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Katherine Schipper

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## Implications of Accounting Research for Financial Reporting Standard Setting

by  
**Katherine Schipper (1)**  
**Financial Accounting Standards Board**  
**March 13, 2002**

[Introductory note: Katherine Schipper, PhD, was appointed to the Financial Accounting Standards Board (FASB) in September 2001. Prior to joining the FASB, she was the L. Palmer Fox Professor of Business Administration at Duke University's Fuqua School of Business. Before that, she was the Eli B. and Harriet B. Williams Professor of Accounting and director of the Institute of Professional Accounting at the University of Chicago Business School.

Ms. Schipper has published research papers on a range of accounting subjects and has been the recipient of several grants and awards, including the American Accounting Association's Outstanding Educator. She has served the American Accounting Association as president and as director of research. She was a member of the FASB's Financial Accounting Standards Advisory Council (FASAC) from 1996 to 1999.

Ms. Schipper holds a BA from the University of Dayton, and MBA, MA and PhD degrees from the University of Chicago.

(1) The views expressed in this presentation are my own and do not represent the views of the Financial Accounting Standards Board. Positions of the Financial Accounting Standards Board are arrived at only after extensive due process and deliberations.

### 1. Introduction and background

I am honored to be here this evening to make this presentation on the implications of accounting research for financial reporting standard setting, as part of the Emanuel Saxe Lecture Series. This lecture series honors Emanuel Saxe, who served Baruch College for many years as professor, department chair, University Distinguished Professor and dean. In preparation for this presentation, I researched the Emanuel Saxe Lectures, and learned that their purpose is to provide discussions of topics of critical interest to the study and practice of accounting. This is an expansive purpose, and as you can imagine, past presenters have covered a wide variety of issues. There have been presentations on taxation, auditing, fair value accounting, inflation, litigation, and regulation.

Most pertinent to my topic this evening, there have also been some presentations on accounting research, specifically the value of accounting research and its relation to financial reporting standards. Three presentations explicitly considered whether accounting research is of any practical value, or, more specifically, whether accounting research is of any value to financial reporting standard setting. In 1979 George Sorter spoke with despair about the inanity of accounting research and its utter uselessness for any practical purpose, let alone its implications for standard setting. In 1982, Robert Jensen described and deplored the increasing gap between academic and practitioner research in accounting and expressed dismay over the shoddiness of academic research in general. In 1983 Ross Watts described the evolution of empirical research in accounting, with significant emphasis on his views

about political costs and contracting costs. My topic is related to these three presentations in that I will consider what are the standard setting inferences that can be drawn from accounting research.

## 1.1 Previous Emanuel Saxe Lectures on accounting standards and regulation

Shifting now from accounting research to accounting standards and the standard setting process, I note that several previous Emanuel Saxe Lectures have focused on accounting standards and regulation, with implications for issues facing us today. Some of these presentations have taken strong positions. For example, in 1974 George Benston argued the case against required financial reporting and disclosure, and against government regulation of securities markets. He argued that various market forces should be permitted to operate to produce the levels of financial disclosure desired by market participants. In 1978 the Emanuel Saxe presentation featured Abraham Briloff and Robert Anthony debating both what should be the characteristics and mandate of a standard setting organization and what should be the nature of financial reporting standards. One important element of the context of this debate was the hearings, led by then-Senator Metcalf, about the proper role of government regulation in accounting, including regulation of the accounting profession and financial reporting standard setting. This, of course, is a debate that has resurfaced in 2002.

In 1979, William Baxter discussed the historical evolution of accounting standards, which he says were almost unknown before World War II. In his description of standards, which I emphasize dates from 1979, he says:

"Now [the financial reporting standards] dominate the accountant's work. They already fill volumes; and fresh ones keep pouring forth with no sign of the stream drying up. They are to be found in many lands; and national standards are being topped up with ... international standards."

I expect that had I not told you the date, you might have thought the description of voluminous reporting standards that dominate the work of accounting came from a very recent presentation.

In 1996, Robert Swieringa used this presentation to describe the 37 standards he had helped shape in his 10.5 years as a Board member at the FASB. Despite his background as an accounting professor, Mr. Swieringa did not refer to academic research at all in his presentation, although he did mention something I will also discuss: the increasing use of estimates in financial reporting.

Finally, Donald Kirk presented the 35th Emanuel Saxe Lecture in 1984, when he was chairman of the FASB. His presentation concerned expectations about professionalism in financial reporting, standard setting, and public accounting. He spoke in 1984 about a recent meeting of the FASB's Financial Accounting Standards Advisory Council [FASAC] in which a major topic of discussion was "what some observers see as a tendency to bypass the intent of accounting standards." He listed four questions discussed at the FASAC meeting; summaries of three of those four questions follow:

1. Do preparers seek innovative transactions or interpretations that are designed to observe the 'letter' of an accounting standard but not its 'spirit' -- and to what extent does this bring them into a matching of wits with auditors?
2. Does heightened competition among CPA firms encourage a search for ways around the spirit of accounting standards?
3. How does the professionalism issue relate to the question of specific versus broad standards?

Mr. Kirk also pointed to several recent events-recent as of 1984 -- including: a re-examination by the American Institute of Certified Public Accountants [AICPA] of its self-regulation, criticism of the FASB for creating too many standards, criticism of the FASB for not providing more timely guidance,

SEC concerns about the quality of financial reporting, and Congressional concerns about the adequacy of the SEC's oversight of standard setting.

