# Why Have Many U.S.-Listed Chinese Firms Announced Delisting Recently?

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#### **ABSTRACT**

In this study, we propose a new rationale for firms' delisting and going private decision: voluntary delist then reissue shares and relist in the "home" country, because of favorable government economic policy and regulatory changes. 29 (27) out of 127 U.S.-listed Chinese ADRs announced going private during 2015 alone (2011-14). Using these two waves of Chinese ADRs going private, we first examine three potential rationales proposed by prior literature, namely, undervaluation, free cash flows and cash holdings, and financial visibility. We find support for them generally, especially for the undervaluation hypothesis. More importantly, we provide evidences supporting our new rationale: government policy changes, which played a significant role in the 2015 wave of Chinese ADRs going private. Overall, our study highlights intensive competition among major international stock exchanges and the importance of government policy in the modern era of increasingly inter-connected global capital markets.

*Keywords:* Delisting and Going Private; Share Reissuance and Relisting; Government Policy and Regulation; Undervaluation; Variable Interest Entity; ADR and CDR

#### 1. INTRODUCTION

It has long been considered prestigious for Chinese firms to be listed on U.S. stock exchanges, as U.S. exchanges tend to have a superior legal and regulatory system. Listing in the U.S. share market allows the firm to be in an environment of better corporate governance and attract a wide spectrum of international investors, who may be willing to pay a premium to get into the growing Chinese markets. The number of Chinese ADRs has grown rapidly since the first listing in 1993. There were 127 Chinese ADRs trading on U.S. exchanges with a combined market capitalization of \$900 billion. It is, however, interesting to note that 29 Chinese ADRs announced their decisions to delist and go private in 2015 alone. A similar wave of Chinese ADRs announcing to delist and go private also occurred during the 2011-2014 period.

Why have many U.S.-listed Chinese firms recently announced delisting to go private? Previous studies on publicly traded firms' decision for going private have proposed several explanations for the drawbacks of being publicly traded on stock markets, including undervaluation (Maupin et al., 1984), agency problem connected to free cash flow (Jensen, 1986), corporate governance (Lehn and Poulsen, 1989), and higher costs involved in public disclosures required by the SOX Act (Engel et al., 2007; Gleason et al., 2007). In particular, accounting problems, including misreporting and accounting scandals, have caused the SEC to bring dozens of fraud cases against China-based firms since 2010 (Chen et al., 2013). The accounting problems and financial frauds of certain Chinese firms may have caused U.S. investors to distrust and undervalue other Chinese ADRs, leading other undervalued ADRs to consider going private.

Perhaps also importantly, the Chinese government recently proposed regulatory and policy changes to allow U.S.-listed Chinese companies with Variable Interest Entity (VIE) ownership structures to be eligible for listing in the strategic emerging industries board in China. Previously, Chinese firms with VIE structures and listed in the U.S. market faced a long and complicated process to delist and relist in the Chinese A-share market. However, in 2015, the Chinese government announced a series of policy changes, including relaxation of restrictions of companies with the VIE structure and removal of several regulatory hurdles aiming to encourage U.S.-listed Chinese firms to go back to the Chinese equity market. This may have caused U.S.-listed Chinese firms to consider delist and go private in the U.S. in 2015 and then re-list in the Chinese stock market, which generally offers higher average valuation for comparable companies.

In our study, we first test how undervaluation associated with the accounting problems and financial fraud affect Chinese ADRs' decisions to delist and go private. Then, we examine how Chinese government's economic policies and regulatory changes were involved in ADRs' goingprivate decision since previous studies have not considered listing requirement changes in the home country that cater to the relisting and "homecoming" of ADRs. It is interesting to examine why Chinese ADRs chose to delist from the U.S. market, despite the fact that listing in the U.S. has traditionally been perceived as being superior and prestigious. Thus, we firstly posit that there are positive abnormal returns resulting from the going private announcement, which would indicate that (i) undervaluation exists, and (ii) minority shareholders of Chinese ADRs in general share the benefits of going private, as DeAngelo et al. (1984) note. Chinese firms with relatively lower undervaluation, higher free cash flows or cash holdings, and lower financial visibility, when compared to the companies with same size and in the same industries in Chinese A-share market, are more likely to delist and go private. Then, we posit that the wave of Chinese ADRs announcing to delist and go private in 2015 was mainly motivated by Chinese government's economic policies and regulatory changes, and is different from the wave of going private during 2011-14, which was more likely motivated by undervaluation, which caused by the accounting problems and financial frauds of other Chinese companies. Our empirical analyses yield support for the above conjectures.

Our study contributes to the literature in the following ways. First and foremost, we propose a previously unexplored rationale for firms' going private decision: voluntary delist then reissue shares and relist in the "home" country, because of favorable government economic policy and regulatory changes. The number of Chinese ADRs going private increased after the announcement of policy and regulatory changes, and the abnormal returns occurring around the announcement date reflect the benefits of Chinese ADRs relisting at a valuation premium on Chinese as opposed to U.S. stock exchanges. Second, we add the characteristics of Chinese ADRs to undervaluation theory (Weir, 2005; Renneboog, 2007; and, Rao, 1995), which is one of the main reasons for companies going private in the U.S. In particular, Chinese ADRs that show signs of information asymmetry, slower growth, and higher cash holdings are more likely to delist and go private. Overall, our study highlights intensified competition among major international stock exchanges and the importance of government policy and regulation in the modern era of increasingly inter-connected global capital markets

#### 2. BACKGROUND

## 2.1. Chinese ADRs Delisting and Going Private

The first batch of Chinese ADRs started their U.S. listing in mid-1990s (Figure A1 in the Appendix). They were well established Chinese companies and in the core of the Chinese manufacturing and tertiary industries. Many of these companies are state owned enterprises (SOE) listed in China or Hong Kong for a long time and cross-listed on U.S. exchanges. The second batch started in 2000, including largely private sector companies in non-strategic industries, such as technology, general retailers, alternative energy, media, and travel and leisure. Many of these companies do not meet Chinese listing regulations and standards at the time of their U.S. IPOs. Since IPOs in China A-share market require government approval, many Chinese companies wanting to go public were not able to obtain listing approvals (Jia, Pownall, and Zhao, 2018). Many of these companies do not meet China or Hong Kong listing standards at the time of their U.S. IPOs. Many of these companies operate in China under unique structures – the variable interest entity (VIE) structure, which is common in the internet sector.

Chinese ADRs' going private transactions mainly take the form of management buyout through which managers take control and improve the firm as they are usually the equity holders and therefore share in the firm's profits. The going-private trend started in early 2010's and picked up steam in 2015 as Chinese companies felt compelled to move their equity trading venue back to China, where their valuation gap with peer stocks listed on the Shenzhen stock exchange was at a historical high level. In sum, there were 29 going-private announcements by Chinese ADRs in 2015; compared to 3 in 2014, 9 in 2013, 11 in 2012, and 4 in 2011 (Table A1 in the Appendix contains a list of these going-private announcements). Many of Chinese ADRs are small-cap. Smaller firms are more likely to go-private than large-cap firms (Rao, 1995; Mehran, 2009). A large portion of these companies are cash rich, and can provide in-house financing source for going-private transactions and for post-privatization funding requirements.

Associated with undervaluation, Chinese ADRs' decision to delist and go private may also relate to the possibility that newly listed firms are unable to achieve financial visibility in terms of stock turnover, analyst coverage, and institutional ownership. These firms may opt to withdraw from public markets after a short period of listing. In fact, Mehran and Peristianwe (2010) analyze firms that went public between 1990-2007, and find that the majority of firms chose to go-private after

being listed for less than five years. Firms with higher level of visibility are able to draw more investor interests and analyst coverage, while firms lacking analyst coverage result in lower stock turnover and firm valuation. Higher analyst coverage may also reduce the agency conflict between managers and investors of the firm (Jensen and Meckling, 1976).

