Does Earnings Quality Affect Information Asymmetry? 
Evidence from Trading Costs*

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1. Introduction

A fundamental role of accounting information in financial markets is to serve as a basis for capital allocation. An important attribute of the quality of accounting information is the extent to which earnings (accruals) map into cash flows. A poor mapping of accruals into cash flows reduces the information content of reported earnings and results in lower-quality earnings. If investors differ in their ability to process earnings related information, then poor earnings quality can result in differentially informed investors and thereby exacerbate the information asymmetry in financial markets (Diamond and Verrecchia 1991; Kim and Verrecchia 1994). Analytical models (e.g., Kyle 1985; Glosten and Milgrom 1985) predict that differential information among market participants increases the adverse selection risk for liquidity providers. In response, liquidity providers demand a larger compensation and widen the spread between the bid and the ask prices, thereby lowering liquidity and increasing the cost of capital.¹

Consequently, the determinants and consequences of earnings quality are of interest to investors, managers, regulators, and standard-setters. The linkages discussed above are best summarized by the words of Arthur Levitt, former Chairman of the Securities and Exchange Commission (SEC), “an important benefit of high quality accounting standards is improved liquidity and lower cost of capital.”² A notion implicit in this remark is that regulators and standard-setters view the reduction in information asymmetry to be an important benefit of improved earnings quality. In this study, we examine whether poor earnings quality is associated with higher information asymmetry in capital markets.

Using an accruals-based measure of earnings quality (Francis, LaFond, Olsson, and Schipper 2005) (FLOS) and a market microstructure based measure of information asymmetry (the price impact of trade), we test for the association between earnings quality and information asymmetry for a large sample of NYSE and NASDAQ firms over the period 1998–2007. We find that poor
earnings quality is significantly and incrementally (i.e., over and above a well-established benchmark model of trading costs) associated with higher information asymmetry. We further investigate whether the negative effects on information asymmetry are more pronounced for certain types of firms than others. We find that poor earnings quality has a more pronounced impact on firms operating in a poor information environment, such as small firms and those with low institutional ownership and low analyst following. Specifically, the magnitude of the association between earnings quality and information asymmetry is estimated to be more than twice as large for small firms as compared to large firms.

The extent to which a firm’s earnings (accruals) map into cash flows is affected by its operating environment and the business model (innate factors) as well as by discretionary reporting choices made by the managers (discretionary factors). To assess the relative contribution of each of the above factors to information asymmetry, we decompose the earnings (accruals) quality measure into an innate component and a discretionary component following the approach in FLOS. We find that the innate component has a significant incremental impact on information asymmetry, suggesting that informed investors have a greater advantage in firms that are operating in uncertain and volatile environments. Furthermore, both extreme positive and extreme negative discretionary accruals increase information asymmetry. The latter result suggests that discretionary choices made by managers that cause accruals to map “too well” into cash flows relative to other firms in the same industry can befuddle investors and contribute to information asymmetry.

In order to account for omitted firm characteristics that may simultaneously affect information asymmetry and earnings quality, we employ a two-stage instrumental variable (IV) approach. We continue to find a significant association between the earnings quality instrument and information asymmetry in the IV regressions. We also implement an event study approach to examine whether poor earnings quality exacerbates information asymmetry around earnings releases (see Lee, Mucklow, and Ready 1993). The event study design helps address possible endogeneity concerns because each firm serves as its own control and hence mitigates the concern that the association between earnings quality and information asymmetry is due to omitted firm characteristics. Our results suggest that poor earnings quality is associated not only with information asymmetry during non-event periods but also with the increase in information asymmetry around earnings releases.