One important element of Mr. Kirk's presentation-in 1984-was a discussion of criticisms that the FASB creates "too many standards, the standards are too detailed, complex and inflexible." In speaking of the basis for this criticism, and of what I will call the demand for detail and the FASB's response to such demands, he quoted from two comment letters from the same organization, written about 18 months apart, on two distinct issues. The 1983 comment letter quoted by Mr. Kirk advocated broad principles-based standards. The 1984 comment letter, from the same organization, advocated detailed implementation guidance. Mr. Kirk also quoted from a 1974 communication to the FASB from the president of the AICPA, speaking of "the need to deal swiftly with the relatively narrow accounting and reporting problems that are frequently encountered in daily practice.... It was the consensus of the [AICPA] Board ... that the FASB should be strongly urged to take whatever steps might be necessary to provide timely guidance to practitioners on emerging problems."

I think these examples make it clear that concerns about accounting research and the standard setting process, sometimes considered separately and sometimes considered together, have figured prominently in this series of presentations since 1973. There have been recurring debates about the legitimacy of the FASB, about private sector standard setting, about the desirability of broad principles-based standards versus detailed rules-based standards, and about the proper role-if there is a role-of accounting research in the standard setting process.

## 1.2 Summary of this Emanuel Saxe Lecture

My contribution to this series of discussions is to present my views about where and how various types of accounting research can inform the standard-setting process, and about the limitations on what can be inferred, for standard-setting purposes, from research. I want to begin with an overview of what I will talk about and describe the perspective that I will be taking in this presentation. By way of background, I'll give a few examples of the kinds of decisions that a standard setter (the FASB) makes. Having laid that groundwork, I'll review the framework that is to be used by the FASB to make standard-setting decisions, namely the Conceptual Framework, as laid out in the Statements of Financial Accounting Concepts.

The main part of my presentation will address a single issue, in various ways, and from various distinct perspectives. That issue can be stated at least two ways :

1. Viewing standard setting from the perspective of accounting research, do accounting researchers use the Conceptual Framework to identify research questions and to choose research designs? Do research results provide *any* insights that can help the Board apply the Conceptual Framework to standard-setting issues? If researchers can provide some insights, what are the limits?
2. Viewing accounting research from the perspective of the FASB, why doesn't the Board seem to pay much attention to the results of accounting research? Is this appearance of inattention to research just that, an appearance, while the reality is the FASB in fact pays substantial attention to research? Are the insights that can be gleaned by standard setters from research so limited that attempting to apply research to standard-setting issues is just not worth the effort?

In order to address this issue, I'll describe the kinds of questions research can and does answer and calibrate both those questions and the answers provided by accounting research against the issues faced by the FASB. In doing so, I hope to focus on both the kinds of insights that can be derived from research and the limitations of those insights.

## 2. Standard-setting decisions

Speaking now to the kinds of decisions a standard setter (the FASB) makes, at one extreme are relatively broad issues that may involve not only developing a new standard but also revisiting and extending concepts.

## 2.1 Accounting for liabilities and equities

One example of such a broad issue is the accounting for liabilities and equities. The FASB issued an Exposure Draft of a standard and of a proposed amendment to Concepts Statement 6, in October 2000. Comment letters have been received, there has been a roundtable discussion, and redeliberations are proceeding.

The proposed amendment to Concepts Statement 6 involves changing the accounting definition of liability. The current liability definition refers to an obligation to transfer assets or provide services. Both practice and the Emerging Issues Task Force (EITF) have treated as equity all obligations that can be settled in shares-whether fixed in number of shares or fixed in dollar value of shares. (2)

The proposed amendment to Concepts Statement 6 would have the effect of characterizing as liabilities arrangements in which an obligation is to be settled by transferring a fixed dollar value of shares. The reasoning is as follows: if obligations that can or must be settled in shares establish a relationship that is not an *owner* relationship, then the instrument that establishes the relationship is a liability. The amendment goes on to explain the attributes of an owner relationship-mainly that the value of whatever is conveyed goes up and down with share values. If the amendment is adopted, then the scope of liabilities will have increased to include certain types of obligations that are settled in shares-a major shift in thinking.

This conceptual issue has broad implications, in that the concepts of assets and liabilities are the building blocks of the other reporting elements, for example, revenues and expenses. That is, the definitions of revenues and expenses are based on the definitions of assets and liabilities-it's not possible to have either revenue or expense without a change in either or both assets and liabilities. Therefore, when the definition of liability is changed, to encompass more kinds of share-settled obligations, it is possible that other changes in accounting practice will follow.

In addition to the conceptual issue just discussed, the liabilities and equities project also contains a broad standard-setting issue, namely, accounting for single instruments, or single arrangements, with two or more heterogeneous components. The specific issue addressed in the exposure draft on liabilities and equities is how best to represent and measure financial instruments that are compound, in the sense that they have characteristics of both liabilities and equities.

Examples of such compound instruments include (but are not limited to) convertible debt, which contains both debt components and equity components. The issue of accounting for convertible debt dates back at least to Accounting Principles Board [APB] Opinion 14, issued in 1969. The Discussion section of APB Opinion 14 lays out the case for and against separate accounting recognition of the debt and equity components of convertible debt, and concludes that separate recognition for the conversion feature in convertible debt will not be permitted. One key element of Opinion 14 [paragraph 8] is that separate reporting of the debt and equity components presents intractable measurement problems.

Interestingly, the dissent to Opinion 14 lays out many of the same arguments that support the separate reporting approach proposed in the FASB's October 2000 exposure draft.(3) The words used in the dissent are that the failure to provide for separate recognition of components belies economic reality. Today, using language from the FASB's Conceptual Framework, I would say that the failure to recognize separate debt and equity components impairs representational faithfulness. In the interests of representational faithfulness, the proposed approach in the exposure draft *would* require separate recognition of components of compound instruments.

