Discussion of "Relative Effects of IFRS Adoption and IFRS Convergence on Financial Statement Comparability"

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Based on my discussion at the 2016 *Contemporary Accounting Research* conference. I thank Mike Welker for the opportunity to discuss the manuscript, and Spencer Anderson and Leslie Hodder for their extremely valuable input. Professor Hopkins thanks the Kelley School of Business and SungKyunKwan University for financial support.

Abstract

Lin, Riccardi and Wang (2016) attempt to investigate a single enhancing qualitative characteristic of financial reporting, comparability, to the exclusion of other fundamental (i.e., relevance, faithful representation) and enhancing (i.e., timeliness, understandability, verifiability) qualitative characteristics. I discuss their study in the context of the International Accounting Standards Board's Conceptual Framework, describe their research design, provide reasons why their comparability proxy likely suffers from low internal validity, and offer suggestions for ways in which comparability-focused research can provide meaningful inferences.

1. Introduction

Lin, Riccardi and Wang (2016) (hereafter LRW) exploit the mandated adoption of International Financial Reporting Standards (IFRS) in Germany, in 2005, as a setting for a quasi-experimental, cross-sectional, archival investigation of the relative effects on financial statement comparability of (1) a "single-shot" adoption of IFRS in Germany where some firms were previously using United States (U.S.) generally accepted accounting principles (GAAP) versus (2) the incremental convergence between GAAP and IFRS that was coincidentally occurring in the U.S.. To measure *adoption* effects, LRW identify 47 publicly traded German firms that switched from U.S. GAAP to IFRS in 2005 ("German U.S. GAAP firms") and match them (i.e., based on 2004's two-digit SIC code) with German firms that applied IFRS throughout the 2002-2010 sample period ("German IFRS firms"). To measure *convergence* effects, LRW take the previously identified German IFRS firms and match them to publicly traded U.S. domestic firms that applied U.S. GAAP throughout the 2002-2010 sample period (i.e., "U.S. GAAP firms").

For each of these two sets of pairwise matched firms, LRW compute three different pairwise proxies for financial reporting comparability: *COMP1*, an earnings-on-returns-regression-type proxy popularized by DeFranco, Kothari and Verdi (2011); *COMP2*, a returns-on-earnings-regression-type proxy proposed by Barth, Landsman, Lang and Williams (2012); and *COMP3*, an accruals-on-cash-flows-regression-type proxy used by Cascino and Gassen (2015). For each of these comparability measures, LRW pool 2002-2010 data for the 47 firms, and use the now-ubiquitous difference-in-differences design to measure the effects of a sudden, structural shift from U.S. GAAP to IFRS (i.e., the *COMP* measures for the pairs of German U.S. GAAP firms and German IFRS firms) versus the incremental convergence between U.S. GAAP and IFRS (i.e., the *COMP* measures for the pairs of German IFRS firms and U.S. firms). LRW

interpret their results as suggesting that both adoption and convergence were associated with an increasing trend in each of the *COMP* measures during the 2002 through 2010 time period; however, these slopes (mostly) were not statistically different between the pre-2005 and the post-2005 time period, suggesting that adoption and convergence were associated with similar trends in comparability (i.e., there was no statistically reliable difference in the differences).

This discussion is based on the remarks I made during the 2016 *Contemporary Accounting Research* Conference at the University of Waterloo, and proceeds as follows: First, given the International Accounting Standards Board's (IASB's) sponsorship of part of the 2016 conference, I describe where the enhancing qualitative characteristic, comparability, fits into the overall IASB Conceptual Framework.[1] Next, I provide a high-level discussion of the paper's research design, with an eye toward evaluating construct validity across comparability-related research studies. Finally, I make suggestions for improving comparability-related inferences in future research studies.

