. Moreover, managers aim to reassure the stakeholders that the company is in a going concern status and relieving market pressures.

The application of the signaling theory is further corroborated as firms appear to have an incentive to voluntarily report to the capital markets even if there were no mandatory reporting requirements. Firms compete with one another for scarce risk capital, and voluntary disclosure is necessary in order to successfully compete in the market for risk capital. Thus, regardless of the industry to which the PLCs belong, they would still be complying with International Financial Reporting Standard disclosure requirements.

The findings suggest that the IFRS 3 disclosure index of mergers and acquisitions exhibit a significant positive relation with the current ratio. Furthermore, the IFRS 3 disclosure index seems to have no relation with the quick ratio, as supported by the insignificant p-value. Hence, changes in the merger and acquisition disclosure index have no effect on the changes of the quick ratio.

There is no significant relation between the merger and acquisition disclosure index and the return on equity ratio, as displayed by the insignificant p-value. The t-statistic of -0.33 signified a p-value of approximately 0.74, which is insignificant at α equals 0.05. This manifests that although the coefficient of the disclosure index shows a negative relation, its true coefficient is actually zero. Thus, there is no relation between the merger and acquisition disclosure index and the return on equity ratio. The merger and acquisition disclosure index also exhibited an insignificant relation with the return on total assets ratio. The insignificant relation exhibited by the return on assets with regard to the disclosure index provides that the degree of compliance to the disclosure requirements of PFRS 3 is independent of the companies' profitability. This result simply reinforces the implication of the previous variable, which actually provides evidence against the notion of earnings manipulation on the part of less profitable companies through less compliance to the disclosure requirements of PFRS 3. Earnings manipulation takes advantage of the flexibility present in the accounting standards, which is often concealed through fewer disclosures.

The merger and acquisition disclosure index denoted an insignificant relation with the asset turnover ratio, as evidenced by the insignificant p-value. The true coefficient of the disclosure index with regard to the asset turnover ratio is zero. In other words, this implies that merger and acquisition disclosure index does not contribute to changes in the asset turnover ratio. The insignificant relation between the merger and acquisition disclosure index and the asset turnover ratio indicates that the degree of compliance to the disclosures of PFRS 3 has no connection to the efficiency of a company's use of its assets in generating sales revenue. In other words, the level of disclosure has no relation to the operating effectiveness of the company. The merger and acquisition disclosure index has no significant relation with the payables turnover ratio, as indicated by the insignificant p-value. The insignificant relation between the disclosure index and the payables turnover ratio denote that the degree of compliance to the disclosures of PFRS 3 has no association with the rate at which the company pays off its suppliers. The payables turnover ratio would give management an idea as to the company's float, which would help them make more effective use of the firm's funds.

There is no significant relation between merger and acquisition disclosure index and the debt to equity ratio, as provided by the insignificant p-value. The t-statistic of -1.02 signified a p-value of more than 0.31, which is insignificant at α equals 0.05. This manifests that although the coefficient of the disclosure index shows a positive relation, its true coefficient is actually zero. Therefore, there is no relation between the merger and acquisition disclosure index and the debt to equity ratio.

The insignificant relation of the debt to equity ratio and the merger and acquisition disclosure index provides that the degree of compliance exhibited by the companies to the disclosure requirements of PFRS 3 has no effect on the company's leverage. Some acquisitions occur with the acquiring company purchasing a company that is staggering at the brick of bankruptcy. Therefore, companies with high debt to equity ratio have an incentive to comply less with the disclosure requirements of PFRS 3 in order to conceal their liabilities or to make the company appear less risky to its investors. As a result, this finding provides evidence that the level of compliance to the disclosure requirements of business combinations is not affected by the degree of leverage possessed by the companies.

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EARNINGS MANAGEMENT INDICATORS AND THEIR IMPACT ON INVENTORY TURNOVER UNDER FOOD, BEVERAGE AND TOBACCO SECTOR: A THOROUGH STUDY USING SIMULTANEOUS EQUATIONS MODEL

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ABSTRACT

The scope of the study's sample size dwells on publicly listed firms that are engaged in food, beverage, and tobacco business. As for the computation of discretionary accruals, the extent of the study lies in the Modified Jones model. The point of analysis is also limited to the extent of literature that the researchers have gathered, in which the same, deemed as relevant for this paper. The statistical analyses that the researchers did are (1) regression analysis to derive the amount of discretionary accruals per firm, (2) panel data analysis to assess the impact and relationship of the FS variables to discretionary accruals and discretionary accruals to inventory turnover ratio, and (3) simultaneous equations model to assess the impact and relationship identified in the determining earnings management to the inventory turnover ratio. The samples that were used in this study include the companies listed in the Osiris database. The study focused on food, beverage, and tobacco industry. Data were captured from their published financial statement.

Keywords: *Earnings Management Indicators, Inventory Turnover, Panel Analysis and Simultaneous Equations Model*

INTRODUCTION

Capital, resources, extensive and successful risk-based management are common denominators among successful entrepreneurs such as Howard Schultz and Donald Trump. These things, however, can be best equated and explained by Peter F. Drucker's famous quote: "Whenever you see a successful business, someone once made a courageous decision". Their businesses started by another common denominator – a right amount of courage used at the right time, a pint of courage to return a million dollar profits.

Just as how subtle business decisions may be, as exhibited by choices which appear to be simple, such as make or buy and invest or divest, these decisions are also becoming increasingly critical in nature. A simple decision can make one an instant billionaire, but a tip of the balance may mean a chance of losing large profits. Hence, all business decisions should be well-informed and based on reliable and relevant data in order to ensure profits and mitigate risks to an acceptable level. Information processing and reporting financial data that is relevant and reliable to users of financial statements is the primary purpose of accounting. These accounting standards are generally based on objective judgment. However, several accounting standards allow management to exercise its discretion to report a certain account based on their own set of assumptions. More often, this discretion results into recognizing accruals thus, leading to the term discretionary accruals. It is a common knowledge among people that are well-versed in accounting that recognition of accruals affects the balance sheet and the income statement.

Recognition of accruals affect the assets and liabilities as well and the profit and loss accounts. This should be viewed as a critical factor which raises flags on the possible repercussions brought by judgment of management. Needless to say, rationally, they have the motivation to increase earnings reported in the financial statements, making these accruals become subjective by nature. The big question is, will this discretion handed to management undermine the value of financial statements particularly on inventory turnover.

RELATED LITERATURE, STUDIES AND THEORETICAL FRAMEWORK

Earnings management usually derives an unfavorable reputation as it can often be perceived as "cooking the books", or in other words, altering financial statement figures just to achieve a more favorable disposition in front of potential investors, creditors and other parties interested or currently engaging with the entity. Roychowdhury (2006) reinforces this idea made in reference to Healy and Whalen (1999). He said that "Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting practices."

The above claims refer to the manipulation of earnings through accounting estimates, yet another method at which earnings management is manifested is through operational decisions made by management known as real activities manipulation. It is defined as "departures from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations" (Roychowdury, 2006).

"Virtually, all management activities have the potential to affect earnings, and so constitutes earnings management" (Public Oversight Board, 2002). Earnings management is often associated with productivity whereby forecasts for sales and profitability are derived and maximize the use of resources to achieve the said forecasts. In a more technical sense, it is a known fact that managing earnings is inherent with how the organization manages its resources to ensure its effective and efficient use. Thomas McKee (2005) reinforces the idea by stating that "Earnings Management is a reasonable and legal management decision making and reporting intended to achieve stable and predictable financial results." Certain practices exist wherein the figures reflected on financial reports are altered not through operational means, but through the procedures in which these reports are produced. However, it is still unknown as to where earnings management may stem from. This is so because a typical employee would resort to alteration of earnings to achieve higher profitability and in return this employee will receive higher bonus or salary. This practice is not aligned with the objective of maximizing shareholers' wealth. These conflicting interests provide a skeptical auditor a reason to raise his/her awareness as to the existence of fraudulent activities that may stem from earnings management.

Recognition of income and expenses is fundamental in accounting, but there are different methods that govern this process. The two primary methods that are widely used and accepted are the cash basis and the accrual basis. The cash method of accounting or cash receipts and disbursements method of accounting records revenue when cash is received, and expenses when they are paid in cash (McQuaig, 2010). Accrual accounting, on the one hand, is an accounting method in which transactions are recognized as the underlying economic events occur, regardless of the timing of the related cash receipts and payments (Khan, 2007). Total accruals can be categorized into discretionary accruals and non-discretionary accruals. The non-discretionary component reflects business conditions (e.g., growth and the length of the operating cycle) that

naturally create and destroy accruals, while the discretionary component identifies management choices (Keefe, 2009). Discretionary accruals, on the other hand, are those that are subject to the choices of the managers. Common examples of these are the bad debts expense, impairment and revaluation of assets, capitalization of borrowing costs, capitalization of research and development costs, and many more (Nelson, Elliott, & Tarpley, 2003). Several studies have stumbled upon earnings management, and the common thing among them is the subject of discretionary accruals. It is implied that managers use discretionary accruals to smoothen income and consequently to signal information concerning the firm's future performance (Subramanyam, 1996).

Higher level of inventory turnover indicates efficiency in managing inventory by turning it fast to cash. The same analysis can be said with other asset activity/turnover ratios. "Accruals are directly related to sales growth. If asset efficiency remains unchanged, then sales growth will lead to a proportional increase in accruals. Second, accruals are inversely related to efficiency. If sales growth remains unchanged, then decreases in asset efficiency lead to a proportional increase in accruals." (Richardson, Sloan, Soliman,& Tuna, 2001). More so, total accruals can also be affected through the liability component under the following assumption of Richardson et al. (2001): "Growing firms tend to have both growing assets and growing liabilities. Thus, while the direct effect of increased liabilities is to reduce accruals, increased liabilities tend to be associated with increased assets, leading to an indirect increase in accruals. This indirect asset effect dominates the direct liability effect, leading to a net positive correlation between changes in liabilities and total net accruals."

It is suggested that inventory and receivables are underestimated components in determining the degree of discretionary accruals. It was discovered by Scholer (2006) that unexpected or sudden changes in these accounts reflect possible discretionary behavior in terms of activity as such accounts tend to be adjusted at year-end to reflect transactions occurring within the end of the year up to the after balance sheet period. The above literature is consistent with the claims of Roychowdhury (2006) who concluded that earnings management can take the form of a varying level of activity. It can be implied that as the firm engages in higher activity levels that construe earnings management, so to say, then the activity ratios are, obviously, altered to further reflect those changes. Since the activity ratio is primarily concerned with day-to-day operations, it is within the grasp of management to provide more control on its current assets, particularly speeding up the turnover of its inventories and the collection of its receivables. It is of particular importance to point that sales is the primary target of the increase in activity, thereby stimulating the need to adjust accruals as well. Accruals play an important role in establishing the desired activity ratio for benchmarking purposes as operational factors can be difficult to control while changes in accounting estimates provide a direct and controllable effect on the financial statement figures.

Earnings management usually derives an unfavorable reputation as it can often be perceived as "cooking the books", or in other words, altering financial statement figures just to achieve a more favorable disposition in front of potential investors, creditors and other parties interested or currently engaging with the entity. Roychowdhury (2006) reinforces this idea made in reference to Healy and Whalen (1999). He said that "Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting practices." The above claims refer to the manipulation of earnings through accounting estimates, yet another

method at which earnings management is manifested is through operational decisions made by management known as real activities manipulation. It is defined as "departures from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations" (Roychowdury, 2006).

Positive Accounting, Agency and Prospect Theories

The objective of the positive accounting theory is to explain and predict the accounting practice (Watts & Zimmerman, 1986). Moreover, this theory seeks to explain why management chooses one policy over the other. An example of this is a firm that uses the fair value model of valuing assets while others in its industry uses cost model. By knowing the reasons behind their actions, one can predict future actions as well. Moreover, this theory is a means of providing reasons for observed behavior. According to the theory, there are three views that justify a company's use of earnings management. The first view is where management disguises the true or actual performance of the company to gain benefits at the expense of other stakeholders. This view, otherwise known as the opportunistic view, lays down perspective to further understand the motives of those managers that are driven by self-interest. The next view is management's use of discretionary accruals to minimize their costs or expenses to contracting parties for the transactions entered between them. Second view is otherwise known as the contractual view. The last view involves management using discretionary accruals to show or reveal information about future firm prospects. In summary, these three views explain the reasons why management decided to utilize discretionary accruals. Positive Accounting Theory is supplemented by Agency theory which states that there is a difference between management and owner interests due to the separation of ownership and control (Jensen & Meckling, 1976). In an agency relationship, one party acts on behalf of another (Shapiro, 2005). Usually, the incentives given to the agent are tied to the level of performance he/she delivers. This opens an opportunity for earnings management.

Agency theory states that there is a conflict between management and owner interests due to the separation of ownership and control (Jensen & Meckling, 1976). In an agency relationship, one party acts on behalf of another (Shapiro, 2005). This being the case, the principal usually is too busy to do a job necessitating the need to delegate the responsibility to others for a consideration given because there are medial tasks which may be delegated allowing for the principal to focus on the tasks that require his expertise. An agent is the recipient of those rewards and incentives. Likewise, the one who obligates himself to perform the entrusted responsibilities. Usually, the incentives given to the agent are tied to the level of performance being delivered apparently seen through specific targets/benchmarks. This opens an opportunity for earnings management. Similarly, managers usually try to use discretionary accruals so that they would always meet the target so they could receive the best rewards. They can simply beef up their earnings by lowering income-reducing accruals if their company is not performing well. They can also shed up some excess earnings and use them as buffer for the days of drought. Moreover, agency theory does not only apply to those aforementioned above. It also applies to a creditor and debtor relationship. The debtor here is the agent as he is the one who borrows the funds and utilizes it while providing a return for the lender of it. It used to be generally accepted feature of agency theory models of credit market that the borrower has better information than the lender (Janda, 2006). The debtor knows whether the covenant attached to the debt will be fulfilled. Should there be restrictions or covenants such as maintaining a certain agreed liquidity ratio, the debtor can resort to discretionary accruals if the actual numbers will contradict to those

stated in the agreement. In short the debtor can resort to discretionary accruals to be able to meet the covenants and therefore escape paying a larger cost. Information asymmetry occurs when one party has more or better information than the other partyin the transactions (Akerlof, 1970). An example of this happens when the management has more information than the stakeholders primarily because they have them at their disposal. Earnings management takes place when the earnings are manipulated to show certain amounts so that stakeholders will feel confident and at ease that their company is on a good track. Using discretionary accruals, management can conceal the true performance of the firm. This also applies to the case of the debtor having more information than the creditor where the debtor has more information than the creditor about his ability to pay and probability of bankruptcy.

The prospect theory, developed by Daniel Kahneman and Amos Tversky in 1979, is a theory of decision making under conditions of risk and uncertainty. The study shows that people are more loss averse. It also reveals that people are more sensitive to losses than they are to profits. Greater focus is placed on losses than forgone gains. Applying this to business, stakeholders tend to place a lesser amount of confidence if the companies they are connected with are suffering losses rather than the company foregoing great gains opportunities. This can affect how the management acts and makes decision. The managers will try to spend time to avoid facing these kinds of losses instead of taking risky ventures that may generate a larger gain. Again, this opens a door to earnings management. Since the public reacts to a loss more negatively, the managers will be pushed to use discretionary accruals as a means to recoup those losses.

RESEARCH METHODOLOGY

A descriptive-correlation and causal -exploratory approach were adopted in this study. Causal research dwells under the general notion of causality, the idea that one thing leads to the occurrence of another. The tests involved the use of the models researched such as the modified Jones model to calculate the amount of discretionary accruals which would then be followed by a series of panel regressions and verification using the simultaneous equation model. This research design required stronger evidence to make generalizations to ascertain the cause and effect relationship; thus, promulgating the use of experiments or tests. Through these means, the researchers were able to manipulate the variables at hand and achieve the objectives in obtaining results of the probable relationship and impact of those factors to the ratios while ensuring that other unnecessary variables are plugged in to the analysis. Exploratory research is another design used in this study. The samples that were used in this study include the companies listed in the Osiris database. The study focused on food, beverage, and tobacco industry. Data were captured from their published financial statements from 2008 to 2012.

SIGNIFICANCE OF THE STUDY

Conclusions and recommendations presented in this paper may help several stakeholders in making well informed business decisions. However, these are of paramount importance to the shareholders, the board of directors, the government, regulatory bodies, investors, debtors, CPAs, auditors, academe, researcher, and the public. Shareholders and the BOD will be provided with adequate information on the possible important factors which affect the earnings management processes of the firm. It explains how certain ratios and indices can be prone to subjective reporting. Uninformed decision makers may look into some ratios with absolute confidence and infallibility, but explaining such factors as susceptibility to too much manipulation gives them more information on how to properly use these certain ratios. This also allows the BOD to take actions which they deem necessary to minimize and limit the incidence of earnings management in the company. This will also pre-dispose the BOD to detect earnings management and make recourses that address these incidents. Government agencies and other regulatory boards will benefit in this study since it serves to increase their awareness on the factors which affect and augment earnings management. The extent at which the company exercises discretion in various accounts should be properly identified so that appropriate regulations and implementation guidelines may be imposed. These regulations should be able to detect when an accrual is simply for matching revenues and expenses and when an accrual leads to deliberate misstatement and misrepresentation of amounts. This is done to curtail and minimize incidents and risks of misrepresentation of the financial statements. Specifically, the revenue agencies will make use of this information to identify accounts which are prone to misstatement by management. This is done to eliminate misdeclaration of earnings and to improve efficiency in tax collection procedures.

Existing and prospective investors, future and current debt holders and the general public depend of the statements and financial ratios of the company as they assess the overall performance and position of said company. This study identifies various accounts with increased risk of manipulation or machinations in the financial statements published by the company. This study will encourage more scrutiny and greater care as they formulate economic decisions, as this study gives them a good background on the different factors affecting earnings management. Certified Public Accountants will be able to prepare more accurate financial statements while auditors can express an opinion on the financial statements which are in accordance with the GAAP. With this increased awareness, auditors can increase the substantive tests that detect certain forms of earnings management and help the company address these incidents to portray a more accurate financial statement. Academic use of the findings may supplement or disprove other studies previously conducted. It may also serve as an enhanced input and reference to more advanced studies regarding the topic. As it becomes more popular, earnings management can be integrated in various accounting and finance managements and in the syllabus and course curricula of business courses. Students who become aware of the findings of this study may also be encouraged to pursue researches relevant to the topic with a strong foundation on earnings management concepts.

PANEL ANALYSIS, EMPIRICAL FINDINGS AND FINAL LINEAR REGRESSION TABLE FOR FINACIAL RATIOS, FULL IFRS DISCLOSURE INDEX AND IFRS DISCLOSURE INDEX FOR SMEs

Table 1 depicts that Accounts Receivable, Net Financial Asset, Salaries Expense, Property Plant and Equipment, Long Term Debt and Inventory have a significant effect on Discretionary Accruals. With p-values less than 0.01, which render the variables significant at 99% confidence level, accounts receivable, net financial assets, salary expense, property, plant and equipment, long-term debt and inventory significantly affect discretionary accruals. Since these variables are just proxies, the results show that the amount of bad debt expense, fair value gains, and losses on financial instruments, benefits expense, impairment loss and recovery on property plant and equipment have direct effects on discretionary accruals. The accounts receivable variable serves as a measure of the amount of impairment loss, bad debts expense and subsequent recovery of such that the firm could recognize. The accounts receivable having a p-value of 0.000 and t-score of 4.00 renders the variable significant at 99% confidence level, suggesting that accounts receivable significantly affects discretionary accruals. Also, it can be seen that the coefficient is positive, suggesting that there is a direct relationship between accounts receivable and discretionary accruals. Net financial assets are used for measuring the net exposure of the firm to financial instruments in the form of stocks, securities, bonds and etc. This would check the level of fair value gains or losses that a firm could recognize.

Table 1
EFFECTS OF FINANCIAL STATEMENT ACCOUNTS IN DISCRETIONARY ACCRUAL

da	Coef.	Std. Err.	t	p>|t|	[95% Conf. Interval]	
da						
L1.	.2650564	.111905	2.37	0.020	.034145	.4866984
ar	.685268	.171145	4.00	0.000	.3462937	1.024242
netfinassets	-.1378477	.0161903	-8.51	0.000	-.1699147	-.1057807
salaries	-.1334469	.0173431	-7.69	0.000	-.1677971	-.0990966
ppe	-.1382885	.0267816	-5.16	0.000	-.1913329	-.085244
qaltd	-2.72e-09	3.26e-10	-8.34	0.000	-3.37e-09	-2.07e-09
invty	-.2432745	.1128322	-2.16	0.033	-.4667528	-.0197962
_cons	110309.7	191161.9	0.58	0.565	-268310.6	488930

The regression results show a p-value of 0.000 with an equivalent t-score of -8.51. Because the variable's p-value is significant at 99% confidence level, it can be concluded that net financial assets significantly affect discretionary accruals. Also, net financial assets having a negative coefficient suggest that the variable has an indirect relationship with discretionary accruals. Salaries Expense has a t-score of -7.69 and a p-value of 0.000, meaning that such will be significant at a 99% confidence level. From this statistical analysis, it can be concluded that salary expense has a significant effect on discretionary accruals. Apart from that, a negative coefficient gives way to the implication that the effect of this variable is to decrease discretionary accrual income. Property, Plant and Equipment (PPE) has a t-score of -5.16 and a p-value of 0.000, which then means that it will be significant at 99% confidence level, hence having a significant effect on discretionary accruals. Long Term Debt yields a p-value of 0.000 with an equivalent t-score of -8.34. Since it is significant at a 99% confidence level, it can be concluded that long-term debt has a significant effect on discretionary accruals. The negative coefficient of this variable indicates that companies use long-term debt to accrue expense in the form of

expensing the interest expense outright. Inventory has a p-value of 0.033 with an equivalent t-score of -2.16. Because it is significant at a 95% confidence interval, it can be concluded that inventory has an effect in discretionary accruals. By looking at the coefficient, it can be seen that inventory has a negative coefficient which means that it negatively affects discretionary accruals. Discretionary Accrual at Lag 1 also significantly affects the Current Discretionary Accrual. It has a p-value of 0.020 and t-score of 2.37. It has a positive relationship which means an increase in this variable increases the current discretionary accrual income. The regression shows that accounts receivable, net financial assets, salary expense, property, plant and equipment, long-term debt, and inventory significantly affect discretionary accruals. The results for accounts receivable suggest that the company's accounts receivable will be used to accrue income as indicated by the positive coefficient of the variable. While the net financial assets suggest that an increase in this variable will decrease the amount of discretionary accrual income. Furthermore, the negative coefficient of the property, plant and equipment proves that companies would not recover their previously recognized impairment losses rather they would recognize more impairment losses to decrease their income for the current year. Long-term debt also shows a negative coefficient suggesting that companies use long-term debt to accrue more expense through expensing outright the interest expense associated with the qualifying assets. The results of the regression implies that it is optimal for companies that engage in earnings management to stack up on accounts receivable, net financial assets, property, plant and equipment, long-term debt, salary expense, and inventory. By doing such, this would give them more liberality and freedom to manipulate their earnings. Therefore, the capability of management to exercise discretion on the reporting of financial performance with respect to these variables pose a threat to the existence of earnings management through discretionary accruals.