I use this example to illustrate a broad and pervasive reporting issue, one that was addressed over 30 years ago by the APB and is now being revisited by the FASB, armed with the tools of the Conceptual Framework and advances in measurement techniques. Those measurement techniques, which include several versions of option pricing models, are derived from academic research.

## 2.2 Accounting for revenues and related liabilities

A second example of a broad issue facing the FASB is accounting for revenues and related liabilities. Although revenues are for most business enterprises the largest single item in the income statement, there is no general financial reporting standard on revenue recognition in U.S. Generally Accepted Accounting Principles [GAAP]. What guidance does exist takes one of two forms. The first form is various industry-specific or transaction-specific pieces of authoritative guidance, which tends to be detailed and narrow. The SEC's Staff Accounting Bulletin [SAB]101, which builds on Accounting Standards Executive Committee [AcSEC] Statement of Position [SOP] 97-2, *Software Revenue Recognition*, provides an example of this type of guidance. Specifically, SAB 101 provides guidance which generalizes from an industry-specific approach and considers a number of narrow facts-and-circumstances reporting situations.

The second form of guidance on revenue recognition appears in the FASB's Conceptual Framework. In addition to ignoring the practical details of actual transactions, this guidance also presents a conceptual issue. Specifically, Concepts Statement 6 defines revenues in terms of changes in assets and liabilities, consistent with the overall Conceptual Framework approach which considers assets and liabilities fundamental. But Concepts Statement 5 adds additional revenue recognition criteria which do not necessarily conform with the assets and liabilities based definitions. For example, Concepts Statement 5 adds the *earned* criterion which requires that the entity must have "substantially accomplished" what it is required to do in order to be entitled to benefits in the form of revenues. This criterion has in some cases given rise to conflicts with the definition of a liability, with the result that recognition criteria tied to the concept of "earnings process" override the liability concept and the enterprise records a deferred revenue account that does not meet the definition of a liability.

The broad issues facing the FASB here are: should Concepts Statements 5 and 6 [SFAC 5 and SFAC 6] be revised to be internally consistent, and if so, how? What should be the principles that govern revenue recognition? These issues touch the definitions of both revenues and liabilities and may even require reconsideration of other concepts and definitions.(4)

## 2.3 Examples of relatively narrow standard-setting issues

Moving now away from examples of broad issues, at the other end of the spectrum are relatively narrow issues--some of which may have broad implications. The FASB and the Emerging Issues Task Force [EITF] are presented with dozens of such issues. I will illustrate this point with two examples. The first example pertains to accounting procedures in purchase business combinations and the second example pertains to loan commitments.

As part of the FASB's project on purchase business combinations procedures, the Board has adopted the principle of measuring assets and liabilities acquired in a business combination at their fair values.(5) This principle sounds straightforward, until we encounter contingent liabilities of the acquired entity which are not measured at fair value under Statement of Financial Accounting Standards 5 [SFAS 5]. If we apply fair value measurements to contingent liabilities of the acquired entity at the acquisition date, what should be the subsequent accounting? Should we revert to SFAS 5 accounting after initial recognition and measurement? What about the measurement inconsistency between *acquired* contingent liabilities -- to be initially measured at fair value -- and *existing* contingent liabilities of the acquirer, which are recognized and measured under SFAS 5?

On the one hand, this issue may be seen as narrow, pertaining only to procedures to be followed in the accounting for business combinations. On the other hand, the issue has broad implications, because it illustrates the conflict between SFAS 5 and Concepts Statement 7. In light of the commitment on the part of at least some Board members to moving toward fair value measurements, I predict that the conflict will often be resolved in favor of fair value measurements, with the implication that pressure will build for a reconsideration of SFAS 5.

A second example of a narrow issue is the accounting for loan commitments, which are agreements by financial institutions to make loans of various types, ranging from home mortgages to commercial paper backups. SFAS 65 and SFAS 91 require a cost-type approach in which, roughly speaking, loan commitments are recorded in terms of the fees received, and income is recognized either when the commitment expires or over the life of the loan. However, some loan commitments seem to meet the definition of a derivative, for which the accounting in SFAS 133 requires a fair value measurement. For loan commitments which are derivatives, the issue represents a conflict in the literature-which measurement approach should be followed for loan commitments? More broadly, for loan commitments which are not derivatives, is the cost-based measurement approach in SFAS 65 and SFAS 91 representationally faithful? This issue is narrow in the sense that only a few kinds of business enterprises make loan commitments. It has potentially broad implications because of the FASB's commitment to move toward a fair value measurement approach for all financial instruments.

### **3.0 Applying accounting research to the Conceptual Framework**

Across the spectrum of issues on the FASB's agenda, the decisions of the Board and staff of the FASB are guided by the Conceptual Framework, whose overarching concept is *decision usefulness*, supported by relevance, reliability and comparability.<sup>(6)</sup> Relevance in turn has as subcomponents such concepts as timeliness, feedback value, and predictive value. Reliability's subcomponents include neutrality, verifiability, and measurement uncertainty.

With those concepts in mind, I will now turn to where and how accounting research does and does not provide insights that can or should help the FASB in applying the Conceptual Framework to standard setting issues. The Conceptual Framework of course contains many elements. To illustrate how accounting research does and does not provide insights to standard setting decisions, however, it will suffice to consider just three: neutrality, measurement uncertainty, and decision usefulness.

