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**Citation:** Filip, A., Huang, Z. & Lui, D. (2020). Cross-listing and Corporate Malfeasance: Evidence from P-chip Firms. *Journal of Corporate Finance*, 63, 101232. doi: 10.1016/j.jcorpfin.2017.07.003

This is the accepted version of the paper.

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**Permanent repository link:** <https://openaccess.city.ac.uk/id/eprint/17699/>

**Link to published version:** <https://doi.org/10.1016/j.jcorpfin.2017.07.003>

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## **Cross-listing and Corporate Malfeasance: Evidence from P-chip Firms**

**Andrei Filip**

ESSEC Business School  
Email: andrei.filip@essec.edu

**Zhongwei Huang**

Faculty of Finance  
Cass Business School  
City, University of London  
Email: zhongwei.huang@cass.city.ac.uk

and

**Daphne Lui**

ESSEC Business School  
Email: daphne.lui@essec.edu

### **Abstract**

The rapid growth of the private sector in China in recent decades has created a large number of capital-hungry private sector firms. An increasing number of these firms choose to raise equity capital on international exchanges, which typically have stronger disclosure, corporate governance, and investor protection regulations. In light of international investors' and regulators' concerns about the corporate finance practice of China's private sector firms, particularly regarding the integrity of their reported earnings, we investigate whether these firms aggressively manipulate their accounts by examining those listed in Hong Kong, commonly known as P-chips. We find systematic evidence that P-chips engage in more earnings management and other corporate misbehaviors than their counterparts in Hong Kong. We posit and provide evidence consistent with cross-jurisdictional enforcement difficulty as a possible explanation to P-chips' questionable practice, and discuss its implications.

**Keywords:** China's private sector; P-chips; Enforcement difficulty; Corporate malfeasance

## 1. Introduction

Since embarking on a journey of market reforms in 1978, which took a big leap in the 1990s, China's economy has experienced an exponential growth, rising to the second largest economic entity in the world, with a GDP of \$10.9 trillion in 2015 (World Bank 2017a). This market-oriented growth was initially fueled by the partial privatization of state-owned enterprises (Jiang and Kim 2015; Sun and Tong 2003; hereafter SOEs), but in recent years the economic power released by the phenomenal growth of the private sector has dominated the scene (Lu 2015). The proportion of private enterprises in the economy expanded from less than 20 percent in 1996 to over 70 percent in 2012 (National Bureau of Statistics of China 1998; 2013). The internal growth of these companies soon arrives at a stage that an external source of capital is required for expansion. As these companies seek equity capital both domestically and internationally, the world sees an influx of applications for listings on its stock exchanges by China's private sector companies. These listings spread across global exchanges from the US to London to Singapore, but mostly concentrate on the Hong Kong Stock Exchange (hereafter HKSE), making Hong Kong the *de facto* hub for hosting initial public offerings (hereafter IPOs) of mainland Chinese private sector firms.

Although these popular overseas listing destinations are believed to have high quality securities regulatory environment, there have been mounting concerns that overseas-listed private sector Chinese firms do not behave in a way predicted by the bonding hypothesis (Coffee 2002; Stulz 1999), which stipulates that cross-listed firms bond to the better investor protection and more stringent listing, disclosure and corporate governance requirements of the foreign market, resulting in them resembling domestic firms of the listing location. Instead, numerous financial scandals associated with overseas Chinese firms broke in recent years, of which some

subject investors to significant financial losses.<sup>1</sup> This paper seeks to examine the aggressive corporate reporting behavior of these foreign-listed mainland private sector firms using a large sample of companies listed on the HKSE, commonly known as P-chips, and propose an explanation for their questionable practice that is inconsistent with the bonding hypothesis.<sup>2</sup>

Since their first listing in the turn of the 21<sup>st</sup> century, P-chips have grown substantially, at present representing the largest group of Chinese firms listed on the HKSE in terms of the number of companies, growing from 11 percent of the total in 2005 to nearly 31 percent in 2015. Assessing their importance based on size, P-chips now represent 20.3 percent of the total market capitalization of all companies listed on the HKSE as at the end of 2015. The increasing market share of P-chips in the Hong Kong market is at the expense of other non-mainland private sector companies, whose market capitalization is now less than 40 percent of the total, despite an increase in their number during the period.

We first compare P-chip companies with their non-mainland private sector counterparts with respect to the level of accruals-based earnings management. We find that P-chips engage in significantly more earnings management than Hong Kong companies, as measured by discretionary accruals estimated using a modified Jones (1991) model (Kothari, Leone, and Wasley 2005). This result is robust to using matched samples as well as using the probability of meeting or beating consensus forecasts by one cent as an alternative proxy for earnings management (Degeorge, Patel, and Zeckhauser 1999). Further analyses show that P-chip firms

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<sup>1</sup> We provide a brief description of two cases of alleged corporate malfeasance committed by Hong-Kong-listed mainland private sector firms in Appendix A.

<sup>2</sup>As detailed in Section 2, apart from P-chips, there are two more groups of Chinese firms listed in Hong Kong: H-shares and Red-chips, with Red-chip and the majority of H-share firms being controlled by the Chinese government. We choose to focus on comparing P-chips versus local Hong Kong firms because, in addition to different ownership structures potentially confounding our comparison (Chen and Yuan 2004; Leuz 2006), the fact that the Chinese government uses Hong Kong listings as a policy tool to reform inefficient SOEs, rather than Chinese SOEs self-select to cross-list in Hong Kong, makes the bonding arguments less relevant for H-shares and Red-chips (Sun, Tong, and Wu 2013).

are also more likely to have engaged in other corporate misconduct such as misstating accounting statements and misappropriating corporate resources through tunneling. These results do not conform to the prediction of the bonding hypothesis.

One possible explanation to this deviation is that Hong Kong has lower quality regulatory environment than mainland China in terms of capital market institutions. Evidence from a detailed comparison of the legal system and securities regulations between the two markets, however, does not support this explanation. Our analysis shows that Hong Kong is ahead of mainland China in areas such as investors protection, regulatory quality, listing rules, and corporate governance regulations, except for mainland China having marginally more extensive disclosure rules. More importantly, our survey of the literature and indices compiled by international organizations all indicate that the legal enforcement quality in Hong Kong is superior to that in mainland China. We also document that the average fines in enforcement actions is five times higher in Hong Kong than in China. Taken together, it is unlikely that the deviation from the prediction of the bonding hypothesis is due to Hong Kong having lower quality regulatory environment than mainland China.

We propose cross-jurisdictional enforcement difficulty as a potential explanation to this phenomenon. P-chip companies may be more prone to corporate misconduct because Hong Kong securities regulators do not have extra-territorial investigation and enforcement jurisdiction in mainland China where P-chip companies are based, and investors may face difficulties to enforce their shareholder rights against P-chip companies and their directors due to complications arising from cross-border access to evidence, legal services, court assistance, or the incremental costs related to those services (HKSE 2013). Without the assistance and cooperation of relevant Chinese authorities, such as the China Securities Regulatory Commission

(hereafter CSRC), provincial and local governments or courts, etc., it is difficult to seize the assets of these firms which are almost entirely located in mainland China, and without an extradition agreement in place between China and Hong Kong, the managers of these firms can “escape” enforcement actions by remaining in mainland China. Muddy Waters, an independent equity research and investment firm that soared to fame after uncovering frauds for a few US- and Canada-listed Chinese companies and bringing them down, suggested that the significant number of Chinese companies listed in Hong Kong could make it “*the next bastion of fraudulent revelations*” (Yousef 2012).

Prior research shows that the institutional environment of a company’s home location is an important determinant of the likelihood of its cooperation with the firm’s listing location in the event of an enforcement action (Duarte, Kong, Siegel, and Young 2014). Hence, to test whether cross-jurisdictional enforcement difficulty is a plausible explanation to P-chips’ misbehavior, we identify the degree of legal and economic development of China’s cities/provinces in which P-chip companies are headquartered as a reverse proxy for enforcement difficulty. We find that the extent of earnings management is negatively associated with this enforcement difficulty proxy among P-chip firms, consistent with our prediction. In addition, we document that P-chips’ earnings response coefficient is significantly lower than that for Hong Kong firms by 0.21 percentage point in a two-day window surrounding earnings announcements, the magnitude of which is both statistically and economically significant. This evidence supports the view that investors are aware of regulators facing enforcement difficulty against P-chip companies, and they use stock prices as a mechanism to protect themselves against the heightened probability of expropriation by P-chip companies’ managers and controlling shareholders.

To further substantiate our enforcement difficulty explanation, we seek its external validity in two alternative cross-listing settings. First, we compare mainland-incorporated firms dual-listed in both mainland and Hong Kong to mainland-incorporated firms listed solely in Hong Kong. The difficulty to enforce Hong Kong regulations on dual-listed mainland corporations is lower because the CSRC has stronger incentives to cooperate with their Hong Kong counterpart under non-binding legal cooperation arrangements in place when corporate misconduct affects mainland investors. Consistent with the alleviation of cross-jurisdictional enforcement difficulty, we find dual-listed firms engaging in lower levels of earnings management. Second, recent reverse merger (hereafter RM) scandals in the US reveal a lack of cooperation between Chinese authorities/auditors and US authorities when the latter conduct investigations against listed companies originated in China (see, e.g., SEC 2015). This suggests that US regulators face similar enforcement difficulty issues as Hong Kong regulators. We compare Chinese private-sector firms listed in the US to domestic US firms, and find that indeed the former engage in a significantly higher level of earnings management than other firms.

Our paper makes several contributions to the literature. First, we add to the literature that examines the behavior of cross-listed firms relative to local firms in the listing location (e.g., Fung, Su, and Gul 2013; Lang, Raedy, and Wilson 2006). These prior studies, however, often have a much smaller sample, and their cross-listed firms tend to differ from local firms in terms of listing rules (e.g., American depositary receipts vs. IPOs), disclosure requirement (e.g., 20-F vs. 10-K), and ownership structure (e.g., SOEs vs. private sector firms), which could confound their findings. Our P-chip setting allows us to test the research question using a much larger sample compared to prior studies in this stream, and more importantly, ensures that cross-listed firms and local firms are subject to the same listing and reporting requirements, and are similar

in terms of ownership structure.<sup>3</sup> We provide much cleaner evidence that cross-listed firms are more aggressive in earnings management and other corporate malfeasances than local firms. In this regard, our paper echoes Sun, Tong, and Zhang (2013), who find that cross-listed firms can bring negative impacts to the cross-listing destination in terms of transaction cost for local firms and the overall price informativeness of the market.