2. Comparability in the Conceptual Framework

The Conceptual Framework is a nonbinding aspirational statement that describes the objectives, characteristics and structural details that should be embodied in general purpose financial statements prepared for external users. As an aspirational statement, the Conceptual Framework is primarily intended to guide standard-setting-related choices made by accounting standards setters. In addition, when accounting standards do not yield unambiguous accounting treatments for transactions and events, the Conceptual Framework is part of the third level of the accounting hierarchy and is supposed to guide the applications of accounting standards by

[1] For the remainder of this discussion, all references to the "Conceptual Framework" relates to the IASB's version.

preparers, the evaluation by auditors of those applications, and the interpretation of financial statements by users (IASB 2010).[2] Thus, the evaluation of actual financial reporting outcomes in the context of the Conceptual Framework is a worthwhile research goal and should be informative to the IASB and other standards setting bodies.

As noted in the Conceptual Framework, "[t]he objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity" (IASB 2010, par. OB2). The IASB decided that useful financial reporting information should have two "fundamental qualitative characteristics:" relevance and faithful representation. Relevance is defined as the ability of financial information to make a difference in the decisions of financial statement users (IASB 2010, par. QC6), and includes the ability of financial information to assist in financial prediction and in feedback or reflection. Faithful representation is a state that is achieved when financial information is complete, neutral and free from error (IASB 2010, par. QC12). Conceptually, the two fundamental qualitative characteristics are independent; that is, in theory, a relevant piece of financial information could be depicted in an incomplete, biased and error-prone manner while the converse could also be true. Decision-useful financial information will maximize the joint product of relevance and faithful representation, and does not favor one fundamental qualitative characteristic over the other (IASB 2010, par. QC17).

Comparability, verifiability, timeliness and understandability are "enhancing qualitative characteristics," and are only considered after relevance and faithful representation are jointly maximized (IASB 2010, par. QC19). None of the enhancing qualitative characteristics takes

[2] In contrast, the FASB's Conceptual Framework is not part of the GAAP hierarchy.

priority over the others and the emphasis of one or the other can be contextual (e.g., upon adoption of a new accounting standard, comparability may be initially diminished, but then enhanced in later periods).

The focus of LRW is comparability, defined by the IASB as "…the qualitative characteristic that enables users to identify and understand similarities in, and differences among, items" (IASB 2010, par. QC21). Comparability is different from uniformity because comparability means "…like things must look alike and different things must look different" (IASB 2010, QC23). The IASB also notes that while relevant economic phenomena can be faithfully represented in many ways, allowing "…alternative accounting methods for the same economic phenomenon diminishes comparability" (IASB 2010, QC25). Finally, the IASB notes that non-comparable financial reporting can be partially remedied through appropriate disclosure (IASB 2010, par. QC34).

The compensatory relation between non-comparable reporting and disclosure can be illustrated via lessee accounting under International Accounting Standard (IAS) 17, which requires capitalization and balance sheet recognition of implicit assets and liabilities for financing leases but, for operating leases, requires off-balance-sheet treatment and expense recognition for the lease payments.[3] This accounting results in non-comparable balance sheets and income statements for lessees because it takes similar obligations for future lease payments, and treats one as an on-balance-sheet liability (i.e., with periodic interest charges run through the performance statement) and the other as an unrecognized contingency that generates performance-statement recognition of the lease payments. However, IAS 17 also requires

[3] International Financial Reporting Standard (IFRS) 16 will supersede IAS 17, is effective for annual reporting periods beginning after January 1, 2019, and generally requires lessees to apply financing-lease treatment to most leases (i.e., except for leases of less than 12 months and leases for low-value assets). This treatment should result in increased comparability for lease obligations.

companies to disclose minimum future lease payments for operating leases, and this information can be used to compute implicit lease obligations by financial statement users. Bratten, Choudhary and Schipper (2013) investigate a similar capitalize-versus-expense, lessee-accounting regime in the U.S., and find that investors equally impound into cost of capital firms' off-balance-sheet "as if" computed operating lease obligations and firms' recognized capital lease obligations. Their findings suggest that, under certain conditions (e.g., when disclosures are salient, are not based on management estimates, and allow basic techniques for imputing as-if recognized amounts), disclosure can mitigate the deleterious effects of non-comparable reporting.