Chinese ADRs going-private process is often conducted through "Merger and Consolidation" under Cayman Islands Companies Law 232~239 since many of these firms were registered in Cayman Islands. This method has a lower threshold as it only requires affirmative votes of two-thirds of shares to approve the proposal. Examples of successful going private transactions in recent years under the "Merger or Consolidation" method include 7 Days, AutoNavi, Focus Media, and Giant Interactive. It normally takes about four months from the announcement of the proposal to shareholders' voting and another several months before the deal closes. The special committee will not decide a definitive timetable for the completion of the proposed transaction or any other transactions until an agreement has been reached. A successful going-private deal may take around one year to complete - a few months of planning and another few months of execution and closing. Figure A2 in the Appendix shows details of the full process.

## 2.2. First Wave of Chinese ADRs Going Private (2011-2014)

The first wave of Chinese ADRs to announce going-private started in 2011. It occurred largely because the share prices of many Chinese ADRs dropped to low levels during 2011 to 2014, mainly caused by the accusation of accounting frauds involving Chinese Reverse Merger (CRM) firms (Siegel and Wang, 2013; Chen, Hu, Lin, and Xiao, 2015). The SEC has accused four accounting firms of violating U.S. Laws when they refused to give the SEC the audit-work papers for Chinese firms the SEC was investigating. The scandals have also been exacerbated by high-profile short sellers, such as Citron Research and Muddy Waters, who exposed several financial frauds involving Chinese firms listed in the U.S. and Canada, which prompted the SEC to put out an investor bulletin, warning the world of potential frauds involving Chinese firms. The accounting problems and financial frauds

<sup>&</sup>lt;sup>1</sup> For firms registered in U.S., they can use the "Two-Step Mergers," which requires that the buyer directly acquires 90% of shares and merges the listed company into a holding company. Or, alternatively, they can use the "One-Step Merger" under which a go-private plan would be passed only if it is approved by over 50% of shareholders plus over 75% of shareholding not held by the buyer.

tarnished the reputation of Chinese ADRs, and drove their share prices lower, even though many of them are high-quality companies.

There are two main types of delisting from the NYSE and NASDAQ: involuntary delisting and voluntary going-private. While our study focuses on the later, it is also informative to note that because of share prices falling below \$1 for 30 consecutive days, 41 Chinese ADRs were delisted from the OTC market during 2012-2015. These delists were related to or affected by the Chinese firms' accounting problems and financial frauds. <sup>2</sup> A voluntary going-private has two key prerequisites: (i) controlling shareholder of the company initiates the process, and (ii) all outstanding shares must be acquired with cash. Furthermore, in the case of companies incorporated in Cayman Islands, at least two-thirds of the ordinary shareholders' consent is required in proxy voting. Thus, going-private requires a significant amount of funding for share repurchase, repatriation tax, and professional fees.

## 2.3. Second Wave of Chinese ADRs Going Private (2015)

The second wave of Chinese ADRs going private occurred in 2015, in which 29 Chinese firms announced to delist and go private. As we argue below, the main motivating factor for the second wave is different from that for the first wave discussed above. The first wave of Chinese ADRs going private decisions are largely attributable to undervaluation caused by a series of accounting problems and financial frauds involving Chinese firms listed on U.S. or Canadian stock exchanges. The second wave is more related to Chinese government's regulatory and economic policy changes to induce oversea Chinese firms to repatriate and relist on one of the Chinese stock exchanges, where Chinese firms tend to get higher valuation than on U.S. stock exchanges.

Most of the companies in the second wave have a unique business model and are in a few industries, e.g., internet, in which demands and consumptions may be better understood by local investors than their foreign counterparts so higher valuation given to these companies may better reflect their value. For example, like the NASDAQ, the Shenzhen Stock Exchange lists many relatively small and high-tech firms. Nevertheless, the firms listed on the Shenzhen are generally traded at a significantly higher valuation than those on the NASDAQ. The higher valuation on the

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<sup>&</sup>lt;sup>2</sup>Sanger and Peterson (1990) document an abnormal return of -8.5% on the announcement day of delisting when firms were involuntarily delisted from a U.S. exchange. Similarly, Liu (2005) also shows a -4.5% return after foreign firms delisted in the U.S.

domestic markets, along with favorable changes in regulatory and economic policies attracts overseas Chinese firms to repatriate, create strong incentives for Chinese ADRs to delist and go private. In addition, home-listing may gain government supports, such as subsidies and tax benefits, and may also be accompanied with lower accounting, legal, and investor relations costs.<sup>3</sup>

Besides listing in Shanghai or Shenzhen Stock Exchanges, China's New Third Board (NTB) or OTC could become one of the alternative listing bourses. Listing requirements on NTB are less stringent for start-ups. In order to promote development of Chinese capital markets, State Council in May 2014 proposed increasing financial service support, encouraging companies in emerging sectors include internet, e-commerce, and education that opt to list in overseas markets to go public in China and removing regulatory restrictions on foreign ownership of e-commerce companies. Chinese government is also considering establish a separate board at Shanghai Stock Exchange to help highgrowth start-ups. There are three possible ways for Chinese ADRs to relist in a domestic market, including VIE tear-down and re-IPO (front-door listing), VIE tear-down and backdoor listing (reverse merger), or backdoor listing by injecting part of the business (carve-out). The first method, VIE tear-down and re-IPO in China, is the most commonly used method.

### 3. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

#### 3.1. Undervaluation

The poor share price performance of Chinese ADRs is potentially an important factor for them to delist and go private. Maupin et al. (1984) point out that a main consideration for firms to delist and go private is that market valuation as measured by the P/E ratio does not reflect the management's perceived value. The severer the undervaluation problem, the higher the chance management will take the firm private. Rao et al. (1995) find that firms that have a lower price-to-book ratio and a lower growth rate are more likely to delist and go private. Furthermore, using data from the U.K., Weir et al. (2005) show that undervaluation is indeed the main reason for firms going private, supporting the undervaluation hypothesis. Similarly, Hansen and Öqvist (2013) show that companies tend to announce going private decisions after a long period of negative abnormal stock returns and

<sup>&</sup>lt;sup>3</sup> Chen et al. (2013) show that the listing choices is not affected by country-specific effect but rather the choice of firms in choosing more stringent or loose corporate governance and financial reporting quality.

valuation discounts, which also supports the undervaluation motive for going private. Yang (2013) finds evidence that firms with a lower price-to-NAV ratio have a higher chance of going private and tend to offer a higher premium. The undervaluation hypothesis posits that going private should benefit shareholders as the firm is expected to generate additional value once it becomes private.<sup>4</sup> Several studies show a going private premium of 20-30% (see, e.g., DeAngelo et al., 1984; Lehn and Poulsen, 1989; and Renneboog et al., 2007). The premium provides evidence that the market has undervalued the firms going private, and implies that minority shareholders also gain from the going private decisions.

It is also possible that these firms intend to relist on China stock markets at a high multiple and close the valuation gap with China A-shares. We note that we compare Chinese ADRs listed in the US market with similar companies listed in the Chinese market to see whether there was a valuation gap. Therefore, the term undervaluation is in a relative sense, as we do not know the intrinsic values of these companies. The Chinese ADRs in the NASDAQ Golden Dragon China Index initially trade at a premium to the Shenzhen ChiNext Index as it was created much earlier, and provides access to companies in China. The Golden Dragon China Index includes companies whose shares are listed in the U.S. and the majority of their operations in China, while the ChiNext Index reflects the performance of innovative and fast-growing enterprises especially high-tech firms based in China. The valuation gap between Chinese ADRs and China A-shares, as shown in Figure A3 in the Appendix, started to reverse in 2011. In 2015, the valuation gap moved to a historic high after the Chinese government's call to support e-commerce development and guide China's internet companies in their plan to expand globally, pushing the valuation of China A-shares higher. Between 2011 and 2015, the ChiNext Index traded at an average price-to-book ratio of 5.3, far above the Golden Dragon China Index's average at 2.0. This wide valuation gap could have motivated Chinese ADRs to delist and go private and re-list on China stock exchanges. In sum, we propose that undervaluation as one of the main reasons for Chinese ADRs to delist and go private.

*H1*: Chinese ADRs decide to delist and go private after being undervalued in the U.S. market, relative to their ADR peers in the U.S. market and their peers in the Chinese market.

