Do minority shareholder protection laws benefit investors? Evidence from a natural experiment on cross-listed firms*

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Abstract

Good corporate governance practices are not universal. Unlike practices in institutional settings in developed countries, which have attracted most scholarly attention, corporate governance practices in emerging economies lean towards addressing principal-principal conflicts that stem from concentrated ownership. The study employs a difference-in-differences panel data design with matched samples of Chinese firms cross-listed in mainland China and Hong Kong (China) and of those listed only in Hong Kong (China) based on propensity score matching. It thus adopts a natural experimental setting – the promulgation of China's Revised Securities Law in March 2020 – to pinpoint whether and how legal revisions of investor protection laws can really benefit investors. The findings show that independent directors in cross-listed firms turn over significantly more than those in firms listed only in Hong Kong (China). Also, it suggests that firms mainly replace departed directors with new directors from similar demographics. Furthermore, the study observes no evidence of significant changes in board independence in the short run. The findings suggest that policymakers should mind unintended consequences beyond the intended outcomes of the legal reforms on corporate governance, particularly the potential disproportionate impacts on smaller firms.

Keywords : China, corporate governance, cross-listed firms, emerging economy, independent director, legal reforms, principal-principal conflicts

JEL classification codes : G34, G38, K22, K40, P26, P52

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1. Introduction

One core theme of the corporate governance literature is the mechanisms that protect shareholder interests. Adopting the classic agency theory (Eisenhardt, 1989; Fama and Jensen, 1983; Jensen and Meckling, 1976), a plethora of corporate governance studies address the principal–agency conflicts between shareholders and managers. These are highly relevant in the Anglo-American context, where the main purpose of public corporations is to maximize shareholder returns (Krause et al., 2019). In emerging economies characterized by much lower levels of market efficiency and ownership dispersion than in economies where agency theory was first developed (Firth et al., 2016), the most pronounced corporate governance issues are the principal–principal conflicts between controlling shareholders and minority shareholders (Shleifer and Vishny, 1997; Young et al., 2008).

In such institutional settings, the Anglo-American governance approach based on the classic agency theory, which aims to enhance management–shareholder alignment, can be less effective (Chen et al., 2011; Young et al., 2008; van Essen et al., 2012). Research on corporate governance in emerging economies unveils the context-specific nature of good corporate governance practices (Black et al., 2012; Chen et al., 2011) and identifies advancement in formal legislative measures that improve market transparency and legal enforcement as a more pertinent instrument to address prevalent principal–principal conflicts (Millar et al., 2005; Mueller, 2006).

In response to this call, legislators in China carried out a major revision to the Securities Law, with a specific focus on enhancing protection of minority shareholders. The revised law, promulgated in 2020, marks a significant step-up towards better corporate governance, which casts some doubt on the validity of existing governance practices. In particular, the revised law stresses the accountability of the controlling shareholder of a listed firm and attributes strengthened rights of shareholder representation to independent directors.

Leveraging the natural experimental setting where the legal revision represents an exogenous shock, this study aims to uncover whether legislative efforts towards greater investor protection materialize as intended and how such efforts roll out by influencing the level and quality of board independence. At the intersection of research on regulatory intervention and board independence, the analyses of this study reveal significantly higher turnover of independent directors in cross-listed firms than in control group firms listed only in Hong Kong (China). The contrast may be attributed to both greater accountability of the actual controllers and enhanced de facto responsibility of the independent directors. In terms of board independence, this study finds no evidence of significant changes among the cross-listed firms. The post-revision observation window is limited, yet this finding might indicate firms' reluctance to go an extra mile beyond the minimum requirement of board independence in the revised law in the short term, as the revision is yet to place emphasis on this metric.

Despite the one-country setting, results based on the Chinese sample imply substantial transferability. First, the legal system in China traces its origin to German civil law while borrowing substantially from common law systems, in particular those of the United States and the United Kingdom. This is a common feature among East Asian countries (La Porta et al., 1998). The legal origin of that system matters because the establishment and enforcement of formal institutions are heavily influenced by a country's legal system. In this respect, countries with civil law origin account for about 80 per cent of the 88 countries investigated by Djankov et al. (2008). Second, the two-tier board structure in China, in which the board chair enjoys official empowerment by law, deviates from that in the United States. Indeed, Krause et al. (2019) find that the effects

of the board chair on firm performance in China and Germany is comparable to the effects of the chief executive officer in the United States and the United Kingdom. That is, although the findings might have limited implications for common-law advanced economies such as the United States, they can be generalized to civil-law advanced economies such as Germany, in addition to other emerging economies.

This study makes several contributions. First, it advances agency theory by exploring external governance approaches that address the type II agency problem in the form of principal–principal conflicts between majority and minority shareholders which, despite its pervasiveness in emerging economies (Young et al., 2008), has failed to garner as much scholarly attention as has the type I agency problem between managers and owners. Second, it enriches the corporate governance literature by adopting an international business perspective to question the validity of Anglo-American-developed good practices of corporate governance in a non-Western emerging market context and to shed light on indigenous legislative endeavours that address context-specific governance issues (Black et al., 2012). Specifically, this study sheds light on corporate governance in emerging markets from a legal perspective. The findings bring significant evidence to the literature on the interplay between investor protection and corporate governance from a legal perspective pioneered by La Porta et al. (2000). Third, through an institutions-based lens (Peng et al., 2009), the study informs the debates on whether and how country-level institutions could substitute or complement firm-level governance (e.g. Melis and Rombi, 2021). Using a unique natural experimental setting, this study enables identification of empirical evidence on how country-level institutions affect firm-level corporate governance practices. The empirical findings contribute to bridge the distinctive arguments advanced by the finance literature and the strategy literature (Zattoni et al., 2020). That is, strengthening investor protection could both induce shareholder-friendly firm-level corporate governance practices and induce symbolic adoption of certain practices, especially in the form of greater independent director accountability (Roberts et al., 2005). Besides the theoretical contributions, this study is also informative for policymaking in emerging markets that are characterized by institutional voids and rapid institutional transitions (Peng et al., 2009) in terms of the causality and effectiveness of major legal revisions.

The remainder of this paper is organized as follows. Section 2 reviews the related literature. Section 3 introduces the research setting and develops two hypotheses. Section 4 describes the data and details the empirical methodology. Section 5 discusses the empirical results. Section 6 offers concluding remarks and draws policy implications.

2. Literature review and institutional background

There is a vast and flourishing literature on corporate governance. In particular, this study is most closely related to two streams. First is the literature on addressing principal–principal conflicts as the major concern in emerging economies. Young et al. (2008) summarize the cause, prevalence and consequences of principal–principal conflicts across emerging economies. They show concentrated ownership is a root cause of such conflicts: over 50 per cent equity ownership is typical in emerging economies, whereas in advanced economies 5 per cent ownership qualifies as a blockholder. Furthermore, listed firms in emerging economies look similar in form but not in substance compared with those in developed economies. That is, the tripod of modern governance mechanisms – shareholders, board of directors, professional managers – is adopted but rarely functions as in advanced economies. Moreover, monitoring costs of a different nature arise, because concentrated ownership is a substitute for poor external governance mechanisms. In addition,

despite the identified effectiveness of board independence in resolving principal–principal conflicts, there is a lack of enthusiasm and demand for independent directors in emerging markets. Listed firms in such markets rarely appoint any independent directors beyond the minimum threshold in regulatory mandates (Firth et al., 2016). This weak demand for independent directors should not come as a surprise, considering the pervasiveness of agency problems among controlling and minority shareholders (Veltrop et al., 2015) and the assumed duties of independent directors to mitigate such problems. A limited supply of competent independent directors accompanies such lackluster demand. A considerable portion of independent directorships may be decorative board seats – friendly observers rather than diligent monitors (Huyghebaert and Wang, 2012).