This discussion of the Conceptual Framework has three important implications for the interpretation of LRW. First, comparability is one of four second-order characteristics that can influence the usefulness of financial accounting information after the joint and primary characteristics of relevance and faithful representation are maximized. If, for example, an accounting standard is issued that changes from a single, less-relevant accounting treatment (i.e., accounting is bad, but comparable) to a single, more-relevant accounting treatment (i.e., accounting is better, and still comparable), then the decision usefulness of accounting information will increase without any of that improvement in decision usefulness coming from changes in comparability. Second, the decision usefulness of financial reporting can be improved without improving comparability if the IASB issues standards that provide enhanced disclosures that allow financial statement users to "work around" the incomparability. Third, all six of the fundamental and enhancing qualitative characteristics influence the decision usefulness of accounting information. Therefore, researchers interested in investigating individual qualitative characteristics must be careful that their operationalized proxies capture the qualitative

characteristic of interest, to the exclusion of the other five (i.e., construct validity is sufficiently high). I focus on construct validity in the next section.

3. Thoughts on construct validity

Figure 1 provides a stylized representation of LRW's research design.[4] The top two boxes (i.e., linked by arrow #1) represent the unobservable constructs that the study intends to investigate, and captures an unambiguously causal relationship between the constructs. These boxes should be based on theory, which is then used to develop the study's hypotheses. The bottom three boxes represent the things the researchers actually did in the study. The left two boxes on the bottom of Figure 1 (i.e., linked by arrow #4) represent the primary operationalization that tests the theoretical constructs in the top row. The bottom right-most box is extremely important in archival settings because typical archival research designs do not allow for randomization of subjects (e.g., firms) to quasi-experimental treatment. Arrows # 2 and #3 capture elements of construct validity and external validity, while arrows #4 and #5 capture elements of internal validity and statistical conclusion validity.

Insert Figure 1 about here.

Because they have implications for studies beyond LRW, I focus my research-design-related remarks on construct validity.[5] A necessary condition for an observed proxy to possess

[4] Figure 1 illustrates the Predictive Validity Framework proposed by Runkel & McGrath (1972, 160), and introduced to the accounting literature by Bob Libby in his discussion of an article by Bob Ashton (Libby 1976, 19) and in his seminal monograph (Libby 1981, 11).

[5] The issues in LRW related to internal validity and statistical conclusion validity are fairly standard (e.g., self-selection) and should be obvious to most readers.

high levels of construct validity is for that proxy to covary with the construct of interest and to be orthogonal with all other potential constructs. In Figure 1, the correspondence represented by arrow #2 reflects the paper's claim that splitting the world into pre-2005 and post 2005 categories is a sufficiently good proxy to capture the nature of change in accounting principles (i.e., mandated versus converged) in Germany. In addition, implicit in this operationalization is a second claim: that the pre-post-2005 split is sufficiently diagnostic that it captures only the causal agent in mandated versus converged changes in accounting principles, to the exclusion of all other potential influential factors. This as a rather bold assumption given the complexity of economies, cultures and societies.

By using a fixed date as the operational treatment in the study, LRW run the risk of spurious correlation with other constructs (i.e., it has low construct validity). For example, using other events occurring in 2005, the results of the study are sufficient for us to conclude that the association between earnings and returns was influenced by Angela Merkel's election to the German Chancellorship, Hurricane Katrina's devastation of the Gulf coast of the United States and the death of Pope John Paul II. While this conclusion might seem absurd, these events do all share the same statistical association with the year 2005 as the mandated German switch to IFRS.