Second, our results contribute to its debate about the bonding hypothesis. A few explanations have emerged in the literature to explain findings that are inconsistent with its prediction. Licht (2001, 2003) argues that firms cross-list to access cheaper finance and greater visibility rather than to bond, and the experience in the US shows that they induce regulators to allow foreign issuers to avoid some of the more exacting regulations. Siegel (2005) posits that cross-listed firms bond themselves by building their reputation, but there is a lack of legal bonding with the US, a view shared by Lang et al. (2006). We underscore and provide evidence on cross-jurisdictional enforcement difficulty as a possible alternative explanation to cross-listed firms' behavior that contradicts the predictions of the bonding hypothesis.

Third, this paper relates to a series of recent studies that examine RM firms listed in the US. Chen, Cheng, Lin, Lin, and Xiao (2016) provide some evidence that the RM process allows Chinese firms that are poorly governed and have low bonding incentives to access the US capital market. We employ a more general setting, as P-chips obtain their Hong Kong listing via both IPOs and RMs, and provide complementary results.<sup>4</sup> Our findings highlight that a listing in a strong legal and enforcement regime does not necessarily lead to high quality reported earnings,

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<sup>3</sup> Our much larger sample has a further advantage that we can match on multiple dimensions to ensure even closer comparability between cross-listed firms and local firms.

<sup>4</sup> Reverse mergers in Hong Kong are subject to bright line tests that may result in many reverse mergers being classified as new listing applications and are subject to similar scrutiny as initial public offerings.

and that it is important to examine the “underlying fundamentals” of a listing that may affect managerial incentives in opportunistic financial reporting.

To our best knowledge, we are the first to directly examine P-chips’ earnings management. With private sector firms becoming a dominant economic power in mainland China, and the phenomenal growth of P-chips listed in Hong Kong, the quality of these firms’ financial decisions has become an important question for regulators, investors, and other stakeholders. Earnings, being a summary result of a firm’s operations during a period, are an important financial indicator upon which the market relies. Earnings manipulation distorts resource allocations and leads to unjustified wealth transfer from investors to managers. Our results thus have important implications for market participants in their investment decisions.

The rest of the paper proceeds as follows. The next section introduces the institutional details of the Hong Kong stock market. Section 3 presents the research design while Section 4 discusses the sample composition and main empirical results. Section 5 reports additional analyses. Finally, Section 6 concludes.

## **2. Institutional background**

### *2.1 Regulatory environment in Hong Kong and mainland China*

Hong Kong has one of the largest stock markets in the world, despite its small geographical size with merely 7 million residents. The total domestic market capitalization of all HKSE-listed companies was \$3,248 billion as of August 2016, comparable with that of the LSE Group and the Euronext (World Federation of Exchanges 2016).<sup>5</sup> Listed companies in Hong

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<sup>5</sup> Hong Kong Stock Exchange was ranked the eighth globally. The first seven markets were: NYSE – US\$19,009 billion, NASDAQ – US\$7,550 billion, Japan Exchange Group (includes Tokyo Stock Exchange and Osaka Stock Exchange) – US\$4,968 billion, Shanghai Stock Exchange – US\$4,052 billion, LSE Group (includes London Stock

Kong are regulated by the Securities and Futures Commission (SFC) and the HKSE, in addition to the company law of their places of incorporation. Being a former British colony, Hong Kong follows a common law legal tradition. This remains the case today as a result of the “one country, two systems” principle adopted by the Chinese government after the transfer of sovereignty over Hong Kong to China in 1997. Consequently, the securities regulations and their enforcement in Hong Kong and mainland China differ significantly. To quantify these differences, we survey indices widely used in the “Law and Finance” literature, alongside our own analysis of the regulations and practices in place to compare these two markets. Table 1 provides a summary of the analysis.

(Insert Table 1)

With a common English law origin, Hong Kong has a stronger legal system concerning shareholder and debtholder protection, relative to mainland China (Allen, Qian, and Qian 2005). For instance, according to the revised version of the anti-director rights index (Djankov, La Porta, Lopez-de-Silanes, and Shleifer 2008), commonly used to measure the extent of shareholder protection in the legal system, Hong Kong scores 5, the highest among all rated jurisdictions, while mainland China scores 1. With regard to debtholder protection, Hong Kong is again rated one of the highest among all jurisdictions on the creditor rights index, scoring 4 vs. China’s 2 (La Porta, Lopez-de-Silanes, Shleifer, and Vishny 1998; Allen et al. 2005). In terms of anti-self-dealing, that is, the legal protection of minority shareholders against expropriation by insiders (Djankov et al. 2008), Hong Kong has the second highest score of 0.96, with mainland China trailing behind at 0.78. Finally on the overall regulatory quality, the regulatory quality index published by World Bank (2017b) gives Hong Kong a score of 1.85 vs. China’s -0.13 in 2005.

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Exchange and Borsa Italia) – US\$3,613 billion, Euronext (includes Belgium, England, France, Netherlands, and Portugal) – US\$3,425 billion, and Shenzhen Stock Exchange – US\$3,310 billion.

These comparisons suggest that Hong Kong has a stronger legal system for investor protection than mainland China.

Beyond the legal system, we also compare the listing rules, corporate governance regulations, and disclosure requirements in these two markets. Acknowledging that the listing rules in mainland China do not offer the same level of investor protection as those in Hong Kong, the HKSE amended its listing rules, particularly by introducing Chapter 19A and Appendix 13 Part D, to impose additional requirements for mainland China-incorporated companies seeking listings in Hong Kong. The CSRC correspondingly introduced the *Mandatory Provisions for Companies Listing Overseas* in 1994 to harmonize these requirements in mainland China on relevant companies. However, these additional requirements do not apply to P-chip companies because they are incorporated outside mainland China.

With regard to corporate governance, concentrated ownership is prevalent in both jurisdictions: majority of firms listed in Hong Kong and China are either state-controlled or family owned (Fan and Wong 2002; Sun, Tong, and Tong 2002). Concerning the structure of the board, one of the most important aspects in corporate governance, both markets require independent directors to comprise a minimum of one-third of all directors, and their term to be fixed at three years with a possibility of serving consecutive terms. The requirements for the composition of the nomination committees and remuneration committees are also very similar, but there are minor differences in the composition of the audit committees. Further, in terms of executive compensation, pay-for-performance is more common in Hong Kong, mainly driven by the rarity of stock-based compensation in China. On an overall scale, the CLSA (2010) Corporate Governance Rating puts Hong Kong ahead of mainland China.

Different from corporate governance regulations, the disclosure requirements in Hong Kong may be less extensive than those in mainland China. For instance, the extent of disclosure index compiled by the World Bank (2017a) has consistently rated China at 10 (the highest possible score) since 2005, and Hong Kong at 9 between 2005 and 2013. Our own reading of the rules suggests that the main difference between the two sets of requirements arises from the vetting of corporate disclosures. The HKSE pre-vets announcements and circulars only for significant transactions (e.g., mergers and acquisitions), and did not ordinarily post-vet announcements until 2009 when the post-vetting of notifiable transactions and connected transactions was introduced (HKSE 2014). On the contrary, disclosures are subject to routine pre-vetting and post-vetting in mainland China (Hong Kong Institute of Chartered Secretaries 2008). With respect to financial reporting, while the accounting standards in mainland China have converged with the Hong Kong Financial Reporting Standards (Hong Kong Institute of Certified Public Accountants 2007), the CSRC imposes additional regulations on the form and content of periodic financial reports that listed companies in China must adopt (Hong Kong Institute of Chartered Secretaries 2008).

Enacting stringent rules and regulations is only the first step to establishing a strong legal system. Equally important, if not more, is their enforcement (e.g., Christensen, Hail, and Leuz 2013; Licht 2005). Hong Kong has in general a better enforcement environment than mainland China according to the enforcement indices we have surveyed. For instance, the rule of law index compiled by World Bank (2017b) gives Hong Kong a score of 1.61 vs. China's -0.49 in 2005. In terms of enforcement of financial reporting regulations, Hong Kong's score of 22 on Brown, Preiato, and Tarca's (2014) accounting enforcement index (out of 24) compares favorably with mainland China's 16. These indices strongly indicate the superior enforcement

quality in Hong Kong relative to mainland China. Taking a step further, we compare the monetary penalties for violating securities rules and regulations. Using the information provided in official enforcement action press releases, we find that in 2011 (the end of our sample period), the average fines imposed by Hong Kong regulators was HK\$1,271,403 (= US\$164,052), almost 4.5 times the average fines imposed by Chinese regulators (CNY239,173 or US\$37,015).<sup>6</sup> The relative low figure in China is primarily a consequence of the Chinese Securities Law capping the fines that can be imposed by the CSRC at CNY600,000 on legal persons and CNY300,000 on natural persons in a majority of legal proceedings.

## *2.2 Mainland Chinese firms on HKSE*

The Hong Kong stock market is characterized by a large number of companies originated in mainland China (Chow 2003). The first China-incorporated listing was approved in 1993 when China started to reform and partially privatize its SOEs (Sun, Tong, and Wu 2013), but it was not until the turn of the millennium when we witnessed an influx of listings of mainland Chinese entities from the private sector.

Firms originated from mainland China can list in Hong Kong via two different channels. First, they can incorporate under Chinese Corporate Law and, upon obtaining the CSRC approval, apply to list directly on the HKSE. These companies are nicknamed H-shares in the market. Alternatively, they can set up off-shore companies, often located in Hong Kong, Bermuda or Cayman Islands, and inject the parent companies' assets into these companies which subsequently list in Hong Kong. These listed entities are referred to as Red-chips if they are controlled by the Chinese state, or P-chips if the parent companies are originated from the

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<sup>6</sup> See <http://www.csrc.gov.cn/pub/zjhpublish/index.htm?channel=3300/3313> for CSRC enforcement actions, and <http://www.sfc.hk/edistributionWeb/gateway/EN/news-and-announcements/news/enforcement-news/> for Hong Kong SFC enforcement actions.