Table 2 below depicts that none of the variables significantly affect Inventory Turnover. The total assets beginning of year showed a p-value of 0.760 and an equivalent z-score of -0.31. This means that total assets at the beginning of year do not significantly affect inventory turnover. It can also be seen that total beginning assets has a negative coefficient showing that it has an indirect relationship with inventory turnover. The degree of operating leverage showed a p-value of 0.582 and an equivalent z-score of -0.31. This means that the variable degree of operating leverage does not significantly affect inventory turnover. The predictor discretionary accruals at lag 0 indicated a p-value that is more than 0.100 which renders it insignificant. Similarly, discretionary accruals at lag 1 shows a p-value of 0.601 under a 95% confidence level which also renders it insignificant.

Table 2
EFFECT OF DISCRETIONARY ACCRUAL ON INVENTORY TURNOVER REM

it	Coef.	Std. Err.	z	p>|z|	[95% Conf.	Interval]
totalassetsbeginningcurrentyear	-7.02e-09	2.30e-08	-0.31	0.760	-5.21e-08	3.81e-08
degreeofoperatingleverage	-.0007709	.0014013	-0.55	0.582	-.0035174	.0019756
da						
--.	3.20e-07	3.98e-07	0.80	0.421	-4.60e-07	1.10e-06
L1.	2.65e-07	5.06e-07	0.52	0.601	-7.26e-07	1.26e-06
_cons.	12.03792	3.434402	3.51	0.000	5.306616	18.76922
sigma_u	17.406334					
sigma_e	13.792073					
rho	.61431347	(fraction of variance due to u_i)				

Table 3 below shows that all FS accounts affect discretionary accrual. After the SEM regression, accounts receivable has a p-value of 0.000 and an equivalent t-score of 3.89. This means that accounts receivable significantly affect discretionary accruals at 99% confidence level. The positive coefficient between accounts receivable and discretionary accruals shows a direct relationship between the two. The variables show a p-value of 0.000 and an equivalent t-score of -8.29. Thus, it can be claimed that there is a significant relationship with discretionary accruals at the 99% confidence level. A negative coefficient indicates inverse relationship discretionary accruals. This means that an increase in net financial assets would decrease discretionary accruals. It also implies that discretionary income may be decreased through this account.

Table 3
SIMULTANEOUS EFFECT MODEL FOR INVENTORY TURNOVER

	Coef.	Std. Err.	t	p>|t|	[95% Conf. Interval]	
it						
totalassetsbeginningcurrentyear	-5.68e-09	1.83e-08	-0.31	0.756	-4.17e-08	3.04e-08
degreeofoperatingleverage	-.0007476	.00195	-0.38	0.702	-.0045893	.003094
da						
--.	1.05e-07	6.50e-07	0.16	0.872	-1.18e-06	1.39e-06
L1.	7.45e-08	6.24e-07	0.12	0.905	-1.16e-06	1.30e-06
_cons.	11.85007	1.999178	5.93	0.000	7.911469	15.78867
da						
da						
L1.	.2929982	.1133951	2.58	0.010	.0695974	.516399
ar	.6764659	.1740848	3.89	0.000	.3334997	1.019432
netfinassets	-.1380236	.0166396	-8.29	0.000	-.1708054	-.1052418
salaries	-.1602655	.0179419	-8.93	0.000	-.195613	-.124918
ppe	-.1390383	.0276251	-5.03	0.000	-.1934628	-.0846139
qaltd	-3.17e-09	3.46e-10	-9.15	0.000	-3.85e-09	-2.48e-09
invty	-.254499	.1152743	-2.21	0.028	-.4816021	-.0273959
_cons	128975.5	194997.8	0.66	0.509	-255191.7	513142.7
Endogenous variables:	it da					
Exogenous variables:	Total assets beginning current year degree of operating leverage L. da ar					
	qaltd invty					

Salary expense yields a significant relationship with discretionary accruals with a p-value of 0.000 and an equivalent t-score of -8.93. Since the regression showed a p-value of 0.000 and a negative relationship between the two, the null hypothesis in this study should be rejected. Because of a negative relationship, an increase in salary expense would decrease the discretionary accruals. Based on the data, the variable has a p-value of 0.000 and an equivalent t-score of -5.03. This indicates a statistical significance at the 99% confidence level alongside a negative coefficient for property, plant and equipment. This would mean that an increase in property, plant and equipment would mean a decrease in discretionary accruals. Long term debt: This variable has a p-value of 0.000 and a t-score of -9.15 and a negative coefficient. Thus, the researchers find this instance as a significant inverse relationship, which rejects the null hypothesis where at first it was expected that it does not have an effect on discretionary accruals. Inventory: The results show a p-value of 0.028 and a t-score of -5.97. Thus, under a 95% confidence interval, inventory has a significant relationship with discretionary accruals. It also showed a negative coefficient implies a negative relationship with discretionary accruals

meaning an increase in inventory would decrease discretionary accruals. Based on the results, discretionary accruals have a statistically significant effect on inventory turnover. It showed a p-value of 0.044 and an equivalent t-score of 2.02 indicating a statistically significant relationship at 95% confidence level. It also showed a positive coefficient indicating a positive relationship between discretionary accrual and inventory turnover. DA Current: The results show a p-value of 0.872 and an equivalent t-score of 0.16. This means that it is statistically insignificant to make an inference about the said results. Even though it showed a positive coefficient, its p-value suggests that it should be equal to zero. But the positive coefficient indicates that it has a positive relationship with inventory turnover DA at Lag 1: The results show a p-value of 0.905 and an equivalent t-score of 0.12. This means that it is statistically insignificant to make an inference about the said results. Even though it showed a positive coefficient, its p-value suggests that it should be equal to zero. But the positive coefficient indicates that it has a positive relationship with inventory turnover Degree of Operating Leverage: The results show a p-value of 0.702 and an equivalent t-score of -0.38 which means that it is statistically insignificant and does not affect inventory turnover. It also showed a negative coefficient indicating a negative relationship with inventory turnover but because of its p-value, it should be equal to zero. Total Assets at Beginning of the Year: The results show a p-value of 0.756 and an equivalent t-score of -0.31 which means that it is statistically insignificant and does not affect inventory turnover. It also showed a negative coefficient indicating a negative relationship with inventory turnover but because of its p-value, it should be equal to zero.

CONCLUSION

"Think outside the box." This phrase has earned significance in today's world that is filled with challenges and competition. Having the mentality of challenging the norm, going against the flow of the conventionality, and carving one's own path has change the world and the way it operates. In the corporate world, business decisions made are highly reliant to the accounting information furnished by the corporations. From decisions affecting the operations of the company to investment decisions made by investors, accounting information is crucial and a necessity. Data embodied by accounting information are published through the financial statements which are specifically tailored based on a standard. For general-purpose financial statements, the most common accounting standards being followed are the International Accounting Standards (IAS) and the International Financial Reporting Standards (IFRS). These standards are published by the International Accounting Standards Board. They are widely accepted across the globe. Going back to the topic of "thinking outside the box," what does it has to do with these accounting standards? How are they connected?

These internationally published standards are principle-based to allow flexibility and harmony with the local rules and regulations promulgated by specific countries on their own. Some of the provisions of the standards are straight-forward, i.e., they provide outright the specific treatment to a specific economic transaction or event. However, some of them rather allow for a leeway. Preparers, usually the management of the corporations, are given freedom and discretion in prescribing the treatment for a specific account. Thinking outside the box, these managers may use this ample amount of discretion allowed to them to be used to their advantage. The discretionary power given to them presents an opportunity for them to manipulate the financial data shown by financial statements and show a rather optimistically sham outlook of their business. Needless to say, rationally, they have the motivation to increase earnings reported

in the financial statements, making these accruals become subjective by nature. The big question is, will this discretion handed to management undermine the value of financial statements particularly on inventory turnover.

Data testing were done to provide answers to the formulated hypotheses. The first test revealed that Accounts Receivable, Net Financial Asset, Salaries Expense, and Long Term Debt have a significant effect on Discretionary Accruals. Accounts receivable, Net Financial Asset, and Long Term Debt yielded significant positive coefficient which suggest that an increase in the values of the variables will result to increase in discretionary accruals. This results imply that the greater the values of these variables, the more likely it is that management used discretionary accruals to manipulate earnings. On the other hand, Salary Expense yielded significant negative coefficient which suggests that increase/(decrease) in value of salary expense decreases/(increases) discretionary accruals. Second test revealed that discretionary accruals do not significantly affect current ratio. This implies that, should the management use discretionary accruals to manage earnings, it is not for the purpose of making the inventory turnover ratio more appealing for evaluation purposes. In the data testing that has been done, none of the variables, including the lagged values, affect inventory turnover ratio. Lastly, the different variables used in the first test were evaluated using Simultaneous Effect Model (SEM) to take into account simultaneity. Unlike the first test, in this test, all of the variables have effect on discretionary accruals. With all variables having negative coefficient except accounts receivable, it could be inferred that a decrease in the values of the variables would lead to an increase in discretionary accruals or the other way around.

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AN EMPIRICAL INVESTIGATION OF THE IMPACT OF FINANCIAL RATIOS AND BUSINESS COMBINATION ON STOCK PRICE AMONG THE SERVICE FIRMS IN THE PHILIPPINES

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ABSTRACT

With more and more people becoming engaged in stock trading in the Philippine Exchange, it is becoming essential that these stock traders know which information would be useful for them to effectively assess and evaluate stock performance.

This study explored the possible effects of mergers and acquisitions, together with the liquidity, activity, profitability, market performance ratios and the industry subsector on the year-on-year change in stock price among the different publicly listed service companies in the Philippines during the year 2006 to 2010. The services sector includes media, telecommunications, information technology, transportation services, hotel and leisure, education as well as diversified services subsectors. These different subsectors were subjected to the statistical tools and techniques used in this paper. To accomplish this, the researchers made use of panel data regression with mergers and acquisitions, financial ratios and industry subsector as independent variables and the year-on-year change in stock price as dependent variables to highlight the impact of various regressors on stock price.

Results indicated that certain financial ratios, namely the return on asset, asset turnover, price-earnings and dividend payout ratios together with the diversified services subsector exhibited a significant impact on company's change in stock price. The result showed that some of the financial ratios had a significant impact on the company while business combinations did not have any significant impact on the year-on-year change in stock price. This indicated that managers make use of merger and acquisition strategies for purposes other than improving the stock performance of the company. This study would help corporate managers to create more advantageous strategies with the objective of increasing stock price. The study also allows the public to better anticipate changes in stock prices.

Keywords: *Business Combination, Financial Ratios, Stock Price and Service Firms*

INTRODUCTION

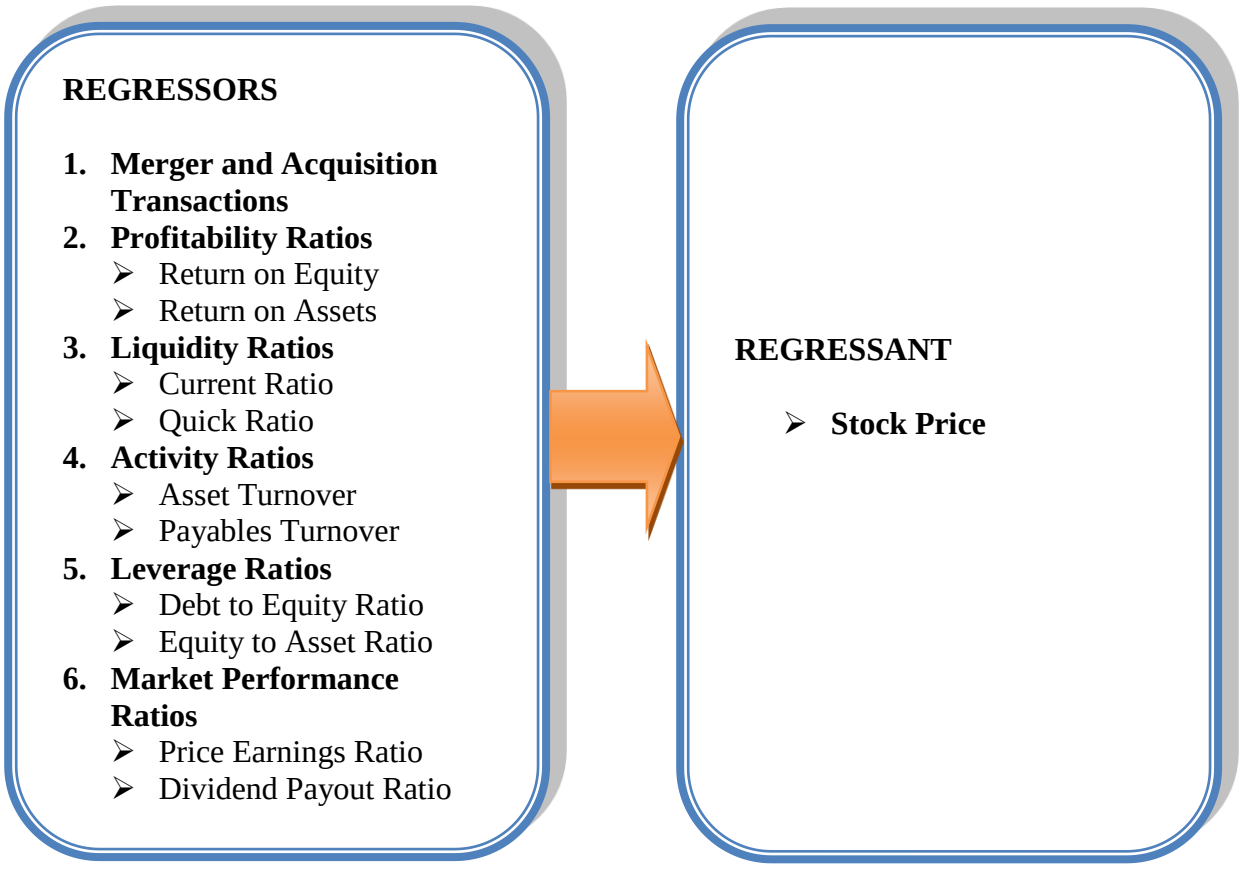
With the increased stock trading activities in the Philippines Stock Exchange, more and more people would want to take advantage of short term changes in the stock price of listed companies. In line with this, the researchers wanted to determine how traditional financial indicators in the form of financial ratios, as well as business combination activities, would impact on the change in stock price for the services sector of the country.

In order to help the researchers obtain a conclusion backed up by statistical evidence, the group made use of the panel data regression. The results of this testing would help in determining if mergers and acquisitions, financial ratios and the industry subsectors could impact the change in stock price.

Several theories, namely the efficient market theory, the discounted cash flows model, the Gordon Growth model and the Price-earnings valuation model, were used as guiding principles for this study. Studies conducted by Leong, Ward, and Gan (1996), Harjito and Sulong (2006); Bouwman, Fuller and Nain (2003) Kallunki, Lampsa and Laamanen (2008); as well as Mazzucato and Semmler (1999) also provided the researchers with valuable insights that helped in the conduct of this study.

STATEMENT OF THE PROBLEM

The study wanted to investigate about the possible effects of merger and acquisition on the change in stock prices of service companies under business combinations. Furthermore, the research wanted to determine which among the financial indicators, represented by financial ratios under the five categories namely profitability, liquidity, activity, leverage, and market performance ratios would significantly impact the year-on-year change in stock price of listed service companies. In addition, the researchers would want to know whether the industry subsectors have a particular effect on the change in stock price.



REVIEW OF RELATED LITERATURE

Merger and Acquisition

A business combination, as defined by IFRS 3, is a transaction or event in which an acquirer obtains control of one or more businesses. A business is then defined as an integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing a return directly to investors or other owners, members or participants (IFRS 3, Appendix A).

According to Moeller (2009), reasons for mergers and acquisitions fall into three broad categories. These are grouped to strategic, financial, and organizational. In strategic intent, the company wants to strengthen the combined companies' market position. This is achieved by increasing the market share or reduction in competition in the market or both. The financial reason is largely due to the money involved in the deal (Moeller, 2009). The business combination activity may be for the short-term or long-term financial goals. The last, which is the organizational intent, is when the acquiring company obtains a target company because of the target company's key management personnel or because of stock liquidity. According to the study of Massa and Xu (2011), the stock liquidity of the target company would affect the likelihood of a business combination occurring. Therefore, stock performance is one of the possible reasons for business combination.

Ravenschaft and Scherer (1987) stated that efficiency was expected to rise as a result of increased capital, shared expertise, reduced redundancy in production and realized economies of scale. This is one of the benefits of a successful M&A, however, according to Hughes (1989), this is not always the case, as M&A if not well planned can lead to even increased inefficiencies in the firm.

Financial Ratios

At present, one major concern of most firms is on how to measure and assess the degree of the success of M&A. Firms need to measure before and after effects of M&A in order for them to evaluate whether the M&A has been beneficial as planned. According to Smart and Megginson (2009), one way to measure a firm's condition is through the use of financial ratios. Financial ratios are suitable tools in analyzing a firm's financial statements to assess performance over a period. Moreover, a variety of financial ratios are existing to analyze a firm's liquidity, activity, debt, profitability and market value. After firms have measured its financial condition, they should be ready to evaluate it. Gitman (1999) discussed the use of ratio analysis, as a method of measuring and evaluating financial ratios to assess a firm's performance. For Gitman (1999), there are basically two methods of ratio assessment. One way is the use of cross-sectional analysis and the other way is the use time-series analysis. Cross-sectional analysis engages the comparison of different financial ratios that took place in the same period. Through this kind of analysis, a firm can determine how well it has performed in relation to other firms, also called as benchmarking and in relation to the industry as a whole. The other way of ratio assessment is known as the time-series analysis. In this kind of analysis, a firm compares its own performance over a period of time. This can tell whether the firm has progressed according to its plans.

Reaction of Stock Prices

Gugler and Yurtoglu (2008) discussed that one way of determining the effect of the merger is through the examination of the stock market value of the acquiring and the acquired firm. Gopalaswamy, Acharya and Malik (2008) examined the Indian market and tested stock price reaction of both the target and the acquiring companies which may have been caused by information related to a merger activity using a traditional event-study residual analysis. Their study indicated that there were abnormal returns which are stimulated by activities that are concerned with business combinations. The result was supported by Wong and Cheung (2009) wherein it was concluded that the acquiring companies would experience positive effects on stock price. Other studies that helped the researchers in this paper were Leong, Ward and Gan (1996) and Pilloff and Santomero (1996). Harjito and Sulong (2006), on the other hand, indicated that there would business combinations would have no significant impact on stock prices.

Stock Prices in Relation to Financial Ratios

Aono and Iwaisoko (2010) suggested that financial ratios have a low level of relationship with the stock price as evidenced by their study involving Japanese firms. Turk and Chapman (2006); Indriani and Sugiharto (2010) as well as Lewellen (2004), on the other hand, showed that financial ratios does not have any significant impact on the change in stock price. Martani, Mulyono and Khairurizka (2009); Hao and Zhang (2007); Cai and Zhang (2010) as well as Shams, Zamanian, Kahreh, and Kahreh (2011) indicated that financial ratios would have a significant impact on the year-on-year in stock price. Their studies provided evidence that different financial ratios can affect the stock price in different stock exchanges.

Stock Price in Relation to Industries

Kallunki, Lampsa and Laamanen (2008) examined the possible effects of industry by looking at the effects of the acquisition of firms under the technology sector. They concluded that such acquisition would affect stock price valuation in a significant manner. Moreover, Mazzucato and Semmler (1999) explored whether there exist a relationship between stock price volatility and market share instability in connection with industry specific factors using the US automobile industry. The empirical results showed that the degree of stock price volatility is indeed partly affected by industry specific factors.

METHODOLOGY

The research used a causal/explanatory approach. In this type, the researchers wanted to study the impact of business combinations, financial ratios and industry subsectors on the change in stock prices of the service companies affected. In order for the group to proceed with the research, the researchers gathered data from the website of the Philippines Stock Exchange particularly the annual reports and stock prices of all the listed service companies from 2006-2010. In order to identify the companies with business combination, the group made use of the information found in the OSIRIS database. The researchers then extracted two particular ratios under the profitability, market performance, liquidity, capital structure, and turnover measures of a company which are used to represent the financial ratios. The occurrence of

mergers and acquisitions would be captured by the use of a dummy variable. Upon gathering the data, the group used the panel data regression analysis to analyze the impact of the ratios on change in stock prices.

The research would include the fifty publicly listed entities under the services sector of the Philippine stock exchange during the periods 2006 to 2010. Ten out of the fifty companies was listed under the diversified services subsector while only three companies were listed under the education subsector. Eight companies was listed under the hotel and leisure subsector. Eleven out of the fifty was listed under the information technology subsector. Moreover, only four companies were listed under the media subsector during the periods 2006 to 2010. The remaining fourteen companies was distributed to two subsectors with five of the companies being listed under the telecommunications subsector and the last nine companies was under the transportation subsector.

The use of various statistical tools and techniques aided the group in the conduct of this study. Specifically, the various descriptive statistics, the variance inflation factor, the naïve regression model, the space-varying fixed effects regression model, the time-varying fixed effects regression model, the space- and time-varying fixed effects regression model as well as the random effects regression model was used in this study.

The researchers made use of descriptive statistics to gain a better insight on the data gathered. The means, standard deviations and the median of the entire dataset used by the group would be shown.

Before actually subjecting the data to the different panel data regression models, the researchers first removed independent variables that were highly correlated with one another. This was performed through the use of the variance inflation factor (VIF). The researchers eliminated the highest variance inflation factor exceeding ten. Upon removal, the variance inflation factor was then recomputed and if the highest variance inflation factor exceeded ten, it was again removed and the process is thereby repeated. By doing this, the group is ensuring that the final model chosen for this study would not have any risks of multicollinearity.

The group chose the panel data regression model because of the existence of cross-sectional dimension in the form of companies and time-series dimension in the data. Panel data regression allowed the researchers to obtain information regarding the possible effects of the difference business practices and conditions across companies and the dissimilarity between the economic, political, social and legal conditions across time.

The first panel data regression model is the naïve regression model wherein the data is treated as a simple cross-sectional data. For the naïve panel data regression, the researchers ran the panel data with the change in stock price as the output variable and all the independent variables that were not eliminated when the groups checked for multicollinearity as the input variables.

After running the naïve panel data regression, the group then proceeded to create the three types of fixed effects models which are the space-varying fixed effects model, the time-varying fixed effects model as well as the space- and time-varying fixed effects model. Using the fixed model would assume that time-invariant characteristics (e.g. error term and constant) are unique to the company and that it must not be correlated to another company's individual characteristic (Torres-Reyna, 2009).

The first type of fixed effects panel data regression ran by the researchers was the space-varying fixed effects model which is also called the within-groups regression. Using this model, the researchers were able to determine if the different business practices and conditions would

significantly impact the change in stock price in addition to the other regressors used in the naïve panel regression model. However, usage of this model resulted to loss of unchanging explanatory space variables and the loss of a significant amount of degrees of freedom (Dougherty, 2006).

