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# Does IFRS Adoption Affect Share Price Anticipation of Earnings?<sup>\*</sup>

Edward Lee,<sup>1</sup> Martin Walker,<sup>2</sup> and Cheng Zeng<sup>3</sup>

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# Abstract

We examine whether share price anticipation of earnings (SPAE) changed following the mandatory adoption of International Financial Reporting Standards (IFRS) in China. We exploit the institutional setting in China, which allows us to identify firms adopting IFRS for the first time in 2007 as a treatment group and those reporting under IFRS prior to 2007 as a control group. We find that SPAE improves for firms in our treatment group relative to our control group, consistent with the improved transparency making it easier for investors to forecast future earnings. Further analyses reveal that the increase in SPAE is more pronounced among firms that are (1) not state controlled, (2) less subsidised, or (3) less politically connected, which largely rely on capital markets to supply most of their financial needs. A policy implication that stems from our findings is that IFRS may potentially facilitate external capital acquisitions, especially in emerging economies where some firms may be less financially supported by the government.

*Keywords*: International Financial Reporting Standards, Future Earnings Response Coefficient, China

JEL classification: G38, H71, M41

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<sup>&</sup>lt;sup>1</sup> Alliance Manchester Business School, The University of Manchester, United Kingdom.

<sup>&</sup>lt;sup>2</sup> Alliance Manchester Business School, The University of Manchester, United Kingdom.

<sup>&</sup>lt;sup>3</sup> Corresponding author, School of Accounting and Finance, The Hong Kong Polytechnic University; email: cheng.zeng@mbs.ac.uk.

# I. Introduction

Following the adoption of International Financial Reporting Standards (IFRS) in the European Union (EU) in 2005, China's decision to adopt a set of standards closely aligned with IFRS marked a major step in the direction of global adoption of IFRS, with the United States being the last major hurdle to IFRS becoming the global standard. From 1 January 2007 onward, all Chinese listed firms that had not already adopted IFRS were required to report under a new set of Chinese accounting standards that substantially converged with IFRS. To date, however, very few studies have been carried out on the effects of mandatory IFRS adoption on accounting quality in China, and the studies that are available have yielded mixed results (He *et al.*, 2012; Liu *et al.*, 2011; Lee *et al.*, 2013). In particular, so far as we are aware, this is the only paper to have considered the impact of the mandatory adoption of the Chinese version of IFRS on share price anticipation of earnings (SPAE).

Beyer *et al.* (2010) argue that accounting information plays two roles in market-based economies. First, it enables investors to evaluate the return potential of investment opportunities (i.e. the valuation role). Second, it allows investors to monitor the use of their capital once committed (i.e. the governance role). In the present paper, we focus on the valuation role of financial reporting. The ability of investors to predict firms' future performance is especially crucial for the valuation role. Thus, our study focuses on the ability of share price to anticipate future earnings. Specifically, we follow the approach of Collins *et al.* (1994) by regressing current stock returns on future earnings changes. The future earnings response coefficient (FERC) estimated from such a regression captures SPAE. Existing studies (e.g. Lundholm and Myers, 2002; Gelb and Zarowin, 2002; Hussainey and Walker, 2009) consistently show that the association between current share price movement and future earnings change is greater when firms voluntarily provide higher levels of disclosure.

The first research question we examine is whether the mandatory adoption of IFRS in China affects the FERC of listed firms. IFRS can influence the FERC in two offsetting directions. On the one hand, the new accounting standards could improve disclosure and transparency. This should facilitate investors' forecasts of future earnings. As a result, the ability of share prices to anticipate future earnings should increase. On the other hand, as a set of principles-based accounting standards, the adoption of IFRS could create greater incentives for firms to manipulate earnings. In this case, the association between current returns and future earnings change could decrease. Thus, these two effects could both contribute to the influence of IFRS on the ability of share price to anticipate future earnings among Chinese listed firms.

The second research question we examine is whether the effect of IFRS on the FERC in China is influenced by financial reporting incentives that are determined by the Chinese government's financial support. Particularly, we investigate three factors that are closely related to government support. First, unlike other ex-communist transitional economies, the Chinese government maintains a substantial share ownership to control many listed firms. Such firms are offered perks, such as business contracts and preferential loans, which reduce their bankruptcy risk (e.g. Chen *et al.*, 2010). Second, in contrast to Western economies, the Chinese government also provides subsidies directly to listed firms through tax rebates and other channels. The purpose of state subsidies is to encourage the development of priority sectors or to rescue distressed firms. Finally, in order to overcome their innate disadvantage vis-à-vis state-owned enterprises (SOEs), namely the need to acquire external capital, non-state-owned enterprises (NSOEs) often establish political connections with politicians and bureaucrats. Therefore, state-controlled, subsidised, or politically connected firms have a lower dependence on external capital. Such firms are less likely to have incentives to improve their disclosure and transparency under IFRS to entice external investors.

To better identify the effect of IFRS on SPAE, we exploit a unique feature of China, namely that prior to 2007, a number of firms had disclosed reconciliations to IFRS in their Chinese GAAP (generally accepted accounting principles) financial statements. So, in effect, this group of firms was already reporting under IFRS. We therefore use this set of firms as a control group against which to compare the changes in the accounting quality of firms adopting Chinese IFRS for the first time in 2007. Our regression results indicate that SPAE increased for the treatment group but not for the control group. We also find that the increase in the FERC following mandatory IFRS adoption is more pronounced among listed firms that are (1) not state controlled or (2) less subsidised by or (3) unconnected with the Chinese government. This suggests that the improvement in disclosure and transparency under mandatory IFRS depends on firms' financial reporting incentives, which in turn are determined by firms' reliance on private suppliers of external capital.<sup>4</sup>

Our study contributes to the literature in several ways. First, we provide new empirical evidence on the capital market consequences of IFRS adoption from one of the BRIC (Brazil, Russia, India, and China) member states. While prior research using the context of more developed economies, such as Europe, generally finds that IFRS adoption has positive economic consequences, particularly in countries with strong legal enforcement (DeFond *et al.*, 2011), there is relatively limited research on the impact of IFRS in emerging economies with weaker institutional environments. Another novel feature of our study is that we focus on the ability of share price to anticipate future earnings, which differs from the usual approach of existing studies in this literature, which includes tests of liquidity, cost of equity capital, and value relevance. For the literature on China's economic development, which is

<sup>&</sup>lt;sup>4</sup> As additional analyses, we carry out tests on earnings properties following Barth *et al.* (2008) and find mixed results on the effect of IFRS adoption in China on these measures. Untabulated results suggest that there are no statistically significant changes in variability of earnings and the tendency to report small profits or large losses. These findings mitigate the possibility that our evidence is driven by the confounding effect of changes in earnings properties around IFRS adoption rather than by firms improving disclosure and transparency.

attracting increasing attention from academics, policymakers, and practitioners, we provide evidence on the impact of a major financial reporting reform. Our findings imply that mandatory IFRS adoption improves the earnings informativeness of firms, particularly those with greater capital market motives.

This paper is organised as follows: Section II introduces the related literature and institutional background, section III develops our empirical hypotheses, section IV explains the research design and sample selection, section V presents our empirical results, and section VI provides concluding remarks and suggestions for future research.

# II. Literature Review and Institutional Background

#### 2.1 Literature on IFRS Adoption outside China

Empirical analyses on the impact of IFRS have largely been based on a voluntary adoption setting before IFRS was mandated across a large group of countries (e.g. in Europe from 2005 onward). Many studies of voluntary IFRS adoption have found that earnings properties change for voluntary IFRS adopters. For example, among German voluntary adopters, Hung and Subramanyam (2007) document that the earnings reported under IFRS are less smoothed and more conservative than those reported under German GAAP. Similar inferences are drawn by Christensen *et al.* (2015), who find that for voluntary adopters, there is less earnings management and timelier loss recognition in accounting numbers following IFRS adoption. Using a sample across 21 countries, Barth *et al.* (2008) find less earnings management, more timely loss recognition, and a greater value relevance of accounting numbers among voluntary IFRS adopters.

Researchers have also examined the economic consequences of the voluntary adoption of IFRS. For example, Leuz and Verrecchia (2000) find that their sample of German firms experience reduced information asymmetry, proxied by bid-ask spreads, and increased share turnover. In addition, Ashbaugh and Pincus (2001) investigate the IAS effect on analyst forecast errors. They find that after IAS adoption, forecast errors decrease and the number of news reports about the sample firms increases. A recent study by Kim and Shi (2012) finds similar evidence, with IFRS adoption significantly lowering stock price synchronicity for voluntary adopters. In contrast to the generally positive findings, Daske (2006) fails to find a reduced cost of equity for German voluntary adopters.

The drawback of examining a voluntary adoption setting is the difficulty of distinguishing between the influences of the accounting standards *per se* and the firms' financial reporting incentives. Ball *et al.* (2003) find that the disclosure quality of firms in East Asian countries is not necessarily better than that of firms in code law countries, despite the former having accounting standards of common law origin. They suggest that such countries have institutional environments that reduce the incentives of firms to issue high quality financial reports, in line with the view that standards *per se* do not necessarily

determine accounting disclosure quality and that financial reporting incentives also play an essential role.