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<sup>&</sup>lt;sup>4</sup> Kalay and Loewenstein (1985) note that when a company is undergoing privatization and the management is the acquiring body, it may use accounting shenanigans to depress the share price before the announcement and management can utilize information asymmetry to their advantage before the management buyout.

### 3.2. Free Cash Flow and Cash Holding

The agency conflict between management and shareholders relates to control over a firm's resources and the payout of free cash to shareholders. The conflict is larger when the firm generates a high free cash flow as more resources are under management control. With free cash flow, the management may destroy a firm's value by empire building and act according to their self-interests. The agency problems reduce benefits of being a public company and make the company less attractive to investors. Based on Jensen's (1986) free cash flow theory, sources of gain for shareholders from going private transactions are (i) alleviation of agency problems connected with free cash flow, and (ii) the use of debt to finance going private transactions, which obligates management to pay out a portion of the free cash flow as interest payments rather than investing it in non-profitable projects.

Indeed, Rao et al. (1995) find that the greater the free cash flow, the more likely a firm will choose to delist and go private. Belkhir et al. (2013) also show firms that go private have higher free cash flows than ones that do not go private. Similarly, Lehn and Poulsen (1989) find an important connection between undistributed cash flows and firms' decisions to go private. They also show that undistributed cash flows as a percentage of equity is a major determining factor for the offer of premiums paid to stockholders. On the other hand, several studies suggest that the Jensen (1986) free cash flow theory has its limits in explaining firms' going-private decisions. For example, Renneboog et al. (2007) analyze U.K. firms' going private decisions, and find little support for the free cash flow theory. Instead, they show that the major types of shareholder wealth gains in going private transactions are undervaluation, tax shields, and incentive alignment. Opler and Titman (1993) and Halpern et al. (1999) also find that free cash flows have limited impact on firms' decisions to go private.

On the other hand, the free cash flow theory may also have limited impact on Chinese ADRs' going private decisions for the following two reasons. First, many of the Chinese ADRs who wish to delist and go private do not have large free cash flows as most of them are growth firms with significant demands for cash needed to finance ongoing investments. Second, it is usually the same founder-owners that possess a significant portion of the equity and effectively control the firm before and after going private. Consequently, the agency costs of free cash flow are likely to be low. To see

whether or not Chinese ADRs that announce going private are subject to the significant agency problems connected with free cash flow, we mainly follow Lehn and Poulsen (1989) in our empirical analysis. An alternative way is to look at cash holdings that may capture something temporary and help explain why a firm may decide to delist and go private at that time. Firms with higher cash holdings are subject to higher valuation discounts as the market perceives management not to be proactively seeking investment opportunities especially true for firms in high growth industries. However, these firms can delist and go private more easily as they can use cash to buy out minority shareholders' shares.<sup>5</sup>

**H2:** Chinese ADRs with higher levels of free cash flow and cash holdings are more likely to announce delisting and going private.

## 3.3. Financial Visibility

One of the reasons why Chinese ADRs choose to list in the U.S. is to increase their public awareness and investor recognition, as represented by analyst coverage, institutional ownership, and liquidity. Firms with high visibility have a lower information risk as they are able to attract investors' interests, which leads to a greater flow and availability of information. Higher investor recognition and lower information risk allow the firms to have a lower cost of capital. It is also easier for them to raise new capital on stock markets. Stulz (1999) finds that the cost of capital for a firm relies heavily on its corporate governance system and listing in the U.S. improves bonding.

However, Chinese ADRs may be motived to delist and go private if they are unable to draw analyst coverage and investor interests after a period of listing in the U.S. Financial analysts provide the crucial function of uncovering information and disseminating it to the market. Their research reports on listed companies affect interests of institutional and retail investors, who trade listed companies' shares. These trading activities make the stock market more efficient. Analysts also help to reduce adverse selection costs in dealing, and improve stock liquidity as highlighted by Brennan and Subrahmanyam (1995). Renneboog and Simons (2005) find an increasing concentration of analyst coverage of large capitalization stocks with higher liquidity. The role of financial analysts is

<sup>&</sup>lt;sup>5</sup> More than 20% of the 29 firms that announced going private in 2015 have cash holdings over 50% of their market values at the time.

especially important in covering Chinese ADRs as most of their operations are in China, not easily accessible for their investor base in the U.S. When liquidity is low, it is harder for companies to tap into capital markets to finance their expansion by issuing new shares. If Chinese ADRs are undervalued due to a lack of liquidity or analyst coverage, they may find the costs incurred to maintain their listing status and the costs of compliance with regulatory requirements unjustified, which may motivate them to delist and go private.

*H3:* Chinese ADRs with lower financial visibility are more likely to announce delisting and going private.

## 3.4. Chinese Government Policy Changes

There have been few studies on the impact of government policies on firms' going private decisions. Witmer (2008) shows that higher propensity for Canadian firms to delist in the U.S. is caused by the ease of listing for small, high growth, and minimal current cash flows Canadian firms in the U.S. Other more recent studies focus on passive reasons for delisting after the implementation of the Sarbanes-Oxley (SOX) Act of 2002 (Engel 2007), although it is not the active reason for listing rules changes to stimulate relisting in the domestic market. Most literature on regulatory changes related to the SOX Act generally applies to all publicly traded firms including Chinese ADRs. The SOX Act raises the costs of being a public corporation compared to being private. These costs include disclosure requirements, mandatory internal control procedures, limitations on appointments to the board of directors, and the cost of avoiding lawsuits. Gleason et al. (2007) indicate firms delist and go private to avoid the high costs of maintaining as a public company after the implementation of the SOX Act. Carney (2006) provides evidence that going private is a response to the SOX Act: the increased cost corresponds to the necessity for managers to assure the correctness of financial statements leading to better internal controls, higher insurance premiums, and increased penalties. Block (2004) also finds the costs of maintaining a listing status was the main reason for going private.

Chinese ADRs going private are dominated by companies in internet services, e-commerce, video streaming, and education (Table A2 in the Appendix shows a breakdown by industry). In 2015, Chinese government policy and regulatory bodies made a lot of efforts to bring U.S.-listed Chinese firms back home because successful Chinese firms in these growth industries were relatively scarce

in the A-share market. The China A-share market is one of the most active equity financing markets in the world and the internet is the hottest investment theme in China after Premier Li Keqiang created the idea of "internet plus" that combines internet with other traditional industries. Internet names in the A-share market generally trade at a large premium compared with overseas-listed peers. There are currently less than 30 internet stocks listed in the A-share market, and they typically trade at higher multiples compared to overseas listed Chinese internet stocks. Such high valuations reflect investors' enthusiasm and optimism for the sector. If the A-share market hopes to enhance and enlarge the internet sector it has to attract some of the overseas-listed elite companies to repatriate. The return process would involve a lot of issues, such as foreign capital industrial policies and listing policies. However, promoting the return process could drive reforms in existing systems and the regulatory framework. For example, the Eight National Rules for e-commerce and promoting the listing of companies with special equity structures in the domestic market as proposed by the State Council, as well as the likely rollout of the Shanghai Board of Strategic Emerging Industries, could facilitate the return of Chinese ADRs and promote improvement in regulations and policies.

The first regulatory change the Chinese government implemented is the relaxation of the restriction of the Variable Interest Entity (VIE) structure on May 19, 2015. It simplified the relisting in the Chinese A-share market process for Chinese ADRs. The majority of Chinese ADRs operating in government restricted sectors include media, education, and internet. The VIE structure is widely adopted for the purpose of avoiding China's regulation of foreign investment in these sectors. The VIE structure, as shown in Figure A4 in the Appendix, refers to the control relationship between a licensed operating entity in China and an overseas-listed company's wholly foreign-owned enterprise in China. The licensed operating entity shifts all its debts and interests to the foreign-owned enterprise, which enables the overseas-listed company to enjoy the entity's economic benefits despite having no direct controlling stake or ownership in this entity. Nonetheless, there is an inherent risk in the VIE structure, which involves the regulatory risk of the structure being declared invalid by Chinese authorities and contractual arrangements being unenforceable or insufficient to retain control over the VIE. These matters caused the VIE crisis of Alipay and New Oriental followed by the undervaluation of Chinese ADRs during 2011-2012. There are over 5,000 companies registered using the VIE structure. The latest listings are of small valuation due to there being less understanding of internal Chinese business models on the part of foreign investors or the stock price being low under the

pressure of overseas short sellers. Many companies with the VIE structure intend to return to China and the decision can be attributed to factors such as higher valuation and more favorable policies.