Chinese private sector.<sup>7</sup> Since their first listing in 2000, P-chips have become the fastest growing market segment on the HKSE. As shown in Table 2, which is compiled based on the information provided in the HKSE Monthly Market Highlights and HKSE China Dimension,<sup>8</sup> there are 577 P-chip firms listed on the HKSE (including both the main board and Growth Enterprise Market) as of December 2015, a total larger than H-shares and Red-chips combined. From 2005 to 2015, the number of P-chips increased by more than 4.5 times from 126 to 577, while H-shares from 120 to 229, and Red-chips from 89 to 145. In addition, as shown in Panel B, the total market capitalization of P-chips has increased substantially in recent years, and is now on par with the market capitalization of either Red-chips or H-shares.

(Insert Table 2)

### 3. Research design

We use discretionary accruals as our primary proxy for earnings management, which is common in the literature in settings such as equity offerings (Teoh, Welch, and Wong 1998a, 1998b), corporate valuation (Marciukaityte and Varma 2008), ownership structure (Guthrie and Sokolowsky 2010), and earnings management of Chinese firms (Giannetti, Liao, and Yu 2015; Gul, Cheng, and Leung 2011). To estimate discretionary accruals, we use the Jones (1991) model, modified by further controlling for the impact of firm performance (Kothari et al. 2005). In particular, following Giannetti et al. (2015) and others, we estimate the following model:

$$ACCURALS = \lambda_0 + \lambda_1 \frac{1}{Lagged\ TA} + \lambda_2 \Delta RECREC + \lambda_3 PPEG + \lambda_4 ROA + error \quad (1)$$

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<sup>7</sup> The HKSE officially classifies a firm as a Red-chip company if (1) it has a minimum of 30% shareholding controlled by Chinese SOEs or provincial/municipal authorities, or (2) for firms with a Chinese state-related shareholding between 20% and 30% and there is a strong influence by these shareholding on the company's board of directors. P-chips are officially known as Non-H Share Mainland Private Enterprises.

<sup>8</sup> <https://www.hkex.com.hk/eng/stat/statistics.htm>.

where *ACCURALS* is net income minus operating cash flow scaled by lagged total assets; *TA* is total assets; *ΔREVREC* is the change in sales adjusted for receivables scaled by lagged total assets; *PPEG* is gross value of property, plant and equipment scaled by lagged total assets; *ROA* is net income scaled by lagged total assets.

Following prior literature, we estimate Equation (1) separately for each pair of year and industry with more than ten observations, and obtain the absolute value of the residuals that forms our main metric of earnings management (*ABSJONES*). We define industry using the Fama-French 12 industry classification. We then pool all firm-year observations and regress *ABSJONES* on the dummy variable of interest, *PCHIP*, which equals one if an observation is a P-chip, and zero otherwise, and a set of control variables (subscripts omitted) as follows:

$$\begin{aligned}
 & \text{ABSJONES} && (2) \\
 & = \alpha_0 + \alpha_1 PCHIP + \alpha_2 SIZE + \alpha_3 MTB + \alpha_4 SALES GROWTH + \alpha_5 ROA \\
 & + \alpha_6 OCF + \alpha_7 LEVERAGE + \alpha_8 EQUITY ISSUE + \alpha_9 DEBT ISSUE \\
 & + \alpha_{10} OWNERSHIP + \alpha_{11} COVERAGE + \alpha_{12} BIG4 + \text{Year fixed effects} \\
 & + \text{Industry fixed effects} + \text{error}
 \end{aligned}$$

A positive (negative)  $\alpha_1$  coefficient denotes that P-chips engage in more (less) earnings management through accounting accruals relative to non-P-chip firms.

We control for firm size (*SIZE*), growth (*MTB* and *SALES GROWTH*), and operating performance (*ROA* and *OCF*), as prior studies show that these firm characteristics are correlated with earnings management (Subramanyam 1996, among others). We also control for financial leverage (*LEVERAGE*), since there is evidence that managers use earnings management to avoid violating debt covenants (e.g., DeFond and Jiambalvo 1994). Prior research shows that firms engage in aggressive earnings management when seeking external financing in equity or debt (Teoh et al. 1998a, 1998b; Liu, Ning, and Davidson III 2010), hence we include equity issuance

(*EQUITYISSUE*) and debt issuance (*DEBTISSUE*). We include the percentage of closely-held shares (*OWNERSHIP*) because past research shows that managerial and institutional shareholdings are negatively associated with earnings management (Chung, Firth, and Kim. 2002). Finally, we control for the intensity of analyst monitoring (*COVERAGE*) and audit quality (*BIG4*), since monitoring by financial analysts and auditors could limit earnings management behavior (Becker, DeFond, Jiambalvo, and Subramanyam 1998; Yu 2008). Detailed definition of all variables is outlined in Appendix B.

#### **4. Evidence on P-chips' aggressive earnings management**

##### *4.1 Sample and descriptive statistics*

We devise the following algorithm to construct our P-chip sample, since the HKSE does not reveal their classification of P-chip companies to the public. First, we classify all firms headquartered in mainland China but not classified as H-shares or Red-chips by the HKSE as P-chips, as these firms have their principal business location in mainland China. Second, for the rest of the firms that are headquartered in Hong Kong or other locations, we impose two criteria to screen P-chips: the ultimate controlling shareholders are mainland China individuals, and the majority of their assets are located and revenues originated in mainland China.<sup>9</sup> We perform this screening by manually searching relevant information in IPO prospectuses (such as details about controlling shareholders), shareholding disclosures obtained from HKExnews, EDGAR's Hong Kong equivalent maintained by the HKSE for the public dissemination of regulatory information about listed companies, and geographical segment information from Capital IQ.

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<sup>9</sup> We follow the MSCI to use 60% assets and 80% revenue as the thresholds in this paper.

Our sample consists of P-chip and local Hong Kong firms listed on the main board of the HKSE from 2005 to 2011. We begin with 2005 to hold constant the accounting standards because of the adoption of the International Financial Reporting Standards (IFRS) in Hong Kong in 2005. The complete list of all active and inactive firms as well as information about their country of incorporation, listing date, and name changes are obtained directly from the official HKSE Fact Books.<sup>10</sup> We collect accounting and financial data from Thomson ONE, supplemented by Capital IQ. We drop all firm-year observations that are banks and financial institutions (SIC codes starting with six), as well as firms that dual-list in other countries, HKSE-defined foreign firms, and firms incorporated in countries other than Hong Kong, Bermuda, and Cayman Islands.

Panel A of Table 3 presents some descriptive statistics for our sample. Approximately one third of our sample observations are P-chip companies ( $1,564 / (1,564+3,237) = 32.6$  percent), consistent with their significant presence in Hong Kong. P-chip companies have higher total assets (the median is \$270.3 million vs. \$176.0 million) and net income (the median is \$13.5 million vs. \$7.0 million) than non-P-chip companies, which makes them more profitable (the median of return on assets is 6.2% vs. 4.7%). They also have higher market-to-book ratios and sales growth (the medians are 1.5 vs. 0.9, and 23.0% vs. 8.6%, respectively). P-chip firms are less leveraged (the median is 15.2% vs. 22.7%), and over 67.2 percent of the observations are audited by a Big 4 auditor (71.6 percent for non-P-chip observations). The descriptive statistics also indicate that P-chip companies have a higher level of discretionary accruals relative to non-P-chip companies, and the differences (the mean is 0.09 vs. 0.08, and the median is 0.07 vs. 0.05) are statistically significant at the 1% level.

(Insert Table 3)

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<sup>10</sup> <https://www.hkex.com.hk/eng/stat/statrpt/factbook/factbook.htm>.

Panel B shows that the industry distribution between P-chips and non-P-chips is very similar, except for a slightly higher proportion of P-chip firms in capital intensive industries such as business equipment (16.4% vs. non-P-chips' 11.7%), energy (5.4% vs. non-P-chips' 1.4%), and manufacturing (14.2% vs. non-P-chips' 11.2%), and a higher proportion of non-P-chip firms in shops (18.3% vs. non-P-chips' 13.5%).

#### 4.2 Comparison of earnings management levels between P-chip and non-P-chip firms

Table 4 presents our main evidence on P-chips' earnings management relative to other private sector firms listed in Hong Kong. In column (1), we include only *PCHIP*, our variable of interest, with industry and year fixed effects, while in column (2) we add financial characteristics of sample firms. Column (3) presents the results with all control variables included. The coefficient on *PCHIP* is consistently positive and highly significant, indicating that P-chip firms have a substantially higher level of discretionary accruals in absolute value relative to domestic firms, even after controlling for other determinants. The magnitude of the difference is also economically large. Taking the coefficient on *PCHIP* (= 0.0105) in column (3) as an example, given the average total assets of the sample amounted to \$1,004.7 million, this translates to P-chip companies reporting around \$10.5 million more in profit ( $0.0105 \times \$1,004.7$  million) contributed by discretionary accruals than non-P-chip companies, representing over 22% of the average net income of the P-chip sub-sample (= \$46.6 million). Overall, our results provide both statistically and economically significant evidence on P-chips' aggressive earnings management practice relative to non-P-chip firms.<sup>11</sup>

(Insert Table 4)

Concerning the control variables, larger firms are less prone to manipulating accruals, as indicated by the negative sign of the coefficient on *SIZE*. Consistent with prior literature, high-

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<sup>11</sup> Our results are robust to using the Jones (1991) model as modified by Dechow, Sloan, and Sweeny (1995).

growth companies, proxied by *MTB* and *SALESGROWTH*, are more likely to manage earnings. The coefficient on *OCF* is negative, owing to the nature of accruals-based accounting system. We also find that firms raising capital, through either issuing equity (*EQUITYISSUE*) or debt (*DEBTISSUE*), have a higher level of discretionary accruals, consistent with the extant literature. Finally, we find that lenders play a significant monitoring role but not analysts, as suggested by the negative (positive) coefficient on *LEVERAGE* (*COVERAGE*). Overall, most of control variables behave in a way consistent with prior literature and economic intuition.

