One Size Fits All?
Costs and Benefits of Uniform Accounting Standards*

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Abstract

I build a model of neoclassical production to examine the capital market and welfare effects of a uniform accounting standard (like IFRS). Firms vary in their cost of compliance to the standard, and investors vary in their cost of learning diverse standards for capital allocation. I show that a uniform accounting standard increases the quantity of capital in the economy and lowers the cost of capital. However, uniform standards force diverse firms onto the same standard, which reduces welfare. A regulator selects the optimal number and type of standard to balance these competing effects. Uniform accounting standards are better than diverse accounting standards when firm productivity and variation between investors is large, but worse when the cost of investment and variation between firms is large. I draw implications for IFRS/GAAP convergence, and the incentives versus standards debate.

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1 Introduction

Over the last decade, the world has witnessed a slow, but steady march toward convergence of international accounting standards. Dozens of countries around the globe have already shifted to the International Financial Reporting Standards (IFRS), and the Securities and Exchange Commission has pledged to harmonize United States Generally Accepting Accounting Principles (US GAAP) with IFRS. But are uniform accounting standards even desirable? While the academic community has long articulated some skepticism of a single, uniform accounting standard (Ball (2006), Dye and Sunder (2001), Sunder (2002)), only recently has this skepticism turned into concrete hesitation by accounting regulators.\(^1\) I advance a simple theoretical framework for thinking about the costs and benefits of uniform accounting standards. I show exactly how uniform accounting standards lower the cost of capital, and under what conditions society is better off under a single uniform accounting standard than under multiple diverse accounting standards. I show that uniform accounting standards are better when firm productivity and variation between investors is large, but diverse accounting standards are better when the cost of investment and variation between firms is large.

The measure of a “good” accounting standard stems from welfare economics, and the objective of the paper is to aim for economic efficiency. In particular, a government regulator selects accounting standards to maximize social welfare. Throughout, I consider total surplus as the measure of social welfare, namely, that I assign equal Pareto weights to firms and investors in the social welfare function.\(^2\) The regulator acts as a single entity, and as such, the model abstracts away from strategic games and rent-seeking between different accounting standard setting bodies. This is not to insinuate that different bodies, like FASB and IASB, agree completely on accounting standards. But the current movement to harmonize international accounting standards suggests that there is substantial coordination between international accounting standard setters.

The model combines neoclassical production with Hotelling product choice. A continuum of investors supplies capital in a competitive marketplace to a continuum of firms, and supply and demand dictates the market-clearing price and quantity of capital. A government regulator selects an accounting standard that firms must adhere to in order

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\(^1\)See the testimony from the confirmation of Mary Schapiro, current Chairman of the Securities and Exchange Commission, January 27, 2009.

\(^2\)Different Pareto weights will alter the social welfare function, but will simply force the regulator to shift the accounting standards in favor of the party with the greater Pareto weight.
to attract capital. There is heterogeneity among both firms and investors with respect to these accounting standards. Firms vary in their cost of compliance to the accounting standards, and investors vary in their cost of interpreting and understanding diverse accounting standards. The regulator acts as a benevolent dictator, and maximizes social welfare.

The main tension in the model rests on the capital allocation benefit of a uniform accounting standard against the social cost of forcing diverse firms to adhere to the same rigid standard. A uniform standard allows investors to compare more easily investment opportunities across the economy, since all financial reports are expressed in the same “language.” This draws investors into the marketplace, thereby, increasing the supply of capital in the economy and lowering the cost of capital for all firms. However, a single standard is costly for firms because it fails to take advantage of the variation among firms. Firms prefer to choose among diverse standards because this lowers their cost of compliance. The regulator, knowing that the firms will choose the standard that best fits them, optimally selects the number and type of standard to minimize the social cost of compliance. The regulator balances the social cost of compliance against the liquidity benefit of greater supply of capital under a single standard.

This paper makes two main contributions. The first contribution is to adopt a neoclassical approach to understand the economic consequences of a uniform accounting standard. Policymakers have often discussed the greater transparency and investor confidence as benefits of a single international accounting standard (e.g., Cox 2008 and Schapiro 2009), and the empirical accounting literature, reviewed below, often tracks the effects of IFRS adoption on measures of market liquidity and the cost of capital. However, there has been a vacuum of theory precisely explaining the economic consequences of uniform standards. In particular, I show that the dominant intuition on harmonizing international accounting standards is correct: uniform standards do lower the cost of capital. My model argues not based on information asymmetry between investors and firms, but rather shows that accounting standards shift the market supply curve of capital.

