MIT Sloan School of Management

MIT Sloan School Working Paper 4740-09
9/17/2009

S.P. Kothari, Karthik Ramanna, Douglas J. Skinner

HARVARD | BUSINESS | SCHOOL

What should GAAP look like? A survey and economic analysis

S.P. Kothari
Karthik Ramanna
Douglas J. Skinner

Working Paper

09-137

Working Paper No. 09-22

What Should GAAP Look Like?
A survey and economic analysis

S.P. Kothari
Massachusetts Institute of Technology (MIT) – Sloan School of Management

Karthik Ramanna
Harvard University

Douglas J. Skinner
University of Chicago Booth School of Business

What should GAAP look like?
A survey and economic analysis

S.P. Kothari
MIT Sloan School of Management
50 Memorial Drive, E52-325 Cambridge, MA 02142-1261
(617) 253-0994
kothari@mit.edu
Barclays Global Investors, San Francisco

Karthik Ramanna
Harvard Business School
Soldiers Field, Boston, MA 02163
(617) 384-5739
kramanna@hbs.edu

Douglas J. Skinner
The University of Chicago Booth School of Business
5807 South Woodlawn Avenue, Chicago, IL 60637
(773) 702-7137
dskinner@chicagobooth.edu

First Draft: May 30, 2009
This Draft: September 17, 2009

Abstract

Based on extant literature, we articulate a positive theory of GAAP under the assumption that the objective is to facilitate the efficient allocation of capital within an economy. The theory predicts that GAAP's principal focus, as shaped by the demand for and supply of financial information, is on the use of the income statement and balance sheet for performance measurement and control (stewardship). This is consistent with efficient contracting considerations guiding financial reporting. Financial reports produced under this model also generate information useful for equity valuation but this is not the primary objective. Thus, artificially imposing equity valuation as the primary objective of financial reporting standards will result in GAAP rules that are unlikely to serve stakeholders' needs. The theory allows us to compare and contrast extant GAAP, as observed in a regulated setting, with GAAP that might arise endogenously as a result of market forces. Building on previous research, we argue that verifiability and conservatism, while detracting from accounting's role in equity valuation, are critical features of GAAP under efficient contracting. We recognize the advantage of using fair values in circumstances where these are based on observable prices in liquid secondary markets but caution against expanding fair values to financial reporting more generally. We conclude that rather than converging U.S. GAAP with IFRS, competition between the FASB and the IASB would allow GAAP to better respond to market forces.

We thank Anwer Ahmed, Bob Kaplan, David Hawkins, Bob Pozen, Jerry Zimmerman (editor), and seminar participants at the 2009 London Business School Accounting Symposium, the University of Rochester Meckling Conference, the 2009 Temple University Accounting Conference, and Washington University in St. Louis for helpful comments.

What should GAAP look like?
A survey and economic analysis

1. Introduction

Financial reporting standard setting is in the midst of at least three major initiatives, which collectively could result in a sea change in financial reporting. First, significant controversy surrounds the degree to which fair values should serve as a basis for financial reporting. The U.S. Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) favor the expanded use of fair values in financial statements and a movement away from the traditional modified historical cost basis of financial reporting.[1] The expanded use of fair values is intended to provide financial information useful for firm valuation, which is implicitly assumed to be the primary objective of financial reporting standards (in contrast, we see the objective of financial reporting as providing information useful for performance measurement and control/stewardship[2]). This has generated debate over the objectives of accounting standards, the economic underpinnings of fair value accounting, and the consequences of the increased use of fair values in financial reporting.

Second, in the aftermath of spectacular accounting scandals at Enron, WorldCom, and other companies, and the recent financial crisis, some argue that U.S. Generally Accepted

[1] Barth (2006, p. 98) states that "In almost every standard-setting project of the FASB and IASB, the boards consider fair value as a possible measurement attribute." This includes the conceptual framework. Also see Johnson (2005) describing FASB's increasing use of fair value measurements in the preparation of financial statements and Schipper (2005).

[2] The traditional stewardship role of the balance sheet had to do with its role in safeguarding the entity's assets in a physical sense (Watts and Zimmerman, 1983). We see the modern control/stewardship function of the balance sheet as being to provide users, and especially equity and debt holders, with information about the minimum amount that is available to meet their claims in the event of a liquidation (this is not to say that a balance sheet that reflects the going concern assumption is inconsistent with the control/stewardship role; see Section 3).

Accounting Principles (GAAP) should move towards the use of "principles-based" accounting standards, rather than specifying detailed accounting "rules."[3]

Finally, the FASB and IASB are committed to the convergence of U.S. GAAP with International Financial Reporting Standards (IFRS) as part of a "shared objective of developing high quality, common accounting standards for use in the world's capital markets" (IASB, 2008a, p. 5). The ongoing collaboration between the FASB and IASB could lead to a single global standard setter within the next decade.

These initiatives have far-reaching implications for the form and substance of financial reporting, with attendant economic consequences. The financial crisis of 2008–09 has imparted a sense of urgency as well as a political will for changing the institutions of accounting practice. If financial reporting is on a precipice of change, a critical review of the academic literature to distill implications for financial reporting standards would be timely. In this spirit, we first articulate an economic theory of GAAP that draws on the large body of research into the demand for and supply of financial information in capital markets. We then use the theory to generate implications for the nature of accounting practice and the role of standard setting in directing such practice.

The *JAE* editors charged us to survey research on and conduct an economic analysis of the properties of GAAP. Rather than provide a chronological review of the literature, we embed the survey into an economic analysis of the properties of GAAP with the objective of drawing implications for current standard-setting issues such as those indicated above. Based on the extensive economics-based (positive theories) literature in accounting, we articulate a theory of GAAP, or "What should GAAP look like?" under the maintained assumption that the objective

[3] See, especially, the Securities and Exchange Commission's (SEC) report on this topic (SEC, 2003) prepared in response to provisions of the Sarbanes-Oxley Act, and as an example the FASB's proposal to eliminate industry-specific practices in revenue recognition (Schipper, Schrand, Shevlin, and Wilks, 2009).

of GAAP is to facilitate efficient capital allocation in the economy.[4] While this assumption seems uncontroversial, it has been subject to considerable misinterpretation and confusion in standard setting. Misunderstandings about the economic forces that give rise to financial reporting and GAAP have guided policy directions on important areas in accounting. Perhaps the most prominent of these is whether standard-setters should focus their efforts on providing accounting rules that generate financial statements whose primary purpose is to meet the needs of equity investors (a valuation or "information" focus) or whether financial reporting has a broader purpose such as to facilitate efficient contracting as a "control" system within the firm. Other issues include the role of choice in accounting practice (e.g., whether standard setters should restrict managers' ability to choose among different accounting methods), the role of competition among standard setters versus a global monopoly in standard setting, and the usefulness of the market efficiency as a maintained hypothesis in standard setting. We draw on the accounting literature to offer an economic analysis of these issues. The analysis can serve as a guide for what GAAP should look like in the future.

In undertaking to write about what GAAP *should* look like, we run the risk of making normative prescriptions. We have no such designs. The analysis is entirely positive, and still we make unambiguous recommendations about what GAAP should look like. As Jensen (1983, p. 320) explains, policy questions are best answered with "knowledge of a wide range of positive theory," which is what we hope to provide. Watts and Zimmerman (1986, Chapter 1, original emphasis) explain how an exercise such as ours can be positive, not normative:

[4] This assumption is not meant to be controversial. We simply assume that those with the power to regulate accounting rules (such as the SEC) seek to do so with the objective of enhancing the economic efficiency of capital markets. However, we recognize that they may also have objectives such as the protection of relatively unsophisticated investors. "Efficient capital allocation" means capital flows to its most highly valued use. GAAP can facilitate efficient capital allocation by lowering transaction and information costs between suppliers and users of capital (e.g., Watts and Zimmerman, 1986, Healy and Palepu, 2001, and Core, 2001). For example, GAAP can lower the costs of becoming informed about the economic prospects of firms, thus encouraging greater participation by private investors in equity and debt markets.

> "Prescriptions require the specification of an *objective* and an *objective function.* For example, to argue current cash equivalents should be the method of valuing assets, one might adopt the objective of *economic efficiency* (i.e., the size of the economic pie available) and specify how certain variables affect efficiency (the objective function). Then one could use a theory to argue that adoption of current cash equivalents will increase efficiency. Theory provides a method for assessing this *conditional* statement (i.e., do we observe that adoption of current cash equivalents increases efficiency?). But theory does not provide a means for assessing the appropriateness of the objective. The decision on the objective is subjective, and we have no method for resolving differences in individual decisions."

The differing perspectives on the direction of change in accounting institutions, including the three major initiatives we described at the outset, all center on a debate over the primary objectives of financial reporting. The crux of the debate is whether accounting is primarily about performance measurement and control (also known as efficient contracting) or equity valuation. Many academics and standard setters see equity valuation as the primary role of financial reporting. Francis, Olsson, and Schipper (2006, p. 262) "take a capital allocation view of earnings quality, as opposed to a contracting or stewardship view," which they rationalize as stemming "from the view that the capital market uses of accounting information are fundamental, in the sense of providing a basis for other uses, such as stewardship" (p. 259).[5] Barth, Beaver, and Landsman (2001, p. 78) justify the usefulness of value-relevance research on grounds that "a primary focus of the FASB and other standard setters is equity investment" while recognizing other uses of financial statements "beyond equity investment, e.g., management compensation and debt contracts."

With respect to the primary objective of financial reporting, we make the following observations. First, the economic theory of GAAP articulated in this paper (Section 2) predicts that the demand for and supply of accounting information to various stakeholders, including

[5] Also see Schipper and Vincent (2003) who analyze earnings quality "from a Hicksian income perspective, following the idea that earnings should faithfully represent changes in wealth." (Francis et al., 2006, p. 263).

equity investors, debtholders, management, and others, lead to an emphasis on performance measurement and control/stewardship. In the process, financial information generates measures (such as earnings) that also tend to be useful for equity valuation, but this is not the primary objective. The fundamental agency relationships that characterize corporations (Jensen and Meckling, 1976), especially those between shareholders and management and between shareholders and debtholders, mean that financial reporting is expected to possess certain attributes such as conservatism (e.g., Watts, 2003a, b), a balance sheet that includes only those assets that are separable and salable, and an income statement that provides a reliable measure of management performance. These features may detract from the usefulness of financial statements for equity valuation, but result in general purpose financial statements that serve the interests of the various stakeholders in the firm, broadly considered.

Second, our analysis does not assume or presuppose the primacy of performance measurement and control/stewardship over equity valuation as the primary objective of financial reporting. Based on various stakeholders' demand for and supply of financial information, the analysis reaches the conclusion that the properties of GAAP are expected to be *as if* the primary objective of financial reporting is to provide information useful for performance measurement and control/stewardship. Such information is expected to also be useful for (or correlated with) firm valuation, but this is not the primary objective of GAAP.

1.1 Detailed outline of the paper

Our discussion of the critical properties of GAAP financial statements begins with the simplified scenario of an all-equity firm without any concerns about credibility between managers and shareholders. In this situation, income measurement focuses on observable

outputs rather than effort because of the inherent difficulties of measuring managerial effort and estimating the future consequences of that effort. Injecting the agency problem between managers and equity holders generates additional properties of GAAP, including verifiability. To rein in management's proclivity to favorably skew the information they supply, GAAP defers the recognition of revenue until management has exerted full effort (to prevent moral hazard), and immediately expense costs when the associated benefits are sufficiently uncertain (e.g., research expenditures; see for example, Watts and Zimmerman, 1986, Kothari et al., 2002, and Skinner, 2008a). Additionally, GAAP requires managers to recognize the effects of bad news immediately in earnings because failing to do so puts shareholders at risk of asset substitution by managers (e.g., Basu, 1997; Kothari, 2000, Watts, 2003a). The introduction of debtholders leads to additional agency problems that further affect the nature of accounting rules given debtholders' demand for periodic financial information about the value of assets available to them in liquidation and the firm's ability to cover interest payments. Agency conflicts between shareholders and debtholders push financial reporting further towards verifiability and conservatism.

In Section 3, we discuss the implications of the positive theory of GAAP for the structure of GAAP financial statements, focusing principally on income statement and balance sheet recognition and measurement issues. Here, we further discuss the implications of the income statement's performance measurement role and the balance sheet's control measurement (stewardship) role.[6] We show that conventional asset recognition criteria can be explained by the

[6] The fact that we see the income statement and balance sheet as serving related but distinct roles is discussed further in Section 2 and is a matter of degree. Because modern GAAP is primarily concerned with corporations where ownership and control are separated, the income statement's primary role is measuring management performance, while the balance sheet's role is primarily related to the stewardship of the entity's net assets. In other types of business firm (such as smaller, private firms with dominant owner-managers) more basic agency problems such as perquisite consumption are likely to be of greater concern, so that the emphasis of both financial statements is on stewardship/control of the entity's net assets.

contracting framework. Assets are recognized when property rights (i.e., claims to benefits of ownership) are well-established, when there is sufficient certainty about future realizations of cash flows to the entity, and when asset values are not substantially dependent on future management effort. By specifying that property rights be well-established, we require that an asset is under an entity's control and is separable and saleable. The requirement for sufficient certainty about future cash flows recognizes that there is a continuum of cash-flow uncertainty associated with all expenditures (from accounts receivable to inventories to fixed assets to intangibles), and that the criterion for asset non-recognition in GAAP financial statements is a discrete point in this continuum where accountants, auditors, regulators, and the courts determine the uncertainty to be unacceptably high for stewardship and contracting purposes (e.g., Ramanna and Watts, 2009). The limit on recognizing assets whose values depend on future management effort (e.g., goodwill) recognizes the moral hazard that arises from using these types of assets as collateral.

We discuss the implications of the asset recognition rules for important contemporary issues such as the capitalization of internally developed intangibles, the recognition of acquired goodwill, and the retention of securitized assets. Many internally generated intangibles (e.g., research efforts) have highly uncertain cash flow realizations and little or no value under liquidation; in such circumstances, capitalization is inappropriate under the economic view of GAAP (Skinner, 2008a). The case for recognizing acquired goodwill is even more tenuous since in addition to a lack of well-established property rights and highly uncertain cash flows, the value of goodwill is largely dependent on future management actions. For asset securitizations, the key determinant of whether corresponding obligations can be moved off-balance sheet is whether these are 'with recourse' transactions. Securitizations of this type (popular in the period

leading up to the recent financial crisis) do not represent a true sale of assets, so their non-recognition is indicative of a failure of extant GAAP to provide a balance sheet that meets the economic demands of shareholders and bondholders seeking to manage agency conflicts. The FASB is currently revising the rules for these types of transactions to effectively preclude off-balance sheet treatment for these types of transactions.

The economic view of GAAP implies that assets and corresponding obligations be recognized in financial statements if the entity can exercise a greater degree of economic "control" over those assets than any other entity. This observation has implications for the current debate on the recognition of contingent obligations, and in particular obligations that are likely to generate extreme losses in certain unfavorable states of nature (such as losses at AIG from settling insurance claims over investments in subprime assets). In circumstances where the full amount of loss in a worst-case scenario is not recognized, it is likely that shareholders and debtholders will demand information about extreme adverse outcomes through supplemental disclosure in financial statement footnotes.

We also address the issue of asset measurement and re-measurement, i.e., the basis for accounting records. We acknowledge the advantage of using fair values in circumstances where these are based on observable prices in liquid secondary markets, but note that it is also the case that such markets do not exist for many assets and liabilities. In the absence of verifiable market prices, fair values depend on managerial judgments and are subject to opportunism. Accordingly, we caution against expanding fair-value measurements to balance sheet items for which liquid secondary markets do not exist.

In Section 4, we discuss implications of the theory for the future development of GAAP. We focus on (i) the role of regulation in determining GAAP; (ii) the role of choice within

GAAP; and (iii) the merits of market efficiency as the maintained hypothesis in standard setting. The study of the regulation of GAAP is important for our purposes because it can explain the nature of accounting standards produced by the FASB and can predict how different standard setting alternatives are likely to affect what GAAP will look like in the future. We organize our discussion of this issue around the public interest, capture, and ideology theories of regulation.

Under public interest theory, regulation is the response of benevolent and omniscient policy makers to "natural" market failures. The four common market failures are natural monopolies, externalities, information asymmetries, and excess competition.[7] We conclude that underproduction of accounting standards due to externalities is the only one of these that can plausibly justify the regulation of GAAP. In practice, we argue that regulation is more adequately described by the capture or ideology theories. Under the former, GAAP regulation is the result of accountants' and auditors' attempt to socialize the expected costs of producing standards, which include reputational loss and legal liability. The resulting standards are unlikely to yield efficient capital allocation. GAAP as a product of the ideology theory is the combined result of special interest lobbying and standard setters' ideologies about accounting principles, which is not necessarily optimal in facilitating efficient capital allocation. We conclude that competition between standard setters is the most effective means of achieving GAAP rules that facilitate efficient contracting and thus efficient capital allocation. The practical implication is for the FASB and IASB to compete rather than having them join forces to form a global monopoly.[8]

[7] See, for example, Breyer (1982). Leftwich (1980) discusses fallacies in market failure justifications commonly used in accounting.

[8] We discuss the possibility of bundling GAAP rules with other securities regulation at the exchange level, partially internalizing the costs and benefits of standard setting.

On the role of choice within GAAP, we conclude that while GAAP rules necessarily limit accounting choice, regulators still have considerable flexibility to determine how much judgment managers, accountants, and auditors have in preparing financial statements. We view accounting choice as critical to innovation in and efficiency of accounting practice, and in general support empowering managers, accountants, and auditors with decision rights to determine best practices in accounting. We also address the contemporary debate about "principles" versus "rules," and why this comparison, while meaningful to an extent, over-simplifies the issues. A principles-based regime, while desirable, is unlikely to be sustainable in practice because the day-to-day application of accounting principles are usually made through working rules (see Benston et al., 2006).

Finally, we address the role of the market efficiency assumption in accounting standard setting. Standard setters' perspective on the efficiency of capital markets with respect to accounting information is an important consideration in how they craft GAAP because it affects their views about fundamental financial reporting issues such as recognition versus disclosure. We discuss why, for both conceptual and practical reasons, it behooves standard setters to maintain the market efficiency assumption.

In Section 5, we summarize the paper and discuss directions for future research. In particular, we identify opportunities in exploring the political economy of GAAP and GAAP financial statements.

1.2 Definitions and clarifications

We begin with some definitions and clarifications. Throughout the paper, "GAAP" refers to the set of accounting principles that govern the preparation of audited financial statements.

Thus, by definition, the analysis assumes auditing is necessary for the existence of "GAAP;" in other words, in developing the economic theory of GAAP, the existence and nature of auditing, including the institutions that facilitate a competitive equilibrium in auditing, are assumed to be exogenous. In contrast, publicly regulated standard setting is not necessary for GAAP, i.e., economic GAAP can arise through best practices in competitive markets (see Section 4). Further, in developing the economic view of GAAP, we take as given several institutional features generally assumed to hold in the U.S. These include: courts' ability to enforce contracts, laws against self-dealing, and separation of tax reporting from financial reporting. Relaxing these features can alter the predictions on what GAAP should look like (e.g., see Ball, Kothari and Robin, 2000, for the effect of variation in economic institutions on GAAP), so the analysis herein when applied internationally must be interpreted in the context of local non-GAAP institutions.

We acknowledge that our analysis is made under "second-best" conditions, i.e., we recognize that complete contracting is too costly to be feasible. In fact, we argue that several critical features of GAAP have evolved because contracting and information costs are economically significant and so preclude "first-best" solutions that would eliminate agency problems.

At the center of the debate between those who advocate a contracting perspective on accounting and those who advocate a valuation perspective is the economic importance of market frictions such as contracting and information costs. As early work in the positive theories paradigm emphasizes (e.g., Holthausen and Leftwich, 1983), economically material market frictions are what gives rise to the economic consequences of accounting rules. Advocates of a valuation perspective on standard setting, with a corresponding emphasis on fair values, favor that perspective largely because they see market frictions as economically unimportant. While

they acknowledge the existence of these costs, the conclusion that fair values are the appropriate measurement basis for many balance sheet items must logically be based on arguments that ignore or minimize the importance of market frictions and the effect of information asymmetries and associated agency problem between corporate stakeholders. An efficient contracting perspective explains and predicts many accounting institutions that have long run survival value in financial reporting (conservatism and verifiability being obvious examples) while a valuation perspective does not. Thus, in Section 2 we conclude that accounting rules that might evolve in an unregulated or competitive setting are likely to be consistent with the efficient contracting perspective. Such rules are likely to have greater survival value than a valuation/fair value approach to standard setting, which explains why some commentators are appropriately pessimistic about the current direction of standard setting (e.g., Watts, 2006).

2. An economic theory of GAAP: Expected properties

We draw on a large body of past research to articulate an economic theory of GAAP. This research includes Gonedes and Dopuch (1974), Jensen and Meckling (1976), Myers (1977), Watts (1977, 2003a and b, and 2006), Watts and Zimmerman (1978, 1979, 1983, 1986), Smith and Warner (1979), Basu (1997), Ball, Kothari, and Robin (2000), Healy and Palepu (2001), Ball (2001 and 2006), Shleifer (2005), among others, although some of the ideas we use have origins that reach further back into the past. Because many of the ideas appear in multiple places over a long period of time, we economize on citations in the interest of brevity and to enhance readability. Our goal is to provide a coherent economic theory of GAAP that emerges from this large literature.

The demand for and supply of financial information in capital markets facilitate contracting and the exchange of resources among stakeholders that include investors, bondholders, boards, management, employees, suppliers, customers, auditors, and regulators (e.g., Jensen and Meckling, 1976, Watts and Zimmerman, 1986, and Healy and Palepu, 2001). This has been the case in periods without government-regulated supply of corporate financial information, i.e., before the creation of the Securities and Exchange Commission (SEC), as well as in the type of regulated environment that currently exists in the U.S. and elsewhere.

The quality and quantity of the available financial information (supplied by corporations and by information intermediaries like analysts and financial press) in an economy influences the efficiency of resource allocation and the cost of capital (i.e., management of risk). One stated motivation for the regulation of corporate financial information is that market imperfections and the public goods nature of financial information impede the adequate supply of financial information.[9] This adversely affects social welfare in that resource allocation is less efficient than it could be and the cost of capital is higher than it could be, necessitating regulation.[10] In addition, the regulation of financial information is motivated by concern for the average, uninformed or unsophisticated investor.[11]

A large literature examines whether concerns about the regulation of financial information are well-founded, and therefore whether regulation of corporate financial reporting

[9] One motivation for the creation of the U.S. Securities and Exchange Commission, which has authority to regulate financial reporting standards, was "to restore investor confidence in our capital markets by providing investors and the markets with more reliable information and clear rules of honest dealing." (SEC website http://www.sec.gov/about/whatwedo.shtml). Also see Pigou (1938) and Breyer (1982), and Section 4 below for "market failure" justifications for the regulation of financial information dissemination.

[10] FASB's mission statement states: "Accounting standards are essential to the efficient functioning of the economy because decisions about the allocation of resources rely heavily on credible, concise, transparent, and understandable financial information." (FASB website http://www.fasb.org/facts/index.shtml#mission).