Close inspection of the trends illustrated in Figure 1 of LRW indicate that something definitely happened 2003-2006 time period. However, this pattern does not make sense when one considers the nature of sudden change versus gradual convergence. If we focus on the pattern of *COMP1* means (i.e., the upper left graph), we notice that the average level of comparability for the adopted and converged pairs of firms were identical in 2006. Does this suggest that the mandated adoption of IFRS in Germany (or, the election of Angela Merkel as German Chancellor) in 2005 caused U.S. GAAP to become converged with IFRS? Does this

make sense given the different underlying processes of adoption versus convergence? This pattern causes me to infer that something else is going on during this time period, and whatever it is appears to be highly correlated with the year 2005 (and everything that happened in that year). I believe we would learn much more about standard setting institutions if we took the time and effort to exactly define what is embodied in those institutions. With respect to LRW, this means instead of relying on a coarse, fixed-date proxy for the treatment, we would learn much more if we attempted to design proxies that capture the complex dimensions of the actual treatment (i.e., in this case, the key features of mandated shifts in standards versus convergence).

Next, I consider the construct validity of the relation represented by arrow #3 in Figure 1; specifically, do the comparability proxies (i.e., *COMP1*, *COMP2*, and *COMP3*) capture the IFRS's concept of comparability to the exclusion of other qualitative characteristics and to the exclusion of other correlated, omitted factors? Because of space limitations, I will constrain my remarks to *COMP1* because it is based on the most common comparability proxy in the extant literature; however, the spirit of these remarks also apply to *COMP2* and *COMP3*.

COMP1 is derived from an output-based measure of interfirm earnings-return similarity proposed in De Franco, Kothari and Verdi (2011). De Franco et al.'s (2011) proxy is based on the following theoretical relation between financial statements and the economic events and transactions affecting firm *i*:

$$\textit{Financial Statements}_i = f_i\,(\textit{Economic Events}_i) \qquad (1)$$

Who can argue with equation 1? The function, $f(\bullet)$, translates the real underlying economic events (i.e., including transactions) of the firm into financial statements through a set

of accounting processes and procedures. If the accounting between two firms is comparable, then, given a set of identical economic events, one should observe identical financial statements. Of course, the trick here is in the definitions of financial statements and economic events. Consistent with De Franco et al. (2011), LRW proxy for the entire package of financial statements and related note disclosures using $NI_{i,t}/P_{i,t-1}$ (i.e., the inverse of the Price-Earnings ratio) and the entire set of economic events and transactions that affect the firm using $(P_{i,t} - P_{i,t-1})/P_{i,t-1}$ (i.e., contemporaneous returns), resulting in the following relation:

$$NI_{i,t}/P_{i,t-1} = \alpha + \beta\,[(P_{i,t} - P_{i,t-1})/P_{i,t-1}] + \varepsilon \qquad (2)$$

To construct *COMP1*, LRW include two estimations for the $\hat{\alpha}$ and $\hat{\beta}$ parameters from running, separately for each firm in the pair, regressions based on equation 2: pre-adoption (2002-2004) and post-adoption (2006-2010). The parameters are used to generate the expected level of NI/P (based on the actual returns) in each reporting period for each of the firms in the pair. For each period for each pair of firms, these expected levels of NI/P are differenced, the absolute value for each is computed, and then are averaged. Because LRW use semiannual earnings data, in the pre (post) period, each pair of firms generates 6 (10) within-sample *COMP1* observations based on the identical $\hat{\alpha}$ and $\hat{\beta}$ parameters, for a total of 16 observations across the entire panel.[6]

[6] Although further in the weeds than I'd like to go with this discussion, I do have the following specification concerns with LRW's operationalization of *COMP1*: (1) differences in volatility of pre and post returns will mechanically generate differences in pre and post *COMP1* values, (2) all computed *E*/*P* values (and related differences) are incorporated into the *COMP1* proxy as if they are measured without error, and (3) all computed *E*/*P* values (and related differences) are incorporated into the *COMP1* proxy as if they are independent.