Our study contributes to the literature along several dimensions. Prior studies examining the association between disclosure quality and information asymmetry are based on small samples
because the disclosure measure is either self-constructed (Botosan 1997) or based on AIMR disclosure scores (e.g., Welker 1995; Healy, Hutton, and Palepu 1999; Heflin, Shaw, and Wild 2005). Because AIMR scores are available only for large firms with significant analyst following, it is unclear how a firm’s information environment affects the relation between earnings quality and information asymmetry. Moreover, AIMR scores are not available after 1996. The last two decades have witnessed the enactment of several major regulations including Regulation Fair Disclosure, SEC Staff Accounting Bulletin 101 and the Sarbanes-Oxley Act. These regulations have been enacted with the intended effect of improving earnings quality and leveling the informational playing field for market participants.

However, recent research (Campbell, Lettau, Malkiel, and Xu 2001) finds that idiosyncratic volatility has increased in recent years. Rajgopal and Venkatachalam (2011) show that reduced earnings quality is associated with increased firm-level volatility. Furthermore, Fama and French (2004) and Klein and Mohanram (2006) document an increased incidence of younger and less profitable firms going public in recent years. These developments are likely to adversely affect the earnings quality of public firms and increase the information advantage of sophisticated investors, thereby exacerbating information asymmetry. Consequently, it is important to understand the extent to which earnings quality influences information asymmetry in recent time periods. Our study, based on a larger and more representative sample over a recent period, is timely and relevant for regulators and market participants.

Moreover, there is significant controversy in the literature regarding the underlying mechanism through which earnings quality affects cost of capital. FLOS argue that accruals quality is an important source of nondiversifiable “information risk” (Easley and O’Hara 2004). However, Core, Guay, and Verdi (2008) show that the pricing effect of accruals/earnings quality documented in FLOS is not robust. Our study contributes to this debate by examining whether earnings quality affects the cost of capital via its impact on trading costs. As discussed earlier, this linkage relies on the well documented relation from the market microstructure literature that (a) information asymmetry increases liquidity cost (Glosten and Milgrom 1985) and (b) liquidity is priced as investors maximize expected returns, net of liquidity costs (Amihud and Mendelson 1986, among others). Thus, notwithstanding the debate on whether information risk is diversifiable, our evidence suggests that poor earnings quality increases the cost of capital via its impact on market liquidity.

Our study also provides empirical support for predictions from recent theoretical work. Lambert and Verrecchia (2011) argue that the adverse consequences of information asymmetry are
inversely related to the degree of investor competition in a stock. We find that the association between earnings quality and information asymmetry is more pronounced for small firms and firms with low institutional ownership. Such firms are likely to be characterized by imperfect competition among investors in that sophisticated investors are likely to have a greater informational advantage over liquidity-motivated traders. Our results provide indirect empirical support for these theoretical predictions and identify certain types of firms (e.g., small firms) and information events (e.g., earnings announcements) where earnings quality has a disproportionate adverse effect on information asymmetry. These findings are important because the value of liquidity provision is much greater for smaller firms and during periods surrounding the release of fundamental information due to the elevated level of uncertainty (see Kaniel, Liu, Saar, and Titman forthcoming for recent evidence).

We note that the information asymmetry proxy used by the study, the price impact of trade, is a direct measure of the adverse selection risk faced by liquidity providers as reflected in trading costs. Kyle (1985) and Glosten and Milgrom (1985) provide theoretical support for this measure based on the adverse information conveyed by a trade, while Brennan and Subrahmanyam (1996) document that adverse information, as measured by the price impact of trade, affects asset prices. The price impact measure is also widely used in the empirical market microstructure literature (see Huang and Stoll 1996; Bessembinder and Kaufman 1997) as well as by regulators. This measure more reliably reflects adverse selection risk than other commonly used proxies such as bid-ask spreads and the Probability of Information-based Trading (PIN) developed by Easley, Hvidkjaer, and O’Hara 2002.

The rest of the paper is organized as follows. Section 2 discusses the background literature and develops the study’s testable hypothesis. Section 3 describes the empirical proxies of earnings quality and information asymmetry, and also presents the study’s research design. Section 4 describes our data and our sample. The empirical results are reported in Section 5. Section 6 provides concluding remarks.