The prevalence of principal–principal conflicts in emerging markets and the consequent ineffectiveness of traditional corporate governance mechanisms have inspired scholars to explore alternative governance options. Using a pooled sample of 917 listed firms from 2003 to 2006 in China, Xu et al. (2011) find that regional tax enforcement efforts reduce agency costs between blockholders and minority shareholders, and thus improve a firm's market performance. Using a natural experiment setting of China's split-share structure reform, Sun et al. (2017) validate the importance of regulatory intervention in enhancing investor protection and information disclosure.

To further illustrate the prominence of principal–principal conflicts in emerging economies, three noteworthy aspects distinguish emerging economies from their more advanced peers in terms of investor protection: small numbers of controlling shareholders, weak institutions and underdeveloped labour markets for independent directors.

First, formal institutions that protect investors' property rights tend to be weak, incomplete or missing in emerging economies (Hou and Moore, 2010; Lin and Chuang, 2011; Young et al., 2008; Zhang et al., 2014). Specifically, a takeover market is absent or inactive, the threat of bankruptcy for defaulting firms is minimal and the financial market is too nascent to regulate supply and demand efficiently (Huyghebaert and Wang, 2012). Furthermore, in these economies law enforcement typically varies substantially from one region to another despite having in place a uniform legal framework (Jiang et al., 2010).

Concentrated ownership structures are adopted by typical publicly listed firms in an emerging economy (Firth et al., 2016). This structure allows the largest shareholder to exercise substantial control by manipulating board composition and managerial incentives (Zhang et al., 2014). The board thus acts as the representative of the controlling shareholders (Firth et al., 2016; Sun et al., 2017) rather than as an effective fiduciary of the firm (Jensen and Meckling, 1976). In such firms, controlling shareholders can easily exploit the wealth of minority shareholders by means of related-party transactions or asset transfers. Berkman et al. (2009) and Zhang et al. (2014) document the collusion between managers and controlling shareholders on such "tunneling". Using a Chinese sample, the authors find that blockholders with excessive control rights are less likely to advocate performance-based incentives that direct managerial actions towards maximizing shareholder value. In this vein, Huyghebaert and Wang (2012) find that as the share of directors affiliated with the dominant owner of a firm increases, so does the firm's amount of related-party transactions.

Prevalent state ownership exacerbates the expropriation of minority shareholders in emerging economies (La Porta et al., 1999). A typical manifestation of principal–principal conflicts emerges when States are controlling owners of a firm. In such circumstances States tend to use firms as tools to pursue political and social objectives that divert resources from the goal of maximizing economic value for minority shareholders (He and Rui, 2016). For example, Shan (2013) has identified a positive correlation between

State ownership and the occurrence of type I tunnelling, which entails outward transfers of firm resources for the benefit of the controlling shareholders (Shleifer and Vishny, 1997).

In sum, minority shareholders are especially at a disadvantage in emerging economies, where ownership concentration, ineffective institutions and pervasive State ownership coexist. That is, traditional "bundles" of corporate governance mechanisms that align ownership with control (Lin and Chuang, 2011) are ineffective in shielding minority investors from managerial opportunism. Worse, these bundles tend to aggravate principal–principal conflicts, which eventually leads to more value extraction by blockholders (Young et al., 2008). Using a sample of 525 listed firms in Taiwan Province of China, Lin and Chuang (2011) find that internal corporate governance mechanisms, such as increasing family ownership and institutional ownership and introducing CEO duality (i.e. making the CEO also the chairman of the board), do not reduce the risk of underpricing in initial public offerings, which harms primarily minority shareholders. In contrast, they find evidence that employing independent outside directors mitigates the extent of such underpricing (Lin and Chuang, 2011). Similarly, Shan (2013) finds that the frequency of board meetings reduces the extent of type I tunneling and that board independence mitigates the expropriation of minority shareholdings.

The second noteworthy aspect is the literature on legal approaches to corporate governance that was pioneered through a series of works by La Porta and coauthors, who demonstrate that the effectiveness of shareholder protection regulations is contingent on a wide range of formal and informal institutional factors. They show how legal origins and rules determine the size of capital markets (La Porta et al., 1997), the effectiveness of investor protection (La Porta et al., 1998), the concentration of ownership (La Porta et al., 1999) and the valuation of firms (La Porta et al., 2002). Furthermore, studies on the impact of the Sarbanes-Oxley Act of 2002 in the United States, passed in response to a number of major corporate and accounting scandals, show that legal reform can have both intended and unintended consequences. For instance, Arping and Sautner (2013) find that Section 404 of the Act resulted in more accurate and less dispersed earnings forecasts by analysts, which are proxies for improved accounting transparency. However, Linck et al. (2009) demonstrate the costs associated with the mandates on directors' workload and firms' board independence – doubled premiums on director and officer insurance along with significant increases in directors' pay and overall costs. In this vein two streams of literature emerge: the finance literature often suggests that strengthening national institutions (e.g. investor protection) tend to induce shareholder-friendly firm-level corporate governance practices, while the strategy literature tends to argue that most new corporate governance practices outside the United States and the United Kingdom are adopted symbolically to increase a firm's or country's legitimacy (Zattoni et al., 2020). The latter argument indicates that the strengthened institutions might either be symbolic or bring additional monitoring costs without additional benefits (Hermalin and Weisbach, 2012). However, the void of one type of institution might be filled or substituted by others, in a complex interplay between both formal and informal institutions. The finance literature argues for substitution effects between national institutions and corporate governance mechanisms, while the strategy literature promotes complementary effects.

The institutional background related to the appointment and departure of directors is relevant. In mainland China, each elected director must receive shareholder approval through e.g. annual general meetings. Independent directors cannot be dismissed except for unusual circumstances. If their resignations lead to board independence lower than one third, such resignations shall come into effect when their replacements are found. In Hong Kong (China), the Rules and Guidance of the Hong Kong Stock Exchange state that "all directors appointed to fill a

casual vacancy should be subject to election by shareholders at the first general meeting after appointment".[1] In sum, although the shareholders are entitled to approve or reject the election of a director, the appointment of a director can occur and become effective any time before a shareholder meeting. This procedural practice means that director appointment and departure can take place any time throughout the year.

3. Research setting and hypotheses development

Aware of the principal–principal conflicts facing firms in emerging economies, legislators in China revised the Securities Law with a focus on protecting minority shareholders. Particularly relevant to this study, the revised law enhances the accountability of the actual controller (the individual or entity that has the de facto control rights) of a firm and attributes enhanced rights of shareholder representation to independent directors. Under the revised law, individual investors can file class lawsuits against firms that exploit shareholder rights in the forms of theft, fraud, accounting manipulation and related-party transactions, and independent directors are held accountable. With the revision, independent directors are exposed to greater legal, financial and reputational risks, which is expected to encourage them to act more responsibly in supervising firm operations and strategies. Despite their face value, it is unclear to what extent and under what circumstances the intended benefits of the revised law can materialize. Drawing on insights from studies on the impact of the Sarbanes-Oxley Act, which was passed by the United States Congress in response to a series of high-profile corporate scandals, it appears that legal reform can have both intended outcomes and unintended consequences (Arping and Sautner, 2013; Linck et al., 2009).