#### 4.3 Robustness analysis based on matched samples

Our main analyses in Table 4 employ samples that consist of all available firm-year observations that qualify for the classification of P-chips and non-P-chips based on a set of criteria. A valid concern is that different characteristics of P-chip vs. non-P-chip sub-samples could drive our results thus far. For example, Panel A of Table 3 reveals that a median P-chip firm tends to be larger, more profitable, and growing faster than a median non-P-chip firm. To address this issue, we first match P-chip with non-P-chip observations by industry and fiscal year. Next, we introduce size (*SIZE*) followed by growth (*SALEGROWTH*) to the matching criteria because prior literature underscores their importance in shaping firm-level accruals (Collins, Pungaliya, and Vijh 2017).<sup>12</sup> We then re-estimate Equation (2) using these matched samples and report the results in Table 5, in columns (1), (2), and (3) respectively. The resulting sample size decrease gradually, but the coefficients on *PCHIP* are consistently positive and significant, and most importantly the results remain similar to those reported in Table 4 based on the full sample.

(Insert Table 5)

#### 4.4 Alternative measures of earnings manipulation

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<sup>12</sup> We have controlled for operating performance, another important determinant of discretionary accruals, in the estimation of *ABSJONES* following Kothari et al. (2005). Our inference remains unchanged if we further match on *ROA*.

Our main inferences rely on the validity of a modified Jones (1991) discretionary accruals model (i.e., *ABSJONES*). Despite the popularity of Jones-type models, they have some drawbacks, such as their sensitivity to business models (Owens, Wu, and Zimmerman 2017), and the industry-year cross-sectional estimation procedure significantly limiting the sample size (Ecker, Francis, Olsson, and Schipper 2013). In this section, we first use an alternative earnings management proxy that is not based on accruals and thus circumvents the accruals estimation problem, and then propose other metrics that measure firms' misbehavior to strengthen our argument.

Our non-accruals-based proxy for earnings management is the probability of firms meeting or just beating analysts' consensus forecasts (e.g., DeGeorge et al. 1999). A significant volume of past research shows that firms have incentives to manipulate earnings to meet or beat the analysts' earnings forecasts by a small amount to avoid the negative stock market or executive compensation consequences of missing the market expectations (see, e.g., Jensen 2005 for a discussion). We construct an indicator variable that takes the value of one if a firm-year meets or beats the last consensus analysts' forecast before an earnings announcement by one cent, and zero otherwise. Our results, presented in column (1) of Table 6, indicate that P-chips are 40% more likely to meet or just beat analysts' forecasts by one cent than non-P-chip firms.

(Insert Table 6)

Next, we focus on more serious corporate misdeeds other than earnings management: misstating financial statements and tunneling corporate resources. We first estimate the probability of material accounting misstatements using the prediction model developed by Dechow, Ge, Larson, and Sloan (2011).<sup>13</sup> This model synthesizes financial statement variables

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<sup>13</sup> We follow Dechow et al. (2011) and use the following two steps to estimate the conditional probability of material misstatement.

that are useful for detecting material accounting misstatements and generates an F score, a higher value of which indicates higher misstatement likelihood. This measure has an advantage that it incorporates other measures beyond accruals to estimate the likelihood of earnings misstatements. We define *HIGHFSCORE* as a dummy variable that equals one for firm-years with above-normal risk, and zero otherwise. Column (2) of Table 6 shows that P-chip firms have a substantially higher probability of materially misstating their financial statements, consistent with our prediction. Our second additional metric measures whether P-chips misappropriate company resources at the expense of minority shareholders through tunneling resources out of the companies to their controlling shareholders. Cheung, Rau, and Stouraitis (2006) show that, among companies listed in Hong Kong, the likelihood of undertaking connected party transactions that violate the HKSE’s listing rules are higher for firms with mainland Chinese ultimate owners. Their results, however, do not apply to P-chip companies because their sample period ends in 2000 before the influx of P-chip listings in Hong Kong. We follow prior literature and use other receivables scaled by total assets as a proxy for tunneling, given that controlling shareholders in China widely practice the use of intercorporate loans, typically reported as “other receivables,” to siphon funds out of publicly listed companies (Jiang, Lee, and Yue 2010). The coefficient on *PCHIP* in column (3) is positive and significant, indicating that P-chips engage in tunneling of corporate resources to expropriate minority shareholders.

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Step 1: Predicted Value =  $-7.893 + 0.790 \times RSST + 2.518 \times CHREC + 1.191 \times CHINV + 1.979 \times SOFTASSETS + 0.171 \times CHCS - 0.932 \times CHROA + 1.029 \times ISSUE$ .

Step 2: Conditional Probability =  $e^{(\text{Predicted Value})} / (1 + e^{(\text{Predicted Value})})$ .

*RSST* represents balance sheet accruals calculated as per Richardson, Sloan, Soliman, and Tuna (2005); *CHREC* represents changes in account receivables; *CHINV* represents changes in inventory; *SOFTASSETS* represents the percentage of soft assets, measured as total assets minus fixed assets and cash; *CHCS* represents changes in cash sales; *CHROA* represents changes in return-on-assets; *ISSUE* is an indicator variable that equals one for securities issuance, and zero otherwise. The F score is then calculated as the conditional probability scaled by the unconditional probability of material misstatements. We use the unconditional probability estimated by Dechow et al. (2011), which is 0.37%, and classify F score greater than one as above normal risk of misstatement.

Taken together, we provide robust evidence that P-chip companies consistently engage in more corporate malfeasances than their counterparts listed in Hong Kong. This finding is opposite to the prediction of the bonding hypothesis. As we discussed in Section 2.1 about the institutional background, Hong Kong overall has a better regulatory environment than mainland China. Hence, the deviation from the prediction of the bonding hypothesis cannot be explained by the listing location having a less superior regulatory environment than the home location. In the next section, we conjecture, and present evidence on, cross-jurisdictional enforcement difficulty as an explanation to this deviation.

## **5. Cross-jurisdictional enforcement difficulty**

### *5.1 The notion of enforcement difficulty*

The presence of enforcement difficulty has long been echoed in Hong Kong regulators' narratives. For instance, Paul Chow, former Chief Executive of the HKSE, once highlighted that *"Hong Kong and the Mainland have separate legal systems. Legal judgements in one system are not recognised or enforceable in the other system..... Overseas regulators may not necessarily have all the powers available to pursue corporate wrong-doing as the required infrastructure may still be developing"* (Chow 2003). Martin Wheatley, the former Chief Executive Officer of the SFC in Hong Kong, once noted that *"If it is a domestic company within the home jurisdiction, the regulator usually has a range of powers to deal with the company. Where it is outside your own jurisdiction you have to rely on the powers of the 'home' regulator"* (Wheatley 2006). In 2013, the HKSE formally published an investor education document highlighting cross-jurisdictional enforcement difficulty arising from overseas firms.<sup>14</sup>

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<sup>14</sup> The document (HKSE 2013; available at <https://www.hkex.com.hk/eng/rulesreg/listrules/listsptop/listoc/rioi.htm>) highlights that *"[a]n overseas company is subject to a different set of corporate laws governing its affairs including*

While legal cooperation between jurisdictions can ease the difficulties faced by regulators of the listing location when they seek to enforce law and regulations against foreign issuers (Duarte et al. 2014), Hong Kong securities regulators have repeatedly voiced concerns about mainland authorities rejecting their requests for information to investigate Hong Kong listed companies and businessmen from mainland China, their inability to have investigations conducted in China, no full reciprocity of regulatory and law enforcement assistance between the two jurisdictions, and no mutual transfer of fugitives (Lau 2006; Sun, Tong, and Zhang 2013; Wang and Yiu 2004). All these factors translate to lack of evidence with which to support prosecutions or enforcement actions in Hong Kong against P-chips from mainland China. In this regard, we argue that, even though Hong Kong has high regulatory standards for listed firms, in the presence of cross-jurisdictional enforcement difficulty, managers of P-chip firms perceive lower risks in mis-behaving, and thus have stronger incentives to engage in opportunistic behaviors to extract private benefits at the expense of minority shareholders.

### *5.2 Cross-sectional variation in enforcement difficulty*

If Hong Kong securities regulators need to investigate P-chips' alleged irregularities or enforce the outcome of the investigations, such as seizing their assets or bringing their key managers to face justice, they will likely require the assistance of local authorities such as provincial governments and courts at the companies' home location. Duarte et al. (2013) argue and find that the likelihood that a foreign firm's home country cooperates with the authorities of the listing location in the event of an enforcement action depends on the home country's

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*duration, organisation structure, governing bodies and their powers, shares transfer, shareholders rights, shareholders' dispute resolutions. It may be difficult for shareholders of an overseas company to enforce their shareholder rights against the company or its directors due to complications arising from cross-border access to evidence, legal services, court assistance or the incremental costs related to those services. Hong Kong regulators may not have extra-territorial investigation and enforcement jurisdiction. Instead, reliance has to be placed on the overseas regulatory regimes to enforce against any corporate governance breaches committed by their subject. If an overseas company's principal operations and assets are outside its place of incorporation or Hong Kong, they may be subject to other laws, standards, restrictions and risks that significantly differ from those in Hong Kong."*

institutions. There are significant regional variations amongst Chinese cities and provinces in terms of institutional environment (Chen, Wang, Li, Sun, and Tong 2015). We posit that if a P-chip firm is headquartered in a city/province that is more economically and legally developed, the local authorities and regulators will be more willing to assist their Hong Kong counterparts in investigating securities and financial wrongdoings and the resulting enforcement actions. Following Chen et al. (2015), we use the National Economic Research Institute (NERI) Index of Marketization of China's provinces compiled by Fan, Wang, and Zhu (2011) to capture the legal and economic development of the cities/provinces in which P-chips are headquartered. The index is compiled based on the scores of each city/province on the following five dimensions: (1) the relationship between government and market, (2) the economic development of the private sector, (3) product market development, (4) factor market development, and (5) the development of market intermediaries and legal system.<sup>15</sup> Taking 2009 as an example, the index values range from 0.38 (Tibet) to 11.80 (Zhejiang), with a higher value indicating a high level of marketization.