The pairwise nature of *COMP1* is the basis for using it as a proxy for comparability (i.e., comparability implicitly requires at least two firms). However, from a construct validity perspective, the more-important attribute is that *COMP1* is based on the earnings-returns relation summarized in equation 2. Regardless of direction (i.e., *Returns* = *f*(*Earnings*) or *Earnings* = *f*(*Returns*)), this relation has likely been the subject of more empirical estimation and investigation than any other set of accounting and market outputs. For example, variations on this relation are the basis for Ball and Brown (1968), the vast literature on earnings response coefficients (e.g., Collins and Kothari 1989), common proxies for accounting conservatism (e.g., Basu 1997), and, since 2011, proxies for financial reporting comparability. The fact that this relation has been used in so many settings is either testament to its versatility, or an indication of its overuse. In the context of comparability, we would benefit from a bit more thought on the economic and financial reporting characteristics captured by the earnings-returns relation.

One aspect of the earnings-returns relation that is ignored by LRW, De Franco et al. (2011) and others is the low proportion of contemporaneous-returns-based economic information that is captured by earnings. For example, De Franco et al. (2011) report a median R^2 = 7 percent and Basu (1997) reports 10 percent R^2 when a negative-return indicator variable is interacted with returns. Other studies have suggested that the low explanatory power is an artifact of the low timeliness of when economic information makes its way through accrual accounting systems into earnings. For example, Ryan and Zarowin (2003) find that a regression of contemporaneous earnings on returns has a 5 percent R^2, but that a regression also including three lagged periods of returns triples the R^2 to 16 percent. This result suggests that the timeliness (i.e., another enhancing qualitative characteristic) of accounting treatments can affect the earnings-returns relation. Further, hypothetically, if different standard setters (e.g., IASB and FASB) issue

standards that result in different accounting treatments but that both improve timeliness, then the earnings-returns relation would change and the pairwise correlation between industry-matched firms in the two regimes would improve; however, comparability would be low.

The potential issues with *COMP1*'s construct validity extend beyond the equivocal outcomes of improved comparability and improved timeliness. As their primary goal, the FASB and the IASB are supposed to promulgate standards that increased relevance and faithful representation. Holding comparability constant, would one expect that more relevant information to have an impact on the earnings-returns relation and the co-movement of that relation between firms? What about enhancements in the understandability (i.e., another enhancing qualitative characteristic) of reported information? The single most important question that must be answered when considering LRW's research design is, why, given the two primary qualitative characteristics and the four equally important enhancing characteristics, does a pairwise statistical proxy based on the earnings-returns relation best exemplify comparability in isolation when one would expect other qualitative characteristics to also affect the earnings-returns relation? Ultimately, a satisfactory answer to this question is necessary for accounting researchers and standard setters to consider the results of LRW in making meaningful inferences about financial reporting comparability. In the next section, I provide suggestions for how accounting research can provide useful insights related to financial reporting comparability.

4. Suggestions for comparability-themed research

During the last half century, archival accounting research has placed tremendous pressure on earnings—a highly aggregated, ill-defined summary statistic—to reveal subtle attributes

about financial reporting and capital markets institutions.[7] LRW continues this practice by using pairwise correlations between earnings and returns to study an important, but second-order, attribute of financial reporting: comparability. While I admire LRW's attempt, I am not convinced the manuscript provides us with any better understanding of the effects on comparability of adoption versus convergence. If we wish to make real progress in understanding financial reporting comparability, then we should think hard about how comparability effects would be manifest in the complete financial reporting package.

Ultimately, comparability is an attribute of the total set of information included in general purpose financial statements, including both the content and its form. The Conceptual Framework includes at least four areas that determine the content and form of general purpose financial statements:

- Recognition: Does a particular transaction, event or condition suggest an item satisfies the definition of a financial statement element (e.g., liability versus disclosed contingency)?
- Measurement: Conditional on recognizing a financial statement element, how should firms measure the financial statement element (cost accumulation versus fair value)?
- Presentation: Conditional on recognizing a financial statement element, how should firms present the element (e.g., in earnings or comprehensive income)?