This neoclassical approach focusing on supply and demand does not deny the existence of information problems in financial reporting, but does deliver novel results in a simple and tractable framework. To arrive at implications for the cost of capital, I build on the literature that connects stock returns to firm production functions.³ This

³This literature initially sought to explain the optimal investment path of firms, and to establish a
“Q-theory” of investment, initiated by Cochrane (1991), establishes a conceptual link between the stock returns and the firm’s production function. I use this literature to show how the equilibrium prices and quantities from a neoclassical production problem have implications for the firm’s cost of capital. In particular, under decreasing returns to scale, the cost of capital rises with the firm’s price of capital. Thus, when a uniform standard increases the supply of capital, this lowers the equilibrium price of capital and hence also the cost of capital.

The second contribution is to use the model to develop a number of comparative statics that can guide policy or future empirical work. I ask under what conditions a uniform accounting standard generates higher social welfare than under diverse accounting standards. There are four implications. First, when variation between firms is large, diverse standards are better. When firms are dispersed, the cost of complying with a single standard is high, and society is better off with multiple standards that provide better coverage of the type space of firms. Second, when variation between investors is large, uniform standards are better. Dispersion between investors means that fewer investors are willing to bear the cost of transitioning to a new standard, thereby shrinking the investor pool. The main benefit of the uniform standard is that it draws capital into the marketplace, and therefore it has a larger benefit to society precisely when investors are reluctant to enter the global capital marketplace. Third, when firm productivity is large, uniform standards are better. A high marginal product of capital generates the most returns when the capital level is high, and this occurs under a uniform standard, which increases the supply of capital in the economy. Fourth, when the cost of investment is large, diverse standards are better. Because investment overall is more expensive, this erodes the benefit of the uniform standard, making diverse standards more beneficial to society.

While the primary impetus and application for this paper is the current policy de-relationship between Tobin’s Q and “marginal Q”, which falls out of the first-order conditions of the firm’s investment problem. Jorgenson (1963) posed the problem, Hayashi (1982) showed that marginal and average Q are equivalent under constant returns to scale, and Abel and Eberly (1994) showed that they are proportional under decreasing returns to scale. Cochrane (1991) first establishes a link between stock returns and investment returns using arbitrage arguments, while Restoy and Rockinger (1994) and more recently Liu, Whited, and Zhang (2009) show that the equivalence of Tobin’s Q and marginal Q under constant returns to scale is identical to the equivalence between stock returns and investment returns. I build on Abel and Eberly (2008), who dispose of the controversial adjustment costs function, and consider firms with decreasing returns to scale.
bate on convergence of the two major accounting standards, IFRS and US GAAP, the
theory applies more broadly. This can also apply to variation in accounting standards
within a country, as well as between countries. On top of this, the theory gives guid-
ance on whether a single accounting standard should have multiple dimensions within a
single overarching standard, like the separate rules for financial and nonfinancial firms
within US GAAP. Nonetheless, I now review the debate over international accounting
standards, the primary application of the theory.

1.1 Policy and Academic Debate on International Accounting
Standards
The various policy bodies involved in international accounting standards have slowly
shifted toward a single standard over several years. The former chair of the US Se-
curities and Exchange Commission, Christopher Cox, in particular, spoke primarily of
the comparability benefit of a single standard, which would ultimately improve trans-
parency of financial reporting and investor confidence.\(^4\) The current SEC chair Mary
Schapiro has broadly supported convergence, though is more skeptical, claiming that
IFRS standards lack the detail of US standards, leave much to interpretation, impose
high transition costs, and rob the SEC of its oversight of accounting standards.\(^5\). On
top of all this, while the IASB and FASB still agree that harmonization is an eventual
target, the process of convergence remains slow, and they keep postponing the timeline
for eventual harmonization. This speaks not only to the complexity of actually imple-
menting a uniform standard, but also to latent concerns, if not skepticism, on whether
a single, international standard is even desirable.

The literature on international accounting standards is large and growing. These
papers examine the effects of international accounting standards on a wide variety of
market measures. The papers most relevant for my model are those that address in-
vestment liquidity or cost of capital. The literature on IFRS adoption is split between
voluntary and involuntary adoption. The evidence on the capital market effects (mar-

\(^4\)In his 2008 address to IOSCO, Cox remarks that “An international language of disclosure and
transparency would significantly improve investor confidence in global capital markets. Investors could
more easily compare issuers’ disclosures, regardless of what country or jurisdiction they came from. They
could more easily weigh investment opportunities in their own country against competing opportunities
in other markets.”

\(^5\)Testimony before Senate Committee on Banking, Housing, and Urban Affairs, January 15, 2009
ket liquidity, cost of capital) is mixed, though somewhat less so for voluntary adoption. Some find that the capital market effects (liquidity or cost of capital) are positive (e.g., Leuz and Verrecchia 2000; Daske et al 2007; Platikanova 2007; Barth, Landsman, and Lang 2008; Hail and Leuz 2006), some find they are neutral (e.g., Cuijpers and Buijink 2005; Leuz 2003), and some find they are negative (e.g. Daske 2006; Barth, Clinch, and Shibano 1999). That capital market effects are mixed is itself an opportunity to provide theoretical guidance, as the evidence establishes variation that can be explained with theory.