[11] "The mission of the U.S. Securities and Exchange Commission is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation. As more and more first-time investors turn to the markets to help secure their futures, pay for homes, and send children to college, our investor protection mission is more compelling than ever." (SEC website http://www.sec.gov/about/whatwedo.shtml).

is warranted (see Leftwich, 1980, for an early treatment of the topic, and Leuz and Wysocki, 2008, for a recent review). Pragmatically, we sidestep this issue and ask, what are the desirable properties of GAAP, regulated or not? Later, in Section 4, we explain the various rationales for regulation of GAAP in the context of different theories of regulation, and discuss the implications of those theories for the nature of GAAP. Throughout the paper, we assume the objective of accounting standards is to facilitate the efficient allocation of resources in an economy, without harming the average, unsophisticated investor. The latter objective reflects the SEC's mission to promote fairness, which is not necessary for GAAP to achieve the objective of efficient capital allocation, and that may in fact detract from the efficient allocation of resources.[12] However, as discussed in Section 4, the informational efficiency of capital markets protects unsophisticated investors, so financial reporting standard setting under the maintained hypothesis that capital markets are informationally efficient is unlikely to be significantly influenced by the "fairness" objective. At most, standard setters might entertain mandating additional disclosure to meet this objective. In our opinion, this will have a second-order effect on the efficiency of the allocation of resources, which we ignore in our analysis below.

We summarize the likely effect of the various stakeholders' demands for and supply of financial information on the properties of GAAP in equilibrium. Because the various stakeholders have different information and contracting demands, no single set of GAAP rules

[12] Fairness concerns are not necessary for GAAP to achieve the objective of efficient capital allocation. In fact, perceived "unfairness," such as complex financial statements that allow sophisticated users to trade on information advantages can facilitate efficiency. Nevertheless, given the SEC's mission to promote fairness, we assume that GAAP financial statements should not harm the average, unsophisticated investor.

will completely satisfy all stakeholders.[13] Nevertheless, we offer an economic rationale for why GAAP is likely to be shaped by certain stakeholder demands. We conclude that performance measurement is expected to play a dominant role in shaping the income statement while the balance sheet is expected to primarily reflect investors' demand for control measurement, i.e., the balance sheet aggregates the firm's separable and salable assets. The two financial statements articulate via double-entry and the use of dirty surplus. We begin the discussion with an all-equity firm setting. Later we discuss the effect of debtholders on the nature of demand for financial information and how it affects the properties of GAAP.

Our view that the income statement and balance sheet serve related but distinct roles merits some discussion. As articulated in more detail below, we see the income statement's primary role as that of measuring management performance while the balance sheet serves a predominantly stewardship role. This reflects our view that modern U.S. GAAP is primarily concerned with corporations that typically have separated ownership and control and thus, have both internal control procedures and professional management teams. In these firms, stockholders are likely to be as concerned about management's performance in running the business as with more basic agency problems such as the expropriation of assets or excessive consumption of perquisites. In firms with high degrees of alignment between ownership and management (including private firms), performance measurement is likely to be less important

[13] Some standard setters have recently advocated developing a GAAP that is predominantly suited to meet equity valuation demands (e.g., Schipper, 2005). As part of this agenda, they advocate the elimination of conservatism from GAAP, arguing that it is unsuitable for equity valuation. In this section, we explain why the conservative properties of GAAP are central to its role in facilitating exchange in markets, and that GAAP without conservatism is unlikely to have survival value (see Ball, 2001 and 2006, and Watts, 2003a, and b, 2006).

than mitigating other agency problems, in which case both statements are more likely to be viewed as playing a control/stewardship role.[14]

There is no doubt that, especially in early forms of business organization, the income statement served to protect the interests of stockholders vis-à-vis those of management and of debtholders vis-à-vis those of stockholders. For example, Watts and Zimmerman (1979) discuss the fact that depreciation was first subtracted from income in years when profits were high enough for dividends to be considered. The goal was to protect debtholders from the possibility that management, acting in the interests of stockholders, would pay dividends out of capital, in the extreme leaving the debtholders with an empty shell. Similarly, they argue that other expenses (such as those necessary for maintenance) were first subtracted from income when it was first used as the basis for management compensation. While these types of agency problems are still possible today, we see the modern income statement as serving primarily to measure management and firm performance rather than simply as a means of control. We recognize that demand for performance measurement is also rooted in agency problems, as discussed earlier.

2.1. An all-equity firm setting

To facilitate the exchange of resources between the providers and users of equity capital, current and prospective investors demand information about the firm's financial performance. This information is useful for at least two reasons: equity valuation and evaluation of management performance. For valuation purposes, ideally investors receive financial information about the firm's current and prospective performance. However, GAAP produces

[14] The difference is really one of degree. Viewed broadly, stewardship includes management's performance in running the business; that is, how efficiently it has utilized the firm's resources to generate earnings (e.g., Penman, 2007). In this view, perquisite consumption and asset expropriation are extreme examples of management's failure to run the business efficiently.

financial reports that primarily contain information about current period performance. GAAP reports offer only limited information about the firm's prospective performance (except perhaps information with respect to certain anticipated outflows or negative performance as dictated under conservatism in accounting). At best, forward-looking information among U.S. registrants is offered qualitatively in the management discussion and analysis (MD&A) section of the firm's annual report/10-K filing. Drawing upon previous research, we explain below why GAAP is likely to have evolved (and why it seems logical for it to have done so) to restrict reporting to current period financial performance, and not incorporate forward-looking information in financial statements.[15] The discussion is divided into two parts. The first part ignores concerns about the credibility of the information supplied by management.[16] In the second part we analyze the effect of incorporating credibility concerns, which creates a demand for verifiability, conditional conservatism, and independent auditing.

2.1.1. Principal-agent relationship between shareholders and management

In a typical public corporation, shareholders delegate the firm's day-to-day operating decisions to management, creating an agency relationship between the shareholders (principals) and management (the agent). The firm's board of directors and shareholders hire management, monitor managers' performance, and reward and incent management to act in the shareholders' best interests. This naturally creates a demand for the measurement of periodic performance, i.e., the management's output in a period resulting from the management's actions in the period.

[15] Whether firms should be required to provide detailed qualitative and quantitative forward-looking information in the form of supplementary financial information or disclosures and the nature of standards governing such disclosures are beyond the scope of our analysis (i.e., they are outside our definition of "GAAP"). A substantial body of literature investigates cross-sectional and time-series variation in the voluntary provision of such information (see Healy and Palepu, 2001, for a review of the literature).

[16] Thus, in this section we ignore agency problems and focus only on the measurement issues, similar to the approach taken in papers such as Lambert and Larcker (1987) and Sloan (1993).

To evaluate and compensate management for current period performance, investors focus on the output resulting from management's actions (effort) in the current period. Actual sales or revenues for the current period reflects (albeit imperfectly) the consequences of management actions in that period. A likely reason for focusing on "outputs" is the difficulty of measuring actions (effort) *per se*: the difficulty exists, even absent agency problems, because of uncertainty about the future and *ex post* settling-up problems (e.g., future business conditions, health of the manager, counter-party risk, etc.). The revenue recognition principle attempts to capture the spirit of an output-based measure of management effort (i.e., revenue is recognized when it is earned and *realized or realizable*).[17]

The nature of information about firm performance that investors are likely to demand for equity valuation is expected to be similar to but not perfectly aligned with that for evaluating and rewarding management. For valuation purposes, investors seek information that is helpful in assessing the amount, timing, and uncertainty of future cash flows, regardless of whether the management has already taken the actions or is likely to act in the future. This includes, but is not limited to, information about the current period's performance.[18]

In addition to measuring current performance, investors seek information about actions management might take in future, and the potential effect of those actions on future cash flows. In fact, investors design compensation packages to influence the management's future actions to be in the investors' best interests, i.e., management takes actions that maximize future net cash

[17] If management has expended effort to produce future sales, then the current period sales (which might include the impact of management's actions from past periods) as a measure of management performance is an imperfect indicator of management performance. This is but one example of accounting performance measure as an imperfect substitute for the desired measure due to limitations in measuring the entire output of actions already taken (i.e., the revenue is not "*realized*" in spite of actions having been taken).

[18] For example, in valuing Wal-Mart, relevant information might include sales (revenues) for the current period as well as information about how much Wal-Mart is expected to sell in future as a result of the company's growth plans, the quality and range of products it anticipates selling, the nature of the competition, the condition of the economy, etc.

flows and therefore the share price. In this sense there is alignment between investors' informational demand for valuation and management performance evaluation, but the latter demand when manifested in GAAP explicitly focuses on performance resulting from the management's actions in the period. To the extent current performance is indicative of future performance, GAAP caters to the investors' valuation demand for information. In the limit, if current performance is a sufficient statistic for valuation relevant information (i.e., if earnings were to follow a random walk and the market had no information beyond that in the time series of earnings, see Kothari, 2001), there would be perfect alignment between the valuation and performance evaluation sources of demand for information. This is unlikely in practice because (i) perfectly capturing current performance is difficult; (ii) current period performance will not entirely subsume information about the future, especially for firms that are growing or in decline; and (iii) some fluctuations in firm values are unrelated to management's performance.[19]

Some advocate fair value accounting to measure firm and manager performance.[20] If fair value accounting were literally mark-to-market, including the marking to market of the firm's intangibles and goodwill (its non-separable assets), then accounting performance would equate to the change in the market value of the firm's equity. However, realistically no application of fair value accounting would approach such a *nirvana* mark-to-market economic performance measure because (i) of the financial accounting systems' focus on the measurement of separable assets, (ii) of the nature of revenue recognition (see below), and (iii) the difficulty of valuing and

[19] In theory, all fluctuations in firm values can be attributed to management's performance (or non-performance). However, in practice, managers are unable or unwilling to bear all firm risk in a measure of their performance (perhaps because they are more risk averse than the "firm"). For example, gains and losses on foreign-currency translations are not included in U.S. GAAP income although managers actively manage currency-risk. See Sloan (1993) for evidence that earnings in part filter out the uncontrollable portion of a firm's periodic economic performance, i.e., market returns.

[20] See, for example, Barth (2006), Johnson (2005) for FASB and IASB boards' advocacy and use of fair value accounting in standard setting.

measuring synergies from management actions. Equally important, stakeholders are unlikely to demand financial information using an accounting system based on fair values, especially when it relies on managers' estimates of those values (see Ball, 2001, and Watts, 2003a and 2003b).[21] On the latter point, see Section 2.1.2 below.

2.1.2. Effect of a demand for credible financial information: Verifiability, conditional conservatism, and auditing

Because management prepares performance reports, investors seek performance measures that are verifiable, and outside auditors' opinion about the reliability of that information (see, for example, Watts and Zimmerman, 1986).[22] Absent these safeguards, management's performance reports are unlikely to be credible given its incentives to embellish reported performance. These incentives arise not only because of the contractual consequences of management's periodic performance for compensation, but also because measured performance is likely to affect their career prospects within the firm (both tenure and promotion prospects) as well as more broadly in the managerial labor market.

The agency problem between shareholders and management has a fundamental effect on the attributes of the financial information (and thus, the GAAP rules) that shareholders and other stakeholders demand and management supplies (Jensen and Meckling, 1976; Watts and Zimmerman, 1983, 1986). To rein in management's proclivity to favorably skew reported performance, GAAP has evolved to require financial reports based on verifiable information.

[21] Penman (2007) discusses why the income statement is the primary vehicle for conveying information relevant for valuation, and not the balance sheet. He discusses the notion that earnings report how well the firm has performed in arbitraging prices in input (supplier) and output (customer) markets—i.e., the value added by the business' operations. Thus, earnings measure the performance of management in arbitraging input and output markets to generate value. He also notes that such (historic cost based) measures of income are useful in forecasting future income and so useful for valuation, while Hicksian fair value measures of income do not forecast future income.

[22] We discuss below additional factors (besides performance measurement) that reinforce the demand for accuracy and reliability of management supplied financial information.

For example, the "earned" criteria in revenue recognition can be attributed to concerns over the credibility of sales reported when full "effort" has not yet been exerted (i.e., moral hazard). In fact, the entire body of practice known as "unconditional" conservatism can be attributed to concerns over verifiability. Unconditional conservatism refers to accounting practices that tend to understate the value of assets and overstate the value of liabilities and hence result in a conservative measure of balance sheet book value. This is distinct from conditional conservatism, which refers to differences in the verification standards applied to the recognition of good and bad economic news (higher verification standards are imposed on good news than on bad news).[23] The practice of systematically expensing costs (in violation of the matching principle) when the benefits associated with those costs are sufficiently uncertain (e.g., most forms of research and advertizing expenditures), which is an example of unconditional conservatism, can be explained by management agency. Absent immediate expensing of such costs management has incentives to indefinitely postpone their recognition as expenses to exaggerate its own performance.[24,25]

As a further response to credibility concerns, the verifiability criterion is relaxed when information is adverse, i.e., GAAP is "conditionally" conservative. Conditional conservatism is "the more timely recognition of bad news than good news in earnings (often referred to as asymmetric timeliness), as occurs with impairment accounting for many types of assets" (Ryan, 2006, p. 511). The underlying logic for conditional conservatism originates from the premise

[23] See for example, Basu (1997), Kothari (2000), Ball, Kothari, and Robin (2000), Ball (2001), Watts (2003a and b), Ball and Shivakumar (2005 and 2006), and Ryan (2006).
[24] The WorldCom fraud is a vivid illustration of this point.
[25] The immediate expensing of costs whose benefits are uncertain can result in understating net performance for the period in which those costs are incurred (e.g., high research spending results in lower net profits in the period the spending is incurred). On these grounds, it can be argued that such costs should be taken directly to equity (i.e., dirty surplus), thus avoiding a muddied performance measure. However, since the benefits from these expenditures, if realized, eventually flow through the income statement, it seems reasonable to require the costs to do so as well.

that management does not have an inherent incentive to recognize the effects of bad news in the financial statements.[26] Therefore, if GAAP requires management to recognize bad news, then management's bad news disclosures would be believable even if they did not meet the objectivity and verifiability thresholds. In contrast, the objectivity and verifiability thresholds are not symmetrically relaxed with respect to good news because such reporting is likely to be inherently unreliable.

Despite the greater credibility of management's bad news disclosures, we note two caveats. First, even when GAAP requires adverse earnings news to be recognized early by lowering the relevant verifiability thresholds, GAAP earnings measures are still likely to be biased upwards. The events of the recent financial crisis suggest that notwithstanding conservatism in GAAP, the recognition of adverse economic news in the financial statements of financial institutions was significantly delayed. With conservative accounting, the favorable bias is likely to be muted, not eliminated.

Second, management can abuse the lower verifiability standards applied to bad news by using their discretion to recognize too much bad news. Specifically, standard setters and others express concern about firms setting up "cookie-jar" reserves, i.e., management's ability to be overly conservative and use conservatism as an earnings-smoothing device (e.g., DeAngelo, DeAngelo and Skinner, 1994; Francis, Hanna, and Vincent, 1996; Myers, Myers, and Skinner, 2007). Previous research also documents management's incentive to be overly conservative following management changes (e.g., Murphy and Zimmerman, 1993; Pourciau, 1993; and

[26] This is in reference to management's differential incentives to *recognize* good and bad news in the financial statements (e.g., Kothari, Shu, and Wysocki, 2009) as opposed to asymmetric *disclosure* incentives (e.g., Skinner, 1994).

Weisbach, 1995). Overall then, the efficiency of conditional conservatism in equilibrium is an empirical question, although its survival over many decades suggests it is efficient.

Shareholders' demand for conditional conservatism arises from at least three factors (e.g., Watts, 2003a). First, shareholders, via the board of directors, delegate responsibility for managing their capital to management, but retain decision rights over management hiring and firing, and compensation. Because management is likely to be reluctant to volunteer bad news, conditional conservatism introduces a contractual obligation through GAAP for the management to recognize bad news as it becomes available even if it does not meet the objectivity and verifiability thresholds that otherwise apply. Management's reluctance to volunteer bad news is mitigated by legal and reputational concerns in the labor market and associated effects on their human capital.

Second, in the event of bad news, management is not only likely to withhold the information, it can also have incentives to make investment decisions that are contrary to the shareholders' best interests. Following poor performance, management faces an option-like payoff in that there is limited downside, but upside that's increasing in the variability of cash flows.[27] This can motivate the management to undertake overly risky investments, which is the asset substitution problem (see Myers, 1977, Smith and Warner, 1979, and Watts, 2003a and 2003b).[28] Conditional conservatism enables shareholders to either curb management's potentially value-destroying decisions (by exercising greater oversight when performance is

[27] As Watts (2006) indicates, managers face limited liability in the sense that the penalties that can be imposed on them are limited. It is this fact, combined with their limited tenure and associated horizon problems, that causes stockholders' asymmetric loss function in their dealings with management, and so leads to a demand for conservatism.

[28] Consider an example in the context of asset management. When a manager has performed poorly, the manager is tempted to undertake highly risky investments in the hope of doing well and thereby erasing the poor performance (e.g., Nick Leeson's risk taking led to the bankruptcy of Barings Bank).

poor) and/or replace the management. Conditional conservatism also provides a legal basis for shareholders to initiate action against the management *ex post*.

Finally, by withholding bad news, management increases their current period compensation. Conditional conservatism allows shareholders to guard against this possibility *ex ante* which is efficient because it is prohibitively costly to recoup such excess compensation *ex post*.[29] This is similar to the underinvestment problem (Myers, 1977, and Smith and Warner, 1979) that is typically described in the context of shareholder-bondholder contracts (see below).

Conditional conservatism mitigates all three of these problems, which explains why it has long been a central tenet of GAAP that predates the regulation of accounting (see, e.g., Basu, 1997; Watts, 2006). The *ex ante* disciplining role of conditional conservatism on management behavior is due in part to the fact that it helps to resolve disputes between shareholders and management *ex post*, which includes the enforcement of GAAP in the event of litigation.[30] Conditional conservatism provides similar benefits in the context of debtholder-shareholder contracts, as discussed below.

Conditional and unconditional conservatism signify a trade-off wherein relevant information about management achievements is deemphasized to provide a more prudent and reliable performance measure. External auditing of financial reporting helps mitigate the trade-off. It reduces the need for a strict application of conservatism and so enhances the relevance of

[29] See Barclay, Gode, and Kothari (2005) and Leone, Wu, and Zimmerman (2006). Anecdotal evidence from the 2008–09 financial suggest that some managers were overcompensated notwithstanding extreme bad news that was not fully disclosed. For more formal discussion about how the structure of compensation in banks created perverse incentives, see Diamond and Rajan (2009).

[30] Even with access to private litigation as recourse for recovering damages, standards (regulation) might produce more efficient outcomes because standards potentially enhance the likelihood of enforcement. Shleifer (2005, p. 445–6) notes "It may be relatively easy to convince a judge—by persuasion or bribery—that a security issuer who concealed information from investors is not liable when there are no specific rules as to what needs to be disclosed. It is much harder for the issuer to convince the same judge when the law states specifically what must be disclosed. Perhaps for these reasons, private enforcement of public rules is a highly efficient strategy of enforcing good conduct in many situations (Hay and Shleifer, 1988; Hay, Shleifer, and Vishny, 1996)."

the performance measure. For example, auditors vouch for the quality of a firm's receivables, which enables credit sales to be included in the determination of accounting earnings. External auditing enhances the credibility of financial reports and also contributes to making the periodic performance measure a more reliable measure of management performance. In addition, auditing facilitates the use of accounting measures in explicit and implicit contracts between shareholders and management. The enhanced contractibility of accounting arises because an external party, the auditor, certifies that management reports conform to an agreed upon set of accounting principles, GAAP. The institution of auditing emerged to fulfill an economic demand for their services that arose in the absence of regulation (see Watts and Zimmerman, 1983). The combination of economic returns to reputation and the threat of litigation serve as incentives for auditors to be independent, and so lend credibility to their attestation of corporate financial reports.

2.2. The effect of debt on GAAP

We begin by briefly summarizing key properties of debt contracts. Whereas stockholders' claim over the firm's assets is analogous to them holding a call option over the firm's assets with an exercise price equal to the face value of debt, debtholders' claim is akin to that of a written put option, in that their upside is capped at the face value of debt (Black and Scholes, 1973, Merton, 1974). If firm value falls below the face value of debt, then the debtholders lose the difference between the face value of debt and the firm value. Debtholders lend capital to the firm in return for promised principal and interest payments, but the operating control of the firm resides with the combination of shareholders and management so long as the contractual terms of the debt are being honored. Like the shareholder-management agency

relationship, debt creates an agency relationship between shareholders and debtholders (Jensen and Meckling, 1976; Smith and Warner, 1979). In the context of this agency relationship, management is assumed to act in shareholders' best interests and therefore has incentives that are indistinguishable from those of the shareholders.

Given their payoff function, debtholders seek financial information about (i) the value of the assets in the event of liquidation, and (ii) firm performance. At the time of lending, debtholders are interested in timely receipt of interest and principal payments over the life of the debt contract. With that in mind, they seek information about the firm's income-generating ability, i.e., periodic firm performance, at the inception of the debt as well as over the life of the debt. In addition, because of the put option-like payoff structure of debt, debtholders seek information about the liquidation value of the assets, i.e., the value debtholders could recoup by selling the firm's assets in the event the firm's business performs poorly, and the firm is unable to make the contractual interest and principal payments.[31] We analyze how these information demands influence GAAP below.

2.2.1. Consequences of asset substitution and underinvestment problems in the agency relationship

The asset substitution and underinvestment problems (Myers, 1977, and Smith and Warner, 1979) drive debtholders' demand for information about the value of the firm's net assets

[31] We describe a simple setting in which one class of "debtholders" comprise all obligations of the firm. Realistically, however, firms typically have different classes of debtholders and some economic obligations do not even appear on the balance sheet. Debtholders naturally pay attention to unrecognized obligations as well as priority of various classes of debtholders. These nuances only serve to intensify the demand for conservatism and other properties of GAAP we discuss here (see, for example, Watts, 2003a and 2003b).

with liquidation in mind. This demand is manifested through the preparation of a balance sheet using accounting principles that include conditional conservatism.

Shareholders can potentially transfer wealth from debtholders to themselves by investing in overly risky assets, i.e., asset substitution. The potential for wealth transfer is greatest when the stockholders' call option is at or close to the money. However, at this juncture, shareholders' operating control of the firm is in jeopardy because as the stock slides out of the money, control rights to the firm's assets are transferred from shareholders to bondholders.[32] To reduce the likelihood of losing control, shareholders have an incentive to withhold bad news so that (i) the reported value of assets exceeds their fair value (and the face value of debt), and (ii) reported performance is embellished (see, e.g., Watts, 2003a,b; Watts, 2006). It is precisely under these circumstances that debtholders wish to be informed about bad news as early as possible so that they can determine whether to restrict shareholders' opportunistic risk-taking through greater oversight and debt covenants. Conditional conservatism alerts debtholders to the potential for wealth expropriation on a timely basis, and therefore a need for transfer of control from shareholders to debtholders or other actions (see Watts, 2003a; Zhang, 2008).

Debtholders face a similar issue with respect to underinvestment as the stockholders' call option falls out of the money. Once again, conditional conservatism protects debtholders from expropriation by recognizing bad news on a timely basis and so preventing stockholders from overstating asset values.[33]

---

[32] We ignore practical impediments to this transfer because the predicted directional effect on GAAP is unlikely to be affected by these legal frictions.