We match each P-chip company to the marketization index by year and the city/province in which the company is headquartered.<sup>16</sup> If aggressive earnings management is indeed associated with the level of cross-jurisdictional enforcement difficulty, we expect a higher level of enforcement difficulty in less developed business environment. Since some companies are headquartered in Hong Kong, which is not included in the index, we assign the highest value of the index among all cities/provinces in that year to Hong Kong. We lose 11 observations due to unavailability of their headquarters location data.

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<sup>15</sup> Our results remain similar if, instead of using the composite index, we use only the score of the development of market intermediaries and legal system component.

<sup>16</sup> Since our index stops in 2009, we assume that the index values for 2010 and 2011 remain the same for all locations.

We present our analysis in Table 7. First, we regress earnings management on the marketization index (*MARKETIZATION*) in column (1). The coefficient on *MARKETIZATION* is negative and significant at the 1% level, indicating that P-chip firms from cities/provinces with a stronger legal and economic environment engage less in earnings management, consistent with the prediction of the enforcement difficulty explanation.<sup>17</sup> We next separate P-chip firms headquartered in mainland China into three groups: the headquarters cities/provinces are of low (the lowest 25<sup>th</sup> percentile), medium (between the 25<sup>th</sup> and 75<sup>th</sup> percentile), or high (the highest 25<sup>th</sup> percentile) legal and economic development. We re-run the analysis and the results in column (2) show that the extent of earnings management varies monotonically with the level of enforcement difficulty. Specifically, firms headquartered in provinces that are relatively less legally and economically developed have a significantly higher level of discretionary accruals than those headquartered in developed provinces. The difference of the coefficients (0.0232 - 0.0089 = 0.0143), which is statistically significant (p-value = 0.07), translates into \$14 million (= 0.0143 × \$1,004.7 million) of net income, or 30% of the average net income of our P-chip subsample. In sum, providing our proxy for cross-jurisdictional enforcement difficulty is valid, which is a reasonable assumption given institutional environment facilitates inter-jurisdictional cooperation (Duarte et al. 2014), our results strongly support cross-jurisdictional enforcement difficulty as a factor behind P-chip firms' aggressive earnings management behavior.

(Insert Table 7)

### *5.3 Market response to P-chip's earnings announcement*

If both regulators and P-chip companies are aware of the problem of cross-jurisdictional enforcement difficulty, it is natural to expect that investors also know of the potential negative

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<sup>17</sup> We also use the geographical proximity between the headquarters location and Hong Kong to proxy for cross-jurisdictional enforcement difficulty. Our results hold but are not reported for brevity.

consequences such as earnings management, and hence they may associate lower credibility to P-chip companies' reported earnings. Following this argument, we examine whether the market places a lower weight on P-chip companies' unexpected earnings during a window of earnings announcement by estimating the following equation:

$$\begin{aligned}
 CAR = & \theta_0 + \theta_1 PCHIP + \theta_2 SUE + \theta_3 SUE \times PCHIP + \theta_4 LOSS + \theta_5 MTB + \theta_6 SIZE \quad (3) \\
 & + \theta_7 SUE \times LOSS + \theta_8 SUE \times MTB + \theta_9 SUE \times SIZE + \text{Year fixed effects} \\
 & + \text{Industry fixed effects} + \text{error}
 \end{aligned}$$

*CAR* is the cumulative abnormal returns in a specified short-window around the earnings announcement date, where abnormal return is defined as the firm's return less the return of the Hang Seng Index.<sup>18</sup> *SUE* is unexpected earnings deciles measured as the change in return on assets. We include firm size, market-to-book ratio, and an indicator of negative earnings as controls alongside year and industry fixed effects.

Table 8 presents the results with *CAR* measured in two different windows. In both windows, the coefficients on *SUE*, which measure the market reaction to non-P-chip firms' earnings surprises, are positive and significant as expected. More importantly, the interaction term *SUE*×*PCHIP* reports a negative and significant coefficient, indicating that the market discounts P-chips' earnings surprises. The magnitude of the discount is economically significant – more than 30 percent relative to non-P-chip companies' earnings surprises depending on the return window. This result provides corroborative evidence that P-chip companies engage in earnings management activities against the benefits of minority shareholders, but the market anticipates their misbehavior.

(Insert Table 8)

#### 5.4 Alternative cross-listing settings

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<sup>18</sup> The Hang Seng Index is a value-weighted stock market index in Hong Kong and the most widely quoted performance indicator of the Hong Kong stock market.

To further substantiate cross-jurisdictional enforcement difficulty as an explanation behind P-chips' aggressive earnings management relative to local Hong Kong listed firms, we seek its external validity using alternative cross-listing settings.

#### *5.4.1 AH versus non-AH firms*

Our first alternative setting explores firms incorporated in mainland China and listed on the HKSE, commonly known as H-shares. Like P-chips, H-share firms primarily operate in mainland China with most of their assets, controlling shareholders, and senior personnel located outside the jurisdiction of Hong Kong regulators. Hence, we expect that Hong Kong regulators also face cross-jurisdictional enforcement difficulty against H-share firms. However, some H-share firms are concurrently listed on the Shanghai or Shenzhen Stock Exchanges (hereafter AH firms), and thus are subject to the CSRC regulations in addition to regulations in Hong Kong. The CSRC and the SFC have started a formal cooperation arrangement from as early as 1993 when the first *Memorandum of Regulatory Cooperation* was signed, and both regulators have been signatories to the *Multilateral Memorandum of Understanding Concerning Consultation and Cooperation and the Exchange of Information* of the International Organization of Securities Commissions since 2007 and 2003 respectively. These arrangements, though not binding, have fostered legal and enforcement cooperation between the two jurisdictions, especially on firms that are listed in both markets, i.e., AH-firms, in which the interests of investors from mainland China are involved. Hence, Hong Kong regulators likely face less difficulty to enforce securities laws and regulations against AH firms, relative to H-shares listed solely in Hong Kong (hereafter non-AH firms). To the extent that cross-jurisdictional enforcement difficulty explains the aggressive earnings management of cross-listed firms, as we have posited in the case of P-chips, we expect that AH firms engage in less earnings management than non-AH firms.

We obtain a list of H-shares from the HKSE Fact Book and a list of AH firms from Capital IQ. Column (1) of Table 9 reports the regression results based on a sample of H-shares from 2005 to 2011, using a specification similar to Equation (2) by replacing *PCHIP* with *AH*, the variable of interest, which takes the value of one for AH firms, and zero for non-AH firms. In column (1), we include the same set of control variables as in Table 4. The coefficient on *AH* is negative and significant, consistent with our expectation based on cross-jurisdictional enforcement difficulty.<sup>19</sup>

#### 5.4.2 US evidence

If Hong Kong securities regulators and investors face cross-jurisdictional enforcement difficulty against mainland Chinese firms, securities regulators from other jurisdictions in which a significant number of mainland Chinese firms cross-list could face a similar problem. For example, in 2011 when the Securities and Exchange Commission (SEC) investigated Longtop Financial Technologies, a Cayman Island incorporated company from mainland China, the Chinese affiliate of Deloitte, a Big 4 auditor, refused to produce audit documents to cooperate with the SEC in its investigations, claiming that doing so would break Chinese law against sharing trade secrets (see SEC 2015 for more details about the difficulties encountered by the SEC in investigating private sector Chinese firms listed in the US). Prior research examining these issues mainly focuses on US-listed RM firms that have avoided the scrutiny during an IPO process (Chen et al. 2016; Siegel and Wang 2013; among others). We broaden the sample to include all private sector firms from mainland China that cross-list in the US, via RM or IPO, and repeat our analysis with the US sample using Equation (2). We use the Halter USX China Index to identify Chinese private sector firms listed in the US, and report the results in Column

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<sup>19</sup> H-shares consist of a large set of state-owned enterprises and a small number of private sector firms. We additionally control for a state ownership dummy, and the coefficient on *AH* remains negative and significant.

(2) of Table 9. The coefficient on *USPCHIP*, a dummy variable indicating these Chinese private sector firms, is positive and significant, which corroborates our main earnings management results and further substantiates enforcement difficulty behind cross-listed firms' aggressive reporting behavior.

(Insert Table 9)

## **6. Conclusion**

In this paper, we provide some descriptive evidence that P-chip firms, the largest and most representative group of Chinese private sector firms listed overseas, manipulate their accounts and engage in corporate malfeasance. We further explore the role of cross-jurisdictional enforcement difficulty as a potential explanation to P-chips' aggressive earnings management, and find multiple corroborative evidence supporting this conjecture.

Even though Hong Kong has high quality regulatory standards than mainland China, investigating P-chips' wrongdoing is difficult and challenging because P-chips largely operate in a regime that does not have a strong legal cooperation with Hong Kong (Wheatley 2006). Consequently, the difficulty faced by Hong Kong regulators to enforce securities law and regulations on P-chip firms results in a situation in which, instead of "bonding" P-chips with Hong Kong's high quality regulations, the Hong Kong listing further intensifies the conflicts between P-chips' controlling shareholders and minority investors, leading P-chips to behave in a way that deviates from the prediction of the bonding hypothesis.

Our conclusion is subject to several caveats. While we believe that understanding how P-chip firms behave in the international capital market arena is important, and that results concerning P-chip firms are interesting in their own right, we acknowledge that the P-chip

setting is special, if not unique, and therefore generalization of our results to other cross-listed firms should be exercised with caution. Moreover, while we argue that cross-jurisdictional enforcement difficulty is a contributing factor to what we find, we cannot draw a definite causal link from enforcement difficulty to P-chips' aggressive earnings management, because we cannot observe the same P-chip firms without enforcement difficulty. Despite these caveats, we believe our findings are relevant to academics and regulators as well as investors who seek to invest and diversify their portfolios through the inclusion of China's private sector firms.