Despite the mixed empirical verdict on the capital market effects of an international accounting standard, the broader evidence on lowering barriers to investment is more conclusive (e.g., Aggarwal, Klapper, and Wysocki, 2005; Leuz et al 2008a ). And improving the ability for foreign investment to a country improves liquidity, lowers the cost of capital, and increases the pool of investor capital (e.g., Stulz 1981; Cooper and Kaplanis 1986), predictions that are all consistent with my model. Bradshaw, Bushee, and Miller (2004) in fact find direct evidence of the comparability benefits of a uniform standard, showing that investors in the US prefer companies that use accounting standards similar to US GAAP, because they are better able to interpret and process the data. This matches Christopher Cox’s rhetoric on the value of comparable financial reports, and fits the steering assumption of my model.

A competing hypothesis in the academic debate on international accounting is the importance of reporting incentives. This argument claims that accounting standards per se are less important than the incentives firms face to make high quality financial reports, which are determined by a wide variety of institutional and legal factors (e.g., Ball 2009; Christensen, Lee, and Walker 2008; Ball et al 2000; Fan and Wong 2002; Leuz et al 2003; Haw et al 2004; Burgstahler et al 2006). These studies show that even when firms adhere to the same standards there is significant variation in reporting practices across countries (e.g., Ball et al 2003; Ball and Shivakumar 2005; Burgstahler et al 2006; Lang et al 2006). While my model is one of accounting standards and does not contain an explicit incentive problem for the firm, it does produce results that speak to this empirical literature. In particular, the cost of investment in my model references all of the institutional and legal constraints on investment, such as weak enforcement of financial reporting, poor protection of property and shareholder rights, weak financial regulatory institutions — any feature of the environment that raises the cost of investment. My theory predicts that when this cost is small, a uniform standard is better than diverse standards. In this

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sense, a uniform standard and the institutional environment (captured by a low cost of investment) are complements and reinforce one another. This follows from the theory and is consistent with the literature on reporting incentives in international accounting.

The existing theoretical literature on international accounting standards is thin and does not directly address whether a single standard is socially optimal. The closest is Barth, Clinch, and Shibano (1999), who examine the effects of harmonizing domestic with foreign accounting standards. Like my model, they assume investors must bear a cost to learning a new (domestic) accounting standard, and they make predictions on trading volume and the cost of capital. Unlike my paper, they consider the precision of GAAP as a key component to determining when harmonization leads to lower cost of capital. Though their model differs in many of the details, they do arrive at a similar conclusion that harmonization is not necessarily the best option.\(^6\)

Other work examines the issue of uniformity versus flexibility within a single accounting standard (e.g., Dye and Verrecchia 1995; Dye and Sridharan 2008), addressing the wide claim that IFRS allows more discretion and flexibility than US GAAP. While this is an important issue, I focus on whether a uniform standard is socially optimal, rather than the optimal structure of a single accounting standard. Finally, Lambert, Leuz, and Verrecchia (2007) model the effects of accounting information on the cost of capital, finding that an increase in the quality of a firm’s disclosure about its own future cash flows has a direct effect on the assessed covariance with other firm’s cash flows, thereby establishing that accounting disclosure can reduce the cost of capital. While their paper certainly differs from mine in both setup and focus, it shares the goal of mapping between the accounting system and the measure of cost of capital. They argue accounting disclosure reduces information asymmetry between firms and investors, lowering the cost of capital. I take a neoclassical approach, arguing that accounting standards shift the market supply of capital, which lowers the cost of capital.

While the theoretical models on international accounting are scarce, there is a small collection of policy pieces written by leading academics on the question of regulatory competition in accounting standards. Dye and Sunder (2001) run through many of the

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\(^6\)I find that there is an unambiguous benefit from a uniform standard, namely that it lowers cost of capital and increases liquidity. The question then remains on whether the costs of a uniform standard outweigh this unambiguous benefit. Barth et al (1999) do not find that harmonization necessarily produces the benefit of lower cost of capital and higher liquidity. In that sense, their paper takes more of a skeptical view on uniform standards that does this one.
arguments for and against regulatory competition, especially the concern for a “race to the bottom” that plagues the economics of consumer product liability. Sunder (2002) extends this discussion and argues that competition would improve the efficiency of accounting standards because regulators would be forced to cater their standards to both firms and investors. Kothari, Ramanna, and Skinner (2009) also defend competition among accounting regulators, using the arguments of better economic innovation and diversity in a world of regulatory competition. While monopolies may innovate less than competitive firms, my focus here is on optimal diversity rather than optimal level of innovation.