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Has the FASB and IASB's Shift toward an Asset/Liability View Enhanced the Predictive Usefulness of ROE?

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HAS THE FASB AND IASB'S SHIFT TOWARD AN ASSET/LIABILITY VIEW ENHANCED THE PREDICTIVE USEFULNESS OF ROE?

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I dedicate this dissertation to my husband, Mark, for patiently supporting me; and to my parents, Ronald and Roselynn, for teaching me the most important lessons in life.

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ABSTRACT

Over the past several decades, accounting standard setters have been gradually shifting financial reporting toward an asset/liability view, by rewriting the underlying conceptual framework and issuing accounting standards that reflect this view. The asset/liability view enhances comparability of a firm's investment base to that of its peers, and thus enhances the comparability of a firm's return of equity (ROE). This, in turn, increases the transparency with which firm-specific performance differs from its peers. Greater transparency would be expected to improve predictive usefulness, but would also place greater pressure on a firm to meet the performance of its peers. In the US, I find that predictive usefulness has generally increased with the shift, indicating that rather than resulting in greater earnings management designed to mask firm-specific differences, the shift resulted in greater transparency of firm-specific accounting information. I also find predictive usefulness has increased in countries that have adopted IFRS, indicating that a further shift toward an asset/liability view to include the greater use of fair values common in IFRS further increased transparency of firm-specific accounting information in adopting countries. This suggests that expanding the use of fair values and/or adopting IFRS in the US may also result in greater reporting transparency. But as the predictive usefulness increases, I find that analysts in the US are not increasing their reliance on firm-specific accounting information, suggesting analysts remain skeptical, even though analysts would likely increase the efficiency in which they form their forecasts by relying more on accounting information.

1. INTRODUCTION

The Financial Accounting Standards Board (FASB) has been gradually shifting away from a revenue/expense point of view and toward an asset/liability view since it issued Statement of Financial Accounting Concepts No. 6 (SFAC 6) in 1985, and later in 2010 with the issuance of SFAC 8.[1] Over this time period, however, little accounting research has been aimed at testing the implications of this shift in viewpoint over time. The asset/liability view aims to prescribe the measurement of assets and liabilities such that income determination would be based on changes in those assets and liabilities, according to the Securities and Exchange Commission (SEC) in a report to Congress in 2003, pursuant to Section 108(d) of the Sarbanes-Oxley Act. Alternatively, the SEC report describes the revenue/expense view as giving primacy to the direct measurement and recognition of revenues and expenses, rendering the balance sheet residual to the income statement.

While financial statements have multiple purposes, SFAC 8 reinforces that the purpose of financial reporting is to provide information to decision makers for resource allocation decisions (SFAC 8 par. OB2). At the most basic level, this would be information that is helpful in assessing the prospects for future cash flows (SFAC 8 par. OB3; Barth 2006). Interest in future cash flows, however, leads primarily to an interest in information about earnings rather than information directly about cash flows (SFAC 1, par. 43). Therefore, future prospects of the firm would be better reflected by accrual accounting than cash flows (SFAC 8 par. OB17; Dechow 1994; Healy and Wahlen 1999; Dichev and Tang 2009). My evidence suggests that the predictive usefulness of accounting information has improved over the time period in which

[1] SFAC 8 was issued in conjunction with the International Accounting Standards Board's (IASB) revision of its *Conceptual Framework*.

standards have been shifting toward the asset/liability view, both in the US and internationally, but analyst forecasts do not seem to be benefiting from this shift.

The accounting literature has long expressed concerns regarding the revenue/expense point of view. For instance, Chambers (1956) claimed that the fault with the focus on earnings is that earnings is a meaningless number unless considered in conjunction with the investment upon which it was generated. Edwards and Bell (1961) echoed Chambers' concerns by claiming that a focus on earnings would actually detract from earnings quality if accounting book value does not accurately reflect the investment base. According to the SEC (2003) report, the shift toward the asset/liability view should enhance the ability to accurately measure the investment base. One expected outcome is that the improved measurement of the investment base would also enhance the comparability of a firm with like-kind organizations (peers, within its industry or country).

To test whether the shift toward an asset/liability view impacted predictive usefulness, my first step is to determine how to best identify the effects of such a shift. The extant literature has examined how the usefulness of accounting information has evolved as standards have shifted over time indirectly, by testing changes in value relevance (Collins et al. 1997; Brown et al. 1999); and directly, by testing the predictability of revenues and expense components (Dichev and Tang 2008) or individual income statement line items (Donelson et al. 2011). I focus on the Ohlson (1995) disaggregation of earnings into 'normal' and 'abnormal' earnings, where normal earnings is based on a firm's net book value multiplied by a 'normal' rate of return (which empirically is proxied as the rate of return of a firm's peers); and, abnormal earnings is the residual or difference between aggregate earnings and normal earnings. In light of Chambers (1956) concerns, among others, I scale aggregate earnings and its components (normal and

abnormal) by a firm's weighted average book value, thus expressing my test variables in terms of return on equity (ROE, NormROE, or AbROE).[2]

Within the Ohlson (1995) framework, the more accurate the measurement of a firm's investment base, the more accurate would be the measurement of normal earnings, and thus, the more the firm would be expected to be comparable to its peers. To the extent that the shift in the asset/liability view enhanced the comparability of a firm to its peers, abnormal earnings would more accurately reflect the extent that a firm differed from its peers. The net effect on predictive usefulness from increasing comparability of a firm to its peers, therefore, would be to increase the transparency of firm-specific performance, and reduce the extent that a firm could mask their performance as being the 'norm' for its peers. While greater transparency would be expected to improve predictive usefulness, a firm would also face greater pressure to meet the performance of its peers and thus provide incentives for a firm to engage in earnings management, which would likely weaken predictive usefulness.

In the US, I test whether the shift over time toward an asset/liability view improved or weakened predictive usefulness relative to a firm's *industry* peers.[3] The shift in the underlying viewpoint in the US can be marked with the passage of SFAC 6 in 1985, but this shift would trickle down gradually through the adoption of subsequent accounting standards that reflected this shift. The first major US accounting standard subsequent to SFAC 6 to reflect the shift toward the asset/liability view was in 1987 with the adoption of Statement of Financial

[2] A firm's weighted average book value is calculated as the beginning net book value adjusted for weighted average capital contributions during the period. Dichev and Tang (2008), among others, scale by total assets rather than net book value. I scale by net book value, however, since scaling by total assets alone captures the effects of only the asset part of the shift toward the asset/liability view. The choice of deflator does not materially alter my conclusions.

[3] I use the Fama-French 30 industry classifications as my industry base, and use the industry rates of returns available at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html as my 'normal' rates of return.

Accounting Standards (FAS) No. 87 on pensions. FAS 87 deviated from prior practice by recording changes in value of the pension assets and liabilities on the balance sheet, while deferring certain gains and losses to future periods (i.e., allowing non-articulation between the balance sheet and income statement). In 1994, FAS 115 on marketable securities further deviated from prior practice by departing from the historical cost principle and requiring fair values of marketable securities to be recorded on the balance sheet without requiring most gains and losses to be recorded in earnings. In 2001, FAS 133 on derivatives became effective with the passage of FAS 137. FAS 133/7 continued this shift to an asset/liability view by recognizing the effects of certain hedges on the balance sheet, again without recognizing the gains or losses through earnings. Finally in 2007, FAS 157, 158, and 159 expanded the use of fair value accounting to financial assets and liabilities, and modified the accounting treatment of pensions and marketable securities.

The shift toward an asset/liability view in the US thus far has stopped short of incorporating many of the fair value provisions found in International Financial Reporting Standards (IFRS). IFRS represent the next step in the asset/liability continuum, and an important extension of my analysis as the US continues to contemplate its adoption. While it is indeterminable whether a further shift in the asset/liability view in the US through the adoption of IFRS would improve or weaken predictive usefulness, examining the impact of adoption of IFRS in other countries would provide evidence of how IFRS impacted predictive usefulness in these countries. Many countries that have adopted IFRS had as part of their local generally accepted accounting principles (GAAP) elements of fair values that predated the adoption of IFRS (Barth et al. 2008), beyond the level currently found with US GAAP. Thus it is likely that if the US were to adopt IFRS, the resulting effects of the shift further toward an asset/liability

view would be even greater than what I may document by examining the adoption of IFRS in other countries.

Initially, the international accounting literature expected to find greater comparability *across* countries with the adoption of IFRS. But even with adoption of uniform reporting standards across countries, Hail et al. (2010) and Liao et al. (2012), among others, find that consistency or comparability in financial reporting may not be achieved due to deep rooted country differences. But with the greater emphasis of the asset/liability view found with IFRS, the comparability would be expected to be higher to a firm's peers *within* country (similar to my domestic analysis within industry), and not necessarily to a firm's industry peers in other countries, even if cross-country peers are within a similar industry.[4]

I extend my tests of predictive usefulness to 24 countries that required IFRS adoption in 2005. To disaggregate earnings into its normal and abnormal components, I base the 'normal' rate of return on a county's rate of return.[5] Since many countries allowed early adoption of IFRS as early as 2002, I evaluate how predictive usefulness changed with the beginning of the transition period, and the beginning of the mandatory adoption period in 2005.

If I find that the shift toward the asset/liability view improved the predictive usefulness of accounting information, I would also expect that analysts, specifically in the US where markets are consistently more efficient, would rely more on firm-specific information in forming their forecasts of future performance. I would otherwise expect them to rely less on firm-specific information if I find predictive usefulness decreases with the shift. In facing the uncertainty of

[4] Data limitations restricted my analysis to a country level, where industry level within each country would likely provide a stronger peer group. The within-country level analysis, however, provides insights into how an economy wide shift toward an asset/liability view affects predictive usefulness, similarly to how the economy as a whole could be impacted upon the US adopting IFRS.

[5] Twenty years of data on daily rates of return, by country, are available from Trading Economics website, at http://www.tradingeconomics.com.

how firms might respond to the increase in comparability, analysts may instead rely more on other information outside of the financial statements as new standards are adopted that shifted the viewpoint. This, of course, is an empirical question whether analysts would adjust their reliance on firm-specific information as standards shift toward an asset/liability view.

I find that predictive usefulness has generally increased as standards have shifted in the US, with significant increases with the adoption of FAS 87 and FAS 157-9, indicating that rather than resulting in greater earnings management designed to mask firm-specific differences, the shift toward the asset/liability view resulted in greater transparency of firm-specific accounting information over time. I also find predictive usefulness has increased as standards have shifted over time in my sample of countries that have adopted IFRS, indicating that a further shift toward the asset/liability view to include the greater use of fair values common in IFRS further increased transparency of firm-specific accounting information in adopting countries. This suggests that expanding the use of fair values and/or adopting IFRS in the US would likely also result in greater reporting transparency. But as the predictive usefulness increases, I find that analysts in the US are not increasing their reliance on firm-specific accounting information, suggesting analysts remain skeptical, even though the analysts would likely increase the efficiency in which they form their forecasts by relying more on accounting information.

My study should be of particular interest to accounting standard setters as they continue to debate the merits of further shifting US reporting toward an asset/liability view – namely the potential convergence to, or adoption of IFRS. My study also highlights for financial statement users that the predictive usefulness of accounting information has been increasing as the standards shift over time, thus providing better guidance on a firm's future prospects upon which resource allocation decisions are based.

The remainder of the paper proceeds as follows. Section 2 discusses the background and related literature. Section 3 presents my model and hypothesis development. Section 4 reviews my sample selection procedures and presents descriptive statistics of my variables. Section 5 discusses my results and section 6 concludes.

2. BACKGROUND AND RELATED LITERATURE

Prior to the shift toward an asset/liability view in 1985 with SFAC 6, authoritative pronouncements were written from a revenue/expense viewpoint. Early standard setting bodies, such as the American Institute of Accountants (AIA), regarded the balance sheet as simply the connecting link between successive income statements (Accounting Research Bulletin 43).[6] Subsequent to the AIA, the American Institute of Certified Public Accountants (AICPA) charged the Accounting Principles Board (APB) with forming principles upon which to develop accounting standards. These principles of the APB, maintained the revenue/expense view. With the formation of the FASB, US accounting standards were based on underlying concept statements, which have been considered an improvement over the piecemeal approach of previous standard setting bodies. The FASB's first concept statement, SFAC 1 issued in 1978, inherited the myopic focus on reported earnings that was characteristic of the pre-FASB regime.

The FASB shifted its thinking towards a more balanced view of financial reporting, one that recognized the complementary roles of the income statement and the balance sheet, as initially expressed through SFAC 6, issued in 1985. SFAC 6 defines all elements of financial reporting in terms of assets and liabilities, thus giving primacy to the balance sheet. The most recent revisions to the conceptual framework contained in SFAC 8, issued in 2010, formally incorporate into the concept statement those ideas put forth by Chambers (1956). That is, it replaced the myopic focus on the reporting of earnings found in SFAC 1 with the notion that the income statement and balance sheet are equally important for users to gauge performance based on the investment base.

I document the evolution in financial accounting standards by identifying five distinct time periods that are marked by major shifts toward an asset/liability view of accounting. Within

[6] The AIA (1917 – 1957) is a predecessor to the American Institute of Certified Public Accountants (AICPA).

each time period, I highlight, below, those standards that bolstered the shift toward the asset/liability view, starting with the issuance of the first concept statement.

2.1 Pre-FAS 87 (1978 – 1986)

I use the issuance of the SFAC 1, in 1978, as the beginning of my analysis. In the years following, earnings takes center stage in financial reporting as that first guidance emphasized "The primary focus of financial reporting is information about an enterprise's performance provided by measures of earnings and its components" (SFAC 1). Although concept statements do not have the authority of standards, they do guide future financial accounting practice and serve as the basis for evaluating existing guidance. As such, this first concept statement was effectively a mold from which future standards would also be cast with an income statement focus. One such example is FAS 81 *Disclosure of Postetirement Health Care and Life Insurance Benefits* (effective 1985) mandating the disclosure of annual cash payments to retirees for such benefits. Clearly this 'pay-as-you-go' approach was issued with the income statement in mind.