## **APPENDIX A**

### **Two exemplary cases of corporate malfeasances committed by P-chip companies**

#### **First Natural Foods Holdings Limited (HKSE Ticker: 1076)**

First Natural Foods (“FNF”) was a Bermuda-incorporated food manufacturing and trading company listed in Hong Kong from February 11, 2002. The Company had three wholly-owned subsidiaries in mainland China, Longyu, Dingwei, and Jia Jing, and was in full and exclusive control by its founder and Chairman Chunglung Yeung (alias Zhonglong Yang), his son and CEO Le Yang, and his son-in-law Chaopeng Ni.

In December 2008, Yeung dismissed all employees and instructed FNF’s trading suspension. Yang, Ni, and another executive director residing in mainland China tendered their resignation by facsimile copies. All of them could not be located and reached ever since.

FNF filed for bankruptcy soon after. The provisional liquidators’ investigation uncovered a few irregularities. First, the Company’s audited financial statements for 2007 showed a strong cash balance amounting to RMB725 million when it had only RMB20 million cash deposits. Second, Yeung withdrew HK\$85 million from one of FNF’s bank accounts without informing the Board, and instructed the bank not to disclose any information about the Company’s account to the provisional liquidators. He subsequently closed the account in February 2009.

The provisional liquidators attempted to regain control of the subsidiaries taken over by the Yeung’s family via the courts in China. While the court ruled in favor of the Company, they did not enforce the rulings. The provisional liquidators sought help from the State Administration of Industry and Commerce in Fuqing, Fuzhou Intermediate People’s Court, the Higher People’s Court of Fujian Province, the Fujian Provincial Department of Foreign Trade and Economic Cooperation Bureau, the Hong Kong Economic and Trade Office in Guangdong, and the Ministry of Commerce of China. All efforts failed in vain.

In April 2009, the provisional liquidators found that the three main subsidiaries (Longyu, Jia Jing, and Dingwei) were either misappropriated by Yeung and his family or had no asset left. In April 2013, the SFC commenced legal proceedings in Hong Kong against Yeung over the alleged embezzlement of HK\$84 million of corporate assets and false accounting. Yeung remained at large as of July 2015.

**Daqing Dairy Holdings Limited (HKSE Ticker: 1007)**

Daqing Dairy, a milk powder company incorporated in Cayman Islands and headquartered in the Heilongjiang province, was listed in Hong Kong in October 2010.

In March 2012, Deloitte resigned as Daqing's auditor and the Company was subsequently suspended for trading. Deloitte raised five main concerns about its audit of the Company's financial statements: (1) fraudulent milk procurement transactions, (2) unexplained differences between sales receipt notes presented for audit work and for a Tax Bureau investigation, (3) management removal of accounting records, (4) the validity and commercial substance of the acquisitions of certain farm assets, and (5) difficulties encountered during visits to the branch of one of the Group's banks.

Daqing commissioned an independent investigation. On January 2, 2013, the heating pipes of some offices in Daqing's headquarters in Heilongjiang cracked, causing extensive damages to the computers and documents. Within days its CEO Yu Zhao tendered his resignation to Daqing's Board via electronic means. In November 2013, Daqing announced the engagement of forensic accountants to investigate the potentially fraudulent transactions raised by Deloitte, but ten months later, Daqing announced no progress in the forensic investigation due to damages to key documents in the January 2013 accident, as well as lack of cooperation from former auditors and the previous and current management of the mainland China subsidiaries.

**APPENDIX B**  
**Variable definition**

Variable	Definition
<i>ABSJONES</i>	Absolute value of discretionary accruals estimated based on performance-adjusted Jones model (Kothari et al. 2005)
<i>PCHIP</i>	An indicator variable that equals one if a firm is a P-chip company, and zero otherwise
<i>SIZE</i>	Natural logarithm of total assets
<i>MTB</i>	Ratio of market value of equity to book value of equity at fiscal year end
<i>SALESGROWTH</i>	Percentage change in sales over two consecutive years
<i>ROA</i>	Net income scaled by one-year lagged total assets
<i>OCF</i>	Operating cash flow scaled by total assets
<i>LEVERAGE</i>	Total debt deflated by market value of equity at fiscal year end
<i>EQUITYISSUE</i>	An indicator variable that equals one if a firm's common equity increases by more than 10% from last year, and zero otherwise
<i>DEBTISSUE</i>	An indicator variable that equals one if a firm's total debt increases by more than 10% from last year, and zero otherwise
<i>OWNERSHIP</i>	Fraction of outstanding shares held by insiders, block holders (over 5%), other corporations not in a fiduciary capacity, and pension plans
<i>COVERAGE</i>	Natural logarithm of one plus the number of analyst following a firm at fiscal year end
<i>BIG4</i>	An indicator variable that equals one if a firm is audited by a Big 4 auditor in the fiscal year, and zero otherwise
<i>HIGHFSCORE</i>	An indicator variable that equals one if the probability of material misstatement estimated using the F-score model (Dechow et al. 2011) is above normal risk, and zero otherwise
<i>MBE</i>	An indicator variable that equals one if a firm meets or beats consensus earnings forecasts by one cent
<i>TUNNELING</i>	Other receivables deflated by total assets
<i>CAR</i>	Cumulative abnormal returns over a specified window around the earnings announcement date, whereby abnormal return is defined as a firm's return less the return of the Hang Seng Index
<i>SUE</i>	Deciles of unexpected earnings measured as the change in earnings scaled by total assets
<i>LOSS</i>	An indicator variable that equals one if a firm has negative net income, and zero otherwise
<i>USPCHIP</i>	An indicator that equals one if a US-listed firm is from the Chinese private sector, and zero otherwise
<i>AH</i>	An indicator that equals one if an H-share firm is dual-listed in mainland China, and zero otherwise

Variable	Definition
<i>MARKETIZATION</i>	The National Economic Research Institute (NERI) index of Marketization of China's provinces compiled by Fan et al. (2011) that tracks the legal and economic development of Chinese cities and provinces
<i>HIGH_MARKETIZATION</i>	An indicator that equals one for cities/provinces that have the lowest 25 <sup>th</sup> percentile of the NERI index value among P-chip observations, and zero otherwise
<i>MEDIUM_MARKETIZATION</i>	An indicator that equals one for cities/provinces that have an NERI index value between the 25 <sup>th</sup> and 75 <sup>th</sup> percentile among P-chip observations, and zero otherwise
<i>LOW_MARKETIZATION</i>	An indicator that equals one for cities/provinces that have the highest 25 <sup>th</sup> percentile of the NERI index value among P-chip observations, and zero otherwise

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**TABLE 1**  
**Comparison of institutional environment**

This table summarizes the institutional environment of Hong Kong and mainland China. Revised anti-director rights index is compiled by Djankov et al. (2008) and calculated by summing six indicator variables counting the existence of six legal rules (vote by mail, shares not deposited, cumulative voting, oppressed minority, pre-emptive rights, and capital to call a meeting) favorable to shareholders within a jurisdiction. Creditor rights index is compiled by La Porta et al. (1998) for Hong Kong and Allen et al. (2005) for China, calculated by summing four indicator variables counting the existence of four legal rules (no automatic stay on assets, secured creditors first paid, restriction for going into reorganization, management does not stay in reorganization) favorable to creditors within a jurisdiction. Anti-self-dealing index is compiled by Djankov et al. (2008) and calculated as the average of ex ante private control of self-dealing (approval by disinterested shareholders, disclosure by buyer, disclosures by seller, and independent review) and ex post private control of self-dealing (disclosure in periodic filings, standing to sue; rescission, ease of holding the seller civilly liable, ease of holding the approving body civilly liable, access to evidence). Regulatory quality index is from World Bank (2017a) Worldwide Governance Indicators. CLSA corporate governance index is from CLSA (2010) CG Watch 2010 Report produced in collaboration with the Asian Corporate Governance Association. Disclosure index is from World Bank (2017b) World Development Indicators. Rule of law index is from World Bank (2017a) Worldwide Governance Indicators. Accounting enforcement index is from Brown et al. (2014). Average fine imposed is calculated based on the fines disclosed in 2011 regulatory action press releases by the CSRC (China) or the SFC (Hong Kong).

	Mainland China	Hong Kong
Revised anti-director rights index	1	5
Creditor rights index	2	4
Anti-self-dealing index	0.78	0.96
World Bank regulatory quality index	-0.13	1.85
CLSA corporate governance index	49	65
World Bank disclosure index	10	9
World Bank rule of law index	-0.49	1.61
Accounting enforcement index	16	22
Average fine imposed	CNY 239,173 (US\$ 37,015)	HK\$ 1,271,403 (US\$ 164,052)

**TABLE 2****Companies listed on the HKSE by classification**

This table presents the number and percentage of companies listed on the HKSE by classification, as well as their absolute and relative market capitalization. Figures presented in this table are sourced from HKSE Monthly Market Highlights and HKSE China Dimension.