An important consideration on the validity of the natural experimental setting is whether the shock can be considered exogeneous to the firms rather than endogenous. This study argues that companies have exerted minimal influence on the legislation processes. The revised law was passed by the legislative body on 28 December 2019 and went into effect on 1 March 2020.[2] Although the debates surrounding the revision had been ongoing since 2014, the room for policy lobbying in China is generally small (Calomiris et al., 2010). Furthermore, the uncertainty about the finality and implementation of the revision is settled only when it gets officially stamped. Hence the anticipation effect on director turnovers would be minimal for this study. Most important, given the temporal gap between the passage and the enactment of law, directors could simply resign shortly before the enactment of the law if they were concerned about its impact. Most directors would not resign before the passage of a law to escape its potential impact while the law was still under discussion because of the uncertainty about whether and when the law would be passed as well as the content of the new legislation. On these grounds, this study argues that the revision can be taken as an exogenous shock to listed firms in mainland China.

As such, the legal revision provides a unique opportunity to investigate research questions in a natural experiment setting. To exploit this setting to the full extent, this study focuses on the causal effects that the revisions of the law have on firm and director behaviour. Specifically, it employs the difference-in-differences (DiD) methodology, taking as treatment firms those that are cross-listed in mainland China and in Hong Kong (China), and as control firms those that are listed in Hong Kong (China) but not in mainland China. The cross-listed firms are a natural choice in such a setting as they are affected by securities laws in both markets,

[1] Hong Kong Exchanges and Clearing, n.d., Appendix 14 Code on corporate governance practices, paragraph A.4.2 (accessed 10 October 2022).

[2] Liu X, Lin Q and Sun M, 2020, Xinjiu Zhengquanfa Quanwen Duibi: Xinzeng Liangzhang, Zhe 150 Tiao You Shangai 新旧证券法全文对比：新增两章，这150条有删改 [Comparing new and old Securities Law], *Pengpai News*, 1 March, www.thepaper.cn/newsDetail_forward_5378169.

making it possible to control by design any effect attributable to regulations in Hong Kong (China), where the control firms are listed. Notably, such treatment and control groups are available thanks to the fact that the mainland Securities Law applies only to firms listed in mainland China, explicitly excluding firms listed in Hong Kong (China).

The articles of interest for this study in the revised law pertain to the greater accountability of the controlling shareholders and the enhanced rights of independent directors. A brief summary of the legal articles follows.[3]

Articles 24 and 85: The burden of proof in cases of misconduct resides in the "critical minorities", including controlling shareholders and actual controllers, the board of directors and other members of the top management team. The inclusion of controlling shareholders and actual controllers marks a critical shift from the previous version of the law, which put the burden of proof on law enforcement.

Article 94 and 78: The critical minorities can be legally pursued when they practice misconduct resulting in investor losses. The statute of limitations expands well over that specified in the Corporation Law, and there is no limitation on shareholding percentage. Combined with Article 78, which specifies the obligation of critical minorities to disclose information, they are thus accountable if any undisclosed information leads to losses for investors. Combined with Article 95, this has a resemblance to class action lawsuits pertaining to stock investments in the United States.

Article 90: Independent directors are explicitly identified as having the right to collect proxy votes from shareholders, allowing them to submit proposals and vote on behalf of shareholders.

These articles are intended to improve corporate governance by explicitly holding accountable critical minorities, including controlling shareholders and actual controllers, the board of directors and other members of the top management team. Accordingly, two hypotheses were formulated about the effects of the revised law.

Hypothesis 1: Corporate governance of firms improves, as evidenced by greater board independence.

The revised law's emphasis on holding critical minorities accountable, in particular putting the burden of proof in cases of misconduct on the controlling shareholders, incentivizes strengthened corporate governance practices. The finance literature suggests that strengthening national institutions (e.g. investor protection) tends to induce shareholder-friendly firm-level corporate governance practices; hence this study expects greater board independence under the revised law and a more shareholder-friendly board (Zattoni et al., 2020). However, this effect might not be strong, at least in the short run, as firms are already obligated to have at least one third of the board composed of independent directors. Given the substitution effects between country-level institutions and firm-level governance (Melis and Rombi, 2021), firms might have fewer incentives to pursue voluntary improvements in board independence when such institutions are strengthened. Furthermore, board independence might be hindered by tokenism or form over substance (Young et al., 2008). That is, firms might have hired independent board members who do not have any actual involvement with the firms' affairs, thereby hampering the effectiveness of independent boards. This study expects such practices to be mitigated under the revised law, which explicitly attributes more rights to the independent directors, leading to the next hypothesis.

[3] These are the author's summaries from the Chinese legal text, focusing on the meanings rather than word-for-word translation. For the full text (in Chinese), see China Securities Investor Protection Fund, 2020, Zhonghua Renmin Gongheguo Zhengquanfa (2019 Nian Xiuding) 中华人民共和国证券法 (2019年修订) [Securities Law of the People's Republic of China (2019 Revision)], 24 March, www.sipf.com.cn/flfg/2020/03/12865.shtml.

Hypothesis 2: The composition of independent boards in firms shifts towards more involved members, marked by greater turnover in independent board directors.

Those independent board memberships, previously sinecures, should become much less attractive because of the greater responsibility these members bear under the revised law. In particular, a considerable portion of the independent directorships may be decorative board seats – for friendly observers rather than diligent monitors (Huyghebaert and Wang, 2012). Changing environments and external pressures contribute to greater director turnover as they alter the needs of both firms and directors (Cotugno et al., 2020; Banerjee et al., 2020). Moreover, changes in board size and composition matter to investors (Vallelado and García-Olalla, 2021) and relate to firm risks (Feng and Xiao, 2021). These factors combined motivate this study to investigate turnover in independent directors. In particular, one would expect to see greater turnover as a result of nudging effects on the independent board members. Furthermore, one would expect a large part of this greater turnover to be attributed to resignations from such sinecures.

4. Data and methodology

Firm-level fundamentals data come from Thomson Reuters' Worldscope, a director list and turnover report from the Hong Kong Stock Exchange's HKEXnews and director information from firms' annual reports. The study also utilizes data from the China Stock Market and Accounting Research Database (CSMAR). The main sample contains 86 cross-listed firms with annual data from 2017 to 2020 – that is, three years before and one year after the revised Securities Law went into effect. This study focuses its discussions on a matched sample comprising 172 unique firms (643 observations) and uses a sample of all firms listed in Hong Kong (China) comprising 2,302 unique firms (7,755 observations) as a baseline test.[4]

To obtain the baseline sample of these firms, this study applies the following four procedures. First, to ensure basic comparability only non-small firms with total assets in any year above HK$100 million are retained as cross-listed firms tend to be large; this restriction removes 2,174 observations.[5] Second, to ensure both comparability and data quality only firms with a minimum board size of three are retained; this restriction removes 96 observations. Third, to ensure data quality only entries with board independence greater than zero are retained as the Hong Kong Stock Exchange requires a minimum of three independent directors and a board independence threshold of one third of directors being independent; this results in removal of 152 observations.[6] The final step removed an additional 27 observations because of missing data and irregularities in extreme data: 12 missing values in industry, 11 missing values in return on assets, 1 missing value in financial leverage, 2 from extreme values of total assets and 1 from extreme value of return on assets.

To arrive at the matched sample, this study matches each firm cross-listed on the stock exchanges of both mainland China and Hong Kong (China) in 2017 to a similar firm listed on the Hong Kong Stock Exchange. It then includes all observations available for the matched firms from later periods. Matching variables include firm size

[4] Included firms may change as this study does not require that all non-cross-listed firms have a sustained presence during the period.