The second type of fixed effects panel data regression used by the group was the time-varying fixed effects model, also called the first differences regression model. Unlike the space-varying fixed effects model, the second model showed the possible effects of the different political, economic and social conditions on the stock price by subtracting from the one time period the observation from the previous time period. However, the problem in the first fixed model, which is the loss of a significant amount of degrees of freedom, was still unsolved in this model (Dougherty, 2006).

The group then ran the last type of fixed effects panel data regression which was the space- and time-varying fixed effects model. This model is a combination of the two other fixed effect models and allowed the researchers to establish the impact of both the difference in business practices and conditions and the difference of the economic, social and political models on the stock price as well as the other explanatory variables that were included in the naïve regression model.

After creating the three fixed effects models, the group used the command testparm in Stata to determine which among the three models would best predict the change in stock price. After entering the command, the researchers compared the F-values of each model and chose the model with the highest F-value.

After determining the best type of Fixed Effects Panel Data Regression model, the researchers then compared the naïve panel data regression model and the time-varying fixed effects panel data regression using the Wald's Test. If the group accepts the null hypothesis of the Wald's Test, the naïve regression model would be better suited for the data. Otherwise, the best fixed effects panel data regression model would be chosen.

The last panel data regression model, which is the random effects model, was then run by the group. Unlike the fixed effects model, random effects model assumes that the entity's error term is not correlated with the independent variables which would allow time-invariant variables to be included as explanatory variables. Furthermore, random effects model allow the inclusion of time invariant variables to be included in the model (Torres-Reyna, 2006). The random effects model treats the variables previously unobserved in the fixed effects model as being randomly drawn and that these unobserved variables are independent from the variables included in the fixed effects model (Dougherty, 2006).

To compare the naïve regression model with the random effects regression model, the Breusch and Pagan Lagrangian Multiplier Test for Random Effects would be used. The Breusch and Pagan multiplier tests whether there is significant evidence against the null hypothesis which is that the variances of groups of the one-way random group effect model or the naïve model are zero. Thus, if the variances of the groups of the naïve model are not zero, the random effects model will be better than the one-way random group effect model.

The Hausman specification test would examine if the collinearity of the individual effects with the other explanatory variables in the model. If the p-value produced by the test is significant at 0.05, it can be concluded that the random errors model is better than the fixed error model. If otherwise, the fixed error model would be more appropriate.

After determining the most appropriate model for this study, the researchers then tested the model for violations of the assumptions of regression. This would prevent the results of the model from being biased and would assure the group of the reliability of the results.

The first test of robustness used by the researchers was the Breush-Pagan/Cook-Weisberg Test. This test allowed the group determines the existence of heteroscedasticity. If the test statistic provided by the Breush-Pagan/Cook-Weisberg Test was statistically significant, then there would heteroscedasticity. The final model chosen in this study was the company-varying fixed effects panel regression model.

Because of the inclusion of time-series variables, autocorrelation may occur. In order to determine if there was indeed autocorrelation, the researchers made use of the Wooldridge Test. The Wooldridge Test is a simple test for autocorrelation in panel data models. If the test yields a significant p-value, which should be lower than 0.05, then the panel data model would have autocorrelation.

If the final model would show signs of either heteroscedasticy or autocorrelation, the researchers would then have to use the generalized least squares version of the model. This allowed the group to suppress the effects of these violations and have better and unbiased results. Presentation of Findings, Analysis and Implications.

In order to have a preliminary view of the possible impact of certain financial ratios, under liquidity, profitability, leverage, activity and market performance, industry subsectors and merger and acquisitions on stock price, the researchers employed the use of descriptive statistics. Using the descriptive statistics, the researchers extracted the average, standard deviation, observations, minimum and maximum values for each variable to be used in the study.

VARIABLE	OBSERVATIONS	MEAN	STANDARD DEVIATION	MIN	MAX
Stock price	174	11.90624	54.67155	-89.83051	366.6667
Current	229	41.48751	424.9676	-99.96194	6300
Quick	229	41.59022	424.9306	-99.96333	6300
Return on equity	229	253.664	4019.093	-13200	56709.8
Return on Asset	229	-131.8639	1173.507	-15500	2520.423
Asset Turnover	202	45.79474	400.081	-100	4286.028
Payables Turnover	177	66.56135	423.1946	-100	4495.116
Debt to equity	229	-8317.496	127630.4	-1931180	18114.67
Equity ratio	229	10.05268	351.6255	-1559.483	4791.331
Price-earnings ratio	153	49.24409	372.4743	-89.0933	4427.163
Dividend pay-out	94	16.45622	158.7318	-100	1499.46
Merger and Acquisition	229	0.0960699	0.2953326	0	1
Industry Subsector	250	11.38	5.52428	5	20

Based on the mean and standard deviation of the various variables used in the study, it was unexpected to observe that the change in stock price would have the smallest standard deviation. This would indicate that the changes in the stock price were generally less volatile compared to the other variables such as the various financial ratios. The low standard deviation was unpredicted by the researchers because stock prices were said to be extremely unstable which caused the research team to expect a high variance. The result would also indicate that approximately 68% of all the year-on-year changes in stock price of the companies listed in the service sector of the Philippines would fall between -42.77% and 66.58%. The average year-on-year change in stock price during the five-year period of 2006 to 2010 was 11.91%. The greatest

stock price drop during the five-year period was 89.83% while the largest stock price gain was 366.67%.

The liquidity ratios have very similar means at 41.49 and 41.59 for current and quick ratios respectively. Moreover, their standard deviations were also very similar at 424.97 and 424.93 respectively. The minimal difference between the two ratios' means and standard deviations may be due to the idea that service companies generally have minimal inventory thereby decreasing the difference in the computation of the two ratios.

The results for the descriptive statistics testing for profitability ratios yielded very interesting results. Even though the return on asset and the return on equity are similar because both are indicators of the profitability of a company, their results (mean, standard deviation, maximum and minimum values) are entirely different. The researchers believe that this was caused by the existence of deficits (negative retained earnings balance) causing the results to be unusual. Change in return on asset average of -131.86 indicated that most of the service companies in the Philippines experienced a decline in the net income or loss over the five-year period.

In relation to publicly listed companies activity measures, mean average of percentage change for asset turnover was 45.79 along with mean average of percentage change for payables turnover which was 66.56. The standard deviation of 423.19 for payables turnover was not statistically more than the 400.081 standard deviation of asset turnover. Both activity measures' largest drop would be as low as 100% percent where the maximum increase will be much higher in payables turnover having 4495.116% than asset turnover's 4286.028 largest positive change. The average change in leverage ratios was small with the average change for -8317.496 and 10.05268 for debt to equity and equity ratios. Debt to equity standard deviation of 127630.4 was also significantly higher compared to the standard deviation of equity ratios of 351.6255.

Under the market performance of publicly listed companies, price earnings ratio would yield a mean average of 49.24 and on one hand, divided payout ratio would give an average of 16.46. These two variables have significantly less observations in comparison with other variables. The standard deviation for price earnings ratio would be higher, having 372.47, than dividend payout ratio which was 16.46. With higher degree of variability, we would expect to see broad ranges for price earnings ratio as compared to dividend payout ratio which was exactly the case, because most changes in percentage for price earnings ratio would fall between -89.09% to 4427.16% mark. The range was much larger relative to the changes in dividend payout ratio which would linger only on -100% to 1499.46% range.

Due to the existence of heteroskedasticity, the research team then made use of a generalized least square shown below:

Estimated covariances = 1	Number of obs = 85
Estimated autocorrelations = 0	Number of groups = 22
Estimated coefficients = 31	Obs per group: min = 1
	avg = 3.863636
	max = 5
	Wald chi2(30)
Log likelihood = -384.9242	Prob > chi2 = 0.0000

stockprice	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
quick	0.233095	0.167382	1.39	0.164	-0.09497	0.561158
returnonas~t	-0.0064	0.002278	-2.81	0.005	-0.01087	-0.00194
assetsturn~r	1.044943	0.254025	4.11	0	0.547063	1.542824
payablestu~r	-0.04675	0.049265	-0.95	0.343	-0.14331	0.04981
debttoequity	0.45468	0.256005	1.78	0.076	-0.04708	0.956442
equityratio	1.337102	0.948008	1.41	0.158	-0.52096	3.195163
priceearni~s	0.739805	0.079593	9.29	0	0.583805	0.895804
dividendpa~t	0.235334	0.038632	6.09	0	0.159618	0.311051
ma	-2.31723	9.419314	-0.25	0.806	-20.7787	16.14429
ind_5	45.07357	21.08051	2.14	0.033	3.756524	86.39061
ind_10	-21.3332	24.96622	-0.85	0.393	-70.2661	27.59967
comp						
59	19.1177	28.64429	0.67	0.505	-37.0241	75.25949
61	-24.7531	15.50018	-1.6	0.11	-55.1329	5.626657
62	-16.6973	18.50013	-0.9	0.367	-52.9569	19.56226
99	-56.5486	25.40044	-2.23	0.026	-106.333	-6.76461
100	-10.8201	17.88618	-0.6	0.545	-45.8764	24.23614
101	-73.9515	27.57921	-2.68	0.007	-128.006	-19.8972
106	(omitted)					
117	-23.0522	14.8672	-1.55	0.121	-52.1913	6.087031
118	-23.6494	14.86617	-1.59	0.112	-52.7866	5.487739
119	-23.5637	14.86341	-1.59	0.113	-52.6954	5.568062
120	-23.625	14.8629	-1.59	0.112	-52.7557	5.505794
242	-26.3965	14.98445	-1.76	0.078	-55.7655	2.972492
243	-23.1344	14.52939	-1.59	0.111	-51.6115	5.342636
244	-25.0098	14.80541	-1.69	0.091	-54.0278	4.008315
245	-23.1616	14.52977	-1.59	0.111	-51.6395	5.316208
246	-26.6255	14.45024	-1.84	0.065	-54.9475	1.69644
247	-369.002	46.82539	-7.88	0	-460.778	-277.226
248	3.641528	15.79929	0.23	0.818	-27.3245	34.60757
250	38.98796	15.16708	2.57	0.01	9.261022	68.7149
251	3.595321	15.86041	0.23	0.821	-27.4905	34.68116
253	(omitted)					
_cons	23.49603	10.97894	2.14	0.032	1.977697	45.01436

The model, being a generalized least square regression, the model would have no heterogeneity and autocorrelation. The overall model was statistically significant at 1% because the p-value of the overall model was 0.000. Based on the results shown by the regression output, return on asset, assets turnover, price-earnings ratio, dividend pay-out were the financial ratios that had significant impact on the change in stock price. Furthermore, an industry subsector, namely the diversified service sector, showed significant impact on the change in stock price.

The overall results of the final regression model supported the results of Harjito and Sulong (2006) which showed that there exists a positive relationship between the change in stock price and the different financial ratios. Furthermore, the results of the model was consistent with the studies conducted by Kallunki, Lampsa and Laamanen (2008) as well as Mazzucato and Semmler (1999) that specific industries in a given stock exchange would have a statistically significant impact on the stock prices. However, one of the researchers' a priori expectations was not met. The a priori expectation that business combinations would have an impact on the stock price was based on the research conducted by Leong, Ward, and Gan (1996). The result of the final model indicated however, that there was no statistical evidence that business combinations had any impact on the year-on-year change in stock price.

Based on the testing performed, merger and acquisition activities did not have any significant impact on the year-on-year change in stock price. This may be because the event window used for this research was too wide. Other researches regarding the effects of business combinations on the change in stock price made use of event windows of only several days wide. However, this research would indicate that mergers and acquisitions did not have any long-term impact on the stock prices even if there would be a significant impact on the short-term stock price changes.

The four financial ratios that were statistically significant in the final regression model were all significant at a Type I error rate of 1% with asset turnover, price-earnings ratio and dividend pay-out ratio all registering a p-value of 0.000 while the return on assets registered a p-value of 0.005. All of the significant financial ratios, other than the return on asset, had a positive impact on the year-on-year change in stock price. Furthermore, the impact of the three ratios, namely asset turnover at 1.04, price-earnings ratio at 0.74 and dividend pay-out ratio at 0.24, was significantly greater compared to the impact of the change in the return on asset of 0.01.

The result was a bit surprising because the return on asset showed a negative impact indicating that increasing the profitability of the company may result in a drop in stock prices. However, the effect of the drop in stock prices was miniscule and may be deemed immaterial even if the impact is statistically significant in our model. The positive impact of the asset turnover indicated that increasing total sales, relative to the assets of a company, would have a positive impact on the year-on-year change in stock price. An year-on-year increase of 1% in the asset turnover ratio of a company may increase stock prices by 1.04%. Price-earnings ratio had a positive impact of 0.74% on year-on-year change in stock price for every 1% increase. The impact of price-earnings ratio and return on asset was consistent because an increase in earnings would increase return on assets and decrease price-earnings ratio thereby indicating that the impact of these two variables should be different.

Diversified services, with a p-value of 0.033, was also significant at a Type I error rate of 5% indicating that companies under this subsector generally had a higher change in stock price compared to other service industries in the Philippines. The impact of being in the diversified services subsector was 45.07, which was significantly higher compared to the impact of the

financial ratios. Certain companies also experienced statistically significant impact on the year-on-year change of stock price over the five-year period, 2006 to 2010. Specifically, four companies out of the twenty-one publicly listed service entities have posted significant impacts on stock prices. This indicates that there is indeed a company-varying factor on the year-on-year change in stock price. However, the effects of these companies on the change in stock price were negative.

CONCLUSIONS

Based on the results above, it was noted that asset turnover, price-earnings ratio and dividends pay-out ratio all had a positive impact on a company's year-on-year change in stock price. This is consistent with the theoretical frameworks, the Price-Earnings and the Gordon Growth model, used in this study. Being able to increase sales by 1% relative to the total assets would be able to help managers increase year-on-year change in stock price by 1.04%. Declaration of high dividends relative to the earnings per share would also positively impact year-on-year change in stock price by 0.23%. Impact of price-earnings ratio and dividend pay-out was consistent with the results of the return on assets. Minimizing profits relative to total assets in the service sector would able to help increase stock price. By minimizing profits, the company would be able to increase price-earnings ratio as well as increase the dividend pay-out ratio. However, it must be noted that the increase in the stock price by reporting a conservative net income is minimal and therefore, it is to the company's advantage to focus more on increasing total sales relative to the total assets because this strategy of increasing stock prices would be more advantageous in the long run.

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THE ROLE OF TERM INSURANCE AS A PROVISION IN JAPANESE SME MANAGEMENT

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ABSTRACT

Japanese small and medium-sized enterprises (SMEs) rarely recognize non-tax deductible provisions, but sometimes purchase term insurance policies, which, unlike many other provisions, are tax deductible under the Corporation Tax Act. They can then play the same substantive role in the management of SMEs as provisions did before the revision of the Act in 1998. In this study, we examine several insurance hypotheses using data on the 18 largest corporations operating in the Japanese refrigerated warehouse industry and 168 Japanese SMEs satisfying the EU definition of an SME (2003/361/EC) as of March 31, 2015. Using a one-sided test of Pearson's correlation coefficients and stepwise multiple regression analysis, we find that Japanese SMEs use term insurance to decrease corporate taxes payable, whereas large corporations tend to adopt defined-benefit pension plans. Finally, we suggest that this difference can be explained from the viewpoint of business profitability.

It is interesting that Japanese SMEs regard insurance as investment in the management in the future so as to complement defined contribution pension plans for employees. More than sixty per cent of the sample SMEs maintains defined benefit pension plans in spite of new accounting standards and revised tax rules, at present. Employees are still considered as an important stakeholder in the management of Japanese SMEs.

INTRODUCTION

Has Japanese accounting system thoroughly changed from being macro-uniformed into being market-oriented in the twenty-first century? (e.g. Mueller 1967; Nobes 1996).

Once referred to as a "triangular legal system" (Arai and Shiratori 1991), the legal and conceptual framework of the business accounting system operating in Japan was formulated primarily on the basis of the Commercial Code (Act No. 48 of 1899), the Securities Translation Act (Act No. 22 of 1947), and the Corporation Tax Act (Act No. 34 of 1965). These laws work neither separately nor independently, but instead are rather closely tied. In our opinion, prior to its revision in 2005 in relation to fair accounting practices, Article 32(2) of the Commercial Code comprised the core of this system (e.g., Yanaga 2013).

Outside these legislative changes, two important events have affected the Japanese accounting system during the last two decades; namely, the so-called Japanese Big Bang in 1996 and the Tokyo Agreement of August 2007. The Financial Services Agency (2000) argued that "[an] efficient and competitive sector is absolutely essential for the vitality of the Japanese economy in the 21st century. The Financial System Reform 'Japanese Big Bang,' commenced in November 1996 under the three principles of 'free, fair, and global,' aiming to rebuild the Japanese financial market into an international market comparable to the New York and London markets." After a first step, the Act on Revision, etc., of Related Acts for the Financial System Reform (Act No. 107 of 1998), "…a package of revisions of laws, including the Banking Law, the Securities and Exchange Law, and the Insurance Business Law, that were required to

implement the Financial System Reform, was enforced in December 1998. Almost all measures were already implemented," and one dealt with the accounting system.

> *Fourth, a framework for reliable trading was established by improving the disclosure system, setting up fair trading rules, such as stricter insider trading control, and protecting customers in times of failure of financial institutions. Since the accounting period ending March 1999, financial institutions have been required by law to disclose information on their nonperforming assets on a consolidated base according to standards equivalent to the ones set by the Securities and Exchange Commission of the United States, with possible penalties for noncompliance.*

In addition to Accounting Standards for Consolidated Financial Statements in 1997, the Business Accounting Deliberation Council (BADC), an advisory body to the Ministry of Finance (Arai & Shratori 1991, p. 5), issued Accounting Standards for the Preparation of Consolidated Interim Financial Statements, Preparation of Consolidated Cash Flow Statements, Research and Development Expenditures, Retirement Benefits, and Tax Effect Accounting in 1998. It later issued the Accounting Standards for Financial Instruments in 1999. Thereafter, it additionally published the Accounting Standards for the Impairment of Fixed Assets in 2002 and Business Combinations in 2003.

In 2001, a private sector standard-setting authority (the Financial Accounting Standards Foundation, FASF) was established, in part so that there would be a clear body to liaise with the new IASB. The objective was to transfer rulemaking in accounting from the public sector (e.g., the BADC) to the private sector. Along the lines of the arrangements for standard setting in the US, the UK, and the IASB, the FASF has a supervisory Board of Governors and an Accounting Standards Board (ASBJ). One of the main tasks of the ASBJ was to assist in the convergence of Japanese accounting practice towards international accounting practice (Nobes 2004, p. 285).

Following the announcement of a project designed to remove the major differences in the rules between the ASBJ and the IASB in 2005 and the ASBJ's Statement on Japan's Progress towards Convergence in 2006, in August 2007, the ASBJ and the IASB jointly announced their Tokyo Agreement on achieving the convergence of accounting standards by 2011. This proposed the removal of major differences using the new standards by 2008, and any other differences by June 30, 2011 (Nobes 2012, p. 273). The text concerning major differences is as follows:

> *Completion of short-term convergence projects by 2008: The goal by 2008 is to reach a conclusion that eliminates the differences or provides compatible accounting standards for the items, which in July 2005, the Committee of European Securities Regulators (CESR) advised remedies as to the financial statements prepared under Japanese GAAP in connection with the equivalence assessment by the European Commission. Consequently, convergence in major areas of existing Japanese GAAP and IFRSs will be achieved through these projects.*

It is notable that the convergence target was not the US, but the EU. From the date of issue of the Agreement until December 2008, the ASBJ issued nine statements. These included Statement No. 15 on contraction contracts, Statement No. 16 on a revised equity method, Statement No. 17 on segment disclosure, Statement No. 18 on asset retirement obligations, Statement No. 19 on partial amendments to standards on retirement benefits, and Statement No. 20 on disclosures about the fair value of investment and rental property. The issued statements also included Statement No. 21 on business combinations, Statement No. 22 on consolidated financial statements, and Statement No. 23 on partial amendments to standards for research and development costs. By June 2011, the ASBJ had also issued Statement No. 24 on accounting

changes and error corrections and Statement No. 25 on the presentation of comprehensive income.

As a result, the accounting measures adopted in both the EU and the US determined Japan's generally accepted accounting practices (GAAP), and were found to be equivalent to the IFRS as adopted by the EU (European Commission 2008). This suggests the globalization of Japanese GAAP in relation to IFRS and US GAAP.

This paper aims to examine some impacts of tax regulations on SME accounting practices at present. Although it is often said that, even today, financial statements of Japanese SMEs are based on tax rules, few statistical and/or academic evidences of the observance has been collected, yet (e.g. Okabe 1994; Suzuki 2013). The main reason is the lack of their database, for the Companies Act does not require SMEs to disclose a set of financial statements in public.

As mentioned below in detail, we use financial data of those listed companies that satisfy with European SME definition. The companies can be characterized as an SME in size while they are globalized in usage of internationally converged accounting standards. They are referred to as 'middle next' by Gomez (2009) and the importance of the study seemed to be confirmed in the course of discussion as to Japan's Corporate Governance Code (Financial Service Agency 2014; Council of Experts Concerning the Corporate Governance Code 2015), which differs from Anglo-Saxon one (e. g. Takei 2015; Prencipe & Bar-Yosef 2011). Findings on them may suggest a future shape of a large number of unlisted SMEs in Japan.

Researches on these companies are not limited not only to accounting field but also to management one. One of the features of Japanese management was pointed out as lifetime or long-term employment (e. g. Tricker 1994). The results of the study can contribute to suggest the better relationship between employees and owners/managers in harmony with globalizing environment.

PROVISIONS IN ACCOUNTING AND TAXATION

The latest revision in 1982 of the Business Accounting Principles by the BADC and that of the Notes on the Business Accounting Principles regulate accounting for provisions. In the Notes (par. 18), there are four requirements for provisions: (a) they represent certain costs or losses expected to be incurred in future periods; (b) they are provided when expenses are incurred for the current period or before to precisely match expenses with revenues; (c) it is probable that they will occur; and (d) a reasonable estimate is possible. It is not possible that there can be costs or losses relating to contingent liabilities if it is improbable that they will occur. The meaning of 'probable' in (c) is much the same as that in the US GAAP (Takahashi 2001).

Therefore, while some provisions in Japan have the character of an obligation, others are not commitments to third parties, but essentially internal costs (Sakurai 2001; 2015). Table 1 provides some examples. Provisions expected due within a year from the balance sheet date are included in current liabilities.

Table 1 **CATEGORY OF PROVISIONS**	
Provision deducting from an asset (Valuation provision)	e.g., Allowance for bad debts
Provision as a liability	Obligation e.g., Allowance for retirement benefits
	Not an obligation e.g., Allowance for repairs
Legal reserve of income	e.g., Reserve for overseas investment losses e.g., Reserve for fluctuation in water levels

(Source) Sakurai (2015, p. 221).

Table 2 **RECOGNITION CRITERION OF ALLOWANCE FOR RETIREMENT BENEFITS** Unit: Number of entities			
A. Except B	1999	1998	1997
(i) Maximum amount deductible under the Corporation Tax Act; that is, 40% of the actual payment at the date of the balance sheet	209	216	215
(ii) 100% of the actual payment at the date of the balance sheet	91	86	88
(iii) Present value of the actual payment at the date of the balance sheet	57	56	57
(iv) Amount after subtraction of pension assets	56	58	60
B. Transition wholly to pension system	89	86	87
Total	502	502	506

(Source) Based on JICPA (2000, p. 317).