#### **3.1 Accounting research and neutrality**

Neutrality is discussed in Concepts Statement 2, paragraphs 98-110. One way of describing neutral accounting information is in terms of faithfulness to the underlying economic activity, without regard to any particular interest, and without shading or coloring presentation for the purpose of influencing behavior in some particular direction [last four words emphasized in paragraph 100 of Concepts Statement 2]. Neutrality thus relates to the absence of bias; if a financial reporting standard contains a bias that is intended to induce (or discourage) some particular behavior, then the standard is not neutral.<sup>(7)</sup>

Arguments based directly or indirectly on an alleged lack of neutrality seem to me to be the basis for claims that some proposed reporting standard will inappropriately discourage some allegedly desirable activity.<sup>(8)</sup> Such claims have from time to time led to well publicized disputes about the appropriateness of a given standard, as, for example, in the FASB's proposal to eliminate the full cost method of accounting for exploratory oil and gas operations. Should research attempt to provide insights on neutrality? How successful are such attempts likely to be?

Clearly, if neutrality is an element of the Conceptual Framework, it would be helpful to standard setters to know the neutrality (or lack of neutrality) characteristics of a given proposal. Given the methods of

social science research, however, I believe that claims about the neutral or non-neutral effects of a given proposed standard are very difficult or impossible to investigate before the fact. The reason is that researchers cannot observe the *actual* effect, in the capital markets, of a *proposed* standard—researchers can observe only what people claim they will do, or what they actually do in hypothetical laboratory settings, where they usually make judgments and/or decisions as individuals and their judgments/decisions are not aggregated into observable prices.<sup>(9)</sup>

Even if we were to settle for ex post evidence on what did happen after a given standard was promulgated, research evidence on neutrality or non-neutrality of a given standard is sparse and often difficult to interpret. The reason is that any consideration of neutrality requires a comparison of actual behavior, presumably in response to a given change in reporting rules (or many other shifts, such as changes in the tax code), with the behavior that would have been observed in the absence of the change.

To take a specific example, related to financial reporting but not related to any specific financial reporting standard, consider the Private Securities Litigation Reform Act [PSLRA], passed in 1995. This legislation was explicitly intended to affect behavior. One intended effect of this legislation was to increase the incidence of forward looking information (that is, forecasts) provided by management, by providing a safe harbor for forecasts made in good faith with appropriate cautionary language. Critics charged that the safe harbor might encourage forecasting, but the resulting information would be noisy—because managers would be shielded from litigation over recklessly developed forecasts. So here is the empirical issue: did the PSLRA influence managers' behavior toward providing more financial projections? Did the quality of financial projections provided by managers increase or decrease after the PSLRA?<sup>(10)</sup>

To answer these questions, the researcher needs to develop a measure which captures something inherently unobservable, namely, what would have happened to the frequency and quality of forecasts absent the legislation. To develop a benchmark for this behavior, the researcher must rely on evidence, usually developed by previous research, about the *observable* influences on forecasting behavior and forecast quality. But we all know that it is not possible to develop a perfect measure of the unobservable behavior that would have occurred in the absence of some actual intervention, so the assessment of whether tax changes, legislative changes, and financial reporting changes have any behavioral impact, let alone the intended ones, always requires strong assumptions and compromises with the data, and almost invariably yields results that must be carefully qualified.

When I say that it is difficult for accounting research to assess neutrality, I do not mean to imply that researchers should not attempt such assessments. Because assertions related to neutrality, or at least my interpretation of neutrality, form the basis for some significant political and lobbying interventions in the standard-setting process, any objective evidence on this issue is of substantial importance. That is, it would be useful to understand whether there is any evidence to support claims that financial reporting standards have systematic effects, whether chilling or otherwise, on economically desirable behavior.

### **3.2 Accounting research and measurement uncertainty**

The second concept I want to address in the context of accounting research is measurement uncertainty. This concept is implied but not explicitly stated in the FASB's Conceptual Framework and is, I believe, related to the concepts of representational faithfulness and verifiability. I define measurement uncertainty as the likelihood of error in a reported measure.

I believe measurement uncertainty is of increasing importance in financial reporting because standards issued by the FASB increasingly require the inclusion of estimates in the preparation of financial statements and notes. Specifically, reporting standards increasingly require that preparers of financial statements make judgments and estimates that in turn yield reported numbers that are not directly based on transactions.<sup>(11)</sup> Measurement uncertainty increases the possibility that representational faithfulness is impaired, and can also increase the possibility that comparability is impaired, if measurement

approaches evolve so that economically similar items are not measured the same way.

Researchers who wish to address measurement uncertainty confront a difficult design issue, namely, what is the benchmark value against which to assess a given candidate measurement approach? After all, if some objectively superior measure is available to serve as a benchmark, that superior measure can and should be used in the preparation of financial reports, and calibration is not necessary. In addition, the researcher also faces the design issue of how to separate the effects of measurement error that is inherent in the estimation approach or the estimation model from measurement error that represents managerial manipulations. This separation is important because the two sources of measurement error have different implications for standard setting.

In the specific case of financial instruments, some objective measures can be and have been used by researchers to calibrate estimation approaches. If the instruments are traded, the researcher can calibrate the outcomes of applying various estimation approaches and models against observed market prices, with a view toward either choosing among various candidate approaches or seeking ways to improve the performance of some given approach. For example, it is possible to compare observed market prices of traded bonds with estimated values obtained from applying various valuation approaches. Such a comparison could be an input into a standard-setting decision about, for example, what kind of measurement approach to take in separately measuring the liability and equity components of convertible debt. However, this comparison is not a direct answer to the standard-setting issue, because the observed market price that forms the benchmark for calibration is for the *entire* bond and the standard setter is interested in the measurement error in the separate components, for which separate market prices are not observed.<sup>(12)</sup>

### **3.3 Accounting research and decision usefulness**

During the remainder of this presentation, I want to talk about how accounting research has attempted to operationalize the concept of *decision usefulness*. This construct sits at the top of the schematic that captures the basic elements of the FASB's Conceptual Framework, and its two components are relevance and reliability. Clearly, research that provides evidence on decision usefulness should be of interest to standard setters. However, the Conceptual Framework does not speak to empirical measures of decision usefulness, and so researchers have formed their own approaches. I will describe some of these in turn.