Partly as a result of the problem with voluntary adoption settings and partly because of the increasingly mandatory adoption of IFRS, recent studies of the economic consequences of IFRS adoption have focused on the mandatory adoption setting (a comprehensive review of this literature is provided by Brüggemann *et al.* (2013)). Studies in this literature have evaluated the IFRS impact through a wide array of indicators, such as equity market liquidity (e.g. Daske *et al.*, 2008), implied cost of equity capital (e.g. Li, 2010), value relevance (e.g. Aharony *et al.*, 2010), stock price synchronicity (e.g. Beuselinck *et al.*, 2010), stock return volatility around earnings announcements (e.g. Landsman *et al.*, 2012), cost of debt (e.g. Florou and Kosi, 2015), credit ratings (e.g. Wu and Zhang, 2014), analyst forecasts (e.g. Byard *et al.*, 2011; Tan *et al.*, 2011), and institutional ownership (e.g. DeFond *et al.*, 2011).

Many of these recent studies use multi-country samples, such as the EU countries that adopted IFRS in 2005, and typically find more significant IFRS effects among firms in countries with greater legal enforcement or more outsider-based capital markets (Christensen *et al.*, 2015). Since institutional factors shape firms' financial reporting incentives, these findings suggest that the impact of IFRS is also conditional on firms' disclosure incentives. Indeed, Christensen *et al.* (2015) show that mandatory IFRS adopters in Germany did not improve the quality of their financial reporting as their voluntary adopter counterparts had done. Thus, even within the same institutional environment, accounting quality improves only among firms with greater financial reporting incentives.

#### 2.2 IFRS Convergence in China

China has evolved from a centrally planned economy to a market-oriented one over the past three decades. To accommodate economic growth and development, accounting regulations and practices have also undergone a significant change, from mainly serving macro-economic planning to increasingly supplying outside investors and creditors with useful information.

On 15 February 2006, the Ministry of Finance officially announced the issuance of the new Chinese accounting standards, referred to as the *Accounting Standards for Business Enterprises* (ASBE). The new standards cover almost all aspects of IFRS and have been recognised by the International Accounting Standards Board (IASB) as having achieved "substantial convergence" with IFRS (IASB, 2006). This convergence to IFRS is significant for the financial reporting practices of Chinese firms because it is a shift towards a principles-based accounting regime and away from the previous rules-based one, which was highly prescriptive and industry specific (ICAS, 2010). The new set of accounting standards was mandated for all listed companies from 1 January 2007. Shareholders' equity reconciliation statements were required to be prepared in the financial statements for the

year 2006, the transition year from the previous Chinese domestic accounting standards to IFRS.

The new accounting standards have made fundamental changes to the previous Chinese GAAP. Particularly, 15 key changes have been made, among which eight rule changes are related to using fair value for balance sheet items and including fair value changes in earnings (Deloitte Touche and Tohmatsu, 2006). For example, the new standards now allow the measurement of exchanges of non-monetary assets at fair value unless the exchange transaction lacks commercial substance. This differs from the previous Chinese domestic accounting standards, which required that the asset acquired should be measured as the carrying amount of the asset given up. In addition to accounting changes, the new accounting standards also differ from the previous Chinese GAAP in the extent of disclosure required (KPMG, 2010). In particular, the new standards involve considerable estimates and assessments of the future, which are often classified as forward-looking information. For example, ASBE 37 requires firms with financial instruments to disclose information about the significance of using financial instruments and the nature and extents of the risk that arises from using these instruments. In addition, ASBE 30 requires disclosure of the profit from discontinued operations net of tax, the details regarding the carrying amount and fair values of the fixed assets to be disposed of, and the estimated disposal costs and expected time of disposal (Deloitte Touche and Tohmatsu, 2006).

So far, limited and mixed evidence has been produced on the effect of mandatory IFRS adoption in China. Ding and Su (2008) provide a descriptive analysis of China's move to IFRS. They document that although the content of the new accounting standards issued in 2006 is highly convergent with IFRS, the implementation of the new standards has faced obstacles and objections, such as weak accounting regulations and poor corporate governance systems. He et al. (2012) investigate the effect of IFRS adoption by focusing on the implementation of fair value accounting in China. They find evidence that earnings quality under IFRS is lower than that under old Chinese GAAP, and this is mainly caused by the underdeveloped market and institutional environment. Moreover, they find that earnings estimated using fair value accounting under IFRS are not value relevant. Their results imply that fair value accounting may not work properly in countries without appropriate institutional infrastructures. Peng and Bewley (2010) assess China's IFRS convergence by focusing on fair value accounting. Through a case study approach, they find that the benefits desired by Chinese regulators from the adoption of fair value accounting may not have been realised in China. Using data for the period from 2005 to 2008, Liu et al. (2011) find a positive impact of IFRS on the earnings properties of Chinese listed firms. This is corroborated by the findings of Lee et al. (2013), which suggest an increase in the value relevance of reported earnings following China's IFRS convergence. In addition, they observe a large cross-sectional variation in the estimated IFRS effects. However, the

aforementioned studies have not examined whether the improved disclosure quality increases investors' ability to forecast future earnings.

#### 2.3 Institutional Factors in China that Influence the IFRS Impact

As an emerging and transitional economy, China has some unique institutional factors that may affect the impact of IFRS adoption. Chinese listed firms can issue A-shares that are traded in the local currency (renminbi), B-shares that are traded in US dollars (in Shanghai) or Hong Kong dollars (in Shenzhen), and H-shares that are traded in Hong Kong dollars. The majority of Chinese listed firms issue A-shares only, which are intended for domestic investors. A small group of firms also issue B- or H-shares, which are mainly intended for foreign investors. Prior to 2007, firms issuing only A-shares prepared financial statements under Chinese local GAAP, while firms that issued both A-shares and B- or H-shares had to provide accounting information under IFRS. Given that the dual-listed firms were already reporting under IFRS before 2007, we expect that China's IFRS convergence in 2007 mainly affects firms that only issue A-shares.

As mentioned in section 2.1, firms' financial reporting incentives are crucial determinants of the economic consequences of IFRS adoption. In China, several institutional factors could materially affect the financial reporting incentives of listed companies, including state control, government subsidies, and political connections.

Since the establishment of the stock market in China, many SOEs have become partially privatised and are listed on the stock market. As a result of the sociopolitical ideology of China, both central and local governments often withhold sufficient shares to maintain control of these listed firms. This approach distinguishes China from other ex-communist transitional economies (e.g. Russia) where the governments have largely relinquished their ownership of listed firms. Despite China's continued march towards a market-based economy, nearly two thirds of firms listed on the Shanghai and Shenzhen stock exchanges today are still under state control (Wang *et al.*, 2011).<sup>5</sup>

In state-controlled listed firms, the government makes decisions about important issues, including executive turnover, asset disposal, mergers, and acquisitions (e.g. Chen *et al.*, 2010). State-controlled listed firms are expected to carry out the political and social objectives of the government (e.g. Bai *et al.*, 2000), which will not necessarily maximise shareholder wealth. To support such firms, the government often provides perks, such as business contracts and financial assistance (Chen *et al.*, 2010; Firth *et al.*, 2008; Wang *et al.*, 2008). As a result of government assistance, state-controlled listed firms have lower financial constraints and face a lower bankruptcy risk than their privately owned counterparts.

In stark contrast, due to an ideological discrimination against entrepreneurial

<sup>&</sup>lt;sup>5</sup> Gul *et al.* (2010) note that among Chinese listed firms, the likelihood that the largest shareholder is government related is about 66%.

ownership in China, private listed firms are subject to substantial pressure to avoid financial distress and attract external financing (Brandt and Li, 2003; Liu and Siu, 2012; Chen *et al.*, 2010). In order to mitigate these political and market disadvantages and seek government-related assistance, privately owned firms are keen to build political connections by either hiring politically connected managers or attaining membership of the ruling Communist Party (Li *et al.*, 2008). Consequently, private firms with political connections demonstrate certain advantages over their unconnected peers, including better access to business operation licences, bank loans, and land and eligibility for favourable government policies, such as tax benefits and the waiver of extralegal fees (Li *et al.*, 2008; Wu *et al.*, 2012).

Despite China's moves towards a market-oriented economy, the government's "visible hand" continues to influence the economic activities of market participants by providing firms with subsidies. Subsidies can be granted to both state and privately controlled listed firms. Allen *et al.* (2005) show that the state budget is one of the four most important financing sources of all firms in China. The main objective of subsidies is to facilitate and support the development of sectors prioritised by the government, such as agriculture, public utilities, and high-tech industries (Chen *et al.*, 2008). Another objective is to rescue distressed firms, which helps maintain job security and the social stability of local economies. Subsidies can be provided by either central or local government in the form of direct financial support or tax rebates (Lee *et al.*, 2014). Firms that receive subsidies from the government are expected to have fewer financial constraints and to be less likely to rely on outside capital markets to supply their financial needs.