Under the triangular legal system, the Second Opinion for Individual Problems in Business Accounting issued by the BADC in 1968 allowed entities to treat the allowance for employees' retirement benefits (*Taishoku Kyuyo Hikiatekin*) as follows:

(a) under the method of estimating the future payments,
(b) under the method of recognizing the actual payment at the date of the balance sheet, or
(c) under the method of present value.

In line with this opinion, entities accounted for and disclosed the allowance. Table 2 details the allowance accounting practices at the time. Of the sample of companies surveyed in FY 1999, excluding those that had switched to a pension system, about half used the maximum amount deductible criterion, and about 20 percent employed the 100 percent of actual payment criterion (JICPA 2000, p. 317).

Alongside the trend towards accounting harmonization or convergence, there has also been reform of the Corporation Tax Act. The Outline of a Tax Reform Plan in 1998 specified that the calculation system for the allowance for bad debts would be changed, and that any allowances for bonuses and warranties, etc., would not be tax deductible (MOF 1998). That said, a company is still able to record a provision in excess of that allowed for tax purposes. However, the excess is not tax deductible, and thus few companies will actually do this. According to Nobes (2004, 291), this is an illustration of how the tax laws influence financial reporting in

Japan. At present, the allowance for retirement benefits does not reduce taxable income through deductions.

The Accounting Standard for Retirement Benefits issued by the BADC in 1998 applied to fiscal years beginning on or after April 1, 2000, now replaced by ASBJ Statement No. 26 Accounting Standard for Retirement Benefits. In practice, 289 entities recognized the allowance for retirement benefits, referred to in Japanese as *Taishoku Kyufu Hikiatekin*, in FY 2001, while 284 entities recognized it as *Taishoku Kyuyo Hikiatekin* in FY 2000. Since then, its accounting treatment has converged.

We question the reason why an entity may consider an alternative deduction, one that plays the role not only of an allowance for retirement benefits, but also as a tax deductible instrument. In a case study of Japanese SMEs in the refrigerated warehouse industry, Fujibayashi et al. (2016) suggested that such an instrument could be insurance (such as company-owned life insurance). In the following sections, we first examine large corporations in the refrigerated warehouse industry and then survey specific SMEs in Japan in this regard.

According to Goode (1964, p. 130), most life insurance policies combine the features of both pure insurance and savings. Pure insurance is protection against the risk of economic loss due to premature death. Savings take the form of a reserve accumulated from premium payments, which earn interest for the benefit of the insured. The pure insurance protection afforded by a policy at any time is the difference between the face amount of the insurance and this reserve. For example, Maples and Turner (2006) and Randolph and Seida (2007) suggested that many fringe benefits, such as employer-paid health care, result in an employer deduction, but no income recognition for the individual beneficiaries. This is problematic in that effective tax planning requires the joint consideration of any tax benefits and the costs of obtaining those benefits.

In Japan, Mizuno (1981) points out the exceptional treatment of life insurance under the Income Tax Act (Act No. 33 of March 31, 1965), in that the premiums not only are tax deductible, but are paid when the policy matures and is receivable. Compared with the tax treatment of other long-term saving instruments such as corporate bonds, loan trusts, securities investment trusts and so on, the regulation governing life insurance is clearly not well founded. In particular, endowment insurance aims to increase wealth, and is therefore characterized by a mixture of insurance, gambling, and saving. Mizuno (1982) argues that the existing laws in Japan with regard to insurance contracts do not act against the risk-spreading function of insurance in combination with its other purposes. Therefore, a company is able to use life insurance for itself by identifying the insurance premiums payable as a tax deduction, and as an insurance receivable as part of an employee's salary and/or a director's bonus. This is particularly complicated in the case of family-controlled private entities where the taxation of life insurance could be subject to interpretation. Considering conditions in Japan just a few years before, Kashima (2001) reports the movement against company-owned life insurance in the US, and the likelihood that this problem could similarly affect group insurance in Japan.

ANALYSIS OF LARGE REFRIGERATED HOUSING CORPORATIONS

We sampled 18 large refrigerated housing corporations meeting the criteria of being included in the 2014 Dictionary of the Japan Association of Refrigerated Warehouses, Inc., being listed in Japan, and having a fiscal year-end on March 31. Using financial statements ending on March 31, 2015 and following a pilot test, we identified 16 items as variables, which are listed in

the Appendix with selected descriptive statistics in Table 3. For the statistical analysis, we used *SPSS* Version 22, IBM Japan, Tokyo.

Table 3
DESCRIPTIVE STATISTICS
Unit: JPY millions

Variables	Min.	Max.	Mean	SD
1) TAXES	–365.00	13,024.00	2,696.715	3,479.668
2) ALLOW	0.00	22,209.00	6,626.886	7,306.630
3) LIABIL	0.00	20,694.00	6,299.470	7,195.274
4) #EMPLOY	64.00	12,970.00	3,599.722	4,488.001
5) SELLING	356.00	111,414.00	27,499.100	40,412.410
6) SALES	4,721.00	851,708.00	209,462.293	234,952.129
7) OPE_INCO	4.00	30,595.00	7,096.628	8,810.836
8) ORD_INCO	50.00	32,243.00	7,151.708	9,169.307
9) TOTALAS	5,756.00	475,233.00	151,560.756	151,991.979
10) CAPITAL	770.00	39,737.00	13,287.037	13,208.008
11) RETEARN	833.00	235,219.00	49,058.589	71,949.272
12) ROA	–0.36	8.74	2.426	2.244
13) CF_OPER	–1,061.00	32,641.00	8,960.128	10,446.463
14) CF_INVES	–39,976.00	–17.00	–11,000.873	13,343.378
15) CASH	622.00	41,236.00	11,920.922	12,536.539
16) FOREIGN	3.00	364.00	115.778	125.475

We used a one-sided test of Pearson's correlation coefficients. In general, the better a corporation performs, the more TAXES payable. This association with profitability also means TAXES positively relate to OPE_INCO (0.970**), ROA (0.641**), CF_OPER (0.925**), CASH (0.796**) and FOREIGN (0.910**). FOREIGN is not included in Fujibayashi et al. (2016). Next, large corporations may select some discretionary accounting and/or business methods in order to decrease TAXES. One is to invest in property, plants, and equipment, where the firm recognizes the sums paid as financial accounting expenses and as tax accounting deductibles in the current year.

It is interesting to see that TOTALAS (0.686**) positively relate to TAXES. This is because large corporations typically have a large number of regular employees who they provide with post-retirement defined-benefit pension plans, as shown by ALLOW (0.665**) and LIABIL (0.600**). We believe a large corporation would evidence ALLOW during the year by earning OPE_INCO during the same year. Therefore, it would be impossible for an SME to adopt a post-retirement defined-benefit pension plan. In the following part of the analysis, we specify SMEs as the sample.

TRENDS IN USAGE OF INSURANCE AMONG SMES

To reveal trends in the usage of insurance among Japanese SMEs, we sampled 168 SMEs. The criteria for inclusion in our sample were (a) listed in Japan and/or operating under the Financial Instruments and Exchange Act (Act No. 23 of 1948) on March 31 2014, (b) have a 2015 financial year-end of March 31, and (c) prepare their financial statements in accordance

with Japanese GAAP. In addition, we required that they (d) have a comparable reporting format (resulting in the exclusion of some financial institutions) and (e) provide all of the 36 items listed below. Lastly, we required that they (f) meet the EU's definition of an SME as a group, in line with the Commission Recommendation of May 6 2003 concerning the definition of micro, small, and medium-sized enterprises (2003/361/EC), with fewer than 250 employees and an annual turnover of €50 million or lower or assets of €43 million or lower (€1 = ¥130.315 as at March 31 2015) (EC 2005, 14). We used the database *eol* and Toyo Keizai's *Quarterly Japanese Company Handbook, Summer 2015* and *Autumn 2015*.

There were originally 36 variables, which we used to categorize the SMEs according to profits, cash flow, profitability, shareholders, commencement, post-retirement benefits, insurance, and taxes. We first used a one-sided test of Pearson's correlation coefficients to select 16 variables based on their significant relationship with TAXES. Tables 4 and 5 provide the descriptive statistics and Pearson's correlation coefficients, respectively. We then used multiple regression analysis and a stepwise estimation procedure, with the results shown in Table 6. The R^2 was 0.450.

Table 4
DESCRIPTIVE STATISTICS

Unit: JPY millions

Variables	Min.	Max.	Mean	SD
1) TAXES	–316.00	1546.00	84.3333	160.35528
2) TOTALAS	213.00	48289.00	5175.8036	5076.05237
3) SALES	324.00	9264.00	3385.2738	1910.43432
4) OPE_INCO	–1962.00	1538.00	159.5893	426.65847
5) CF_OPER	–1442.00	3019.00	198.6131	517.52792
6) CF_INVES	–8011.00	1974.00	–265.4702	841.60414
7) CASH	30.00	7359.00	1243.0714	1166.97685
8) ROA	–50.60	24.10	1.1696	11.02510
9) FOREIGN	0.00	47.10	3.5988	7.24613
10) PARTIC	10.10	100.00	58.1101	18.51911
11) ESTAB	1896.00	2015.00	1977.7560	24.53215
12) LISTING	1949.00	2015.00	1996.0952	17.79936
13) STOCK_OP	0.00	1.00	.4583	.49975
14) DEFINED	0.00	1.00	.4107	.49343
15) INSUR	0.00	1.00	.3810	.48707
16) INSUR_RE	0.00	314.00	16.5714	47.62246
17) INSUR_FL	–4.00	53.00	2.3155	8.09830
18) #EMPLOY	6.00	249.00	116.2380	62.93435

Table 5
PEARSON'S CORRELATION COEFFICIENTS OF SMES

	1)	2)	3)	4)	5)	6)	7)	8)	9)	19)	11)	12)	13)	14)	15)	16)	17)	18)
1)	1																	
2)	.235**	1																
3)	.147*	.237**	1															
4)	.463**	−.030	.410**	1														
5)	.179*	.046	.293**	.480**	1													
6)	−.133*	−.273**	−.080	−.213**	−.182**	1												
7)	.340**	.333**	.243**	.416**	.241**	−.135*	1											
8)	.245**	.155*	.360**	.460**	.391**	−.025	.224**	1										
9)	.486**	.186**	−.045	.156*	.061	−.042	.225**	.038	1									
10)	.183**	.036	.171*	.364**	.265**	−.057	.091	.371**	−.045	1								
11)	.168*	−.103	−.286**	.060	.024	−.139*	.094	.043	.135*	.202**	1							
12)	.170*	−.064	−.179*	.131*	.092	−.123	.114	.125	.053	.252**	.823**	1						
13)	.079	−.072	−.145*	.022	.043	−.093	.125	−.028	.249**	−.018	.442**	.422**	1					
14)	−.026	−.052	.168*	.104	.111	−.059	−.046	.081	−.133*	.091	−.108	−.026	−.161*	1				
15)	.097	.026	.190**	.178*	.141*	−.137*	.037	.133*	−.128*	.190**	−.128*	−.038	−.156*	.192**	1			
16)	.136*	.082	.163*	.085	.142*	.075	.215**	.061	−.079	.072	−.163*	−.144*	−.156*	.063	.445**	1		
17)	.037	.031	.111	.072	.045	−.075	.018	.060	−.083	.079	−.159*	−.130*	−.128*	.000	.311**	.051	1	
18)	.132*	.173*	.544**	.253**	.213**	.017	.205**	.252**	−.029	.111	-.160*	-.021	-.012	.208**	.134*	.052	.175*	1

**Significant at 0.01 level. * Significant at 0.05 level.

Table 6
MULTIPLE REGRESSION ANALYSIS MODEL OF TAXES

	Nonstandardized coefficient		Standardized coefficient	t-statistic	p-value
	Beta	Standard error	Beta		
Invariable	–1737.612	776.807		–2.237	.027
FOREIGN	8.532	1.351	.386	6.314	.000
OPE_INCO	.146	.022	.388	6.519	.000
TOTALAS	.006	.002	.177	2.942	.004
INSUR_RE	.473	.201	.141	2.352	.020
ESTAB	.875	.392	.134	2.231	.027

As shown, SME operating activities and profitability explain TAXES, that is, OPE_INCO (0.463**), ROA (0.245**), CASH (0.340**), and FOREIGN (0.486**). Because good performance results in increases in TAXES, managers will attempt to select some discretionary accounting and/or business methods in order to decrease TAXES. In consideration of the Corporation Tax Act, managers will then use not only defined benefit pension plans for this purpose, but also STOCK_OP (art. 54), DEFINED (art. 84) and INSUR (sec. 3 of Choku-shin No. 25, the Basic Notice of the Corporation Tax Act, May 1, 1969).

As hypothesized, SMEs will purchase insurance to pay for employee benefits and for managerial retirement compassionate allowances. INSUR_RE is positively related with CASH (0.215**) while INSUR_FL is positively related with #EMPLOY (0.478**). If an SME is good performing, INSUR_RE will increase, but not allowances for employee retirement bonuses. If it is not good performing or needs working capital, it can use the allowance for direct premium payments or surrender insurance to save money. As far as possible, an SME will prefer to use insurance to purchase insurance instead of recognizing the allowance in order to decrease TAXES. Therefore, insurance not only enables TAXES to decrease in tax accounting, but also makes it possible for management to pay employee retirement bonuses and provide for working capital at times of financial crisis.

Moreover, founder families who are shareholders often control SMEs and are therefore managers. INSUR is positively associated with PARTIC (0.190**). PARTIC reveals the impact of family-controlled equity and therefore foreign investors would avoid investing in these firms. In addition, INSUR is positively associated with managerial retirement compassionate allowances (0.314**). The results suggest that controlling family members may use insurance for themselves rather than for their firm's employees. This governance structure could assist managers in deciding to purchase insurance.

ALTERNATIVES TO DEFINED BENEFIT PENSION PLAN

It is considered that SMEs may select defined contribution pension plans and/or stock option plans as well as insurance as an alternative to defined benefit pension plans. Among the 168 SMEs above, 104 (61.9%) had LIABIL which represented the adoption of defined benefit pension plans. On the other hand, 69 (41.1%) adopted DEFINED and 57 (33.9%) had STOCK_OP while 64 (38.1%) used insurance during the current year. The most popular means for employees is still defined benefit pension plans among SMEs while the least one is stock options. Defined contribution pension plans and insurance are ranked between them.

In order to examine relationship among these four plane, we additionally, used multiple regression analysis and a stepwise estimation procedure, with the results shown in Panel A to G of Table 7. The variables were in Table 4, but OPE_INCO and INSUR_FL were excluded and SELLING, CF_FI, ROE, ΔCASH, COMPAS, LIABIL and RETIRE, here. Each of the four plans as well as TAXES was analyzed as a dependent variable and the 22 were used as an independent one.

Panel A of Table 7 shows that tax payable needs cash in hand both under regulations and in practice, that foreign investors may regard TAXES as one of important indicators of investment and that the relatively large percentage of shares managers own will help to make it possible to decide to carry out an effective tax planning.

Judging from Panel B, older SMEs more employees are working for have maintained defined benefit pension plans and are in face of larger liabilities concerning their post-retirement benefits. Panel C demonstrates that the retirement cost during the current year depends on operating activities.

As shown by Panel D, considering the relatively large number of employees, SME management has adopted defined contribution pension plans in order to avoid outflows of assets in the future. In addition, it is interesting that management buy insurance side by side. Insurance has a role of complementing defined contribution pension plans in the management of Japanese SMEs.

Panel E indicates that newer SMEs prefer stock options. Stock option plans result in an increase in selling and general administration expenses while they make retirement cost during the current year decreased.

According to Panel F and G, SME management considers insurance as investment in the future. For defined contribution pension plans, side by side with insurance, will not alone lead to secure its working capital in the future. Additionally, and it is more important for Japanese SMEs that insurance is on managers as well as on employees. The insurance on managers will be appropriated to the allowance for managerial compassion unless SMEs come to a head. It seems that SMEs listed earlier tend to prefer insurance.

Table 8
Panel A: MULTIPLE REGRESSION ANALYSIS MODEL OF TAXES

	Nonstandardized coefficient		Standardized coefficient	t-statistic	p-value
	Beta	Standard error	Beta		
Invariable	-80.841	35.150		-2.300	.023
FOREIGN	9.817	1.460	.444	6.722	.000
CASH	.031	.009	.224	3.380	.001
PARTIC	1.577	.559	.182	2.820	.005

Table 8
Panel B : MULTIPLE REGRESSION ANALYSIS MODEL OF LIABIL

	Nonstandardized coefficient		Standardized coefficient	t-statistic	p-value
	Beta	Standard error	Beta		
Invariable	3105.455	647.552		4.796	.000
RETIRE	4.230	.720	.396	5.875	.000
ESTAB	–1.557	.326	–.304	–4.769	.000
SELLING	–3.867E–02	.010	–.244	–3.706	.000
#EMPLOY	.417	.138	.209	3.010	.003

Table 8
Panel C: MULTIPLE REGRESSION ANALYSIS MODEL OF RETIRE

	Nonstandardized coefficient		Standardized coefficient	t-statistic	p-value
	Beta	Standard error	Beta		
Invariable	–1.472	1.445		–1.019	.310
LIABIL	4.275E–02	.006	.457	7.296	.000
SALES	2.150E–03	.000	.349	5.337	.000
CF_OPER	–3.703E–03	.001	–.163	–2.583	.011

Table 8 Panel D: MULTIPLE REGRESSION ANALYSIS MODEL OF DEFINED					
	Nonstandardized coefficient		Standardized coefficient	t-statistic	p-value
	Beta	Standard error	Beta		
Invariable	.227	.083		2.741	.007
#EMPLOY	.002	.001	.268	3.177	.002
SELLING	.000	.000	-.178	-2.130	.035
INSUR	.161	.076	.159	2.122	.035

Table 8 Panel E: MULTIPLE REGRESSION ANALYSIS MODEL OF STOCK_OP					
	Nonstandardized coefficient		Standardized coefficient	t-statistic	p-value
	Beta	Standard error	Beta		
Invariable	-13.116	2.866		-4.577	.000
ESTAB	.007	.001	.333	4.690	.000
SELLING	.000	.000	.259	3.897	.000
RETIRE	-.009	.003	-.207	-2.854	.005
FOREIGN	.012	.005	.174	2.638	.009

Table 8 Panel F: MULTIPLE REGRESSION ANALYSIS MODEL OF INSUR					
	Nonstandardized coefficient		Standardized coefficient	t-statistic	p-value
	Beta	Standard error	Beta		
Invariable	.199	.045		4.424	.000
INSUR_RE	.004	.001	.385	5.380	.000
CF_INVES	-9.393E-05	.000	-.162	-2.426	.016
COMPAS	.002	.001	.175	2.459	.015
DIFINED	.150	.066	.152	2.274	.024

Table 8 Panel G: MULTIPLE REGRESSION ANALYSIS MODEL of INSUR_RE					
	Nonstandardized coefficient		Standardized coefficient	t-statistic	p-value
	Beta	Standard error	Beta		
Invariable	742.063	348.839		2.127	.035
INSUR	37.057	6.727	.379	5.509	.000
COMPAS	.217	.066	.225	3.301	.001
CASH	.009	.003	.225	3.437	.001
LISTING	-.377	.175	-.141	-2.156	.033
CF_INVES	.008	.004	.134	2.017	.045

SUMMARY AND CONCLUSIONS

In order to clarify the status of the management of Japanese SMEs, this study compared the current accounting system for SMEs operating in Japan compared with that prevailing before the globalization of accounting standards. One way to consider this is as a "triangular legal system," whereby the Japanese accounting system was unchanged such that SMEs continued in practice to use the regulations under the Corporation Tax Act as accounting standards. The character of insurance policies in firms in Japan is therefore diverse and invokes some problems under the Corporation Tax Act. Regardless of size, an enterprise will require an effective tax planning that considers tax benefits and the costs of obtaining those benefits.

First, we examined the conduct of 18 large refrigerated warehouse corporations and surveyed 168 Japanese SMEs. In the first analysis, using the data on large corporations, we calculated one-sided tests of Pearson's correlation coefficients and then estimated a multiple regression equation with a stepwise procedure. We found that in relation to insurance, corporate income, the number of employees, and business taxes explained the allowances for retirement benefits in the previous year and the liabilities for retirement benefits in the current year.

In the second analysis, we employed the same analytical techniques, but using data on SMEs. Unlike large corporations, we found SMEs often use relatively larger amounts of insurance because they typically purchase insurance as a way to pay for employee benefits. As a result, insurance reserves increase relative to the allowances for employee retirement bonuses. As far as possible, an SME will also prefer to use insurance to purchase additional insurance rather than to recognize the allowance for decreasing taxes. Insurance therefore not only enables taxes to be decreased in tax accounting terms, but also allows management to pay for employee retirement bonuses and, if needed, working capital in the event of a financial crisis, represented by the cash value of the insurance. Moreover, founder families as shareholders often both control and manage SMEs. This form of governance often leads to the decision to purchase insurance.

As the results of the additional analysis, insurance is on managers rather than on employees. Insurance is appropriated to the allowance for managerial compassion and it can be also allotted for working capital, if necessary. Such Japanese SMEs that purchase insurance tend to adopt defined contribution pension plans and regard insurance as a complement to defined contribution pension plans and think of as investment in the future. Considering the usage of insurance on managers themselves in the management, considering governmental amendments to the rules of taxation at insurance, and considering an important role of insurance companies in the Keiretsu (e.g. Imai 1991), the management of Japanese SMEs seems to be controlled by the nation even though they are listed.

It is notable that more than sixty per cent of Japanese SMEs maintain defined benefit pension plans, today. Such SMEs have longer history and, at the same time, have more employees. In case of defined benefit pension plans, the longer an employee work for an SME, the larger amount of money is paid following the retirement. The traditional type of plans plays a role for employees as an incentive for long-term employment while it obliges SMEs to incur a liability as to them. In addition, stock option plans, which is one of the most modern and the most market-oriented plans, is absorbed into Japanese society. Different from Anglo-Saxon ones, Japanese enterprises develop and adopt one-yen stock options instead of performance stock options. Among the NIKKEI 225 companies, 55.4 per cent adopt one-yen stock options while 28.6 per cent adopt performance stock options (Inoue & Tsuji 2015). Though this study does not examine which type of stock options Japanese SMEs adopt, this tendency may apply to Japanese SMEs.

It is sure that, in the usage of the internationally converged accounting standards, Japanese accounting system has changed from being macro-uniformed into being market-oriented, at present. But, in case of Japanese SMEs, the traditional management survives and the government is controlling them in the national financial system as well as through the taxation system.

There were some limitations in the study. One limitation of this study was the lack of an explanation for a selection of an alternative pension plan rather than a defined benefit pension plan. Other was the lack of analysis concerning the impact of the type of retirement plan. We intend to examine these issues carefully in the next stage of our research.