2.2 Post-FAS 87 (1987 – 1993)

FASB made substantial progress toward the asset/liability view with the issuance of FAS 87 *Employers' Accounting for Pensions*, effective in 1987. This standard is unique in that it affected the reporting of the balance sheet separately from the income statement. It improved the reporting of the balance sheet by requiring a minimum pension liability to be recognized in an effort to reflect assets and liabilities more accurately. Adjustments due to changes in value of plan assets and liabilities were then allowed to bypass current earnings and be reported directly to equity with gradual recycling through income.

2.3 Post-FAS 115 (1994 – 2000)

The FASB broke from the long-standing historical cost concept with the adoption of FAS 115 *Accounting for Certain Investments in Debt and Equity Securities*, in 1994, marking another major turning point towards the asset/liability view of accounting. This standard was issued to address the accounting and reporting for certain investments in debt and equity securities on the balance sheet and established categories for debt and equity securities that require unrealized gains and losses on available-for-sale securities to be excluded from the current period's earnings and be reported in a separate component of shareholders' equity. Gains and losses are recycled upon disposal of the underlying securities.

This time period is also marked with the adoption of a cluster of accounting standards that became effective in the early to mid-1990s that bolstered the shift toward the asset/liability view. By the end of 1992, FAS 106 *Employers' Accounting for Postretirement Benefits other than Pensions* became effective to replace the 'pay as you go' method of accounting for these liabilities. The inclusion of an estimate of the present value of liabilities of this type has been shown to be value relevant to investors (Amir 1993). Effective in 1993, FAS 109 *Accounting for Income Taxes* was issued to ensure an 'asset and liability' approach to reporting income taxes. The various components of the deferred tax item on the balance sheet provides additional information beyond the sum of this item, hence enhancing the predictive usefulness of accounting information (Amir et al. 1997). Further, FAS 121 *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of* was issued in 1995 (effective 1996) in response to firms inconsistently recognizing asset impairment (Barth et al. 1998; Barth and Clinch 1998).

2.4 Post-FAS 133/7 (2001 – 2006)

The next major shift towards the asset/liability view was evidenced by FAS 133 *Accounting for Derivative Instruments and Hedging Activities* with an effective date delayed until 2001 by FAS 137 *Accounting for Derivative Instruments and Hedging Activities—Deferral of the Effective Date of FASB Statement No. 133*. This standard improved the accounting for derivatives by requiring that financial statements reflect the off-balance sheet positions that firms had assumed.

Also during this period, the FASB began issuing standards that allow more fair value estimates to be included in financial reporting. FAS 142 *Goodwill and Other Intangible Assets* was issued in response to the increasing importance of intangible assets on a firm's balance sheet. The desired result of this standard was that "financial statement users will be better able to understand the investments made in those assets and the subsequent performance of those investments (FAS 142 page 7)". Lee (2011) finds evidence that goodwill is more predictive of future cash flows post SFAS 142 than prior to this standard.

2.5 Post-FAS 157-9 (2007 – 2012)

As of 2007, firms began changing the way they reported pensions and marketable securities on the balance sheet and increased the level of fair value disclosure with the FASB's issuance of a cluster of standards focusing on fair value. FAS 157 *Fair Value Measurements* provided clarification to the fair value measurement in FAS 115 and FAS 133. FAS 158 *Employer's accounting for Defined Benefit Pension and Other Post Retirement Plans, an amendment of FASB Statements No. 87,88,106, and 132(R)* required an employer to recognize the overfunded or underfunded status of a defined benefit postretirement plan (other than a multiemployer plan) as an asset or liability. Changes to that funded status are to be recognized

through comprehensive income. FAS 159 *Fair Value Option for Financial Assets and Financial Liabilities (Including an Amendment of FASB Statement No. 115* further clarified the fair value option for FAS 115 items. This standard also moved FASB closer to international reporting as it is similar to IAS 39 *Financial Instruments: Recognition and Measurement*.

2.6 Extending to IFRS

Currently, US GAAP is limited in the extent that fair values are incorporated into accounting information. Adoption of IFRS would significantly further the shift in the US toward an asset/liability view. The FASB has made strides toward convergence or adoption of IFRS through the joint project with IASB in issuing SFAC 8. The project to revise the standard setters' conceptual frameworks is no longer joint, but is being advanced individually according the respective agendas of the FASB and the IASB. According to Leslie Seidman, Chairperson of the FASB, however, the US remains committed to promoting convergence toward IFRS, with the overall goal being to have a single set of high quality standards (Tysiac 2013).

As an example of how IFRS furthered the shift toward an asset/liability view, consider International Accounting Standards (IAS) 16 *Property, Plant, and Equipment*. IAS 16 allows the application of fair values to a firm's operating assets. Aboody et al. (1999) document a relation between asset revaluations and future performance of UK firms, providing evidence of how the use of fair values could enhance predictive usefulness. The extant literature has documented some issues that face IFRS implementation, such as a country's legal system, securities laws, political economy, and tax regime create incentives for manages that influence reporting and could impact the comparability expected to be found with the adoption of IFRS (LaPorta et al. 1998; Bushman and Piotroski 2006; Barth et al. 2012). By focusing on within-country comparability, my study would be less susceptible to some of these issues.

3. MODEL AND HYPOTHESIS DEVELOPMENT

As guidance on the relation between future earnings and current accounting information, I begin with Ohlson's (1995) simple earnings persistence model, in which future earnings is modeled as a function of current earnings, as follows: [7]

$$\tilde{E}_{j,t+1} = (r+1)E_{j,t} + \tilde{\varepsilon}_{j,t} \quad \textbf{(1)}$$

where:

$E_{j,t}$ = earnings attributable to common shareholders, for firm *j* from time *t* to *t*-1;

r = the 'normal' rate of return;

$\tilde{\varepsilon}_{i\,j,t}$ = error term.

Equation (1) represents a setting where the expected future earnings is simply a function of current earnings adjusted for a firm's expected rate of return. To the extent that the measure of earnings is noisy, or the extent that the rate of return varies from expectations, the predictive usefulness of equation (1) will be weak. If a firm is expected to generate future earnings beyond the 'normal' rate of return, however, the earnings expectation can be expressed (following Ohlson 1995) in terms of the 'normal' return on investment (book value) and the extent that earnings exceed that level of return, as follows:

$$\tilde{E}_{j,t+1} = rBV_{j,t} + \omega E^{a}_{j,t} + \tilde{\varepsilon}_{j,t} \quad \textbf{(2)}$$

where:

$BV_{j,t}$ = net book value of common equity for firm *j* at time *t*;

$E^{a}_{j,t}$ = earnings beyond a 'normal' rate of return, defined as *abnormal earnings* and calculated as $E_{j,t} - rBV_{j,t-1}$, for firm *j* from time *t* to *t*-1;

[7] Ohlson's (1995) simple characterization also includes a term for current dividends, which I exclude for clarity and to be comparable with the related earnings predictability literature (see for example, Dichev and Tang 2008). Ohlson's (1995) framework also includes an 'other information' term, ν, that I also suppress in my analysis for clarity and comparability to the extant literature.

ω = persistence of earnings beyond a 'normal' rate of return on net book value.

Any reduction in measurement error of a firm's investment base from the shift toward the asset/liability view would not be evident in the expected relation between current and future earnings in equation (1). In equation (2), however, the shift toward the asset/liability view is expected to reduce the measurement error in *normal earnings* ($rBV_{j,t}$), resulting in the observed relation between current normal earnings and future reported earnings to be less noisy as standards have shifted over time. Since the measurement error of abnormal earnings (defined as $E_{j,t} - rBV_{j,t-1}$) also would be decreasing as the accuracy of the measurement of book value increases, I would expect the relation of abnormal earnings with future reported earnings to also be less noisy with the shift over time.

Empirically, a firm's 'normal' rate of return (r) in the US is based on the industry rate of return (Fama-French industry rate of return – see Myers 1999, among others). Since the shift toward an asset/liability view increases the comparability of a firm's book value to its industry peers, application of the industry r relegates normal earnings to be the average industry rate of return (upon deflating by average book value, and expressing earnings in terms of return on common equity or ROE). Further, by normal earnings representing the industry rate of return, abnormal earnings would be the extent that a firm's specific rate of return deviates from the industry averages. One consequence of the shift toward the asset/liability view and greater comparability of a firm to its industry peers, however, could be that managers may have incentives to inject noise (earnings management) into their reported earnings to obfuscate the extent that their firm may differ from their industry peers.

As a benchmark for whether the shift toward the asset/liability view has improved the predictive usefulness of accounting earnings, I express equation (1) empirically in terms of ROE

by deflating the relation by the weighted average net book value to serve as my benchmark, as follows:

$$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t} \quad \textbf{(3)}$$

where:

$ROE_{j,t}$ = return on equity, calculated as earnings attributable to common shareholders, for firm *j* from time *t* to *t*-1, divided by the weighted average net book value of common equity, for firm *j* at time *t*;

α_i = regression coefficients.

As standards shift over time, the relation between current and future ROE, represented by α_1, would shift with changes in underlying macroeconomic conditions (Donelson et al. 2011). To test whether decomposing ROE into its *normal* and *abnormal* components improves the predictive usefulness of accounting information with the shift toward the asset/liability view, I deflate the relation expressed in equation (2) by the weighted average net book value. Since my focus is to test whether the predictive usefulness of firm-specific accounting information improved with the shift in view, I express the right-hand-side of equation (2) empirically in terms of a firm's ROE and abnormal ROE, as follows:

$$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t} \quad \textbf{(4)}$$

where:

$AbROE_{j,t}$ = *abnormal* return on equity, calculated as $ROE_{j,t} - NormROE_{j,t}$, where $NormROE_{j,t}$ is the weighted average net book value of common equity multiplied by the 'normal' rate of return ($rBV_{j,t}$), for firm *j* at time *t*, divided by the weighted average net book value of common equity, for firm *j* at time *t*;

β_i = regression coefficients.

In equation (4), since $AbROE_{j,t}$ is a component of $ROE_{j,t}$, β_1 represents the extent that only $NormROE_{j,t}$ is associated with $ROE_{j,t+1}$, and β_2 represents the extent that the association of $AbROE_{j,t}$ with $ROE_{j,t+1}$ differs from that of $NormROE_{j,t}$. As is the case with the coefficient, α_1, on $ROE_{j,t}$ in equation (3) above, shifts in industry-wide macroeconomic conditions would be reflected in changes to β_1, since $NormROE_{j,t}$ represents the returns of a firm's industry.[8] As such, $ROE_{j,t}$ in equation (4) serves as a control for changes in the underlying macroeconomic conditions over time. My tests of whether the shift toward an asset/liability view improved the predictive usefulness of accounting information is, therefore, represented by the coefficient, β_2, on $AbROE_{j,t}$ from equation (4).

Since the expectation of accounting standard setters and others are that the shifts toward an asset/liability view over time will improve comparability, and thus more clearly delineate how a firm's performance (ROE) differs from its peers through $AbROE_{j,t}$, I would expect the coefficient, β_2, on $AbROE_{j,t}$ to be increasing as the standards shift over time. Such an increase in β_2 would be indicative of improvements in earnings quality. But with a more clear delineation between firm-specific performance and the performance of the industry as a whole, managers would face greater pressures to manage earnings to meet industry norms. To that extent, such pressures would hamper earnings quality and reduce predictive usefulness, as reflected in a decrease in β_2 with the shift over time. It is this tension of how predictive

[8] Note that in equation (4), $NormROE_{j,t}$ simplifies to the peer group *r*. For studies within a single country (as with my US tests), the peer groups which $NormROE_{j,t}$ represent is industry, as stated. In applying this analysis across multiple countries, I propose the appropriate peer group would be *within*-country peers.

usefulness changes as standards shift over time (*T* denoting my time periods) that I test in my first set of hypotheses, stated (in alternative form) below:

> **H1a:** In the US, the predictive usefulness of AbROE increased or decreased as standards shift over time ($\Delta(\beta_2^T - \beta_2^{T-1}) > 0$ or $\Delta(\beta_2^T - \beta_2^{T-1}) < 0$; $T \in$ [Pre-FAS 87, Post-FAS 87, Post-FAS 115, Post-FAS 133/7, Post-FAS 157-9]).

H1a tests whether the shifts in the asset/liability view improve the predictive usefulness of accounting information *across* my sample time periods in the US. This hypothesis is predicated on the premise that the predictive usefulness of the disaggregated model, represented in equation (4), increases as accounting standards shift toward the asset/liability view, due to the greater comparability of a firm to its industry peers. The underlying macroeconomic conditions may be such that in any particular time period, however, the comparability of firms within an industry may be hampered. In such a case, disaggregating ROE into NormROE and AbROE would not improve the predictive usefulness of accounting information over the aggregate model, represented in equation (3), and can even inject noise into the relation between current and future ROE. It is this underlying premise about the predictive usefulness of disaggregating ROE that I test. I formally state this (in alternative form) in my hypothesis below:

> **H1b:** In the US, the predictive power of the Disaggregated Model (DM) is greater than the predictive power of the Aggregate Model (AM) within a time period ($RSqr^T_{DM} - RSqr^T_{AM} > 0$; $T \in$ [Pre-FAS 87, Post-FAS 87, Post-FAS 115, Post-FAS 133/7, Post-FAS 157-9]).

My first set of hypotheses test the extent that the shift in standards toward an asset/liability view enhances predictive usefulness in the US. But as discussed above, US standards have not yet incorporated IFRS. Accounting standards in other countries that have adopted IFRS have shifted further toward an asset/liability view than standards in the US, since

IFRS incorporates more fair values than standards in the US. By extending my study to test the effects of the shift in the asset/liability across multiple countries that have adopted IFRS, I are able to test my expectation that IFRS increase predictive usefulness.