Under this regulation, Chinese ADRs with VIE structure intending to list in A-share market have to complete the following complicated procedure: delist in the U.S. market, scrap the VIE structure, restructure as a domestic company, terminate the ESOP of the foreign company, dissolve or transfer any foreign company, dissolve the domestic special vehicle registration, and finally apply for listing in the Chinese A-share market. The procedure is even less complicated for a private Chinese company. The new foreign investment law, introduced by the Ministry of Commerce in January 2015, was intended to replace the current laws that regulate foreign investment in mainland China. This will rectify the existing disparities between the regulatory treatments governing domestic and foreign investments and allow VIEs to be officially listed in China easily (Table A3 in the Appendix summarizes important policy changes).

The second regulatory change is the relaxation of the internet content provider (ICP) license, which is a pre-requisite for almost all internet companies to repatriate. The China Ministry of Industry and Information Technology allowed 100% foreign ownership of operational e-commerce companies on June 19, 2015 (Table A3). A notice about lifting the foreign ownership restriction on online data and transaction processing services, or Circular 196, made it possible for a foreign-owned entity established under the VIE structure to obtain a VATS license for e-commerce, and removed one of the important obstacles for VIE structured e-commerce companies being listed in China. The regulatory relaxation was piloted within the Shanghai Free Trade Zone at the beginning of 2015, and was later expanded nationwide. The relaxation of the restriction means that Chinese ADR e-commerce companies could simplify the relisting procedure and accelerate the "going home" process, skipping the necessary and time-consuming VIE structure teardown. This initiative signals the government's willingness to pave the way home for foreign listed internet companies. Overall, Chinese government policy changes could have provided incentives for Chinese ADRs to go private in the U.S. in order to relist in China.

**H4:** Chinese government policy changes positively affect Chinese ADRs' delisting and going private decisions in the U.S.

### 4. Data and Sample

We compile a list of Chinese ADRs that announced going private from multiple sources. We search SEC Schedule 13E-3 filings for Chinese companies that became private and obtain NYSE-and NASDAQ-listed Chinese ADRs from Bloomberg, then cross-check with the global equity investing depositary receipt service list from the Bank of New York Mellon. We exclude Chinese ADRs listed on OTC markets since they are not subject to SEC reporting requirements. We retrieve data on all companies that announced going private proposals, and filed a Form 8-K with the SEC, which recorded material corporate events during the period from 2011 to 2015 and we exclude companies which delisted from the NYSE/NASDAQ and relisted on the OTC. We also exclude mergers that involved two Chinese ADRs with payment made in the form of shares, instead of cash, because the combined entity remains listed in the U.S. There were two such mergers in 2012: Youku taking over Tudou and HiSoft merging with VanceInfo Technologies. Our final sample consists of 56 firms that went private (PGPs) and 71 firms that did not delist and go private (nPGPs). Stocks and companies' data of our sample firms were obtained from CRSP and Compustat.

## 5. Empirical Methodology and Results

To test our hypotheses, we applied three difference methods. The first method is the univariate matching method. A paired t-test is applied to see if the two sets of comparable firms are significantly different from each other. The matching method involves two steps. First, we select firms with similar net asset size within the same industry as defined by the Shenzhen Stock Exchange. Then, we calculated the differences of mean values of each paired(matched) PGP and nPGP companies and applied paired t-test on mean value of these difference for each index. We apply this matching method to test H1, H2, and H3.

The second method we use is the Cox Proportional Hazard Regression Model (hazard regression model). Following Mehran and Peristiani (2010), we use this model to measure factors affecting the going private decisions. Specifically, the hazard regression function estimates the probability that a publicly traded firm will announce going private. We apply the hazard regression model to test H1, H2, and H3. Following the literature, we use the following control variables in our empirical analysis: debt ratio (*Long term debt*), tax ratio (*Income tax*), capital expenditure (*CPAX*), firm size (*Log asset*), year and industry fixed effects, as they may contribute to firms' going private

decisions. Specifically, debt ratio is defined as the ratio between the firm's book value of long term debt and its equity. The tax ratio is income tax divided by net sales, capital expenditure is cash outflow for additions to the company's property, and firm size is the natural logarithm of the total sales. The hazard regression model takes the following form:

$$\lambda(t|X_i) = \lambda_0(t) \exp(\beta_1 X_{i1} + \dots + \beta_p X_{ip}) = \lambda_0(t) \exp(X_i \cdot \beta)$$

in which  $\lambda(t|X_i)$  is the hazard rate of PGPs' going private decision.  $\lambda_0(t)$  is the underlying baseline hazard function, which shows how the risk of event per time unit changes over time at the baseline levels of the covariates.  $X_{we} = \{X_{i1}, \dots, X_{ip}\}$  is the realized values of the covariates for subject i.

The third method is Event Study. We apply this method to test H1 to evaluate whether the company is undervalued. More importantly, we use this method to test H4 concerning the effects of Chinese government policy and regulatory changes on Chinese ADRs' share price performance. To assess the impact of such a factor on a firm's going private decision, we follow MacKinlay (1997) event study methodology to capture the event's economic impact, based on abnormal share price performance during the announcement period. We also use another type of event study proposed by Schwert (1981) to measure the impact of changes in Chinese government policies on firm value.

### 5.1. Undervaluation (H1)

To test H1 (undervaluation), we examine the valuation gap between PGPs and nPGPs. We compare the valuation gap in the P/B ratio of PGPs versus nPGPs for matched Shenzhen Growth Enterprise Market (GEM) stocks (i.e. PGPs-GEM versus nPGPs-GEM). The results are shown in Figure 1. Then, we use undervaluation as a dummy variable in the hazard regression model to test if undervaluation increases the hazard rate of PGPs going private over time and apply event study to test if PGPs were undervalued before they went private.

## [Insert Figure 1 here]

Table 1 shows the valuation gap between Chinese ADRs and the Shenzhen GEM (GEM) existed during the period 2010-2014. Listing in the U.S. does not give a higher valuation to Chinese ADRs despite the stronger corporate governance in the U.S. relative to China. One possible cause of undervaluation is negative investor sentiment towards U.S.-listed Chinese firms after misreporting and accounting scandals caused the SEC to bring dozens of fraud cases against China-based firms.

Another reason could be home bias by local investors, who tend to be reluctant to invest in foreign shares. A cause of home bias comes from asymmetric information between home and foreign investments as local investors face constraints with regard to access to credible information about foreign firms. Thus, local U.S. investors prefer to invest in firms they are familiar with. The reliability of information is an even more challenging problem due to the complex VIE structure of many Chinese ADRs. The home bias phenomenon does not only apply to Chinese ADRs. King and Segal (2003) show cross listing does not alleviate U.S. investors home bias as cross-listed Canadian firms also trade at a discount with respect to other U.S.-listed firms, and foreign firms that fail to reduce information costs by listing in the U.S. are underweighted by U.S. investors (Ahearne, 2004).

### [Insert Table 1 here]

The univariate matching results in table 2 shows that PGPs have a lower P/B ratio and a wider valuation gap (PGPs-GEM) relative to nPGPs (nPGP-GEM) during the period of 2011-2015. The univariate matching results in Table 3 divide the sample period into 2011-2014 versus 2015. The valuation gap between PGP and nPGP is significant in 2011 to 2014, but not in 2015. This suggests that there are factors other than undervaluation that motivated going private transactions in 2015.