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Appendix A
VARIABLE DEFINITIONS

Variables	Definitions
1) TAXES	Corporate income, inhabitants, and business taxes
2) ALLOW	Allowance for retirement benefits in the last year
3) LIABIL	Liability for retirement benefits
4) #EMPLOY	Number of employees
5) SELLING	Selling and general administration expenses
6) SALES	Total sales
7) OPE_INCO	Operating income
8) ORD_IINCO	Ordinary income
9) TOTALAS	Total assets
10) CAPITAL	Capital stocks
11) RETEARN	Retained earnings
12) ROA	Total assets divided by the current net income
13) CF_OPER	Cash flow from operating activities
14) CF_INVES	Cash flow from investing activities
15) CASH	Cash and cash equivalents at end of period
16) FOREIGN	Percentage of foreign shareholders
17) PARTIC	Percentage of ten largest shareholders, its directors and the company itself
18) ESTAB	Year in which the company was established
19) LISTING	Listing year of the company's stock on Japan's stock exchanges
20) STOCK_OP	Dummy variable, equal to one if the company uses stock options
21) DEFINED	Dummy variable, equal to one if the company uses defined contribution pension plans
22) INSUR	Dummy variable, equal to one if the company uses insurance which is tax deductible
23) INSUR_RE	Insurance reserve
24) INSUR_FL	Total amount of profits and losses for insurance
25) RETIRE	Retirement cost shown in SELLING
26) ΔCASH	Change in CASH
27) COMPAS	Allowance for managerial compassion
28) CF_FI	Cash flow from financing activities
29) ROE	Owners' equity and total accumulated other comprehensive income divided by the current net income

PROFILE OF COMMON STOCK A GLOBAL PERSPECTIVE

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ABSTRACT

This research casts some light on the components of return as well as the degree of predictability of changes in return for common stock. It further provides information regarding variation in return over time. It appears that changes in the dividend yield, the real growth in earnings, factors causing periodic adjustments to earnings per share, as well as changes in valuation multiples such as the price earnings ratio, price to sales ratio and market to book value ratio have, economically and statistically, significant impacts on the resulting return on common stock. Statistical return generating models as well as behavioral pattern recognition techniques and financial market constraints appear to help in explaining the profile of common stock.

INTRODUCTION

Security analysis pays attention to the firm's characteristics, its performance in the industry and its reaction to changes in the global economy. Such analyses are purported in finding the best value or the right time to invest. The best value denotes a selection that should lead to high return while the right time is an indication of the presence of momentum in direction of price movements. When the selectivity and timing approaches work, investment payoffs will be greater than the average return and far exceeding the minimum required return. In addition, it is important to know as to how and why investors reach the required or desired return on investment and how and why the required return varies over time, as it causes a rise or fall in stock prices. Such information may help individuals and institutions in planned savings and investments by properly formulating expectations regarding the likely future outcome.

The ability to explain and formulate expectations regarding the likely return on common stock is an important issue and has crucial impacts on investors. This is because savings behavior of individuals and the management of asset-liability of financial institutions are affected by expected return. Some examples of the role of return on investment are as follows: a) endowment funds establish spending rate policy rules such that a pre-determined percent of the endowment fund can be spent on an annual basis. Obviously the resulting return on investment must be greater than the spending policy rule for preservation of the endowment fund; b) retirement plans make their funding based on assumptions regarding projected return known as the actuarially assumed return. Earning a return below the actuarially assumed return will result in under-funded pensions causing hardships for employees, employers, and government authorities; c) insurance companies incorporate return on their invested capital in determination of premiums or costs of the various insurance products; d) portfolio management is generally viewed as an asset and liability management. That is, to design a process in managing the overall risk of the portfolio while obtaining a reasonable return. Meanwhile, expected return provides one way of forecasting the rise or fall in stock prices.

Objectives

The primary objective of this paper is to gain knowledge about the notion of return on common stock. By extension, empirical results provide information regarding the components of its total return. The secondary objective is to examine the degree of predictability of total return over the long horizon. Theories of finance, as organized body of knowledge, have evolved over time to help in learning about the return on common stock. In addition, advances in statistical designs as well as the wealth of financial data have provided tools for conducting extensive empirical studies.

Research Methodology

In pursuit of learning about the return on common stock and its degree of predictability, scholars in finance have developed various theoretical constructs as well as conducting extensive empirical examination of data on common stock prices. Thereby, a review of theoretical as well as empirical work in the literature of finance during the past two centuries appears to be fruitful. In this line of thinking, the efficient market hypotheses and the notion of random walk in stock prices of the 1950s, the behavioral finance and the role of psychology of the market of the 1980s, as well as the emotional finance theories of the 2000s are purported to help in understanding the behavior of return on common stock.

The Findings

The numerous and extensive work of scholars in finance covering both the short and long horizon returns during the past two centuries shows that there is a reasonably good degree of predictability in the variance of return on common stock. It is shown that total return on common stock follows changes in factors such as inflation, growth in real earnings of business enterprises, changes in the outstanding shares of common stock in the market as well as changes in the degree of risk aversion by investors. And most of all, the variance in the dividend yield is shown to lead to a subsequent change in return on common stock. Especially important, long run return on common stock is shown to be predictable. Indeed, 27 percent of real, inflation adjusted, stock return variance over a ten-year time horizon is explained by the dividend yield. Furthermore, emotional responses and cognitive biases appear to cause changes in return on common stock. Overall, these finding are in support of the Chartists or Technical financial analysts who strive at forecasting returns.

COMPONENTS OF RETURN

Appraisal of the fair value of a business enterprise has been an important issue in corporate finance. Value of the firm is viewed as a function of its future net cash flows. Within the standard discounted cash flow analysis, the projected stream of cash flows is discounted as a perpetuity which should sum up as the value of the firm. The resulting total value of the firm is shared by its common stockholders as well as the bondholders. Alternatively, since the creditors to the firm have a fixed claim on its assets, the major task in the appraisal of the market value of the firm would be the estimation of the value of its equity or common stock which depends on the sum of the discounted cash flows available to common stockholders. Historically, common stockholders have received a part of net income or earnings as dividend with the remaining being allocated to support the activities of the firm which would in turn generate growth in earnings

and dividends. Gordon (1962), shows that the value of equity or common stock depends on the discounted future dividends where the discount factor is the investors' desired return. As equity is a component of long term capital of the firm, the desired return on the part of investors as well as growth in earnings is normalized to include a smoothed value, usually over two or three phases of the business cycles. The Gordon model for determination of common stock fair value is based on the expected per share value of the dividend, its persistent growth and the investors' required return on investment as follows.

$$P_0 = D_1 / (k - g) \quad (1)$$

Here $\{P_0\}$ denotes the fair value for common stock, $\{D_1\}$ is the forthcoming annual dividend,$\{k\}$ is the required return on the part of investors and $\{g\}$ is the persistent growth in earnings of the firm. The basic form of the Gordon pricing model is with the assumption of constant rate for growth in earnings and dividends as well as a constant rate of discount. In that manner, the current value of common stock reflects the discounted value of future dividends. The return version of the model using equation (1) is as follows.

$$R = (D_1 / P_0) + g \quad (2)$$

Here $\{R\}$ denotes return on investment, and P_0 denotes the starting or initial price paid by investor. The income part of return is (D_1 / P_0) and the capital gain is measured by $\{g\}$.

Grinold and Kroner (2011) show a decomposition of total return on common stock from equation (2) as follows.

$$R = \{(d/p)-ds\} + \{g+i\} + \{dpe\} \quad (3)$$

Here $\{d/p\}$ denotes dividend yield; $\{ds\}$ denotes the net percentage of shares repurchased; $\{g\}$ denotes real growth in the level of the corporate profits; $\{i\}$ denotes inflation; and $\{dpe\}$ denotes change in the price to earnings ratio over the time horizon.

Thereby, the income return= $\{(d/p) - ds)\}$ =$\{(d/p)$+repurchase-dilution$\}$, and the capital gain= $\{i+g+dpe\}$.

An estimate of total return during 1926-2010 is as follows.

Income return= $\{(d/p) - ds)\}$ =$\{(d/p)$+repurchase-dilution$\}$ = 1.78+2.2-2=1.98% (4)

Capital gain= $\{i+g+dpe\}$= 2.4+1.8+0.85=5.05% (5)

Total expected return= 1.98+5.05=7.03% (6)

According to Arnott and Bernstein (2002) since the U.S. was on gold standard in 1926 and thereby expected inflation was zero, the bond yield of 3.7 percent was in effect the real return prevailing in the market. Meanwhile the stock dividend yield was quite high at 5.1 percent and an investor in 1926 had perhaps been looking for an expected risk premium of 1.4 percent (i.e., 5.1-3.7). Looking back, they note that real dividend has risen by about 0.9 percent on an annual basis during 1802-2001 which has been in line with real per capita GDP growth. While it is reasonable to assume that growth in earnings should be in line with the real growth in GDP, the authors state that GDP is affected by the overall level of corporate profit of both the existing publicly held corporations and those of the newly formed business enterprises. Thereby, the existing shareholders will not necessarily be able to participate in the overall rate of growth in the economy. In effect the real earnings growth for a buy and hold investor may be about half as much as the real growth in the economy. In addition, the existing corporations have continuously issued new shares of common stock causing a dilution of about 2 percentage points in the rate of growth in earnings. Meanwhile, share repurchase has resulted in about 2.2 percentage points rise in earnings growth. Once the effects of the share repurchase and the newly issued shares are combined, it appears that an additional 0.2 percentage points can be added to real return on common stock (i.e., 2.2-2).

Table 1
INFORMATION REGARDING RETURN ON COMMON STOCK

	Average Real Stock Return	Average PE	Earnings Yield	Dividend Yield	Real Earning Growth	Real Dividends Growth	Average Payout	Real Cap. Gain
1946-2011	6.44 %	15.29%	6.54%	3.5%	3.14%	1.76%	47%	2.85%

Source: Arnott and Bernstein, 2011

The dilution in stock return over time of about 2 percentage points per year, as measured by Arnott and Bernstein, is due to the secondary issuance of shares as well as the exercise of stock options by corporate executives which tends to reduce earnings per share for the shareholders. The dilution is estimated by the difference between growth rate in total earnings and earnings per share. Alternatively, the dilution in stock return is calculated as the difference in the percentage change in stock return and the percentage change in the market capitalization of a company. Thereby, stock returns are about 2 percentage points less than the rise in market capitalization of the company. The authors note that growth in a firm's earnings must be equal to real GDP growth rate which in turn is combination of real per capita GDP growth rate plus population growth rate resulting in a forecasting of 2.65 percent (i.e. 1.8+0.85 for real per capita GDP and U.S. population growth rates).

Arnott (2011) further notes that during various time intervals there is a distinct change in the ratio of price to earnings as well as the price to dividend which has resulted in an additional source of return on common stock. He, however, notes that one cannot account for such a valuation effect in forecasting the future stock returns and provides a forecast of 3.3% for the real premium on common stock during the decade of 2010s.

Changes in return due to the valuation effect is further shown by Dimson, Marsh and Staunton (2011) who note that the return on common stock has changed over time based on investors' degree of risk aversion as well as demographic changes and it tends to exhibit a mean reversion pattern over time in which higher returns have followed market declines in the following time horizon and vice versa, lower returns in one time interval have resulted in higher prices at a later time. They provide an expected real stock premium of 5.26 percent for the decade of 2010s. In line with this, Illmanen (2012) explains the nature of change in dividend yield from 1982 at which time restrictions on share repurchasing by corporations were reduced.

Thereby, allowing corporations the flexibility in managing their payouts to stockholders by a combination of payment of dividend and stock buyback which has the effect of dividend as it helps in raising the stock price and resulting in a higher earnings per share.

Table 2
COMPONENTS OF RETURNS IN VARIOUS HORIZONS

	Time	Bond Yield	Expected Inflation	Dividend Yield	Growth in Real Dividend	Real Growth in GDP	Real Earnings Growth	Changes in P/E or P/D	Real Return on Intermediate Bonds
Arnott & Bernstein 2002	1926 Gold Standard	3.70 % so it was also real rate	0	5.10 %					
Arnott 2011	1802-2001				0.90%	1.60%	1.40%		
	1802-2010	5.10%	1.50%	4.90%	0.50%	1.60%		0.50%	
	1926-2010		3.00%	4.10%	1.30%	2.00%		1.10%	
Dimson, Marsh Staunton 2011	1900-2010	0.96%		4.24%	1.37%			0.56%	
Illmanen 2012									
	1950-1990			3.6%					
	1990-2011			2.00%					
Cornell 2010									
	1947-2008			3.30%		2.00%	1.00%	1.00%	1.00%

A share buyback tends to reduce the number of shares outstanding. If the level and growth in earnings do not fall, then earnings per share should rise for those who had held their shares instead of selling it. This may be a reason for a sharp decline in dividend yield by about fifty percent from about 4 percent to 2 percent. In the presence of share repurchase, Illmanen assumes that changes in dividend yield may not possess a strong prediction power for stock prices; instead, the earnings yield may be more informative and notes that factors such as inflation volatility, the ratio of profit to gross domestic product, and demographic changes appear to influence the earnings yield and stock prices.

Arnott (2011) provides a measure of decomposed return on common stock return during 1802-2010 of 7.9 percent which shows that 4.9 percent was due to dividend, 0.8 percent from the real growth in dividend, 0.5 percent from the rise in price earnings ratio, 0.2 percent from compounding and 1.5 percent from inflation (i.e., 4.9+0.8+0.5+0.2+1.5). The return in the stock market is tied to the return in the overall economy in that growth in corporate profit is associated with the growth in GDP. Thereby, the equity risk premium should be calculated as the difference between the stock return and the yield on a Treasury inflation protection bond with a constant maturity of 10 years. The stock return should be viewed as a longer term of 10 years in which it can be decomposed into three parts; net dividend yield; growth in corporate profits; and changes in valuation due to the trends in the market.

Cornell (2010) provides a forecast of expected return on common stock using a detailed decomposition of its components in an equilibrium economic condition. The real growth in per capita GDP is expected to be 2 percent with a population growth of 1 percent for a total of 3 percent real growth in GDP. Noting that the ratio of total national income to GDP has remained

constant during 1947-2008, Cornell suggests that the real growth in corporate earnings should be the same as the real growth in the economy or 3 percent. Given the equality of the real growth in corporate profits and the economy, he subtracts 2 percentage points due to dilution as per Arnott and Bernstein (2002) resulting in about 1 percentage point for real growth in earnings. Given an average dividend yield of about 3.5 percent during the past 50 years, Cornell expects about 4 percent real return on common stock consisting of about 3 percent dividend and 1 percent in real growth. During the same time span, real return on medium term government bonds has been 1 percent thereby the risk premium or reward for investing in common stock should be about 3 percent for the decade of 2010. The 3 percent real risk premium for common stock is thus the difference between the real return on common stock of 4 percent and the real return on government bond of 1 percent.

Dimson, Marsh and Staunton (2011) show decomposition of stock return around the world as a compilation of five factors; geometric average dividend yield; real dividend growth rate, and expansion in price dividend multiple. During 1900-2010, for the U.S., the real stock return amounts to an annual return of 6.17 percent (4.24+1.37+0.56), accounting for 4.24 percent in dividend yield with a real growth of 1.37 percent and a change in valuation impact of 0.56 percent. With the rate of interest on U.S. Treasury bills of 0.96 percent, the real premium amounts to an annual rate of 4.21 percent (i.e. 6.17-0.96). The authors find the dividend yield as the largest portion of annual return on common stock (i.e., 4.24/6.17 or about 67 percent). Dimson, Marsh and Staunton explain the changing nature of equity premium over time as a result of investors' attitude toward risk. Investors become more averse to risk in common stock after a sharp fall in price. Thereby, stock prices would revert to their equilibrium level on a periodic basis. That is, stock prices fall when they are overpriced and rise when they are undervalued. In effect investors appear to over-react to good news by raising stock prices far greater than their equilibrium level and subsequently would be unpleasantly surprised by slight negative changes in corporate outcomes.

Table 3
COMMON STOCK RETURN DECOMPOSITION 1900-2013 IN PERCENTAGE POINTS

Stock Exchanges	Total Real Return on Common Stock	Dividend Yield	Growth Rate of Real Dividend	Expansion in Dividend Yield	Real Appreciation of Common Stock	Real Growth Rate in GDP
USA	6.45	4.18	1.63	-0.54	2.18	3.29
Overall Markets	4.54	4.35	-0.11	-0.29	0.18	2.76
UK	5.33	4.61	0.59	-0.1	0.69	1.84
Japan	4.11	5.14	-2.01	-1.05	-0.99	3.68

Adapted from Dimson, Marsh and Staunton, Credit Suisse 2014.

RETURN RECOGNITION MODELS

In the financial theory and practice of the pre-1960s popular indicators of future performance of common stock were the dividend yield—the income received from investment— and the earnings yield—the profit earned from investment—as well as the real growth in the two. Changes in the dividend yield and earnings yield result in fluctuations in stock prices over time, establishing a distribution of returns which has generally been assumed to be of a normal or bell shaped form.

Given an independent and identical normal distribution of returns over time, an opposing school of thought evolved in the mid-1950s with the belief in random character of stock prices in the short run and thereby it stated that changes in prices would not be predictable in the short run. Return on common stock in the long run, however, was expected to be associated with the market as a single determinant of performance. The capital asset pricing model in the context of the efficient market hypothesis states that current stock prices instantaneously adjust to news in the market and reflect their full equilibrium value. Furthermore, the required return on stock is a linear function of its co-movements with the basket of securities forming the market.

The idea that the return on common stock commoves with the market induced empirical research in line with the capital asset pricing model and expanded to include multiple factors such as the industry, the economy, inflation and interest rates. In this manner, several risk factors were identified and their respective expected rewards were determined. It was further concluded that the market price is affected by book value of common stock and the market capitalization of the company. Anomalies or cases against the random character of stock prices were however emerged in the 1980s and in support of the traditional security analysis. That is, stock prices appear not to behave as randomly as they were expected and that pertinent characteristics of investments provide adequate signal for the likely future return on investment. Evidence against the efficient market hypothesis in the early 1980s brought about new theories such as the mean reversion with time-varying risk premium.

The reasons for predictability of long run return on common stock appear to be as follows: a) time-varying real return; b) time varying risk premium or expected reward; and c) changes in real growth in earnings. Campbell and Shiller (1988) had provided strong evidence regarding time varying risk premium noting that investors appear to look for various required returns over time. They showed that about 27 percent of real, inflation adjusted stock return variance over a ten-year time horizon is explained by the dividend yield or the percentage of current income provided by the firm. In addition, the growth in dividend was an important factor in changes in stock prices. They further noted that the 30-year moving average of the earnings yield explained about 57 percent of the variance in real stock return.

In line with Campbell and Shiller's findings, John Cochrane (2011) showed that expected return on the part of investors has varied by a large amount over time and he further explored the reasons for it. A rational, economic explanation for changes in stock prices is further explored by Cornell (2010) who finds that factors such as the real growth in U.S. national income and growth in population appear to affect the real growth in corporate earnings and thereby common stock returns.

A better understanding of behavioral patterns during the 1990s further provided mechanisms for explanation of expected return as investors appear to possess psychological biases. For example, investors are found to overreact to good news and causing a rise in stock prices far above their equilibrium values and in the latter part of 2000s researchers have further noted the role of feelings and emotional responses in explaining the variance in return.

It appears that returns on financial assets are predictable as investment decisions are influenced by the theoretical and empirical knowledge in finance, behavioral patterns of investors and emotional factors. In addition, the dividend yield, and growth in earnings are important variables in the minds of investors who formulate their expectations regarding the likely course of the stock market.

TIME VARYING RETURN

A review of the literature shows that academicians and practitioners have alternative views regarding the likely return on common stock. Given the availability of the vast amount of data on common stock prices during the past two centuries, empirical research has focused on the likely factors influencing return on investment. Expected return has strong implications for future stock prices. Risk premium for common stock is defined as the difference between the return in common stock and either a short term Treasury bill, such as 3 months in maturity, or a medium term Treasury bond with 10 years remaining to maturity. Investors have a desired risk premium in mind as a reward for investment which is based on the average observed risk premium. Fama (2002), for example provides the average risk premium on a decade by decade basis during 1872-2000. The range by decades, is - 2.15 to 14.72 in percentage points. If investors expect a risk premium far greater than the past average value, stock prices should rise and vice versa, a perception of obtaining a risk premium below the average value may lead investors to sell or stay away from common stock and thereby stock prices may fall.

Campbell and Shiller (1988) find that common stock prices and thereby total returns are predictable over long horizon as they show a relatively strong tie to earnings yield and growth in dividends. They find that about 27 percent of real stock return over a 10-year time horizon is explained by the change in dividend yield, and as much as 57 percent of the variance in real stock return is explained by a 30-year moving average of earnings yield. They find that while observed returns are highly variable, such a high degree of volatility also leads stock prices to revert to their equilibrium value. This is because dividend yield and earnings yield as well as growth in dividend that are high and above the average historical values would motivate investors to buy stock and thereby causing a rise in stock prices.

Chochrane (2011) shows that return on common stock varies over time and that the dividend yield has a good explanatory power. The regression of expected return onto the dividend yield appears to have a reasonably good predictive power, especially over long horizons. On a one-year ahead basis, a 1 percentage point change in dividend yield results in about 4 percentage points change in stock return and when the time horizon expands, the 5-year returns show more than 20 percentage points change in return resulting from a 1 percentage point change in dividend yield. It is further noted that the standard deviation of expected return resulting from these regressions rises as the forecasting time horizon increases. Expected return varies by 5.5 percentage points in one year and 29 percentage points in the 5-year regression. The results further show that variance of past returns is caused by other factors besides the discount rate. Regressions are as follows.

$$\text{Log}\,(d_t/p_t) = \alpha + \beta * \log\,(r_t) + e_t \quad (7)$$

$$\text{Return}\,(r) = \alpha + \beta\,(\text{growth}) + \gamma\,(\text{dividend yield}) \quad (8)$$

$$\text{Log}\,(r) = \alpha + \beta * \log\,(g) + \gamma * \log\,(dy) \quad (9)$$

Here {r} denotes return; {g} denotes growth and {dy} denotes dividend yield.

Chochrane shows that fluctuations in the dividend yield are due to the changes in expected return or discount rate and that about half of the change in price is due to the change in dividend yield and that "dividend yields forecast returns." He further notes that dividend yield is a good tool for forecasting return and that "a fall in prices with no change in dividend is likely to mean revert." He calculates the statistics of a return generating regression model where returns denote the return in excess of the risk free rate which is in effect an estimate of risk premium.

Table 4
REGRESSION RESULTS OF RETURN ONTO DIVIDEND YIELD AND GROWTH

Time Horizon	Beta Coefficient	R^2	Standard Deviation of Fitted Value	Coefficient of Variation
1 Years	3.8 (t=2.6)	0.09	5.46	0.76
5 years	20.6 (t=3.4)	0.28	29.3	0.62

Source: Chocrane, 2011.

Cochrane further shows that the ratio of aggregate consumption to a long term moving average of consumption is closely tied to the price dividend multiple, showing a positive relationship between stock prices and consumption. That is, when consumption falls, the required return on common stock will rise and as a result, common stock prices will fall. This is because consumption constitutes a large portion of GDP. In this manner, it is noted that common stock returns are tied to cycles of the economy. Alternatively, when consumption falls, common stock must pay a higher yield.