[33] A recent analytical exercise in Gigler, Kanodia, Sapra, and Venugopalan (2009, p. 791, original emphasis) concludes "the result that accounting conservatism actually *detracts* from efficiency of debt contracts, a result that is strikingly different from that" suggested here and elsewhere in the literature. The opposite conclusions, in our opinion, are a direct consequence of Gigler *et al.* ignoring agency problems like asset substitution and underinvestment.

Because lenders anticipate these types of agency problems, they typically demand conditionally conservative accounting rules as a precondition to lending. Further, because lenders price protect themselves *ex ante*, shareholders are likely to voluntarily adopt this form of accounting rules because it minimizes their net borrowing costs (see Beatty, Ramesh, and Weber, 2002; and Asquith, Beatty, and Weber, 2005).

2.2.2. Debtholders' demand for verifiability and auditing

Because debtholders might be forced to recoup the amounts they are owed through liquidation of the firm, they demand information about the value of the firm's separable and salable assets net of its economic obligations. Firm value is likely to exceed the sum of the values of its separable net assets by the amount of goodwill, which represents both firm-specific assets-in-place and growth options (e.g., Roychowdhury and Watts, 2007). Because this goodwill has little or no liquidation value, and because its market value on a going concern basis is largely unverifiable, debtholders generally ignore it in making lending decisions (for example, see Watts, 1977; Leftwich, 1983; Watts, 2006).[34] In this sense, unconditional conservatism in GAAP can be attributed to stakeholder demands that the balance sheet reflect only "hard" net

[34] See Frankel, Seethamraju, and Zach (2008) for some seemingly contrary evidence on this point. Frankel et al. find that the likelihood that lenders use a net worth covenant (which reflects goodwill) rather than a tangible net worth covenant (which does not) increases with the amount of goodwill on the borrower's balance sheet. Beatty, Weber and Yu (2008) report a similar result but argue that lenders may be indifferent between using a net worth covenant that includes the entity's goodwill at inception and a tangible net worth covenant that ignores the goodwill entirely.

assets. The historic (pre-SEC) practice of writing-off goodwill immediately upon acquisition is consistent with this argument (Ely and Waymire, 1999).[35]

As in the case of shareholder-management contracts, the demand for auditing arises quite naturally in the presence of debtholders. They seek independent auditors' attestation that the preparation of financial statements conforms to GAAP, including conditional conservatism. Auditors thus help to enhance the credibility of financial information used by debtholders.

2.3 Demands of Different User Groups

We have outlined above how debtholders and equityholders demand somewhat different information from the financial statements, which means that the financial statements trade off their different informational needs. This problem is further complicated by the fact that other stakeholders (such as regulators, employees, government agencies, and customers) are all likely to have somewhat different informational needs. One solution to this problem is to provide different sets of financial statements to each set of users. However, producing multiple sets of financial statements is likely to be prohibitively costly, especially when we factor in the cost of auditing these different sets of statements.

Another solution to this problem is for firms to provide a single set of general purpose financial statements and allow different user groups to tailor (or adjust) the financial statements to suit their own purposes (Watts and Zimmerman, 1986). The fact that we don't observe multiple sets of financial statements (or different user groups preparing their own set of financial

[35] Ely and Waymire (1999) report that a common practice from the pre-SEC period was to write-off acquired goodwill directly to equity. This dirty-surplus practice is consistent with the desire to provide verifiable balance sheet measures without muddying contemporaneous performance measures (since the goodwill write-off from an immediately completed acquisition is unlikely to provide useful information about management performance). This example suggests there can be an economically meaningful role for dirty-surplus accounting, contrary to the FASB's fair-value-based conceptual framework where all changes in assets and liabilities must flow through the income statement.

statements from scratch) suggests that preparing a single set of general purpose financial statements is likely to be the lowest cost solution to this problem (also see Leftwich, 1983). However, the question remains as to what the "general purpose" financial statements should look like. Some (e.g., Francis et al., 2006, and Barth et al., 2001) suggest that equity market investors are the primary users of financial statements and that their focus on equity valuation (and "unbiased" performance measures) means that financial statements should be free of conservatism (of either type).[36] The economic theory outlined above, however, predicts that both equity holders and debt holders demand conservatism for a number of reasons, so unbiased financial statements are unlikely to be viable for general purpose financial reports. Conservatism has been embedded in accounting rules as they have evolved endogenously over hundreds of years, which suggests conservative general purpose financial statements are economically efficient. This is not surprising when one considers that agency problems among various corporate stakeholders, and particularly between management and other groups, are ubiquitous, and the agency relationships often provide management with incentives to overstate periodic performance measures.

2.4. Implications for GAAP

Based on a review of the literature, we have summarized a simple economic setting in which debt- and equity holders demand financial information about the value of the firm and periodic performance of the firm. Our conclusion is that this efficient contracting view of GAAP, based on the contributions of Jensen and Meckling (1976), Holthausen and Leftwich

[36] Penman (2007) argues that the existing approach to income determination is helpful in revising expectations of future performance and hence useful in equity valuation. He further argues that the current model is superior from an equity valuation standpoint than alternatives, including an "unbiased" model that relies heavily on fair value accounting.

(1983), Watts and Zimmerman (1986), among many others, is likely to survive, while the alternative "valuation" viewpoint is not. Under the efficient contracting view, the demands of equity- and debtholders are similar in many respects, but also differ along several important dimensions.

First, equity holders demand information about the firm's periodic performance (output), which they use to evaluate, reward, and punish the management. The realizability concept in the revenue recognition principle is a direct consequence of the demand for a reliable, output-based measure of periodic performance.

Second, stakeholders demand verifiable information because they recognize that management as the supplier of financial information has both superior information about the firm's prospects and incentives to favorably skew the financial information. While equity investors are interested in receiving information relevant for valuing the firm, they also recognize that management has incentives to bias this information. This results in trading-off the relevance and timeliness of financial statement information in favor of verifiability (reliability). GAAP is also influenced by the trade-off between the demand for a reliable periodic performance measure and financial information relevant for valuation, which transcends periodic performance.[37] We expect, and evidence suggests, that periodic performance and valuation (i.e., change in market value) measures are positively, but not perfectly correlated.

Third, these stakeholders seek conditionally conservative financial information in which the verifiability thresholds for recognition of bad news are lower than those for good news. Preference for conditional conservatism recognizes management's (with respect to investors) and

[37] Johnson (2005) in the context of the expanding use of fair value accounting in standard setting articulates the FASB's position as "the Board does not accept the view that reliability should outweigh relevance for financial statement measures."

shareholders' (with respect to bondholders) reluctance to disclose bad news and undertake actions to the detriment of these groups, especially in the presence of bad news. Conditional conservatism as an explicit attribute of GAAP is also helpful in the enforceability, through litigation, of contracts between shareholders and management and between debtholders and shareholders.

Fourth, in extreme unfavorable circumstances, debtholders recoup their principal through liquidation of a firm's assets. With this possibility in mind, debtholders seek information about the value of assets in liquidation.[38] Therefore, debtholders' interest is in the value of separable and salable assets, excluding goodwill and certain other intangibles, which represent assets-in-place with no alternate use and/or future rents the firm might have earned as a going concern.

Fifth, the combination of demand for information about periodic performance and demand for verifiable information leads to the primacy of performance measurement and control over valuation in determining important attributes of financial statements. The income statement is primarily oriented toward performance measurement whereas the balance sheet serves the control (stewardship) role. These conclusions do not imply that each statement exclusively serves one purpose or the other. Nor do we suggest that the two statements are entirely separate with distinct, unrelated properties. In fact, double-entry book-keeping ensures that the balance sheet and the income statement articulate.

Finally, the demand for auditing arises in part to enhance the credibility of the management-supplied information about the firm's financial condition and economic performance. The demand for audited financial statements also contributes to verifiability and

[38] Debtholders also seek other information, including forecasts of cash flows from operations, earnings, leverage, etc., but such information is typically under the assumption of the firm as a going concern, not a firm in liquidation with debtholders in control.

conditional conservatism as properties of GAAP. Our analysis and predictions of the properties of GAAP throughout this study are predicated on the assumption that well-functioning auditing institutions exist in the economy.

The economic forces outlined above shape the demand for and therefore the content of financial reports. In addition to the demands from equity holders and debtholders described above, demands of other users of financial statements like employees, customers, suppliers, and regulators also influence the nature of GAAP. Managers and current equity holders have incentives in equilibrium to supply financial information that meets these demands. Doing so provides access to capital and economic opportunities, and can additionally lower the cost of capital.

Given the costs of producing, auditing, and processing financial information, it is likely that comparability and consistency are desirable characteristics of financial reports. This gives rise to a body of GAAP. Of course, in practice, observed GAAP is the result of both an economic equilibrium and political forces. We address the impact of political process on GAAP in Section 4. But first, we discuss the implications of the theory of GAAP outlined above for the structure of GAAP financial statements.

3. Implications of the theory for the structure of financial statements under GAAP

The efficient contracting theory we discuss in Section 2 suggests that GAAP financial statements satisfy two principal market-driven demands:

1. The income statement provides information useful for managerial performance measurement.

2. The balance sheet provides information on the values of the entity's separable assets and liabilities, for control (stewardship) purposes.

In this section, we discuss in more detail the implications of the efficient contracting perspective for the GAAP rules used to prepare these two financial statements. We first discuss why "dirty surplus" accounting arises naturally from our economic model of GAAP.

Under "clean surplus" accounting, all transactions that affect the entity's net assets and that are not transactions with the owners are recorded on the income statement and flow through retained earnings on the balance sheet. This accounting thus results in two components of stockholders' equity, paid-in capital and retained earnings. Because the income statement and balance sheet serve somewhat different purposes, however, such "clean surplus" accounting is unlikely to survive as a necessary attribute of financial reporting. In particular, certain items that would be included as part of income under clean surplus accounting do not provide useful information for performance measurement purposes (e.g., Holthausen and Watts, 2001, pp. 43-49). Under current US GAAP, there are three components of Other Comprehensive Income (OCI, i.e., "dirty surplus"), which for most entities are both relatively transient and non-operating in nature: unrealized gains and losses on marketable investment securities and certain derivative securities, foreign currency translation gains and losses, and the effect of the minimum liability pension adjustment. It is reasonable that these items are excluded from income because they do not provide meaningful information about management performance during the period (because, for most non-financial entities, they do not inform us about the entity's operating performance).[39]

[39] Mangers are expected to manage the risk associated with marketable securities, derivatives, and foreign currency translations; thus, a case for including gains and losses associated with these activities in performance measures can be made. However, the practice of excluding these items from the income statement likely reflects a market equilibrium under which managers are unable or unwilling to bear all firm risk in a measure of their performance. There have been calls to re-examine this equilibrium in the wake of the 2008–09 financial crisis.

Consistent with this, Li (2009) finds that many private debt contracts define net worth to exclude accumulated other comprehensive income.

3.1. The Balance Sheet

Consistent with its use before regulation in the U.S., the balance sheet primarily serves the interests of the entity's creditors, broadly defined to include the regulatory use of this statement (for example, by bank regulators).[40] Thus, the balance sheet aggregates the values of the entity's separable assets and liabilities, and so provides a lower bound on the entity's value in liquidation. This has implications for rules that govern the recognition and measurement of balance sheet items, which we address in turn.

3.1.1. Balance Sheet Recognition Criteria

Under current GAAP, three criteria must generally be satisfied for an item to be recognized on the balance sheet as an asset: (i) provides probable future economic benefits; (ii) arises as the result of a past transaction or event, (iii) is under the control of the entity.[41] The use of these criteria is consistent with the efficient contracting view that the balance sheet primarily serves as a tool for stewardship, satisfying creditors' interests. Assets must be under the control of the entity so that they can be used, legally, to satisfy creditors' claims in the event of bankruptcy or liquidation. The event giving rise to the asset (and evidencing its measurement at cost) must be reliable and verifiable, which necessitates a past transaction or event. In addition,

[40] The most obvious example of regulations that do this is the regulation of banks under BIS (Bank for International Settlements, or Basel) standards, which define minimum levels of regulatory capital. Under these rules, regulatory capital is adjusted stockholders' equity, where the adjustments remove certain intangibles that do not have clear economic value and so cannot support the banks' obligations.

[41] See para. 25, CON6 ("Statement of Financial Accounting Concepts No. 6: Elements of Financial Statements").

the balance sheet serves the stewardship demands of stockholders, who demand some assurance that the entity's assets have not been expropriated during the period.[42]

The stewardship role of the balance sheet necessitates the exclusion of economic resources that cannot be used to satisfy creditors' claims against the entity. There has been a good deal of controversy about whether the balance sheet should include assets related to various internally developed intangibles such as brand names, customer satisfaction, intellectual capital of various forms, etc.[43] These items typically fail conventional asset recognition criteria because there is no external transaction (these items are often internally developed), because the benefits are highly uncertain, and because property rights over these items are not well developed, making legal claims uncertain.

Proponents of the view that these intangibles should be capitalized argue that by failing to recognize these items, the balance sheet excludes assets that have significant economic value (e.g., Lev and Zarowin, 1999). However, management supplied estimates of the value of such intangibles are not credible, and for contracting purposes, their inclusion is of limited use. Specifically, in contracting, these exclusions are justifiable because it is unclear that these items could be used to satisfy creditors' claims given uncertainty about both their future economic benefits and/or whether property rights are sufficiently well-defined as to establish legal rights over these items. Moreover, measurement of these items often relies on information and estimates provided by management, which are not verifiable and subject to bias. This strengthens the view that these items should not be included on the balance sheet.

[42] The balance sheet also allows stockholders to evaluate the value of their option to shut the firm down at any point in time (the abandonment option; see Hayn, 1995; Burgstahler and Dichev, 1997).
[43] For a summary and references, see Skinner (2008a).

The more general point is that all assets currently recognized as such under GAAP have anticipated future benefits; with the exception perhaps of cash itself, there is always some degree of uncertainty associated with future cash flows. Thus, the capitalization issue is one where GAAP rules draw the line between those expenditures for which the anticipated future benefits are sufficiently certain as to justify asset recognition, and those expenditures for which this is not the case. Under current GAAP, the anticipated cash flows from most internally developed intangibles (such as customer loyalty) are seen as being inherently too uncertain to justify recognition.

We favor a GAAP rule that explicitly recognizes that uncertainty about future cash flows associated with the entity's expenditures varies along a continuum, and clearly indicates where along that continuum uncertainty becomes too large to allow capitalization. This type of rule is likely to achieve better consistency than drawing the line at different points for different classes of assets (e.g., always recognize real estate assets, never recognize customer relationships) unless, in practice, the classes of assets are used as proxies for the uncertainty rule.[44] We acknowledge that while the principle of specifying a level of uncertainty below which assets can be capitalized is desirable, as a practical matter specifying such a level objectively (i.e., not requiring management judgment in its implementation) will be challenging, and rules might be needed. We revisit the issue of principles versus rules in Section 4.

Furthermore, for the purpose of contracting, to be recognized as assets, economic resources need to have economic value on a stand-alone basis, i.e., they need to be separate and salable (Holthausen and Watts, 2001). As indicated above, balance sheets provide a lower bound

[44] This uncertainty cutoff is likely to differ across different GAAP regimes given underlying institutional differences in the legal environment (for example, intangibles may have different legal lives, which affect the uncertainty about future benefits), audit quality, securities enforcement, and so on.

on the value available to creditors in the event the entity ceases to be a going concern. Consequently, when the value of assets, such as certain intangibles, is attributable to economic rents that flow from the entity's ongoing operations and disappear when the entity ceases to be a going concern, they are less likely to be included on the balance sheet. This logic is straightforward, as the following quote from Alan Greenspan, discussing the collapse of Enron, makes clear:

> "As the recent events surrounding Enron have highlighted, a firm is inherently fragile if its value added emanates more from conceptual as distinct from physical assets. A physical asset, whether an office building or an automotive assembly plant, has the capability of producing goods even if the reputation of the managers of such facilities falls under a cloud. The rapidity of Enron's decline is an effective illustration of the vulnerability of a firm whose market value largely rests on capitalized reputation. The physical assets of such a firm comprise a small portion of its asset base. Trust and reputation can vanish overnight. A factory cannot." Quote taken from Lev (2002, pp. 131–132).

Evidence from privately negotiated lending agreements supports the contracting view of balance sheets. Leftwich (1983) and more recently, Beatty, Weber, and Yu (2008) provide evidence that parties to these agreements, who are free to adjust GAAP financial statements in any way they choose, make systematic adjustments to GAAP, including: (i) the removal of certain assets, often intangibles, from balance sheets, (ii) the inclusion of certain obligations that do not qualify as liabilities under GAAP.

Another important attribute of asset recognition criteria is the extent to which an asset's recognition and measurement are dependent on management judgment. Consider the treatment of research and development (R&D) expenditures. Under U.S. GAAP (SFAS 2), R&D costs are expensed as incurred in spite of the fact that in some instances the associated anticipated future cash flows are likely to be reasonably certain. This rule has survival value under efficient contracting because the alternative, i.e., capitalization under the valuation perspective, requires

reliance on managerial judgments about the likelihood of future benefits. Under this view, for example, the corresponding IFRS standard, IAS 38, allows too much managerial discretion because the information necessary to value the asset is difficult for management to communicate objectively. Under IFRS, research costs are expensed as incurred while development costs may be capitalized if commercial and technical feasibility have been established. This is a subjective standard, relying on information usually knowable only to management, thus allowing scope for managerial discretion. Because this leads to the potential for manipulation by management, efficient contracting implies a more conservative approach, such as that in SFAS 2, when there is a relatively large information asymmetry about asset value between management and outsiders.

Bank regulatory rules operate in much the same way. BIS rules, as implemented in the U.S. and most other countries, exclude certain assets when computing banks' regulatory capital, including intangibles and most deferred tax assets, because these assets have uncertain economic values.[45]

These principles imply that goodwill should not be recognized on the balance sheet. Goodwill has at least two strikes against it. First, because goodwill effectively represents the rents available to economic activity, it is not a separate and salable asset, and so has little or no value as collateral. Second, the economic value of goodwill may be observable to management but is unobservable to outsiders, except at significant cost. Thus, while the initial amount of recorded goodwill is bounded from above by a verifiable amount (i.e., the purchase price of the acquired entity is verifiable, although the allocation of that purchase price between the assets and

[45] According to BIS guidelines, assets should be measured 'conservatively' and regulators are expected to adjust GAAP-based financial statements for both intangible assets (including goodwill) and deferred tax assets (BIS, 2000). The Fed's risk-based capital guidelines for U.S. banks limit the amount of deferred tax assets (DTAs) included in Tier I capital to: (i) the amount of DTAs expected to be realized within 1 year, and (ii) 10% of Tier I capital, whichever is smaller. These guidelines also exclude goodwill and 'certain other intangible assets' from Tier I capital.

liabilities acquired and goodwill is not), the current GAAP impairment rule requires managers to periodically compare the book value of the goodwill to its fair value. Determining these fair values is highly subjective and difficult for auditors to verify.

To summarize, we predict that stakeholders will demand GAAP that's consistent with efficient contracting. Efficient contracting supports the use of the following asset recognition criteria: (i) there be a clearly defined level of uncertainty of cash flows beyond which assets cannot be recognized, and (ii) assets have economic value on a stand-alone basis (are separate and salable), and (iii) the benefits associated with assets can be reliably measured by parties separate from management. Consistently using these criteria would allow GAAP to address the emergence of new transactions without having to engage the rather cumbersome standard-setting machinery on an *ad hoc* basis, which inevitably results in standard-setting that lags economic innovation and can succumb to special-interest exceptions.

Evidence from private contracting supports the view that certain items are usefully excluded from balance sheets for creditors' purposes while others are included. For example, the major ratings agencies adjust balance sheet leverage ratios to include the effects of off-balance sheet securitizations, operating leases, pension liabilities, and other such economic obligations that are not recorded on the balance sheet under current GAAP. The common feature shared by these transactions is that their exclusion results in balance sheets that systematically understate the entity's financial leverage. From the viewpoint of creditors, securitizations represent financing transactions that increase the entity's leverage. Consequently, the major ratings

agencies, as well as certain debt covenants, adjust balance sheets to include the effect of these transactions (Kraft, 2008; Moody's, 2005).[46]

This view of the balance sheet has implications for the recent discussion regarding the appropriate treatment of off-balance sheet transactions. SFAS 140 allows entities to derecognize assets and liabilities transferred to other entities as part of securitization transactions, largely through the use of vehicles known as "qualified special purpose entities (QSPEs)." In spite of this accounting treatment, some argue that the originating entity (usually a bank) retains an economic obligation to make good on the SPE's obligations in the event its assets are insufficient to satisfy the claims of creditors (the investors who purchase various types of asset-backed securities).[47] Under the contracting model, unless obligations are truly disposed of in an economic sense, failure to reflect such items on the balance sheet overstates the net assets available to creditors. This issue has received a good deal of attention in the wake of the recent subprime financial crisis, in which the value of these securities and the associated securitization vehicles collapsed, and has caused the FASB to revise its thinking on this issue and propose the elimination of the QSPE concept for securitizations.[48] It thus appears that market forces are pushing the FASB to move its accounting back into line with the contracting model.

As the events of the recent financial crisis make evident, an important feature of with-recourse securitizations (or those that otherwise do not represent an economic sale of assets) is that they allow entities to become highly leveraged without that leverage being evident on the balance sheet. In our view, this is indicative of a failure of the balance sheet to achieve one of its

---

[46] The principal ratings agencies also adjust the balance sheet classification of hybrid securities to counter firms' tendency to underreport debt on the balance sheet by classifying hybrid securities into the equity or "mezzanine" sections of the balance sheet.

[47] As indicated above, the ratings agencies, which have a strong creditor perspective, also make this argument.

[48] See: *Accounting for Transfers of Financial Assets—an amendment of FASB Statement No. 140* (issued 9/15/08), and *Proposed Statement, Amendments to FASB Interpretation No. 46(R)* (issued 9/15/08). Both documents are available at http://www.fasb.org/draft/index.shtml.

fundamental economic objectives—to provide outsiders with a clear picture of the entity's obligations. Bear Stearns and Lehman both had *balance sheet* leverage ratios well in excess of 30-to-1 in periods before they failed, with overall economic leverage substantially higher than that. Transactions such as securitizations, through their multiplicative nature, made it possible for entities to achieve levels of leverage many times greater than was reflected on their GAAP balance sheets. This means that relatively small declines in asset values can quickly result in insolvencies, with attendant feedback effects on the economy. Under the efficient contracting view, balance sheets that do not reflect these large amounts of leverage are of little use to creditors (and ultimately equity investors as well); as a result, we argue that such transactions should be capitalized so that balance sheets reflect the economics of these types of transactions.

More generally, the efficient contracting framework implies that assets and corresponding obligations from transactions such as leases, purchase commitments, and hedging (via derivatives) transactions be reflected in the financial statements in a manner that represents their economic substance, and more specifically that a "control" test be adopted. That is, we view the balance sheet as appropriately reflecting those assets and corresponding liabilities over which the entity can exercise a greater degree of economic control than any other entity.[49]

In the case of leases, for example, efficient contracting implies that standard-setters' proposed approach (to recognize all noncancelable leases on the balance sheet as assets and liabilities) is too aggressive.[50] Setting aside some of the practical implementation issues, the

---

[49] This is consistent with the efficient contracting view that the balance sheet should give a comprehensive accounting of the assets available to satisfy the obligations of creditors.