## [Insert Tables 2 and 3 here]

The results of the hazard regression model in Table 4 shows that the impact of undervaluation is significant with and without firm specific control variables that include leverage, firm size, capital expenditure, and tax benefits. However, when we incorporate year and industry fixed effects, the difference in undervaluation disappears. This suggests cross-year and cross-industry differences. The results of year effects show that the probability of going private in 2015 is higher than the other years. The results of the industry effects do not show any significant differences among different industries. Undervaluation can only have an impact across years and across sectors, but cannot explain intrayear and sector differences. The hazard regression model in Table 5 divides the test period into two periods, 2011-2014 versus 2015. The results show that undervaluation had an effect on the going private decision in 2011-2014, with or without control variables, but had no effect in 2015. These evidences suggest that the motivations for these two waves of going private transactions may have different reasons, with the first wave during 2011-2014 more due to undervaluation.

## [Insert Tables 4 and 5 here]

Overall, these results support H1: undervaluation is the main cause for Chinese ADRs going private during the period of 2011-2014. In addition, instead of undervaluation, other factors may affect Chinese ADRs' decision to delist and go private in 2015.

### 5.2. Free Cash Flow, Cash Holding, and Financial Visibility (H2 and H3)

To test H2 (free cash flow and cash holding), we follow Lehn and Poulsen (1989) to see if free cash flow in a firm is related to the possibility of a firm announcing going private. The free cash flow theory of Jensen (1986) states that the source of shareholder gains stems from mitigating agency problem related to free cash flow that is not invested into positive net present value projects nor returned to shareholders in the form of dividends. The free cash flow is defined as follow:

$$CF = INC - TAX - INTEXP - PEDDIV - COMDIV$$

in which *CF* is the undistributed cash flow (percentage to equity); *INC* is the operating income before depreciation; *TAX* is the total income taxes; *INTEXP* is the gross interest expense on short-term and long-term debt; *PEDDIV* is the total amount of preferred dividend requirement for cumulative preferred stock and dividend paid on noncumulative preferred stock; and *COMDIV* is the total dollar amount of dividends declared on common stock. We examine whether PGPs have higher free cash flows and are more likely to delist and go private by making a univariate comparison between PGPs and nPGPs. We also include *CF* as a dummy variable in the hazard regression model to analyze whether it has a role in influencing the going private decision. We also collect cash balance of each firm from its balance sheet and calculate cash holding as a percentage of the firm's market capitalization. Then, we conduct univariate tests between PGPs and nPGPs, and a hazard regression model including the cash holding ratio to see if there is any correlation between cash holding and the going private decision.

The univariate matching analyses in Tables 2 and 3 illustrate PGPs have lower FCFs than nPGPs before they announce delisting and going private, but the difference is not statistically significant. PGPs can have lower cash flows due to cash outlays used to finance positive net present value projects. It is also common for small and young companies to deploy a lot of cash for corporate development and debts repayment in the early years of their establishment. The results also show that PGPs have significantly higher levels of cash holdings than nPGPs. Excess cash holdings can also be

used as an option to defend against hostile takeover bids. Faleye (2004) found firms that are targets of proxy fights target have 23% higher cash holdings than comparable firms. Idle cash can also be used for stock repurchases when share prices are weak in order to enhance shareholders' returns. The hazard regression results are reported in Tables 6 and 7, which show that higher free cash flow is positively and significantly associated with Chinese ADRs' decisions to delist and go private after controlling for the firm size and industry fixed effect.

## [Insert Tables 6 and 7 here]

Overall, our empirical results especially those based on multivariate analysis are consistent with H2: Chinese ADRs with higher levels of free cash flow and cash holdings are more likely to announce delisting and going private. Our findings are consistent with prior literature focusing on US firms, e.g. Rao et al. (1995) and Belkhir et al. (2013), which find that firms that go private have higher free cash flows than firms that do not.

To test H3 (financial visibility), we examine if lower financial visibility (rate of growth of analyst coverage, change in institutional ownership, and liquidity) motivates the going private decision. The growth in analyst coverage is a measure of the change in the number of analysts actively tracking and writing opinions about a company. Companies with higher analyst coverage will have higher firm value (Chung and Jo, 1996) and companies with lower analyst coverage have less ability to raise fund in the stock market (Bowden, Chen, and Chang, 2004). The change in the number of institutional shareholders and the rate of growth in institutional ownership indicates the changes in the level of mutual fund and pension fund investment in a firm. Companies with lower institutional investor participation are more likely to delist and go private (Boot, Goplan, and Thakor 2006). Liquidity is a measure of the turnover of a stock and it shows the level of investor activity and interest in the company. Aside from the four proxies above, we form a composite index to capture the common component in these four proxies of financial visibility. The financial visibility based on the first principal component of the four visibility proxies is defined as:

$$\label{eq:Visibility} Visibility_{i,t} = 0.532 cov g_{i,t} + 0.543 inshold_{i,t} + 0.598 insnum g_{i,t} + 0.248 to_{i,t}$$

in which *Visibility* is the composite index; *covg* is the growth of analyst coverage; *insholdg* is the change in number of institutional owners and growth rate of institutional ownership; *insnumg* is the growth rate of institutional number; and *to* is the liquidity of the stock or the ratio of dollar volume trade to market capitalization. For the composite index, each of the four components are first

standardized. The first principal component explains 42% of the sample variance. We compare PGPs and nPGPs using univariate matching and set different proxies as dummy variables in a hazard regression model to examine if there is a relationship between lower financial visibility and the going private decision.

The results of univariate matching in Tables 2 and 3 show a general decline in analyst growth, institutional ownership and institutional growth during the last year before the announcement to delist and go private among PGPs in the 2011-14. However, the disparities between PGPs and nPGPs are not significant. There is no significant difference between PGPs and nPGPs in the visibility composite. Furthermore, the results also show that PGPs had a statistically significant lower liquidity than nPGPs in the period 2011-2014. The hazard regression in Tables 6 and 8 also exhibits a noticeable decline in institutional ownership and institutional number in 2011-2015. In particular, the decline in institutional ownership had a significant effect on the going private transactions that took place in 2015. A stock with a low institutional ownership number is uneconomical for a research analyst to cover. Research analysts write research reports and market them as part of brokerage services provided to institutional clients including pension funds and unit trusts, and these institutions pay for the research and will increase their ownership if they are satisfied with the marketing. The institutional client's interest will determine which listed companies the analyst is to follow. Notwithstanding the above firm size also influences the extent of analyst coverage; the stock of large firms is widely held by institutional investors, and large firms release more public information, compared to small firms. Firms in the PGP groups are relatively smaller than the nPGPs, and the IPOs of Weibo and Alibaba in 2013 and 2014 further widened the size gap between the two groups. The results also shows that the turnover had an effect on going private in 2015. Having lower liquidity will affect the order flow and price of a stock causing it to be subject to greater mispricing (Amihud, 2002). If a company suffers a long period of low value it is hard to finance future expansion by way of issuing new shares. As the company is unable to access the capital market a listing on the exchange becomes uneconomical and there is more incentive to go-private. Institutional investors usually trade in large volume and typically favor stocks with high turnovers.

[Insert Table 8 here]

The results from the univariate matching analysis and hazard regression show evidences of a general decline in the number of institutional owners and institutional ownership growth, and liquidity among PGPs relative to nPGPs. These three proxies stand out as being the major causes of the lower financial visibility that affects the Chinese ADRs decision to delist and go private. The hazard regression results also show that institutional ownership number, institutional ownership growth and liquidity had a significant effect on decision to delist and go private during 2015, and this partly explains the surge in going private transactions that formed the second wave of Chinese ADRs going private. The results also suggest that both the univariate matching and hazard regression are consistent with each other and robust.

### 5.3. Chinese Government Policy Changes (H4)

Finally, we test H4 (Chinese government policy changes). The main regulatory change occurred on May 19, 2015, when the CSRC (the Chinese "SEC") announced a plan to establish a strategic emerging industries board on the Shanghai Stock Exchange, allowing technology firms, including those listed in the U.S. and those with an eligible VIE ownership structure to be listed on the new board. The new board intends to support innovative companies while existing laws and regulations will revise to promote the relisting of overseas-traded Chinese technology firms on the Ashare market. We conduct two different event studies to test H4: one around the announcement of the policy change on May 19, 2015, and one on the two separate waves of PGPs during 2011-2014 versus during 2015.

