Market Reactions to XBRL-Formatted Financial Information: Empirical Evidence from China

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ABSTRACT

XBRL (eXtensible Business Reporting Language) facilitates the efficient processing/interpreting of corporate financial information by investors. This paper examines market reactions to financial statement filings in China in the period before and after the XBRL mandate in China to assess the extent to which XBRL may impact the processing of financial information. It finds that absolute price reactions of financial statement filings are larger (smaller) in the post-XBRL (pre-XBRL) period. This result holds for the cumulative 3-day window surrounding filings, as well as for each individual day during the event window. This paper also finds similar results for the average volume of trading around these event windows. Consistent with its expectations, its findings suggest XBRL financial statements play a significant role in investors’ decision making process.

Keywords: Capital Markets, Corporate Disclosure, eXtensible Business Reporting Language (XBRL), Financial Information, XML

1. INTRODUCTION

The advancement of digital content and the internet era have vastly increased the flow of information between corporations and investors (Rubin & Rubin, 2010). In particular, in the wake of corporate failures, investors’ need for transparency and semantic interoperability of corporate financial statements has increased significantly. eXtensible Business Reporting Language (XBRL) leverages internet technologies to facilitate this flow of information to meet this need (Zhu & Wu, 2011). XBRL is an open source information standard which allows for the standardized conversion of business information into computer-readable format. Granular information contained in the financial reports of companies—the primary financial statements and footnotes—are encoded such that software applications can automatically download this detailed information and update valuation models for immediate analyses as soon as the financial statements are posted with the securities regulator, stock exchange or on company websites. Currently, in the United States, the Securities and Exchange Commission

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The SEC has mandated that all SEC filers submit their 10-Ks and 10-Qs using XBRL, in addition to the traditional HTML filing with EDGAR. According to the SEC, XBRL has the potential to “increase the speed, accuracy and usability of financial disclosure and eventually reduce costs for investors” (SEC, 2008).

Stock exchanges around the world in China, Japan, India, and Singapore have already mandated that companies submit their filings in XBRL. In addition, government regulators in Australia and around the world are also implementing XBRL as a means of electronically exchanging information between government agencies. Although proponents claim that XBRL promises to increase transparency, information accessibility, and thus efficiency in the capital markets (SEC, 2007), to date there is very little empirical evidence to support these claims. Indeed, cynics of XBRL suggest that a plausible alternative hypothesis is that XBRL has no material effect on the speed, accuracy and usability of financial statements, and merely increases preparation costs for firms. In this study, we argue that there is significant cross-sectional variation in the potential informational benefits to XBRL filings.

In this study, we examine whether XBRL adoption increases the efficiency with which the market reacts to financial statements filed with the Shanghai (SSE) and Shenzhen (SSZE) stock exchanges. There are two ways in which XBRL filings may have a potential effect on market reactions. First, XBRL-formatted financial statement, as well as footnote, information can be instantly available for market participants to perform analyses, and therefore XBRL is able to increase the timeliness and efficiency with which market participants can use financial information. The second way in which XBRL may affect market reactions is in the relatively higher precision of information provided via an XBRL implementation, by associating each individual financial statement item with a tag in the XBRL taxonomy.

The Chinese capital market provides a unique opportunity to examine the capital market impact of XBRL for a number of reasons. Firstly, since the establishment of SSE and SSZE, the Chinese stock market has grown significantly, such that it is expected to become the second largest in the world (Tang, 2011). Despite the rapid growth, however, its stock market efficiency is relatively weak in that prices and investor behavior do not reflect the fundamental values of listed firms (Allen, Qian & Qian, 2005). Second, China was the first country to formally adopt XBRL for external corporate financial reporting. Unlike other countries, the reporting framework in China uses a chart-of-accounts approach, making the implementation of XBRL to this structured approach relatively straightforward (Kernan, 2008). Third, the Shenzhen and Shanghai stock exchanges have been able to develop software more efficiently to validate the data integrity of the submitted corporate filings, thereby reducing the incidence of data errors that have plagued other countries’ XBRL implementation. Finally, a number of recent studies examining the impact of XBRL on the capital markets focus on the United States. In particular, given the relatively short history of the SEC’s XBRL mandate (effective since 2009), these market-based studies focus on the voluntary filer program period which began in 2005 (Effendi, Park & Subramaniam, 2010). Because China has implemented XBRL for external financial reporting for a relatively longer period of time compared to the United States, examining the Chinese environment may overcome some of the self-selection issues inherent in a study of the SEC’s XBRL voluntary filer program or of the SEC’s XBRL mandate which completed the final phase-in of full compliance for the smallest group of companies in 2011.

We examine the full population of publicly-traded firms on the SSE and SSZE with available data on the China Stock Market & Accounting Research database. Our final sample is comprised of 5,675 firm-year observations during the 2001-2006 period, where the year 2004 represents the year of China’s mandatory XBRL implementation. Our research design is motivated by prior studies that also examine the potential impact of new technologies on
Exploring the Roles of Intermediaries in Collective Memory-Supported Electronic Negotiation: A Theoretical Framework
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