[5] The Hong Kong Institute of Certified Public Accountants defines "small private company" to be one that does not have total assets of HK$100 million or more (see www.hkicpa.org.hk/en/Standards-setting/Standards/Our-views/Standards-Interpretations-Guides-and-PN-Members-Handbook/Reference-Materials/references-materials/smefrfre2020, accessed 15 December 2023).

[6] Actual board independence may fall below one third as even if a firm fulfils the criteria laid out by Hong Kong Stock Exchanges and Clearing (see https://en-rules.hkex.com.hk/entiresection/238, accessed 13 January 2024), it may voluntarily report the actual number of independent non-executive directors, with some leeway corresponding to the principle of comply-or-explain.

measured as total assets in billions of Hong Kong dollars, industry (25 major industry groups from Worldscope) and board size. The first two variables capture important firm characteristics and are commonly used in firm-level matching in the literature. This study employs only board size as the internal governance characteristic – because board independence is an outcome variable of interest – to further ensure institutional comparability within the sample, as firms tend to list on foreign host markets most appropriate for them (Moore et al., 2012). Moreover, although board size might correlate with firm size, it reflects monitoring costs (Boone et al., 2007).

The set of control variables include return on assets, financial leverage (total liabilities over total shareholders' equity), strategic change, and industry and year fixed effects. In particular, the variable strategic change includes resource allocation in six domains in response to organizational decline, according to Crossland et al. (2014) and Wowak et al. (2016). This study includes this measure because director turnover might be closely related to organizational change. More specifically, this variable is constructed by summing the log of absolute changes from the previous year among the following six variables: *Advertising* is the ratio of advertising (proxied by selling, administrative, and general expenses) over sales (net sales or revenue). *R&D* is the ratio of research and development expenses over sales. *Overhead Efficiency* is the ratio of overhead costs to sales. This study uses as overhead costs – ongoing expenditures of running a business that cannot be conveniently traced to any particular cost unit – the sum of selling, general and account expenses; R&D expenses; and interest expenses. *Capital Intensity* is the ratio of net fixed assets to the total number of employees. *Plant and Equipment Newness* is the ratio of net fixed assets to gross fixed assets, where the difference comes from accumulated depreciation and impairment provisions. *Financial Leverage* is the ratio of total liabilities to total shareholder equity. Furthermore, this study controls for industry and year fixed effects.

To examine the nudging effects of the law regarding sinecures, this study considers both the number and the percentage of independent directors who resigned upon the enactment of the law. This study treats a turnover of an independent director as a resignation in a given year if the following two conditions are satisfied: (a) the director has left the firm, and (b) the director has served in the position for fewer than the maximum six years in the mainland for cross-listed firms or fewer than the maximum nine years in Hong Kong (China) for control firms. The study uses this crude measure because (i) the exact reasons for a director's turnover are rarely disclosed, and (ii) a director's departure may be recorded later than the resignation date if a replacement has not yet been found, as discussed earlier. This study assumes that a director might leave a firm for reasons unrelated to the firm. For instance, a director might take on other commitments or become sick. However, this study relies on the fact that such idiosyncratic departures remain arbitrary across firm and time. Therefore, if a sudden overall significant surge in premature turnovers is identified, this study regards it as resulting from exogenous shocks.

4.1 Summary statistics

Table 1 reports the summary statistics of the main variables across the samples. As discussed earlier, the cross-listed firms are quite different from typical firms listed in the Hong Kong Stock Exchange in that they are much larger in size by total assets, have a larger board and are much older with higher leverage. Finding peers through matching is difficult, as tradeoffs must be made on what to match. The matched peers are farther apart in size (unreported balance test significance below 1 per cent) but closer in board size and board independence (unreported balance test significance at 5 per cent).

Table 2 reports the correlations among the variables employed in the matched sample.

Table 1
Summary descriptive statistics, 2017–2020

	Observations	Mean	Median	Standard deviation	Minimum	Maximum
All listed firms, Hong Kong (China)						
Total assets (HK$ billion)	7 755	116.78	2.494	1 140.266	0.100	30 109.436
Board size	7 755	8.103	8	2.436	3	39
Board independence	7 755	0.432	0.429	0.091	0.143	0.923
Return on assets	7 755	-0.026	0.020	0.324	-10.370	7.258
Financial leverage	7 755	2.673	0.761	81.156	-257.749	7 016.468
Strategic change	7 755	-10.688	-10.664	5.365	-32.032	15.678
Cross-listed firms						
Total assets (HK$ billion)	344	184.162	62.02	366.864	0.158	2 733.190
Board size	344	9.36	9	2.046	4	15
Board independence	344	0.400	0.375	0.078	0.25	0.800
Return on assets	344	0.031	0.031	0.092	-1.300	0.397
Financial leverage	344	1.477	1.369	2.509	-30.44	21.839
Strategic change	344	-13.634	-13.724	6.258	-32.032	11.551
Matched firms by total assets, board size, board independence and industry						
Total assets (HK$ billion)	299	387.308	19.682	2 446.578	0.298	24 878.288
Board size	299	10.328	9	4.370	6	39
Board independence	299	0.390	0.375	0.072	0.222	0.714
Return on assets	299	0.007	0.031	0.501	-8.097	2.336
Financial leverage	299	1.539	1.208	4.716	-56.445	29.348
Strategic change	299	-12.423	-12.618	5.444	-27.711	2.349

Source: Author's calculations.

Table 2
Correlation matrix of variables

	Total assets (HK$ billion)	Board size	Board independence	Return on assets	Financial leverage	Strategic change
All firms listed in Hong Kong (China)						
Total assets (HK$ billion)	1					
Board size	0.19	1				
Board independence	-0.02	-0.55	1			
Return on assets	0.01	0.09	-0.08	1		
Financial leverage	0.01	0.01	-0.01	0.00	1	
Strategic change	0.00	-0.12	0.16	-0.18	0.03	1
Matched sample of cross-listed firms and control firms						
Total assets (HK$ billion)	1					
Board size	0.10	1				
Board independence	0.02	-0.33	1			
Return on assets	0.00	0.03	-0.02	1		
Financial leverage	0.25	-0.02	0.08	0.00	1	
Strategic change	0.02	0.09	0.02	-0.08	-0.01	1

Source: Author's estimation.

4.2 Difference in differences analysis

To draw causal inferences from the effects of the revised law, this study resorts to the DiD technique. Empirical results using DiD on cross-listed firms against all firms listed in Hong Kong (China) as baseline results are reported first. Then this study focuses on introducing the matching method to match cross-listed firms one to one against their peer listed firms on the Hong Kong Stock Exchange. The rationale to focus on results after matching is that cross-listed firms are generally much larger both in size and market capitalization than an average listed firm, and the comparison should be made with more similar firms. To exploit the natural experimental setting, regression analyses were conducted on the following specifications:

$$Outcome_{i,t} = \delta * 1_{cross\text{-}listed} * 1_{after\ 2019} + \gamma_1 * 1_{cross\text{-}listed} + \gamma_2 * 1_{after\ 2019} + X\beta + \alpha_i + \lambda_t + \epsilon_{i,t},$$

where δ is the coefficient of interest, that is, the causal effect of the revised law on the treated firms. $Outcome_{i,t}$ is the outcome variable of interest defined in the working hypotheses. $1_{cross\text{-}listed}$ is a dummy variable that indicates whether a firm is cross-listed or not. $1_{after\ 2019}$ is a dummy variable that indicates whether the current year t is after 2019 or not. X is the set of control variables; α_i is the industry fixed effect, λ_t is the year fixed effect and $\epsilon_{i,t}$ is the residual error term. As a panel data set is employed, this study uses double-clustered standard errors, at the firm level and the time dimension, following Petersen (2009).

