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Discontinuities in earnings and earnings change distributions after J-SOX implementation: Empirical evidence from Japan

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ABSTRACT

Prior research finds that the Sarbanes-Oxley Act (US-SOX) of 2002 has affected earnings management in the United States. Cohen et al. (2008) indicate that accrual-based earnings management has declined since the passage of US-SOX, while real earnings management has increased. Further, Gilliam et al. (2015) show that the zero-earnings discontinuity has disappeared since its passage, indicating that earnings management to avoid losses has decreased as a result. In Japan, the Financial Instruments and Exchange Act of 2006, the so-called Japanese version of SOX (J-SOX), was implemented for fiscal years starting in April 2008. Similar to US-SOX, J-SOX aims to reinforce the corporate governance of financial reporting. This study investigates whether the discontinuity in the distributions of earnings and earnings changes disappeared after J-SOX implementation. In contrast to US-SOX, the results indicate that the discontinuity in the earnings distribution at zero did not disappear after J-SOX implementation. However, the discontinuity in the earnings change distribution at zero almost disappeared after J-SOX implementation, indicating that earnings management to avoid earnings decreases became less prevalent. In addition, the results indicate that the discontinuity in the distribution of earnings changes before J-SOX implementation was mainly caused by habitual beaters and that earnings management by habitual beaters to avoid earnings decreases was less prevalent after J-SOX implementation.

1. Introduction

Many studies show that the distributions of earnings and earnings changes have a discontinuity around zero, indicating that firms manage earnings to avoid losses and earnings decreases (e.g., Burgstahler and Dichev, 1997; Degeorge et al., 1999; Hayn, 1995).[1] Prior studies also provide evidence that managers use real earnings management (e.g., Gunny, 2010; Roychowdhury, 2006) and accrual-based earnings management (e.g., Hansen, 2010; Zang, 2012) to avoid losses and earnings decreases. Similarly, with regard to Japanese firms, prior studies find a discontinuity in the distributions of earnings and earnings changes; they also indicate that managers engage in accrual-based earnings management (e.g., Suda and Shuto, 2007) and real earnings management (e.g., Yamaguchi, 2009) to achieve these benchmarks.

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[1] Prior research also shows the discontinuity in forecast error distributions, indicating that managers manipulate earnings to meet analysts' forecast earnings (e.g., Burgstahler and Eames, 2006; Degeorge et al., 1999). However, we do not focus on the distribution of forecast errors because such a distribution is affected not only by earnings management but also by forecast management.

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Recently, important laws on corporate financial reporting have been established in the United States and Japan after major accounting scandals. In the United States, the Sarbanes-Oxley Act (US-SOX) was established in 2002 as a reaction to serious corporate scandals including Enron and Worldcom. Some provisions of US-SOX have been formulated to reduce opportunistic financial reporting, including the certification of financial statement accuracy by CEOs and CFOs, external auditor assessment of internal control, and increased legal penalties for CEOs and CFOs with regard to financial misreporting.

After major Japanese accounting scandals (e.g., Seibu Railway, Kanebo, and Livedoor), the Japanese Diet passed the Financial Instruments and Exchange Act of 2006, the so-called Japanese version of SOX (J-SOX).[2] The Act was implemented for all listed firms for fiscal years starting in April 2008. Similar to US-SOX, the purpose of J-SOX is to reinforce the corporate governance of financial reporting. J-SOX requires a manager's confirmation of financial statement accuracy, a manager's assessment of internal control and preparation of internal control reports, and external auditors' audit of internal control reports. In addition, it imposes penalties on managers for the misstatement of internal control reports.

Prior studies find that US-SOX affects managers' earnings management activities.[3] Lobo and Zhou (2006, 2010) indicate that firms have become more conservative and report lower discretionary accruals since the passage of US-SOX. Cohen et al. (2008) indicate that accrual-based earnings management has declined since the passage of US-SOX, while real earnings management has increased. Caylor (2010) provides evidence that managers prefer to use discretion in deferred revenue relative to accounts receivable to avoid negative earnings surprises but that US-SOX has mitigated this preference. Gilliam et al. (2015) use an earnings distribution approach to test whether *total* earnings management has changed since the passage of US-SOX. They show that the zero-earnings discontinuity has disappeared since US-SOX implementation, indicating that total earnings management to avoid losses has decreased as a result. In their supplemental analyses, Gilliam et al. (2015) also find that the discontinuity in the distributions of earnings changes and analysts' forecast errors have declined since the passage of US-SOX but that neither has disappeared completely.