#### III. Hypothesis Development

The mandatory adoption of IFRS in China in 2007 switched Chinese listed firms from rules-based to principles-based accounting standards (ICAS, 2010). Under the rules-based accounting standards, Chinese listed firms were compelled to report their earnings according to detailed implementation guidelines. This rigidity restricted managerial choices or subjective judgments in financial statements. However, financial reporting under rules-based standards emphasises form over substance. The shift from a tight to a flexible standard framework after IFRS has given firms greater financial reporting discretion. Thus, financial reporting under principles-based accounting standards enables firms to convey economic substance over form. However, existing literature (e.g. Schipper, 2003; Nelson, 2003) suggests that the principles-based standards are a double-edged sword. On the one hand, greater managerial discretion enables firms to disclose forward-looking information in their financial statements, which may entice outside investors and reduce the cost of capital. On the other hand, the flexibility in financial reporting provides firms with greater means to manipulate their earnings performance (Dechow and Sloan, 1991). In other words,

principles-based accounting standards could be used to either improve or reduce the information conveyed by financial statements to the market.

The argument that the mandatory adoption of IFRS would benefit Chinese listed firms is based on the fact that Chinese IFRS have imposed more requirements on disclosure, especially forward-looking disclosure, than the previous Chinese GAAP (see discussion in section 2.2). Since a primary objective of disclosure is to inform investors about the level, timing, and uncertainty of firms' future performance (Gelb and Zarowin, 2002), the enhanced disclosure due to IFRS adoption is expected to lead to better predictions of the future, implying that there should be a stronger relation between firms' current returns and future earnings following the adoption of IFRS.

The argument that principles-based accounting standards may reduce the share price anticipation of future earnings is based on the premise that securities regulation in China creates incentives for firms to manipulate earnings in order to avoid delisting (Jiang and Wang, 2008). For instance, the China Securities Regulatory Commission (CSRC) mandates that if a listed firm reports losses in two consecutive years, its stock will be classified as "special treatment" (ST). There are many trading and financial restrictions on ST stocks. For instance, the daily stock price movement is restricted within the range of 5%, and the firm's semi-annual report must be audited, unlike other firms. More seriously, such a firm is not allowed to raise additional capital from the stock market. If the firm reports one more year's loss, it will be suspended from trading on the stock exchanges. After a fourth annual loss, the stock will be delisted. Positive accounting theory stipulates that managers have the incentive to manipulate accounting numbers to serve their interests whenever contracts are based on those numbers (e.g. Watts and Zimmerman, 1990). Thus, regulations that are based on accounting numbers create earnings management incentives for Chinese listed firms.

In summary, there are two offsetting effects associated with firm's discretion that could determine the impact of mandatory IFRS adoption on the financial reporting of Chinese listed firms. As China is a large transitional economy with high economic growth, Chinese listed firms have ample investment opportunities that require external capital to support them. To entice external investors, firms may disclose more forward-looking information under principles-based accounting standards. This should increase the ability of share price to anticipate future earnings change. On the other hand, however, securities regulation generates an incentive for such firms to manipulate earnings. This would decrease the FERC. As long as the opposing effects do not cancel each other out perfectly, then there should be an empirically observable change in the FERC following mandatory IFRS adoption. Thus, we posit the following hypothesis:

# H1: Mandatory IFRS adoption in China from 2007 onwards affects the share price anticipation of future earnings changes.

Increasing evidence in the accounting literature highlights the importance of firms'

reporting incentives in determining accounting quality (Ball and Shivakumar, 2005; Lang *et al.*, 2006; Daske *et al.*, 2008; Soderstrom and Sun, 2007). This literature argues that accounting standards have limited influence on financial reporting quality unless firms have incentives to convey information (e.g. Ball *et al.*, 2003; Christensen *et al.*, 2015). Existing studies suggest that financial reporting incentives are determined by corporate governance (e.g. Bushman and Smith, 2001), legal and political institutions (e.g. Bushman and Piotroski, 2006), and corporate finance (e.g. Ball *et al.*, 2008).

As mentioned in section 2.3, China has three institutional factors that could influence firms' financial reporting incentives: state control, government subsidies, and political connections. Firms that are (1) not under state control, (2) less subsidised, or (3) politically unconnected suffer from a higher bankruptcy risk and have more financial constraints than other firms. In order to entice external investors and mitigate their disadvantages with regard to financing, such firms are expected to have greater incentives to improve their disclosure and transparency under IFRS. Therefore, we posit the following hypothesis:

H2: The effect of mandatory IFRS adoption on the share price anticipation of future earnings changes is more pronounced among firms that are non-state controlled or less subsidised or politically unconnected.

# IV. Model Specification and Sample

#### 4.1 Share Price Anticipation of Future Earnings Changes

We assess the extent to which share prices anticipate future earnings using the regression model of Collins *et al.* (1994).

$$R_{t} = \alpha + \beta_{0}X_{t} + \sum_{k=1}^{3}\beta_{k}X_{t+k} + \sum_{k=1}^{3}\beta_{k+3}R_{t+k} + \beta_{7}EP_{t-1} + \beta_{8}AG_{t} + e_{t}$$
(1)

 $R_t$  and  $R_{t+k}$  are stock returns, calculated as buy-and-hold returns at the end of period t and t+k, respectively.  $X_t$  and  $X_{t+k}$  are the earnings changes for period t and t+k, deflated by the closing price at the end of period t-1. In this study, earnings are measured by net income.  $EP_{t-1}$  is defined as the earnings level over the price at the end of period t-1.  $AG_t$  is asset growth, defined as the growth rate of total assets in period t. SPAE is measured as the coefficient of  $X_{t+k}$ .

This model relates current returns, as the dependent variable, to current and future earnings changes. The model assumes that during any one year, new information arrives about the earnings change for the current year and earnings changes for the next three years ahead.<sup>6</sup> These are the principal drivers of current year returns. However, as pointed out by

<sup>&</sup>lt;sup>6</sup> Including three years is consistent with previous empirical evidence that returns do not significantly anticipate earnings changes beyond three years in advance (Kothari and Sloan, 1992).

Collins *et al.* (1994), it is not appropriate to work with a model that only includes current and future earnings changes as the independent variables. Two types of correction are needed. First, one needs to allow for the possibility that at the start of year t, the market may already have information that is relevant for predicting the earnings changes for year t and beyond. To control for this, the model includes the variables  $EP_{t-1}$  and  $AG_t$ . Second, actual future earnings changes are imperfect proxies for the information about future earnings changes that becomes available to the market in the current year. As a result, the inclusion of future earnings changes in the model without further correction would result in a hindsight bias. To overcome this problem, future returns are introduced as a control variable in the model.

Considering the data availability for our Chinese sample, we make two changes to Eq. (1). First, we include only the one year's future earnings growth variable in our regression model. This is done to preserve a maximum number of observations in our sample. Second, the deflator for the earnings growth variable chosen by Collins *et al.* (1994) is lagged earnings. However, in this paper, we use the lagged share price instead. This is mainly because small (i.e. close to zero) values for lagged earnings can result in extreme values of earnings growth.<sup>7</sup>

To test hypothesis H1, we directly examine the impact of IFRS on the SPAE for Chinese listed firms using the following regression model:

$$R_{t} = \beta_{0} + \beta_{1}X_{t} + \beta_{2}X_{t+1} + \beta_{3}R_{t+1} + \beta_{4}EP_{t-1} + \beta_{5}AG_{t} + \beta_{6}Post + \beta_{7}Post * X_{t} + \beta_{8}Post * X_{t+1} + \beta_{9}Post * R_{t+1} + \beta_{10}Post * EP_{t-1} + \beta_{11}Post * AG_{t} + \varepsilon_{t}$$
(2)

 $R_t$  and  $R_{t+1}$  are stock returns, calculated as buy-and-hold returns at the end of period t and t+1, respectively.  $X_t$  and  $X_{t+1}$  are the earnings changes for period t and t+1, deflated by the closing price at the end of period t-1. Again, earnings are measured by net income.  $EP_{t-1}$  is defined as the earnings level over price at the end of period t-1.  $AG_t$  is asset growth, defined as the growth rate of total assets in period t. *Post* is a dummy variable taking the value of 1 for the period since 2007 and 0 otherwise.  $\beta_2$  represents the FERC during the pre-IFRS period, and  $\beta_8$  indicates whether there is a difference in the FERC between the pre- and post-IFRS adoption periods. If IFRS affects the ability of the share price to anticipate future earnings changes, then  $\beta_8$  should be significantly different from 0.

We carry out the regression analyses of Eq. (2) separately for the subsamples, namely the treatment group and the control group. Following prior literature (e.g. Liu *et al.*, 2011; Chen *et al.*, 2019), the treatment group consists of listed firms that only issue A-shares.

<sup>&</sup>lt;sup>7</sup> Price is used as a deflator in prior research (Christie, 1987; Easton and Harris, 1991). As in Kothari (1992) and Ohlson and Shroff (1992), since price reflects market expectations, the errors-in-variables problem due to earnings' lack of timeliness could be mitigated by using price as a deflator.