#### **3.3.1 Perceptual data on decision usefulness**

First, a researcher might measure decision usefulness as the extent to which users of financial reports say they use the information in those reports. To gather this information, the researcher might use surveys, interviews, and focus groups. This approach elicits self-reported perceptions about information use. Specifically, this measure of decision usefulness is based on how respondents in a survey, interview, or focus group believe they use the information, or how they they *would* use a given piece of information if it were to be provided.

This approach to measuring usefulness is, I believe, the basis for a number of information-gathering efforts at the FASB and elsewhere. For example, the AICPA Special Committee on Financial Reporting used a telephone survey of 1200 users of business reports and convened two discussion groups of investors and creditors to discuss user perceptions of their information needs.<sup>(13)</sup> As another example,

PricewaterhouseCoopers has conducted several surveys of sell-side analysts, institutional investors, and executives (CFOs, heads of investor relations, presidents and CEOs) to ascertain their perceptions of various alternative performance measures.<sup>(14)</sup> And the FASB has convened task forces, roundtable discussions, and other arrangements in which participants provide perception-based information about information they do (and do not) find useful for decision making.

Research that gathers information on perceptions has, in my view, both strengths and limitations. Among the strengths are the ability to elicit perceptions about hypothetical information structures. For example, analysts might be asked to state their beliefs about whether and how they would use the information that would be reported under some proposed standard. A second strength is the ability to seek input on narrow and specific questions; for example, analysts might be asked to state their views on the most decision-useful accounting for loan commitments. On the other hand, there are limitations to this research as well. The most important limitation, in my opinion, is that perceptions are not behaviors and perception-based research cannot, by design, capture actual behaviors. Research in cognitive psychology has shown that people, even experts, are not very good at describing their own decision-making behavior, and that both perceptions and recalled instances of behavior are often inaccurate.<sup>(15)</sup> As a result, the reliability of perceptual data, as a basis for standard setting decisions, is not clear.

### **3.3.2 Experimental data on decision usefulness**

To get evidence on actual uses of information in making decisions, we need a research approach that is directed at behavior, and not just perception. Ideally, we'd like evidence on real-world behaviors, that is, on actual and observable use of accounting information in making some real-world decision. This is a high hurdle, because in actual markets it is not possible to observe any particular bit of information being used. So researchers have gone in two directions to document decision usefulness. The first is the laboratory. In a well-designed experiment, the researcher can be pretty certain what information is being used to form a judgment or reach a decision because the researcher controls both the task and the information presented to the experimental participants. He can use conventional research designs to vary the information conditions facing the participants and connect differences in their judgments and decisions to differences in the information they are using. For example, a researcher might ask whether analysts' estimates of intrinsic value are affected by whether Other Comprehensive Income is displayed as part of the income statement or displayed as part of the Statement of Common Equity -- the idea is that the income statement display is more salient so analysts are more likely to take account of Other Comprehensive Income that is displayed this way. In this experimental design, some analysts would be given the former display and some the latter, with the numbers unchanged across the two display choices.<sup>(16)</sup> Differences in estimates of intrinsic value would then be attributable to the difference in display.

The ability to be relatively certain that information is used and to test how it is used, in experiments, does not come without cost. Specifically, experiments provide evidence on individual behavior, under relatively artificial and controlled conditions. Such behavior may or may not extrapolate or generalize to actual market conditions, which feature much richer information environments and potentially powerful economic incentives.

### **3.3.3 Archival data on decision usefulness**

Researchers have also attempted to discern evidence of actual information use in naturally occurring markets, such as the U.S. capital markets. In general this research takes the form of testing for a statistical association between an information release (such as an earnings announcement press release) and stock price movements over very short intervals, such as one day. The researcher assumes that the information in the press release is the dominant source of information for each sample firm on the release day, and that any other information releases for the sample firms contribute only noise. In most research this is just an assumption-the researcher does not control or measure the effects of other information.

In research that investigates the actual use of accounting information in the capital markets, I view as increasingly problematic the limitations arising from a focus on just one piece of information-usually the summary earnings number-in an information release (such as an earnings announcement press

release) that contains many pieces of potentially decision-useful information. Both anecdotal evidence and systematic large-sample evidence demonstrate that earnings announcement press releases have gotten longer and more complex over time, and are increasingly likely to contain detailed income statements, discussions of earnings components, and forward looking information. This concurrently-released, non-earnings information has been shown, in other contexts, to convey information to investors. So when the researcher observes a capital market response to an earnings announcement press release, it is increasingly likely that the response is associated with *both* the summary earnings number *and* the other information in the press release. This means that ascribing the entire response to the earnings number may not be appropriate.

I emphasize the importance of considering the entire package of information in the earnings announcement press release for two reasons. The first reason is the existence of strong statements made from time to time about dramatic market responses to small earnings surprises. One hears, for example, that a share price decline of, say, 5 percent or 10 percent or even more is associated with a one-cent deviation of the reported earnings number from expectations. This statement assumes away all the other pieces of information in the earnings announcement press release, which could include, for example, an entire income statement, a management discussion of certain income components, and even some forward-looking information about future earnings.