To empirically test across countries the aggregate and disaggregate models presented in equations (3) and (4), respectively, a firm's peer group would be those like-kind firms *within* a country. The extant literature has overwhelmingly documented the difficulties in cross-country comparisons, in that even with a common reporting system, local practices erode comparability (for example, see Liao et al. 2012). Thus the 'normal' rate of return (*r*) applied in determining NormROE and AbROE would most appropriately be the *country-level* rate of return. In an international setting, therefore, the shift toward an asset/liability view through the adoption of IFRS increases the comparability of a firm's book value to its *within-country* peers, and application of the country-level *r* relegates normal earnings to be the average within-country rate of return.

I restrict my international sample to those firms in countries that adopted IFRS in 2002, with a mandatory adoption of IFRS by 2005. This restriction allows me to draw distinct windows in which I can identify a shift in the asset/liability view to test for changes in predictive usefulness. If the adoption of IFRS and its shift toward an asset/liability view improved predictive usefulness of accounting information, I would expect predictive usefulness to be increasing from the pre-IFRS period prior to 2002, to the transition period of 2002-2004 in which many countries allowed firms to early adopt IFRS, to the post-IFRS period beginning in 2005. Such an increase would be evidenced by β_2 from equation (4) increasing over my time periods. But as the case with other shifts toward an asset/liability view that I test in my first hypotheses in the US, if IFRS more clearly delineate between firm-specific performance and the performance

of the country as a whole, managers would face greater pressures to manage earnings to meet country norms. Such pressures would likely reduce predictive usefulness, and β_2 from equation (4) would be decreasing over my time periods. It is this effect from IFRS I test in my next set of hypotheses on predictive usefulness, stated (in alternative form) below:

> **H2a:** Internationally, the predictive usefulness of AbROE increased or decreased as standards shift over time ($\Delta(\beta_2^T - \beta_2^{T-1}) > 0$ or $\Delta(\beta_2^T - \beta_2^{T-1}) < 0$; $T \in$ [Pre-IFRS, Trans-IFRS, Post-IFRS]).

H2a tests whether the shift in the asset/liability view improves the predictive usefulness of accounting information with the transition to, and adoption of IFRS. Unlike the US, however, the accuracy of the peer group performance is likely to be very noisy, since the within-country peer group is likely to be much less correlated with actual firm performance than would an industry peer group. Disaggregating ROE into NormROE and AbROE would improve the predictive usefulness of international accounting information only to the extent that within-country comparisons reduce, rather than increase the level of noise. I therefore test whether disaggregating ROE in an international setting improves the predictive usefulness of accounting information. I formally state this (in alternative form) in my hypothesis below:

> **H2b:** Internationally, the predictive power of the Disaggregated Model (DM) is greater than the predictive power of the Aggregate Model (AM) within a time period ($RSqr^T_{DM} - RSqr^T_{AM} > 0$; $T \in$ [Pre-IFRS, Trans-IFRS, Post-IFRS]).

Finding whether the predictive usefulness increases or decreases over time documents the correlation of peer or firm specific rates of return with future realized performance, but does not address whether analysts are utilizing this information in developing their forecasts. If the shift toward the asset/liability view increases the comparability of a firm to its peers, and improves the

predictive usefulness of firm-specific rates of return (AbROE), I would expect analysts to rely more on AbROE in their forecasts as standards shift over time. If the shift toward the asset/liability view creates more noise when comparing a firm's rate of return to its peers' average rate of return, I would expect analysts to rely less on AbROE in their forecasts with the shift over time.

I address my research questions about analyst forecasts by focusing on the US firms and recasting equations (3) and (4) using analyst forecasts at time *t* of a firm's future ROE over time *t* to *t*+1 ($FROE_{j,t}^{t+1}$) as the dependent variable in tests of these models (henceforth referenced as equations (3') and (4')).[9] As above, I would expect the coefficient, β_2 from equation (4') on $AbROE_{j,t}$ to be increasing as standards shift over time. Such an increase in β_2 as standards shift over time would be indicative that analysts are relying more heavily on firm-specific rates of return as accounting standards shift toward an asset/liability view. Alternatively, a decrease in β_2 would indicate that analysts are relying less on accounting information as standards shift over time. I test this in my final set of hypotheses, stated (in alternative form) below:

> **H3a:** In the US, the association of analyst forecasts with AbROE increased or decreased as standards shift over time ($\Delta(\beta_2^T - \beta_2^{T-1}) > 0$ or $\Delta(\beta_2^T - \beta_2^{T-1}) < 0$; $T \in$ [Pre-FAS 87, Post-FAS 87, Post-FAS 115, Post-FAS 133/7, Post-FAS 157-9]).

H3a tests whether analysts rely more on firm-specific rates of return as accounting standards in the US shift toward the asset/liability view across my sample time periods. This hypothesis is predicated on the presumption that if the decomposition of ROE into normal and

[9] I restrict my analyst forecast tests to the US sample, thus restricting the question to analysts' view of the usefulness of the increased comparability in a firm's investment base to others within its industry. Such a test internationally would be a joint test of comparability and the usefulness of a country-level return, which is the focus of my second hypothesis. Further, global data on analyst forecasts are less reliable and less available than in the US.

abnormal components improves the predictability of earnings over time as the standards shift toward an asset liability view, analysts would rely more on accounting information and, in effect, form their forecasts based on an industry component and a firm-specific component. But analysts may view this disaggregation as noisy, may myopically rely on aggregate ROE, or may rely on information not yet reflected in accounting earnings or book values. It is this underlying presumption about analysts' willingness to rely more on disaggregated industry and firm-specific information as accounting standards shift toward an asset/liability view over time that I test. I formally state this (in alternative form) in my hypothesis below:

H3b: In the US, the predictive power of the Disaggregated Model (DM) is greater than the predictive power of the Aggregate Model (AM) within a time period ($RSqr^{T}_{DM} - RSqr^{T}_{AM} > 0$; $T \in$ [Pre-FAS 87, Post-FAS 87, Post-FAS 115, Post-FAS 133/7, Post-FAS 157-9]).

4. SAMPLE SELECTION AND DISCRIPTIVE STATISTICS

4.1 Sample Selection Procedures

In Table 1.a, I provide details of my sample selection and screening procedures for my US sample. I collect annual data for my US sample from *Compustat* for the time period of 1978 to 2012. This results in a sample of 299,272 firm-year observations. I exclude observations due to missing data required to calculate ROE. This results in a deletion of 42,752 firm-year observations. I also exclude 37,667 firm-year observations in finance industry (SIC code 6000) because special rules that apply to financial institutions are not generalizable to a broader sample. I exclude 26,185 firm-year observations where book value (total common equity) is negative, due to the inability to disaggregate ROE within my framework. Finally, I limit my sample to the largest 1,100 firms by total assets which results in the deletion of 154,168 firm year observations.[10] My final sample for testing my hypothesis on ROE (H1) is 38,500 firm-year observations, 9,900, 7,700, 7,700, 6,600, and 6,600 for time periods for the Pre-FAS 87 (1978–1986), Post-FAS 87 (1987–1993), Post-FAS 115 (1994–2000), Post-FAS 133/7 (2001–2006),and Post-FAS 157-9 (2007–2012), respectively.

I collect the analyst forecasts of one-year-ahead earnings from I/B/E/S detail file for all available years and merge this data with the other accounting variables from *Compustat*. 19,589 firm-year observations remain to test my hypothesis related to analysts' forecasts (H3). The distribution of this data is 2,002, 3,647, 4,475, 4,385, and 5,080 firm-year observations for Pre-FAS 87 (1978 – 1986), Post-FAS 87 (1987 – 1993), Post-FAS 115 (1994 – 2000), Post-FAS 133/7 (2001 – 2006), and Post-FAS 157-9 (2007 – 2012), respectively.

[10] I follow Dichev and Tang (2008) and limit my sample to the largest firms by total assets each year in order to reduce any bias that might result from uneven coverage of firms in the database over the years. By keeping only the top largest firms, early coverage is similar to later coverage.

Table 1.a Sample Selection and Screening Procedures

US Sample	Pre-FAS 87 (1978-1986)	Post-FAS 87 (1987-1993)	Post-FAS 115 (1994-2000)	Post-FAS 133/7 (2001-2006)	Post-FAS 157-9 (2007-2012)	Total
Initial Sample fromCompustat	64,020	61,550	72,795	52,768	48,139	299,272
Less firm-years:						
Missing information	(6,046)	(10,761)	(7,906)	(6,838)	(11,201)	(42,752)
Finance industry	(4,769)	(6,424)	(9,923)	(8,887)	(7,664)	(37,667)
Negative book value	(5,366)	(5,819)	(7,394)	(3,977)	(3,629)	(26,185)
Not in the top asset ranking	(37,939)	(30,846)	(39,872)	(26,466)	(19,045)	(154,168)
Sample for H1 Tests on ROE	9,900	7,700	7,700	6,600	6,600	38,500
Less firm-years:						
Missing Analyst Forecast data	(7,898)	(4,053)	(3,225)	(2,215)	(1,520)	(18,911)
Sample for H3 tests on Analyst Forecasts	2,002	3,647	4,475	4,385	5,080	19,589

Table 1.b, presents my sample selection procedures required to test my hypothesis related to international firms (H2). I collect data from *OSIRIS* (Bureau van Dijk) for a sample of firms from 24 countries that adopted IFRS in 2002 with mandatory adoption by 2005. I partition my sample into three periods beginning with the earliest year for which data required to compute ROE is available. My first period starts in 1995 (the earliest year in which country level return data was available through Trading Economics) and ends in 2001. I label this period the Pre-IFRS period. Since many firms were allowed to adopt IFRS earlier than the 2005 mandatory date, I label 2002 to 2004 as my Trans-IFRS period. Finally, I label 2005 to 2012 as the Post-IFRS period. This results in an initial sample over all three periods of 225,542 firm-year observations. I delete 131,007 firm-year observations for missing required data and another 15,584 for negative values of total common equity. This results in a sample of 78,951 firm-year observations, 22,202, 13,624, and 43,125 for the Pre-, Trans-, and Post-IFRS periods, respectively.

Table 1.b Sample Selection and Screening Procedures for International Sample

	Pre-IFRS (1995-2001)	Tran-IFRS (2002-2004)	Post-IFRS (2005-2012)	Total
Initial Sample from Osiris	79,901	38,319	107,322	225,542
Less firm-years:				
Missing information	(50,084)	(21,782)	(59,141)	(131,007)
Negative book value	(7,615)	(2,913)	(5,056)	(15,584)
Sample for H2 Tests on ROE	22,202	13,624	43,125	78,951
Sample Countries				
Austria	471	227	588	
Belgium	172	158	883	
Czech Republic	376	89	88	
Germany	3,288	1,891	5,895	
Denmark	432	319	1,090	
Estonia	10	40	126	
Spain	584	365	1,134	
Finland	487	374	929	
France	3,362	1,874	5,500	

(Table 1.b continued)

Sample Countries	Pre-IFRS (1995-2001)	Tran-IFRS (2002-2004)	Post-IFRS (2005-2012)	Total
Greece	571	310	1,828	
Hungary	81	53	125	
Ireland	349	206	574	
Iceland	19	25	92	
Italy	485	537	1,827	
Luxembourg	38	85	351	
Latvia	9	56	245	
Netherlands	385	298	1,052	
Norway	343	201	857	
Poland	128	136	967	
Portugal	237	162	370	
Romania	0	11	71	
Sweden	1,447	772	3,059	
Slovakia	11	25	72	
United Kingdom	8,917	5,410	15,402	
	22,202	13,624	43,125	78,951

In Table 2.a, I present industry rates of return based on the Fama-French 30 industry classifications. My sample is dispersed across available industries and fairly balanced across my sample years.

Table 2.b, presents country rates of returns obtained from Trading Economics website. I present annual returns per country for the Pre-IFRS, Trans-IFRS, and Post-IFRS time periods. The annual rates of return are more volatile for some countries (Greece and Finland, for example) than others (Estonia in the earlier periods, and Latvia, for example), suggesting the importance of within country comparisons, since cross-country comparisons would likely prove too volatile.