These firms are more sensitive to the impact of the mandatory IFRS convergence in China after 2007 because before then they were only allowed to issue financial statements under the rules-based Chinese domestic accounting standards. The control group consists of dual-listed firms that issue both A-shares and either B-shares or H-shares. These dual-listed firms are less sensitive to the impact of the mandatory IFRS convergence because they were already providing accounting information under IFRS prior to 2007. Firms in both our treatment group and our control group are exposed to the same economic shocks in the Chinese stock market over our sample period. The main difference between the two groups is the aforementioned difference in sensitivity. Therefore, if we observe a statistically significant change in the FERC (i.e.  $\beta_8$  in Eq. (2)) between the two periods in the treatment group but not in the control group, then this would mitigate the possibility that our evidence in support of H1 is due to other unidentified background reasons, such as a time trend or business cycles.

To test hypothesis H2, we examine whether the impact of IFRS adoption on SPAE is more pronounced among firms with greater financing difficulties. Specifically, for the state control effect, we classify Chinese listed firms in our treatment group into SOEs and non-SOEs (NSOEs) and carry out the regression analyses of Eq. (2) in these two subgroups separately. SOEs are firms with controlling shareholders affiliated to central and local governments. NSOEs are firms with entrepreneurs and foreign investors serving as the controlling shareholders. For the state subsidy effect, we classify the Chinese listed firms in our treatment group into those that have received a subsidy at least once in the past three years and those that have not. Finally, for the political connected firms. Following prior literature (e.g. Fan *et al.*, 2007; Chen *et al.*, 2011; Wu *et al.*, 2012), a CEO or a chairman is defined as politically connected if he or she is currently, or has been in the past, one of the following: (1) a government official; (2) a military official; (3) a member of the People's Congress; (4) a member of the People's Political Consultative Conference.<sup>8</sup>

# 4.2 Sample Selection

Chinese firms with annual financial information, ownership information, and stock information available in the Sinofin database for the period from 2004 to 2008 are selected for this study. Panel A of Table 1 describes the sample selection process. The initial sample consists of 7,203 firm-years after excluding financial firms. We then exclude the 1,420 observations from the year 2006 since the change in future earnings in this transition year would be calculated from earnings reported under different accounting standards. We further exclude 707 observations that lack some data that we require for our analyses. The final sample comprises 5,076 firm-year observations: 4,620 firm-year observations for Chinese

<sup>&</sup>lt;sup>8</sup> The latter two organisations are influential in the Chinese political system. They play a part in policymaking and personnel appointments and often have close ties with key government officials.

listed firms that only issue A-shares (i.e. our treatment group) and 456 firm-year observations for Chinese dual-listed firms that issue both A-shares and either B- or H-shares (i.e. our control group). All variables except for the dummies are winsorised at the 1% and 99% levels to reduce the effect of outliers.

Panel B of Table 1 presents the number and percentage of firm-year observations in each year of our sample period. In general, the distribution of observations between pre-IFRS (i.e. 2004 and 2005) and post-IFRS (i.e. 2007 and 2008) adoption is quite similar. Panel C of Table 1 describes the industry composition of the sample based on the CSRC industry classification. The sample is distributed across a wide range of industries, with a concentration in manufacturing, trade, and "other" industries. Basically, the distribution of market capitalisation across industries is consistent with the distribution of the number of firms in the sample across industries. Untabulated results suggest that there is no significant difference in the industry composition between the pre- and post-IFRS periods.

| Tuble 1 Sumple Selection and       |                        |               |                        |  |
|------------------------------------|------------------------|---------------|------------------------|--|
| Panel A: Sample selection          | Observations           |               |                        |  |
| Initial sample for 2004-2008 (exc  | 7,203                  |               |                        |  |
| Excluding transitional year 2      | (1,420)                |               |                        |  |
| Excluding firm-years with n        | nissing financial data | (             | (707)                  |  |
| Final sample                       |                        | 4             | 5,076                  |  |
| Panel B: Yearly distribution       |                        |               |                        |  |
| Sample year                        | Number of firm-years   | <u>% of t</u> | total sample           |  |
| 2004                               | 1,225                  |               | 24.13                  |  |
| 2005                               | 1,317                  |               | 25.95                  |  |
| 2007                               | 1,275                  |               | 25.12                  |  |
| 2008                               | 1,259                  | 24.80         |                        |  |
| Total                              | 5,076                  | 100           |                        |  |
| Panel C: Industry distribution     |                        |               |                        |  |
| Industry                           | Number of firms        | % of sample   | <u>% of market cap</u> |  |
| Agriculture, Forestry, and Fishing | g 126                  | 2.48          | 1.14                   |  |
| Mining                             | 76                     | 1.50          | 14.56                  |  |
| Manufacturing                      | 2,957                  | 58.25         | 47.68                  |  |
| Utilities                          | 229                    | 4.51          | 7.12                   |  |
| Construction                       | 101                    | 1.99          | 1.20                   |  |
| Transportation                     | 218                    | 4.29          | 7.69                   |  |
| Information Technology             | 313                    | 6.17          | 5.17                   |  |
| Trade                              | 349                    | 6.88          | 4.23                   |  |
| Real Estate 235                    |                        | 4.63          | 4.73                   |  |
| Service 149                        |                        | 2.94 2.63     |                        |  |
| Media                              | 0.69                   | 0.55          |                        |  |
| Others                             | 5.67                   | 3.29          |                        |  |

# Table 1 Sample Selection and Distribution

This table presents our sample selection (Panel A), yearly sample distribution (Panel B), and industry distribution (Panel C). % of market cap is calculated as the market value for each industry divided by total market value of our entire sample.

# V. Empirical Findings

#### 5.1 Descriptive Statistics and Correlations

Panel A of Table 2 presents the descriptive statistics of the variables used in our main analyses. In both the treatment and control groups, the mean returns are positive while the median returns are negative. This is broadly consistent with the systematic underperformance of Chinese listed firms over this period, which has also been documented by other studies, such as Conyon and He (2011, 2014). The opposite signs of the mean changes in earnings for year t and year t+1 in the treatment group indicate a reversal in the change in earnings. No significant differences are found between the treatment and control groups for both the test and control variables. This again confirms that the dual-listed firms are suitable to serve as a control group against the pure A-share listed firms of our treatment group.<sup>9</sup>

| Panel A: Dese | criptive statist | tics                                   |                |           |           |                                   |           |           |  |
|---------------|------------------|--|----------------|-----------|-----------|-----------------------------------|-----------|-----------|--|
|               | A-share li       | A-share listed firms (Treatment group) |                |           | Dual-li   | Dual-listed firms (Control group) |           |           |  |
|               | Obs.             | Mean                                   | 50th           | Std. Dev. | Obs.      | Mean                              | 50th      | Std. Dev. |  |
| $R_t$         | 4,620            | 0.290                                  | -0.172         | 1.166     | 456       | 0.249                             | -0.166    | 1.132     |  |
| $X_t$         | 4,620            | 0.419                                  | 0.200          | 0.992     | 456       | 0.364                             | 0.201     | 0.954     |  |
| $X_{t+1}$     | 4,620            | -0.001                                 | 0.000          | 0.038     | 456       | 0.002                             | 0.000     | 0.042     |  |
| $R_{t+1}$     | 4,620            | -0.001                                 | 0.000          | 0.042     | 456       | -0.001                            | 0.000     | 0.042     |  |
| $EP_{t-1}$    | 4,620            | 0.006                                  | 0.007          | 0.035     | 456       | 0.007                             | 0.008     | 0.038     |  |
| $AG_t$        | 4,620            | 0.123                                  | 0.071          | 0.296     | 456       | 0.099                             | 0.065     | 0.287     |  |
| Panel B: Corr | elation matrie   | ces                                    |                |           |           |                                   |           |           |  |
|               | $R_t$            | X                                      | C <sub>t</sub> | $X_{t+1}$ | $R_{t+1}$ | El                                | $P_{t-l}$ | $AG_t$    |  |
| $R_t$         |                  | 0.2                                    | 57*            | -0.265*   | -0.572*   | -0.0                              | )11       | 0.250*    |  |
| $X_t$         | 0.190*           |  |                | -0.420*   | -0.087    | -0.6                              | 608*      | 0.083     |  |
| $X_{t+1}$     | -0.103*          | -0.3                                   | 27*            |           | 0.208*    | 0.0                               | )28       | -0.210*   |  |
| $R_{t+1}$     | -0.569*          | -0.0                                   | 73*            | 0.146*    |           | 0.0                               | )14       | -0.174*   |  |
| $EP_{t-1}$    | -0.004           | -0.4                                   | 35*            | -0.154*   | 0.037     |                                   |           | 0.187*    |  |
| $AG_t$        | 0.170*           | 0.1                                    | 27*            | -0.129*   | -0.080*   | 0.2                               | 219*      |           |  |

 Table 2
 Descriptive Statistics and Correlations

This table presents descriptive statistics and correlations. Correlations below (above) the diagonal are for the treatment (control) groups. Our treatment group consists of A-share listed firms, and our control group consists of A-share and B- or H-share dual-listed firms. The variables are defined as follows:  $R_t$  and  $R_{t+1}$  are calculated as buy-and-hold returns for financial year t and t+1, respectively.  $X_t$  and  $X_{t+1}$  are defined as earnings change per share in period t and t+1, deflated by the closing price at the end of period t-1. Earnings are measured by net income.  $EP_{t-1}$  is defined as the earnings level in period t-1 divided by the price at the end of period t-1.  $AG_t$  is defined as the growth rate of total assets in period t. All variables are winsorised at the 1% and 99% levels. \* indicates a significant difference between the two subgroups at the 1% level based on a two-tailed t-test.