[50] New rules are moving towards recognition of all leases (http://www.fasb.org/project/leases.shtml). "The boards [IASB/FASB] have analyzed lease contracts and, in line with the views of many users of financial statements, have concluded that, whether classified as operating leases or as finance leases, lease contracts always create rights and obligations that meet the boards' definitions of assets and liabilities… If this principal [sic] is adopted in a new standard on lease accounting, it would result in the lessee recognizing:

- an asset for its right to use the leased item (the right-of-use asset)
- a liability for its obligation to pay rentals."

economic approach would capitalize those leases that, in economic substance, are essentially asset purchases financed by debt. This means that relatively short term lease transactions (such as a three year automobile lease) would not be recognized on the balance sheet because the entity does not have control over the corresponding asset, which is therefore not available to satisfy creditors' obligations.

A practical problem with this approach is the same as that currently encountered under GAAP, such as SFAS 13 in the U.S., which uses four tests to classify leases as capital or operating leases. Under this rule, entities can, at relatively low cost, structure lease contracts to strategically avoid classification as a capital lease (e.g., by structuring the lease term to be shorter than 75% of the useful life of the asset). One approach to this problem that is currently being considered by standard-setters is to treat all non-cancelable lease arrangements as capital leases and record them on balance sheets. While this approach removes incentives for companies to structure leases to achieve off-balance sheet treatment, it also results in capitalization of what are substantively operating leases. An alternative approach would categorize and account for leases as either operating or capital leases, similar to the current model, but increase the economic costs of artificially structuring capital lease transactions to obtain operating lease accounting treatment.

For example, the current U.S. GAAP rule capitalizes those leases for which the present value of minimum lease payments is at least 90% of asset value. This means that parties structuring capital leases to keep them off-balance sheet have to contrive to reduce the reported present value of the lease payments by just over 10% of the actual economic present value to qualify for operating lease accounting. The economic approach to GAAP would lower this threshold so that the discount necessary to avoid capital lease treatment is significant enough to discourage parties from structuring lease agreements only to qualify for off-balance sheet

treatment. The general idea here is that accounting standard-setters should factor in the incentives of parties to a transaction to game accounting rules, and craft standards accordingly.

The asset recognition rule based on economic control described above would exclude most executory contracts, including purchase commitments, from recognition on balance sheets. These transactions do not give rise to assets and liabilities as long as the business is a going concern, so that the economic claims and obligations are resolved in entity's normal course of business. Further, we would adopt a liability definition similar to that currently employed in U.S. GAAP under SFAS 5; that is, liabilities are recognized when there is (i) a probable future sacrifice of resources (ii) that results from a past transaction or event and that is (iii) measurable in monetary terms. Thus, in most instances we would not reflect the effects of contracts like purchase commitments or guarantees on the balance sheet except to the extent of the expected value of the costs that would be incurred in the event such contracts were broken.

The implication for GAAP is that balance sheets would reflect contingent obligations such as lawsuits, guarantees, insurance contracts, and so forth, at their expected values rather than the full amount of the entity's obligation in the worst possible case.[51] Thus, for example, the recent problems at AIG and other insurers that insured financial institutions against losses from their investments in financial instruments represent a failure to accurately estimate the probability of certain extreme adverse outcomes, as opposed to a failure of financial reporting rules.[52]

---

[51] FIN 45, released by the FASB in 2002, requires entities that provide guarantees to recognize a "stand ready" obligation at fair value on the balance sheet. In our view it is more appropriate to treat such obligations in the conventional way as contingencies because this better represents the economics of the transaction (this effectively means that the likelihood of having to make good on the guarantee is "possible" and not "probable," the terms used in SFAS 5).

[52] Whether the failure is due to negligence, (intentional) bias, or to an honest error due to the complexity of these transactions is beyond the scope of our paper.

One approach to dealing with contingencies such as these is not to require balance sheet recognition, but rather to ensure that pertinent information about the nature of the contingency and the magnitude of the potential loss are disclosed in footnotes. However, it is not clear that footnote disclosure of off-balance sheet obligations, even if of high quality, is a complete substitute for recognition. Although there is evidence that some sophisticated users of financial statements (such as credit ratings agencies and private lenders) adjust balance sheets to include such items when their effect is disclosed in footnotes, it may well be that other users (perhaps individual investors) place lower weights on the financial obligations left off an entity's balance sheet. [53] Further, explicit and implicit contracts may well be based on balance sheet numbers without complete adjustment if contracting and information costs are non-trivial, which we see as being descriptive. Bernard and Schipper (1994) conjecture that recognition provides a signal about the reliability of measurement, which may cause users to place greater weight on certain items that are recognized rather than disclosed.[54]

3.1.2. Balance Sheet Measurement Rules

The existing accounting model measures balance sheet assets and liabilities using a "mixed attribute" model. With certain exceptions, most balance sheet items are still recorded on a modified historic cost basis; that is, they are initially recorded at cost, amortized or allocated to expense in a systematic way, and are subject to an impairment test, which reduces amortized cost

[53] See Leftwich (1983), and Kraft (2008).

[54] Under SFAS 5, balance sheet recognition of contingencies signals that managers have relatively precise information about the expected loss while non-recognition indicates the opposite. We are agnostic about the reasons certain individual investors place greater weight on items that are recognized on balance sheets rather than being disclosed. For some experimental research on this question see Maines and McDaniel (2000); and Libby, Nelson, and Hunton (2006). We assume here that GAAP does not give management a choice about whether to recognize or disclose a given item. If there was such a choice, management's decision to recognize an item would clearly be informative and so recognition and disclosure would not be equivalent.

to a lower amount if the assets are judged to be impaired. Assets cannot be revalued upwards under U.S. GAAP. This reflects the longstanding tendency for US GAAP to be conservative.

The FASB began to move away from strict adherence to this model and towards fair value accounting with the release of SFAS 115 in 1993. Under this rule, most marketable investment securities are measured at fair value on the balance sheet with changes in fair value taken either to income or directly to equity (as part of dirty surplus). The fact that fair value accounting (other than through impairment accounting) was first introduced for these assets, which trade in liquid secondary markets and for which market values are likely to provide a better measure of liquidation value than the cost basis, is consistent with what one would expect under efficient contracting (i.e., use market values only when those values can be objectively verified by reference to external transactions).[55]

In 1998, the FASB released SFAS 133, which applied much the same fair value accounting model to derivative securities. Although SFAS 133 extended fair value accounting to securities whose value is sometimes hard to determine reliably, the rule applies to derivatives that represent both assets and liabilities of the entity. One effect of this rule was to increase the reporting transparency of entities' derivatives positions, which previously had largely been kept off the balance sheet in spite of the fact that derivative transactions could expose the entity to large losses.[56] Thus, this rule helps protect creditors and other stakeholders from bearing losses

[55] Consistent with the efficient contracting view, this rule was spurred by the U.S. Savings and Loan crisis of the 1980s, under which banks' investment portfolios, then recorded on an amortized cost basis, turned out to have liquidation values well below book values, which generated large losses for bank creditors, which suggests a failure to record impairments on a timely basis. This resulted from the practice under which these entities "cherry picked" their investment portfolios to realize accounting gains.

[56] This is particularly true of derivatives that trade on markets without margin requirements. When dealers require a margin that depends on the securities' values, losses are less likely to get out of hand because the trader (the company) is forced to cover its losses as they occur. When there are no margin requirements there is no such discipline, which provides a role for fair value. In other words, fair value accounting can serve as a substitute disciplining role for entities' trading activities.

by ensuring that the balance sheet provides a more timely and so a more complete rendering of the entity's economic obligations, as well as the resources available to satisfy those obligations.[57]

Given our objectives, it is useful to consider whether fair value is an appropriate measurement basis for balance sheet items generally. If reliably measured, it seems clear that measurement at fair value is superior to the use of an historic cost basis as a means of providing information about the potential economic values of assets, provided those assets are separable.[58] Thus, a sufficient condition for the reliable measurement of these items is that they trade in liquid secondary markets, as is the case currently for investment securities.[59] If such a market is unavailable, however, it is harder to envision fair value being viable, especially if the determination of fair value is largely a matter of managerial judgment.

In the absence of liquid secondary markets, one might consider using a "mark-to-model" approach under which a generally accepted valuation methodology (such as Black-Scholes) is used to estimate fair value. There are at least two problems with such an approach. The first relates to the reliability of model inputs. In the case of employee stock options (ESOs), for example, there is evidence that managers manipulate estimated model inputs to reduce the estimated fair value and thus the potential adverse income statement effects (Aboody, Barth, and Kasznik, 2006; Bartov, Mohanram, Nissim, 2007). The second problem relates to the reliability of the model. In the case of ESOs, for example the model is known to be less reliable when the

[57] Prior to this rule, entities could engage in derivatives transactions, including speculative positions, about which there was little or no disclosure.

[58] This is not to say that because fair values are reliable measures of economic value it follows that they should be used for balance sheet measurement purposes. As we have emphasized, the balance sheet's primary role is one of stewardship/control, for which modified historic costs (with an impairment rule) are likely to be more suitable even if they are less 'value relevant' with respect to equity values.

[59] This requires that the fair value of the investment is the exit price under liquidation, i.e., the firm will be a price taker if it decides to sell the investment. This is a reasonable assumption if the firm does not have a substantial stake in the underlying investment (meaning a stake lower than that which would give it "significant influence," which triggers the use of the equity method).

instrument in question is not traded on liquid secondary markets or other assumptions of the model are not satisfied (the Black-Scholes approach to pricing options is less reliable in the case of ESOs because those securities are not traded). While we know that using the conventional Black-Scholes approach over-estimates the value of ESOs because these securities are not traded, there is no reliable way of quantifying the appropriate discount.

As discussed previously, one of the problems with recognizing goodwill as well as certain other internally-developed intangibles is the difficulty of establishing fair values for these items (which is necessary to implement rules that require initial measurement on a historical cost, i.e., transactions basis combined with periodic testing for impairment). This occurs because intangibles do not trade in liquid secondary markets, which reflects the fact that most internally developed intangibles have the following attributes: (i) poorly defined property rights (including a relatively high cost of establishing control over the benefits from the asset), (ii) non-separability (the economic value of intangibles often arises from their combination with other assets, as for example in the case of economic rents), (iii) uncertain economic values because of the uncertainty of future benefits, and (iv) information asymmetry between management and outsiders with respect to value measurement. Consequently, it is difficult to envision the use of fair values in accounting for intangibles.

Consider also the case of the FASB's recent statement that gives entities a broad fair value option in accounting for financial instruments (SFAS 159). Under this rule, an entity's liabilities as well as its assets can be measured at fair value on the balance sheet. In the case of the entity's obligations, fair value is measured as the present value of the future cash outflows, discounted at the entity's cost of debt. Thus, if an entity's credit worsens so that its cost of debt increases, the measured fair value of the debt declines (a higher discount rate is applied to the

constant cash flows). This means that these obligations are not measured at the amounts actually due to the entity's creditors, and can significantly understate the actual obligation if the entity is in financial difficulty. In addition, the income statement reports a gain, which implies that overall firm value is unaffected by these events and that equity value has increased. Our view under efficient contracting is that this accounting degrades the balance sheet's ability to provide meaningful information to creditors and others as well as the income statement's role in measuring performance.

Overall, while we recognize that there are advantages to the use of fair values in the financial statements, these advantages must be balanced against some significant disadvantages.[60] In the area of marketable investment securities, the tradeoff favors the use of fair value accounting. For derivatives, which do not always trade in liquid secondary markets, the tradeoff is less favorable because fair values are not independently observable and must be estimated by management, rendering them subject to manipulation. For a number of reasons, including the fact that fair values are unobservable, we argue against the recognition of goodwill and other intangibles. To summarize, we are skeptical about whether the expanded use of fair values, which is an important feature of current standard setting agendas at the FASB and IASB, has long run survival value in financial reporting.

[60] Christensen and Nikolaev (2009) provide some interesting evidence on the use of fair value accounting for non-financial assets when firms have the ability to choose. These authors look at IFRS adoption in Europe which effectively allowed companies in the U.K. and Germany to choose either conventional historic cost accounting or fair value accounting for their non-financial assets. The authors find that a large fraction of the companies that had previously used fair value accounting for at least one class of non-current used the adoption of IFRS to change to historic cost. In contrast, there are almost no companies that used historic cost accounting prior to IFRS that chose to switch to fair value. The only exception to this is investment property owned by real estate companies, where fair value seems appropriate from a stewardship standpoint. The overall conclusion is that very few companies choose fair value accounting in practice.

3.2. The Income Statement

Under efficient contracting, the principal role of the income statement is to measure periodic performance, particularly that of management. Under this view, GAAP rules governing income statement recognition have evolved to reflect various stakeholders' incentives, particularly managers' incentives under compensation contracts and managers' incentives to stay in their jobs.[61] Consequently, revenue recognition criteria traditionally employed under GAAP defer the recognition of revenue until: (1) the entity provides goods and services to the customer, and reaches the point that no significant uncertainty remains regarding its ability to perform under the terms of the contract (i.e., revenue is 'earned'); and (2) payment is reasonably assured. Thus, even when cash is received in advance, recognition of revenue is deferred until such time as the entity (management) actually delivers on its contractual promises.

Moreover, as discussed in Section 2, income measurement rules require that losses are recognized when incurred while gains are deferred until they are actually realized in cash or legally enforceable claims to cash. Such conditional conservatism guards against management's incentives under most compensation arrangements to opportunistically boost reported earnings to increase the present value of their compensation, and has evolved as an equilibrium contractual response to these types of agency problems (e.g., see Jensen and Meckling, 1976; Watts and Zimmerman, 1986).

One of the disadvantages of such an approach is that it does not provide timely information to investors relative to the information impounded into stock prices (Kothari, 2001). This leads us to consider whether a more timely approach to revenue recognition is feasible. To deliver a system of income measurement that provides more timely information to investors

[61] We believe this is likely to be true in spite of the fact that there is no strong evidence of a relation between CEO turnover and firm performance (e.g., Brickley, 2003).

requires a different way of recognizing revenue. It seems likely that most of the current value increases impounded in stock prices during a given period relate to the market's anticipation of revenues. For example, the market responds favorably when Boeing announces an important customer has committed to buying new aircraft; however, the associated revenues are not recognized as part of income until the aircraft is actually built, Boeing has a binding sales arrangement with the customer, and (in most cases) some cash or some claim to cash has been received.

It seems impractical to us to recognize revenue at the time Boeing's customers initially indicate that they will purchase aircraft because there are numerous circumstances under which customers can renege on such promises or, more generally, when managers conceive projects they believe will be profitable. There are several problems with such an approach. Because managers are evaluated and compensated based on income statement numbers, and because revenue recognition under such a system relies heavily on managerial judgments, such a system would provide them with strong incentives to opportunistically recognize revenues early. Once management is paid, it is costly to recover compensation that is too large, *ex post.*[62] Instead, by deferring the recognition of revenue, we provide management with ongoing incentives to exert effort in such a way as to maximize the value of the project. That is, the revenue recognition principle helps resolve the moral hazard problem that exists between managers and stockholders. Finally, as should be clear from the rapidity with which the macroeconomic situation has deteriorated during 2008 and 2009, until the point of sale there is often significant uncertainty about whether customers will actually agree to take delivery of and pay for the aircraft.

[62] This problem is mitigated to the extent that management holds equity claims that impound this information. However, managers' wealth is likely to be more sensitive to short-run performance measures such as earnings than changes in the value of their equity claims.

Similar problems arise with respect to the determination of the costs that are matched to these revenues, since they also would have to be estimated well in advance of when they are actually incurred. This estimation must take place in the absence of costs actually being incurred, estimates of efficiency, or even the feasibility of production (witness the delays that continue to plague Boeing's ability to deliver its new Dreamliner 787 aircraft).

Finally, an approach that allows management to recognize revenues as products are developed requires companies to recognize the value of projects in advance of completion and record impairments if the value of the project is overstated. However, there is evidence that the timing and magnitude of impairments is discretionary (managers again have a significant informational advantage) and that managers can exploit this discretion to strategically delay and/or reduce the amount of impairment charges.

The IASB and FASB are currently considering radical changes to the GAAP rules governing revenue recognition. Consistent with their general philosophy of financial reporting, they are considering implementing a balance sheet approach to revenue recognition under which revenue would be recognized by measuring changes in the values of assets and liabilities that are associated with contractual arrangements with customers.[63] One version of this approach currently under consideration would measure changes in the fair value of these assets and liabilities as a means of recognizing revenue for the period rather than using an approach, similar to the extant model, under which recognition is driven by the output-based (realized) measurement of economic performance delivered (earned) for each period. For the reasons we discuss above, we argue that the change currently under consideration is ill-advised. Moreover,

[63] See observer notes to meetings of the IASB in November 2007 and January 2008, available here: *http://www.iasb.org/Current+Projects/IASB+Projects/Revenue+Recognition/Meeting+*Summaries+and+Observer+Notes/IASB+November+2007.htm. Also see Schipper et al. (2009).

this change reflects the standard-setters' general view that the balance sheet is the primary statement and that fair values should be employed for measurement in the balance sheet. It is also unclear how expenses would be determined under such a model.

3.3 Summary

The forces outlined in Section 2 predict GAAP consistent with efficient contracting, i.e., the managerial performance measurement role of the income statement and the control/stewardship role of the balance sheet. We therefore develop specific GAAP recognition and measurement rules under efficient contracting. Because the recognition and measurement roles are not completely concordant (we note the income statement's performance measurement role as dominant), reconciling the two financial statements requires the use of dirty surplus accounting. We argue that certain existing GAAP rules—such as the revenue recognition principle—arise naturally from the income statement's role in measuring performance and that recent prescriptions to change the revenue recognition model in fundamental ways are unlikely to have long run survival value. Moreover, we argue that the balance sheet's control measurement objective precludes the recognition of certain assets such as goodwill and has implications for the measurement of assets and liabilities. The efficient contracting approach implies that fair value accounting is unlikely to be tenable except for certain limited classes of assets because it fails to reflect the fundamental need for accounting conservatism as well as opening the door for managerial manipulation given the lack of verifiability of many fair value measurements.

4. Implications of the theory for developing GAAP in the future

We next turn our attention to broader policy issues in standard setting. In this section we focus on three conceptual issues that are likely to affect the development of GAAP in the future. First, in Section 4.1, we address the origin and consequences of regulating GAAP, i.e., why we regulate GAAP and how regulatory systems can be designed to generate GAAP consistent with economic demands. We conclude that competition between the FASB and IASB is the most effective means of achieving GAAP rules that are likely to facilitate efficient capital allocation. Moreover, evidence strongly suggests local political and institutional forces affect country-level GAAP rules. We therefore argue that a single global standard setter like the IASB is unlikely to survive and succeed. Countries embracing international standards are likely to modify and adapt those standards to local conditions. In the process, international standards are likely to devolve into country-level GAAP.

Second, in Section 4.2., we discuss the role of choice in accounting standards: while regulation, by definition limits accounting choice, regulators still have considerable flexibility in determining how much judgment managers, accountants, and auditors have to prepare financial reports. We also address the contemporary debate on principles versus rules and how this comparison, while meaningful to an extent, oversimplifies the issues of choice in accounting.

Finally, in Section 4.3., we address the role of the market efficiency assumption in standard setting. A fundamental objective of financial reporting is to promote economic efficiency through capital market efficiency, i.e., a competitive equilibrium in capital markets. Standard setters' perspective on the efficiency of capital markets with respect to accounting information is thus an important consideration in how they craft accounting standards. A growing literature on stock market mispricing with respect to accounting information could

prompt GAAP regulators to consider standards on the basis of the form of financial statements. We discuss why for both conceptual and practical reasons it would be unwise for standard setters to abandon the market efficiency assumption in standard setting.

4.1. Role of regulation

The regulation of GAAP in the United States originated in the 1930s and continues to the present day. Befor the 1930s, accounting practice was determined largely at the firm and auditor level, with little formal coordination among the players. "GAAP" represented just that: *generally* accepted accounting principles. Baxter (1979) notes that the establishment of the SEC marked the beginning of a four-decade journey to the "standardization" of GAAP: the first accounting regulator to operate at the behest of the SEC, the Committee on Accounting Procedure (1939–1959), produced "Research Bulletins;" its successor body, the Accounting Principles Board (1959–1973), produced "Opinions;" and it was not until the Financial Accounting Standards Board (FASB) came into being in 1973 that regulators began promulgating "Statements of Financial Accounting *Standards*.[64]"

Even since the 1970s, the role of the accounting standards regulator in the United States has been evolving. The most significant event in that evolution was the Sarbanes-Oxley Act of 2002. This Act, for the first time, formalized the role of the accounting standard setter, granting the FASB (or its successors) *de jure* status as the regulator of U.S. GAAP (U.S. Congress, 2002, Sarbanes Oxley Act, Sec. 108). Until the passage of the Act, the FASB had been funded largely

[64] Dye (2002) provides an explanation for the "perpetual" increase in standardization by making the distinction between *de jure* and *de facto* standards: *de jure* refers to formal standards as presented by regulators; *de facto* to equilibrium accounting practices as actually observed. Dye argues that as investors learn about firms' production functions, *de facto* standards change. Then, in order to keep the distance between *de jure* and *de facto* standards more-or-less constant, regulators write new *de jure* standards.

through voluntary contributions by corporations. The Act prescribed that listed corporations be assessed a tax to support the operations of the FASB (U.S. Congress, 2002, Sarbanes Oxley Act, Sec. 109). This represented a substantial departure from prior practice since the accounting regulator is now publicly funded.

Even as accounting standard setters in the United States have consolidated their position as regulators, we have little consensus on why we regulate GAAP. The study of the regulation of GAAP is important for our purposes because it can help explain the nature of accounting standards produced by the FASB, and can predict how different standard setting alternatives are likely to affect what GAAP will look like in the future. We organize the remainder of this section around a discussion of the various theories of regulation as they apply to the regulation of GAAP. We then discuss the implications of these theories for the design of accounting standard setting institutions going forward, particularly in light of the growing presence of the IASB in standard setting.

The regulation of GAAP is distinct from the regulation of financial reporting. The former refers to the practice of mandating accounting principles; the latter refers to the practice of requiring publicly available financial reports for entities that access public capital markets. The motives for regulating financial reporting lie in assumptions about market failure in endogenously arising financial-information markets (due to externalities and information asymmetries) and concerns about the fairness and/or efficiency of outcomes generated in such markets. We avoid a discussion of this issue, referring the interested reader to the well-developed literature in this area.[65] Our focus is instead on the regulation of GAAP, a phenomenon that has,

[65] See, for example, Benston (1969 and 1973), Mahoney (1999), Seligman (2003), and Mahoney (2009). Leuz and Wysocki (2008) provide an excellent survey of the literature in accounting (and related fields) on the regulation of financial reporting.

in the United States, arisen out of regulated financial reporting, but that can arise independently of such as well (as in the case of the IASB).[66]

In discussing the regulation of GAAP, we define "regulation" broadly to include a study of the organized production of accounting standards by so-called private standard setters like the FASB and the IASB.[67] In the course of their standard setting activities, these organizations define the grammar of accounting practice, and thus exert considerable influence on observed financial reporting. To understand their role as regulators, rather than the more commonly used standard setters term, it is helpful to contrast organized standard setting with the alternative: standards that evolve out of common practices by accountants and auditors (as occurred in the United States and elsewhere prior to the 1930s).