Time varying returns have further been observed in the global financial markets. As shown by Dimson, Marsh and Staunton (2014, 2016) the average annual return for the emerging stock markets during 1900-2010 of 7.4 percent is 90 basis points less than those of the developed markets of 8.3 percent. During 1900-2013, the relationship between the real return on common stock {RR} and the rate of growth in GDP {g} on a global basis is shown by a regression line as follows.

$$RR = -0.001+1.68g, \quad \text{with } R^2 = 0.26. \tag{10}$$

During this time, the real total return on common stock in terms of U.S. dollar return, averaged across global markets, has been 4.54 percent of which 4.36 percent is due to the dividend yield and 0.18 percent due to capital appreciation. Of particular importance is the dilution in common stock growth of 2.34 percent due to issuance of new shares. Within this comparative analysis, the global real return has been lower by 1.91 percentage points from those for U.S. real return of 6.45 percent for which the share of dividend is 4.18 percent, with a real capital gain of 2.18 percent and dilution in stock performance of 0.35 percent. Dilution is measured as the difference in economic growth and the growth in real dividends per share. The rate of growth in real dividend of 1.63 percent for U.S. common stock further far exceeds -0.11 percent for the average value for a sample portfolio of global equities. The author further note that return on common stock is higher during the expansionary phases of the monetary policy, as compared to the contraction phases, in both the U.S and UK.

Speidell (2011) calculates correlations covering the 1980s between S&P 500 and the emerging markets on a 36-month rolling correlation to be about 0.50 which has gradually risen over time. He further calculates such rolling correlations on a five-day basis during a time horizon of 150 days which were rolled over during 2006-2008 for observing a change in correlation during the global financial crisis and found a rise in correlation to 0.74. The rise in correlation generally diminishes the risk reduction properties of diversifying across countries. Consequently, the rise in correlation was further accompanied by a rise in standard deviation. Quisenberry (2010) also finds that during December 1999-April 2010, on a rolling 48-month basis, correlation between S&P 500 and the emerging markets and frontier markets have been relatively low and far below 0.50. Correlations though rose during the financial market crisis of 2008.

Richards (1996) uses data on emerging markets based on the International Finance Corporation (IFC) global indices, which covers about 60 percent of market capitalization of each country included in the index. Monthly data were included from December 1975-September 1995 while weekly data horizon was December 1988-September 1995. Returns are in terms of U.S. dollar returns. As noted by Richards, this manner of measuring return for international markets in U.S. dollar would reflect both the variations in stock prices as well as the respective currency. In addition, the exchange rates used are either based on market rates or official exchange rates. Tests by Richards show a decline in volatility of return in emerging markets and that a negative serial autocorrelation is revealed for horizon of one to three years with magnitudes that are in line with the developed or mature markets. That is, bubbles formed in the emerging markets are not different from other markets.

FRICTION AND RETURN

Modern theories of finance are based on the existence of perfect capital markets, with the availability of complete information and with no transactions costs. Adler (2014), defines financial friction as an "impediment, obstruction, or constraint" prevailing in the capital markets. This would include changes in the flow of credit availability and lack of market liquidity which would increase transactions costs and resulting in a lower net return. Liquidity demanded traders or momentum investors would be willing to pay a premium to the liquidity providers who are the patient investors and thus require a higher return.

Another reason for changes in return is due to liquidity and availability of information as well as the search cost. This is because in the absence of a liquid and frequently traded market for a stock, the search cost for the equilibrium value of the stock will be higher. As shown by Hirshleifer (1973) the varying individuals' subjective probability of belief regarding the possible value, which is due to lack of availability of full information, leads to diversion in stock prices.

This is in line with the view by Stigler (1961) that dispersion in price is a biased measure of lack of information and ignorance about the equilibrium level of the stock price.

The search cost and its role in the determination of asset prices is perhaps one way of explaining the superior performance of the portfolio endowment model for which the average long run return has exceeded the average return on the market. The portfolio endowment model, as noted in Swensen (2000), generally refers to a concentration of illiquid assets such as private equity, forest land and farms in which a long term holdings horizon is required.

SUMMARY

This paper casts some light on the degree of predictability of changes in common stock prices. It further provides information regarding as to how or why common stock prices may change over time. The findings may help investors in planned savings and investments by properly formulating expectations regarding the likely future outcome. It appears that changes in the dividend yield, the real growth in earnings, factors causing periodic adjustments to earnings per share, as well as changes in valuation multiples such as the price earnings ratio, price to sales ratio and market to book value ratio have economically and statistically significant impacts on the resulting return on common stock.

Total return on common stock is shown to be a function of several pertinent variables which include, but is not limited to, the level and the growth in dividends, the rate of discount applied to the stream of dividends, the change in the value of the pricing multiples such as the price earnings ratio, the timing and magnitude of repurchasing of the outstanding common stock and the addition of new shares of common stock in the form of a secondary public offering or as a result of exercise of stock options by the managers of the firm.

The review of the literature shows that in the long run spanning to several decades, the financial managers of the firm by repurchasing the firm's shares from the market can add 2.2 percentage points to the stockholders wealth on an annual basis. Within the same horizon, however, the issuance of new shares in the market may reduce 2 percentage points from total return. Thereby, the net effect will be 0.2 percentage points on an annual basis. For this reason, a share buyback by the corporation is viewed as a form of dividend policy of the firm. In addition, the cost search for information, friction in the structure of trading, as well as styles of investing have shown to influence the return on common stock.

The components of total return are further shown by scholars for the effects of the varying rates of discount, the stream of dividends and earnings. Such statistical models show the importance and contribution of dividends and earnings. In addition, it is shown that statistical models have a reasonably good power in explaining the variance in total return. Much effort is made for estimating growth in earnings. In particular, the growth in total earnings of the firm and the earnings per share are shown to be different from each other and further that they may both be different from the growth of the economy. One reason for the growth in earnings of a publicly held firm to be different from the national economic growth is due to the role of privately held firms and entrepreneurs in the growth of the economy.

Based on the information extracted from historical data and various empirical findings during the past several decades, the likely return on common stock over a medium term time horizon of five to seven years, will perhaps be as follows: an average dividend yield of 2 percentage points; of about 0.2 percentage points in additional income as a result of stock buy-back plans of the company, net of issuance of new shares; an average real growth in earnings of 1.5 percent; and about 0.5 percent in valuation effects due to changes in the price earnings multiple, price to book value or the price to sales ratios. That is, the annual real return, on average, is expected to be about 4.2 percent. In the presence of successful monetary policy, maintaining an inflation rate of 2 percent, the average nominal return should be about 6.2 percent. This is an important area of study as the observed return from investments in common stock has crucial implication on individual and institutional investors.

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ISSUES AFFECTING CONVERGENCE OF NATIONAL ACCOUNTING STANDARDS WITH IFRS IN A TRANSITIONAL COUNTRY: THE CASE OF CHINA

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ABSTRACT

The International Accounting Standards Board (IASB) was established to develop a single set of high-quality financial reporting standards, known as International Financial Reporting Standards (IFRS), and to promote worldwide IFRS adoption. As a result, nearly 130 countries have adopted IFRS either mandatorily or voluntarily. However, the accounting standards-setter in China, the Ministry of Finance (MOF) has no plans to apply the "direct adoption approach" as suggested by the IASB, which would lead to replacing Chinese GAAP with IFRS. Instead, the MOF applies a so-called "convergence approach" to eliminate differences between Chinese GAAP and IFRS gradually. Furthermore, the MOF stated that Chinese-specific contextual factors are prime considerations when it decides the policy in regard to IFRS implementation in China. Applying the accounting ecology framework developed by Gernon and Wallace (1995), this study provides a holistic and rigorous analysis of the main features of Chinese contextual factors. Findings of this study show that market-based economy development in China such as the increase in foreign direct investment (FDI) and Chinese enterprises' financing in overseas capital markets created the demand for converging Chinese GAAP with IFRS. On the other hand, findings of this study show that current Chinese-specific contextual factors such as accounting professionals' deficiency in the necessary training and experience to implement principles-based accounting standards may impede consistent interpretations and applications of IFRS in China. This study provides a deeper understanding concerning the global convergence of IFRS in the world's biggest transitional country by clarifying not only accounting issues but also the effects of contextual factors on accounting practices.

INTRODUCTION

The increasing globalization of capital markets and the significant growth of multinational enterprises created demand for a single set of global accounting standards to improve the comparability and transparency of financial reporting worldwide (Barth & Schipper, 2008). Enhancing the comparability in financial reporting has been expected to promote capital flow across countries, including foreign direct investment (FDI) (Choi & Meek, 2011; Doupnik & Perera, 2012). To reduce differences in financial reporting across countries, the International Accounting Standards Board (IASB) has contributed to developing a single set of high-quality financial reporting standards, known as International Financial Reporting Standards (IFRS), and promoted worldwide adoption of IFRS. The IASB's survey[1] shows either mandatory or voluntary adoption of IFRS[2] in about 130 countries (as of March 22, 2016).

IFRS reflect the Anglo-American accounting model, which, in a broad sense, refers to the accounting system widely used in English-speaking countries such as the United Kingdom and the United States (Doupnik & Perera, 2012). The Anglo-American accounting model focuses on investor-orientation, extensive application of fair value accounting and accountants' professional

judgments (Hellmann, Perera & Patel, 2010). Furthermore, this model has been developed over a long period of time in an environment characterized by developed capital markets, common law, and the separation of accounting and income tax scheme (Hail, Leuz & Wysocki, 2010b; Doupnik & Perera, 2012; Nobes & Parker, 2012). The IASB's promotion of IFRS adoption implied that Anglo-American accounting values, practices, and principles are superior to national accounting standards, and IFRS can be applied consistently in all countries (Ball, 2006; Hellmann, Perera & Patel, 2010).

However, numerous studies documented that accounting standards and practices are deeply embedded in each country's context, including its cultural, legal, organizational, political, and economic environments (Doupnik & Richter, 2003, 2004; Doupnik & Riccio, 2006; Nobes & Parker, 2008; Hellmann, Perera & Patel, 2010; Chand, Patel & Patel, 2010; Chand, 2012; Perera, Cummings & Chua, 2012; Drnevich & Stuebs, 2013). These previous studies also revealed that contextual factors lead to inconsistent interpretations and applications of IFRS across countries. Thus, it is necessary to clarify distinct contextual factors and their effects on convergence with or adoption of IFRS in individual countries (Hail, Leuz & Wysocki, 2010a, 2010b; Brüggemann, Hitz & Sellhorn, 2013). Brüggemann, Hitz and Sellhorn (2013, p. 22) argued that "focusing on more specific settings (e.g. a single country or trading segment) is likely to help researchers understand and control for contemporaneous non-IFRS effects."

This study focuses on convergence[3] toward IFRS in China as a case study. China is in transition from a centrally-planned economy to a market-based economy and has a different context from Anglo-American countries, which includes distinct features such as extensive state ownership of business firms, underdeveloped capital markets, and a deficiency in qualified accounting professionals. Despite these distinct contextual factors, the accounting standard-setter in China, the Ministry of Finance (MOF), took a big step toward the global convergence of IFRS by establishing a new set of Chinese GAAP in 2006, which the IASB acknowledged as having achieved "substantial convergence"[4] with IFRS (IASB, 2006). The MOF required all listed companies in China's capital markets to apply the new set of Chinese GAAP for both consolidated and individual financial statements from the beginning of the fiscal year 2007.

Since 2011, the current Chairman of the IASB, Hans Hoogervorst, has pressured the MOF to fully adopt IFRS to replace Chinese GAAP. For example, when he visited to China in 2011, he gave a speech and stated:

> *…there is a lingering suspicion among the broader international financial reporting community about closeness between IFRSs and Chinese accounting standards. In this regard, the term 'principally in line with IFRS' does China no favours. It is for this very reason that Brazil, another country that is on the verge of fulfilling its full economic potential, has decided to fully adopt IFRSs. In its strategy to become the leading regional financial marketplace, Brazil knew it needed the full benefits of the IFRS franchise. Investors in London, New York, Paris, Frankfurt, and Shanghai all understand when a Brazilian company's financial statements are labelled 'in conformity with IFRSs' (Hoogervorst, July 2011).*

The MOF, however, has no plans to accept the "direct adoption approach" suggested by the IASB, in which IFRS would replace Chinese GAAP.[5] Instead, the MOF applies the so-called "convergence approach", in which it continues to develop Chinese GAAP, while gradually eliminating disparities between Chinese GAAP and IFRS over time. In regard to reasons for applying the convergence approach rather than the direct adoption approach, Yang Min, former Director General of the Accounting Regulatory Department[6] within the MOF, stated:

Considering the Chinese legal environment, codes of language, practical problem solving, implementation of accounting standards, and grasping the initiative and flexibility [of accounting standards setting by the MOF] (added by the author) in the trend of accounting globalization, adhering to the convergence approach is a pragmatic and effective way to meet the needs to establish and develop accounting standards [in China] (Yang, Lu & Xu, 2011, p. 14).

As suggested by former Director General Yang Min, the MOF's decision regarding convergence with IFRS is based primarily on considerations of the distinct Chinese contextual factors, which are quite different from those in Anglo-American countries. In the debate about the most suitable solution regarding IFRS implementation in China, it is an urgent issue to examine the main features of Chinese-specific contextual factors and their effects on the convergence of Chinese GAAP with IFRS.

Several studies have addressed issues concerning convergence toward IFRS in China. They clarified differences between Chinese GAAP and IFRS such as different accounting treatments for business combinations and limited application of fair value measurement in Chinese GAAP (Biondi & Zhang, 2007; Peng & Bewley, 2010; Baker, Biondi & Zhang, 2010). However, the relevant studies failed to provide in-depth analyses of Chinese-specific contextual factors, which are the MOF's prime considerations when it decides to apply the convergence approach rather than the direct adoption approach. These facts lead me to adopt the accounting ecology framework developed by Gernon & Wallace (1995) to provide a holistic and rigorous analysis of the main features of the Chinese-specific accounting environment.

Findings of this study show that market-based economy development in China created demand for converging Chinese GAAP with IFRS. Specifically, increase of FDI in China and Chinese enterprises' financing in overseas capital markets highlighted the importance of high-quality financial reporting to meet the needs of foreign investors. On the other hand, findings of this study show that in the current Chinese context, there is a lack of the necessary infrastructure to support consistent interpretations and applications of IFRS. Particularly, while IFRS rely on a more principles-based approach (Ball, 2006), Chinese accounting professionals are accustomed to rules-based accounting standards (Chen, 2007). This suggests that the necessary training and experience to implement more principles-based IFRS are urgent issues in China. Findings of this study further show that although an increasing number of Chinese enterprises raise funds in overseas capital markets, most Chinese listed companies collect funds only in domestic capital and credit markets. This may lead to a relatively passive demand for adopting IFRS in China and provide a rational for the MOF's decision to apply the convergence approach rather than the direct adoption approach.

As such, this study provides a deeper understanding concerning the convergence approach adopted in China by clarifying not only accounting issues but also the effects of contextual factors on accounting practices. Through these investigations, this study suggests that changing accounting standards (e.g. adopting IFRS) without considering the institutional complementary between accounting rules and surrounding infrastructure potentially leads to undesirable outcomes for the country as a whole, even if the change is expected to improve financial reporting.

The remainder of this study is organized as follows. Section 2 summarizes the accounting ecology framework developed by Gernon & Wallace (1995). Section 3 applies this framework to clarify the primary features of the Chinese accounting environment, from the societal, organizational, professional, individual, and accounting aspects. Section 4 concludes this study by summarizing China's accounting environment and its influence on the convergence of Chinese GAAP with IFRS.

ACCOUNTING ECOLOGY FRAMEWORK

Gernon and Wallace (1995) developed a so-called national accounting ecology framework to provide an integrated and holistic view of country-specific accounting scenes. This framework considers that accounting is a complex system influenced by various contextual factors such as national culture, economic development, and accounting professionals' education. Thus, in this framework, no one factor occupies a predominant position because overemphasizing one or several factors and their influence cannot provide a broad understanding of accounting practices (Gernon & Wallace, 1995). Moreover, the accounting ecology framework emphasizes the interrelationship among the contextual factors. According to Gernon and Wallace (1995), the accounting ecology in a country includes five individual but interactive components:

1. Societal environment: including cultural variables such as language, ethnic origin, religion, belief systems, and shared values; structural variables such as economic, technological and legal development; and demographic variables such as a country's population and geographical location.
2. Organizational environment: referring to elements relevant to rationalization in the choice and design of accounting systems such as organizational size, technology and complexity, as well as human and capital resources.
3. Professional environment: referring aspects related to the accounting profession such as the education, training, registration, and the discipline of accountants and auditors.
4. Individual environment: referring to accounting policy choices made by individuals and comprising the whole setting in which individuals lobby standard-setters and use accounting numbers to pursue respective interests.
5. Accounting environment: encompassing financial reporting rules and practices, influenced by and proactively affecting elements in the other environments. Specifically, it includes the disclosure and measurement requirements and practices, coupled with types and frequency of accounting reports.

The national accounting ecology framework enables a comprehensive description of the milieu in which accounting operates (Gernon & Wallace, 1995). Perera and Baydoun (2007), Hellmann, Perera and Patel (2010), Poudel, Hellmann and Perera (2014), and Tsunogaya, Hellmann and Scagnelli (2015) demonstrated the framework's applicability to examine country-specific accounting environments through studies into Indonesia, Germany, Nepal and Japan, respectively. Perera and Baydoun (2007) clarified that contextual factors in Indonesia such as the "credit-insider" financing system, the legal system featuring paternalistic protection, and the Islam tradition and its strong influence on business activities, would make IFRS implementation in Indonesia a challenging task. Hellmann, Perera and Patel (2010) illustrated that contextual factors in Germany such as the conservative cultural tradition, uniformity and statutory control, the "credit-insider" system, and the close relationship between taxation and accounting, may hinder consistent interpretations and applications of IFRS in Germany. Poudel, Hellmann and Perera (2014) illustrated that contextual factors in Nepal such as widespread corruption, underdeveloped capital market, and a lack of qualified and well-trained accountants are likely to hinder consistent interpretations and applications of IFRS in Nepal. Thus, the direct adoption of IFRS in Nepal does not necessarily improve the comparability and transparency of financial reporting prepared by Nepalese companies. Tsunogaya, Hellmann and Scagnelli (2015) demonstrated that Japan's distinct contextual factors such as the high weight of the manufacturing industry, long-term oriented business practices, the coordinated market economy, and the relatively small size of accounting professionals, are likely to impede the mandatory adoption of IFRS in Japan.

ANALYSIS OF THE CHINESE ACCOUNTING ECOLOGY

Societal Environment

The societal environment refers to demographic, cultural, and structural variables such as the level of technological, economic, and political development. After establishing the People's Republic of China as a socialist state in 1949, Mao Zedong (1893-1976), the former leader of China, adopted a Soviet-style centrally-planned economic system characterized mainly by central planning and state ownership (Wu, 2005). Due to economic blockades by Western countries beginning in the 1950s and the diplomatic rupture with the former Soviet Union from the early 1960s, Mao emphasized a "self-reliance" (*ziligengsheng*) policy and encouraged the development of an independent domestic economic system. This inward-oriented economic policy lasted until the 1970s and led to stagnancy and depression in China's foreign trade (Wu, 2005). After the death of Mao, Deng Xiaoping (1904-1997) became the leader of China. Deng initiated the "Reform and Opening Up" (*gaigekaifang*)[7] policy in 1978 to accelerate Chinese economic development by promoting the inflow of FDI and introducing market principles and mechanisms. Compared to Mao's economic policy that emphasized independence and self-reliance, Deng proposed adopting an export-oriented industrialization policy aiming to expand exports of manufactured goods (Wu, 2005).

The "Reform and Opening Up" policy resulted in a significant increase of FDI in China from the 1980s, as shown in Figure 1. China has been one of the fastest growing economies for more than 30 years, with an average growth rate of approximately 7.7% per annum.[8] In terms of GDP, China became the second largest economy after the United States in 2010. The secondary sector, such as mining and manufacturing industries, contributed the most to Chinese GDP. For example, 42.7% of Chinese GDP in FY 2014 came from the secondary sector (National Bureau of Statistics of China, 2015). The increase in foreign trade was one important component supporting Chinese GDP growth. Figure 2 shows a rapid increase in Chinese exports and imports since 1978. The total value of exports and imports accounted for 41.5% of Chinese GDP in FY 2014 (National Bureau of Statistics of China, 2015). The European Union (EU), the United States, and Japan were the most important bilateral trading partners with China. They were also major contributors of FDI in China. As such, China has gradually globalized its business and organizational activities. This, in turn, placed China under the pressure to converge its domestic accounting standards with IFRS (Kanbur & Zhang, 2005; Biondi & Zhang, 2007; Doupnik & Perera, 2012). Actually, the MOF mobilized exogenous pressures from the economic globalization to promote the convergence of Chinese GAAP with IFRS. Wang Jun, former Vice Minister of the MOF (2005-2013), recognized:

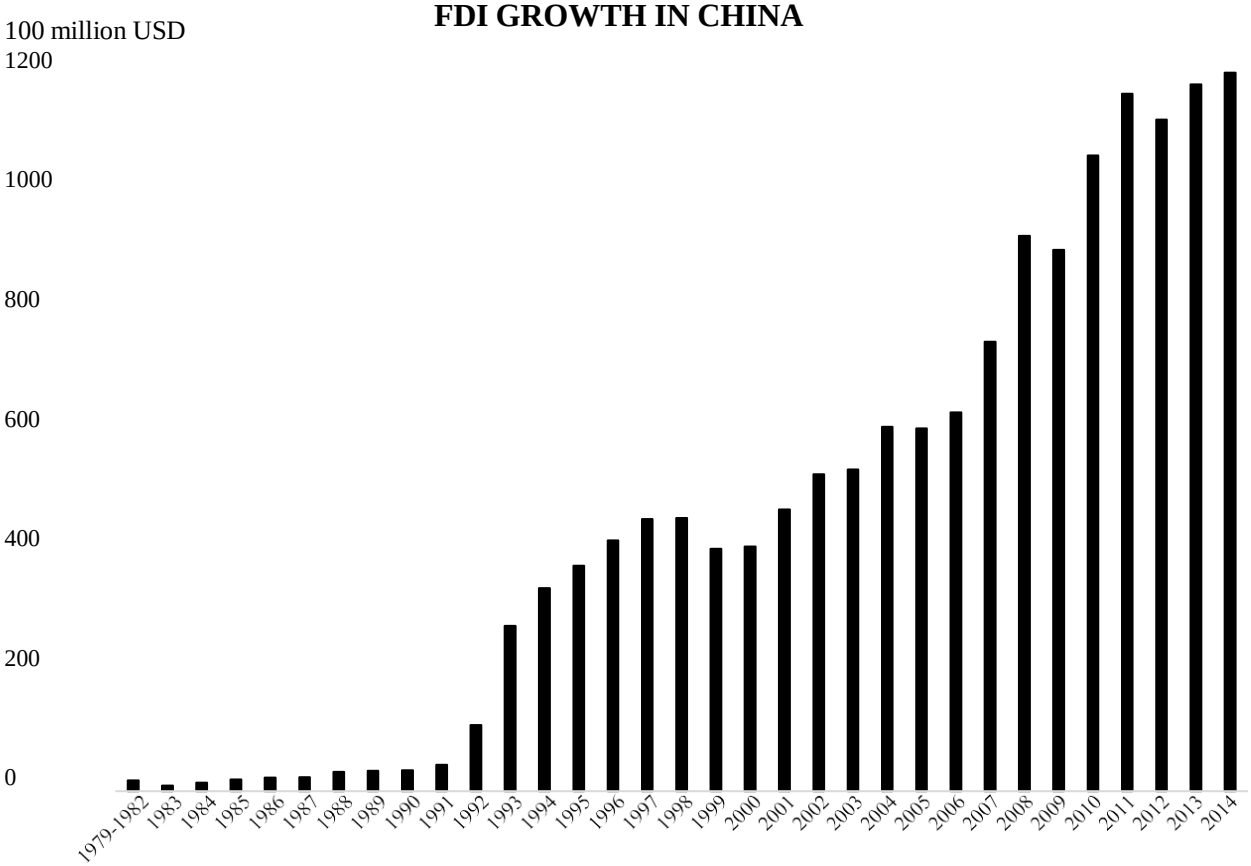
> *European and Asian countries are China's major trading partners and sources of foreign investment. With the increased trade and capital flows between China and these countries, accounting information is playing a more important role in promoting bilateral economic and trade cooperation. Parties engaged in international trade and international capital providers both need high-quality, comparable and understandable accounting information as basis for decision-making" (Wang, March 2006).*

Further, Wang Jun emphasized that converging Chinese GAAP with IFRS would benefit "the further integration of the Chinese economy into the global economic system and foreigners' understanding of China" (Wang, 2005, p.3).