<sup>&</sup>lt;sup>9</sup> We also compare the differences between the treatment and control groups in some other firm characteristics that are commonly used as control variables, including market-to-book ratio, leverage, firm size, ROA, and earnings management incentive measures such as rights issue and loss avoidance. The untabulated results show that dual-listed firms are significantly larger and have higher leverage than A-share firms. However, these two types of firms are indistinguishable in terms of other firm characteristics, such as market-to book ratio, ROA, and earnings management incentives. These results reaffirm that our control group is largely qualified.

Panel B of Table 2 shows a Pearson correlation matrix for all variables, with correlations for the treatment group in the lower quadrant and correlations for the control group in the upper quadrant. The correlation coefficients between the two subsamples are very close for most variables, suggesting, again, that the dual-listed firms are qualified to act as our control group.<sup>10</sup> Particularly, the current returns ( $R_t$ ) are significantly negatively correlated with the future returns ( $R_{t+1}$ ), which implies that there is a mean reversion effect in Chinese stock return performance. This is consistent with a mean reversion effect in earnings growth, as indicated by the significantly negative correlation between current earnings changes ( $X_t$ ) and future earnings changes ( $X_{t+1}$ ). In addition, the correlations between contemporaneous returns and earnings growth (i.e. between  $R_t$  and  $X_t$  or between  $R_{t+1}$  and  $X_{t+1}$ ) are significantly positive.

#### 5.2 Test of Hypothesis H1

Table 3 presents findings relating to our test of hypothesis H1. Panel A is based on listed firms that only issue A-shares (i.e. our treatment group). Panel B is based on dual-listed firms that issue both A-shares and either B- or H-shares (i.e. our control group). In both panels A and B, we observe significantly positive coefficients of  $X_{t+1}$ . For instance, the coefficient of  $X_{t+1}$  is 0.501 (t-statistic = 3.75) for the treatment group and 0.623 (t-statistic = 1.86) for the control group. The difference between the two groups is statistically insignificant. This indicates that the two groups of firms are indistinguishable in terms of the relationship between current returns and future earnings changes prior to mandatory IFRS adoption in 2007. However, the coefficient of  $POST \times X_{l+1}$  is significantly positive only in the treatment group (e.g. 1.707 (t-statistic = 2.00)). There is also a statistically significant difference between the treatment and control groups for the estimated coefficient of  $POST \times X_{l+1}$ . This indicates that the FERC is incrementally higher after mandatory IFRS adoption in 2007 only in the treatment group, not in the control group. In other words, we show that there are changes in the ability of the share price to anticipate future earnings changes after mandatory IFRS adoption only among firms expected to be influenced by the new set of accounting standards. The fact that a similar effect is not observed among firms in our control group mitigates the possibility that our findings are due to unidentified confounding effects unrelated to the impact of IFRS.

It is worth noting that for the control group firms, the coefficient on  $X_{t+1}$  decreases from 0.623 (t-statistic = 1.86) to -3.96 (t-statistic=-1.42) after the mandatory IFRS adoption. The reduction in the FERC for the control group could reflect the following:

1) A temporary effect of IFRS: There is a long-standing debate over whether the effect

<sup>&</sup>lt;sup>10</sup> We conduct a correlation analysis for the treatment and control groups pre- and post-IFRS adoption. The unreported results show that the coefficients of current earnings changes and future earnings changes are very close, regardless of whether we are looking at the pre- or post-IFRS period. This provides a preliminary indication that IFRS do not affect earnings persistence. Moreover, the coefficients of the treatment and control groups are similar, indicating that the control group is selected properly.

of IFRS adoption is permanent or temporary (e.g. Ball *et al.*, 2015). Beuselinck *et al.* (2010) show that stock price synchronicity decreases after mandatory IFRS adoption, but this effect is temporary. In our case, to the extent that the dual-listed firms had adopted IFRS for a while before 2007, the positive impact of IFRS on the FERC may have diminished over time.

| Den en deut Verichter D         | Panel A: Trea       | tment group | Panel B: Control group |         |  |  |
|---------------------------------|---------------------|-------------|------------------------|---------|--|--|
| Dependent variable: $K_t$       | Coefficient         | T-stat      | Coefficient            | T-stat  |  |  |
| $X_t$                           | 1.803***            | 10.55       | 1.968***               | 4.82    |  |  |
| $X_{t+1}$                       | 0.501***            | 3.75        | 0.623*                 | 1.86    |  |  |
|                                 | [-0.24]             |             |                        |         |  |  |
| $R_{t+1}$                       | 0.029***            | 3.78        | 0.022                  | 0.71    |  |  |
| $EP_{t-1}$                      | 1.532***            | 7.73        | $1.177^{**}$           | 2.48    |  |  |
| $AG_{t-1}$                      | $0.177^{***}$       | 6.38        | 0.343***               | 3.85    |  |  |
| POST                            | 1.265***            | 48.53       | $1.014^{***}$          | 12.67   |  |  |
| $POST \times X_t$               | 5.869***            | 4.15        | 9.304**                | 2.31    |  |  |
| $POST \times X_{t+1}$           | $1.707^{**}$        | 2.00        | -4.583                 | -1.63   |  |  |
|                                 | [2.34] <sup>a</sup> |             |                        |         |  |  |
| $POST \times R_{t+1}$           | -1.016***           | -47.22      | -0.903***              | -12.47  |  |  |
| $POST \times EP_{t-1}$          | 1.602               | 1.28        | 3.167                  | 0.83    |  |  |
| $POST \times AG_{t-1}$          | -0.020              | -0.25       | -0.169                 | -0.84   |  |  |
| Constant                        | -0.178***           | -4.54       | -0.334                 | -1.61   |  |  |
| $X_{t+l} + POST \times X_{t+l}$ | 2.208               | 8***        | -3.960                 |         |  |  |
| (T-statistics)                  | (2.6                | (2.62)      |                        | (-1.42) |  |  |
| Industry                        | YE                  | ES          | YES                    |         |  |  |
| Obs                             | 462                 | 4620        |                        | 456     |  |  |
| Adj. R <sup>2</sup>             | 0.6                 | 63          | 0.60                   | 69      |  |  |

 Table 3 Share Price Anticipation of Changes in Future Earnings in the Treatment and Control Groups

This table presents the results of OLS regression analyses for the treatment group in Panel A and the control group in Panel B. The treatment group comprises pure A-share listed firms. The control group comprises A-share and B- or H-share dual-listed firms. The variables are defined as follows:  $R_t$  and  $R_{t+1}$  are calculated as buy-and-hold returns for financial year t and t+1, respectively.  $X_t$  and  $X_{t+1}$  are defined as earnings change per share in periods t and t+1, deflated by the closing price at the end of period t-1. Earnings are measured by net income.  $EP_{t-1}$  is defined as the earnings level in period t-1 divided by the price at the end of period t-1.  $AG_t$  is defined as the growth rate of total assets in period t. *POST* is 1 for observations in 2007 and 2008, and 0 for observations in 2004 and 2005. The numbers in square brackets are the t-statistics for the difference between the treatment and control groups' FERCs (i.e.  $X_{t+1}$  or  $POST \times X_{t+1}$ ). All variables (except *POST*) are winsorised at the 1% and 99% levels. All t-statistics are based on standard errors adjusted for heteroscedasticity. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively (one-sided).

2) Some negative externality: For example, the improved financial reporting quality of A-share firms arising from the IFRS adoption may crowd out investors' interests in dual-listed firms. This may affect the liquidity or trading volume, subsequently stock returns, of the latter. Since stock return is a crucial input of the CKSS model, the possible spillover

effect may add noise to the interpretation of our results.

3) A lack of test power: De George *et al.* (2016) suggest that choosing a short window around IFRS adoption has the advantage of mitigating confounding effects. Nevertheless, this also suffers from a lack of power in tests when a sufficient number of observations is unavailable in the short window.

Overall, the results reported in Table 3 provide evidence in support of hypothesis H1.Since we observe a significant increase in the FERC after IFRS adoption, this implies that the improvement in disclosure and transparency dominates the increased earnings management incentives under the new standards.

#### 5.3 Test of Hypothesis H2

Tables 4 to 6 present the findings from our test of hypothesis H2. In Table 4, we split the firms in our treatment group into NSOEs (Panel A) and SOEs (Panel B). In both panels, we observe a significantly positive coefficient for  $X_{t+1}$ . For instance, the coefficient of  $X_{t+1}$  is 0.409 (t-statistic = 2.47) for the NSOE group and 0.601 (t-statistic = 2.97) for the SOE group. There is no statistically significant difference between the two groups. This suggests that prior to the mandatory adoption of IFRS in 2007, both NSOEs and SOEs had similar FERCs. However, the coefficient of  $POST \times X_{t+1}$  is significantly positive only in the NSOE group (coefficient=3.318, t-statistic=2.57), and this is also significantly different from the coefficient for the SOEs. This suggests that the improvement in SPAE that we observe for firms in our treatment group is more pronounced among NSOEs than among SOEs. This is consistent with mandatory IFRS adoption improving the ability of the share price to anticipate future earnings mainly among firms not controlled by the Chinese government, which have greater dependence on external capital and, as a result, more incentives to communicate with outside investors. Thus, Table 4 provides evidence in support of hypothesis H2. In other words, mandating IFRS in China has reduced the disadvantage to NSOEs caused by their lack of government financial support by giving them greater power to improve their disclosure and transparency and so entice external investors.