Table 2.a Domestic Distribution of Industry Rates of Return

	Pre-FAS 87 (1978-1986)			Post-FAS 87 (1987-1993)			Post-FAS 115 (1994-2000)			Post-FAS 133/7 (2001-2006)			Post-FAS 157-9 (2007-2012)		
FF Industry Code	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
1 Food	286	0.234	0.146	237	0.195	0.173	231	0.185	0.149	185	0.104	0.077	199	0.133	0.064
2 Beer	45	0.249	0.167	40	0.249	0.186	41	0.203	0.138	34	0.067	0.065	33	0.130	0.081
3 Tobacco	30	0.224	0.079	32	0.228	0.147	13	0.219	0.136	16	0.193	0.124	18	0.181	0.095
4 Recreation	120	0.226	0.157	140	0.234	0.140	137	0.119	0.080	179	0.180	0.140	161	0.190	0.211
5 Printing	124	0.247	0.110	144	0.149	0.049	148	0.196	0.129	132	0.073	0.067	88	0.141	0.204
6 Consumer	153	0.171	0.139	143	0.144	0.092	136	0.192	0.109	87	0.089	0.064	86	0.087	0.039
7 Apparel	42	0.249	0.178	59	0.206	0.196	63	0.101	0.103	62	0.154	0.139	65	0.197	0.180
8 Health	214	0.197	0.139	247	0.201	0.220	349	0.283	0.178	373	0.066	0.070	389	0.105	0.080
9 Chemicals	290	0.215	0.136	268	0.158	0.092	249	0.152	0.077	241	0.124	0.100	223	0.254	0.215
10 Textiles	56	0.257	0.127	71	0.268	0.209	52	0.081	0.044	17	0.128	0.087	14	0.174	0.165
11 Construction	292	0.219	0.093	254	0.170	0.112	211	0.124	0.118	213	0.187	0.166	210	0.126	0.115
12 Steel	183	0.155	0.112	178	0.150	0.038	154	0.165	0.178	118	0.243	0.224	108	0.138	0.146
13 Fabricated	314	0.177	0.094	237	0.172	0.086	178	0.156	0.116	205	0.159	0.147	210	0.231	0.198
14 Electrical	71	0.197	0.131	70	0.190	0.139	66	0.297	0.165	71	0.151	0.153	82	0.174	0.135
15 Auto	142	0.159	0.142	134	0.200	0.123	149	0.152	0.112	123	0.141	0.210	102	0.227	0.240
16 Aircraft	157	0.230	0.120	130	0.172	0.107	94	0.200	0.180	75	0.178	0.118	88	0.168	0.112
17 Mining	55	0.169	0.147	45	0.136	0.121	48	0.066	0.041	31	0.221	0.230	44	0.239	0.246
18 Coal	24	0.159	0.113	10	0.104	0.133	16	0.235	0.212	28	0.209	0.200	46	0.224	0.237
19 Petro	385	0.219	0.138	298	0.141	0.107	294	0.181	0.094	280	0.196	0.116	429	0.123	0.106
20 Utilities	1,885	0.183	0.078	1,511	0.155	0.091	1,373	0.182	0.140	1,197	0.156	0.098	1,084	0.112	0.074
21 Communication	499	0.179	0.095	538	0.204	0.129	588	0.246	0.189	406	0.098	0.107	264	0.144	0.112
22 Services	162	0.223	0.138	265	0.171	0.194	454	0.335	0.220	516	0.107	0.101	617	0.156	0.170
23 Business Eq.	350	0.190	0.112	380	0.106	0.072	482	0.342	0.213	540	0.147	0.243	561	0.175	0.196
24 Business Supp.	242	0.204	0.109	276	0.133	0.085	225	0.140	0.081	166	0.094	0.105	171	0.152	0.175
25 Transportation	420	0.197	0.112	369	0.220	0.142	278	0.157	0.137	259	0.113	0.079	265	0.117	0.119
26 Wholesale	176	0.257	0.146	196	0.168	0.093	252	0.154	0.122	197	0.114	0.083	230	0.143	0.137
27 Retail	409	0.226	0.149	517	0.223	0.198	474	0.224	0.178	455	0.112	0.088	444	0.139	0.100
28 Restaurants	67	0.200	0.109	65	0.229	0.132	94	0.109	0.101	103	0.166	0.141	95	0.154	0.135
30 Other	2,707	0.268	0.135	846	0.144	0.126	851	0.124	0.087	291	0.106	0.103	274	0.088	0.076

Table 2.b International Distribution of Industry Rates of Return

	Pre-IFRS (1995-2001)			Tran-IFRS (2002-2004)			Post-IFRS (2005-2012)		
Contry	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
Austria	471	0.014	0.079	227	0.266	0.189	588	0.071	0.351
Belgium	172	0.057	0.198	158	0.094	0.230	883	0.024	0.267
Czech Republic	376	-0.018	0.186	89	0.348	0.141	88	0.073	0.299
Germany	3,288	0.120	0.240	1,891	0.000	0.337	5,895	0.098	0.236
Denmark	432	0.112	0.198	319	0.097	0.227	1,090	0.094	0.284
Estonia	10	0.047	0.001	40	0.432	0.066	126	0.120	0.376
Spain	584	0.130	0.235	365	0.056	0.246	1,134	0.022	0.234
Finland	487	0.195	0.455	374	-0.095	0.183	929	0.043	0.278
France	3,362	0.142	0.246	1,874	-0.029	0.215	5,500	0.014	0.218
Greece	571	0.191	0.488	310	0.069	0.278	1,828	-0.038	0.370
Hungary	81	0.158	0.385	53	0.270	0.170	125	0.074	0.302
Ireland	349	0.154	0.154	206	0.058	0.266	574	-0.008	0.295
Iceland	19	0.124	0.270	25	0.431	0.098	92	0.043	0.295
Italy	485	0.051	0.263	537	0.006	0.198	1,827	-0.051	0.228
Luxembourg	38	-0.116	0.095	85	0.111	0.262	351	0.041	0.311
Latvia	9	0.469	0.001	56	0.258	0.279	245	0.023	0.289
Netherlands	385	0.146	0.218	298	-0.066	0.176	1,052	0.032	0.260
Norway	343	0.089	0.261	201	0.155	0.366	857	0.104	0.303
Poland	128	0.037	0.272	136	0.266	0.163	967	0.095	0.291
Portugal	237	0.102	0.297	162	0.010	0.189	370	0.009	0.274
Romania	n/a	n/a	n/a	11	0.407	0.093	71	0.080	0.303
Sweden	1,447	0.200	0.307	772	0.015	0.306	3,059	0.075	0.256
Slovakia	11	0.077	0.241	25	0.339	0.141	72	-0.030	0.165
United Kingdom	8,917	0.068	0.153	5,410	-0.009	0.166	15,402	0.037	0.158

4.2 Descriptive Statistics

In Panel A of Table 3, I present descriptive statistics for the key variables. In Panel A, I present descriptive statistics for my US sample. I find that the mean ROE is highest and with the least standard deviation in the 1978-1986 time period, even though this period is depicted as double- digit inflation. The 1987-1993 time period exhibits the lowest mean ROE, with mean ROE stabilizing for the remaining sample periods. The distribution of AbROE is consistent with

prior literature (Meyers 1999). I find that the mean AbROE is consistently negative, peaking during the 1987-1993 time period, and leveling off over the remaining periods. Analyst forecasts represented by FROE increases monotonically across sample periods. Consistently, I find between 14- and 19-percent of firms reporting losses over the time periods, and firm size continued to grow throughout my sample period. I find that INTANG is generally increasing over the sample periods suggesting the intangible intensity of firms. I find that the percentage of firms categorized as being highly influenced by the shift toward principles-based standards, high P-score firms (retail, construction, and restaurant) ranges from 8-percent to nearly 12-percent in later periods. The percentage of low P-score firms (tobacco, coal, and utilities) is greater. In Panel B of Table 3, I report descriptive statistics for my international sample. I find that across my 24 countries, the mean ROE is negative during the transition period in which firms were allowed to early adopt IFRS and continued to be negative during the post-adoption period.

Within Table 3, *ROE* is earnings before extraordinary items minus dividends paid to preferred shareholders, for firm *j* in year *t*, divided by a weighted average of common equity from time *t*-1 to *t*; *AbROE* is earnings, minus dividends paid to preferred shareholders, minus normal earnings, for firm *j* in year *t*, divided by a weighted average of common equity from time *t*-1 to *t*. Normal earnings is the r (industry rate of return) multiplied by the weighted average of common equity from time *t*-1 to *t*; *FROE* is the average of the one-year-ahead earnings forecasts for firm *j* in year *t*, calculated from the first forecast per analyst made after the announcement of prior period's earnings; *LOSS* is a dummy (0,1) indicator variable set to one if earnings before extraordinary items is negative and zero otherwise; *SIZE* is the natural log of total assets for firm *j* in year *t*; *INTANG* is a dummy (0,1) indicator variable set to one if the firm is in an industry categorized by Collins et al. (1997) as being intangible intensive, and equal to zero otherwise; *P-SCORE(H)* is a dummy (0,1) indicator variable set to one if the firm is in an industry ranked in the top decile based on the level of influence from the change in accounting principles

Table 3 Descriptive Statistics

Panel A: Domestic	Pre-FAS 87 (1978-1986)			Post-FAS 87 (1987-1993)			Post-FAS 115 (1994-2000)			Post-FAS 133/7 (2001-2006)			Post-FAS 157-9 (2007-2012)		
Variable	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
ROE	9,900	0.131	0.102	7,700	0.049	0.350	7,700	0.108	0.264	6,600	0.095	0.328	6,600	0.105	0.350
AbROE	9,900	-0.087	0.161	7,690	-0.144	0.444	7,665	-0.101	0.420	6,541	-0.076	0.469	6,561	-0.084	0.476
FROE	2,002	0.079	0.085	3,647	0.096	0.111	4,475	0.139	0.197	4,385	0.161	0.237	5,080	0.187	0.230
LOSS	9,900	0.078	0.268	7,700	0.177	0.381	7,700	0.143	0.350	6,600	0.183	0.387	6,600	0.184	0.387
SIZE	9,900	7.349	1.000	7,700	7.742	1.041	7,700	8.079	0.995	6,600	8.360	1.055	6,600	8.598	1.073
INTANG	9,900	0.095	0.293	7,700	0.133	0.339	7,700	0.168	0.373	6,600	0.189	0.392	6,600	0.185	0.388
P-SCORE (H)	9,900	0.078	0.268	7,700	0.109	0.311	7,700	0.101	0.302	6,600	0.117	0.321	6,600	0.113	0.317
P-SCORE (L)	9,900	0.196	0.397	7,700	0.202	0.401	7,700	0.182	0.386	6,600	0.188	0.391	6,600	0.174	0.379

Panel B: International	Pre-IFRS (1995-2001)			Tran-IFRS (2002-2004)			Post-IFRS (2005-2012)		
Variable	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
ROE	22,202	0.044	0.406	13,624	-0.066	0.590	43,125	-0.037	0.561
AbROE	22,202	-1.078	93.295	13,624	-0.222	12.780	43,125	-0.174	7.534
LOSS	22,202	0.243	0.429	13,624	0.374	0.484	43,125	0.356	0.479
SIZE	22,202	11.972	2.163	13,620	11.678	2.396	43,117	11.756	2.529
INTANG	22,202	0.184	0.388	13,624	0.229	0.420	43,125	0.219	0.414
P-SCORE (H)	22,202	0.148	0.356	13,624	0.122	0.328	43,125	0.106	0.308
P-SCORE (L)	22,202	0.029	0.168	13,624	0.026	0.160	43,125	0.025	0.157

based on Folsom et al.'s (2011) industry level *P-score* ranking, and equal to zero otherwise; and *P-SCORE(L)* is a dummy (0,1) indicator variable set to one if the firm is in an industry ranked in the bottom decile based on the level of influence from the change in accounting principles based on Folsom et al.'s (2011) industry level *P-score* ranking, and equal to zero otherwise.

As with my US sample, I consistently find that the mean *AbROE* is negative, but with more extreme levels of standard deviations. I also find a between 24- and 38-percent of my sample firms report losses across the time periods, a level slightly higher than in the US. Further, as opposed to my findings in the US where the mean of firm size was increasing through the time, average firm size is fairly stable across the entire 18 year period. Consistent with my US sample, I find *INTANG* to be generally increasing over time. Unlike my US sample, the percentage of firms categorized as high P-score is greater than that of firms categorized as low P-score firms.

5. EMPIRICAL RESULTS

5.1 Results from Regressing Future ROE (Tests of H1)

Table 4 presents my results from testing $ROE_{j,t+1}$ with the aggregate and disaggregate models. I find that in general, the coefficient on $ROE_{j,t}$, decreases over time, in the aggregate model, consistent with the prior literature's findings that earnings persistence has been dropping over time (Dichev and Tang 2008; Donelson et al. 2011). This drop is also evidenced in my disaggregated model with the coefficient on $ROE_{j,t}$, generally dropping over time. Within Table 4, *****, ******, ******* indicate two-way significance at the ten-, five-, and one-percent levels, respectively; #, ##, ### indicate one-way significance at the ten-, five-, and one-percent levels, respectively. The number of observations are: 9,900; 7,700; 7,700; 6,600; and, 6,600 for sample periods Pre-FAS 87 (1978–1986), Post-FAS 87 (1987–1993), Post-FAS 115 (1994–2000), Post-FAS 133/7 (2001–2006), and Post-FAS 157-9 (2007–2012), respectively. *ROE* is earnings before extraordinary items minus dividends paid to preferred shareholders, for firm j in year t, divided by a weighted average of common equity from time t-1 to t. *AbROE* is earnings, minus dividends paid to preferred shareholders, minus normal earnings, for firm j in year t, divided by a weighted average of common equity from time t-1 to t. Normal earnings is the r (industry rate of return) multiplied by the weighted average of common equity from time t-1 to t. The drop in persistence is attributable to the economy and the ability of accounting information to reflect the underlying performance of a business (Donelson et al. 2011). To test whether the shift towards asset/liability view improves the predictive usefulness of accounting information across my sample time periods (H1a), I focus on the coefficient on $AbROE_{j,t}$ in the disaggregate model. I find the coefficient on $AbROE_{j,t}$ increases by 0.211 (significant at the one-percent level) with the

Table 4

Tests of H1: Results from Estimating the Aggregate and Disaggregate Models - Future ROE

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.026	0.747	0.427	0.027	0.741	0.006	0.427	0.000
(1978-1986)	10.50 ***	46.29 ***		10.88 ***	45.70 ***	1.03		
Post-FAS 87	0.014	0.677	0.523	0.045	0.520	0.217	0.538	0.016 ###
(1987-1993)	3.77 ***	31.08 ***		8.66 ***	17.87 ***	7.71 ***		
[Diff ('87-'93 – '78-'86)]		-0.071 ***			-0.221 ***	0.211 ***		
Post-FAS 115	0.065	0.421	0.310	0.103	0.276	0.252	0.358	0.049 ###
(1994-2000)	16.43 ***	20.00 ***		22.69 ***	12.53 ***	13.35 ***		
[Diff ('94-'00 – '87-'93)]		-0.256 ***			-0.244 ***	0.035		
Post-FAS 133/7	0.060	0.457	0.321	0.081	0.305	0.290	0.358	0.037 ###
(2001-2006)	13.91 ***	18.94 ***		17.00 ***	11.20 ***	9.72 ***		
[Diff ('01-'06 – '94-'00)]		0.036			0.028	0.038		
Post-FAS 157-9	0.074	0.358	0.190	0.102	0.169	0.407	0.273	0.083 ###
(2007-2012)	14.55 ***	13.75 ***		17.37 ***	5.15 ***	10.30 ***		
[Diff ('07-'12 – '94-'00)]		-0.099 ***			-0.136 ***	0.116 ***		

adoption of FAS 87, and increases again by 0.116 (significant at the one-percent level) with the adoption of FAS 157-9. These increases in the coefficient on $AbROE_{j,t}$ suggest that as standards shift toward the asset liability view, deviations in a firm's performance from the industry norm become more transparent. Thus, my results indicate that managers are not using their reporting discretion to artificially meet the performance of the industry. Instead, financial reporting is improving the predictive usefulness of firm-specific information over time.