The majority of Chinese ADRs were incorporated under the VIE structure to avoid Chinese regulations on foreign investment in prohibited and restricted sectors. The policy change on May 19, 2015, allows VIE listing on a new strategic emerging industry board. This policy change provided formal legal legitimacy for the VIE structure, allowing U.S.-listed Chinese companies, many organized under the VIE structure, access to Chinese capital markets. In Table 10, we conduct an event study around the policy change announcement on May 19, 2015. We exclude ADRs that announced to delist and go private during the pre-event period (January 1 – May 19, 2015, 6 PGPs), because share prices might have already reacted to the going private announcement and the offer premium represents the level of the shareholders' wealth gain. We also exclude firms that announced going private within one month (May 19 – June 18, 2015, 10 PGPs) after the regulatory change, as

we are not sure if the share price reaction is due to the policy change announcement or the result of the upcoming going private announcement. The results of the event study in Table 9 show the abnormal return following the policy change announcement is only significant for those PGPs that announced going private after the regulatory change on May 19, 2015 (3.8% and significant), and not significant for the nPGPs (0.3% and insignificant). Regression coefficients for 1-day and 3-day abnormal returns of the PGP dummy in Table 10 are also significant and shows similar results.

## [Insert Tables 9 and 10 here]

Figure 2 plots cumulative abnormal returns around going-private announcement dates for all sample PGPs, and separately for PGPs during 2011-2014 versus 2015. Figure 2 shows that for all PGPs during 2011-2015, there is large jump of CAR on the day of going-private announcement. By separating all PGPs into the two waves, 2011-2014 versus 2015, one can see that the jump on announcement day is mainly due to the first wave of PGPs (2011-2014). For companies going private before 2015, undervaluation is a very significant factor since the cumulative abnormal return on the event day exceeds 20%. On the other hand, for the 2<sup>nd</sup> wave of PGPs in 2015, the cumulative abnormal return only goes up by less than 5%. These findings are consistent with our findings in subsection 5.1 about the undervaluation hypothesis (H1), suggesting that there are other factors at work affecting Chinese ADRs' going-private decisions in 2015.

### [Insert Figure 2 here]

Combining these findings with our results in Tables 9 and 10 showing positive abnormal returns around Chinese government's policy change among firms going private later, we conclude that Chinese government policy changes in 2015 is among the main contributing factors for going private decisions in the second wave, supporting H4. This provides a reasonable explanation for why the number of Chinese ADRs going private surged to 29 in 2015 alone compared to a total of 27 during the previous three years, 2011-2014, especially given that the undervaluation gap in fact declined in 2015 compared to before.

### 6. CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Chinese ADRs going private in the U.S. is an interesting phenomenon. Most investors recognize China as one of the most important emerging economies, with Chinese companies having

significant long term value-accretive potential as the country shifts toward higher value-added activities, continues to industrialize, demonstrates greater technological innovation and undergoes economic maturation with the support of the new administration. However, some of the Chinese ADRs listed in the U.S. are unable to achieve a higher valuation despite exposure to a wider investor base (Pagano et al., 2002) and superior corporate governance (Licht, 2003).

In this study, we have investigated the reasons for Chinese ADRs deciding to delist and go private during the period 2011-2015. In the first delist and go private wave between 2011 and 2014, our tests demonstrate there is a strong link between undervaluation and the decision to delist and go private (Rao, 1995; Weir 2005). We find most Chinese ADRs suffer from a long period of undervaluation and going private provides sources of gains for shareholders (Renneboong et al.2007). This is demonstrated by the abnormal share price performance during the announcement period. Most delist and go private Chinese ADRs have a lower relative industry valuation particularly in the IT industry, as measured by the gap in value between the P/B ratio of Chinese ADRs and the Shenzhen GEM. The lower P/B ratio is attributed to lower growth and lack of positive net present value projects relative to other non-going firms.

We also find signs of information asymmetry coming from the generally lower financial visibility of the going private firms which is also one of the main causes of undervaluation. The variable interest structure of Chinese ADRs reduces information access so that research analysts are hindered from completing their research coverage and this subsequently causes a decline in institutional ownership growth and liquidity before a going private transaction. The existence of the home bias phenomenon also caused U.S.-listed Chinese firms to be severely underweighted when consider for inclusion in U.S. equity portfolio (Darrough, 2012). Moreover, the lower valuation of Chinese ADRs may also be caused by the spillover effect of negative investor sentiment toward Chinese reverse merger firms after several fraudulent accounting practices and other shenanigans were disclosed.

Most importantly, we conclude the sudden surge of going private transactions in 2015 can be explained by government regulatory changes. Previous research seldom examined the listing requirement changes in the home country catering for the relisting of ADRs because listing in the U.S. has been perceived as being superior. The VIE structure has been used to avoid China's regulatory restrictions on foreign ownership in several industries so they can get listings overseas. Almost all

Chinese internet firms listed on foreign stock exchanges use the VIE structure. There are currently over 5,000 firms with the VIE structure. A lot of Chinese start-ups preparing to list have very limited choice other than to set up using the VIE structure, which implicitly indicates that the majority of Chinese ADRs do not intend to list on overseas markets in the first place and suffer from long periods of undervaluation, and that regulatory changes is the trigger that causes companies to consider relisting in domestic markets.

The "homecoming" process of Chinese ADRs involves global stock exchanges, fund flows, and different financing channels such as private equity facilitation. These difference stages of developments offer a path way for future research. It will also be of interest to examine which way of relisting, including re-IPO, backdoor listings, and carve outs will achieve the highest valuation. What is more, Chinese government has announced plans to allow issuance of Chinese Depository Receipts (CDRs). Since many Chinese internet tycoons, such as Baidu, Alibaba, Tencent, and JD all have adopted the VIE structure and share structures with weighted voting right and some companies even have not achieved profitability so far, issuance of CDRs can bypass these legal and policy obstacles and achieve faster and lower-cost A-share trading, especially when compared to the revision of the IPO system or the change in the ownership structure of companies, Thus, these policies will attract enterprises that have been listed overseas and have large market capitalization as well as those that are not yet listed on the domestic market but also have a VIE structure, such as Didi and Meituan-Dianping. For both these types of companies, entering the A-share market through issuance of CDRs might be best option.

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**Table 1**Matching ADRs with GEMs and valuation gaps

Panel A of this table shows the number of matched ADRs between 2010-2014. Majority of the firms are from wholesales & retail and IT sectors. Panel B compares the P/B Ratio (price-to-book ratio) of ADRs with P/B ratio of stocks in Shenzhen Growth Enterprise Market (GEMs) over 2010-2014 period. The sample includes all firms with available Compustat and CRSP information. Each ADR is matched with comparable GEMs of similar market capitalization and industry. \*, \*\*and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively.

	Panel A: Matched ADR Numbers			Panel B: P/B Ratio Gaps						
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
Total	77	81	70	64	75	-2.192*** (0.00)	-1.939*** (0.00)	-1.266*** (0.00)	-0.624 (0.31)	-3.032*** (0.00)
Wholesale & Retail	27	27	23	24	28	-1.000* (0.08)	-1.009** (0.03)	0.151 (0.81)	2.159* (0.06)	-1.857* (0.08)
IT	27	29	27	23	28	-1.932** (0.04)	-1.648*** (0.00)	-1.329*** (0.00)	-1.466 (0.12)	-3.789*** (0.00)

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Table 2
Univariate and matching comparison between PGPs and nPGPs

This table compares PGPs (ADRs that delist and go private) with nPGPs (ADRs that do not delist and go private) in 2011-2015. Undervaluation measures the valuation gap between PGP-GEM and nPGP-GEM. FCF= operating income before depreciation – total income taxes – gross interest expenses on short and long-term debts – preferred stock dividend – common stock dividend. Cash = cash holding of the firm. Analyst growth = difference in the log(number of analysts+1) from year (t) to year (t-1). Inst ownership growth = institutional ownership (percentage). Inst number growth =institutional number (percentage). Turnover = stock trading volume divided by market capitalization (percentage). Visibility composite = Analyst growth + Inst ownership growth + Inst number growth + Turnover. Visibility<sub>i,t</sub> =  $0.532covg_{i,t} + 0.543$ insholdg<sub>i,t</sub> + 0.598insnumg<sub>i,t</sub> + 0.248to<sub>i,t</sub>. The matching difference column presents *t*-test results on the mean value of the differences of matched pairs of PGP and nPGP companies. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively.