A vast literature in political economy is dedicated to addressing regulation of economic activity. That literature has produced at least three major theories to explain the existence and consequences of regulation.

1. Public interest theory of regulation
2. Capture theory of regulation
3. Ideology theory of regulation

We devote the remainder of this section to discussing and interpreting these theories in the context of accounting standards as a regulated product market.

[66] Another way to see the distinction between the regulation of financial reporting and the regulation of GAAP is to look at the customer in the respective product markets. In the financial reporting product market, the primary customer is the firm's investors (both debt and equity investors). In the GAAP product market, the primary customers are accountants and auditors.

[67] In the U.S., "private" standard setters have operated at the behest of the SEC to provide "substantial authoritative support" (Zeff, 2005a). Internationally, the "privately" developed IASB standards are mandated in many jurisdictions.

4.1.1. Public interest theory of regulation

The public interest theory describes regulation as a benevolent and socially efficient response to market failures (Pigou, 1938). Thus, a necessary condition for regulation under the public interest theory is the existence of market failures. Breyer (1982) describes the four commonly offered causes of market failures discussed under the public interest theory: (i) natural monopoly; (ii) externalities; (iii) information asymmetries; and (iv) excess competition (also see Leftwich, 1980). We expand on each of these justifications below.

4.1.1.1 Natural monopoly

Under the natural monopoly argument, regulators assume that the average cost of the product they are regulating (e.g., accounting standards) decreases throughout the interval of customer demand. This property of the cost function is expected to give rise to consolidation among suppliers until a monopolist eventually arises. The monopolist is expected to extract rents from customers by charging above-marginal-cost prices. Regulation is justified as constraining the natural monopolist by ensuring "fair" pricing.

The natural monopoly argument is unlikely to explain the regulation of GAAP because above-marginal-cost pricing of accounting standards is difficult to enforce. The cost of excluding non-payers from using accounting standards once they are developed is likely to be very high (e.g., Sunder, 1988). Moreover, standards become more valuable as more users adopt them (i.e., standards are products with network effects, e.g., Dye and Sridhar, 2008; Ramanna and Sletten, 2009), suggesting that standard-setters are unlikely to benefit from excluding potential users by charging monopoly prices.

Casual observation is also inconsistent with a natural monopoly justification for regulating GAAP. The natural monopoly argument suggests that absent regulation, a private accounting standard-setter will emerge, and that such a standard-setter will extract monopoly prices for its accounting standards. As noted earlier, in the United States, formal accounting standard-setting has always been organized at the behest of the SEC. Prior to the organization of the SEC, despite fairly well-developed capital markets, there is no evidence of a private standard-setting body, save a monopolist.[68] In the international arena, the IASB can be considered a private monopoly standard setter, in that it is not subject to competition and it is not officially chartered by any government. The IASB, however, does not charge its constituents for the use of its standards. Further, an analysis of the IASB annual reports over the period 2002 through 2007 reveal that the IASB derives the bulk of its revenues from voluntary donations (IASB, 2008b).

4.1.1.2 Externalities

The externalities argument for regulation assumes that the equilibrium price of a product does not reflect its true cost. This can be because public resources are consumed in manufacturing the product or because the product is non-excludable (i.e., the cost of excluding non-paying consumers from enjoying the product exceeds the product's benefit to those consumers). In the case of products that use public resources (e.g., products that pollute the environment), overproduction is likely, resulting in wealth transfers from society to the manufacturer. In the case of non-excludable products, underproduction is likely, resulting in

[68] References to the organization of accounting standard setting prior to the SEC are intended only to provide descriptive evidence. The U.S. economy and capital markets have evolved considerably since the 1920s, thus it is not clear that evidence from this period is sufficient grounds for drawing policy inferences today.

deadweight losses. Regulation of products with externalities is expected to set production to welfare maximizing levels.

It is difficult to argue that producing accounting standards results in the consumption of public resources. Thus, overproduction due to externalities is an unlikely justification for regulating accounting. Accounting standards can, however, be considered non-excludable (see for example, Gonedes and Dopuch, 1974; Leftwich, 1980; Watts and Zimmerman, 1986; Sunder, 1988).[69] In this sense, selling privately developed standards is unlikely to be a profitable exercise. Thus, one can argue that if left unregulated, accounting standards will be under-produced resulting in deadweight losses. The absence of organized standard setting in the pre-SEC period in the United States is consistent with underproduction of accounting standards in an unregulated environment.[70]

4.1.1.3 Information asymmetries

The information asymmetry justification for regulation can be best understood through Akelof's (1970) description of the adverse selection problem. Information asymmetry between buyers and sellers on the quality of a product prompts the buyers to demand a discount from sellers. The sellers of high quality products exit the market since the discount is such that it makes production of their products unprofitable. With the absence of high quality products in the market, buyers demand deeper discounts forcing even more sellers to exit. The process continues

[69] See also Dye (1990), who argues that optimal mandatory and equilibrium voluntary disclosure regimes can diverge when there are "real externalities" to financial reports (i.e., the financial reports of one firm affects the cash flows of another).

[70] Given the relatively low costs of funding a standard setting body (e.g., total annual FASB expenses throughout the early 2000s were under $40 million in an economy with a multi-trillion dollar stock market), it is reasonable to argue that if there are substantial benefits from organized standard setting, a coalition of the prospective beneficiaries will voluntarily form (absent regulation) to produce such standards. This argument does not negate underproduction as a rationale for regulation; it suggests the possibility of a collective-action solution.

until no buyers and sellers remain, i.e., the market breaks down. Regulation is expected to solve this market failure by mandating credible quality disclosures from sellers.

The information asymmetry argument can be used to justify the regulation of financial reporting, but justifying the regulation of GAAP under this argument is less compelling. The information asymmetry justification, as its title suggests, is intended to apply to circumstances where the potential consumers of a product are uninformed about the quality of the product. When the product is accounting standards, the primary consumers are accountants and auditors. For information asymmetry to be advanced as the cause for regulating GAAP, it would require regulators to argue that accountants and auditors are unqualified to choose among alternate privately developed accounting standards: a seemingly self-destructive assertion.[71] Another problem with the information asymmetry argument is that it does not account for the role of reputation in establishing and maintaining product quality. In the case of accounting standard setting, any viable private standard setter can be expected to compete across multiple time periods and thus have economic incentives to establish a reputation for quality.

Casual observation on the nature of U.S. GAAP prior to regulation is not supportive of concerns generated under the information asymmetry argument. Pre-1930s, audit firms generated their own accounting "standards," which is inconsistent with a claim that they are unsophisticated. Further, by endogenizing standard setting, the audit firms bore at least some of the costs of having low quality standards and thus resolved potential information asymmetries.

4.1.1.4 Excess competition

[71] In lamenting the growth of accounting standardization, Baxter (1979) presciently observed: "We may indeed envisage a brave new world in which an accountant spends his whole life applying rules pro-pounded by others -- unless at last, full of years and honors, he himself ascends to the Accounting Principles Board, and then for the first time must face reality."

The excess competition argument can be used to justify regulation in markets for new products with weak differentiation. The argument is that in the presence of an unregulated economic opportunity, many producers flood the market. The overproduction drives prices below average costs, stymieing further innovation and quality. Regulating the number of entrants can help stabilize the market and promote further product development. In economic studies, excess competition is seldom discussed since it is not a long-run equilibrium outcome. Inefficient producers incur a loss and therefore cannot survive, thus market forces can be expected to drive the number of producers down to the optimal level.

Notwithstanding market forces, the excess competition argument can have some merit if the adjustment to equilibrium is slow and costly. This is particularly possible for products that are capital intensive. If producers are susceptible to the sunk cost effect (e.g., Thaler, 1980; Connolly, Arkes, and Hammond, 2000) or if capital commitments are sticky (i.e., producers commit in advance to investing over multiple periods), costly "excess" competition can linger. Accounting standard setting has a relatively low capital intensity (see for example, footnote 70) suggesting that excess competition is unlikely to be a serious justification for regulating GAAP. Further, the absence of any organized standard setting enterprise in the U.S. pre-1930s is not consistent with concerns over excess competition.

4.1.1.5 Summary

Of the four justifications for regulation under the public interest theory described by Breyer, only underproduction due to externalities appears to have any potential application to accounting standard setting. In our subsequent discussion on the implications of regulatory theories for accounting standard setting, we address this explanation in greater detail.

Implicit in the public interest theory's description of regulation as a benevolent and socially efficient response to market failures is a model of the regulator as an incorruptible and infallible entity. This is a strong assumption in particular because it provides no room for lobbying and its potential effects on regulatory outcomes. The assumption is addressed in the capture and ideology theories. The assumption, however, can be interpreted as consistent with some accounting regulators' views of their own work. In explaining how academic research can inform standard setting, Barth (2006, p. 72) eschews the need for research into standard setters' objective function.

> "Whether and how research can inform standard-setting issues have long been the subject of debate among academics… [Some believe] that despite standard setting's regulatory role, research can provide insights into standard setting issues by operationalizing the criteria the standard setters establish for deciding among alternatives when developing standards… These criteria are specified in the conceptual frameworks of the FASB and IASB, thereby eliminating the need for researchers to specify the unspecified objective function of standard setters."

There are two unstated assumptions in the quote above. First, the FASB and IASB specify a socially optimal objective function for the purpose of standard setting. Second, the FASB and IASB are able to execute their objective function without error. Evidence consistent with these two assumptions is likely to be of considerable interest to both academic research and public policy since it would identify the FASB and the IASB as efficient regulators, consistent with the public interest theory. Given the lack of evidence supporting the public interest theory in all other spheres of regulation, we expect that the above assumptions are unlikely to hold in reality.[72]

[72] For example, Dopuch and Sunder (1980, p. 18) argue that there is "little evidence that official statements of objectives of financial accounting have had any direct effect on the determination of financial accounting standards."

4.1.2. Capture theory of regulation

The public interest theory's controversial assumption of the incorruptible and potentially infallible regulator is the focus of the capture theory of regulation (Stigler, 1971). The capture theory models regulators as economic agents seeking to maximize their own utility functions. The regulators are usually described as politicians consuming some mixture of money (bribes) and power (votes, prestige, popularity, etc.).

The capture theory is so named because it predicts that regulation is "captured" by the regulated, in other words, regulation serves those that it seeks to regulate. The intuition for the theory is relatively straightforward. Producers seeking wealth transfers from society lobby politicians for favorable regulation (e.g., mandated pricing above marginal costs). Politicians provide such regulation to the point that it does not affect their reelection chances. In return for the favorable regulation to producers, politicians demand bribes (in various models, this has taken the form of cash, perks, post-public-service employment, etc.). The citizenry is unable to stop the collusion between politicians and producers due to the free rider problem (Olson, 1965): i.e., the individual benefit to a citizen from stopping the wealth transfer is lower than the combined cost of becoming informed on the issue and subsequently organizing other citizens on the issue.

Peltzman (1976; see also Dal Bo, 2006) develops one of the earliest and most generalizable models of capture in the literature. In this model, there is a regulator, a producer, and consumers/voters. The regulator has the power to set the price for the producer's product. Consumers prefer lower prices and reward the regulator for such with more votes. The producer prefers higher profits and rewards the regulator for such with more bribes. The regulator wants to maximize her utility, $M(p,\pi)$, where p is the price consumers must pay and π is the producer's

profit. The conditions for M can be written as $M_p < 0$, $M_{pp} < 0$, $M_\pi > 0$, and $M_{\pi\pi} < 0$. The model also assumes that the effects profits and prices have on the regulator's utility are unrelated to each other, i.e., $M_{p\pi} = 0$. The producer's profit is defined as a function of p and costs, in other words, $\pi = f(p,c)$, where $f_p > 0$, $f_{pp} < 0$. The regulator's problem can be written as:

Max_p: $M(p,\pi)$, subject to $\pi = f(p,c)$ … (1)

The first order condition for the problem is: $M_p = -M_\pi * f_p$. This condition can be interpreted as follows: starting from the monopoly (competitive) price, the regulator will lower (increase) prices until the marginal utility from votes gained (lost) equals the marginal utility from bribes lost (gained). This simple model yields two powerful predictions with strong normative implications: (1) in case of monopolies, regulation arises to reduce deadweight losses; and (2) in case of perfect competition, regulation arises to reduce social welfare.

It follows from the two points above that observed regulation in any product market can either be socially beneficial or socially costly, depending on whether the product market in question is prone to market failure in its natural unregulated state. This makes the analysis of market failures introduced earlier particularly important. If there is no market failure in a given product market (see Leftwich, 1980, for arguments about market failures in accounting), it follows that regulation is always undesirable. Even under market failures, the capture theory makes two observations about regulation that distinguish it sharply from the public interest theory: (i) regulation results from a self-serving use of the political process; and (ii) regulation is never socially optimal (first best), i.e., even if addressing a market failure, regulators will not design a socially efficient response, their response will instead maximize their own utility. The

latter highlights the costs of regulation. The desirability of regulation under market failure thus depends on the relative magnitude of the costs of opportunistic regulators versus the costs of market failure.

Under the theory of capture, GAAP regulation can be explained as the result of rent seeking actions by producers of accounting standards, i.e., accountants and auditors. In other words, GAAP regulation is the result of accountants and auditors successfully lobbying the political process to seek wealth-transferring regulation for themselves. An obvious follow-up question is why the accountants and auditors would choose to be regulated. William Baxter reflected on this point in a 1979 address at Baruch College:

> "It is a safe bet that some 90% of accountants are not excessively fond of government… Such men would scoff at the notion that, by entrusting difficult problems to political authority, we bring the [millennium] closer. Yet these men are now happily erecting and submitting to an extra form of authority within their own profession. They hungrily demand more controls over their daily work, and do not doubt that the outcome will be good. Is this not a puzzling paradox?"

One hypothesis to explain Baxter's "paradox" is that the accounting profession seeks out regulation as a way to insure against the risk of producing "poor quality" accounting standards (i.e., standards less likely to facilitate efficient capital allocation). The poor quality standards produced under regulation can be either more or less risky than those sustainable in market equilibrium (in that they over- or under-innovate relative to market-based standards). In either case, the accountants shift the costs (risk) of accounting innovation to society while capturing the benefits. The emergence of GAAP regulation in the 1930s, a period during which accountants were criticized for poor accounting practices through the 1920s, is consistent with this hypothesis (see for example, Ripley, 1927, for criticisms of accounting practices in the 1920s).

The risk of producing poor quality accounting standards, and its associated costs, can be attributed to two factors: loss of reputation and legal liability. If an accounting judgment is determined *ex post* to be erroneous, accountants and auditors can lose their credibility as experts, affecting future business prospects. Accountants and auditors also experience legal liability: when faced with a legal challenge of their accounting opinion, they are likely to prefer citing an authoritative regulation over their own professional judgment. In fact, we expect the greater the legal liability faced by accountants and auditors, the greater their demand for regulated standards. Casual observation of time-series evolution of accounting regulation—from "research bulletins" under the CAP, to "opinions" under the APB, to "standards" under the FASB—is consistent with increased equilibrium demand for regulation by accountants and auditors as the legal environment in the United States became more litigious (see Kothari, Lys, Smith, and Watts, 1988, for a summary of the time-series increase in corporate litigiousness in the United States). We further explore the issue of legal liability on the nature of GAAP in Section 4.2.

The capture theory has its limitations. For example, the existence of entrepreneurial law firms and public interest groups that can check the opportunism of regulators is consistent with limits to capture. The presence of these groups in equilibrium suggests that any captured regulation is socially efficient (the marginal benefit from unraveling opportunistic behavior in regulators is lower than the marginal cost of doing so) and calls into question the key normative implication of the capture theory, i.e., that all regulation is socially costly. Moreover, the empirical evidence on the capture theory is mixed at best (see Dal Bo, 2006, for a recent review). For example, studies that have attempted to relate legislative voting on regulation to campaign contributions by corporations have generally been unable to establish a bribery motive (see Milyo, Primo, and Groseclose, 2000, for a review; and Stratmann, 2002, as a rare exception).

These data are consistent with a more nuanced view of regulators and this is the focus of the final theory, the ideology theory of regulation.

4.1.3. Ideology theory of regulation

The ideology theory of regulation relies on the premise of market failures much like the public interest theory. However, the behavioral model of regulators in the ideology theory is not as naïve (or benevolent) as that in the public interest theory. In particular, the ideology theory allows a role for special-interest lobbying in influencing the actions of regulators.

Formal analytical work in political economics since at least the 1990s has posited that regulators are neither as benevolent as suggested by the public interest theory, nor as self-serving as assumed in the capture theory (e.g., Grossman and Helpman, 1994; Austen-Smith, 1995). The work followed earlier empirical observations that did not confirm the capture theory (e.g., Kau and Rubin, 1979; Kalt and Zupan, 1984). Under this alternate model of regulatory behavior, regulators are exogenously endowed with political "ideologies." The precise nature of these ideologies is usually not specified, allowing the ideological spectrum to vary across multiple dimensions (e.g., liberal to conservative, altruistic to corrupt). Regulatory outcomes are the joint result of political ideologies and the effects of interest-group lobbying on regulators (in this sense, regulators can be described as "semi-benevolent," Persson and Tabellini, 2000).[73] The ideology theory is appealing in that it can explain empirical studies' inability to establish a one-to-one causal relation between corporate lobbying activities and politicians' votes on regulations.

The key innovation in the ideology theory is that lobbying is not an explicit form of bribery, but rather it is a mechanism through which regulators are informed about policy issues.

[73] The notion of "ideology" driven regulators has been in the literature since before the 1990s, although not in a well specified analytical framework (see for example, Schumpeter, 1950).

In other words, interest groups lobby regulators in order to convey their specific knowledge about the issues being regulated. Since regulators have "ideologies," a successful lobbyist must frame the information such that it is consistent with the lobbied regulator's ideology (Grossman and Helpman, 2001). Money is involved in lobbying in order to make the information provided a costly signal (thus preventing cheap talk).

The ideology theory can be applied to accounting standard setting to explain the regulation of GAAP. If accounting standards are assumed to be non-excludable in nature, then the underproduction due to externalities predicts that a private market for accounting standards would fail. Regulation then arises to provide GAAP, although this regulation is not always socially optimal because regulators are not assumed to be benevolent or omniscient.[74] The regulators have ideologies (e.g., they believe strongly in balance-sheet primacy or the fair-value measurement basis), but they are open to lobbying from constituents with specific knowledge. In the case of accounting standard setting, this information can be in the form of direct lobbying (e.g., comment letters from constituents) or indirect persuasion through members of Congress allied with the constituents.

The ideology theory makes no prediction on the optimality of regulation. In this theory, regulation does arise to correct market failures, but the presence of political ideologies and potentially manipulative constituent lobbying can skew the design of regulation so that it is

[74] An interesting question that arises here is: why would the SEC delegate standard setting to the CAP and successor bodies. Weingast (1984) offers an explanation in the context of the relationship between Congress and independent regulatory agencies (like the SEC). He argues that regulatory agencies allow Congress to expand its jurisdiction to many areas of the economy (through delegation). Agency shirking is prevented by self-serving agency bureaucrats (who seek to curry favor with Congress) and the committee system in Congress (which promotes oversight specialization among congresspersons). The Weingast model can be applied to explain the SEC's delegation of accounting standard setting: the delegation frees up SEC time to focus on other areas of regulation. See also Melumad and Shibano (1994).

welfare destroying. Thus, the optimality of regulation is an empirical issue that must be assessed on a case-by-case basis.

4.1.4. Implications of the theories of regulation

Under the public interest theory, the regulation of GAAP can be explained by the underproduction of accounting standards in a free market due to their non-excludable nature. GAAP regulations are socially optimal since regulators are infallible. If the public interest theory is correct, no further discussion on standard setting design issues is necessary.

Under the capture theory, GAAP regulation can be explained as having evolved due to efforts by the accounting profession to socialize the risks of producing poor standards. The expected costs of producing poor standards can be explained as arising from reputational concerns and legal liability. The capture theory has implications for the nature of standards produced under regulation. Specifically, regulated GAAP can take more risks in prescribing accounting methods than GAAP produced by market forces (because the society bears the cost of failure). Alternately, regulated GAAP can be less innovative than GAAP produced by market forces (because private players do not capture the benefits from innovation).

If the capture theory is correct, the policy implication is to stop regulating GAAP and return to producing accounting standards through a free-market process. In other words, accountants and auditors will no longer have to follow GAAP as produced by a state-sponsored standard setter like the FASB. They may voluntarily choose to do so (if private market forces choose to keep the FASB in existence), or they may collectivize to form an alternate, competing bodies to produce accounting standards.

We cannot be sure what the nature of standard setting under a free market process will look like. Prior to mandated standard setting under the SEC, there was no formal private standard setting body.[75] Accounting "standards" were simply best practices that resulted from accounting and auditing decisions at the firm level. Auditors endogenized the risk of the accounting procedures they signed off on, and thus, were responsible for maintaining the quality of these procedures. If this is the market solution to standard setting, then audit firms will have to develop a set of accounting procedures that is both innovative and not excessively risky. An auditor-based solution for determining GAAP avoids the hypothesized costs of regulation, including regulatory "capture" and/or the imposition of regulators' "ideologies" on an economy.

An alternate market-based solution to standard setting is bundling standard setting with stock exchanges. In other words, stock exchanges can be freed to develop their own sets of accounting standards, which companies endogenously commit to when they decide to list on a given exchange. Since stock exchanges compete with one another, the process encourages innovation in accounting standards. Further, since certain stock exchanges tend to attract particular types of firms (e.g., NASDAQ) or particular firm sizes (e.g., London's AIM), these exchanges can develop accounting standards that are unique to their clients' needs, thus providing the exchanges with an added dimension to compete. Another advantage to bundling accounting standards with exchanges is that it allows the standards to reflect enforcement practices in the exchange's jurisdiction (e.g., Ball, 2001). In the exchange-based arrangement, the costs of producing poor standards are shared by the exchange. If an exchange develops

[75] The period prior to the SEC's formation was one of relatively low corporate litigation. The absence of organized accounting standard setting in that period can thus be explained by weak demand for socializing the costs of standard setting errors. In the current litigation environment, it is likely that even absent a government mandate for regulated accounting standards, the profession will organize to produce common standards.

standards that are too aggressive and the standards facilitate fraud, the exchange will bear at least some of the consequences (e.g., loss of reputation).[76]

The implications of capture theory are that standard setting should be bundled with a private good (like auditing or stock-exchange listing) so that it can be produced through an unregulated market process. While this argument is compelling, we do not expect there to be much political will in the coming years to dismantle existing standard setting institutions. We thus turn to the ideology theory of regulation for more practicable proposals.

The ideology theory accepts the argument that the regulation of GAAP is due to its non-excludable nature (i.e., market failure). However, it leaves open to empirical investigation whether this regulation is in fact socially optimal. The effectiveness of regulation is expected to depend on regulators' political ideologies and on the impact of special-interest lobbyists on regulation.