Table 4 also reports the results from testing H1b, that is, whether disaggregating ROE in to NormROE and AbROE improves the predictive power of accounting information relative to the aggregate model. The disaggregation would improve predictive power only if the shift to the asset/liability view did indeed increase comparability and hence improve predictability and thus transparency. When comparing the predictive power of the models, using the Vuong (1989) test, I find the Adj. R^2 of the disaggregate model to be larger by 0.016, 0.049, 0.037, and 0.083 in the Post-FAS 87, Post-FAS 115, Post-FAS 133/7, and Post-FAS 157-9 periods, respectively (significant at the one-percent level). This lends support to the underlying premise that the shift towards an asset/liability view would increase the comparability of a firm to its industry peers and thus making firms-specific information incrementally meaningful.

5.2 Results from Regressing Future ROE for IFRS (Tests of H2)

Table 5 presents my results from expanding my tests to consider the effects of IFRS. Unlike my US sample, I do not observe any significant changes in the coefficient on $ROE_{j,t}$, in the aggregate model, over time, nor with $ROE_{j,t}$ in the disaggregate model. This suggests that as financial reporting shifts toward an asset/liability view, accounting maintains its ability to reflect firms' underlying economic reality. When testing H2a, I find an overall increase of 0.102

Table 5

Tests of H2: Results from Estimating the Aggregate and Disaggregate Models - International

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-IFRS	0.059	0.293	0.087	0.073	0.194	0.187	0.122	0.035 ###
Adoption	23.39 ***	15.40 ***		28.23 ***	9.17 ***	11.53 ***		
Trans-IFRS	-0.022	0.295	0.079	-0.038	0.193	0.298	0.151	0.071 ###
Adoption	-4.76 ***	14.33 ***		-7.80 ***	8.83 ***	13.39 ***		
[Diff (Trans - Pre)]		0.002			-0.001	0.110 ***		
Post-IFRS	-0.009	0.291	0.104	-0.002	0.169	0.289	0.181	0.077 ###
Adoption	-3.65 ***	30.87 ***		-0.90	16.91 ***	26.20 ***		
[Diff (Post - Trans)]		-0.005			-0.024	-0.009		
[Diff (Post - Pre)]		-0.003			-0.025	0.102 ***		

(significant at the one-percent level) on the coefficient on $AbROE_{j,t}$, from the Pre-IFRS period to the Post-IFRS period. This result is driven by the increase of 0.110 (significant at the one-percent level) with the initial transition to IFRS. My findings suggest that, internationally, where the shift toward the asset/liability has evolved to a greater extent under IFRS, the predictive usefulness of firm-specific information has improved over time.

Within Table 5, ***, **, ***** indicate two-way significance at the ten-, five-, and one-percent levels, respectively; #, ##, ### indicate one-way significance at the ten-, five-, and one-percent levels, respectively. The number of observations are: 9,900; 7,700; 7,700; 6,600; and, 6,600 for sample periods Pre-FAS 87 (1978–1986), Post-FAS 87 (1987–1993), Post-FAS 115 (1994–2000), Post-FAS 133/7 (2001–2006), and Post-FAS 157-9 (2007–2012), respectively. *ROE* is earnings before extraordinary items minus dividends paid to preferred shareholders, for firm j in year t, divided by a weighted average of common equity from time t-1 to t. *AbROE* is earnings, minus dividends paid to preferred shareholders, minus normal earnings, for firm j in year t, divided by a weighted average of common equity from time t-1 to t. Normal earnings is the r (industry rate of return) multiplied by the weighted average of common equity from time t-1 to t.

Again, I validate the premise that disaggregating overall performance into NormROE and AbROE would improve predictive power by comparing the Adj. R^2 of the disaggregate model to that of the aggregate model, using the Vuong (1989) test. I find that the predictive power of the disaggregate model is larger by 0.035, 0.071, and 0.077 in the Pre-IFRS, Trans-IFRS, and Post-IFRS periods, respectively (significant at the one-percent level), indicating that the shift toward an asset/liability view increases the comparability of a firm to its within-country peers thus making firm-specific deviations incrementally predictive.

5.3 Results from Regressing Analysts Forecasts (Tests of H3)

Table 6 presents my $FROE_{j,t}^{t+1}$ regression results to test whether analysts are utilizing the increase in comparability by basing their forecasts on firm-specific information. I examine changes in $ROE_{j,t}$, as an indication of the extent that analysts incorporate industry performance into their forecasts. I find a decrease of 0.091 in the coefficient on $ROE_{j,t}$, in the aggregate model in the Post-FAS 87 period but the coefficient increases by 0.107 and 0.137 during the Post-FAS 115 and Post-FAS 133/7 periods, respectively.

Within Table 6, ***, **, ***** indicate two-way significance at the ten-, five-, and one-percent levels, respectively; #, ##, ### indicate one-way significance at the ten-, five-, and one-percent levels, respectively. The number of observations are: 9,900; 7,700; 7,700; 6,600; and, 6,600 for sample periods Pre-FAS 87 (1978–1986), Post-FAS 87 (1987–1993), Post-FAS 115 (1994–2000), Post-FAS 133/7 (2001–2006), and Post-FAS 157-9 (2007–2012), respectively. In regressing equations (3') and (4'), I include as a control the number of analysts following (determined as the frequency of forecasts from the I/B/E/S detail file) calculated as 1 divided by the number of analysts following firm *j* in year *t*. *FROE* is the average of the one-year-ahead earnings forecasts from the I/B/E/S detail file, calculated from the first forecast per analyst made after the announcement of prior period's earnings. *ROE* is earnings before extraordinary items minus dividends paid to preferred shareholders, for firm j in year t, divided by a weighted average of common equity from time t-1 to t. *AbROE* is earnings, minus dividends paid to preferred shareholders, minus normal earnings, for firm j in year t, divided by a weighted average of common equity from time t-1 to t. Normal earnings is the r (industry rate of return) multiplied by the weighted average of common equity from time t-1 to t.

Table 6

Tests of H3: Results from Estimating the Aggregate and Disaggregate Models - Analyst Forecasts

	Aggregate Model			Disaggregate Model				
	$FROE_{j,t}^{t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$FROE_{j,t}^{t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.040	0.250	0.082	0.049	0.214	0.036	0.085	0.002
(1978-1986)	8.85 ***	9.36 ***		9.01 ***	7.55 ***	2.44 **		
Post-FAS 87	0.065	0.159	0.068	0.071	0.129	0.052	0.074	0.006 #
(1987-1993)	15.80 ***	8.04 ***		15.29 ***	5.69 ***	3.08 ***		
[Diff ('87-'93 – '78-'86)]		-0.091 ***			-0.086 **	0.016		
Post-FAS 115	0.104	0.266	0.140	0.114	0.235	0.059	0.144	0.004 #
(1994-2000)	15.43 ***	10.30 ***		15.26 ***	8.18 ***	3.13 ***		
[Diff ('94-'00 – '87-'93)]		0.107 ***			0.106 ***	0.007		
Post-FAS 133/7	0.134	0.403	0.272	0.141	0.341	0.117	0.282	0.010 ##
(2001-2006)	19.89 ***	16.37 ***		19.32 ***	9.96 ***	3.46 ***		
[Diff ('01-'06 – '94-'00)]		0.137 ***			0.106 **	0.058		
Post-FAS 157-9	0.180	0.314	0.227	0.188	0.240	0.137	0.244	0.017 ###
(2007-2012)	28.14 ***	14.37 ***		26.71 ***	7.78 ***	4.55 ***		
[Diff ('07-'12 – '94-'00)]		-0.089 ***			-0.101 **	0.020		

During the Post-FAS157-9 period, I observe a decrease of 0.089 (all significant at the one-percent level). The increases in the coefficient on $ROE_{j,t}$, are inconsistent with the earlier findings that the persistence on ROE was dropping, suggesting that analysts may have been overweighting aggregate performance during these periods. The results from testing H3a with the disaggregate model reveal no significant changes in the coefficient on $AbROE_{j,t}$ as standards shift over time. This suggests that analysts are, surprisingly perhaps, not increasing the weighting on firm-specific information as one might expect given the results from H1a (increases in the coefficient on $AbROE_{j,t}$).

As before, I examine changes in predictive power by comparing the Adj. R^2 of the disaggregate model to that of the aggregate model, using the Vuong (1989) test. I find relatively weak results in the earlier periods, an improvement of 0.006 and 0.004 in the Post-FAS 87 and Post-FAS 115 periods, respectively (significant at the ten-percent level). I also find only mild improvements in the Adj R^2 0.010 and 0.017 in the Post-FAS 133/7 and Post-FAS 157-9 periods, respectively (significant at the five- and one-percent levels, respectively). Although I find statistically significant evidence that analysts' reliance on financial reporting grew over time, the magnitude is unlikely to be economically significant. The weak predictive power suggests that analysts view the disaggregation as noisy or simply rely on information not yet reflected in the financials.

5.4 Sensitivity Tests

5.4.1 Firm Losses

I partition my samples into loss and profit firms and repeat my analysis. This is done to highlight the expected differences in profit and loss firms. In general, I find a decline in the

coefficient on $ROE_{j,t}$. My results for loss firms are presented in Table 7.a. When testing H1a with loss firms, I find the coefficient on $AbROE_{j,t}$ increases in the earlier two periods, Post-FAS 87 and Post-FAS 115, but then levels off and decreases in the latter two periods, Post-FAS 133/7 and Post-FAS 157-9. This decrease in the coefficient on $AbROE_{j,t}$ is contrary to my main findings in Table 4 and may reflect the volatility of the economy at the time, as these later time periods would likely be affected by the global financial crisis. My results for H1b show an improvement in the predictive power of the disaggregated model over the aggregate model in all except the last period, Post-FAS 157-9, consistent with volatile economic times.

My results for profit firms are shown in Table 7.b. I find a general decrease in the coefficient on $ROE_{j,t}$ in both the aggregate and disaggregate models during all periods except for Post-FAS 133/7. When testing H1a with profit firms, I find the coefficient on $AbROE_{j,t}$ generally increasing. My results for H1b show an improvement in the predictive power of the disaggregated model over the aggregate, in all periods, consistent with the mail results.

Table 8.a presents the results from my international sample. This table shows that my results for loss firms are consistent with the results from testing H2a, in that I find a general increase over time in the coefficient on $AbROE_{j,t}$. My results of testing H2b for loss firms are also consistent with the main tests. Table 8.b, presents my results from testing profit firms, in my international sample. For profit firms, when testing H2a, I find an increase in the coefficient on $AbROE_{j,t}$ only when comparing the Post-IFRS period to the Pre-IFRS period. When testing H2b, I find an improvement in the predictive power of the disaggregate model over the aggregate model in all periods.

Table 7.a

Tests of H1: Results from Estimating the Aggregate and Disaggregate Models - Loss Firms

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.045	1.069	0.135	0.010	1.296	-0.169	0.150	0.015 #
(1978-1986)	4.83 ***	7.76 ***		0.70	8.96 ***	-3.05 ***		
Post-FAS 87	-0.010	0.747	0.502	0.033	0.611	0.194	0.511	0.008 #
(1987-1993)	-0.79	24.05 ***		1.86 *	12.02 ***	3.29 ***		
[Diff ('87-'93 - '78-'86)]		-0.322 ***			-0.684 ***	0.363 ***		
Post-FAS 115	0.061	0.573	0.339	0.179	0.358	0.406	0.393	0.054 ###
(1994-2000)	4.53 ***	13.49 ***		9.22 ***	6.29 ***	6.40 ***		
[Diff ('94-'00 - '87-'93)]		-0.174 ***			-0.253 ***	0.212 ***		
Post-FAS 133/7	-0.001	0.478	0.257	0.068	0.310	0.377	0.290	0.032 ###
(2001-2006)	-0.06	10.93 ***		4.07 ***	6.02 ***	5.18 ***		
[Diff ('01-'06 - '94-'00)]		-0.096			-0.048	-0.029		
Post-FAS 157-9	0.006	0.487	0.245	0.041	0.440	0.136	0.248	0.004
(2007-2012)	0.41	11.1 ***		1.93 *	8.39 ***	1.58		
[Diff ('07-'12 - '94-'00)]		0.010			0.130 *	-0.241 ***		

Table 7.b

Tests of H1: Results from Estimating the Aggregate and Disaggregate Models - Profit Firms