Another important aspect of the societal environment is culture. The Chinese culture is characterized mainly by the teachings of Confucius (also known as Confucianism), which have played an important role in forming Chinese economy and accounting systems (Hofstede & Bond,

1988; Yee, 2009, 2012; Yang, 2012). The main objective of Confucianism is to achieve harmony in a complex society by establishing a strong and orderly hierarchy among people (Yang, 2012). In a highly hierarchical society, the superior should be benevolent to and take care of the subordinate, and the subordinate owes the superior obedience and loyalty (Ross, 2003; Yee, 2009). People in this cultural environment are more likely to accept unequal rights and respect authority. As such, many consider that accountants in China prefer to implement relatively prescriptive and detailed requirements rather than the flexibility of accounting standards and the excessive application of accountants' professional judgments (World Bank, 2009; ICAS, 2010).

Figure 1
FDI GROWTH IN CHINA

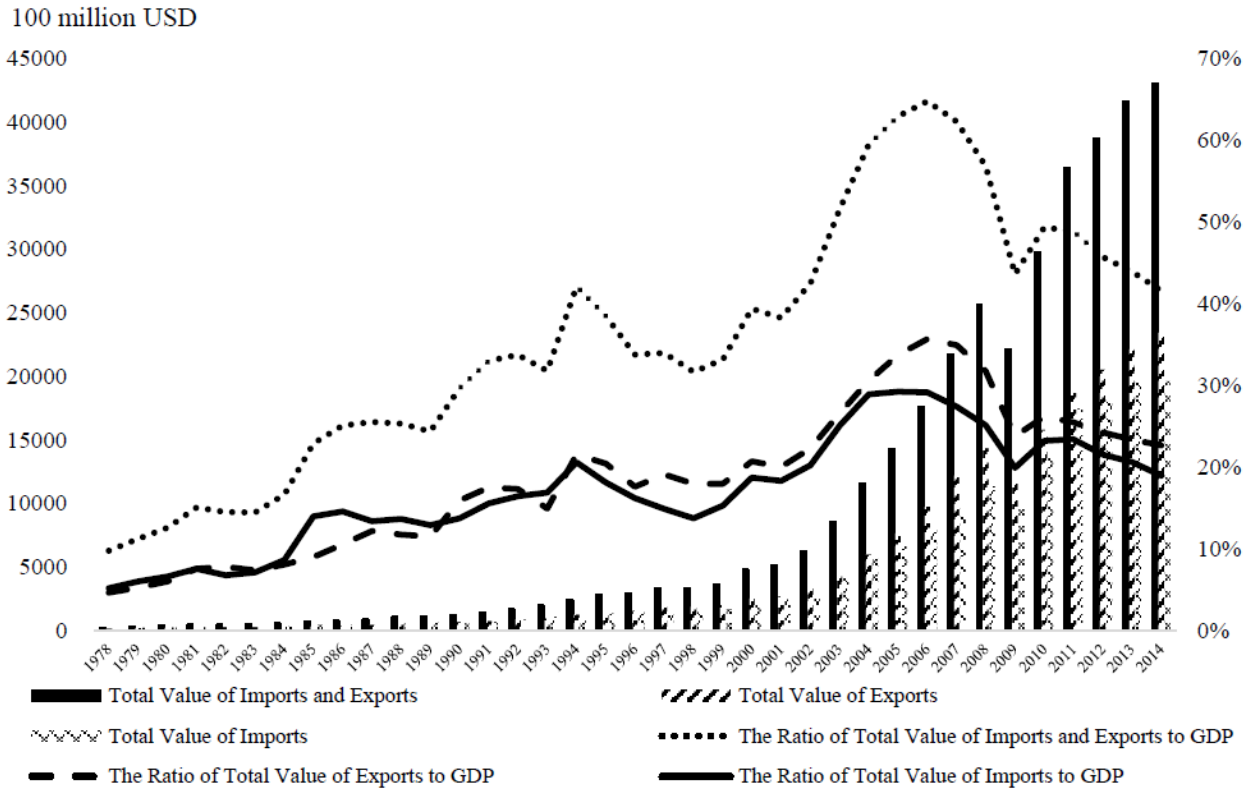


Source: drew by the author based on *China Statistical Yearbook 2015*.

Moreover, Confucianism values "thrift" and requires not spending more money than necessary, leading to saving and accumulating capital for reinvestment to achieve permanent development of enterprises (Hofstede & Bond, 1988). The emphasis on capital accumulation is likely to prevent excessive distributions and lead to prudent and conservative virtues. Moreover, the long-term perspective provides a rationale for that Chinese policy makers emphasize enterprises' permanent or sustainable incomes, which are incomes from market transactions of goods and services rather than from fluctuations in market prices of assets and liabilities. The MOF stated:

Listed companies in the manufacturing industry ought to manage their main businesses well. Only by this, they can achieve long-term development and contribute to social wealth growth. Otherwise, [the increase in profits] should be considered as the redistribution of wealth (MOF, 2008).

Figure 2
FOREIGN TRADE GROWTH IN CHINA AND ITS SIGNIFICANCE FOR THE CHINESE ECONOMY



Source: drew by the author based on *China Compendium of Statistics 1949-2008* and *China Statistical Yearbook 2015*.

Organizational Environment

The organizational environment encompasses elements such as firm size, complexity, capital resources, and corporate governance, which relate to appropriateness in the choice and design of accounting systems and the demand for accounting services. Chinese capital markets have a relatively short development history. In the centrally-planned economy, the Chinese central government controlled almost all economic resources such as funds and materials, and distributed these resources to every individual State-owned Enterprise (SOE) according to the estimated needs for fulfilling national economic plans (Wu, 2005). The capital market was considered incompatible with a centrally-planned economy and was closed in the 1950s (Zhang, 2001). With the introduction of market mechanisms since 1978, the capital market was re-introduced in China as one important institution for a market-based economy. Two domestic capital markets, the Shenzhen Stock Exchange and the Shanghai Stock Exchange, were established in December 1990. Thereafter, issuing shares to the public and listing on stock exchanges became one important fund-raising method for Chinese companies. Table 1 shows a rapid growth in the number of Chinese listed companies and the amount of funds raised in capital markets since the early of 1990s. With the development of Chinese capital markets, outside investors need high-quality financial information for their investment decision-making. As such, the development of Chinese capital

markets has been one of the most important forces to drive the convergence of Chinese GAAP with IFRS (Zhang & Lu, 2007).

Table 1
DEVELOPMENT OF CHINESE LISTED COMPANIES

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Number of listed companies in Chinese domestic capital markets	53	183	291	323	530	745	852	949	1088	1160	1224
Number of Chinese companies listed on the Stock Exchange of Hong Kong	0	6	15	18	25	42	43	46	52	60	75
Amount of funds raised in Chinese domestic capital market by offering of Shares (100 million RMB)	69	245	214	100	308	860	787	874	1516	1238	720
Amount of funds raised on the Stock Exchange of Hong Kong by offering of Shares (100 million RMB)	0	61	189	32	101	388	38	47	562	73	192
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of listed companies in Chinese domestic capital markets	1287	1377	1381	1434	1550	1625	1718	2063	2342	2494	2489
Number of Chinese companies listed on the Stock Exchange of Hong Kong	93	111	122	143	148	153	159	165	171	179	185
Amount of funds raised in Chinese domestic capital market by offering of Shares (100 million RMB)	666	651	339	2374	7815	3312	4834	9800	7154	4542	4284
Amount of funds raised on the Stock Exchange of Hong Kong by offering of Shares (100 million RMB)	537	648	1666	3073	927	311	1068	2343	732	998	1060

Source: drew by the author based on *China Statistical Yearbook 2014, China Statistical Yearbook 2015, China Securities and Futures Statistical Yearbook 2012* and *China Securities and Futures Statistical Yearbook 2014.*

Additionally, an increasing number of Chinese enterprises issued shares and listed their stocks in overseas capital markets such as the Stock Exchange of Hong Kong,[9] the New York Stock Exchange, NASDAQ, the London Stock Exchange, the Singapore Exchange, and the Australian Securities Exchange. Among these overseas capital markets, the Stock Exchange of Hong Kong has been the most important one. Table 1 shows a growth in the number of Chinese companies listed on the Stock Exchange of Hong Kong and the amount of funds raised there. Major overseas capital markets require or permit foreign companies whose securities are publicly traded there to report consolidated financial statements in accordance with IFRS. Thus, overseas listed Chinese companies need to conduct reconciliation of financial statements prepared under Chinese GAAP to IFRS, leading to an increase in the cost of financing in overseas capital markets. The MOF acknowledged that eliminating differences between Chinese GAAP and IFRS would reduce reconciliations of financial statements and benefit Chinese enterprises that raise funds in the global capital market. This was one of the MOF's motivations to promote the convergence of Chinese GAAP with IFRS. For example, former Vice Minister of the MOF, Wang Jun stated that "if [Chinese companies] get listed in different capital markets simultaneously, [they] need to provide financial statements in accordance with different accounting standards. Great differences among accounting standards in countries or regions will largely increase financial statements conversion cost for enterprises, consequently increase cost of listing" (Wang, November 2006). Wang Jun further stated that in the trend of global convergence of accounting standards, "establishing Chinese GAAP by using IFRS for reference" will encourage Chinese enterprises to "go out [to overseas capital markets] with low cost" (Wang, November 2006).

Table 2
FUNDS RAISED IN CHINESE DOMESTIC CAPITAL MARKETS VERSUS BANK LOANS

Year	Funds raised in Chinese domestic capital markets (direct financing) (100 million RMB)	Bank loans (indirect financing) (100 million RMB)	Ratio of direct financing to indirect financing (%)
1993	314.54	6,335.40	5.0
1994	138.05	7,216.62	1.9
1995	118.86	9,339.82	1.3
1996	341.52	10,683.33	3.2
1997	933.82	10,712.47	8.7
1998	803.57	11,490.94	7.0
1999	897.39	10,846.36	8.3
2000	1,541.02	13,346.61	11.6
2001	1,182.13	12,439.41	9.5
2002	779.75	18,979.20	4.1
2003	823.10	27,702.30	3.0
2004	862.67	19,201.60	4.5
2005	338.13	16,492.60	2.1
2006	2,463.70	30,594.90	8.1
2007	7,722.99	36,405.60	21.2
2008	3,534.95	41,703.70	8.5
2009	5,719.91	95,940.00	6.0
2010	10,190.93	79,510.73	12.8
2011	9,649.29	74,700.00	12.9

Source: *China Securities and Futures Statistical Yearbook 2012*.
Note: Funds raised in Chinese domestic capital markets include these raised through issuing shares and company bonds.

Although an increasing number of Chinese companies have been raising funds in overseas capital markets, the Chinese government does not allow foreign companies to issue shares or list on domestic stock exchanges. Moreover, the Chinese government has been limiting the investment of foreign investors in Chinese domestic capital markets. The Chinese capital markets regulator, the China Securities Regulatory Commission (CSRC), has applied a so-called Qualified Foreign Institutional Investor (QFII) system. This system permits only overseas institutional investors that acquired the CSRC's approval to invest in shares and company bonds listed in Chinese domestic capital markets. Furthermore, the State Administration of Foreign Exchange (SAFE) controls QFIIs' investment amounts and awards investment quota to each QFII. Until September 28, 2015, 277 QFIIs were approved with total investment quotas worth 78.8 billion USD (SAFE, 2015). This accounted for only about 1% of the total market capitalization of Chinese domestic stock markets, which was about 7,160.6 billion USD on August 1, 2015 (CSRC, 2015b). The restriction on foreign investment in Chinese domestic capital markets has led to marginal importance of foreign investors. For most Chinese listed companies, major users of their financial reporting are Chinese domestic investors. This provides a rationale for the MOF and the CSRC to consider that the direct adoption approach is not necessarily suitable for Chinese context, as IFRS largely focuses on

meeting the financial information needs of investors in the global capital market, and likely ignore the needs of Chinese domestic investors (Li, 2011).

Furthermore, among over 60,000 Chinese GAAP-applying enterprises, only 2,853 (as of April 13, 2016) are publicly traded companies. These data show that most Chinese GAAP-applying enterprises are not capital market-oriented business entities.[10] Thus, Chinese enterprises are likely to have weak incentives to provide relevant financial information and extensive disclosure to outside investors and creditors. Moreover, most Chinese GAAP-applying enterprises are unlisted and of medium-size. For these enterprises, a switch to IFRS is not likely to bring benefits such as a decrease in the cost of capital and easier access to the global capital market; rather, the switch would impose high implementation costs such as updating accounting systems and recruiting or re-training financial staffs.

Regardless of firm size, commercial banks are the most important funds providers for Chinese enterprises. Table 2 shows that funds from shares and company bonds issuance (so-called direct financing) were small relative to bank loans (so-called indirect financing). For example, though funds raised through direct financing in Chinese domestic capital markets reached a peak of 10,190.93 million RMB in 2010, this amount only accounted for 12.8% of bank loans in the same year. Even in 2007, the ratio of direct financing to indirect financing reached the highest level of 21.2%, it was relatively low.

The four largest commercial banks, which are controlled by the Chinese government,[11] provide a large portion of loans to Chinese enterprises. For example, in 2015, the four largest state-owned commercial banks provided nearly 40% of all loans that year.[12] Furthermore, they provided most of the loans to SOEs (Lu & Yao, 2004), because they are always under strong political pressure to provide loans to government-supported SOEs, even when the SOEs are in financial distress (Martin, 2012). Thus, most loan decisions made by the four state-owned commercial banks are significantly influenced by political pressure and not necessarily based on the debtors' financial status. This is likely to reduce the demand of Chinese commercial banks for transparent financial information to make their lending decisions.

Professional Environment

The professional environment refers to the education, training, registration and discipline of accountants and auditors, professional ethics and traditions, as well as the quality of auditing. China has a comparatively short development history of its accounting profession. The Chinese public accountants re-emerged in 1980,[13] while Certified Public Accountants (CPA) in the United States emerged in 1896 (Zeff, 2003; Chen, 2008; Yee, 2009). The MOF and Chinese leaders, from 1980s onward, emphasized the development of China's accounting professionals. Particularly, Zhu Rongji, former Vice Premier (1991-1997) and former Premier (1997-2003), recognized that the development of China's CPAs is important for the establishment of a market-based economy (Zhu, June 1996). Zhu Rongji's interest in establishing a Western-style CPA system and his hegemonic influence on Chinese political policy decisions provided reformers within the MOF with a favorable political opportunity to improve the professional education and training of Chinese CPAs by using international accounting standards. Furthermore, the MOF received financial aid from the World Bank and technical support from Deloitte Touche Tohmatsu, an international accounting firm, to overcome the deficiency in funds and expertise, and enhanced the training of Chinese accounting professionals to improve their competence in applying international accounting standards (Suzuki, Yan & Chen, 2007).

With political support from Chinese leaders and financial aid from the World Bank, in the early 2000s, the MOF established three National Accounting Institutions (NAIs) in Beijing, Shanghai and Xiamen. The NAIs are government-funded institutes to provide accounting-centered training to Chinese accounting professionals. Especially, training in the three NAIs are mandatory for a cadre of CPAs, Chief Executive Officers (CEOs) of SOEs, Chief Financial Officers (CFOs) of large enterprises, and senior officials within regulators such as the MOF and the CSRC (Suzuki, Yan & Chen, 2007). Training courses at the three NAIs include accounting practices, auditing techniques, and professional ethics consistent with international accounting and auditing standards (World Bank, 2010). Through these training courses, a small cadre of elites in the Chinese accounting profession has been equipped with sound knowledge and skills to apply IFRS. Importantly, these well-trained accounting professionals provided the MOF with the necessary professional infrastructure to introduce fair value measurement and principles-based accounting standards into Chinese GAAP (Graham, Peng & Bewley, May 2013).

Although there was a dramatic improvement in China's accounting professionals, the infrastructure is still considered as incompetent to support consistent interpretations and applications of IFRS in China. Firstly, the number of China's CPAs is relatively small. Specifically, the number of CPAs per one million in China is approximately 159 (215,091/1,350 mil.), while in the United States, it is 1,087 (342,490/315 mil.),[14] meaning that China only has one-seventh the number of CPAs per one million as the United States. Importantly, according to the regulations of the MOF and the CSRC,[15] less than 0.5% of accounting firms (40 of 8,350), and consequently, only about 11% of CPAs (about 24,146 of 213,376) in China are eligible to audit listed companies.[16] This shows a relative lack of qualified CPAs in China. The size of the accounting professionals in a country is often used as a proxy for auditing quality (Saudagaran, 2004). The small size of China's CPAs may impair auditing quality in China. Consequently, it may challenge IFRS implementation in China, because high quality auditing is one of the efficient enforcement mechanisms for the rigorous and consistent application of IFRS (Hail, Leuz & Wysocki, 2010a).

Secondly, Chinese accounting professionals are considered to lack the necessary education and experience to consistently interpret IFRS and make appropriate judgments (World Bank, 2009; ICAS, 2010). Chinese accounting professionals are accustomed to the rules-based approach during a long period of education and practice under an accounting system with detailed regulations. After the establishment and issuance of the new set of Chinese GAAP in 2006, the application of more principles-based accounting standards modeled on IFRS was one of the main concerns of the Chinese regulatory authorities. To ensure consistent implementation of principles-based accounting standards by preparers of financial statements and CPAs, the MOF offered a series of guidelines (*yingyongzhinan*), explanations (*jieshi*), and explications (*jiangjie*). Although IFRS tend to limit guidance for applying the general principles to particular transactions and economic events and encourage the application of professional judgments (Doupnik & Perera, 2012), considering the current Chinese professional environment, detailed guidance and interpretations of principles-based accounting standards are indispensable for the consistent implementation of IFRS in China. The MOF has been concerned about that IFRS without greater specificity and more guidance would encounter practical problems in China. Furthermore, the MOF recognizes that IFRS give financial reporting preparers substantial discretion because the application of the standards involves considerable judgments, and this may lead to unintended consequences in Chinese-specific context. For example, fair value measurement relies on managers' private

information and involves an assessment of the future, may leading to subjective biases, and thus unreliable financial information (Liu, 2007, 2011b). Moreover, Chinese CPAs may not be able to effectively audit fair value measurement to confirm the appropriateness of preparers' estimations and moderate subjective biases (Li, Zou & Jiang, 2012; Yang, Li, Lu, Zhu & Chen, 2012).

Individual Environment

The individual environment refers to accounting policy choices made by individuals and comprises the whole setting in which individuals lobby standard-setters and use accounting numbers to pursue respective interests. The accounting standard-setter in China is a public sector, the MOF, which has been entrusted by the *Accounting Law* with the only authority to establish Chinese accounting standards. The MOF, between 2001 and 2004, showed little interest and hesitation to converge Chinese GAAP with or adopt IFRS, although IFRS gained momentum in global acceptance as the single set of accounting standards and have been adopted in more and more countries after 2000. This situation changed along with the personnel replacement in the MOF (Camfferman & Zeff, 2015). Wang Jun, at the end of 2004, replaced Feng Shuping to be responsible for establishing Chinese GAAP. Wang Jun encouraged the establishment of a new set of Chinese GAAP, aiming at promoting the convergence with IFRS. While crafting the new set of Chinese GAAP during the early 2005 and the early 2006, the MOF invited a team of specialists from the IASB for technical assistance (Camfferman & Zeff, 2015). During the initial stage of the collaboration, the IASB held a strong position that convergence means full adoption of IFRS word for word (Wang, April 2006). On the other hand, Wang Jun contended that accounting standards should consider national contextual factors such as the economic environment, legal system, cultural tradition, enforcement system, and professional competence (Wang, 2005). Finally, Wang Jun convinced David Tweedie, the Chairman of the IASB during 2001 and 2011, that direct adoption of IFRS is infeasible in China because of distinct Chinese accounting environment. After negotiations with the IASB, both accounting standard-setters took a step back. The MOF made significant revisions to the initial draft of Chinese GAAP according to suggestions from the IASB' specialists to eliminate major differences between Chinese GAAP and IFRS. On the other hand, the IASB accepted that "how to converge with IFRSs is a matter for China to determine" (CASC & IASB, 2005), and acknowledged that the new set of Chinese GAAP had achieved "substantial convergence" with IFRS (IASB, 2006), although evident gaps between Chinese GAAP and IFRS still existed (Camfferman & Zeff, 2015).

Wang Jun accepted that economic globalization and accounting convergence are irresistible trends. He, however, opposed IFRS adoption and argued that Chinese-specific contextual factors should be considered. Furthermore, Wang Jun insisted that the convergence of accounting standards should be bidirectional. Specifically, the IASB should take account of distinct accounting environment of China, as well as those of other developing, emerging, and transitional economies rather than imposing unidirectional IFRS adoption (Wang, 2005). Wang Jun suggested the MOF seek greater influence in the process of setting IFRS and apply pressure on the IASB to reflect Chinese-specific contextual factors in IFRS. After Wang Jun's promotion to the Vice Minister of the MOF in 2005, his decision has been thoroughly implemented by his successors, Liu Yuting and Yang Min, former Director Generals of the Accounting Regulatory Department within the MOF. Both of them argued that IFRS will be more applicable in emerging and transitional economies only if the IASB considers contextual factors in these economies (Liu, 2009; Yang, Lu & Xu, 2011). Particularly, Yang Min led a project team within the MOF to study the application of fair value measurement in emerging economies, and concluded several practical problems. For example, Yang Min reported:

Although many product markets exist in emerging economies, these markets lack enough depth and liquidity. For example, relatively inactive markets include inter-bank bond market, treasury bonds market, credit default swap market, the market for loan assets, and the real estate market. The lack of market depth results in price manipulation by market participators and the increase of non-orderly transactions. Furthermore, for items such as investment properties measured at fair values, non-performing loans held by asset management companies, and financial instruments needing credit risk adjustments, their valuations are difficult because of the lack of observable market inputs (Yang, Li, Lu, Zhu & Chen, 2012).