The second reason I emphasize the importance of considering the entire package of information in the earnings announcement press release is the existence of research evidence that indicates that share price responses to these releases have been increasing over the past 20 or so years. The increases are both modest in magnitude and, apparently, concentrated among larger firms, but they are statistically reliable and pervasive across samples and research methods. Given evidence that press releases have increasingly contained earnings-related information as well as the summary earnings number, it seems appropriate to investigate the extent to which the documented increase in the apparent decision usefulness of earnings announcements is due to the inclusion of earnings-related information in the releases and not the earnings number itself.

In attempting to measure decision usefulness by measuring the one-day stock market response to an information release, the researcher must not only assume away or control for any effects of other information releases, he must also find exact dates of information releases. This turns out to be possible for a surprisingly small set of items, mostly involving earnings announcements in press releases (not 10K or 10Q reports), management forecasts published in press releases, and dated analyst reports. So this approach to assessing decision usefulness is limited to information for which the researcher can readily identify the date the information reached investors-and that is not usually the kind of information that is at issue in a standard-setting decision.

Finally, even for information with identifiable announcement dates, the evidence on one-day associations between information releases and share price movements often is far too coarse to shed light on standard-setting issues, whether they are broad or narrow. For example, I cannot conceive of how to use evidence on associations between share returns and information releases to shed light on the issue of whether and how to separate compound instruments into their liability and equity components, or the issue of how to measure the revenue associated with each component of a multiple-deliverable arrangement.

Perhaps because of design difficulties in carrying out tests of decision usefulness that require precise identification of information release dates, many researchers have turned to an alternative perspective on decision usefulness that asks whether a given piece of accounting information, such as earnings, is associated with, or summarizes, or aggregates the information used by investors to price shares. For these investigations, it is not necessary to identify an information release date, and the period over which the association is measured is a choice made as part of the research design. For example, I might ask if GAAP reported earnings for some year, say 2000, is a good or a poor summary of the information used to price shares over the year 2000. To answer this question, I would measure the statistical

association between share returns over the entire year 2000 and reported earnings for the year 2000. The strength of this association would then be used to characterize earnings as either a relatively good or a relatively poor summary indicator of the information used by investors to price shares. Research that has carried out these association tests, year by year, over long periods of time has reported that the earnings number is an increasingly weak summary of the information used to price shares.<sup>(17)</sup> This result has been used as the basis for a number of criticisms of the current financial reporting model.

### **3.3.4. Standard-setting implications of archival research on decision usefulness**

From a standard-setting perspective, this finding raises (at least) the following questions. First, standards speak to much more than the summary earnings number. So we would like to know, how good is the *entire package of information* in the financial reports as a summary of the information used to price shares? That is, evidence that earnings, taken alone, is an increasingly poor summary number does not speak to the question of the entire information package.

Second, is the decline in the statistical association between earnings and returns partly due to design choices and the statistics used to capture the association? This question is of course directed at the technical side of research and does not in and of itself bear at all on standard setting. Third, what is the role of implementation decisions in determining the strength of reported earnings as a summary of information? That is, for a given set of accounting standards, to what extent is the ability of earnings to summarize information used by investors affected by management's implementation decisions? This third question has implications for earnings management, restatements, quality of earnings, and estimation errors. Investigations of these and related matters account for a large stream of accounting research.

Fourth, and of immediate significance to standard setting, to what extent is the apparent decline in the ability of earnings to summarize information used by investors due to an increasingly poor fit between reporting standards and the economic environment? Examples of this poor fit, offered by researchers and others, include the following: most expenditures to develop intangible assets must be expensed; the balance sheet and income statement reflect a mixed attribute measurement approach, with some items at fair value and some at acquisition cost; the current display requirements on the income statement do not provide meaningful categorizations of income components; and the financial reporting model itself is not appropriate for capturing the true underlying measures of performance, many of which are non-financial. Without going into the details of any of these criticisms, I believe it is not useful to attribute the entire apparent decline in the performance of GAAP earnings as a summary measure of performance to any of the four possible causes I have listed without also considering the other three possibilities.

## **4. Examples of accounting research with possible standard-setting implications**

At this point, I would like to use two examples to link several of the issues discussed so far. My first example links perceptions-based research (which asks users of financial statements what information they believe they use) with archival research that tests for associations between pieces of information and investor behavior as reflected in share returns. The question to be addressed is: do analysts identify as preferred valuation measures the same measures investors actually use to value shares? The perceptions in this example are those of analysts and the behaviors are those of investors as reflected in share returns.

This example involves first choosing non-earnings performance measures that are favored by analysts. These choices are based on reading documents prepared by analysts-this is perception-based research which establishes what analysts say they do. The second step links perceptions with behavior by comparing the ability of analyst-preferred non-earnings measures to summarize information used by investors to price shares with the performance of GAAP earnings as a summary measure.<sup>(18)</sup> Because non-earnings measures are in general industry specific, I have chosen telecommunications, where

EBITDA(19) is viewed as a superior performance measure, and homebuilding, where order backlog and new orders are viewed as superior.

Conventional tests which measure whether earnings or the analyst-preferred non-earnings measure has superior ability to summarize the information actually used by investors to price shares, and whether earnings and the non-earnings measure add to each other's performance as summary indicators, yield the following results. In the case of telecommunications, earnings and EBITDA are statistically indistinguishable in their individual ability to summarize the information in returns, and each adds to the other in terms of explanatory power. To put this another way, neither EBITDA nor earnings dominates the other as a summary indicator-even though analyst perceptions would predict EBITDA dominance. In the case of homebuilding, earnings has *greater* ability to summarize the information in returns than new orders and order backlog combined, and the two non-earnings measures, taken together, do not add much explanatory power in the presence of earnings. In other words, results of conventional tests indicate that the non-earnings performance measures perceived by analysts to be superior for valuing homebuilding firms are in fact not at all superior to GAAP earnings.