4.3 Propensity score matching

To arrive at the final sample with treatment and control firms that are as comparable as possible, this study resorts to propensity score matching, conducted for 2017. Ryan et al. (2018) find that DiD analysis with matching outperforms the standard DiD or interrupted time-series analysis models.

The matching procedure can be broken down into three steps. First, a logistic regression is conducted on the dummy variable of interest – that is, whether a firm is cross-listed or not – using a set of four covariates: total assets, industry, board size and board independence.[7] This regression sample includes firms with the dummy being both ones or zeros. Second, the coefficients from the first step are deployed to predict, using a logistic function, the likelihoods – the propensity scores – that the firms in the sample will end up having a cross-listing dummy of value 1. Third, using these propensity scores, the nearest neighbours of the firms with a dummy of 0 to those firms with a dummy of 1 are found. That is, the nearest neighbours are the counterpart non-cross-listed firms that have the closest propensity score to that of each cross-listed firm. Employing a one-to-one matching scheme, the study ends up with a final sample of matched pairs with each treatment firm corresponding to a non-treatment or control firm.

In sum, the unique natural experimental setting makes it possible to investigate the causal effects of legal revisions on firm and director behaviour. Such a unique setting is difficult to come across, as one can only await the occurrence of appropriate events. Furthermore, the setting threads through both emerging and advanced markets, which enables myriad intriguing observations and comparisons. The detailed variables included empower this study's inquiry in that various aspects of interest can be studied and at the same time controls for effects established from the extant literature can be included. However, such a setting, like most other natural experiments on cross-listed firms, has the downside of a double-edged sword.

[7] For hypothesis 1 to include board independence may not be reasonable, as a good matching would make the matched samples similar in this aspect. This study hence uses two guards of robustness: (i) the baseline result without matching serves as a benchmark, and (ii) in unreported results using matching without board independence, the findings are similar on board independence.

There is an apparent bias towards larger-sized firms and the matched sample is of limited size. In addition, cross-listed firms might contain distinct attributes that limit the generalization of the findings.

5. Results and discussion

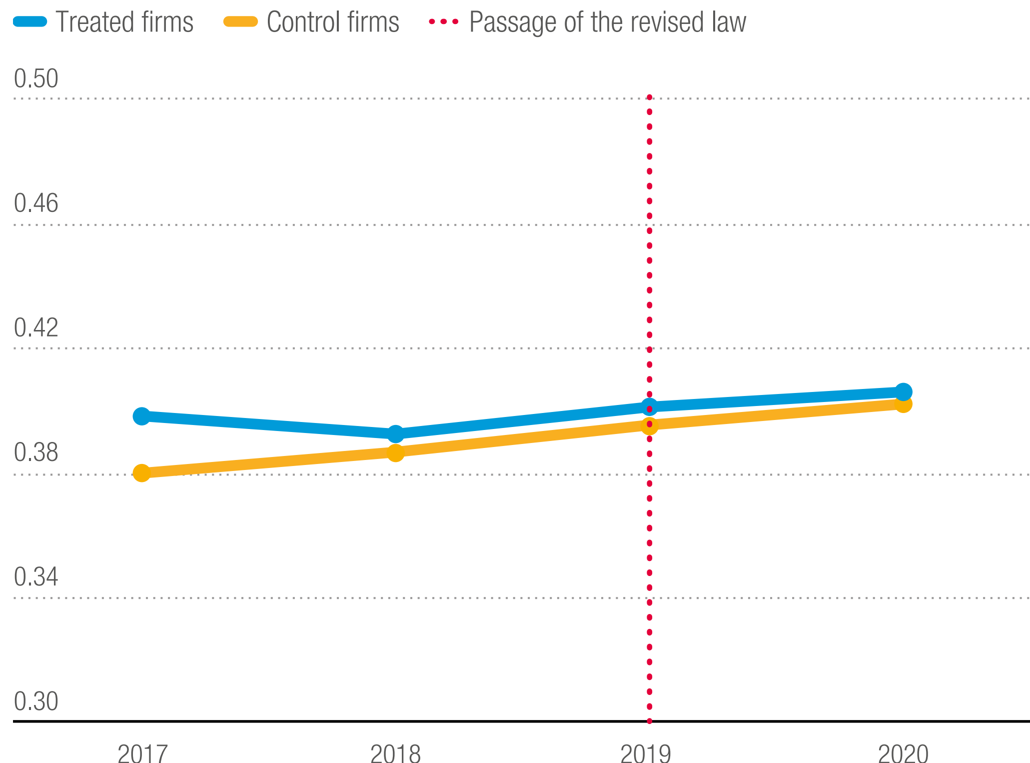
To put the results in context, this study first examines the trends between treatment and control firms by depicting the dependent variables of interest across time and provides market-wide statistics to facilitate economic interpretation of the results. Figures 1 and 2 illustrate the board independence and independent director turnover of the matched sample, respectively. Figure 3 depicts the independent director turnover as a percentage of the total number of independent directors.

From visual inspection, the parallel trend assumption for DiD analysis, which is arguably the most difficult to fulfil, might be violated for independent director turnover. Nonetheless, this study argues that the trends before the law was revised work in favour of, rather than against, the questions investigated. For director turnover, the treatment group of cross-listed firms underwent a consistent declining trajectory whereas the control group of firms listed in Hong Kong (China) followed a path of modest increase. A counterfactual, without exogenous shocks, would find director turnovers of the treatment group to be lower in 2020 than in the previous year and that of the control group to be slightly higher. Empirically the data show instead a drastic reversal, leading to

Figure 1

Time-series plot of board independence of matched sample firms

(Percentage)



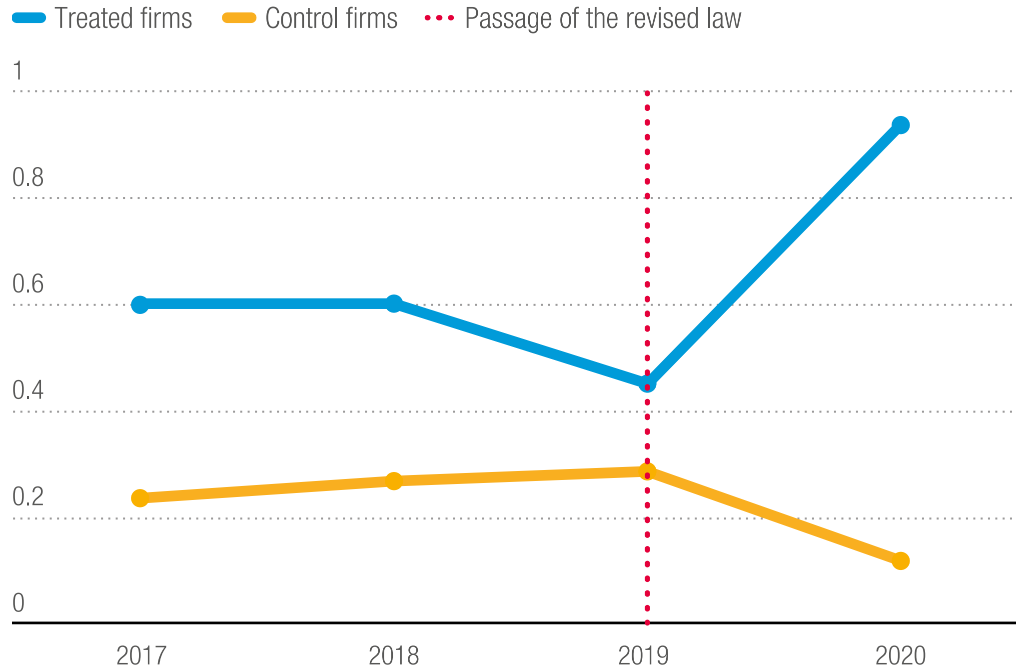
Source: Author's calculations.