Given the tighter regulations for managers on financial reporting under J-SOX, managers' earnings management could decrease. Thus, in line with Gilliam et al. (2015), we anticipate that the discontinuity in the earnings distribution for Japanese firms disappeared after J-SOX implementation, a situation that is the same as that experienced by U.S. firms. Consequently, this study investigates whether the discontinuity in the earnings distribution disappeared after March 2009 in Japan. We focus on the distributions of earnings and earnings changes. We do not focus on the distribution of forecast errors because this is affected not only by earnings management but also by forecast management.[4] Especially in strong investor protection countries such as the United States and Japan, managers tend to use forecast guidance to avoid negative earnings surprises (Brown and Higgins, 2005).

Some differences exist between US-SOX and J-SOX. Following the criticism that firms bear high costs under US-SOX, J-SOX was developed so that the cost burden of managers' assessments and auditors' audits regarding internal control over financial reporting would not be excessive. In particular, according to the Business Accounting Council (2007), J-SOX has six measures that differ from US-SOX: (1) the use of a top-down/risk-based approach, (2) the classification of internal control deficiencies (two categories), (3) no direct reporting, (4) the integration of internal control audits with financial statement audits, (5) the preparation of a unified internal control audit report and financial statement audit report, and (6) coordination between corporate auditors/audit committee and internal auditors. Overall, the procedures required by J-SOX are more concise than those required by US-SOX because of an emphasis on cost-effectiveness. These differences between US-SOX and J-SOX may lead to different effects on managers' earnings management activities.

The results indicate that the discontinuity in the earnings distribution at zero did not disappear after J-SOX implementation. However, we find that the discontinuity in the earnings change distribution at zero almost disappeared after J-SOX implementation, indicating that earnings management to avoid earnings decreases became less prevalent. In addition, the results indicate that the discontinuity in the distribution of earnings changes before J-SOX implementation was mainly caused by habitual beaters and that earnings management by habitual beaters to avoid earnings decreases reduced after J-SOX implementation.

This study contributes to the earnings management literature. Whereas Gilliam et al. (2015) present the first research to investigate the effect of US-SOX on U.S. firms' earnings distributions, this study is the first to examine the effect of J-SOX on Japanese firms' earnings distributions. Consequently, new insights are provided into the effect of J-SOX on total earnings management in Japanese firms. In addition, this study enables a comparison of the effect of US-SOX on U.S. firms with that of J-SOX on Japanese firms. Gilliam et al. (2015) find that since the passage of US-SOX, the discontinuity in the earnings distribution at zero has disappeared and that the discontinuity in the earnings change distribution at zero has declined.

[2] "The diet shall be the highest organ of state power, and shall be the sole law-making organ of the State" (The Constitution of Japan, Article 41). The Diet in Japan is equivalent to the U.S. Congress.

[3] The effect of US-SOX is not limited to the effect on earnings management. For example, prior research suggests an increase in the voluntary disclosure of information security activities (Gordon et al., 2006), a change in investors' valuation weight for each earnings component (Kalelkar and Nwaeze, 2011), and a change in disciplining CEOs and CFOs in response to restatements after the passage of US-SOX (Burks, 2010).

[4] In Japan, managers' earnings forecasts are more prevalent than analysts' earnings forecasts because the rules of the Tokyo Stock Exchange require managers of listed firms to disclose earnings forecasts regularly (Kato et al., 2009). Based on Gilliam et al. (2015), we analyze the distributions of managers' earnings forecast errors in a supplemental analysis. Similar to the results of analysts' earnings forecasts under US-SOX (Gilliam et al., 2015), our results (not tabulated) suggest that the discontinuity in the managers' forecast error distribution declined after the passage of J-SOX but still exists. Given the asymmetrically large negative stock price response to negative earnings surprises (Skinner and Sloan, 2002), managers' incentives to avoid negative earnings surprises should be considerably strong. As a result, the discontinuity in the forecast error distribution may not disappear altogether under both US-SOX and J-SOX.