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.024	0.748	0.366	0.023	0.754	-0.006	0.366	0.000
(1978-1986)	8.5 ***	39.75 ***		7.69 ***	39.59 ***	-0.98		
Post-FAS 87	0.086	0.256	0.080	0.097	0.207	0.111	0.094	0.014 ###
(1987-1993)	17.62 ***	8.12 ***		16.10 ***	5.78 ***	5.37 ***		
[Diff ('87-'93 - '78-'86)]		-0.491 ***			-0.547 ***	0.117 ***		
Post-FAS 115	0.113	0.211	0.098	0.125	0.161	0.154	0.134	0.036 ###
(1994-2000)	27.41 ***	9.12 ***		30.16 ***	7.40 ***	8.90 ***		
[Diff ('94-'00 - '87-'93)]		-0.045			-0.046	0.043		
Post-FAS 133/7	0.097	0.315	0.155	0.107	0.207	0.248	0.209	0.054 ###
(2001-2006)	20.02 ***	10.32 ***		20.35 ***	6.42 ***	7.56 ***		
[Diff ('01-'06 - '94-'00)]		0.103 ***			0.046	0.093 **		
Post-FAS 157-9	0.131	0.157	0.038	0.138	0.006	0.454	0.195	0.157 ###
(2007-2012)	17.28 ***	4.21 ***		21.90 ***	0.16	11.73 ***		
[Diff ('07-'12 - '94-'00)]		-0.157 ***			-0.201 ***	0.207 ***		

Table 8.a

Tests of H2: Results from Estimating the Aggregate and Disaggregate Models - International, Loss Firms

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-IFRS	-0.131	0.350	0.096	-0.073	0.283	0.166	0.114	0.018 ###
Adoption	-12.39 ***	10.75 ***		-5.57 ***	7.99 ***	4.88 ***		
Trans-IFRS	-0.210	0.277	0.056	-0.137	0.240	0.291	0.110	0.054 ###
Adoption	-18.99 ***	10.14 ***		-14.43 ***	9.25 ***	9.56 ***		
[Diff (Trans - Pre)]		-0.073			-0.042	0.125 ***		
Post-IFRS	-0.195	0.343	0.103	-0.094	0.279	0.294	0.172	0.069 ###
Adoption	-32.27 ***	22.70 ***		-15.19 ***	19.80 ***	18.46 ***		
[Diff (Post - Trans)]		0.066 ***			0.038	0.003		
[Diff (Post - Pre)]		-0.007			-0.004	0.127 ***		

Table 8.b

Tests of H2: Results from Estimating the Aggregate and Disaggregate Models - International, Profit Firms

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-IFRS	0.113	0.102	0.013	0.114	0.067	0.084	0.023	0.010 ##
Adoption	42.87 ***	4.15 ***		42.82 ***	2.51 **	4.52 ***		
Trans-IFRS	0.100	0.110	0.018	0.074	0.065	0.125	0.035	0.017 #
Adoption	24.00 ***	3.35 ***		7.09 ***	1.69 *	2.99 ***		
[Diff (Trans – Pre)]		0.008 *			-0.002	0.040		
Post-IFRS	0.106	0.092	0.018	0.091	0.033	0.144	0.042	0.024 ###
Adoption	42.05 ***	7.97 ***		28.75 ***	2.50 **	8.25 ***		
[Diff (Post – Trans)]		-0.018			-0.031	0.019		
[Diff (Post – Pre)]		-0.010			-0.033	0.059 **		

Table 9.a presents my results from my analyst forecast tests using loss firms. I find a weak increase in the coefficient on $AbROE_{j,t}$ in the Post-FAS 115 period and then a weak decrease in the Post- FAS 157-9 period, where I found no differences across the full sample in my test of H3a. But, I again find no support for H3b in that I do not find significant increases in predictive power of the disaggregate model over the aggregate model.

My results from testing profit firms are presented in Table 9.b. When testing H3a, I find an increase in the coefficient on $AbROE_{j,t}$ in the Post-FAS 133/7 period, only. When testing H3b, I find significant increases in predictive power of the disaggregate model over the aggregate model, especially in the later time periods. Overall, my analyst forecast results again suggest that analysts are not fully incorporating the greater comparability of either profitable or unprofitable firms.

5.4.2 Firm Size

Next, I partition my samples by size, by total assets, and highlight the differences between small and large firms. Table 10.a presents my results for small firms. I find a general decrease in the coefficient on $ROE_{j,t}$, in the aggregate model as I did in Table 4. When testing H1a, I find the coefficient on $AbROE_{j,t}$ increases in the earlier two periods, Post-FAS 87 and Post-FAS 115, but then levels off in the latter two periods, Post-FAS 133/7 and Post-FAS 157-9. This leveling off may reflect the volatility of the economy at the time, as these later time periods would likely be affected by the global financial crisis. My results for H1b show an improvement in the predictive power of the disaggregated model over the aggregate model in all periods, consistent with my main results in Table 4. For large US firms, shown in Table 10.b, my results are similar to the results for small firms.

Table 9.a

Tests of H3: Results from Estimating the Aggregate and Disaggregate Models - Analyst Forecasts, Loss Firms

	Aggregate Model			Disaggregate Model				
	$FROE_{j,t}^{t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$FROE_{j,t}^{t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.057	0.329	0.019	0.030	0.526	-0.139	0.032	0.013
(1978-1986)	5.02 ***	1.82 *		1.54	2.61 ***	-1.81 *		
Post-FAS 87	0.046	-0.016	-0.002	0.035	-0.003	-0.044	-0.001	0.001
(1987-1993)	6.19 ***	-0.33		2.33 **	-0.07	-0.75		
[Diff ('87-'93 - '78-'86)]		-0.345 *			-0.529 ***	0.094		
Post-FAS 115	0.084	0.043	-0.001	0.124	-0.006	0.133	0.010	0.010
(1994-2000)	6.59 ***	0.46		4.96 ***	-0.06	1.82 *		
[Diff ('94-'00 - '87-'93)]		0.059			-0.003	0.177 *		
Post-FAS 133/7	0.051	0.158	0.029	0.062	0.137	0.057	0.030	0.001
(2001-2006)	4.68 ***	2.39 **		4.13 ***	1.91 *	0.74		
[Diff ('01-'06 - '94-'00)]		0.115			0.143	-0.076		
Post-FAS 157-9	0.066	0.009	-0.001	0.032	0.058	-0.138	0.015	0.016
(2007-2012)	4.24 ***	0.11		1.79 *	0.69	-1.66 *		
[Diff ('07-'12 - '94-'00)]		-0.149			-0.079	-0.195 *		

Table 9.b

Tests of H3: Results from Estimating the Aggregate and Disaggregate Models - Analyst Forecasts, Profit Firms

	Aggregate Model $FROE_{j,t}^{t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			Disaggregate Model $FROE_{j,t}^{t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.047	0.251	0.051	0.058	0.201	0.050	0.056	0.005 ##
(1978-1986)	10.00 ***	7.32 ***		10.32 ***	5.66 ***	3.28 ***		
Post-FAS 87	0.069	0.192	0.072	0.076	0.158	0.066	0.081	0.010 ##
(1987-1993)	14.77 ***	6.68 ***		14.48 ***	5.17 ***	4.17 ***		
[Diff ('87-'93 - '78-'86)]		-0.059			-0.043	0.016		
Post-FAS 115	0.090	0.306	0.166	0.095	0.288	0.052	0.169	0.003 #
(1994-2000)	15.03 ***	9.96 ***		14.38 ***	8.90 ***	2.65 ***		
[Diff ('94-'00 - '87-'93)]		0.115 ***			0.130 ***	-0.014		
Post-FAS 133/7	0.095	0.464	0.290	0.101	0.398	0.150	0.307	0.017 ##
(2001-2006)	15.55 ***	14.61 ***		15.06 ***	9.82 ***	3.91 ***		
[Diff ('01-'06 - '94-'00)]		0.158 ***			0.110 **	0.098 **		
Post-FAS 157-9	0.134	0.366	0.241	0.142	0.273	0.210	0.281	0.039 ###
(2007-2012)	24.24 ***	13.62 ***		23.80 ***	7.88 ***	6.58 ***		
[Diff ('07-'12 - '94-'00)]		-0.098 **			-0.126 **	0.060		

Table 10.a

Tests of H1: Results from Estimating the Aggregate and Disaggregate Models - Future ROE, Small Firms

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.018	0.780	0.444	0.017	0.787	-0.007	0.444	0.000
(1978-1986)	4.94 ***	33.78 ***		4.26 ***	33.46 ***	-0.73		
Post-FAS 87	0.001	0.768	0.587	0.025	0.646	0.155	0.593	0.006 ##
(1987-1993)	0.28	26.71 ***		3.13 ***	14.56 ***	3.68 ***		
[Diff ('87-'93 - '78-'86)]		-0.012			-0.141 ***	0.162 ***		
Post-FAS 115	0.052	0.544	0.401	0.090	0.373	0.259	0.439	0.038 ###
(1994-2000)	9.66 ***	17.34 ***		12.20 ***	9.42 ***	7.65 ***		
[Diff ('94-'00 - '87-'93)]		-0.224 ***			-0.273 ***	0.104 ***		
Post-FAS 133/7	0.039	0.628	0.448	0.055	0.502	0.189	0.460	0.012 ##
(2001-2006)	6.94 ***	17.62 ***		8.00 ***	11.18 ***	4.57 ***		
[Diff ('01-'06 - '94-'00)]		0.084 *			0.129 **	-0.070		
Post-FAS 157-9	0.048	0.461	0.261	0.075	0.300	0.301	0.304	0.043 ###
(2007-2012)	7.19 ***	11.18 ***		8.69 ***	5.49 ***	5.33 ***		
[Diff ('07-'12 - '94-'00)]		-0.167 ***			-0.202 ***	0.112		

Table 10.b

Tests of H1: Results from Estimating the Aggregate and Disaggregate Models - Future ROE, Large Firms

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.027	0.731	0.416	0.023	0.750	-0.019	0.417	0.001
(1978-1986)	7.54 ***	29.79 ***		6.33 ***	30.87 ***	-2.06 **		
Post-FAS 87	0.032	0.545	0.433	0.064	0.402	0.235	0.460	0.027 ###
(1987-1993)	6.22 ***	17.13 ***		9.59 ***	10.80 ***	6.06 ***		
[Diff ('87-'93 - '78-'86)]		-0.186 ***			-0.347 ***	0.254 ***		
Post-FAS 115	0.096	0.260	0.180	0.120	0.181	0.195	0.223	0.043 ###
(1994-2000)	15.94 ***	9.05 ***		19.62 ***	6.73 ***	7.77 ***		
[Diff ('94-'00 - '87-'93)]		-0.285 ***			-0.221 ***	-0.040		
Post-FAS 133/7	0.082	0.318	0.227	0.100	0.194	0.315	0.280	0.053 ###
(2001-2006)	13.64 ***	10.74 ***		15.89 ***	6.47 ***	7.66 ***		
[Diff ('01-'06 - '94-'00)]		0.058			0.012	0.120 **		
Post-FAS 157-9	0.104	0.280	0.139	0.126	0.079	0.523	0.281	0.142 ###
(2007-2012)	13.27 ***	8.09 ***		16.20 ***	2.02 **	9.75 ***		
[Diff ('07-'12 - '94-'00)]		-0.038			-0.115 **	0.208 ***		

Table 11.a presents my results for testing small firms, internationally. My results are consistent with the results for H2a, in that I find an increase in the coefficient on $AbROE_{j,t}$ when comparing the first and last periods. I again find support for H2b with an improvement in the predictive power of the disaggregate model over the aggregate model in all periods for small firms.

For large firms, shown in Table 11.b, when testing H2a, I find increase in the coefficient on $AbROE_{j,t}$ during the transition period, but a decrease upon adoption of IFRS. The decrease during the Trans-IFRS period, however, was small enough that when comparing the Post-IFRS to the Pre-IFRS periods, I find an overall increase in the coefficient on $AbROE_{j,t}$. I again find support H2b with an improvement in the predictive power of the disaggregate model over the aggregate model in all periods for large firms, internationally.

Next, I present my results for tests related to analyst forecasts. Table 12.a shows that for small firms, there is little evidence to suggest that analysts are incorporating the effects of the shift toward an asset/liability view. This is not surprising since fewer analysts follow smaller firms, thus more noise surrounds the information for smaller firms.

In Table 12.b, for large firms, however, I do find support for H3a with an increase in the coefficient on $AbROE_{j,t}$ but only in the Post-FAS 133/7 period. This finding suggest that analysts did find this shift in accounting standards useful in forecasting future firm performance, at least for the often complex accounting for derivative instruments and hedging activities. It is the later time periods that I also find support for H3b in that I find an increase in predictive power of the disaggregate model relative to the aggregate model.