Note: This figure plots the annual average of the board independence of cross-listed firms (treatment group) and firms listed in Hong Kong (China) (control group).

Figure 2

Time-series plot of independent director turnover of matched sample firms

(Average, persons per firm)

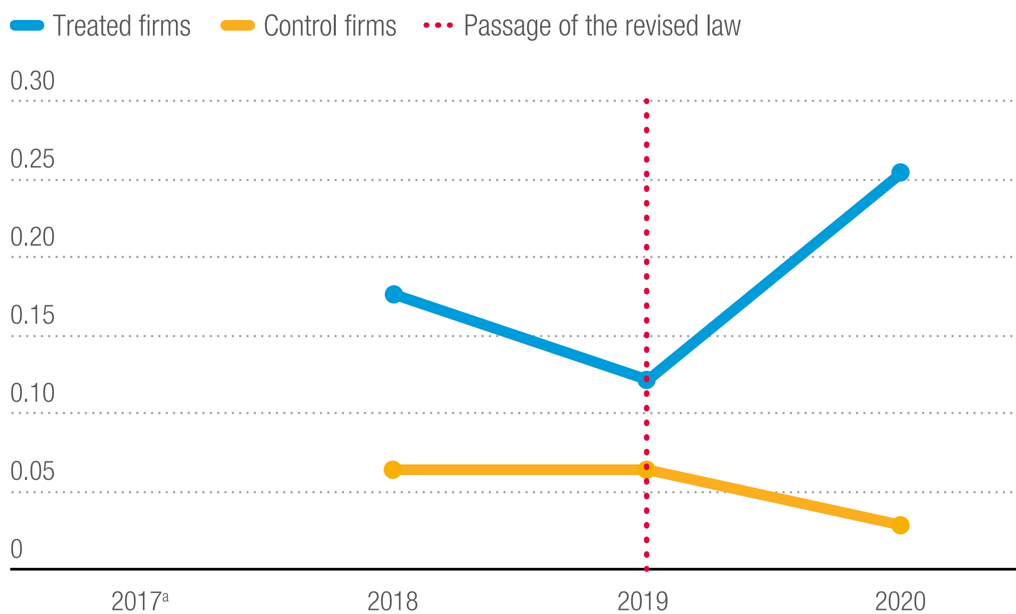


Source: Author's calculations.

Figure 3

Time series plot of percentage of independent director turnover of matched sample firms

(Percentage)



Source: Author's calculations.

[a] Percentage not available for 2017 because the data set does not cover 2016.

significant uptake unseen in the preceding three years for the treatment group, which this study argues may be attributable to the effect of the revision of the law.[8]

Now turning to the results from regression analyses, this study first reports baseline results of cross-listed firms against all firms on the Hong Kong Stock Exchange, because these results are more stable whereas the matched sample has the disadvantage of being subject to changes dependent upon the matching variables chosen. However, with the considerable benefits of robustness under matching (Ryan et al., 2018) and comparability across treatment and control firms, the study now focuses on results from analysing the matched sample.

Tables 3 and 4 report the baseline DiD empirical results on board independence and independent director turnover, respectively. The following discussions focus on results from the panel regression with both industry and year fixed effects as they represent the more stringent set

Table 3
Difference-in-differences baseline results: board independence

	Board independence		
	OLS		Panel linear
	(1)	(2)	(3)
Cross-lister: year 2020	-0.0068*** (0.0014)	-0.0079*** (0.0008)	-0.002 (0.0081)
Cross-lister dummy	-0.0302*** (0.0062)	0.0014 (0.0057)	
Year 2020 dummy	0.0140*** (0.0003)	0.0080*** (0.0005)	
Total assets (HK$ billion)		0.0000** (0.0000)	0.0000** (0.0000)
Return on assets		-0.0040 (0.0026)	0.0003 (0.0017)
Board size		-0.0209*** (0.0017)	-0.0243*** (0.0015)
Financial leverage		-0.0000*** (0.0000)	0.0000 (0.0000)
Strategic change		0.0012*** (0.0004)	0.0000 (0.0002)
Constant	0.4320*** (0.0088)	0.6062*** (0.0134)	
Observations	7 755	7 755	7 755
R^2	0.0284	0.3333	0.2154
Adjusted R^2	0.0262	0.3313	-0.1176

Source: Author's estimations.
Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The regression results compare cross-listed firms against *all* firms listed in Hong Kong (China) using the difference-in-differences technique. Analysis includes industry and year fixed effects; standard errors are clustered by industry and year.

[8] Empirically, the violation may result in a bias of the estimate.

Table 4
Difference-in-differences baseline results: independent director turnover

	Total turnover			Percentage of turnovers		
	OLS		Panel linear	OLS		Panel linear
	(1)	(2)	(3)	(4)	(5)	(6)
Cross-lister: year 2020	0.4113*** (0.0261)	0.4231*** (0.0353)	0.3489** (0.1774)	0.1132*** (0.0109)	0.1171*** (0.0130)	0.0936* (0.0498)
Cross-lister dummy	0.2767*** (0.0349)	0.3098*** (0.0307)		0.0671*** (0.0112)	0.0832*** (0.0113)	
Year 2020 dummy	-0.0910*** (0.0132)	-0.0967*** (0.0185)		-0.0270*** (0.0043)	-0.0307*** (0.0057)	
Total assets (HK$ billion)		0.0000** (0.0000)	0.0000 -0.0001		0.0000* (0.0000)	0.0000 (0.0000)
Return on assets		-0.1971*** -0.0632	-0.0803** -0.0381		-0.0600*** -0.0189	-0.0253** -0.0119
Board size		0.0061 (0.0092)	-0.0567*** (0.0150)		-0.0026 (0.0020)	-0.0126*** (0.0040)
Financial leverage		0.0000 (0.0000)	-0.0001*** (0.0000)		-0.0000* (0.0000)	-0.0000*** (0.0000)
Strategic change		0.0136*** (0.0041)	0.0011 (0.0032)		0.0039*** (0.0011)	0.0001 (0.0010)
Constant	0.3861*** (0.0274)	0.4651*** (0.0938)		0.1059*** (0.0063)	0.1636*** (0.0244)	
Observations	7 276	7 276	7 276	7 276	7 276	7 276
R^2	0.0203	0.0446	0.0093	0.0152	0.0402	0.0069
Adjusted R^2	0.0179	0.0416	-0.4269	0.0128	0.0372	-0.4303

Source: Author's estimations.
Note: * p <0.10, ** p < 0.05, *** p < 0.01. The regression results compare cross-listed firms against *all* firms listed in Hong Kong (China) using the difference-in-differences technique. Analysis includes industry and year fixed effects; standard errors are clustered by industry and year. The panel linear column reports within estimators equivalent to firm and year fixed effects.

of controls and the results are generally robust across specifications. First, the coefficient of interest measuring effects on board independence is close to zero, suggesting that board independence does not change substantively because of the revision of the law, at least in the short term. Second, the coefficient estimates for total independent director turnovers and percentage of such turnovers per firm are economically and statistically significant.

Tables 5 and 6 report the matched sample DiD empirical results on board independence and independent director turnover, respectively. The two observations from the baseline results on board independence and independent director turnover hold also in the matched sample. In particular, the 0.48 coefficient estimate on total turnovers suggests that the revision of the law resulted in about a 50 per cent increase in the likelihood of having an independent director turn over. The 0.12 coefficient estimate on percentage of turnovers combined with the average number of independent directors being three helps validate this finding, further ensuring the stationarity of the dependent variable.