If the ideology theory is correct, the key policy implication is to design a standard setting institution that minimizes the effect of idiosyncratic ideologies and special-interest lobbying. One way to achieve this is to encourage competition among standard setters (Dye and Sunder, 2001; Sunder, 2002). Competition among standard setters can promote competition among ideologies, which means an ideology promoting an efficient GAAP as determined by market forces would survive. Competition prevents any one ideology favored by standard setters from dominating GAAP. Competition can also minimize the effects of special interest lobbying. If a standard setter is perceived as being vulnerable to special-interest lobbying, it can lose credibility. Further, competition can lower the costs to society when any given standard setter

[76] One potential drawback to transferring standard-setting to auditors and stock exchanges is moral hazard. In particular, if audit firms and stock exchanges are considered "too big to fail," they will have incentives to produce standards that are riskier than those generated in market equilibrium.

fails. If there is an institutional body of knowledge to standard setting (e.g., operational and organizational know-how), it is costly to let the only standard setter in an economy to fail, even when it is corrupt or inefficient. With competition, the institutional knowledge of standard setting is spread across multiple bodies, so the costs of eliminating any one non-performing standard setter can be lower.

In discussing the implications of both the capture and ideology theories, it becomes clear that some form of competition is necessary to generate efficient standard setting. If independent standard setters are to compete, an important question to consider is what their objective functions should be. The non-excludable nature of accounting standards suggests that for-profit standard setting is unlikely to be viable. If accounting standard setters are motivated by prestige, competition among standard-setting bodies can be sustained on the basis of standard setters maximizing personal prestige.[77] A more tangible option is for standard setters to compete on both personal prestige and on funding from constituents. Both the FASB and the IASB have at some point in their existence relied on voluntary funding to maintain their operations. Accordingly, we envision a setting where the FASB and the IASB compete to establish a reputational equilibrium wherein high quality standards result in more funding and thus, more resources for further production of accounting standards.

There are some potential pitfalls to competition as a solution to regulated standard setting. First, under some limited circumstances, competition can induce a "race to the bottom." Specifically, if markets are unable to price-protect against wealth-extractive standards, special-interest groups will have an incentive to seek out opportunistic standard setting. In this case,

[77] If standard setting bodies get too large, a free-rider problem among board members can mitigate incentives to compete on prestige.

instead of competing on quality, standard setters will compete (knowingly or unknowingly) on their ability to supply favors to special interests.[78]

Second, the large loss function in standard setting (i.e., the termination of standard-setting bodies that can result from producing standards that are socially costly or unpopular) can create an incentive for competing standard setters to collude. By colluding (and eventually merging), standard setters pool the risk from producing poor quality standards. The current "convergence project" between the FASB and the IASB is consistent with this observation.[79] As discussed earlier, such collusion is unlikely to be efficient in that it stifles innovation and promotes the influence of special-interests in standard setting. One solution to the current collusive agreement between the FASB and the IASB is for the U.S. courts, the U.S. Congress, or the SEC to expressly dismantle the convergence project on antitrust grounds and allow U.S. listed firms to adopt IFRS without reconciliation to FASB standards. This arrangement will likely force the two standard setting bodies into competition.

There are two other (related) reasons why competition (rather than convergence) between the IASB and local accounting standard setters is more likely to generate an economically efficient GAAP.

1. A growing body of evidence suggests variation in country-level institutions, including accountant and auditor training, quality of enforcement, rule of law, and culture, shapes the nature of accounting standards and financial reporting locally (e.g., Ball, Kothari, and Robin, 2000; Ball, Robin, and Wu, 2003; Skinner, 2008b; and Ball,

[78] Huddart, Hughes, and Brunnermeier (1999) model stock exchanges competing on disclosure requirements and find that such a setup can result in a "race to the top" even under certain institutional impediments that restrict the flow of liquidity.

[79] Another example is the evolution of societies of Certified Public Accountants (CPAs). Early in the history of the CPA designation, New York State had more than one such society (Brown, 1905). However, these societies eventually merged into the current arrangement of one New York State Society of CPAs.

2009). Therefore, it is unlikely that a single set of global accounting rules (e.g., IFRS) will generate world-wide conformity in accounting practice, much less, efficient capital allocation decisions.

2. There is also evidence of political interference in standard setting, both in the U.S. and internationally (e.g., Watts and Zimmerman, 1978; Zeff, 2005a, b; Ramanna, 2008). The political forces that shape local GAAP standards are unlikely to recede in the wake of worldwide IFRS adoption. For example, Enron, at its egregious height, attempted to influence standard setting at the International Accounting Standards Committee in exchange for a $500,000 donation.[80] Moreover, developed, sovereign countries are unlikely to accept IASB standards in the wake of strong local opposition.[81] Thus, what starts out as internationally harmonized rules is likely to devolve into standards adapted to local political conditions, suggesting that attempts to converge accounting standards globally are futile.

We conclude this section by noting that the scarcity of empirical work on regulation of GAAP makes prescribing optimal regulatory structures in accounting particularly difficult. While Watts and Zimmerman (1978) proposed a "positive" theory of accounting, where accounting is the result of economic and political forces, most subsequent positive research has failed to consider the potential political nature of accounting. The literature is instead populated with studies where researchers treat changes in accounting standards as exogenous, and use such

[80] Specifically, Enron's audit partner at Arthur Andersen, David Duncan, was quoted in an email discussing the donation, "While I think Rick [Rick Causey, Enron's chief accounting officer] is inclined to do this given Enron's desire to increase their exposure and influence in rule-making broadly, he is interested in knowing whether these types of commitments will add any formal or informal access to this process (i.e., would these types of commitments present opportunities to meet with the trustees of these groups or other benefits)…" (Quoted from Sweeney, 2009).

[81] For example, in the wake of declining financial markets in 2008, the IASB allowed financial institutions to suspend market-to-market accounting and thus avoid costly impairments. Several commentators in the financial press (e.g., Leone, 2008) have suggested that the IASB made this decision in response to political pressure from the European Union.

changes as "events" to study the economic consequences of standards (see Fields, Lys, and Vincent, 2001 for a survey). Given the critical importance of understanding how political forces shape accounting, we argue for more studies on the political process in accounting.

Studying the political economy of accounting requires a theory of the behavior of regulators and standard setters. In this section, we have outlined three such theories from the political economy literature. As noted earlier, the casual empirical evidence suggests the capture and ideology theories are most likely to explain regulatory behavior. These theories provide a useful starting point for academics to study the political nature of accounting. While regulators and standard setters enjoy considerable discretion in setting the agenda for the future of accounting, we know very little about the incentives of standard setters, their ideologies, and the degree to which they are captured.[82] A body of literature in accounting political economy can, in the long run, provide us with a systematic understanding of the behavior of regulators and standard setters. Such evidence is critical to advancing the practice of accounting.

4.2. The role of choice within GAAP: Principles or rules?

In this section, we discuss the implications of the economic theory of GAAP for the role of choice within GAAP. The economic theory suggests that an ideal set of GAAP is the set of accounting "best practices" that emerge as a result of well-functioning market forces absent

[82] For example, we know of no research in accounting that has addressed what is referred to in the economics literature as the "revolving door" problem. The revolving door problem is drawn from the observation that regulators in most specialized fields such as accounting are former practitioners with close ties to industry, and who, in many cases, upon leaving regulatory office, return to industry. Thus, there is a "revolving door" between regulatory bodies and the industry they regulate. The revolving door has benefits since persons with experience in a specialized industry have the expertise required to design effective regulation. At the same time, the revolving door can create conflicts of interest: close ties and the potential for future employment create incentives for regulators to favor the regulated. At issue is whether the benefits of revolving doors exceed the costs. Evidence on this question will be useful in developing the optimal criteria for service on regulatory bodies (including requirements on past experience in industry, restrictions on post-regulatory appointments, term limits, etc.).

regulation. In a free market, best practices are developed over time through innovation in accounting methods. Diversity in accounting practice, or accounting choice, is thus essential to the development of free-market GAAP. Without accounting choice, there can be no experimentation, and without experimentation, "best practices" cannot develop (see for example, Hayek, 1945; Porter, 1996; and Hayek, 2002, on the role of competition and choice in developing best practices). Absent frictions, infinite accounting choice might be available in an unregulated setting; in practice, however, we expect accounting choice to be limited by human ingenuity and transaction costs, including limits set forth by courts and other institutions concerned with enforcing contracts written on financial statements (see for example, Ball, 2009, on the role of enforcement in determining accounting practice).

The importance of accounting choice in an unregulated setting has implications for the role of choice under regulated GAAP. In particular, while regulation, by definition, constrains the accounting choice set available to managers, accountants, and auditors, we have little evidence on whether such constraints are optimal. Accounting choice develops in free markets because different measures of income, assets, and liabilities are likely to be appropriate in different economic situations (e.g., Watts and Zimmerman, 1986). These different economic situations persist under regulation, calling into question the need for regulators to constrain choice in accounting. In constraining accounting choice, regulators often cite concerns over comparability, consistency, and potential for manipulation as their justifications.[83] As noted

[83] For example, concerned over "complexity" in accounting, SEC chairman Chris Cox in 2007 convened an advisory committee to address the issue. The advisory committee concluded that accounting "complexity" was due in part to diversity in accounting practice and recommended that the FASB eliminate such diversity where possible. Recommendation 1.7 of the committee (SEC, 2008, p. 49) states: "U.S. GAAP should be based on a presumption that formally promulgated alternative accounting policies should not exist. As such, the SEC should recommend that any new projects undertaken jointly or separately by the FASB not provide additional optionality, except in rare circumstances. Any new projects should also include the elimination of existing alternative accounting policies in relevant areas as a specific objective of those projects, except in rare circumstances."

earlier, comparability and consistency are the key determinants of a free-market-based GAAP, suggesting that accounting standards that develop absent regulation are also likely to display these features.[84] Further, a free-market-based GAAP is also likely to minimize standards that facilitate manipulation since absent regulation, the full cost of poor quality standards is borne by the private standard setters (including accountants and auditors) that produce the GAAP (assuming courts enforce contracts written on that GAAP).[85]

Related to the issue of choice in accounting is the current standard-setting debate on principles versus rules. Recently, "rules" in accounting have come under attack and GAAP in the U.S. has been compared unfavorably to IFRS as being too "rules-based." (e.g., SEC, 2007) Below we provide a framework to understand the debate on principles versus rules and investigate whether "rules-based accounting" does in fact deserve the pejorative connotation it has come to receive.

Given the regulation of GAAP, the question of principles versus rules can be viewed as debate among regulators on the benefits and costs of according greater choice to managers in determining accounting numbers. In the extreme, under a principles-based regime, regulators set broad accounting "principles" and let managers apply those principles to the specific economic contexts they encounter. Conversely, in a rules-based regime, regulators provide managers with

---

[84] Jamal, Maier, and Sunder (2005) study the comparative properties of e-commerce privacy standards that (1) developed under government regulation (United Kingdom) and (2) evolved in the absence of regulation (United States). They found that the standards in the United Kingdom "improve[d] neither the disclosure nor the practice of e-commerce privacy relative to [those in] the United States." They highlight the implications of their results for accounting standards that are likely to develop absent regulation.

[85] Consistent with this claim, notable accountants prior to regulation in the United States generally embraced conservative practices. For example, even when dealing with liquid short-term investments, William A. Chase, sometime president of the National Association of CPA Examiners eschewed market-based revaluations: a 1916 textbook, *Higher Accountancy: Principles and Practice*, edited by him, states (Chase, MacClintock, Willis, and Hirschl, 1916, pp. 188–89): "If stocks are purchased for speculative purposes or as short-term investments for idle funds or for purposes of resale, they are equivalent to merchandise, and the rule of 'cost or market, whichever is lower,' applies." Also, Ramanna (2008) and Skinner (2008b) discuss how regulated standards in the United States and Japan, respectively, were potentially compromised through the political process to favor special interests.

detailed guidance, obviating the need for managers to exercise much judgment (e.g., to provide preparers with a framework to differentiate between capital and operating leases, SFAS 13 lays out four very specific criteria, including, for example, "if the term on a property lease is at least 75% of the estimated economic life of the property, the lease shall be classified as a capital lease").[86]

The difference between principles and rules can be viewed through the funnel-shaped diagrams in Figure 1. Given an economic transaction, managers theoretically face an infinitely large choice set of ways to account for it. Regulator-determined principles and rules limit that choice set to a subset of alternatives. The limits are based on regulators' incentives and loss functions, and are likely to depend on their concerns over comparability, consistency, and reliability. On any given issue (e.g., revenue recognition), principles (Panel A), by their nature, give managers a larger subset of accounting choices than rules do (Panel B). These choices are subsequently limited by boards of directors, accountants, and auditors based on their incentives and loss functions, until eventually the manager chooses only one method to report the transaction under GAAP (e.g., Watts and Zimmerman, 1986; Watts and Zimmerman, 1990; and Skinner, 1993). For example, consider a hypothetical scenario where there are no regulatory restrictions on revenue recognition (i.e., neither principles nor rules). In this situation, boards and auditors are likely to curb management's tendency to report as revenue the one-period change in the expected present value of future cash inflows; rather, they are likely to present managers *ex*

[86] In general, preparers and users consider U.S. GAAP as being more rules based and IFRS as being more principles based (SEC, 2008). This judgment is based both on the length of U.S. GAAP standards versus IFRS standards—U.S. GAAP standards are longer because they contain detailed implementation guidance—and on the presence of much lower tier GAAP in the US, including FASB Interpretations, FASB Staff Positions, SEC guidance (usually in the form of Staff Accounting Bulletins), EITF interpretations, etc. In part because of this complexity, the FASB has just implemented a codification project (Accounting Standards Codification) which provides a single source of authoritative US GAAP.

ante with a set of acceptable revenue-recognition practices that factor in managers' information advantage and their incentives to overstate periodic performance.

The gradual limiting of accounting choices across regulators, boards, accountants, and auditors from the original choice set to the eventual accounting method used traces the shape of a deep funnel in a principles-based regime and a shallow funnel in a rules-based regime. The shape and slope of the funnel, in effect, reflect firm-level restrictions on management accounting choice; the firm-level restrictions are a function of the degree of accounting-method autonomy granted at the regulatory level.

The idea, in theory, behind a principles-based regime is to set broad boundaries and let managers, accountants, and auditors develop practice within them: the understanding being that boards and managers have specific knowledge about their firms' economic situation and so are more capable of designing methods to account for those realities. A principles-based approach requires a well-articulated underlying conceptual framework (to define core financial statement elements such as assets and liabilities) that provides a foundation for the accounting practice that is expected to develop. A potential byproduct of providing preparers and auditors with the flexibility to develop accounting practice is the potential for innovation in accounting methods: the broader the principles, the greater the room for innovation. Of course, according managers the flexibility to work with "principles" can introduce costs in terms of decreased immediate comparability and increased potential for manipulation. A desire to mitigate these costs is what motivates a rule-based system. Thus, the debate between principles and rules can be viewed as a debate between the benefits and costs of locating relatively more accounting choice at the manager level. Since, as argued earlier, accounting choice is responsible for accounting

innovation, the question of principles versus rules can be restated as a question of the relative benefits of having accounting innovation happen at the standard-setter versus firm level.

Importantly, however, this theoretical construction of the debate between principles and rules is often lost in practice. In contrast to the above discussion, the objective of the principles-based system currently envisioned by the FASB does not seem to have much to do with accounting choice. For example, a main objective of the FASB's work in this area, as stated on its website, is to reduce industry-based exceptions to accounting methods, and so to reduce management choice.[87] See Benston, Bromwich, and Wagenhofer (2006) for a detailed discussion of this issue. These authors argue that a principles-based approach combined with an asset-liability/fair value model for accounting is unlikely to be feasible because the use of fair values in practice will result in a large number of implementation complexities that will inevitably lead to detailed accounting guidance. In Benston et al.'s (2006, p. 185) view "the FASB will have to promulgate very detailed rules governing the permissible inputs to and applications of pricing alternatives even when ostensibly using a principles-based regime. Otherwise, on what basis could auditors challenge managers' assertions about appraisals, comparable prices, and valuation model inputs such as expected cash flows, probabilities and relevant discount rates?"

Allowing innovation in accounting practice becomes particularly important if accounting is viewed as being of strategic importance rather than simply being a compliance tool. In other words, if there are rents to be earned from developing superior accounting performance measures (for example, companies with better performance measures are more likely to be able to raise capital cheaply), GAAP principles (rather than rules) are more likely to allow managers to

[87] http://www.fasb.org/project/principles-based_approach.shtml

capture those rents.[88] The idea is not to have every accountant, auditor, and manager in an economy innovate with accounting methods. In fact, we expect most will not because they are either unable or unwilling to do so. It is among the few that do, however, that the potential for further growth in accounting lies.

The distinction between principles and rules highlighted above is meant to inform a *regulator*'s choice between the two systems. If a principles-based system is adopted, however, "rules" are not likely to disappear. This is because as a practical matter to most managers, accountants and auditors, the day-to-day application of most principles will likely be based on detailed working rules. This is due to at least four reasons.

1. It is not cost effective for accountants and auditors to work with principles on a day-to-day basis. Authority on interpreting and implementing GAAP in an economy has to be delegated to thousands of rank-and-file accountants and auditors (for reasons of efficiency); this is possible only if working rules are formulated out of principles.

2. If an audit opinion is challenged in court, auditors are better off citing a hard rule than an abstract principle that they have interpreted. Legal liability generates a demand for detailed accounting rules, and a preference that they are attributable to a government-sanctioned independent standard setter (and not simply "best practice").

[88] See, for example, the vast literature on the effects of improved disclosure on the cost of capital: Diamond and Verrecchia (1991), Botosan (1997), and Lambert, Leuz, and Verrecchia (2007). Healy and Palepu (2001) provide a review. Watts and Zimmerman (1986) discuss the notion that managers are better able to understand how different accounting methods affect their firms' interactions in the political and regulatory arenas, which is an argument for allowing more choice by managers.

3. Even in non-litigious countries, auditor reputation can lead to the development of working rules from broader principles (the likelihood of being questioned over the application of a rule is lower).

4. On day-to-day issues, for efficiency reasons, users of financial statements will prefer accounting reports that are prepared under working rules (i.e., there is unlikely to be a demand for accountants and auditors to "reinvent the wheel" on common transactions).

Thus, in a well-functioning accounting system, working "rules" and regulatory "principles" are two sides of the same coin. The distinction between the working "rules" that develop from the application of principles among accountants and auditors, and "rules" imposed by regulators cannot be understated. The former is generated under a system that is likely to generate accounting innovation; the latter is not. The distinction is often muddied in the public debates on "principles versus rules," where "diversity in practice" is often cited as a negative consequence of a rules-based regime. For example, the 2007 SEC Advisory Committee on financial reporting blamed diversity in industry practice as a source of "complexity" in accounting (SEC, 2007); and the FASB in its proposal to revise revenue recognition standards argues that the over 100 different industry standards on the "earned" criterion in revenue recognition are a manifestation of excessive "rules" in accounting (quoted from Schipper, Schrand, Shevlin, and Wilks, 2009).

We argue that diversity in industry practice often represents "working rules," i.e., equilibrium accounting standards that have likely evolved to reflect the different economic circumstances in different industries. Such diversity is essential to a well-functioning GAAP

because without it, financial reports are unlikely to be able to reflect the economics of a transaction. Moreover, as noted earlier, the industry-based diversity is a pragmatic solution to economic demands of comparability and consistency on GAAP. Thus, while the efficient contracting theory of GAAP endorses greater choice in accounting (as manifested by broad "principles" under a regulatory regime), as a practical matter we expect the choice to be guided by industry-based working rules. Eliminating such working rules under the desire for uniformity in an arbitrary "conceptual framework" is unlikely to result in a GAAP that can achieve its stated objective of efficient capital allocation.

4.3. Market efficiency assumption in standard setting

Standard setters' perspective on the efficiency of capital markets is an important consideration in how they craft accounting standards. We begin this section with a brief summary of the evidence on market efficiency. We then explain why regardless of whether standard setters believe markets are efficient or not, it behooves us to use market efficiency as a maintained assumption in setting accounting standards. Specifically, we examine the conceptual and practical challenges standard setters would face if they were to abandon the maintained hypothesis of market efficiency. We conclude with implications of market efficiency for standard setting.

4.3.1. Summary of evidence on market efficiency

The efficient markets hypothesis (see Fama, 1970) began to gain wide-spread acceptance among academics and practitioners in the 1960s. Initial evidence was largely supportive of market efficiency. Jensen (1978, p. 95) concludes that "The efficient market hypothesis has been

widely tested and, with few exceptions, found consistent with the data in a wide variety of markets …" This euphoria, however, did not last long as a steady stream of research accumulated evidence inconsistent with market efficiency (see Schwert, 2001, and Kothari 2001, for reviews of the stock-market anomalies literature). As this anomalous evidence strengthened in scope and magnitude, in the last decade, financial economists developed behavioral finance theories to (predict and) explain the behavior of stock prices. The foundation for these theories is the evidence psychologists and experimental economists provide, which suggests "a number of departures from market rationality in the form of specific behavioral biases that are apparently ubiquitous to human decision-making under uncertainty …" (Lo, 2005, p. 21).[89] The behavioral finance theories predict that security prices might deviate from fundamental valuations in part because (i) investors exhibit systematic behavioral biases that in the aggregate do not cancel, and (ii) arbitrage can be net costly (see Shleifer and Vishny, 1995).

While the evidence of departures from market efficiency is abundant, in our judgment, interpreting it as consistent with one or more of the behavioral theories has been a challenge, especially in out-of-sample tests.[90] Further, evidence ruling out gross inefficiencies is plentiful. For example, in comparison to the large magnitude of losses firms often report, security prices typically exhibit little, if any, reaction to firms' voluntary or FASB mandated decision to expense stock options and to firms' decisions about goodwill write-offs or other asset write-downs.[91] Nor do the stock prices of firms choosing different accounting methods as permitted within GAAP

[89] The psychological underpinnings to the behavioral finance theories are found in Kahneman and Tversky (1979), Shefrin and Statman (1994 and 2000), Shefrin and Thaler (1988), etc. For surveys of the psychology literature relevant to behavioral finance, see Hirshleifer (2001), Daniel, Hirshleifer, and Teoh, (2002), and Lo (2004 and 2005).

[90] See Fama (1998), Chan, Frankel, and Kothari (2004), Kothari, Lewellen, and Warner (2006), and Hirshleifer, Hou, and Teoh (2009) for a few examples of tests of behavioral finance theories.

[91] We do not expect a zero stock price reaction to the reporting of the losses even if they did not have any direct cash flow effects because the losses might signal the firm's financial health and thus might have cash flow consequences, which investors would incorporate in setting the stock price.