	PGPs Samples (N = 193)	nPGPs Samples $(N = 281)$		
	Mean	Mean	<ul><li>Matching</li><li>Difference</li></ul>	
Undervaluation	-2.637	-2.414	-0.371**	
			(0.04)	
FCF	0.083	0.135	-0.007	
			(0.57)	
Cash	0.309	0.255	-0.112***	
			(0.00)	
Analyst growth	0.436	0.164	-0.045	
			(0.82)	
Inst ownership growth	0.032	0.014	-0.008	
			(0.37)	
Inst number growth	6.228	6.769	-1.625	
			(0.22)	
Turnover	4.913	5.204	-0.987*	
			(0.05)	
Visibility composite	0.078	-0.04	-0.117	
			(0.15)	

 Table 3

 Univariate and matching comparison between PGPs and nPGPs: 2011-2014 versus 2015.

This table compares PGPs with nPGPs for the two subsamples in 2011-2014 and 2015 respectively. The matching difference column presents *t*-test results on the mean value of the differences of matched pairs of PGP and nPGP companies. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively.

	nPGPs Samples ( <i>N</i> =281)	PGPs Samples	(2011-2014) ( <i>N</i> =55)	PGPs Samples (2015) ( <i>N</i> =138)	
	Mean	Mean	Matching Difference	Mean	Matching Difference
Undervaluation	-2.414	-3.348	-0.693*** (0.00)	-2.260	-0.200 (0.41)
FCF	0.135	0.109	-0.002 (0.93)	0.066	-0.010 (0.53)
Cash	0.255	0.306	-0.171*** (0.00)	0.311	-0.076*** (0.00)
Analyst Growth	0.164	0.694	-0.066 (0.82)	0.280	-0.033 (0.90)
Inst Ownership Growth	0.014	0.045	-0.008 (0.50)	0.024	-0.008 (0.51)
Inst Number Growth	6.769	6.918	-2.132 (0.23)	5.807	-1.329 (0.47)
Turnover	5.204	2.505	-3.203*** (0.00)	6.478	0.416 (0.57)
Visibility Composite	-0.040	0.104	-0.191* (0.08)	0.062	-0.070 (0.54)

**Table 4**Cox Hazard Regression Model: Undervaluation.

This table shows the impact of undervaluation on the decision to go-private. The dependent variable in the Cox hazard regression model is the probability that the ADR will choose to go-private given it has not done so until that point in time. We also examine the other explanations proposed in the LBO literature and set them as control variables. Long term debt is the firm's ratio of long-term debt to equity which relates to transfer of wealth from bondholders to equity holders. Income tax is the total income taxes to net sales and relate to transaction cost. CAPX is the cash outflow to acquire firm's plant, property and equipment over net sales, this is a proxy to investment opportunity. Log assets = net assets (\$ millions) use to control the firm size. Fixed effects are years and industries; we can see if the undervaluation effect is intra-year or inter-year and if there is difference between industries. The likelihood ratio test shows if the covariate effects are statistically different from zero and full model is better than the restricted model. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively.

	Without Controls	With Contr	ols
Undervaluation	-0.167**	-0.173**	-0.099
	(0.01)	(0.01)	(0.22)
Long term debt		-0.531	-0.569
_		(0.19)	(0.18)
Income tax		-1.384	-0.577
		(0.74)	(0.89)
CAPX		-0.195	-0.527
		(0.87)	(0.65)
Log asset		0.09	0.014
_		(0.53)	(0.93)
Fixed effect		, ,	Years and Industries
Number of delist events	51	51	51
Firm-year observations	367	365	365
Likelihood ratio test	6.992***	9.609*	30.981***

Table 5

Cox Hazard Regression Models 2011-2014 versus 2015: Undervaluation

This table examines the impact of undervaluation on going private decisions in 2011-2014 and 2015. We put undervaluation as dummy variables to test if its presence may shift the going private decision. In column 3 we add control variables include long term debt, income tax, CAPX, log asset. In column 4 we further set fixed effect includes year and industry as constant and test accordingly. The likelihood ratio test shows if the full model include undervaluation is better fit than the restricted model. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively.

	Without Controls	With Contr	rols
Undervaluation $\times$ Dummy <sub>2015</sub>	-0.051	-0.064	-0.003
	(0.52)	(0.43)	(0.97)
Undervaluation $\times$ Dummy <sub>2011-2014</sub>	-0.204***	-0.213***	-0.426**
	(0.00)	(0.00)	(0.01)
Long-Term Debt		-0.481	-0.633
_		(0.23)	(0.15)
Income Tax		-1.216	0.122
		(0.77)	(0.98)
CAPX		-0.432	-0.33
		(0.7)	(0.78)
Log Asset		0.105	0.002
		(0.47)	(0.99)
Fixed Effect			Year and
			Industry
Number of Delist Events	51	51	51
Firm-Year Observations	367	365	365
Likelihood Ratio Test	11.464***	13.794**	36.798***

Table 6
Cox Hazard Regression Models for the Going-Private Decision:
Free cash flow, cash holding, and financial visibility

This table examines the hazard regression model based on other explanatory variables include free cash flow, cash holding, and financial visibility variables. Undervaluation is the main explanatory variable to analyze the firm's motivation to go-private. All explanatory variables are lagged by one year to reduce regression endogeneity problems. The likelihood ratio test shows if the full model include explanatory variables is better fit than the

restricted model. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Undervaluation	-0.142*	-0.096	-0.109	-0.082	-0.096	-0.099	-0.097	-0.128
	(0.1)	(0.24)	(0.21)	(0.36)	(0.28)	(0.23)	(0.27)	(0.17)
FCF	2.479***							2.447***
	(0.01)							(0.01)
Cash		-0.659						-0.746
		(0.5)						(0.48)
Analyst Growth			0.058					
			(0.38)					
Inst Ownership Growth				-2.251*				
				(0.09)				
Inst Number Growth					-0.003			
					(0.77)			
Turnover						0.026		
						(0.12)		
Visibility Composite							-0.013	-0.044
							(0.94)	(0.79)
Long Term Debt	-0.803	-0.596	-0.573	-0.562	-0.538	-0.439	-0.338	-0.737
	(0.13)	(0.17)	(0.18)	(0.18)	(0.2)	(0.38)	(0.49)	(0.21)
Income tax	-2.116	-0.117	-0.211	-0.455	-0.711	-0.097	-0.765	-2.012
	(0.65)	(0.98)	(0.96)	(0.91)	(0.86)	(0.98)	(0.85)	(0.68)
CAPX	-0.521	-0.455	-0.79	-0.447	-0.675	-0.703	-0.848	-0.77
	(0.64)	(0.7)	(0.55)	(0.72)	(0.6)	(0.57)	(0.53)	(0.57)
Log Asset	-0.213	-0.019	0.039	0.022	0.011	-0.056	-0.004	-0.214
	(0.22)	(0.91)	(0.81)	(0.89)	(0.94)	(0.72)	(0.98)	(0.25)
Fixed Effect	Year and							
	Industry							
Number of Delist	51	51	48	48	48	51	48	48
Events								
Firm-Year Observations	360	365	310	310	310	352	299	296

Likelihood Ratio Test 40.088\*\* 31.446\*\*\* 26.779\*\*\* 28.855\*\*\* 26.086\*\*\* 31.282\*\*\* 23.864\*\*\* 35.426\*\*\*