Taking the baseline and matched sample results together, this study does not find strong evidence supporting hypothesis 1; specifically the revised law does not seem to significantly affect board independence. In contrast, this study finds strong empirical evidence in support of hypothesis 2, specifically that the revised law triggered significant turnovers among independent directors. To further investigate whether indeed such turnovers of independent directors are conducive to companies' corporate governance, which is central to hypothesis 2's claim on more involved board members, the study first discusses the conditions and subsequently examines other empirical data.

The turnover triggered by the increased legal mandate among directors could be beneficial to firms under certain conditions. Hauser (2018) offers causal evidence that focused directors contribute to higher profitability and market-to-book valuations in the focal firms. Firms with directors whose outside appointments are far from headquarters benefit most from directors

Table 5
Difference-in-differences results with matched firms: board independence

	Board independence		
	OLS		Panel linear
	(1)	(2)	(3)
Cross-lister: year 2020	-0.0117** (0.0046)	-0.0123** (0.0048)	0.0064 (0.0099)
Cross-lister dummy	0.0090 (0.0063)	0.0054 (0.0051)	
Year 2020 dummy	0.0176*** (0.0035)	0.0150*** (0.0030)	
Total assets (HK$ billion)		0.0000 (0.0000)	0.0000 (0.0000)
Return on assets		-0.0029 (0.0104)	-0.0026 (0.0025)
Board size		-0.0070*** (0.0019)	-0.0179*** (0.0043)
Financial leverage		0.0007 (0.0011)	-0.0001 (0.0004)
Strategic change		0.0007 (0.0006)	0.0008 (0.0007)
Constant	0.3855*** (0.0079)	0.4602*** (0.0227)	
Observations	642	642	642
R^2	0.1288	0.2204	0.2258
Adjusted R^2	0.0920	0.1808	-0.1178

Source: Author's estimations.
Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The regression results compare cross-listed firms against *matched* firms listed in Hong Kong (China) using the difference-in-differences technique. Analysis includes industry and year fixed effects; standard errors are clustered by industry and year. The panel linear column reports within estimators equivalent to firm and year fixed effects.

Table 6
Difference-in-differences results with matched firms: independent director turnover

	Total turnover			Percentage of turnovers		
	OLS		Panel linear	OLS		Panel linear
	(1)	(2)	(3)	(4)	(5)	(6)
Cross-lister: year 2020	0.4681***	0.4841***	0.4841***	0.1246**	0.1228**	0.1228***
	(0.1518)	(0.1651)	(0.1589)	(0.0534)	(0.0579)	(0.0476)
Cross-lister dummy	0.8830	0.8967		0.2918	0.3109	
	(0.5827)	(0.6739)		(0.2047)	(0.2484)	
Year 2020 dummy	-0.0913	-0.0684		0.1650***	0.1771***	0.1771***
	(0.0820)	(0.0954)		(0.0442)	(0.0339)	(0.0584)
Total assets (HK$ billion)		0.0000	0.0000		0.0000	0.0000
		(0.0003)	(0.0002)		(0.0001)	(0.0001)
Return on assets		0.0546	0.0546**		-0.0035	-0.0035
		(0.0929)	(0.0270)		(0.0127)	(0.0105)
Board size		-2.4351**	-2.4351***		-0.4248	-0.4248
		(1.0569)	(0.9099)		(0.3202)	(0.2736)
Financial leverage		-0.0273	-0.0273		-0.0027	-0.0027
		(0.0226)	(0.0209)		(0.0030)	(0.0026)
Strategic change		-0.0003	-0.0003		0.0029	0.0029
		(0.0176)	(0.0115)		(0.0048)	(0.0040)
Constant	0.0309	0.8122***		-0.1784***	-0.0210	
	(0.0608)	(0.3011)		(0.0518)	(0.0822)	
Observations	643	643	643	471	471	471
R^2	0.2643	0.2808	0.0359	0.3161	0.3214	0.0522
Adjusted R^2	-0.0114	0.0006	-0.3397	-0.0859	-0.0961	-0.5309

Source: Author's estimations.
Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The regression results compare cross-listed firms against *matched* firms listed in Hong Kong (China) using the difference-in-differences technique. Analysis includes industry- and year-fixed effects; standard errors are clustered by industry and year. The panel linear columns report within estimators equivalent to firm and year fixed effects.

having fewer directorships. Following this vein, Moursli (2019) finds that increased busyness of independent directors lead to decreases in firm value. Extra demand imposed by regulations is met with shortages in the supply of directors in the labour market, hence incumbent independent directors must join multiple boards, thereby increasing their business opportunities at the cost of reduced commitments to any single firm. Furthermore, were a firm to take the opportunity to appoint directors more befitting the new environment, such increased board turnover might be beneficial to the firm, for instance, if the board education level rises (Cotugno et al., 2020) or more female directors come on board (Boutchkova et al., 2020).

However, such sudden escalated turnover might also open doors to detrimental changes in the firms. Ingratiation of corporate leaders with independent directors and the tendency to appoint deferential individuals as independent directors combine to mitigate the effectiveness of an independent board (Westphal and Zajac, 2013).

The departure boom that this study uncovers might result in further justification for swiftly appointing replacements who are deferential, thence leading to corrosion of independent board monitoring in the long run (Fracassi and Tate, 2012). From the perspective of resource dependence theory, management is given an opportunity to co-opt by appointing their own representatives to the board in the face of difficulties in finding appropriate candidates. Li et al. (2021) document that independent directors who are appointed due to favouritism reciprocate by pampering the insiders through expropriation and tunnelling. Feng and Xiao (2021) find that higher director turnover rates lead to higher risk, but if new directors differ from their predecessors in terms of demographics and experience, such risks are reduced. In a similar vein, Vallelado and García-Olalla (2021) find that investors react negatively to board changes in banks across the European Union.

As Zattoni et al. (2020) observe, the finance literature often suggests that strengthening investor protection tends to induce shareholder-friendly firm-level corporate governance practices, while the strategy literature tends to argue that most new corporate governance practices outside the United States and the United Kingdom are adopted symbolically to make firms or countries more legitimate. The latter argument indicates that the strengthened institutions might either be symbolic or bring additional monitoring costs without additional benefits (Hermalin and Weisbach, 2012). The findings on unchanged board independence in the face of increased minority shareholder protection thus would seem to favour the argument advanced by the strategy literature. However, combined with greater director turnover – should it meet the conditions to benefit firms – the thesis of the finance literature on strengthened shareholder-friendly corporate governance at the firm level may or may not be supported. Hence here this study provides supplementary analyses to examine whether there is any indication of changes in the quality of independent directors' involvement in decision-making.

Demographic variables such as age and gender may be proxies for cognitive orientation that in turn affect director behaviour such as decision-making (Cuypers et al., 2022). Table 7 reports the age and gender of independent director replacements before and after the revision of the law for cross-listed firms and their matched peers. Notably, there are significantly more turnovers in the cross-listed firms than in their matched counterparts. For cross-listed firms directly affected by the revision, newly appointed independent directors seem to be slightly younger than before the revision.

In cross-listed firms, pre-revision replacements tend to include more women. This pattern might benefit firms in the long run as gender-diversified boards reduce the attendance problem for male directors and increase the probability of CEO turnover in the face of poor firm performance, and male directors who work with female colleagues also benefit in the same direction outside the focal board (Boutchkova et al., 2020).