Table 5 presents our findings for another set of tests of hypothesis H2. In this case, we split the firms in our treatment group into unsubsidised (Panel A) and subsidised (Panel B) firms. In both panels, we observe significantly positive FERCs before the mandatory adoption of IFRS, as indicated by  $X_{t+1}$ . For instance,  $X_{t+1}$  is 0.337 (t-statistic = 1.14) for the unsubsidised firms and 0.560 (t-statistic = 3.62) for the subsidised firms. There is no statistically significant difference between the two groups. In other words, both groups have similar FERCs prior to the mandatory adoption of IFRS. Following the adoption of IFRS, there is a significantly positive increase in the FERC only among the unsubsidised firms. The coefficient of  $POST \times X_{t+1}$  is 5.804 (t-statistic = 2.54) for the unsubsidised firms, which is significantly different from the coefficient for their subsidised counterparts. The contrast between the two groups indicates that the increased ability of the share price to anticipate

future earnings changes that we observe for firms in our treatment group is more pronounced among the firms that are unsubsidised. This is consistent with improved disclosure and transparency under IFRS being more pronounced among firms that have higher financial reporting incentives due to their greater dependence on external capital. In other words, we have evidence in support of hypothesis H2. Mandatory IFRS adoption in China benefits unsubsidised firms by facilitating their efforts to attract external investors through improved disclosure and transparency.

| Denendent Verichler D           | Panel A:            | NSOEs  | Panel B: SOEs |        |  |
|---------------------------------|---------------------|--------|---------------|--------|--|
| Dependent variable: $R_t$       | Coefficient         | T-stat | Coefficient   | T-stat |  |
| $X_t$                           | 1.458***            | 5.49   | 2.055***      | 8.71   |  |
| $X_{t+1}$                       | $0.409^{**}$        | 2.47   | $0.601^{***}$ | 2.97   |  |
|                                 | [-0.72]             |        |               |        |  |
| $R_{t+1}$                       | 0.034**             | 2.24   | $0.028^{***}$ | 3.05   |  |
| $EP_{t-1}$                      | $1.482^{***}$       | 4.42   | 1.625***      | 6.32   |  |
| $AG_{t-1}$                      | 0.183***            | 3.29   | $0.182^{***}$ | 5.55   |  |
| POST                            | 1.315***            | 29.15  | 1.238***      | 38.8   |  |
| $POST \times X_t$               | 6.663***            | 2.99   | 5.396***      | 3.04   |  |
| $POST \times X_{t+1}$           | 3.318***            | 2.57   | 0.526         | 0.47   |  |
|                                 | [1.68] <sup>b</sup> |        |               |        |  |
| $POST \times R_{t+1}$           | -0.971***           | -27.16 | -1.052***     | -39.06 |  |
| $POST \times EP_{t-1}$          | 2.354               | 1.21   | 1.265         | 0.74   |  |
| $POST \times AG_{t-1}$          | 0.029               | 0.21   | -0.043        | -0.5   |  |
| Constant                        | -0.099*             | -1.66  | -0.282***     | -6.25  |  |
| $X_{t+l} + POST \times X_{t+l}$ | 3.72                | 27***  | 1.127         |        |  |
| (T-statistics)                  | (2.92)              |        | (1.03)        |        |  |
| Industry                        | YES                 |        | YES           |        |  |
| Obs                             | 1,538               |        | 3,082         |        |  |
| Adj. R <sup>2</sup>             | 0.6                 | 51     | 0.6           | 72     |  |

Table 4Share Price Anticipation of Changes in Future Earnings in NSOE and SOEFirms

This table presents results of the OLS regression analyses of listed firms that only issue A-shares (i.e. our treatment group) separately for NSOEs in Panel A and SOEs in Panel B. NSOE firms have entrepreneurs and foreign investors as controlling shareholders. SOE firms have controlling shareholders affiliated to central or local government. The variables are defined as follows:  $R_t$  and  $R_{t+1}$  are calculated as buy-and-hold returns for financial year t and t+1, respectively.  $X_t$  and  $X_{t+1}$  are defined as earnings change per share in periods t and t+1, deflated by the closing price at the end of period t-1. Earnings are measured by net income.  $EP_{t-1}$  is defined as the earnings level in period t-1 divided by the price at the end of period t-1.  $AG_t$  is defined as the growth rate of total assets in period t. POST is 1 for observations in 2007 and 2008, and 0 for observations in 2004 and 2005. The numbers in square brackets are the t-statistics for the difference between the NSOE and SOE groups' FERCs (i.e.  $X_{t+1}$  or  $POST \times X_{t+1}$ ). All variables (except *POST*) are winsorised at the 1% and 99% levels. All t-statistics are based on standard errors adjusted for heteroscedasticity. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively (two-tailed). a, b, and 10% levels, respectively (one-sided).

| Den en deut Veniehler D         | Panel A: Ur         | nsubsidised | Panel B: Subsidised |        |  |  |
|---------------------------------|---------------------|-------------|---------------------|--------|--|--|
| Dependent variable: $K_t$       | Coefficient         | T-stat      | Coefficient         | T-stat |  |  |
| $\overline{X_t}$                | 1.664***            | 4.80        | 1.914***            | 9.46   |  |  |
| $X_{t+1}$                       | 0.337               | 1.14        | $0.560^{***}$       | 3.62   |  |  |
|                                 | [-0.89]             |             |                     |        |  |  |
| $R_{t+1}$                       | $0.032^{*}$         | 1.88        | $0.029^{***}$       | 3.29   |  |  |
| $EP_{t-1}$                      | $1.206^{***}$       | 3.84        | $1.719^{***}$       | 6.63   |  |  |
| $AG_{t-1}$                      | 0.143***            | 3.35        | $0.192^{***}$       | 5.37   |  |  |
| POST                            | $1.447^{***}$       | 24.08       | 1.232***            | 42.82  |  |  |
| $POST \times X_t$               | $7.552^{*}$         | 1.93        | 5.645***            | 3.72   |  |  |
| $POST \times X_{t+1}$           | 5.804**             | 2.54        | 1.133               | 1.24   |  |  |
|                                 | [1.90] <sup>b</sup> |             |                     |        |  |  |
| $POST \times R_{t+1}$           | -1.016***           | -17.46      | -1.013***           | -43.54 |  |  |
| $POST \times EP_{t-1}$          | 1.215               | 0.46        | 1.776               | 1.23   |  |  |
| $POST \times AG_{t-1}$          | 0.001               | 0.00        | -0.018              | -0.21  |  |  |
| Constant                        | -0.328***           | -4.96       | -0.145***           | -3.17  |  |  |
| $X_{t+l} + POST \times X_{t+l}$ | 6.141***            |             | 1.694*              |        |  |  |
| (T-statistics)                  | (2.71)              |             | (1.89)              |        |  |  |
| Industry                        | YES                 |             | YES                 |        |  |  |
| Obs                             | 862                 |             | 3,758               |        |  |  |
| Adj. R <sup>2</sup>             | 0.7                 | 02          | 0.6                 | 55     |  |  |

Table 5Share Price Anticipation of Changes in Future Earnings in Unsubsidised andSubsidised Firms

This table presents the results of OLS regression analyses of Chinese listed firms that only issue A-shares (i.e. our treatment group) separately for unsubsidised firms in Panel A and subsidised firms in Panel B. We classify firms as subsidised if they received a state subsidy in any of the past three years. The variables are defined as follows:  $R_t$  and  $R_{t+1}$  are calculated as buy-and-hold returns for financial year t and t+1, respectively.  $X_t$  and  $X_{t+1}$  are defined as earnings change per share in periods t and t+1, deflated by the closing price at the end of period t-1. Earnings are measured by net income.  $EP_{t-1}$  is defined as the earnings level in period t-1 divided by the price at the end of period t-1.  $AG_t$  is defined as the growth rate of total assets in period t. POST is 1 for observations in 2007 and 2008 and 0 for observations in 2004 and 2005. The numbers in square brackets are the t-statistics for the difference between the unsubsidised and subsidised groups' FERCs (i.e.  $X_{t+1}$  or  $POST \times X_{t+1}$ ). All variables (except POST) are winsorised at the 1% and 99% levels. All t-statistics are based on standard errors adjusted for heteroscedasticity. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively (two-tailed). <sup>a</sup>, <sup>b</sup>, and <sup>c</sup> indicate if there is significant difference in the coefficients between the two groups at the 1%, 5%, and 10% levels, respectively (one-sided).