TABLE 11.a

Tests of H2: Results from Estimating the Aggregate and Disaggregate Models - International, Small Firms

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-IFRS	0.032	0.304	0.098	0.050	0.145	0.267	0.158	0.060 ###
Adoption	7.50 ***	12.95 ***		11.95 ***	5.31 ***	11.35 ***		
Trans-IFRS	-0.074	0.341	0.103	-0.073	0.219	0.299	0.166	0.063 ###
Adoption	-9.56 ***	13.11 ***		-10.41 ***	7.59 ***	10.07 ***		
[Diff (Trans - Pre)]		0.036			0.074	0.032		
Post-IFRS	-0.084	0.319	0.127	-0.052	0.182	0.312	0.210	0.083 ###
Adoption	-21.38 ***	28.06 ***		-14.76 ***	14.69 ***	21.86 ***		
[Diff (Post - Trans)]		-0.021			-0.037	0.013		
[Diff (Post - Pre)]		0.015			0.037	0.046 *		

Table 11.b

Tests of H2: Results from Estimating the Aggregate and Disaggregate Models - International, Large Firms

	Aggregate Model $ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			Disaggregate Model $ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	Difference in Adj. R^2
Pre-IFRS	0.083	0.253	0.060	0.090	0.214	0.096	0.071	0.012 ##
Adoption	27.16 ***	7.70 ***		28.05 ***	6.19 ***	4.44 ***		
Trans-IFRS	0.030	0.158	0.024	0.001	0.119	0.248	0.083	0.059 ###
Adoption	5.54 ***	4.72 ***		0.20	3.48 ***	7.21 ***		
[Diff (Trans - Pre)]		-0.094 **			-0.096 *	0.152 ***		
Post-IFRS	0.065	0.177	0.040	0.055	0.114	0.195	0.081	0.041 ###
Adoption	23.12 ***	10.88 ***		17.90 ***	6.75 ***	11.11 ***		
[Diff (Post - Trans)]		0.019			-0.005	-0.053 **		
[Diff (Post - Pre)]		-0.076 **			-0.101 ***	0.099 ***		

Table 12.a

Tests of H3: Results from Estimating the Aggregate and Disaggregate Models - Analyst Forecasts, Small Firms

	Aggregate Model			Disaggregate Model				
	$FROE_{j,t}^{t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$FROE_{j,t}^{t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.044	0.237	0.099	0.055	0.192	0.046	0.103	0.004
(1978-1986)	8.41	6.56		8.31 ***	5.06 ***	2.43 **		
Post-FAS 87	0.067	0.215	0.111	0.074	0.180	0.053	0.117	0.006
(1987-1993)	14.53	6.52		11.76 ***	4.51 ***	2.36 **		
[Diff ('87-'93 - '78-'86)]		-0.022			-0.012	0.008		
Post-FAS 115	0.092	0.292	0.135	0.104	0.242	0.078	0.141	0.007 ##
(1994-2000)	13.52	6.88		13.00 ***	5.23 ***	3.26 ***		
[Diff ('94-'00 - '87-'93)]		0.076			0.061	0.025		
Post-FAS 133/7	0.089	0.383	0.236	0.102	0.273	0.149	0.255	0.019 ##
(2001-2006)	16.13	9.98		15.48 ***	5.82 ***	3.60 ***		
[Diff ('01-'06 - '94-'00)]		0.092			0.031	0.071		
Post-FAS 157-9	0.126	0.233	0.143	0.138	0.152	0.122	0.163	0.020 #
(2007-2012)	24.35	6.96		19.46 ***	3.08 ***	2.79 ***		
[Diff ('07-'12 - '94-'00)]		-0.150 ***			-0.121 *	-0.027		

Table 12.b

Tests of H3: Results from Estimating the Aggregate and Disaggregate Models - Analyst Forecasts, Large Firms

	Aggregate Model			Disaggregate Model				
	$FROE_{j,t}^{t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$FROE_{j,t}^{t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.051	0.249	0.060	0.058	0.221	0.029	0.061	0.000
(1978-1986)	9.37	5.94		7.79 ***	4.93 ***	1.18		
Post-FAS 87	0.081	0.104	0.034	0.086	0.081	0.045	0.039	0.004
(1987-1993)	18.79	4.25		16.20 ***	2.95 ***	1.60		
[Diff ('87-'93 - '78-'86)]		-0.145 ***			-0.140 ***	0.017		
Post-FAS 115	0.113	0.223	0.115	0.114	0.220	0.009	0.114	0.000
(1994-2000)	13.80	5.95		12.93 ***	5.57 ***	0.30		
[Diff ('94-'00 - '87-'93)]		0.119 ***			0.139 ***	-0.037		
Post-FAS 133/7	0.121	0.429	0.301	0.127	0.372	0.155	0.315	0.014 #
(2001-2006)	17.22	12.55		15.70 ***	8.14 ***	2.96 ***		
[Diff ('01-'06 - '94-'00)]		0.205 ***			0.152 **	0.146 **		
Post-FAS 157-9	0.158	0.367	0.249	0.168	0.278	0.205	0.278	0.029 ###
(2007-2012)	23.84	12.38		22.62 ***	7.05 ***	4.68 ***		
[Diff ('07-'12 - '94-'00)]		-0.062			-0.094	0.050		

5.4.3 Intangible Intensity

Next I partition my samples by intangible intensity. Table 13.a presents the results for the subset of highly intangible firms. For these firms, I find weak evidence of a decrease in coefficient on $ROE_{j,t}$ in the aggregate model. When testing H1a for firms in intangible based industries, I find the coefficient on $AbROE_{j,t}$ increases in the Post-FAS 87 and Post-FAS 115, but then levels off in the latter two periods, Post-FAS 133/7 and Post-FAS 157-9. As with other controls tested, this leveling off may reflect the volatility of the economy at the time.

In Table 13.b, I present the results from the low intangible intensity subset of firms. I find a general decrease in coefficient on $ROE_{j,t}$ in the aggregate model and disaggregate modes, consistent with my main results for H1a. As with my main results for H1b, I find an improvement in the predictive power of the disaggregated model over the aggregate model in all periods.

Table 14.a presents the results of testing intangible intensive firms, internationally. My results are consistent with my main tests of H2a and H2b, an increase on the coefficient on $AbROE_{j,t}$ and an improvement in the predictive power of the disaggregated model over the aggregate model in all periods.

In Table 14.b, I present the results from the low intangible intensity subset of firms, from my international sample. Intangible intensity is defined at an industry level. Again, my results are I find an increase on the coefficient on $AbROE_{j,t}$, when testing H2a, and an improvement in the predictive power of the disaggregated model over the aggregate model in all periods, when testing H2b.

Table 13.a

Tests of H1: Results from Estimating the Aggregate and Disaggregate Models - Future ROE, High Intangible

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.037	0.718	0.457	0.035	0.728	-0.010	0.457	0.000
(1978-1986)	4.38 ***	13.61 ***		4.10 ***	13.84 ***	-0.57		
Post-FAS 87	0.049	0.512	0.416	0.069	0.414	0.159	0.437	0.021 #
(1987-1993)	3.52 ***	6.78 ***		4.96 ***	5.53 ***	2.99 ***		
[Diff ('87-'93 - '78-'86)]		-0.206 **			-0.314 ***	0.170 ***		
Post-FAS 115	0.067	0.416	0.360	0.141	0.266	0.271	0.421	0.060 ###
(1994-2000)	6.48 ***	10.89 ***		12.02 ***	7.26 ***	8.85 ***		
[Diff ('94-'00 - '87-'93)]		-0.096			-0.148 *	0.112 *		
Post-FAS 133/7	0.024	0.430	0.329	0.047	0.274	0.305	0.370	0.042 ###
(2001-2006)	2.72 ***	9.06 ***		5.63 **	6.78 ***	6.14 ***		
[Diff ('01-'06 - '94-'00)]		0.014			0.008	0.034		
Post-FAS 157-9	0.098	0.289	0.139	0.122	0.121	0.404	0.239	0.100 ###
(2007-2012)	7.19 ***	4.55 ***		9.38 ***	1.95	6.12 ***		
[Diff ('07-'12 - '94-'00)]		-0.140 *			-0.154 **	0.099		

Table 13.b

Tests of H1: Results from Estimating the Aggregate and Disaggregate Models - Future ROE, Low Intangible

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.021	0.760	0.428	0.018	0.774	-0.014	0.433	0.005
(1978-1986)	7.89 ***	42.74 ***		6.44 ***	43.39 ***	-2.05 **		
Post-FAS 87	0.010	0.695	0.535	0.433	0.533	0.223	0.547	0.012 ###
(1987-1993)	2.81 ***	30.01 ***		7.47 ***	16.49 ***	6.91 ***		
[Diff ('87-'93 - '78-'86)]		-0.065 **			-0.241 ***	0.237 ***		
Post-FAS 115	0.069	0.409	0.280	0.102	0.256	0.283	0.355	0.075 ###
(1994-2000)	14.29 ***	14.61 ***		19.00 ***	8.85 ***	10.50 ***		
[Diff ('94-'00 - '87-'93)]		-0.287 ***			-0.277 ***	0.060		
Post-FAS 133/7	0.066	0.467	0.325	0.089	0.305	0.310	0.373	0.048 ###
(2001-2006)	13.44 ***	16.58 ***		15.29 ***	9.11 ***	8.43 ***		
[Diff ('01-'06 - '94-'00)]		0.058			0.049	0.027		
Post-FAS 157-9	0.069	0.381	0.209	0.099	0.182	0.431	0.287	0.078 ###
(2007-2012)	12.37 ***	12.97 ***		14.71 ***	4.69 ***	8.91 ***		
[Diff ('07-'12 - '94-'00)]		-0.086 **			-0.123 **	0.121 **		

Table 14.a

Tests of H2: Results from Estimating the Aggregate and Disaggregate Models - International, High Intangible Firms

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-IFRS	0.017	0.305	0.101	0.030	0.161	0.230	0.142	0.041 ###
Adoption	2.15 **	9.77 ***		3.89 ***	4.07 ***	6.64 ***		
Trans-IFRS	-0.118	0.274	0.070	-0.107	0.211	0.267	0.125	0.055 ###
Adoption	-9.71 ***	7.78 ***		-9.98 ***	5.83 ***	6.68 ***		
[Diff (Trans - Pre)]		-0.031			0.049	0.037		
Post-IFRS	-0.045	0.290	0.112	-0.022	0.147	0.336	0.215	0.103 ###
Adoption	-7.89 ***	17.38 ***		-4.44 ***	8.52 ***	16.38 ***		
[Diff (Post - Trans)]		0.015			-0.064	0.070		
[Diff (Post - Pre)]		-0.015			-0.015	0.107 ***		

Table 14.b

Tests of H2: Results from Estimating the Aggregate and Disaggregate Models - International, Low Intangible Firms

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-IFRS	0.068	0.282	0.078	0.082	0.198	0.174	0.112	0.033 ###
Adoption	26.44 ***	11.78 ***		30.48 ***	7.76 ***	9.43 ***		
Trans-IFRS	0.005	0.291	0.077	-0.019	0.173	0.305	0.153	0.077 ###
Adoption	1.13	11.45 ***		-3.41 ***	6.31 ***	11.36 ***		
[Diff (Trans - Pre)]		0.009			-0.025	0.131 ***		
Post-IFRS	0.002	0.290	0.099	0.004	0.177	0.269	0.166	0.067 ###
Adoption	0.62	25.43 ***		1.86 *	14.53 ***	20.62 ***		
[Diff (Post - Trans)]		-0.001			0.004	-0.036		
[Diff (Post - Pre)]		0.007			-0.021	0.095 ***		

Tables 15a and 15.b present my results for tests related to analyst forecasts. The lack of results, as shown in Table 15.a, for tests of H3a, is not surprising given that accounting information for intangible intensive firms is not expected to be as relevant (Amir and Lev 1996). With my main tests of H3b, I found improvements in Adj R^2 that, while statistically significant, are not likely to be economically meaningful. For the subset of intangible intensive firms, however, I fail to even find weak significance in any of my tests.

In Table 15.b, I find that for firms of low intangible intensity, some increase on the coefficient on $AbROE_{j,t}$, when testing H3a, and an improvement in the predictive power of the disaggregated model over the aggregate model in all periods, when testing H3b. Together, the results of my analyst forecast tests suggest that the shift toward the asset/liability view may not benefit those firms in intangible intensive industries.

5.4.4 Shift toward Principles-Based Standards

I also consider the effects of the shift towards principles-based reporting and create subsamples of firms that are highly influenced by principles-based standards and those that are the least influenced. I use the *P-score* measure developed by Folsom et al. (2011) which captures the extent to which a firm is affected by principles-based standards. My results from testing H1a and H1b on my sample partitioned by P-score are discussed in further detail below.

Tables 16.a and 16.b present the results of testing H1a and H1b on my sample partitioned by P-score. In Table 16.a, I find that for US firms that are highly influenced by the shift towards principles-based standards (high P-score firms), my results are subdued compare to the entire sample used in my main tests. That is, I find a decrease in coefficient on $ROE_{j,t}$, in the aggregate and disaggregate models in the Post-FAS 155 and Post FAS 157-9 periods only.

Table 15.a

Tests of H3: Results from Estimating the Aggregate and Disaggregate Models - Analyst Forecasts, High Intangible Firms

	Aggregate Model $FROE_{j,t}^{t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			Disaggregate Model $FROE_{j,t}^{t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	Difference in Adj. R^2
Pre-FAS 87	0.044	0.171	0.027	0.042	0.182	-0.009	0.022	-0.005
(1978-1986)	2.65 ***	1.58		1.65 *	1.26	-0.17		
Post-FAS 87	0.082	0.141	0.058	0.088	0.105	0.059	0.064	0.006
(1987-1993)	7.05 ***	0.06		6.03 ***	1.42	1.37		
[Diff ('87-'93 - '78-'86)]		-0.030			-0.077	0.068		
Post-FAS 115	0.094	0.310	0.176	0.096	0.307	0.006	0.174	-0.001
(1994-2000)	7.39 ***	6.25 ***		5.65 ***	5.48 ***	0.16		
[Diff ('94-'00 - '87-'93)]		0.169 ***			0.202 **	-0.053		
Post-FAS 133/7	0.133	0.453	0.303	0.135	0.436	0.034	0.306	0.003
(2001-2006)	15.01 ***	12.01 ***		14.60 ***	9.03 ***	0.62		
[Diff ('01-'06 - '94-'00)]		0.143 ***			0.129 *	0.028		
Post-FAS 157-9	0.173	0.354	0.247	0.177	0.331	0.051	0.248	0.002
(2007-2012)	18.78 ***	8.40 ***		17.15 ***	6.31 ***	1.06		
[Diff ('07-'12 - '94-'00)]		-0.099 ***			-0.106	0.017		

Table 15.b

Tests of H3: Results from Estimating the Aggregate and Disaggregate Models - Analyst Forecasts, Low Intangible Firms