Post-revision replacements among cross-listed firms, however, show similar shares of female directors as among the departed directors; this is not the same replacement pattern as before the revision. Among matched firms, however, director replacement patterns remain similar. Combined with the greater turnover shown earlier, the evidence suggests that firms may have opted to fill directorships left empty by sudden increases in unplanned departures rather than aim to refresh the board. Nonetheless, although the demographics examined may indicate a tendency in decision-making (Cuypers et al., 2022), the limitations of demographic proxies are obvious, particularly in terms of how the processes resulting in decisions unfold (Priem et al., 1999).

Another question on the robustness of the results relates to firm size, given

that previous studies have documented disproportionate macroeconomic effects on small firms (e.g. Beck et al., 2008; Demirgüç-Kunt et al., 2020) and differing growth impacts from similar strategies of small and medium firms such as outward investment (e.g. Santos-Paulino et al., 2023). Given that cross-listed firms tend to be large, the question arises as to whether firms of different size may receive differential effects from the revised law. Table 8 reports the average independent director turnovers of all mainland-listed firms in number and proportion, by firm size as categorized by assets. The data suggest that the effects of the revision on independent director turnovers mainly manifested among the largest and the smallest firms, while the medium-sized firms in the two middle quartiles saw little impact. Notably, average turnover increased 3 percentage points (or 30 per cent) for the largest firms post-revision compared with the previous three-year average from 2017 to 2019, with a similar increase of 4 percentage points (or 38 per cent) for the smallest firms. However, large and small firms may experience the seemingly similar situation quite differently: large firms typically have more resources to handle the increased turnovers and may draw on their status or reputation to recruit replacements, whereas small firms are more constrained (Beck et al., 2005).

Table 7

Independent directors: incumbents and replacements of matched sample firms, pre- and post-revision

Time indicator	Replacement dummy	Age, average	Gender	Observations	Missing percentage
Cross-listed firms: demographic of independent director					
0	0	58.83	0.06	108	9
0	1	58.10	0.19	148	0
1	0	57.18	0.10	83	21
1	1	55.24	0.09	100	0
Matched firms listed in Hong Kong (China): demographic of independent director					
0	0	57.07	0.10	59	2
0	1	56.92	0.13	89	33
1	0	59.79	0.07	14	0
1	1	61.20	0.07	25	40

Source: Author's estimation.
Note: Gender is 1 for female and 0 for male. Time indicator is 1 for post-revision (in 2020) and 0 for pre-revision (before 2020). The replacement dummy is 1 for directors who are newly appointed to replace departed directors, who are indicated by 0. Missing percentages indicate missing observations for the two demographic variables.

Table 8

Independent directors: turnovers among mainland-listed firms by firm size, pre- and post-revision

Firm size category (Percentage quartile)	Mean turnover, 2020	Mean percentage turnover, 2020	Mean turnover, 2019	Mean percentage turnover, 2019	Mean turnover, 2017–2019	Mean percentage turnover, 2017–2019
Largest (over 75)	0.11	0.03	0.08	0.02	0.08	0.02
Medium (50–75)	0.07	0.02	0.11	0.04	0.10	0.03
Smaller (25–50)	0.11	0.04	0.10	0.03	0.11	0.04
Smallest (below 25)	0.15	0.05	0.08	0.03	0.11	0.04

Source: Author's calculations.
Note: Average turnover before six years of tenure.

6. Concluding remarks and policy implications

Adopting a DiD design with matched samples of Chinese firms cross-listed in mainland China and Hong Kong (China) and of those listed only in Hong Kong based on propensity score matching, the study makes use of a natural experimental setting – the promulgation of China's Revised Securities Law in March 2020 – to pinpoint whether and how legal revisions of investor protection laws can benefit investors. The research question is inspired by the widespread principal–principal conflicts between majority and minority shareholders in emerging markets that result from concentrated ownership manifested as the presence of a small number of high-powered controlling shareholders and weak formal institutions, which are further exacerbated by an underdeveloped labour market of competent independent directors. Considering the limited transferability of good corporate governance principles to non-Anglo-American contexts, this study adopts a legal perspective, in line with the theme studies by La Porta et al. (1997, 1998, 1999, 2000 and 2002), to shed light on the role of country-level legal institutions, especially the improvement thereof, in shaping firm-level governance practices.

The empirical analyses derive the following findings. First, the study identifies that independent directors in cross-listed firms turn over significantly more often. The increased turnover alone could be both beneficial and detrimental to firms, depending on certain conditions. Second, the newly appointed directors seem to be filler replacements of their predecessors, i.e. they share similar demographics. Such one-for-one replacement may indicate that the turnover was not planned but that firms affected by the revision of the law need to fill directorships left empty due to sudden increases in unplanned departures. With the current observation window, the study finds no evidence of significant changes in board independence in the short run.

This study makes several theoretical contributions. First, it complements the mainstream corporate governance literature by offering insights into the principal–principal conflicts that are prevalent in emerging markets but have received limited scholarly attention so far (Young et al., 2008). Second, it highlights the usefulness of an inside-out contextualization approach in understanding familiar concepts in

non-Western contexts (Barkema et al., 2015; Tsui, 2007). Instead of testing the transferability or spillover of corporate governance practices informed by agency theory that were developed in response to Anglo-American realities, this study casts light on the effects of legislative revision on the conduct of firm-level corporate governance, which is more specific to the institutional contexts in emerging economies (Millar et al., 2005; Mueller, 2006). Third, it enriches the institutions-based perspective by observing how different levels of institutions offset or complement each other.

Because of the particular focus on legal institutions, this study also has critical implications for policymaking in terms of minority shareholder protection in emerging civil law economies. First, proportionality is a critical principle that policymakers should apply at both the firm level and the director level. The legislation examined in this study aims to bring proportionality in minority shareholder protection, learning from common law systems, for a civil law system. The approach is a laudable one, yet success calls for adaptation to account for institutional differences such as independent directors' incentives. More importantly, while larger firms such as the cross-listed firms in the study may absorb the costs related to the necessary changes and tap into the best talent for director replacements, that may not be the case for smaller firms which may find it too costly to comply with the changes. Likewise, experienced directors may have more leeway in their careers, yet less experienced directors may not adapt well on their own to the enhanced mandates. These are two aspects on which policymakers may need to make appropriate adjustments or interventions.

Second, post-reform evaluation should entail a wider scope to include examination of both intended outcomes and unintended consequences, uncovering the hidden costs. Directions of such investigation can draw lessons from studies on the institutional system modeled; in this case abundant inspiration can be gained from the literature examining the (unintended consequences of) the Sarbanes-Oxley Act in the United States.

Third, this study thus advocates an adaptive learning approach to legislative reform. As discussed earlier, even when legislators are all well intended, there may be unintended consequences that require deliberate examination, particularly after the fact, so as to (i) guide and shape the public's interpretation and perception of the reform, and (ii) introduce adequate policy measures to cater for potential adjustments.

Several limitations of this study may restrict generalization from the findings and thus require future research. First, to understand the causal effects the focus of this study is cross-listed firms, which tend to be large firms with more resources. Although smaller firms are also subject to the same forces from the legal reform, they may experience it rather differently given their more limited resources. One direction for future research may consider whether and how different types of firms respond to the legal reforms, e.g. by size, industry and profitability. Second, to examine the causal effects of the legal reform on director departure this study restricted its attention to the short run; future research may also consider longer-term effects but may need to deal with other confounders. One venue for future research to examine whether independent directors become more involved after the revision of the law may investigate directors' voting behaviour. Third, this study considers only a small set of demographic variables among directors owing to limited data availability in other aspects and the small sample of turnovers.

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