(e.g., straight-line versus accelerated depreciation), and therefore reporting systematically different earnings numbers, differ in proportion of the differences in accounting numbers. Overall, the evidence from accounting method changes and accounting choice studies dispels the notion that investors are, in equilibrium, fixated on reported financial statement numbers.[92]

Instead, an overwhelming body of evidence suggests that stock prices largely anticipate the economic substance of the information in financial statements.[93] Reaction to firm specific as well as macroeconomic news occurs quickly although there is evidence to suggest a predictable drift in returns consistent with under-reaction as well as stock price reversal, consistent with overreaction.[94] However, professional asset managers have been unable to consistently outperform the market, i.e., exhibit persistence in alpha, which corroborates the lack of evidentiary correspondence between the behavioral finance theories of market inefficiency and observed security price behavior (see Fama and French, 2008, and Kosowski, Timmermann, Wermers, and White, 2006). Collectively, the research suggests the presence of some return predictability as an indicator of market inefficiency, but in practical terms its economic significance is weak.[95] Schwert (2001, p. 32) in his survey of the academic evidence on market inefficiency concludes "these findings suggest that anomalies may be more apparent than real." From the perspective of standard-setting, we argue the evidence of market inefficiency is much like waves over deep sea waters—the tranquility of deep waters underneath swamps any

[92] See Fields, Lys, and Vincent (2001) and cites therein.
[93] See Ball and Brown (1968) and the papers cited in Kothari (2001).
[94] See, for example, the literature on the post-earnings announcement drift (Ball and Brown, 1968, and Bernard and Thomas, 1989) and Jegadeesh and Titman (1993); and for over-reaction to accruals (Sloan, 1996) and past stock-price performance (DeBondt and Thaler, 1985). There is a vast amount of finance and accounting literature that offers supporting as well as contradicting the evidence.
[95] In an efficiency market, returns can be predictable due to changing expected rates of returns (see Fama and French, 1988, and an extensive literature thereafter). The return predictability we allude to is that beyond the extent of predictability due to changing expected rates of returns, which would violate the efficient markets hypothesis.

indication of turbulence from waves on the top. As such, it behooves us to assume market efficiency in deliberating accounting standards.

4.3.2. Why should market efficiency be the maintained assumption?

The efficiency of stock market prices with respect to all publicly available information ("market efficiency") describes an outcome that is desirable in that it facilitates the efficient allocation of capital resources and risk in society. Market efficiency is achieved through a host of endogenously arising institutions, including public financial reporting. In designing standards for public financial reporting, GAAP regulators must thus be cognizant of the relation of financial statement information to stock market prices.

Under the efficient market hypothesis, stock prices fully and unbiasedly incorporate all public (value-relevant) information. The implication for GAAP regulators is that the form of accounting information itself is not relevant to stock markets: the focus of markets is on the substantive information in financial statements, i.e., whether a particular accounting entity (e.g., earnings, goodwill write-offs, etc.) provides information about the amount, timing, and uncertainty of future cash flows.[96]

The growing literature on stock market mispricing with respect to accounting information (discussed earlier) has challenged the validity of the efficient market hypothesis. Notwithstanding that evidence, for reasons described below, we argue standards presupposing inefficient markets are unlikely to be meaningful, and can even be, in some circumstances, costly to the society.

[96] From a costly contracting perspective, form of accounting information does matter. The fact that for equity valuation the form of accounting information does not matter under market efficiency implies that form should be influenced by contracting considerations, where it matters.

1. Market inefficiency is not an equilibrium theory: Unlike the efficient market hypothesis, which describes a capital market pricing equilibrium, behavioral theories about market inefficiency describe transient pricing, i.e., states that are not expected to persist in perfect market conditions. Moreover, there is no behavioral theory to describe the relation of accounting information to stock market prices in an equilibrium of market inefficiency. Absent an equilibrium theory of market inefficiency, regulation that assumes inefficiency has no natural starting point, and more importantly, no framework to guide markets back to efficiency. In other words, if GAAP is designed assuming market inefficiency, then it is unclear how such a GAAP would lead to an equilibrium state of market efficiency. Without a framework to understand the origin and persistence of irrational pricing, several important questions arise: Would inefficiency persist no matter what is the design of GAAP? Or worse, can inefficiency be exacerbated through poorly understood and thus poorly designed regulation?[97]

2. Practical difficulties with the market inefficiency assumption: As a practical matter, even if standard setters were to embrace inefficiency as the maintained assumption, we doubt market inefficiency has the potential to guide them in deciding on a suitable GAAP. What behavioral assumption should be assumed and therefore what form of inefficiency should be assumed? Should we assume prices over-react or under-react?

[97] As noted earlier, efficient capital markets are an equilibrium state that is achieved through numerous endogenously arising institutions, including regulation. Thus, it is possible that GAAP regulation, as an institution, can facilitate efficient capital markets. However, GAAP regulation that is conceived without a theory of efficiency will be *ad hoc* and reactive at best, or counterproductive at worst. Moreover, regulation, as an institution, is generally less susceptible to change in the face of non-performance than private-based solutions, i.e., regulations are "sticky." Therefore, getting it right in the first place is important.

> Do they initially under-react, but then over-react if a firm reports a sequence of good news or a sequence of bad news, which triggers representativeness bias? How long should such a sequence be before under-reaction morphs into over-reaction on the part of investors? What should we assume with respect to arbitrage opportunities and the likely degree of success of arbitrageurs?

In raising the set of questions above, we do not intend to imply that we are dismissive of the possibility that individual investors (and perhaps the market as a result) exhibit behavioral biases, which might lead to prices systematically deviating from the fundamentals. Even if investors were to exhibit behavioral biases, we argue GAAP should be designed as if market pricing is efficient, i.e., consistent with investor rationality, and prices, on average, reflecting economic fundamentals. For example, suppose we were to assume investors over-react to accruals. Would we then ask managers to report smaller absolute amounts of accruals because investors would be over-reacting to reported accruals? How much discretion would we give managers in such reporting? What guidance would we offer to auditors?

4.3.3. Implications

The most important implication of the maintained assumption of market efficiency is that the debate over form versus substance in financial reporting is unimportant for equity valuation, although it is relevant for efficient contracting. Stated more strongly, if the analysis above is used to motivate accounting policy, the debate will not be in the context of pricing and trading rules, but rather, standard setters will focus on substantive aspects of the form versus substance debate. For example, standard setters will be concerned whether footnote disclosure versus

inclusion of information in the body of financial statements conveys differential information about risk or about the probability of cash inflow or outflow. If market efficiency is assumed, then whether GAAP offers considerable or very little choice to managers will hinge on considerations other than the perception that prices fixate on reported numbers. The agency problems discussed earlier will be of first order importance to standard setters in designing GAAP, whereas recognition versus disclosure or accounting choice *per se* will be relatively unimportant in the hierarchy of issues standard setters pay attention to in designing GAAP.[98]

5. Conclusions, summary, and implications for future research

5.1. Summary

The editors of the *JAE* charged us to provide a survey and economic analysis of the properties of GAAP. Based on the literature, we articulate a theory of GAAP to answer the question, "What should GAAP look like?" The theory is based on prior research on the economic forces that shape the demand for and supply of GAAP financial statements. In the theory, the objective of GAAP is the efficient allocation of capital resources in an economy. The theory provides us with a framework to predict how a GAAP shaped by economic forces would address the various challenges in performance measurement and control/stewardship that shape the nature of the income statement and the balance sheet. In addition, the theory allows us to compare and contrast extant GAAP, as it is produced in a regulated setting, with GAAP that

[98] The SEC's "fairness" objective in financial reporting can have a profound impact on the nature of standard setting if regulators conclude that capital markets are informationally inefficient. For reasons outlined in this subsection, we argue that abandoning the efficient markets hypothesis in standard setting is unwise. Nevertheless, the evidence on market inefficiency does behoove standard setters to address fairness concerns. We argue that such concerns can be addressed by recommending additional (non-GAAP) disclosure to meet this objective.

arises endogenously due to market forces. Thus, the title of the paper can alternately be read as, "What *would* GAAP shaped by economic forces look like?"

Section 2: An economic theory of GAAP

Financial reporting is generated by economic demands for both performance measurement and control/stewardship. The equilibrium response to these two demands on accounting is manifested through the income statement and the balance sheet. The two financial statements have properties that are unique to the forces they have evolved in response to; but the statements are linked to each other by bookkeeping practices so that the properties of control that are fundamental to the balance sheet manifest themselves in the income statement, skewing performance measures downward. Conservatism in performance is economically efficient where observed because stewardship is a pragmatic property of the income statement: managers cannot be assumed to be completely credible when reporting on their own performance. Circumstances where economic forces demand different properties of the income statement and the balance sheet are dealt with through dirty-surplus accounting.

Section 3: Balance sheet and income statement properties

We discuss the implications of the economic theory of GAAP for income statement and balance sheet recognition and measurement issues. We show how the economic theory explains the nature of longstanding accounting rules, including the asset recognition criteria. In particular, assets are recognized (i) from past transactions (ii) when property rights are well-established and (iii) when there is sufficient certainty about future realizations of cash flows to the entity. By specifying that property rights be well-established, we require that an asset is under an entity's

control and is separable and saleable. The requirement on *sufficient* certainty about future cash flows is intended to recognize that there is a continuum of cash-flow uncertainty associated with all non-cash assets, and that the criterion for asset non-recognition in GAAP financial statements is a discrete point in this continuum where accountants, auditors, regulators, and the courts determine the uncertainty to be unacceptable for stewardship and contracting.

We also address the issue of asset measurement and re-measurement, i.e., the basis for accounting records. We acknowledge the advantage of using fair values in circumstances where these are based on observable prices in liquid secondary markets, but note that such markets do not exist for most assets. In the absence of verifiable market prices, fair values are determined by management judgment and the evidence on the opportunistic use of this judgment is germane. Accordingly, we caution against expanding fair-value measurement to areas such as intangibles, as standard setters have sometimes proposed.

The principal role of the income statement is to measure performance, particularly that of management. Accordingly, we argue the agency relationship between management and the firm's owners should be paramount in determining criteria for revenue recognition. We view the "earned" standard in extant revenue recognition rules as a reflection of concerns generated by this agency relationship (i.e., revenue is not recognized until effort is exerted), and the FASB's proposals to abandon this standard for fair-value-based revenue recognition rules as ill advised.

Section 4: Implications for standard setters

We address the origin and consequences of regulating GAAP, i.e., why do we regulate GAAP and how can we design regulatory systems that are likely to generate a GAAP consistent with the efficient contracting theory. We conclude that dismantling the convergence project

between the FASB and IASB on antitrust grounds and forcing these two bodies into competition is the most practicable way to achieve an economic GAAP in the near future.

While regulation, by definition limits accounting choice, regulators still have considerable flexibility in determining how much judgment managers, accountants, and auditors have in developing financial reports. We view accounting choice as critical to innovation and efficiency of accounting practice, and in general, support according managers, accountants, and auditors (rather than regulators) the decision rights to determine best practices in accounting.

Finally, we address the critical role of the market efficiency assumption in standard setting. We discuss why for both conceptual and practical reasons it would be unwise for standard setters to abandon the market efficiency assumption in standard setting. In particular, if GAAP is designed assuming market inefficiency, then it is unclear to us how such a GAAP would lead to an equilibrium state of market efficiency.

5.2. Suggestions for future research: An institutional framework for accounting and the role for research in accounting and the political process

The efficient market hypothesis holds that equilibrium prices in a well-functioning market are unbiased indicators of net present value. The hypothesis is grounded in the assumption that aggregate human behavior in well-functioning markets is consistent with the neoclassical model of the human being (i.e., human beings as rational, omniscient actors). While there is evidence to suggest aggregate irrationality, elsewhere we have argued that this evidence does not as yet collectively constitute an equilibrium theory of human behavior that can substitute the rational expectations model in policy making.

The limitation of the behavioral theories still leaves us with the pressing question of what to do about the evidence of systematic inefficiencies in asset pricing and capital allocation

decisions (e.g., the 1988–89 savings and loan crisis, the 2000–01 dot-com crash, the 2008–09 financial crisis, etc.), which are not predicted in the rational expectations model. We propose that an "institutional" framework of the nature and role of accounting and other market institutions can provide guidance for further research in this area.[99] Our discussion of the role of political factors in determining the standard setting equilibrium in Section 4.1 is consistent with the institutional framework. Below we provide a brief description of the framework, especially as it can relate to accounting research.

Efficient outcomes in the neoclassical rational expectations model are predicated on certain assumptions, i.e., the assumptions are necessary (and in some instances sufficient) for prices to equilibrate to fundamental value in capital markets. Examples of these assumptions include:

1. Price taking
2. Non-collusion
3. Free entry and exit
4. Full information
5. No agency problems
6. Market clearing
7. No counterparty risk

Any or even most of these assumptions are unlikely to hold in reality in any given capital market at any given time; but in the neoclassical model "institutions" emerge endogenously to

[99] The institutional framework reflects developments in new institutional economics that can be attributed to the works of Coase, Merton, North, Shleifer, Shiller, Thaler, and Williamson among many others (see Thaler and Sunstein, 2003; and Merton and Bodie, 2005 for more recent overviews).

accommodate the absence of these assumptions. “Institutions” here are defined broadly to include mechanisms that facilitate competitive equilibriums in markets. Examples of these institutions include:

1. The evolution of product aggregators like brokerage houses to facilitate price taking
2. The presence of courts and regulations to prevent collusion
3. The evolution of a market for corporate control to mitigate price distortions from limited entry and exit
4. The emergence of information intermediaries like accountants and analysts to mitigate information asymmetries
5. The emergence of monitors like auditors, corporate boards, non-profit watchdogs, etc., and monitoring mechanisms like accounting conservatism to address agency problems
6. The emergence of investment banks, brokerages, and other market-making institutions to facilitate market clearing
7. The presence of government intervention in crises to resolve systemic counterparty risk

As can be seen from the examples above, under the institutional framework, accounting, in general, and GAAP, in particular, can be viewed as “institutions” that have evolved to facilitate competitive equilibriums in markets. Specifically, the properties of GAAP as described in the efficient contracting theory (e.g., comparability, consistency, verifiability, conservatism, auditability, etc.; see Section 2) suggest that the “institution” of GAAP helps mitigate both information asymmetry and agency problems in capital market transactions, thereby facilitating the long-run efficiency of those capital markets.

The institutional framework can explain the evidence of systematic inefficiencies in asset prices and capital allocation decisions through the presence of "sticky" inefficient institutions. Unlike in the rational expectations model, where institutional evolution is almost instantaneous (and thus any potential inefficiency is immediately addressed), the institutional framework hypothesizes institutional inertia: i.e., institutional evolution that is slow, lumpy, and most importantly, a political process. The implication of institutional inertia is that capital markets can lack the appropriate institutions to facilitate competitive equilibriums at any given time. While this is less likely in mature markets where appropriate institutions have had the time to evolve, institutional inertia is particularly likely in markets for new technologies like the internet in the late 1990s and derivative securitization in the early to mid 2000s. The result of poorly developed institutions in new markets is potential capital market disequilibrium, i.e., systemic inefficiencies. For example, the absence of appropriate accounting for securitized assets in the wake of the securitization boom of the early 2000s can be classified as a missing "institution" that facilitated off-equilibrium market prices during that period.

The framework above suggests that understanding institutional evolution is critical to ensuring that capital markets approach perfect market-like conditions. Institutional evolution is both an economic and political process, thus a political economy approach is well suited to this kind of research. The results of the political process are not always optimal: if special interests capture the political process, wealth-transferring institutions can develop. This suggests the need for theories of regulation to explain the origin and consequences of institutional evolution (see Section 4). For example we know very little about how accounting institutions like auditing practices, corporate governance practices, conservatism, and standard setting arise and are

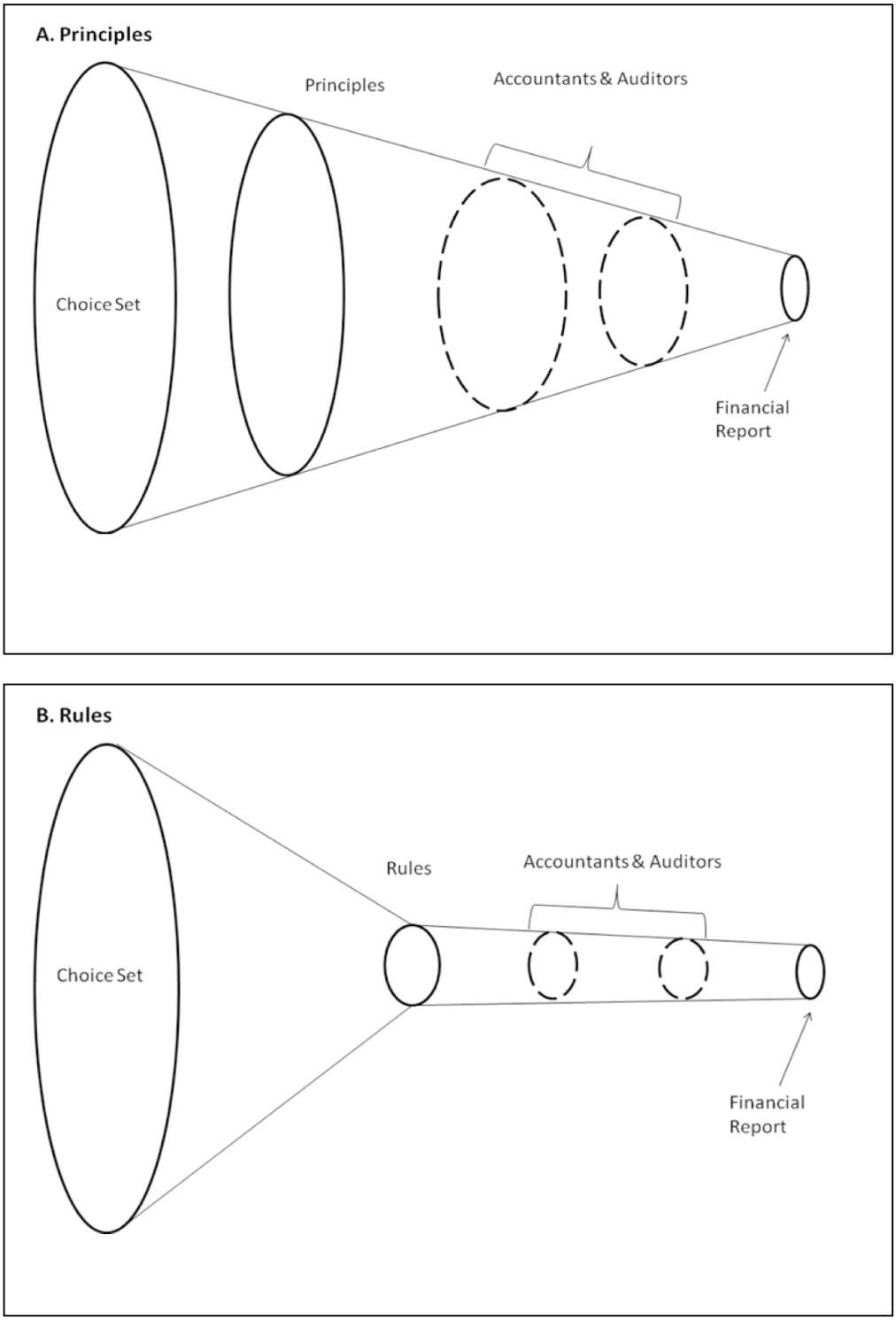
shaped by political factors (rather the extant empirical literature usually assumes these institutions as given and studies their economic consequences).

It has been hypothesized that accounting standards and financial reports influence and are influenced by economic and political forces. While the past forty years has witnessed considerable research on the economic determinants and consequences of accounting, there has been relatively little progress in our understanding of accounting and the political process. We argue that research in this latter area is of critical importance if accounting academe expects to continue to inform our knowledge of markets and market design. Additionally, the 2008–09 Financial Crisis has created the environment for increased governmental (and hence political) involvement in accounting, thereby exacerbating the need for such political research in accounting. Some research questions in accounting and the political process follow:

- When do political factors influence financial reporting? For example, what is the role of elections and prospective regulation in shaping the nature of financial reports? Ramanna and Roychowdhury (2009) provide evidence that political considerations in the 2004 elections influenced reported earnings; does this evidence generalize to all elections? If so, for which firms and what issues?
- Do political factors create systematic trends in the properties of accruals (i.e., are accruals systematically overstated or understated under certain political pressures)? Do investors/ does the market appreciate these systematic trends (i.e., are there trading opportunities created by the political nature of accruals?)
- When does accounting discretion influence the political process? How does regulation respond to earnings management?

- How do political factors influence the nature of accounting standards? For example, we discuss various theories of regulation that provide competing predictions on the role of lobbying in standard setting. Those theories also provide different models for the behavior of regulators (i.e., regulators' idiosyncratic ideologies). What is the trade-off between ideology, political pragmatics, and economics in determining accounting standards? What institutional features of standard setting can minimize the effect of ideologies and politics on standard setting?

Figure 1
A pictorial comparison of principles- and rules-based accounting



References

Aboody, D., Barth, M., Kasznik, R., 2006. Do firms understate stock-based compensation expense disclosed under SFAS 123? Review of Accounting Studies 11, 429–461.

Akerlof, G., 1970. The market for “lemons”: quality uncertainty and the market mechanism. The Quarterly Journal of Economics 84, 488–500.

Asquith, P., Beatty, A., Weber, J., 2005. Performance pricing in debt contracts. Journal of Accounting & Economics 40, 101–128.

Austen-Smith, D., 1995. Campaign contributions and access. American Political Science Review 89, 566–581.

Ball, R., 2001. Infrastructure requirements for an economically efficient system of public financial reporting and disclosure. Brookings-Wharton Papers on Financial Services, 127–169.

Ball, R., 2009. Market and political/regulatory perspectives on the recent accounting scandals. Journal of Accounting Research 47, 277–323.

Ball, R., Brown, P., 1968. An empirical evaluation of accounting income numbers. Journal of Accounting Research 6, 159–177.

Ball, R., Kothari, S., Robin, A., 2000. The effect of international institutional factors on properties of accounting earnings. Journal of Accounting & Economics 29, 1–51.

Ball, R., Robin, A., Wu, J., 2003. Incentives versus standards: Properties of accounting earnings in four East Asian countries. Journal of Accounting & Economics 36, 235–270.

Ball, R., Shivakumar, L., 2005. Earnings quality in U.K. private firms. Journal of Accounting & Economics 39, 83–128.

Ball, R., Shivakumar, L., 2006. The role of accruals in asymmetrically timely gain and loss recognition. Journal of Accounting Research 42, 207–242.

Ball, R., Shivakumar, L., 2008. How much new information is there in earnings? Journal of Accounting Research 46, 975–1016.

Barclay, M., Gode, D., Kothari, S., 2005. Matching delivered performance. Journal of Contemporary Accounting & Economics 1, 1–25.

Barth, M., 2006. Research, standard setting, and global financial reporting. Foundations and Trends ® in Accounting 1, 71-165.

Barth, M., Beaver, W., Landsman, W., 2001. The relevance of the value relevance literature for financial accounting standard setting: another view, Journal of Accounting & Economics 31, 77–104.

Barth, M., Taylor, D., 2009. In defense of fair value: Weighing the evidence on earnings management and asset securitization, forthcoming in the Journal of Accounting & Economics.

Bartov, E., Mohanram, P., Nissim, D., 2007. Managerial discretion and the economic determinants of the disclosed volatility parameter for valuing ESOs. Review of Accounting Studies 12, 155–179.

Basu, S., 1997. The conservatism principle and the asymmetric timeliness of earnings. Journal of Accounting & Economics 24, 3–37.

Baxter, W., 1979. Accounting standards: Boon or curse? In: The Emanuel Saxe Distinguished Lectures in Accounting 1978–1979. New York, NY: The Bernard M. Baruch College, 25–40.

Beatty, A., Ramesh, K., Weber, J., 2002. The importance of accounting changes in debt contracts: the cost of flexibility in covenant calculations. Journal of Accounting & Economics 33, 205–227.