As a final test of hypothesis H2, in Table 6, we split the NSOEs in our treatment group into politically unconnected (Panel A) and connected (Panel B) firms. Prior to IFRS adoption, there is no significant difference in the coefficient of  $X_{t+1}$ . However, following the adoption of IFRS, the coefficient of  $POST \times X_{t+1}$  is significant for the unconnected firms (coefficient = 3.824, t-statistic = 2.37) but not for the connected firms (coefficient = -2.453, t-statistic = -0.90). Moreover, the difference in the coefficient is statistically significant between the two subsamples. This, once again, confirms our hypothesis H2 that the improved ability of share price to anticipate future earnings following IFRS adoption is more pronounced among firms that rely more on external financing channels and therefore have greater incentives to improve their disclosure transparency.

| Demendent Veriables D           | Panel A: Ur         | Panel A: Unconnected |               | Connected |  |
|---------------------------------|---------------------|----------------------|---------------|-----------|--|
| Dependent variable: $K_t$       | Coefficient         | T-stat               | Coefficient   | T-stat    |  |
| $X_t$                           | $0.788^{***}$       | 2.85                 | 1.456***      | 3.42      |  |
| $X_{t+1}$                       | 0.323               | 1.63                 | $0.721^{*}$   | 1.89      |  |
|                                 | [-0.96]             |                      |               |           |  |
| $R_{t+1}$                       | 0.011               | 0.75                 | $0.073^{***}$ | 2.71      |  |
| $EP_{t-1}$                      | $1.290^{***}$       | 3.62                 | 0.584         | 0.94      |  |
| $AG_{t-1}$                      | $0.206^{***}$       | 4.04                 | 0.138         | 1.18      |  |
| POST                            | 1.296***            | 25.6                 | 1.398***      | 14.58     |  |
| $POST \times X_t$               | 3.926**             | 2.06                 | 1.522         | 0.28      |  |
| $POST \times X_{t+1}$           | 3.824**             | 2.37                 | -2.453        | -0.90     |  |
|                                 | [2.02] <sup>b</sup> |                      |               |           |  |
| $POST \times R_{t+1}$           | -0.899***           | -21.35               | -1.088***     | -15.37    |  |
| $POST \times EP_{t-1}$          | 0.680               | 0.32                 | 1.971         | 0.44      |  |
| $POST \times AG_{t-1}$          | 0.060               | 0.50                 | 0.037         | 0.15      |  |
| Constant                        | -0.113*             | -1.72                | -0.028        | -0.19     |  |
| $X_{t+l} + POST \times X_{t+l}$ | 4.147               |                      | -1.731        |           |  |
| (T-statistics)                  | (2.60) ***          |                      | (-0.64)       |           |  |
| Industry                        | YES                 |                      | YES           |           |  |
| Obs                             | 1,068               |                      | 456           |           |  |
| Adj. R <sup>2</sup>             | 0.647               |                      | 0.612         |           |  |

Table 6Share price anticipation of changes in future earnings in politically connectedand unconnected NSOE listed firms

This table presents the results of OLS regression analyses of NSOE listed firms that only issue A-shares (i.e. our treatment group), separately for politically unconnected firms in Panel A and connected firms in Panel B. We classify a firm as politically connected if its CEO or chairman is currently or has been in the past a government official or a member of the People's Congress. The variables are defined as follows:  $R_t$  and  $R_{t+1}$  are calculated as buy-and-hold returns for financial year t and t+1, respectively.  $X_t$  and  $X_{t+1}$  are defined as earnings change per share in periods t and t+1, deflated by the closing price at the end of period t-1. Earnings are measured by net income.  $EP_{t-1}$  is defined as the earnings level in period t-1 divided by the price at the end of period t-1.  $AG_t$  is defined as the growth rate of total assets in period t. *POST* is 1 for observations in 2007 and 2008 and 0 for observations in 2004 and 2005. The numbers in square brackets are the t-statistics for the difference between the unconnected and connected groups' FERCs (i.e.  $X_{t+1}$  or  $POST \times X_{t+1}$ ). All variables (except *POST*) are winsorised at the 1% and 99% levels. All t-statistics are based on standard errors adjusted for heteroscedasticity. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively (two-tailed). a, b, and c indicate if there is significant difference in the coefficients between the two groups at the 1%, 5%, and 10% levels, respectively.

# VI. Conclusion

This study examines the effect of mandatory IFRS adoption on SPAE for Chinese listed firms. We apply the approach of Collins *et al.* (1994) to evaluate changes in the FERC. We exploit the segmented stock market of China to show that improvements in SPAE only occurs among listed firms that were obliged to report under IFRS from 2007 onward and not among those that were already disclosing under IFRS prior to 2007. Next, we exploit other unique institutional features of China to show that the aforementioned effect is more pronounced among firms that are (1) not state controlled, (2) less subsidised, or (3) politically unconnected.

Our results provide some indications that the implementation of IFRS varies amongst Chinese firms according to the extent to which they are reliant on private investors for external finance. However, we have not studied in detail the specific new forms of disclosure that appear to have increased the FERC for firms that are more dependent on private investors for new capital. More detailed exploration of this issue is a promising topic for further research.

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## References

- Aharony, J., Barniv, R., and Falk, H. (2010), 'The impact of mandatory IFRS adoption on equity valuation of accounting numbers for security investors in the EU', *European Accounting Review* 19 (3): 535–578.
- Allen, F., Qian, J., and Qian, M. J. (2005), 'Law, finance, and economic growth in China', *Journal of Financial Economics* 77 (1): 57–116.
- Ashbaugh, H. and Pincus, M. (2001), 'Domestic accounting standards, international accounting standards, and the predictability of earnings', *Journal of Accounting Research* 39 (3): 417–434.
- Bai, C. E., Li, D. D., Tao, Z. G., and Wang, Y. J. (2000), 'A multitask theory of state enterprise reform', *Journal of Comparative Economics* 28 (4): 716–738.
- Ball, R., Li, X., and Shivakumar, L. (2015), 'Contractibility and transparency of financial statement information prepared under IFRS: Evidence from debt contracts around IFRS adoption', *Journal of Accounting Research* 53 (5): 915–963.
- Ball, R., Robin, A., and Sadka, G. (2008), 'Is financial reporting shaped by equity markets or debt markets? An international study of timeliness and conservatism', *Review of Accounting Studies* 13 (2-3): 168–205.
- Ball, R., Robin, A., and Wu, J. S. (2003), 'Incentives versus standards: Properties of accounting income in four East Asian countries', *Journal of Accounting and Economics* 36 (1-3): 235–270.
- Ball, R. and Shivakumar, L. (2005), 'Earnings quality in UK private firms: Comparative loss recognition timeliness', *Journal of Accounting and Economics* 39 (1): 83–128.
- Barth, M. E., Landsman, W. R., and Lang, M. H. (2008), 'International accounting standards and accounting quality', *Journal of Accounting Research* 46 (3): 467–498.
- Beuselinck, C., Joos, P., Khurana, I. K., and der Meulen, S. V. (2010), 'Mandatory IFRS reporting and stock price informativeness', Working Paper, Tilburg University.

- Beyer, A., Cohen, D. A., Lys, T. Z., and Walther, B. R. (2010), 'The financial reporting environment: Review of the recent literature', *Journal of Accounting and Economics* 50 (2-3): 296–343.
- Brandt, L. and Li, H. (2003), 'Bank discrimination in transition economies: Ideology, information, or incentives?', *Journal of Comparative Economics* 31 (3): 387–413.
- Brüggemann, U., Hitz, J. M., and Sellhorn, T. (2013), 'Intended and unintended consequences of mandatory IFRS adoption: A review of extant evidence and suggestions for future research', *European Accounting Review* 22 (1): 1–37.
- Bushman, R. and Piotroski, J. (2006), 'Financial reporting incentives for conservative accounting: The influence of legal and political institution', *Journal of Accounting and Economics* 42 (1-2): 107–148.
- Bushman, R. M. and Smith, A. J. (2001), 'Financial accounting information and corporate governance', *Journal of Accounting and Economics* 32 (1-3): 237–333.
- Byard, D., Li, Y., and Yu, Y. (2011), 'The effect of mandatory IFRS adoption on financial analysts' information environment', *Journal of Accounting Research* 49 (1): 69–96.
- Chen, H. W., Chen, J. Z., Lobo, G. J., and Wang, Y. Y. (2010), 'Association between borrower and lender state ownership and accounting conservatism', *Journal of Accounting Research* 48 (5): 973–1014.
- Chen, X., Lee, C. W. J., and Li, J. (2008), 'Government assisted earnings management in China', *Journal of Accounting and Public Policy* 27 (3): 262–274.
- Chen, C., Lee, E., Lobo, G. J., and Zhu, J. (2019), 'Who benefits from IFRS convergence in China?', *Journal of Accounting, Auditing and Finance* 34 (1): 99–124.
- Chen, C. J., Li, Z., Su, X., and Sun, Z. (2011), 'Rent-seeking incentives, corporate political connections, and the control structure of private firms: Chinese evidence', *Journal of Corporate Finance* 17 (2): 229–243.
- Christensen, H. B., Lee, E., Walker, M., and Zeng, C. (2015), 'Incentives or standards: What determines accounting quality changes around IFRS adoption?', *European Accounting Review* 24 (1): 31–61.
- Christie, A. A. (1987), 'On cross-sectional analysis in accounting research', *Journal of Accounting and Economics* 9 (3): 231–258.
- Collins, D. W., Kothari, S. P., Shanken, J., and Sloan, R. G. (1994), 'Lack of timeliness and noise as explanations for the low contemporaneous return-earnings association', *Journal of Accounting and Economics* 18 (3): 289–324.
- Conyon, M. and He, L. (2011), 'Executive compensation and corporate governance in China', *Journal of Corporate Finance* 17 (4): 1158–1175.
- Conyon, M. and He, L. (2014), 'CEO turnover in China: The role of market-based and accounting performance measures', *The European Journal of Finance* 20 (7-9): 657–680.
- Daske, H. (2006), 'Economic benefits of adopting IFRS or US-GAAP-Have the expected

cost of equity capital really decreased?', *Journal of Business Finance and Accounting* 33 (3-4): 329–373.