**Panel A: Number (Percentage) of companies listed on the HKSE by classification**

Year	P chips	H shares	Red chips	Rest of HKSE	Total
2005	126 (11.1%)	120 (10.6%)	89 (7.8%)	800 (70.5%)	1,135
2006	136 (11.6%)	141 (12.0%)	90 (7.7%)	806 (68.7%)	1,173
2007	200 (16.1%)	146 (11.8%)	93 (7.5%)	802 (64.6%)	1,241
2008	222 (17.6%)	150 (11.9%)	93 (7.4%)	796 (63.1%)	1,261
2009	271 (20.5%)	156 (11.8%)	97 (7.4%)	795 (60.3%)	1,319
2010	327 (23.1%)	163 (11.5%)	102 (7.2%)	821 (58.1%)	1,413
2011	365 (24.4%)	168 (11.2%)	107 (7.2%)	856 (57.2%)	1,496
2012	437 (28.2%)	176 (11.4%)	108 (7.0%)	826 (53.4%)	1,547
2013	493 (30.0%)	182 (11.1%)	122 (7.4%)	846 (51.5%)	1,643
2014	541 (30.9%)	202 (11.5%)	133 (7.6%)	876 (50.0%)	1,752
2015	577 (30.9%)	229 (12.3%)	145 (7.8%)	915 (49.0%)	1,866

**Panel B: Market capitalization in US\$ billion (as percentage of total market capitalization) of companies listed on the HKSE by classification**

Year	P chips	H shares	Red chips	Rest of HKSE	Total
2005	25 (2.4%)	165 (15.7%)	219 (20.9%)	640 (61.0%)	1,049
2006	48 (2.8%)	433 (25.3%)	378 (22.1%)	850 (49.7%)	1,710
2007	185 (7.0%)	651 (24.5%)	708 (26.7%)	1,109 (41.8%)	2,654
2008	71 (5.4%)	350 (26.5%)	369 (27.9%)	531 (40.2%)	1,320
2009	238 (10.4%)	604 (26.4%)	496 (21.6%)	953 (41.6%)	2,292
2010	297 (11.0%)	671 (24.8%)	562 (20.8%)	1,173 (43.4%)	2,702
2011	209 (9.3%)	526 (23.4%)	513 (22.8%)	1,001 (44.5%)	2,248
2012	367 (13.0%)	628 (22.3%)	620 (22.0%)	1,199 (42.6%)	2,814
2013	505 (16.4%)	630 (20.4%)	619 (20.1%)	1,328 (43.1%)	3,082
2014	527 (16.4%)	735 (22.9%)	670 (20.9%)	1,283 (39.9%)	3,214
2015	643 (20.3%)	662 (20.9%)	660 (20.9%)	1,199 (37.9%)	3,165

**TABLE 3**  
**Sample description**

**Panel A: Descriptive statistics**

This table presents the descriptive statistics of key firm characteristics for the P-chip and non-P-chip subsamples. All variables are defined in Appendix B.

	Variables	Mean	Std. Dev.	P25	P50	P75
P-chip (N=1,564)	Total assets (in \$mil)	767.1479	1605.8863	101.1657	270.2511	731.8795
	Net income (in \$mil)	46.6408	124.9379	0.2482	13.4604	52.9477
	<i>ABSJONES</i>	0.0945	0.0933	0.0313	0.0693	0.1233
	<i>SIZE</i>	7.5753	1.4893	6.6046	7.5872	8.5835
	<i>MTB</i>	2.3830	3.2813	0.7308	1.4524	2.8790
	<i>SALESGROWTH</i>	0.4425	1.2795	-0.0205	0.2302	0.4580
	<i>ROA</i>	0.0441	0.2361	0.0024	0.0619	0.1495
	<i>OCF</i>	0.0356	0.1259	-0.0239	0.0438	0.1110
	<i>LEVERAGE</i>	0.4886	0.8419	0.0247	0.1519	0.5747
	<i>EQUITYISSUE</i>	0.2379	0.4259	0.0000	0.0000	0.0000
	<i>DEBTISSUE</i>	0.4348	0.4959	0.0000	0.0000	1.0000
	<i>OWNERSHIP</i>	0.5124	0.2366	0.3848	0.5585	0.6896
	<i>COVERAGE</i>	0.8689	0.9475	0.0000	0.6931	1.3863
<i>BIG4</i>	0.6720	0.4696	0.0000	1.0000	1.0000	
Non-P-chip (N=3,237)	Total assets (in \$mil)	1119.5380	5108.3860	72.9769	175.9361	498.9807
	Net income (in \$mil)	61.2200	294.1369	-0.5601	6.9963	28.3079
	<i>ABSJONES</i>	0.0791	0.0838	0.0237	0.0545	0.1012
	<i>SIZE</i>	7.3499	1.5929	6.3378	7.2178	8.2603
	<i>MTB</i>	1.6081	2.6454	0.5084	0.9051	1.7827
	<i>SALESGROWTH</i>	0.2511	1.1301	-0.0871	0.0861	0.2576
	<i>ROA</i>	0.0181	0.2128	-0.0086	0.0468	0.1064
	<i>OCF</i>	0.0380	0.1200	-0.0131	0.0421	0.1049
	<i>LEVERAGE</i>	0.6220	1.0259	0.0298	0.2271	0.7105
	<i>EQUITYISSUE</i>	0.2091	0.4068	0.0000	0.0000	0.0000
	<i>DEBTISSUE</i>	0.3509	0.4773	0.0000	0.0000	1.0000
	<i>OWNERSHIP</i>	0.5466	0.2268	0.4355	0.5938	0.7140
	<i>COVERAGE</i>	0.5478	0.8238	0.0000	0.0000	0.6931
<i>BIG4</i>	0.7164	0.4508	0.0000	1.0000	1.0000	

**Panel B: Industry distribution**

This table reports the industry distribution of sample observations based on the Fama-French 12 industry classification. Firms classified as Money (SIC=6000-6999) are eliminated from the sample.

Industry	P-chip		Non P-chip	
Consumer nondurables	257	16.4%	485	15.0%
Consumer durables	69	4.4%	143	4.4%
Manufacturing	222	14.2%	364	11.2%
Energy	85	5.4%	47	1.4%
Chemicals	67	4.3%	87	2.7%
Business equipment	256	16.4%	378	11.7%
Telecommunications	4	0.3%	64	2.0%
Utilities	30	1.9%	26	0.8%
Shops	211	13.5%	592	18.3%
Healthcare	67	4.3%	94	2.9%
Other	296	18.9%	957	29.6%
Total	1,564	100.0%	3,237	100.0%

**TABLE 4****Evidence on P-chip firms' aggressive earnings management based on the full sample**

This table reports the results of comparing the level of earnings management between P-chip and non-P-chip companies listed in Hong Kong from 2005 to 2011. The dependent variable is *ABSJONES* that represents the absolute value of discretionary accruals estimated using the performance-adjusted Jones model (Kothari et al. 2005). *PCHIP* represents P-chip companies in our sample; *SIZE* is the natural logarithm of total assets; *MTB* is market-to-book ratio; *SALESGROWTH* is sales growth rate over two consecutive years; *ROA* is return on assets; *OCF* is operating cash flow scaled by total assets; *LEVERAGE* is total debt divided by market value of equity; *EQUITYISSUE* and *DEBTISSUE* are proxies for equity and debt issuance respectively; *OWNERSHIP* represents closely-held shares; *COVERAGE* is the natural logarithm of one plus the number of analysts following a firm; *BIG4* is a Big four auditor indicator. More detailed variable definitions are outlined in Appendix B. We report regression coefficients followed by heteroscedasticity-consistent standard errors (White 1980) in parentheses, clustered by firm (Rogers 1993). \*, \*\*, \*\*\* indicate that a coefficient is statistically different from zero at the 0.10, 0.05, and 0.01 level, respectively, in two-tailed tests.

	(1)	(2)	(3)
<i>PCHIP</i>	0.0185*** (0.0036)	0.0137*** (0.0033)	0.0105*** (0.0034)
<i>SIZE</i>		-0.0062*** (0.0011)	-0.0090*** (0.0015)
<i>MTB</i>		0.0038*** (0.0008)	0.0033*** (0.0008)
<i>SALESGROWTH</i>		0.0101*** (0.0018)	0.0089*** (0.0018)
<i>ROA</i>		0.0077 (0.0120)	0.0152 (0.0119)
<i>OCF</i>		-0.0784*** (0.0247)	-0.0597** (0.0247)
<i>LEVERAGE</i>		-0.0035** (0.0015)	-0.0027* (0.0015)
<i>EQUITYISSUE</i>			0.0233*** (0.0039)
<i>DEBTISSUE</i>			0.0120*** (0.0026)
<i>OWNERSHIP</i>			-0.0096 (0.0066)
<i>COVERAGE</i>			0.0070*** (0.0024)
<i>BIG4</i>			-0.0046 (0.0034)
Constant	0.0747*** (0.0034)	0.1136*** (0.0085)	0.1289*** (0.0110)
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	4,801	4,801	4,801
Adjusted R-squared	0.0300	0.0943	0.1114

**TABLE 5**

**Evidence on P-chip firms' aggressive earnings management based on matched samples**

This table reports the results of comparing the level of earnings management between P-chip and non-P-chip companies listed in Hong Kong for three matched samples from 2005 to 2011. In column (1), each P-chip firm is matched to a non-P-chip firm in the same industry and year. In column (2), *SIZE* is added to the matching criteria. In column (3), an additional criterion of *SALESGROWTH* is added. The dependent variable is *ABSJONES* that represents the absolute value of discretionary accruals estimated using the performance-adjusted Jones model (Kothari et al. 2005). *PCHIP* represents P-chip companies in our sample; *SIZE* is the natural logarithm of total assets; *MTB* is market-to-book ratio; *SALESGROWTH* is sales growth rate over two consecutive years; *ROA* is return on assets; *OCF* is operating cash flow scaled by total assets; *LEVERAGE* is total debt divided by market value of equity; *EQUITYISSUE* and *DEBTISSUE* are proxies for equity and debt issuance respectively; *OWNERSHIP* represents closely-held shares; *COVERAGE* is the natural logarithm of one plus the number of analysts following a firm; *BIG4* is a Big four auditor indicator. More detailed variable definitions are outlined in Appendix B. We report regression coefficients followed by heteroscedasticity-consistent standard errors (White 1980) in parentheses, clustered by firm (Rogers 1993). \*, \*\*, \*\*\* indicate that a coefficient is statistically different from zero at the 0.10, 0.05, and 0.01 level, respectively, in two-tailed tests.