How can we interpret these results? That is, what if any standard-setting inferences can be drawn from these findings? I believe there are at least two. First, these findings reinforce the point that perceptions are not behavior. Analysts may *perceive* that EBITDA or order backlog or some other measure is superior to GAAP earnings in assessing firm performance, but this perception may not capture investors' actual information use, that is, investors' behavior. In my example, analyst perceptions *do not* capture investor behavior as reflected in share returns. Based on the statistical associations, earnings comes as close as EBITDA for capturing the information in returns of telecommunications firms and earnings is actually better than the proposed non-GAAP performance measures for homebuilders. The inference I draw is that standard setters should evaluate cautiously statements made by users of financial statements-such as analysts-about whether and how analysts (or investors) *do* use the existing information in financial reports and whether and how they would use some new piece of information if it were provided.

Second, these findings raise a difficult question of separating relevance from reliability. Association tests, like the ones I just described, capture combined relevance and reliability of a given information item in a single statistical measure of the relation between share values and the information item. The two constructs of relevance and reliability are distinct-something can be relevant without being reliably measured, and vice versa-but they can rarely be separated in an association test. The possibility exists that the economic constructs captured by EBITDA for telecommunications firms, and by the combination of order backlog and new orders for homebuilders, are highly relevant to investors, but measured with insufficient reliability. That is, measurement error swamps the informativeness in the construct. It seems reasonable that agreement on a single approach to calculating or measuring a given performance summary indicator, coupled with the assurance associated with including that indicator in the audited financial reports, would increase reliability. The inference I draw is that standard setters should consider the possibility that expanding the current reporting model to provide for comparable calculation of certain non-GAAP performance measures-especially measures like EBITDA-would increase the reliability and hence the decision usefulness of those measures.

The second example I want to use to link some of the issues discussed so far involves goodwill arising from a purchase business combination. In its reconsideration of the accounting for business combinations, the FASB needed to answer (among others) the following two questions(20):

1. Is purchased goodwill an accounting asset?
2. If goodwill is an asset, does it have an identifiable service life, to be used for amortization purposes?

With regard to the first question, accounting research can provide evidence on whether existing purchased goodwill appears to be valued by investors in the same way other accounting assets are

valued. And, the answer appears to be, yes, purchased goodwill receives a positive valuation multiple in a regression of share price on three accounting items: assets excluding goodwill, liabilities, and purchased goodwill. With regard to the second question, accounting research can provide evidence on whether amortization expense associated with purchased goodwill appears to be valued by investors as are other expenses. And, the answer appears to be, no, research did not find evidence that amortization expense was treated, for valuation purposes, in the same way as other expenses.

What inferences could be drawn from this evidence for standard setting? First, the evidence supports the treatment of purchased goodwill as an asset, and does not indicate that reliability is substantially reduced by measuring goodwill as a residual remaining after the purchase consideration is applied to measure identifiable tangible and intangible assets and liabilities at fair value. Second, the evidence does not support the amortization treatment of goodwill, which suggests that to the extent goodwill loses value the loss is not equal, period-by-period, but rather sporadic over time. The inference is that goodwill should not be amortized; instead, it should be subject to periodic impairment testing.

At this point, however, there are no more standard-setting inferences that can be drawn from the results—we have reached the practical limits of accounting research. But the standard setter still faces the issue of describing the approach to be taken to impairment testing. For example, at what level in the organization should goodwill be tested for impairment? At the segment level? At some organizational level below the segment level? As another example, what form should the impairment test take? Because goodwill is a residual number that cannot be separately measured, any test for impairment will be subject to measurement error. How can that measurement error be reduced to tolerable levels?

This example illustrates, again, an important limitation of accounting research for standard setting: as the questions become more specific, more narrow, more implementation-oriented and, sometimes, more measurement-oriented, the ability of accounting research to provide insights disappears. And, to the extent the questions concern information structures that do not already exist, research which relies on archival data cannot be used to provide answers because archival data are by definition written records pertaining to events that have already occurred.

## 5. Conclusions

To summarize, the FASB uses, or is supposed to use, the Conceptual Framework to guide standard setting decisions. To the extent the Board's decisions are, however, narrow and implementation-oriented rather than principles-oriented, the Conceptual Framework may simply not provide operational guidance. In addition, the Conceptual Framework is incomplete in that only Concepts Statement 7, *Using Cash Flow Information and Present Value in Accounting Measurements*, focuses on measurement with any degree of specificity. Finally, the Conceptual Framework appears to be internally inconsistent with respect to the explicit or implied guidance on revenue recognition in Concepts Statements 5 and 6.

Accounting researchers can and do provide evidence that is pertinent to the FASB's decisions, to the extent the research is structured around the Conceptual Framework. There are examples and even streams of research that address issues related to neutrality, predictive ability, comparability, and measurement uncertainty. A substantial portion of accounting research focuses on the fundamental concept of decision usefulness, as operationalized by the concepts of relevance and reliability. Studies of decision usefulness that use archival data focus on relevance and reliability jointly, because it is for the most part not possible, using archival data, to separate relevance from reliability. And it is not possible, in general, to use archival data to shed light on the many narrow implementation-oriented issues facing the FASB. So, although accounting research can and does provide evidence that can inform the standard-setting process, the evidence tends to focus on selected aspects of the broadest elements of decision usefulness. This feature limits the ability of accounting research (and accounting researchers) to influence the standard-setting process.