Considering these practical problems, the MOF suggested that the IASB should provide more educational guidance for the application of fair value measurement in emerging economies (Yang, Li, Lu, Zhu & Chen, 2012). Moreover, the MOF argued that Chinese GAAP reflects economic reality in China better than IFRS in some cases. One example is the MOF's requirement for applying the pooling of interests method to business combinations under common control, while the IASB requires the application of the purchase method for all business combinations. The MOF recognized that a large portion of business combinations in China are the ones under common control, and their nature is the reorganization among intra-group entities, rather than a takeover of an acquired company by an acquiring company through a capital market (Pan, 2002; Huang, Chen, Zhang & Wang 2004; Biondi & Zhang, 2007; Baker, Biondi & Zhang, 2010; Yang, Lu & Xu, 2011). Thus, the MOF required the application of the pooling of interests approach and prohibited the revaluation of assets and liabilities by using fair value measurement and the recognition of goodwill. The MOF has no plan to eliminate the pooling of interests approach in order to achieve greater convergence with IFRS. Instead, it suggested that the IASB should revise existing IFRS (specifically, IFRS 3 *Business Combinations*) or set a new accounting standard to regulate business combinations under common control (Liu, 2011a). Liu Yuting stated that "the fundamental reason for why China cannot directly adopt IFRS is that the establishment and main revisions of IFRS have not well considered actual conditions in China and other emerging economies" (Liu, 2011a). He argued that only if the IASB does so, IFRS will "achieve high-quality, authority and worldwide legalization in deed" (Liu, 2011b, p.14).

Various stakeholders in China can express views and opinions in the process of setting Chinese GAAP. Major lobby groups include government organizations (e.g. the CSRC, the State-owned Assets Supervision and Administration Commission (SASAC), the China Banking Regulatory Commission (CBRC), the China Insurance Regulatory Commission (CIRC) and the State Administration of Taxation (SAT)), SOEs and state-owned banks, stock exchanges, auditing firms and accounting academics. Among them, regulators, such as the CSRC, the CBRC, the CIRC, the SASAC and the SAT are the strongest lobby groups because they are involved in not only the establishment of Chinese GAAP but also the enforcement of accounting standards by providing implementation guidance and interpretations of accounting standards to enterprises, financial institutions, and CPAs.

These regulators, especially the CSRC, tend toward conservative accounting and oppose the extensive application of fair value measurement in order to promote financial stability. For example, one senior official within the CSRC, Li Xiaoxue argued:

Considering the features of China's market economy, the CSRC hopes that [a listed company] provides financial information reflecting its ability to continue as a going concern, rather than gains or losses from prices fluctuation of short-term financial assets (Li, 2011, p.14).

Another senior official within the CSRC, Jia Wenqin stated:

Considering the features of China's current market economy, to maintain the country's financial stability, [we should] moderately use fair value measurement. Currently, economic development in our country is still largely depended on the real economy rather than the "fictitious" economy.[17] Additionally, the market-based economy has not yet fully developed in China. There is a lack of active markets in some areas, so the application of fair value measurement relies largely on subjective judgments and estimations of managers, leading to some faults in reliability. Moreover, the application of fair value measurement is likely to aggravate the fluctuation of operating performance, especially for banks financial institutions that hold a large amount of financial assets. Considering current economic environment and financial stability in China, it is necessary to have a comprehensive understanding of the constraints on the application of fair value measurement in China, and produce respective advantage of historical cost and fair value measurements… [I] suggest that China's accounting standard-setter should weight the pros and cons and cautiously make policies adapting to real economic environment in our country, and should not pursue convergence with IFRS at the expense of the decline in accounting information quality reported by Chinese enterprises(Jia, 2010, p.9).

Accounting Environment

The accounting environment includes existing and desirable financial reporting regulations and practices that affect, and are affected by, the other slices, including societal, organizational, professional and individual components. With establishing a centrally-planned economy in the 1950s, the Chinese government adopted a Soviet-style accounting system. This system was mainly characterized as rules-based and taxation-oriented. The MOF provided detailed accounting regulations such as the depreciable rate, and allowed almost no professional judgments. Additionally, accounting treatments were required to be in accordance with tax regulations (Feng, 1999a). The MOF required all Chinese SOEs to apply this accounting system until the early 1990s. After "Reform and Opening Up" policy in 1978, foreign investment increased rapidly and contributed significantly to the Chinese economy development. The MOF, in 1985, introduced a historical cost accounting system to Sino-foreign joint ventures (*zhongwai hezi jingying qiye*) to meet the information needs of foreign investors (Tokuga & Wang, 2005; Ezzamel, Xiao & Pan, 2007). With the introduction of market mechanisms into Chinese SOEs, the Soviet-style accounting system was criticized for not meeting the information needs of outside investors and creditors (Yang, 1988). In 1992, the MOF repealed the Soviet-style accounting system and required all Chinese enterprises to adopt the historical cost accounting system. Afterward, with the development of Chinese capital markets since 1990, the MOF gradually introduced a so-called modified historical cost accounting[18] into Chinese listed companies to meet the financial information needs of investors in capital markets. During this period, the modified historical cost accounting system dominated most national GAAPs and international accounting standards (Tsunogaya, Okada & Patel, 2011). By introducing the modified historical cost accounting system, the MOF intended to make financial statements illustrate "the economic and monetary process of the firm as an entity and a going concern, focusing on the incomes generated during the reference accounting period" (Biondi & Zhang, 2007, p.703). Thus, the MOF adopted some internationally accepted accounting principles such as the accrual basis, matching between revenues and related expenses, and valuation on a historical cost basis (MOF, 1992).

Importantly, as a result of convergence with international accounting standards, the MOF adopted fair value measurement in the late 1990s. The MOF issued accounting standards for *Debt Restructurings* and *Non-monetary Transactions* in 1998 and 1999, respectively, and required

enterprises to recognize the differences between the carrying value and the fair value of the exchanged assets during debt restructuring and non-monetary transactions as current profits. During the implementation of the two accounting standards, many studies found that a number of Chinese listed companies abused the fair values in debt restructuring and non-monetary transactions to overstate reported profits (Wang, 2005; Xie, Fan & Lu, 2008; He, Wong & Young, 2012). Feng Shuping, former Director General of the Accounting Regulatory Department within the MOF during 1996 and 2001, pointed out that one practical problem with fair value measurement was "how to determine the fair values of exchanged non-monetary assets. If the fair values cannot be correctly determined, it is possible that enterprises abuse debt restructuring transactions to window-dress their financial statements" (Feng, 1999b, p.44). To prevent potential earnings manipulation through abusing fair value measurement, the MOF, in 2001, revised the accounting standards for *Debt Restructurings* and *Non-monetary Transactions* and required Chinese enterprises to value exchanged assets on the carrying amount rather than on the fair value. As such, during 2001 and 2005, the MOF eliminated fair value measurement application in Chinese GAAP.[19]

The IASB, in contrast, showed an increasing preference for fair value accounting. Especially, the IASB's movement toward fair value accounting was strengthened mainly by the influence of the Financial Accounting Standards Board (FASB) after singing the *Norwalk Agreement* in 2002 between the two accounting standard-setters (Whittington, 2008). The FASB and the IASB had used political rhetoric, such as "fair," "transparent," and "relevant" to promote the extensive application of fair value measurement in US GAAP and IFRS (Biondi & Suzuki, 2007; Tsunogaya, Okada & Patel, 2011). As fair value accounting and global convergence of IFRS gained momentum, the MOF was under strong exogenous pressure to accept fair value as a measurement attribute. As a respond to the pressure, the MOF re-introduced fair value measurement in Chinese GAAP issued in 2006.

Although Chinese GAAP moved significantly toward fair value accounting in a stream of global accounting convergence, the MOF imposed tight constraints on the application of fair value measurement (Biondi & Zhang, 2007; Baker, Biondi & Zhang, 2010). Indeed, the *Basic Standard* (*jibenzhunze*), which constitutes the conceptual framework of Chinese GAAP, introduces fair value as one of acceptable measurement attributes. It, however, uses the historical cost as the principle measurement attribute, and requires fair value measurement only for certain items such as marketable securities. Table 3 shows some notable differences between Chinese GAAP and IFRS in terms of fair value measurement as follows.

1. Chinese standards for fixed assets and intangible assets adopt the historical cost model measuring these assets at their depreciated acquisition costs, while IFRS (e.g., IAS 16 and IAS 38) allows a revaluation model that reflects changes in fair value.
2. Chinese GAAP require enterprises to measure a biological asset on initial recognition at its cost, and require measurement after recognition at its fair value only when the fair value can be measured reliably on a continuing basis, while IAS 41 requires enterprises to measure a biological asset on initial recognition and at the end of each reporting period at its fair value less costs to sell.[20]
3. Chinese GAAP prohibit the use of unobservable inputs to measure the fair value of investment properties, while IAS 40 allows Level 3 inputs[21] to measure the fair value of investment properties. Additionally, Chinese GAAP prohibit changes from the fair value model to the cost model for subsequent measurements of investment properties, while IAS 40 allows such a change if it results in a more appropriate presentation.
4. Chinese GAAP prohibit the reversal of impairment losses for all assets, while IAS 36 requires the reversal of impairment losses for every asset except goodwill.

Table 3
LIMITED APPLICATION OF FAIR VALUE MEASUREMENT IN CHINESE GAAP COMPARED WITH IFRS

Regulations	hinese GAAP (C-GAAP)	Fair value measurement	IFRS	Fair value measurement
Measurement of fixed assets and intangible assets after recognition	Allow only cost model C-GAAP 4: *Fixed Assets*, C-GAAP 6: *Intangible Assets*	N/A	Permit choice between cost and revaluation model IAS 16: *Property, Plant and Equipment*, IAS 38: *Intangible Assets*	Level 1, Level 2, Level 3
Measurement of biological assets after recognition	Principle: historical cost; Exception: fair value C-GAAP 5: *Biological Assets*	Level 1, Level 2, Level 3	Principle: fair value; Exception: historical cost IAS 41: *Agriculture*	Level 1, Level 2, Level 3
Measurement of investment properties after recognition	Principle: historical cost; Exception: fair value; Prohibit the change from fair value to cost model C-GAAP 3: *Investment Property*	Only Level 1 and Level 2 are permitted	Either fair value or cost model; Permit the change from one model to the other only if the change results in a more relevant presentation IAS 40: *Investment Property*	Level 1, Level 2, Level 3
Reversal of impairment losses	Prohibit the reversal of impairment losses for all assets C-GAAP 8: *Impairment*	N/A	Require the reversal of impairment losses for every asset except goodwill IAS 36: *Impairment of Assets*	N/A

Source: drew by the author based on MOF (2006) and IASB (2012).

Note: Cost model means measuring assets at their costs less any accumulated depreciation and any accumulated impairment losses. Revaluation model means measuring assets at their fair values at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Fair value model means measuring assets at their fair values without depreciation or impairment requirements.

As such, the MOF has been concerned about the extensive application of fair value measurement, and allows the application only when the fair values of items are reliably measurable on a continuing basis (Liu, 2007, 2011a, 2011b). The main reasons for the limited application of fair value measurement can be summarized as follows.

1. The manufacturing sector has a central place in the Chinese economy, and manufacturing companies have a relatively low proportion of financial assets in their total assets. For these companies, financial information users, including investors, anticipate enterprises' future operating performance largely based on realized incomes reported under historical cost accounting. Therefore, the demand for financial information based on fair value measurement is relatively weak in China (Jia, 2010; FSA, 2012).
2. As the market economy in China is undeveloped, directly observable prices in active markets for most assets and liabilities, especially non-financial assets and liabilities, are not available (Feng, 2004; Peng & Bewley, 2010; Liu, 2011b). Therefore, if the MOF allows the extensive application of fair value measurement in China, preparers of financial reporting may apply Level 3 inputs and use subjective estimations to measure the fair

values of most assets and liabilities. This may cause subjective biases, and thus unreliable financial information (Xie, 2006; Penman, 2007; Liu, 2007).

3. Most auditors in China lack the necessary training and experience to apply fair value measurement. Therefore, they may be unable to effectively audit fair value measurement to confirm the appropriateness of preparers' estimations (Li, Zou & Jiang, 2012; Yang, Li, Lu, Zhu & Chen, 2012). This means that auditing in China may be unable to moderate subjective biases.
4. Given that some Chinese listed companies abused fair value measurement to inflate earnings during 1998 and 2000, the MOF has been concerned about the potential opportunistic use. To reduce opportunities for earnings manipulation, the MOF imposed restrictions to the application of fair value measurement, such as prohibiting the change from a fair value model to a cost model once an enterprise applied a fair value model to measure investment properties and banning the reversal of impairment losses for all assets once impairment losses were recognized in prior fiscal periods (Liu, 2011b).

These reasons provide evidence that Chinese-specific contextual factors such as economic development, professional training, and organizational structure may cause inconsistent application of fair value measurement in China. Furthermore, this fact provides a rationale for that the MOF is cautious about direct adoption of IFRS, which is considered as being extending the application of fair value measurement.

CONCLUSION

By applying the accounting ecology framework developed by Gernon and Wallace (1995), this study examined the primary features of the Chinese-specific contextual factors and outlined their effects on the convergence of Chinese GAAP with IFRS. China is in transition from a centrally-planned economy to a market-based economy. The Chinese government still exerts a strong influence on the resources allocation such as giving SOEs priority to get bank loans and imposing restrictions on the investment of foreign investors in Chinese domestic capital markets. Due in part to these facts, market mechanisms are relatively limited in China. This may lead to a comparatively passive demand for transparent financial information to improve resources allocation in China. Moreover, the secondary sector is an important contributor to Chinese economy as it accounts for about half of China's GDP. The relatively high weight of the secondary sector may impede the extensive application of fair value measurement in China.

In a Confucian cultural environment, China's accounting professionals prefer to comply with prescriptive accounting regulations rather than making individual professional judgments. Chinese accounting professionals are accustomed to rules-based accounting standards and lack of the necessary education and experience to make appropriate interpretations and judgments under principles-based accounting standards. Thus, principles-based IFRS lacking precise guidance and interpretations may cause practical problems in China.

Because the Chinese government imposed stringent restrictions on foreign investment in China's domestic capital markets, for most Chinese listed companies, the main users of financial reporting are domestic investors. This may lead to a relatively passive demand for adopting IFRS in China, as IFRS is considered to focus on the information needs of investors in the global capital market and likely ignore the needs of Chinese domestic investors. Moreover, this legitimizes the MOF's decision to apply the convergence approach instead of the direct adoption approach. That is because Chinese GAAP is considered to reflect the economic realities of China's enterprises, especially those in the manufacturing industry, better than IFRS, and provide more decision-useful financial information to Chinese domestic investors (Jia, 2010).

The number of Chinese accounting professionals is relatively small compared to that of Anglo-American countries. This may cause a decline in the auditing quality and add difficulty to

IFRS implementation in China because high quality auditing is one of the efficient enforcement mechanisms for the rigorous and consistent application of IFRS.

Chinese regulators, such as the CSRC, the CBRC, and CIRC, are deeply involved in the process of establishing Chinese GAAP. These regulators emphasize maintaining stability in the financial sector and consider that the extensive application of fair value measurement may exacerbate swings in the financial system. These lobby groups forced the MOF to be cautious about the application of fair value measurement in Chinese GAAP.

Furthermore, the MOF has been concerned about practical problems caused by the extensive application of fair value measurement. Specifically, Chinese enterprises may have difficulty obtaining active market prices to measure the fair values of certain assets and liabilities. Additionally, as financial reporting preparers and CPAs lack of competence in measuring and disclosing fair values precisely, the reliability of financial statements reported by Chinese enterprises may decline. Thus, the MOF recommends historical cost measurement and requires fair value measurement only to cases where fair values will be reliably measurable on a continuing basis. Actually, by adopting the convergence approach, the MOF incorporated IFRS into Chinese GAAP but revised them to reduce the impact of fair value measurement in many areas (Biondi & Zhang, 2007).

Findings of this study show that contextual factors in China such as its cultural tradition, capital market development, accounting profession, and political system may lead to inconsistent interpretations and implementations of IFRS. Considering the lack of necessary infrastructures for the consistent IFRS application in China, the direct adoption approach may not be optimal since it may lead to unintended consequences, such as a decline in comparability and reliability of financial information prepared by Chinese enterprises. The establishment of surrounding institutions coordinated with IFRS would generate significant implementation and enforcement costs for related stakeholders such as preparers of financial reporting and Chinese regulators (Jia, 2010; Yang, Li, Lu, Zhu & Chen, 2012). For example, Chinese enterprises need to re-train accounting professionals and update existing accounting systems.

In the global debate about a more suitable approach to IFRS implementation, specifically, whether it should be the direct adoption or the cautious convergence, this study contributes useful findings to the MOF's policy choices regarding IFRS implementation in China. Although this study used China as a case, it could provide a deeper understanding of accounting practices in other transitional countries with similar contextual factors and those countries facing similar challenges caused by convergence with or adoption of IFRS. Findings of this study also have important applications for the IASB, as it has been promoting direct adoption and consistent implementation of IFRS in nations with diversified accounting environments. Findings of this study suggest that to achieve the global convergence of IFRS, the discussion should be extended from simple accounting issues to a more holistic perspective, including societal, organizational, individual and professional issues.

This study analyzed only five dimensions of the Chinese accounting environment, including societal, organizational, professional, individual and accounting dimensions. Other factors that may challenge IFRS implementation in China such as issues related to the interpretation and translation of IFRS, as well as the implementation costs of IFRS must be investigated by future research. Although this study has this limitation, it provides valuable insights into the Chinese context in which accounting operates, and contributes applications for policy decisions concerning convergence with or adoption of IFRS not only in China but also in other transitional countries.

ENDNOTES

1 See http://www.ifrs.org/Use-around-the-world/Pages/Analysis-of-the-IFRS-jurisdictional-profiles.aspx.

2 Adoption of IFRS in this study indicates that: applying IFRS as issued by the IASB without modifications, and applying IFRS as endorsed by regional or national regulators (e.g. the European Commission) with potential deletions or modifications (e.g. the "carve-out" from IAS 39 *Financial Instruments* by the European Union).

3 Convergence is defined in this study as the process of gradually eliminating differences between existing national accounting standards and IFRS. However, IFRS are not necessarily incorporated to replace national accounting standards directly. Thus, convergence does not necessarily eventually result in the adoption of IFRS.

4 Substantial convergence, as defined by officials within the MOF, means that the principles of recognition, measurement, and reporting in Chinese GAAP are the same as those in IFRS, leading to the same results in financial statements of enterprises applying either IFRS or Chinese GAAP.

5 The MOF and the IFRS Foundation signed a joint statement on November 18, 2015, in which both parties stated the plan to "establish a joint working group to explore ways and steps to advance the use of IFRS within China and other related issues, especially for those internationally-orientated Chinese companies" (MOF & IFRS Foundation, 2015). "To advance the use of IFRS within China" may indicate either accelerating the process of revising Chinese GAAP to eliminate differences with IFRS or initiating a discussion on whether the MOF should permit or require Chinese companies, especially global companies, to prepare their financial statements in accordance with IFRS. The latter means either voluntary or mandatory adoption of IFRS in China. However, the MOF and the IFRS Foundation have not said the meaning definitely, and have not declared the direct adoption approach a potential way to advance the use of IFRS within China. Thus, it is difficult to judge that this joint statement means a change in the fundamental policy of the MOF in regard to IFRS implementation in China. That is a change from the convergence approach to the direct adoption approach, at least for global Chinese companies.

6 The Accounting Regulatory Department is the department within the MOF and responsible for establishing Chinese accounting standards.

7 Deng Xiaoping defined the "Reform and Opening Up" policy as two interactive facets. Economic reform refers to the introduction of market mechanisms into Chinese economic system. Opening up refers to promoting the inflow of FDI, and introducing advanced foreign technologies and business management experience into China to develop an export-oriented economy (Wu, 2005). These two parts reinforce each other (Wu, 2005).

8 The average GDP growth per annum during 1979-2014 was calculated based on the GDP data reported by the World Bank, available at http://data.worldbank.org/indicator/NY.GDP.MKTP.CD/countries/CN?display =graph.

9 Hong Kong has independent jurisdiction to regulate its capital market. Thus, in this study, Chinese domestic capital markets exclude the Stock Exchange of Hong Kong, and include only the Shanghai Stock Exchange and the Shenzhen Stock Exchange.

10 Business entities that are not capital market-oriented refer to those that have not offered shares to the public or list shares in capital markets.

11 The four largest commercial banks are the Industrial and Commercial Bank of China, the Bank of China, the Construction Bank of China, and the Agricultural Bank of China, in which the Chinese government, as December 31, 2015, held 69.31%, 64.02%, 57.31%, and 82.3% of the outstanding shares, respectively.

12 The ratio was calculated based on statistics of "Sources and Uses of Credit Funds of Financial Institutions" provided by the People's Bank of China.

13 Accounting professionals in China first emerged in 1918. By 1947, there were 2,619 certified accountants in China (Doupnik & Perera, 2012). In 1949, the Chinese CPA system was repealed.

14 The Chinese Institute of Certified Public Accountants announced that there were 215,091 CPAs as of January 18, 2016. The FSA (2010) shows that there were 342,490 CPAs in the United States.

15 To improve the auditing quality of listed companies, the MOF and the CSRC introduced a qualification system and required that accounting firms providing auditing services to listed companies should acquire licenses jointly issued by these two regulators. Only CPAs in accounting firms with licenses are eligible to audit Chinese listed companies.

16 The number of 24,146 CPAs as of December 31, 2014 who are eligible to audit Chinese listed companies was calculated by the author by adding up numbers of CPAs in 40 accounting firms that have licenses to audit

listed companies. The number of CPAs in each accounting firm was published by the Chinese Institute of Certified Public Accountants and is available at http://www.cicpa.org.cn/news/201508/W020150803590945780015.pdf.

17 The term of "the real economy" mainly refers to the manufacturing industry (Jia, 2010, p.9), being concerned with using resources to produce the goods and services, while "the 'fictitious' economy" mainly refers to financial sector (Jia, 2010, p.9), being concerned with buying and selling in the financial markets.

18 The modified historical cost accounting includes accounting treatments such as measuring short-term investments at lower of cost or market and inventory at lower of cost or realizable value.

19 The only exception was for fund assets held by mutual fund companies. According to the *Accounting System for Financial Institutions* issued in 2001 by the MOF, fund assets traded in capital markets should be measured at their fair values.

20 When a biological asset for which quoted market prices are not available and for which alternative fair value measurements are determined to be clearly unreliable, IAS 41 requires enterprises to measure the biological asset on initial recognition at its cost less any accumulated depreciation and any accumulated impairment losses (IASB 2012).

21 Level 3 inputs are unobservable inputs used to estimate the fair values of assets or liabilities (IASB, 2012).

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