	(1)	(2)	(3)
<i>PCHIP</i>	0.0115*** (0.0036)	0.0077** (0.0039)	0.0104** (0.0041)
<i>SIZE</i>	-0.0084*** (0.0019)	-0.0087*** (0.0022)	-0.0085*** (0.0025)
<i>MTB</i>	0.0027*** (0.0010)	0.0028*** (0.0009)	0.0040*** (0.0012)
<i>SALESGROWTH</i>	0.0072*** (0.0019)	0.0123*** (0.0026)	0.0043 (0.0038)
<i>ROA</i>	0.0244 (0.0156)	0.0404** (0.0170)	-0.0012 (0.0212)
<i>OCF</i>	-0.0805*** (0.0291)	-0.1066*** (0.0329)	-0.0615 (0.0379)
<i>LEVERAGE</i>	-0.0027 (0.0020)	-0.0035** (0.0017)	-0.0028 (0.0023)
<i>EQUITYISSUE</i>	0.0169*** (0.0047)	0.0232*** (0.0054)	0.0179*** (0.0057)
<i>DEBTISSUE</i>	0.0131*** (0.0032)	0.0117*** (0.0037)	0.0127*** (0.0039)
<i>OWNERSHIP</i>	-0.0110 (0.0084)	-0.0067 (0.0090)	-0.0076 (0.0097)
<i>COVERAGE</i>	0.0079*** (0.0030)	0.0070** (0.0034)	0.0061* (0.0036)
<i>BIG4</i>	-0.0042 (0.0040)	-0.0029 (0.0043)	-0.0001 (0.0045)
Constant	0.1266*** (0.0138)	0.1309*** (0.0156)	0.1306*** (0.0167)
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	3,040	2,528	2,042
Adjusted R-squared	0.0994	0.1202	0.0819

**TABLE 6****Other evidence of P-chip firms' aggressive financial dealings**

This table reports the results of comparing P-chip and non-P-chip companies listed in Hong Kong from 2005 to 2011 using other measures of corporate malfeasance. *MBE* is an indicator variable that equals one if a firm meets or just beats analysts' consensus forecast by one cent, and zero otherwise. *HIGHFSCORE* is an indicator variable that equals one if the probability of material misstatement estimated using the F-score model (Dechow et al. 2011) is above normal risk, and zero otherwise. *TUNNELING* is proxied by other receivables scaled by total assets. *PCHIP* represents P-chip companies in our sample; *SIZE* is the natural logarithm of total assets; *MTB* is market-to-book ratio; *SALESGROWTH* is sales growth rate over two consecutive years; *ROA* is return on assets; *OCF* is operating cash flow scaled by total assets; *LEVERAGE* is total debt divided by market value of equity; *EQUITYISSUE* and *DEBTISSUE* are proxies for equity and debt issuance respectively; *OWNERSHIP* represents closely-held shares; *COVERAGE* is the natural logarithm of one plus the number of analysts following a firm; *BIG4* is a Big four auditor indicator. More detailed variable definitions are outlined in Appendix B. We report regression coefficients followed by heteroscedasticity-consistent standard errors (White 1980) in parentheses, clustered by firm (Rogers 1993). \*, \*\*, \*\*\* indicate that a coefficient is statistically different from zero at the 0.10, 0.05, and 0.01 level, respectively, in two-tailed tests.

	(1) <i>MBE</i>	(2) <i>HIGHFSCORE</i>	(3) <i>TUNNELING</i>
<i>PCHIP</i>	0.4137** (0.1656)	0.3758*** (0.1335)	0.0116** (0.0045)
<i>SIZE</i>	-0.1424 (0.0882)	0.1299* (0.0670)	-0.0002 (0.0019)
<i>MTB</i>	0.0590* (0.0348)	0.0289 (0.0183)	0.0015** (0.0006)
<i>SALESGROWTH</i>	-0.1403 (0.0963)	0.1637*** (0.0337)	0.0068*** (0.0017)
<i>ROA</i>	0.2499 (0.5030)	0.4212 (0.2818)	0.0064 (0.0103)
<i>OCF</i>	0.5994 (0.7526)	-3.5397*** (0.5425)	-0.0389*** (0.0131)
<i>LEVERAGE</i>	-0.4397** (0.1845)	-0.1610* (0.0862)	0.0029* (0.0017)
<i>EQUITYISSUE</i>	-0.0645 (0.2006)	1.7666*** (0.1317)	0.0077** (0.0036)
<i>DEBTISSUE</i>	0.1050 (0.1291)	-0.0977 (0.1167)	0.0116*** (0.0031)
<i>OWNERSHIP</i>	0.4794 (0.3199)	-0.7286*** (0.2595)	-0.0010 (0.0083)
<i>COVERAGE</i>	0.2186* (0.1298)	0.0899 (0.1003)	-0.0015 (0.0028)
<i>BIG4</i>	-0.2680 (0.2181)	-0.2936* (0.1500)	-0.0085* (0.0050)
Constant	-1.2520** (0.5574)	-4.5913*** (0.5134)	0.0277** (0.0126)
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	2,094	4,876	4,876
Pseudo/Adjusted R-squared	0.0674	0.1985	0.0544

**TABLE 7**

**Enforcement difficulty as an explanation for P-chip companies' aggressive earnings management**

This table reports the results of comparing the level of earnings management among P-chip companies for a sample period from 2005 to 2011, conditional on their legal and economic development. The benchmark group is non-P-chip firms. The dependent variable is *ABSJONES* that represents the absolute value of discretionary accruals estimated using the performance-adjusted Jones model (Kothari et al. 2005). *MARKETIZATION* is the level of legal and economic development of the Chinese province in which a P-chip firm is headquartered; *HIGH\_MARKETIZATION* is an indicator that equals one for cities/provinces that have the lowest 25th percentile of the NERI index value among P-chip observations, and zero otherwise; *MEDIUM\_MARKETIZATION* is an indicator that equals one for cities/provinces that have an NERI index value between the 25th and 75th percentile among P-chip observations, and zero otherwise; *LOW\_MARKETIZATION* is an indicator that equals one for cities/provinces that have the highest 25th percentile of the NERI index value among P-chip observations, and zero otherwise; *PCHIP* represents P-chip companies in our sample. Control variables are the same as those included in Table 4. More detailed variable definitions are outlined in Appendix B. We report regression coefficients followed by heteroscedasticity-consistent standard errors (White 1980) in parentheses, clustered by firm (Rogers 1993). \*, \*\*, \*\*\* indicate that a coefficient is statistically different from zero at the 0.10, 0.05, and 0.01 level, respectively, in two-tailed tests.

	(1)	(2)
<i>MARKETIZATION</i>	-0.0059*** (0.0019)	
<i>LOW_MARKETIZATION</i> × <i>PCHIP</i>		0.0232*** (0.0072)
<i>MED_MARKETIZATION</i> × <i>PCHIP</i>		0.0091* (0.0048)
<i>HIGH_MARKETIZATION</i> × <i>PCHIP</i>		0.0089** (0.0044)
Constant	0.1886*** (0.0214)	0.1292*** (0.0111)
Control variables	Yes	Yes
Year fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
Observations	4,790	4,790
Adjusted R-squared	0.1104	0.1113

**TABLE 8**  
**Market analysis**

This table compares the market reaction to earnings announcements between P-chip and non-P-chip firms for a sample period from 2005 to 2011.  $CAR(0, +1)$  is the cumulative abnormal returns over the (0,+1) window around the earnings announcement date;  $CAR(-1, +5)$  is the cumulative abnormal returns over the (-1,+5) window around the earnings announcement date;  $PCHIP$  represents P-chip companies in our sample;  $SUE$  represents the deciles of earnings surprise measured as the change in earnings scaled by total assets;  $LOSS$  is an indicator variable that equals one if a firm reports a loss, and zero otherwise;  $SIZE$  is the natural logarithm of total assets;  $MTB$  is market-to-book ratio. More detailed variable definitions are outlined in Appendix B. We report regression coefficients followed by heteroscedasticity-consistent standard errors (White 1980) in parentheses, clustered by firm (Roger 1993). \*, \*\*, \*\*\* indicate that a coefficient is statistically different from zero at the 0.10, 0.05, and 0.01 level, respectively, in two-tailed tests.

	$CAR(0, +1)$	$CAR(-1, +5)$
<i>PCHIP</i>	0.0107** (0.0048)	0.0251*** (0.0083)
<i>SUE</i>	0.0067*** (0.0020)	0.0086*** (0.0030)
<i>SUE</i> × <i>PCHIP</i>	-0.0021** (0.0008)	-0.0029** (0.0013)
<i>LOSS</i>	0.0119** (0.0056)	0.0174** (0.0085)
<i>MTB</i>	-0.0003 (0.0007)	-0.0005 (0.0011)
<i>SIZE</i>	-0.0001 (0.0015)	0.0015 (0.0023)
<i>SUE</i> × <i>LOSS</i>	-0.0048*** (0.0009)	-0.0062*** (0.0014)
<i>SUE</i> × <i>MTB</i>	-0.0001 (0.0001)	-0.0003 (0.0002)
<i>SUE</i> × <i>SIZE</i>	-0.0000 (0.0002)	-0.0000 (0.0004)
Constant	-0.0456*** (0.0126)	-0.0719*** (0.0187)
Observations	4,709	4,709
Adjusted R-squared	0.0444	0.0362

**TABLE 9****Alternative cross-listing settings**

This table compares the level of earnings management between AH firms and non-AH firms for a sample of H-share firms in column (1), and between US-listed Chinese private sector firms and domestic US firms in column (2). In both cases the sample period is from 2005 to 2011. The dependent variable is *ABSJONES* that represents the absolute value of discretionary accruals estimated using the performance-adjusted Jones model (Kothari et al. 2005). *AH* is an indicator for H-share firms also listed in China; *USPCHIP* is an indicator for private sector Chinese firms listed in the US. Control variables are the same as those included in Table 4. More detailed variable definitions are outlined in Appendix B. We report regression coefficients followed by heteroscedasticity-consistent standard errors (White 1980) in parentheses, clustered by firm (Rogers 1993). \*, \*\*, \*\*\* indicate that a coefficient is statistically different from zero at the 0.10, 0.05, and 0.01 level, respectively, in two-tailed tests.

	(1)	(2)
<i>AH</i>	-0.0091* (0.0048)	
<i>USPCHIP</i>		0.0294** (0.0120)
Constant	0.0314 (0.0197)	0.1529*** (0.0094)
Control variables	Yes	Yes
Year fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
Observations	627	14,546
Adjusted R-squared	0.1380	0.1971