Beatty, A., Weber, J., 2006. Accounting discretion in fair value estimates: an examination of SFAS 142 goodwill impairments. Journal of Accounting Research 44, 257–288.

Beatty, A., Weber, J., Yu, J. 2008. Conservatism and debt. Journal of Accounting & Economics 45, 154–174.

Beaver, W., 1989. Financial Reporting: An Accounting Revolution, 2nd edition. Englewood Cliffs, NJ: Prentice Hall.

Benston, G., 1969. The value of the SEC's accounting disclosure requirements. The Accounting Review 54, 515–532.

Benston, G., 1973. Required disclosure and the stock market: An evaluation of the Securities Market Act of 1934. American Economic Review 63, 132–155.

Benston, G., Bromwich, M., Wagenhofer, A., 2006. Principles- versus rules-based accounting standards: The FASB standard setting strategy, ABACUS 42, 165-188.

Bernard, V., Schipper, K., 1994. Recognition and disclosure in financial reporting. Working Paper, University of Michigan.

Bernard, V., Thomas, J., 1990. Evidence that stock prices do not fully reflect the implications of current earnings for future earnings. Journal of Accounting & Economics 13, 305–340.

BIS, 2000. Report to G7 Finance Ministers and Central Bank Governors on International Accounting Standards. Basel: Basel Committee on Banking Supervision.

Black, F., Scholes, M. 1973. The pricing of options and corporate liabilities. Journal of Political Economy 81, 637–654.

Botosan, C., 1997. Disclosure level and the cost of equity capital. The Accounting Review 72, 323–349.

Breyer, S., 1982. Regulation and Its Reform. Cambridge, MA: Harvard University Press.

Brickley, J., 2003. Empirical research on CEO turnover and firm performance: A discussion. Journal of Accounting and Economics 36, 227–233.

Burgstahler, D., Dichev, I., 1997. Earnings, adaptation, and equity value. The Accounting Review 72, 187–215.

Brown, R., 1905. A History of Accounting and Accountants. Edinburgh: T.C. & E.C. Jack.

Chan, W., Frankel, R., Kothari, S., 2004. Testing behavioral finance theories using trends and consistency in financial performance. Journal of Accounting & Economics 38, 3–50.

Chase, W., MacClintock, S., Willis, H., Hirschl, S., 1916. Higher Accountancy: Principles and Practice. Chicago, IL: LaSalle Extension University.

Christensen, H., Nikolaev, V., 2009. Who uses fair value accounting for non-financial assets after IFRS adoption? Working paper. The University of Chicago Booth School of Business. February.

Connolly, T., Arkes, H., Hammond, K. (Eds.), 2000. Judgment and Decision Making: An Interdisciplinary Reader. New York, NY: Oxford University Press.

Core, J., 2001. A review of the empirical disclosure literature: Discussion, Journal of Accounting & Economics 31, 441-456.

Dal Bo, E., 2006. Regulatory capture: a review. Oxford Review of Economic Policy 22, 203–225.

Daniel, K., Hirshleifer, D., Teoh, S., 2002. Investor psychology in capital markets: evidence and policy implications. Journal of Monetary Economics 49, 139–209.

DeBondt, W., Thaler, R., 1985. Does the stock market overreact? Journal of Finance 40, 793–805.

Diamond, D., Verrecchia, R., 1991. Disclosure, liquidity, and the cost of capital. Journal of Finance 46, 1325–1359.

Diamond, D., Rajan, R., 2009. The credit crisis: Conjectures about causes and remedies. Paper presented at AEA Meetings, January 2009. Most recently accessed at http://faculty.chicagobooth.edu/raghuram.rajan/research/recent.htm.

DeAngelo, H., DeAngelo, L., Skinner, D. 1994. Accounting choice in troubled companies. Journal of Accounting and Economics 17, 113–143.

Dechow, P., Myers, L., Shakespeare, C., 2009. Fair Value Accounting and Gains from Asset Securitizations: A Convenient Earnings Management Tool with Compensation Side-Benefits Professor, forthcoming in the Journal of Accounting & Economics.

Dopuch, N., Sunder, S. 1980. FASB's statements on objectives and elements of financial accounting: A review. The Accounting Review 55, 1–21.

Dye, R. 1990. Mandatory versus voluntary disclosures: The cases of financial and real externalities. The Accounting Review 64, 1–24.

Dye, R. 2002. Classifications manipulation and Nash accounting standards. Journal of Accounting Research 40, 1125–1162.

Dye, R., S. Sridhar. 2008. A positive theory of flexibility in accounting standards. Journal of Accounting & Economics 46, 312–333.

Dye, R., Sunder, S., 2001. Why not allow the FASB and IASB standards to compete in the U.S.? Accounting Horizons 15, 257–271.

Ely, K., Waymire, G., 1999. Accounting standard-setting organizations and earnings relevance: longitudinal evidence from NYSE common stocks 1927–93. Working Paper, Emory University.

Fama, E., 1970. Efficient capital markets: a review of theory and empirical work. Journal of Finance 25, 383–417.

Fama, E., 1998. Market efficiency, long-term returns, and behavioral finance. Journal of Financial Economics 49, 283–306.

Fama, E., French, K., 1988. Permanent and temporary components of stock prices. Journal of Political Economy 96, 246–273.

Fama, E., French, K., 2008. Mutual fund performance. Working Paper, University of Chicago.

Fields, T., Lys, T., Vincent, L., 2001. Empirical research on accounting choice. Journal of Accounting & Economics 31, 255–307.

Financial Accounting Standards Board (FASB). 1974. *Accounting for Research and Development Costs.* Statement of Financial Accounting Standards No. 2. Norwalk, CT: FASB.

Financial Accounting Standards Board (FASB). 1975. *Accounting for Contingencies.* Statement of Financial Accounting Standards No. 5. Norwalk, CT: FASB.

Financial Accounting Standards Board (FASB). 1976. *Accounting for Leases.* Statement of Financial Accounting Standards No. 13. Norwalk, CT: FASB.

Financial Accounting Standards Board (FASB). 1993. *Accounting for Certain Investments in Debt and Equity Securities.* Statement of Financial Accounting Standards No. 115. Norwalk, CT: FASB.

Financial Accounting Standards Board (FASB). 1998. *Accounting for Derivative Instruments and Hedging Activities.* Statement of Financial Accounting Standards No. 133. Norwalk, CT: FASB.

Financial Accounting Standards Board (FASB). 2000. *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities—A Replacement of FASB Statement No. 125.* Statement of Financial Accounting Standards No. 140. Norwalk, CT: FASB.

Financial Accounting Standards Board (FASB). 2007. *The Fair Value Option for Financial Assets and Financial Liabilities—including an amendment of FASB Statement No. 115.* Statement of Financial Accounting Standards No. 159. Norwalk, CT: FASB.

Francis, J., Hanna, D., Vincent, L., 1996. Causes and effects of discretionary asset write-offs. Journal of Accounting Research 34 (Supplement), 117–134.

Francis, J., Olsson, P., Schipper, K., 2006. Earnings quality. Foundations and Trends ® in Accounting 1, 259–340.

Frankel, R., Seethamraju, C., Zach, T., 2008. GAAP goodwill and debt contracting efficiency: Evidence from net-worth covenants. Review of Accounting Studies 13, 87–118.

Gonedes, N., Dopuch, N., 1974. Capital market equilibrium, information production, and selecting accounting techniques: Theoretical framework and review of empirical work. Journal of Accounting Research 12, 48–129.

Gigler, F., Kanodia, C., Sapra, H., Venugopalan, R., 2009. Accounting conservatism and the efficiency of debt contracts. Journal of Accounting Research 47, 767–797.

Green, J., Hand, J., Soliman, M., 2009. Going, going, gone? The death of the U.S. accruals anomaly. Working paper, UNC Chapel Hill.

Grossman, G., Helpman, E., 1994. Protection for sale. American Economic Review 84, 833–850.

Grossman, G., Helpman, E., 2001. Special Interest Politics. Cambridge, MA: MIT Press.

Hay, J., Shleifer, A., 1988. Private enforcement of public laws: a theory of legal reform. American Economic Review Papers and Proceedings 88, 398–403.

Hay, J., Shleifer, A., Vishny, R., 1996. Toward a theory of legal reform. European Economic Review 40, 559–567.

Hayn, C., 1995. The information content of losses. Journal of Accounting and Economics 20, 125–153.

von Hayek, F., 1945. The use of knowledge in society. American Economic Review 35, 519–530.

von Hayek, F., 2002. Competition as discovery procedure. The Quarterly Journal of Austrian Economics 5 (3), 9–23.

Healy, P., Palepu, K., 2001. Information asymmetry, corporate disclosure, and the capital markets: a review of the empirical disclosure literature. Journal of Accounting & Economics 31, 405–440.

Hirshleifer, D., 2001. Investor psychology and asset pricing. Journal of Finance 56, 1533–1598.

Hirshleifer, D., Hou, K., Teoh, S., 2009. Accruals, cash flows, and aggregate stock returns. Journal of Financial Economics 91, 389–406.

Holthausen, R., Leftwich, R., 1983. The economic consequences of accounting choice: implications of costly contracting and monitoring. Journal of Accounting & Economics 5, 77–117.

Holthausen, R., Watts, R., 2001. The relevance of the value-relevance literature for financial accounting standard setting. Journal of Accounting & Economics 31, 3–75.

Huddart, S., Hughes, J., Brunnermeier, M. 1999. Disclosure requirements and stock exchange listing choice in an international context. Journal of Accounting & Economics 26, 237–269.

IASB, 2008a. Discussion Paper: Fair value measurements, London: International Accounting Standards Committee Foundation Publications Department, November.

IASB, 2008b. IASB Annual Report 2008. London: International Accounting Standards Committee Foundation.

Jamal, K., Maier, M., Sunder, S., 2005. Enforced standards versus evolution by general acceptance: a comparative study of E-commerce privacy disclosure and practice in the United States and the United Kingdom. Journal of Accounting Research 43, 73–96.

Jegadeesh, N., Titman, S., 1993. Returns to buying winners and selling losers: implications for stock market efficiency. Journal of Finance 48, 65–91.

Jensen, M. C., 1983. Organization theory and methodology. The Accounting Review 58, 319–339.

Jensen, M., Meckling, W., 1976. Theory of the firm: Managerial behavior, agency costs, and ownership structure. Journal of Financial Economics 3, 305–360.

Jensen, M., Field, S., Park T., 1978. Some anomalous evidence regarding market efficiency. Journal of Financial Economics 6, 95–101.

Johnson, L. T, 2005. Relevance and reliability: The FASB Report, at: http://www.fasb.org/articles&reports/relevance_and_reliability_tfr_feb_2005.pdf/

Kahneman, D., Tversky, A., 1979. Prospect theory: an analysis of decision under risk. Econometrica 47, 263–291.

Kalt J., Zupan, M., 1984. Capture and ideology in the economic theory of politics. American Economic Review 74, 279–300.

Kau, J., Rubin, P., 1979. Self interest, ideology, and logrolling in Congressional voting. Journal of Law and Economics 22, 365–84.

Kosowski, R., Timmermann, A., Wermers, R., White, H., 2006. Can mutual fund "stars" really pick stocks? New evidence from a bootstrap analysis. Journal of Finance 61, 2551–2595.

Kothari S., Lewellen, J., Warner, J., 2006. Stock returns, aggregate earnings surprises, and behavioral finance. Journal of Financial Economics 79, 537–568.

Kothari, S., Lys, T., Smith, C., Watts, R., 1988. Auditor liability and information disclosure. Journal of Accounting, Auditing and Finance 3, 307–339.

Kothari, S., 2000. Role of financial reporting in reducing financial risks in the market. In: Rosengren, E.S., Jordan, J.S. (Eds.). Building an Infrastructure for Financial Stability. Boston, MA: Federal Reserve Bank of Boston, 89–102.

Kothari, S., 2001. Capital markets research in accounting. Journal of Accounting & Economics 31, 105–231.

Kothari, S., Laguerre, T., Leone, A., 2002. Capitalization versus expensing: Evidence on the uncertainty of future earnings from capital expenditures versus R&D outlays, Review of Accounting Studies 7, 355-382.

Kothari, S., Shu, S., Wysocki, P., 2009. Do managers withhold bad news? Journal of Accounting Research 47, 241–276.

Kraft, P., 2008. Rating Agency Adjustments to GAAP Financial Statements and their Effect on Ratings and Bond Yields. Unpublished manuscript. http://ssrn.com/abstract=1266381.

Lambert, R., Larcker, D., 1987. An analysis of the use of accounting and market measures of performance in executive compensation contracts, Journal of Accounting Research 25, 85-125.

Lambert, R., Leuz, C., Verrecchia, R., 2007. Accounting information, disclosure and the cost of capital. Journal of Accounting Research 45, 385–420.

Leftwich, R., 1980. Market failure fallacies and accounting information. Journal of Accounting & Economics 2, 193–211.

Leftwich, R., 1983. Accounting information in private markets: evidence from private lending agreements. The Accounting Review 58, 23–42.

Leone, M. 2008. "Spineless?" UK pressure targets fair value weakening. *CFO.com*, November. http://www.cfo.com/article.cfm/12586836?f=related.

Leone, A., Wu, J., Zimmerman, J., 2006. Asymmetric sensitivity of CEO compensation to stock returns. Journal of Accounting & Economics 42, 167–192.

Leuz, C., Wysocki, P. 2008. Economic consequences of financial reporting and disclosure regulation: A review and suggestions for future research. Working Paper, University of Chicago.

Lev, B., Zarowin, P., 1999. The boundaries of financial reporting and how to extend them. Journal of Accounting Research 37, 353–385.

Lev, B., 2002. Where have all of Enron's intangibles gone? Journal of Accounting and Public Policy 21, 131–135.

Li, N., 2009. Negotiated measurement rules in debt contracts. Unpublished dissertation, University of Chicago Booth School of Business.

Libby, R., Nelson, M., Hunton, J., 2006. Recognition v. disclosure, Auditor tolerance for misstatement, and the reliability of stock-compensation and lease information. Journal of Accounting Research 44, 533–560.

Lo, A., 2004. The adaptive markets hypothesis: Market efficiency from an evolutionary perspective. Journal of Portfolio Management 30, 5–29.

Lo, A., 2005. Reconciling efficient markets with behavioral finance: the adaptive markets hypothesis. The Journal of Investment Consulting 7, 21–44.

Mahoney, P., 1999. The stock pools and the Securities Exchange Act. Journal of Financial Economics 51, 343–369.

Mahoney, P., 2009. The development of securities law in the United States. Journal of Accounting Research 47, 325–347.

Melumad, N., Shibano, T., 1994. The Securities and Exchange Commission and the Financial Accounting Standards Board: Regulation through veto-based delegation. Journal of Accounting Research 32, 1–37.

Merton, R. 1974. On the pricing of corporate debt: The risk structure of interest rates. Journal of Finance 29, 449–470.

Merton, R., Bodie, Z, 2005. The design of financial systems: Towards a synthesis of function and structure. Journal of Investment Management 3, 1–23.

Milyo, J., Primo, D., Groseclose, T., 2000. Corporate PAC campaign contributions in perspective. Business and Politics 2, 75–88.

Moody's Investor Services: Global Credit Research, 2005. Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations - Part I. Manuscript available at http://ssrn.com/abstract=959001.

Murphy, K., Zimmerman, J., 1993. Financial performance surrounding CEO turnover. Journal of Accounting & Economics 16, 273–315.

Myers, J., Myers, L., Skinner, D. 2007. Earnings momentum and earnings management. Journal of Accounting, Auditing and Finance 22, 249–284.

Myers, S., 1977. Determinants of corporate borrowing, Journal of Financial Economics 5, 147–175.

Olson, M., 1965. The Logic of Collective Action: Public Goods and the Theory of Groups. New York, NY: Schocken Books.

Peltzman, S., 1976. Toward a more general theory of regulation. Journal of Law and Economics 19, 211–240.

Penman, S., 2007. Financial reporting quality: Is fair value a plus or a minus? Accounting and Business Research 37 (3), 33–44.

Persson, T., Tabellini, G., 2000. Political Economics: Explaining Economic Policy. Cambridge, MA: MIT Press.

Pigou, A., 1938. The Economics of Welfare. London: Macmillan and Co. (Orig. pub. 1920.)

Porter, M., 1996. What is strategy? Harvard Business Review 76, 61–78.

Pourciau, S., 1993. Earnings management and nonroutine executive changes. Journal of Accounting & Economics 16, 317–336.

Ramanna, K., 2008. The implications of unverifiable fair-value accounting: evidence from the political economy of goodwill accounting. Journal of Accounting & Economics 45, 253–281.

Ramanna, K., Roychowdhury, S., 2009. Elections and discretionary accruals: Evidence from 2004. Working Paper, Harvard Business School.

Ramanna, K., Sletten, E., 2009. Why do countries adopt International Financial Reporting Standards? Working Paper, Harvard Business School.

Ramanna, K., Watts, R., 2008. Evidence from goodwill non-impairments on the effects of using unverifiable estimates in financial reporting. Working Paper, Harvard Business School.

Ripley, W., 1927. Main Street and Wall Street. Boston, MA: Little Brown and Company.

Roychowdhury, S., Watts, R., 2007. Asymmetric timeliness of earnings, market-to-book, and conservatism in financial reporting. Journal of Accounting and Economics 44, 2–31.

Ryan, S., 2006, Identifying conditional conservatism, European Accounting Review 15, 511–525.

Schipper, K., 2005, Fair values in financial reporting. Presentation at American Accounting Association Annual Meetings, August 2005. Available at http://fars.org/2005AAAFairValueKSchipper.pdf (last accessed Septermber 15, 2009).

Schipper, K., Schrand, C., Shevlin, T., Wilks, T., 2009. Reconsidering revenue recognition. Accounting Horizons 23, 55–68.

Schipper, K., Vincent, L., 2003. Earnings quality. Accounting Horizons 17, 97–110.

Schumpeter, J., 1950. Capitalism, Socialism, and Democracy. New York: Harper & Brothers. (Orig. pub. 1942.)

Schwert, G., 2001. Anomalies and market efficiency. In: Constantinides, G.M., Harris, M., Stulz, R.M. (Eds.). Handbook of the Economics of Finance. North-Holland: Elsevier.

Securities and Exchange Commission **(**SEC**),** 2003. Study Pursuant to Section 108(d) of the Sarbanes-Oxley Act of 2002 on the Adoption by the United States Financial Reporting System of a Principles-Based Accounting System. Available at http://www.sec.gov/news/studies/principlesbasedstand.htm.

Securities and Exchange Commission (SEC), 2007. Discussion Paper for Consideration by the SEC Advisory Committee on Improvements to Financial Reporting. Securities and Exchange Commission. Available at http://www.sec.gov/rules/other/2007/33-8836.pdf.

Securities and Exchange Commission (SEC), 2008. Final Report of the Advisory Committee on Improvements to Financial Reporting to the United States Securities and Exchange Commission. Securities and Exchange Commission. http://www.sec.gov/about/offices/oca/acifr/acifr-finalreport.pdf.

Seligman, J., 2003. The Transformation of Wall Street. New York, NY: Aspen Publishers.

Shefrin, H., Statman, M., 1994. Behavioral capital asset pricing theory. Journal of Financial and Quantitative Analysis 29, 323–349.

Shefrin, H., Statman, M., 2000. Behavioral portfolio theory. Journal of Financial and Quantitative Analysis 35, 127–151.

Shefrin, H., Thaler, R., 1988. The behavioral life cycle hypothesis. Economic Inquiry 24, 609–643.

Shleifer, A., 2005. Understanding regulation. European Financial Management 11, 439–451.

Shleifer, A., Vishny, R., 1995. The limits of arbitrage. Journal of Finance 52, 33–55.

Skinner, D., 1993. The investment opportunity set and accounting procedure choice: Preliminary evidence. Journal of Accounting & Economics 16, 407–445.

Skinner, D., 1994. Why firms voluntarily disclose bad news. Journal of Accounting Research 32, 38–60.

Skinner, D., 2008a. Accounting for intangibles—a critical review of policy recommendations. Accounting and Business Research 38, 191–204.

Skinner, D., 2008b. The rise of deferred tax assets in Japan: the role of deferred tax accounting in the Japanese banking crisis. Journal of Accounting & Economics 46, 218–239.

Sloan, R., 1993. Accounting earnings and top executive compensation. Journal of Accounting & Economics 16, 55–100.

Sloan, R., 1996. Do stock prices fully reflect information in accruals and cash flows about future earnings? The Accounting Review 71, 289–316.

Smith, C., Warner, J., 1979. On financial contracting: an analysis of bond covenants. Journal of Financial Economics 7, 117–161.

Stigler, G., 1971. The theory of economic regulation. Bell Journal of Economics 2, 3–21.

Stratmann, T., 2002. Can special interests buy congressional votes? Evidence from financial services legislation. Journal of Law and Economics 45, 345–373.

Sunder, S., 1988. Political economy of accounting standards. Journal of Accounting Literature 7, 31–41.

Sunder, S. 2002. Regulatory competition among accounting standards within and across international boundaries. Journal of Accounting and Public Policy 21, 219–234.

Sweeney, J. 2009. Are Global Standards Bad for America? *Business Finance,* August 11. http://businessfinancemag.com/article/are-global-standards-bad-america-0810.

Thaler, R., 1980. Toward a positive theory of consumer choice. Journal of Economic Behavior and Organization 1, 39–60.

Thaler, R., Sunstein, C., 2003. Libertarian paternalism. American Economic Review 93, 175–179.

U.S. Congress, 2002. The Sarbanes-Oxley Act of 2002.

Watts, R., 1977. Corporate financial statements a product of the market and political processes. Australian Journal of Management 2, 53–75.

Watts, R., 2003a. Conservatism in accounting Part I: explanations and implications. Accounting Horizons 17, 207–221.

Watts, R., 2003b. Conservatism in accounting Part II: evidence and research opportunities. Accounting Horizons 17, 287–301.

Watts, R., 2006. What has the invisible hand achieved," *Accounting and Business Research*, Special issue: International Accounting Policy Forum, 51-61.

Watts, R., Zimmerman, J., 1978. Towards a positive theory of the determination of accounting standards. The Accounting Review 53, 112–134.

Watts, R., Zimmerman, J., 1983. Agency problems, auditing and the theory of the firm: some evidence. Journal of Law and Economics 26, 613–633.

Watts, R., Zimmerman, J., 1986. Positive Accounting Theory. Englewood Cliffs, NJ: Prentice Hall.

Watts, R., Zimmerman, J., 1990. Positive Accounting Theory: A Ten Year Perspective. The Accounting Review 65, 131-156.

Weingast, B., 1984. The congressional-bureaucratic system: a principal agent perspective (with applications to the SEC). Public Choice 44, 147–191.

Weisbach, M., 1995. CEO turnover and the firm's investment decisions. Journal of Financial Economics 37, 159–188.

Zeff, S., 2005a. The evolution of US GAAP: the political forces behind professional standards part 1. CPA Journal 75 (January), 18–27.

Zeff, S. 2005b. The evolution of US GAAP: the political forces behind professional standards part 2. CPA Journal 75 (February), 19–29.

Zhang, J., 2008. The contracting benefits of accounting conservatism to lenders and borrowers. Journal of Accounting & Economics 45, 27–54.