[7] Earnings (i.e., net income) is not defined in the Conceptual Framework. The IASB states that "[p]rofit or loss, total OCI and total comprehensive income are not elements of financial statements. They are subtotals or totals derived by summing items of income or expense" (IASB 2013, par. 2.13). Although the FASB's Conceptual Framework includes comprehensive income as an element, it does not define earnings. Thus, under both Conceptual Frameworks, earnings is the aggregation and netting of those things identified as revenues, expenses, gains and losses.

- Disclosure: Given non-comparable recognition, measurement or presentation, can standard setters provide other information that mitigates the non-comparability (e.g., supplemental disclosure for operating leases)?

The first three of these concepts—recognition, measurement and presentation—are attributes of the primary financial statements, and are the source of what one might define as financial statement comparability. The fourth concept—disclosure—is outside the three primary financial statements, and is a way for standard-setters to mitigate problems with non-comparable primary financial statements.

Given that comparability is multi-dimensional attribute of financial reporting, then an individual interested in understanding comparability would be well-served to consider the exact source of comparability. In the context of the LRW, what are the adopted and/or converged standards during 2002 through 2010 that caused changes in recognition, presentation or measurement? Did these changes affect the timing of when specific components of earnings were recognized? Did these changes affect the way earnings was measured? Was the salience of earnings and its components affected by changes in presentation? How would those changes be manifest in COMP? Alternatively, if these attributes remained static, did changes in accounting disclosure result in changes in the earnings-returns relation and in COMP?

If we extend beyond the proxies included in LRW, our understanding of the determinants of comparability will be enhanced if we explicitly make states of, and changes in, recognition, measurement, presentation and disclosure the subjects of our investigations. By isolating and separately investigating each of these features of accounting standards, we can greatly increase the power of our tests and provide inferences that have a higher likelihood of providing useful information to accounting researchers and standard setters. Can we leverage newer text-scraping

technologies to identify and catalog the sources of changes in comparability (e.g., specific accounting standards) and the reporting outcomes of those changes? Can we identify specific financial statement line items (e.g., revenues) that should be affected? We can do much more in attempting to isolate comparability to the exclusion of other financial reporting attributes (e.g., timeliness), and these efforts would do well to rely less on the earnings-returns relation.

Finally, the comparability-related studies can be greatly improved if researchers attempt to explicitly investigate the attributes that separate accounting comparability from uniformity: "…like things must look alike and different things must look different" (QC23). Implicitly, by operationalizing comparability-related proxies based on the pricing of earnings across pairs of companies, extant research has primary focused on the characteristics of earnings that cause like things to look alike. Alternatively, one could also argue that these studies investigate settings in which accounting is more uniform. Accounting standard setters and researchers would benefit from studies that explicitly consider cases in which "different things are supposed to look different" (e.g., Anderson 2017, Yip and Young 2013).

5. Conclusion

LRW exploit the mandated adoption, in 2005, of IFRS in Germany to investigate the relative effects on financial statement comparability of all-at-once adoption versus the incremental convergence between GAAP and IFRS that was coincidentally occurring in the U.S. In this discussion, I attempt to place into the context of the entire conceptual framework comparability as one of four enhancing qualitative characteristics that are secondary to the fundamental qualitative characteristics, relevance and representational faithfulness. Next, I discuss the construct validity of LRW's treatment and outcome proxies, and describe how the

former is equivocal to many other events that occurred in 2005 and that the latter likely does not have sufficiently high discriminant validity to meaningfully differentiate it from other qualitative characteristics, like relevance, timeliness or understandability. Thus, any inferences about comparability are tenuous, at best. I conclude this discussion with suggestions for ways to improve the empirical study of comparability.

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Figure 1 LRW's Research Design