## Footnotes

(2) See EITF Issue 00-19, *Accounting for Derivative instruments Indexed to and Potentially Settled in, a Company's Own Stock*.

(3) In addition, some comment letters received by the FASB on its October 2000 exposure draft repeat the same arguments put forward in paragraphs 7 and 8 of APB Opinion 14 to support the reporting of convertible debt solely as debt.

(4) At the time of this presentation [March 2002], the FASB was seeking comments on a proposed project on revenue recognition and related liabilities. On May 15, 2002, the project was formally added to the FASB agenda.

(5) This principle is consistent with the measurement guidance in APB opinion 16, issued in 1970.

(6) Two useful (and very different) discussions of the Conceptual Framework can be found in G. Jonas and J. Blanchet, "Assessing the Quality of Financial Reporting," *Accounting Horizons* 14:3 (September 2000): 353-363 and R. Storey and S. Storey, *The Framework of Financial Accounting Concepts and Standards*, Special Report published by the Financial Accounting Standards Board, January 1998.

(7) Neutrality does not imply that everyone is treated alike in all respects or that neutral financial reporting standards do not affect behavior. Financial reporting is *intended* to influence behavior, by providing information to investors to be used in making resource allocation decisions; neutrality implies that the intended influence is not in a predetermined direction. For additional discussion and examples, see Storey and Storey (1998, pp. 111-113).

(8) Examples of such claims include reductions in (allegedly beneficial) merger activity if the pooling of interests method were to be abolished; reductions in R&D expenditures because of the requirement in SFAS 2 that these expenditures be immediately expensed [see, for example, R. Dukes, T. Dyckman and J. Elliott, "Accounting for Research and Development Costs: The Impact on Research and Development Expenditures," *Journal of Accounting Research* 18: supplement 1980, 1-26]; reductions in exploration activity and in competition within the oil and gas industries because of the [proposed] elimination of the full cost accounting method for exploratory oil and gas operations [see, for example, D. Collins and W. Dent, "The Proposed Elimination of Full Cost Accounting in the Extractive Petroleum Industry: An Empirical Assessment of the Market Consequences," *Journal of Accounting and Economics* 1:1 (March 1979): 3-44.

(9) The exception is laboratory market settings, in which individuals trade and, in general, establish observable security values.

(10) An example of research which addresses these two questions is: M. Johnson, R. Kasznick, and K. Nelson, "The Impact of Securities Litigation Reform on the Disclosure of Forward-Looking Information by High-Technology Firms," *Journal of Accounting Research* 39:2 (September 2001), 297-328.

(11) This issue -- the extent to which US GAAP *requires* the exercise of judgment and the application of estimation techniques -- was raised (but not explored in any detail) by Robert Swieringa in his 1996 Saxe Lecture [available at [http://newman.baruch.cuny.edu/digital/saxe/saxe\\_1996/swieringa\\_96.htm](http://newman.baruch.cuny.edu/digital/saxe/saxe_1996/swieringa_96.htm)].

(12) For an example of research which compares total bond value estimates (derived from option pricing models) with market values of traded bonds, see M. Barth, W. Landsman and R. Rendleman, "Option Pricing Based Bond Value Estimates and a Fundamental Components Approach to Account for Corporate Debt," *The Accounting Review* 73:1 (January 1998): 73-102.

(13) See chapter 2 of *Improving Business Reporting-A Customer Focus, Comprehensive Report of the Special Committee on Financial Reporting*. 1994. American Institute of Certified Public Accountants.

(14) See R. Eccles, R. Herz, E. Keegan, and D. Phillips, *The Value Reporting Revolution: Moving Beyond the Earnings Game*. 2001. John Wiley and Sons.

(15) See, for example, K. Ericsson and H. Simon, "Verbal Reports as Data," *Psychological Review* 87: 215-251 and R. Nisbett and T. Wilson, "Telling More than We can Know: Verbal Reports on Mental Processes," *Psychological Review* 84: 231-259. In accounting research, P. Hopkins, R. Houston and M. Peters demonstrate (in an experiment) that analysts' stock price judgments in fact depend on the method of accounting for a business combination, even though none of the analysts in the experiment mentioned the accounting method as having any influence on their judgments ["Purchase, Pooling and Equity Analysts' Valuation Judgments," *The Accounting Review* 77:3 (July 2000): 257-281].

(16) This experiment was performed by E. Hirst and P. Hopkins, "Comprehensive Income Reporting and Analysts' Valuation Judgments," *Journal of Accounting Research* 36 (supplement 1998): 47-83. They found that buy-side analysts' estimates of intrinsic value were affected by the way the income was displayed.

(17) See, for example, D. Collins, E. Maydew, and I. Weiss, "Changes in the Value-Relevance of Earnings and Book Values over the Past Forty Years," *Journal of Accounting and Economics* 24:1 (December 1997): 39-67; J. Francis and K. Schipper, "Have Financial Statements Lost their Relevance?" *Journal of Accounting Research* 37:2 (Autumn 1999): 319-352; B. Lev and P. Zarowin, "The Boundaries of Financial Reporting and How to Extend Them," *Journal of Accounting Research* 37:2 (Autumn 1999): 353-385.

(18) This example is taken from J. Francis, K. Schipper, and L. Vincent, "The Relative and Incremental Explanatory Power of Earnings and Alternative (to Earnings) Performance Measures for Returns," *Duke University working paper*, March 2002.

(19) EBITDA = Earnings before interest, taxes, depreciation and amortization. This construct is not defined in US GAAP.

(20) Both of these questions were considered as part of L. Vincent, "The Equity Valuation Implications of the Purchase and Pooling Methods of Accounting," *Journal of Financial Statement Analysis* 2 (Summer 1997):