- Daske, H., Hail, L., Leuz, C., and Verdi, R. (2008), 'Mandatory IFRS reporting around the world: Early evidence on the economic consequences', *Journal of Accounting Research* 46 (5): 1085–1142.
- De George, E. T., Li, X., and Shivakumar, L. (2016), 'A review of the IFRS adoption literature', *Review of Accounting Studies* 21 (3): 898–1004.
- Dechow, P. M. and Sloan, R. G. (1991), 'Executive incentives and the horizon problem: An empirical investigation', *Journal of Accounting and Economics* 14 (1): 51–89.
- DeFond, M., Hu, X. S., Hung, M. Y., and Li, S. Q. (2011), 'The impact of mandatory IFRS adoption on foreign mutual fund ownership: The role of comparability', *Journal of Accounting and Economics* 51 (3): 240–258.
- Deloitte Touche and Tohmatsu (2006), 'China's new accounting standards: A comparison of current PRC GAAP and IFRS', retrieved from http://www.iasplus.com/dttpubs/0607prcifrsenglish.pdf.
- Ding, Y. and Su, X. (2008), 'Implementation of IFRS in a regulated market', *Journal of Accounting and Public Policy* 27 (6): 474–479.
- Easton, P. D. and Harris, T. S. (1991), 'Earnings as an explanatory variable for returns', *Journal of Accounting Research* 29 (1): 19–36.
- Fan, J. P., Wong, T. J., and Zhang, T. (2007), 'Politically connected CEOs, corporate governance, and Post-IPO performance of China's newly partially privatized firms', *Journal of Financial Economics* 84 (2): 330–357.
- Firth, M., Lin, C. and Wong, S. M. L. (2008), 'Leverage and investment under a state-owned bank lending environment: Evidence from China', *Journal of Corporate Finance* 14 (5): 642–653.
- Florou, A. and Kosi, U. (2015), 'Does mandatory IFRS adoption facilitate debt financing?', *Review of Accounting Studies* 20 (4): 1407–1456.
- Gelb, D. S. and Zarowin, P. (2002), 'Corporate disclosure policy and the informativeness of stock prices', *Review of Accounting Studies* 7 (1): 33–52.
- Gul, F. A., Kim, J. B., and Qiu, A. A. (2010), 'Ownership concentration, foreign shareholding, audit quality, and stock price synchronicity: Evidence from China', *Journal of Financial Economics* 95 (3): 425–442.
- He, X. J., Wong, T. J., and Young, D. Q. (2012), 'Challenges for implementation of fair value accounting in emerging markets: Evidence from IFRS adoption in China', *Contemporary Accounting Research* 29 (2): 538–562.
- Hung, M. and Subramanyam, K. R. (2007), 'Financial statement effects of adopting International Accounting Standards: The case of Germany', *Review of Accounting Studies* 12 (4): 623–657.

- Hussainey, K. and Walker, M. (2009), 'The effects of voluntary disclosure and dividend propensity on prices leading earnings', *Accounting and Business Research* 39 (1): 37– 55.
- International Accounting Standards Board (IASB) (2006), 'China affirms commitment to converge with IFRS', *IASB News: Announcements and Speeches*.
- Institute of Chartered Accountants of Scotland (ICAS) (2010), 'Chinese accounting reform: Towards a principles-based global regime', available at https://www.icas.com/\_\_data/ assets/pdf file/0013/2281/Chinese-Accounting-Reform-ICAS.pdf.
- Jiang, G. and Wang, H. (2008), 'Should earnings thresholds be used as delisting criteria in stock market?', *Journal of Accounting and Public Policy* 27 (5): 409–419.
- Kim, J. B. and Shi, H. (2012), 'IFRS reporting, firm-specific information flows, and institutional environments: International evidence', *Review of Accounting Studies* 17 (3): 474–517.
- Kothari, S. P. (1992), 'Price-earnings regressions in the presence of prices leading earnings: Earnings level versus change specifications and alternative deflators', *Journal of Accounting and Economics* 15 (2-3): 173–202.
- Kothari, S. P. and Sloan, R. G. (1992), 'Information in prices about future earnings: Implications for earnings response coefficients', *Journal of Accounting and Economics* 15 (2-3): 143–171.
- KPMG (2010), 'An overview of new PRC GAAP: Differences between old and new PRC GAAP and its convergence with IFRS', source: https://home.kpmg/cn/en/home/insights.html.
- Landsman, W. R., Maydew, E. L., and Thornock, J. R. (2012), 'The information content of annual earnings announcements and mandatory adoption of IFRS', *Journal of Accounting and Economics* 53 (1): 34–54.
- Lang, M., Raedy, J. S., and Wilson, W. (2006), 'Earnings management and cross listing: Are reconciled earnings comparable to US earnings?', *Journal of Accounting and Economics* 42 (1-2): 255–283.
- Lee, E., Walker, M., and Zeng, C. (2013), 'Does IFRS convergence affect financial reporting quality in China?', The Association of Chartered Certified Accountants, Research Report 131.
- Lee, E., Walker, M., and Zeng, C. (2014), 'Do Chinese government subsidies affect firm value?', *Accounting, Organizations and Society* 39 (3): 149–169.
- Leuz, C. and Verrecchia, R. E. (2000), 'The economic consequences of increased disclosure', *Journal of Accounting Research* 38 (3): 91–124.
- Li, S. Q. (2010), 'Does mandatory adoption of International Financial Reporting Standards in the European Union reduce the cost of equity capital?', *The Accounting Review* 85 (2): 607–636.
- Li, H., Meng, L., Wang, Q., and Zhou, L. A. (2008), 'Political connections, financing and

firm performance: Evidence from Chinese private firms', *Journal of Development Economics* 87 (2): 283–299.

- Liu, Q. and Siu, A. (2012), 'Institutions and corporate investment: Evidence from investment-implied return on capital in China', *Journal of Financial and Quantitative Analysis* 46 (6): 1831–1863.
- Liu, C. H., Yao, L. J., Hu, N., and Liu, L. (2011), 'The impact of IFRS on accounting quality in a regulated market: An empirical study of China', *Journal of Accounting, Auditing & Finance* 26 (4): 659–676.
- Lundholm, R. and Myers, L. A. (2002), 'Bringing the future forward: The effect of disclosure on the returns-earnings relation', *Journal of Accounting Research* 40 (3): 809–839.
- Nelson, M. W. (2003), 'Behavioral evidence on the effects of principles- and rules-based standards', *Accounting Horizons* 17 (1): 91–104.
- Ohlson, J. A. and Shroff, P. K. (1992), 'Changes versus levels in earnings as explanatory variables for returns: Some theoretical considerations', *Journal of Accounting Research* 30 (2): 210–226.
- Peng, S. and Bewley, K. (2010), 'Adaptability to fair value accounting in an emerging economy: A case study of China's IFRS convergence', *Accounting, Auditing & Accountability Journal* 23 (8): 982–1011.
- Schipper, K. (2003), 'Principles-based accounting standards', *Accounting Horizons* 17 (1): 61–72.
- Soderstrom, N. S. and Sun, K. J. L. (2007), 'IFRS adoption and accounting quality: A review', *European Accounting Review* 16 (4): 675–702.
- Tan, H., Wang, S., and Welker, M. (2011), 'Analyst following and forecast accuracy after mandated IFRS adoptions', *Journal of Accounting Research* 49 (5): 1307–1357.
- Wang, X., Manry, D., and Wandler, S. (2011), 'The impact of government ownership on dividend policy in China', *Advances in Accounting* 27 (2): 366–372.
- Wang, Q., Wong, T. J., and Xia, L. J. (2008), 'State ownership, institutional environment and auditor choice: Evidence from China', *Journal of Accounting and Economics* 46 (1): 112–134.
- Watts, R. L. and Zimmerman, J. L. (1990), 'Positive accounting theory: A ten year perspective', *The Accounting Review* 65 (1): 131–156.
- Wu, W., Wu, C., Zhou, C., and Wu, J. (2012), 'Political connections, tax benefits and firm performance: Evidence from China', *Journal of Accounting and Public Policy* 31 (3): 277–300.
- Wu, J. S. and Zhang, I. X. (2014), 'The Adoption of Internationally Recognized Accounting Standards: Implications for the Credit Markets', *Journal of Accounting, Auditing & Finance* 29 (2): 95–128.