	Aggregate Model			Disaggregate Model				
	$FROE_{j,t}^{t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$FROE_{j,t}^{t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.048	0.253	0.084	0.059	0.210	0.045	0.088	0.004 #
(1978-1986)	12.45 ***	8.95 ***		11.88 ***	7.20 ***	2.79 ***		
Post-FAS 87	0.073	0.159	0.068	0.080	0.129	0.053	0.074	0.006 #
(1987-1993)	24.14 ***	7.66 ***		21.49 ***	5.77 ***	2.78 ***		
[Diff ('87-'93 - '78-'86)]		-0.095 ***			-0.081 **	0.008		
Post-FAS 115	0.105	0.231	0.106	0.113	0.194	0.076	0.112	0.006 #
(1994-2000)	17.59 ***	6.83 ***		17.08 ***	5.42 ***	3.06 ***		
[Diff ('94-'00 - '87-'93)]		0.072 *			0.066	0.023		
Post-FAS 133/7	0.096	0.408	0.276	0.107	0.316	0.176	0.301	0.025 ##
(2001-2006)	17.62 ***	12.30 ***		15.46 ***	6.86 ***	4.05 ***		
[Diff ('01-'06 - '94-'00)]		0.177 ***			0.122 **	0.100 **		
Post-FAS 157-9	0.134	0.308	0.201	0.147	0.207	0.183	0.233	0.032 ###
(2007-2012)	28.16 ***	11.48 ***		24.67 ***	5.54 ***	5.03 ***		
[Diff ('07-'12 - '94-'00)]		-0.100 **			-0.110 *	0.007		

Table 16.a

Tests of H1: Results from Estimating the Aggregate and Disaggregate Models - Future ROE, High P-Score

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.023	0.785	0.500	0.021	0.795	-0.011	0.499	0.000
(1978-1986)	3.25 ***	18.18 ***		2.72 ***	17.42 ***	-0.66		
Post-FAS 87	-0.004	0.720	0.555	0.017	0.641	0.113	0.558	0.003
(1987-1993)	-0.35	13.59 ***		0.93	8.52 ***	1.40		
[Diff ('87-'93 - '78-'86)]		-0.065			-0.154	0.123		
Post-FAS 115	0.064	0.435	0.299	0.097	0.284	0.248	0.332	0.033 ##
(1994-2000)	4.84 ***	5.52 ***		6.87 ***	3.60 ***	4.37 ***		
[Diff ('94-'00 - '87-'93)]		-0.285 ***			-0.358 ***	0.135		
Post-FAS 133/7	0.091	0.521	0.349	0.111	0.263	0.482	0.456	0.107 ##
(2001-2006)	5.78 ***	6.65 ***		6.96 ***	2.76 ***	4.51 ***		
[Diff ('01-'06 - '94-'00)]		0.086			-0.020	0.234 *		
Post-FAS 157-9	0.074	0.345	0.122	0.092	0.016	0.696	0.334	0.212 ##
(2007-2012)	4.64 ***	3.31 ***		6.86 ***	0.15	5.19 ***		
[Diff ('07-'12 - '94-'00)]		-0.176			-0.247 *	0.214		

Table 16.b

Tests of H1: Results from Estimating the Aggregate and Disaggregate Models - Future ROE, Low P-Score

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.043	0.672	0.370	0.044	0.669	0.004	0.370	0.000
(1978-1986)	6.24 ***	13.68 ***		7.49 ***	15.53 ***	0.22		
Post-FAS 87	0.028	0.713	0.513	0.041	0.647	0.102	0.518	0.005
(1987-1993)	2.37 **	7.81 ***		2.95 ***	6.69 ***	1.32		
[Diff ('87-'93 - '78-'86)]		0.041			-0.022	0.098		
Post-FAS 115	0.073	0.342	0.272	0.085	0.272	0.152	0.309	0.037 ##
(1994-2000)	6.76 ***	4.13 ***		10.67 ***	4.21 ***	3.33 ***		
[Diff ('94-'00 - '87-'93)]		-0.371 ***			-0.374 ***	0.050		
Post-FAS 133/7	0.089	0.227	0.099	0.106	0.171	0.139	0.125	0.025 #
(2001-2006)	9.17 ***	2.97 ***		10.74 ***	2.61 ***	2.70 ***		
[Diff ('01-'06 - '94-'00)]		-0.115			-0.101	-0.013		
Post-FAS 157-9	0.071	0.342	0.284	0.087	0.255	0.220	0.311	0.027
(2007-2012)	9.53 ***	4.43 ***		11.19 ***	3.92 ***	2.52 **		
[Diff ('07-'12 - '94-'00)]		0.115			0.085	0.080		

For these US firms, I find minimal evidence, when testing H1a, of an improvement to firm-specific information as the coefficient on $AbROE_{j,t}$ increases only in the Post-FAS 133/7 period. I find when testing H1b with high P-score firms, however, improvement in predictive power of the disaggregate model relative to the aggregate model in the Post-FAS 155, Post-FAS133/7, and Post-FAS 157-9 periods. My results suggest that the shift toward the asset/liability view enhance the predictive usefulness beyond the effect of the shift toward principles-based standards in the US.

My results for US firms in the low P-score subset of my sample, presented in Table 16.b, are similar with respect to the decrease in the coefficient on $ROE_{j,t}$, in the aggregate and disaggregate models. But I find no evidence of an improvement to firm-specific information, when testing H1a, and I find weak improvements to predictive power of the disaggregate model, when testing H1b. These results suggest that for firms that are not strongly affected by the shift toward principles, are also not strongly affected by the shift toward the asset/liability view of accounting. Next, I present the results of partitioning my international sample by P-score.

In Table 17.a, I find for the subset of high P-score firms, a decrease in the coefficient on $ROE_{j,t}$, in the aggregate model during the Trans-IFRS period only. This differs slightly from the stable coefficient on $ROE_{j,t}$, that I found in the full sample. Where I found improvements to firm-specific information in the full international sample, I do not find such evidence in the subset of high P-score firms, when testing H2a, The changes over time are all insignificant at conventional levels. When testing H2b using the subset of high P-score firms, I do find improvement to the predictive power of the disaggregate model over the aggregate model in all periods.

Table 17.a

Tests of H2: Results from Estimating the Aggregate and Disaggregate Models - Future ROE - International, High P-Score

	Aggregate Model			Disaggregate Model				
	$ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-IFRS	0.080	0.426	0.172	0.094	0.303	0.211	0.214	0.042 ###
Adoption	14.20 ***	7.89 ***		16.45 ***	5.37 ***	5.23 ***		
Trans-IFRS	0.036	0.252	0.056	-0.005	0.140	0.319	0.142	0.086 ###
Adoption	3.02 ***	3.41 ***		-0.32	1.70 *	4.63 ***		
[Diff (Trans - Pre)]		-0.173 *			-0.163	0.108		
Post-IFRS	0.018	0.345	0.123	0.015	0.222	0.265	0.184	0.061 ###
Adoption	2.80 ***	10.05 ***		2.35 **	5.65 ***	6.80 ***		
[Diff (Post - Trans)]		0.092			0.081	-0.054		
[Diff (Post - Pre)]		-0.081			-0.081	0.054		

With my subset of low P-score international firms, Table 17.b, I find an overall improvement to firm-specific information when comparing the Post-IFRS period to the Pre-IFRS period, but unlike my main results, this is not driven by an improvement during the Trans-IFRS period. Further, I find improvement to the predictive power of the disaggregate model over the aggregate model in the Post-IFRS period only, when testing H2b.

Finally, Table 18.a presents the results of my tests related to analyst forecasts, for high P-score firms. I fail to find support for significant changes in either industry or firm-specific information suggesting that for these firms, analysts are not incorporating the shift toward an asset/liability view into their forecasts of firm performance. In Table 18.b, for low P-score firms, however, I do find decrease in the coefficient on $ROE_{j,t}$, in the aggregate model that I have found throughout this study, but I do not find the improvements to predictive power of the disaggregate model.

Table 17.b

Tests of H2: Results from Estimating the Aggregate and Disaggregate Models - Future ROE - International, Low P-Score

	Aggregate Model $ROE_{j,t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			Disaggregate Model $ROE_{j,t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	Difference in Adj. R^2
Pre-IFRS	0.103	0.285	0.064	0.106	0.294	0.061	0.069	0.004
Adoption	8.71 ***	1.40		8.84 ***	1.49	0.49		
Trans-IFRS	0.039	0.223	0.032	0.021	0.234	0.305	0.125	0.093
Adoption	1.34	0.93		0.61	1.02	1.71 *		
[Diff (Trans - Pre)]		-0.062			-0.059	0.244		
Post-IFRS	0.069	0.013	-0.001	0.057	-0.046	0.305	0.119	0.120 ##
Adoption	5.40 ***	0.16		4.01 ***	-0.62	3.95 ***		
[Diff (Post - Trans)]		-0.210			-0.280	0.000		
[Diff (Post - Pre)]		-0.272			-0.340	0.244 *		

Table 18.a

Tests of H3: Results from Estimating the Aggregate and Disaggregate Models - Analyst Forecasts, High P-Score

	Aggregate Model			Disaggregate Model				
	$FROE_{j,t}^{t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$FROE_{j,t}^{t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.065	0.090	0.004	0.063	0.096	-0.007	-0.002	-0.006
(1978-1986)	5.61 ***	1.38		4.36 ***	1.45	-0.14		
Post-FAS 87	0.070	0.098	0.024	0.075	0.079	0.032	0.026	0.002
(1987-1993)	7.02 ***	2.57 **		6.36 ***	1.77 *	1.05		
[Diff ('87-'93 - '78-'86)]		0.008			-0.016	0.039		
Post-FAS 115	0.073	0.232	0.111	0.086	0.175	0.111	0.124	0.013
(1994-2000)	3.03 ***	2.44 **		3.45 ***	1.74 *	2.32 **		
[Diff ('94-'00 - '87-'93)]		0.133			0.096	0.079		
Post-FAS 133/7	0.142	0.287	0.153	0.151	0.109	0.316	0.249	0.096
(2001-2006)	5.85 ***	3.75 ***		6.65 ***	0.84	2.36 **		
[Diff ('01-'06 - '94-'00)]		0.056			-0.066	0.206		
Post-FAS 157-9	0.161	0.320	0.196	0.171	0.078	0.405	0.309	0.114
(2007-2012)	8.90 ***	4.43 ***		9.93 ***	0.68	2.84 ***		
[Diff ('07-'12 - '94-'00)]		0.032			-0.031	0.088		

Table 18.b

Tests of H3: Results from Estimating the Aggregate and Disaggregate Models - Analyst Forecasts, Low P-Score

	Aggregate Model			Disaggregate Model				
	$FROE_{j,t}^{t+1} = \alpha_0 + \alpha_1 ROE_{j,t} + \varepsilon_{j,t}$			$FROE_{j,t}^{t+1} = \beta_0 + \beta_1 ROE_{j,t} + \beta_2 AbROE_{j,t} + \varepsilon_{j,t}$				Difference
Time Period	*Intercept*	*ROE*	Adj. R^2	*Intercept*	*ROE*	*AbROE*	Adj. R^2	in Adj. R^2
Pre-FAS 87	0.027	0.537	0.084	0.036	0.497	0.035	0.081	-0.003
(1978-1986)	2.27 **	5.69 ***		1.36	3.44 ***	0.39		
Post-FAS 87	0.098	0.058	0.007	0.116	-0.031	0.133	0.044	0.037
(1987-1993)	13.31 ***	1.06		9.18 ***	-0.45	2.19 **		
[Diff ('87-'93 - '78-'86)]		-0.479 ***			-0.528 ***	0.097		
Post-FAS 115	0.078	0.357	0.347	0.083	0.323	0.060	0.352	0.006
(1994-2000)	4.88 ***	2.35 **		5.15 ***	2.13 **	1.93 *		
[Diff ('94-'00 - '87-'93)]		0.299 *			0.355 **	-0.072		
Post-FAS 133/7	0.081	0.418	0.389	0.093	0.381	0.104	0.402	0.013
(2001-2006)	6.29 ***	4.20 ***		7.01 ***	4.22 ***	1.36		
[Diff ('01-'06 - '94-'00)]		0.061			0.058	0.044		
Post-FAS 157-9	0.114	0.417	0.304	0.133	0.300	0.270	0.341	0.037
(2007-2012)	5.51 ***	3.77 ***		5.94 ***	2.52 **	2.35 **		
[Diff ('07-'12 - '94-'00)]		-0.001			-0.081	0.166		

6. CONCLUSIONS

Over the past several decades, accounting standard setters have been gradually shifting financial reporting from a revenue/expense view to an asset/liability view, by rewriting the underlying conceptual framework and issuing accounting standards that reflect this view. I find that this shift towards an asset/liability view to date, in the US, has generally increased the predictive usefulness of accounting information. I further find that the adoption of IFRS across a broad cross-section of countries has also increased the predictive usefulness of accounting information, where IFRS incorporates more fair values in accounting than typically found in local GAAP, thus shifting the viewpoint further toward an asset/liability view. Since current US GAAP incorporates fewer fair value accounting requirements than IFRS, or even than the previous local GAAP of most adopting countries, my results suggest that the adoption of IFRS in the US will continue to shift accounting information further toward the asset/liability view and likely increase its predictive usefulness.

My evidence provides support that the shift toward an asset/liability view achieved the FASB's goal, as expressed in SFAC 8, of providing information that is helpful in assessing the future prospects of a firm. I also find, however, that analysts (who serve as important market intermediaries) have not increased their reliance on firm-specific accounting information as the standards shifted over time, even though my evidence indicates that the predictive usefulness of firm-specific information has increased. To the extent that other sources of information are more costly, analysts and others could increase the efficiency in which they form their forecasts by increasing their reliance on firm-specific information.

While I analyze the shift in standards toward an asset/liability view broadly over a 35 year span, future research could delve deeper to analyze what elements in the shift in viewpoint

enhanced predictive usefulness. Specifically, research could focus on particular standards that further shifted GAAP towards an asset/liability view, and the characteristics of those standards associated with greater predictive usefulness. Future research could also examine why analysts to date have been reluctant to incorporate firm-specific information into their forecasts, as my evidence suggests is the case. Possible reasons could be that other information outside the financial statements is readily available with today's technology; or, analysts could be skeptical on the quality of accounting information, since the shift toward an asset/liability view likely increased the pressure on managers to meet industry norms.

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THE VITA

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