Table 7
Cox Hazard Regression Models 2011-2014 vs 2015: FCF and Cash Holdings

This table examines the FCF and cash holdings impact on going private decisions in 2011-2014 and 2015. We set FCF and cash holdings as two dummy variables to see if their presence shifts the going private decision. We also set control variables include long term debt, income tax, CAPX, log asset and fixed effect (year, industry) as constant. The likelihood ratio test if the full model includes FCF and cash holdings is better than the restricted model. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Undervaluation $\times$ Dummy <sub>2015</sub>	0.005	0.006
	(0.95)	(0.94)
Undervaluation $\times$ Dummy <sub>2011-2014</sub>	-0.483***	-0.403**
	(0.00)	(0.01)
$FCF \times Dummy_{2015}$	1.771*	
2010	(0.06)	
$FCF \times Dummy_{2011-2014}$	4.954**	
7 2011 2011	(0.01)	
Cash × Dummy <sub>2015</sub>	•	0.476
22013		(0.70)
$Cash \times Dummy_{2011-2014}$		-1.804
V 2011 2011		(0.19)
Long-Term Debt	-0.629	-0.644
	(0.21)	(0.15)
Income Tax	-2.723	0.778
	(0.58)	(0.85)
CAPX	-0.233	-0.343
	(0.83)	(0.76)
Log Asset	-0.26	-0.017
	(0.15)	(0.92)
Fixed Effect	Year and Industry	Year and Industry
Number of Delist and go private Events	51	51
Firm-Year Observations	360	365
Likelihood Ratio Test	48.987***	38.973***

**Table 8**Cox Hazard Regression Models 2011-2014 vs 2015: Financial Visibility

This table examines the financial visibility impact on going private decisions in 2011-2014 and 2015. We use the five proxies of financial visibility (analyst growth, institutional ownership growth, institutional ownership number, turnover, visibility composite) as dummy variables to test if the proxy variables shift the going private decision. We held the effect of control variables constant include long term debt, income tax, CAPX, log asset and fixed effect (year, industry). The likelihood ratio test shows if the full model include financial visibility is better than the restricted model. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Undervaluation $\times$ Dummy <sub>2015</sub>	-0.011	0.053	0.056	-0.013	0.023
	(0.89)	(0.55)	(0.58)	(0.88)	(0.81)
Undervaluation $\times$ Dummy <sub>2011-2014</sub>	-0.461	-0.47	-0.444	-0.408	-0.432
V 2011 2011	(0.01) ***	(0.01) ***	(0.01) ***	(0.01) ***	(0.01) ***
Analyst Growth $\times$ Dummy <sub>2015</sub>	0.102			,	,
7 7 2013	(0.29)				
Analyst Growth $\times$ Dummy <sub>2011-2014</sub>	0.051				
7 mary 50 ar 6 Weir × Dammy 2011 – 2014	(0.49)				
Inst_growth × Dummy <sub>2015</sub>	(0.15)	-4.376***			
mst_growth × bulling <sub>2015</sub>		(0.00)			
Inst. grouth V Dummy		0.702			
Inst_growth $\times$ Dummy <sub>2011-2014</sub>					
Last a survey that Down		(0.66)	0.02		
Inst_num_growth $\times$ Dummy <sub>2015</sub>			-0.02		
			(0.28)		
Inst_num_growth $\times$ Dummy <sub>2011-2014</sub>			0.003		
			(0.81)		
Turnover $\times$ Dummy <sub>2015</sub>				0.029*	
				(0.08)	
Turnover $\times$ Dummy <sub>2011-2014</sub>				-0.046	
				(0.56)	
Visibiilty Composite × Dummy <sub>2015</sub>					-0.108
visibility Composite $\wedge$ Dummy <sub>2015</sub>					(0.72)
Visibility Composite V Dummy					0.083
Visibility Composite $\times$ Dummy <sub>2011-2014</sub>					
					(0.67)

Long-Term Debt	-0.695	-0.624	-0.545	-0.463	-0.462
_	(0.13)	(0.16)	(0.21)	(0.37)	(0.35)
Income Tax	0.664	0.727	-0.164	0.167	-0.035
	(0.87)	(0.86)	(0.97)	(0.97)	(0.99)
CAPX	-0.639	0.081	-0.314	-0.559	-0.513
	(0.63)	(0.95)	(0.81)	(0.66)	(0.71)
Log Asset	0.05	-0.036	-0.075	-0.029	-0.034
	(0.77)	(0.83)	(0.68)	(0.86)	(0.84)
Fixed Effect	Year and				
	Industry	Industry	Industry	Industry	Industry
Number of Delist and go private Events	48	48	48	51	48
Firm-Year Observations	310	310	310	352	299
Likelihood Ratio Test	33.5***	39.0***	33.2***	38.4***	30.1***

Table 9
Abnormal Returns around Policy Announcement Day

This table examines the effect of the regulatory change announcement on May 19, 2015 among all ADRs, nPGPs and PGPs. An event window of 11 days is employed, comprised of 5 pre-event days, 5 post-event days and on event date. We excluded from our sample the ADRs that have announced going private before the announcement and those that announced within one month after the regulatory change. After the adjustment, we have 71 nPGPs and 16 PGPs from a total of 104 observations. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Days	All Samples $(N = 104)$	nPGPs Samples ( <i>N</i> =71)	PGPs after June 19 ( $N = 16$ )
-5	-0.008***	-0.005	-0.008
	(0.00)	(0.12)	(0.33)
-4	-0.001	0.000	0.003
	(0.61)	(0.91)	(0.64)
-3	0.008**	0.008**	0.022
	(0.03)	(0.04)	(0.18)
-2	0.004	0.003	0.004
	(0.21)	(0.47)	(0.55)
-1	-0.011***	-0.013***	-0.011
	(0.00)	(0.00)	(0.20)
0	0.011	0.003	0.038*
	(0.10)	(0.68)	(0.07)
1	0.000	-0.002	0.002
	(0.98)	(0.79)	(0.81)
2	0.002	0.003	0.003
	(0.69)	(0.57)	(0.91)
3	0.021**	0.025**	0.024
	(0.01)	(0.01)	(0.26)
4	0.006	0.002	0.013
	(0.21)	(0.74)	(0.26)
5	-0.008**	-0.009**	-0.007
	(0.03)	(0.03)	(0.56)

**Table 10**Regressions of the Abnormal Returns

This table examines the regression for the cumulative abnormal returns for both the 1-day (CAR1) and 3-day (CAR3). We set PGPs as dummy variables to test whether they have bigger impact on share price from the regulatory change announcement in column 2 and 4. We also test the reaction under control variables in column 3 and 5 include ROA (return on asset), M/B (market-to-book reflect the growth potential), Log-cap (firm size control), sector\_I (IT sector), sector\_F (wholesale and retail), the sector code is set by CSRC. We chose 1-day and 3-day to ensure the robustness of our test. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5% and 1% levels, respectively.

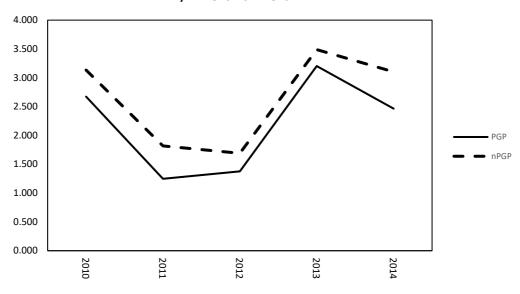
	CAR1		CAR3		
Constant	-0.997***	-1.019***	-0.012	-0.057	
	(0.00)	(0.00)	(0.28)	(0.13)	
PGPs Dummy	0.034*	0.035**	0.042*	0.048*	
	(0.08)	(0.04)	(0.09)	(0.07)	
ROA		0.005		0.014	
		(0.73)		(0.57)	
M/B		0.002		-0.02	
		(0.97)		(0.86)	
Log-Cap		-0.002		-0.002	
		(0.26)		(0.60)	
Sector_I		0.005		0.007	
		(0.13)		(0.21)	
Sector_F		0.014		0.025	
_		(0.41)		(0.36)	

Figure 1

P/B Ratio and P/B Valuation Gap of PGP Firms versus nPGP Firms

Panel A.

P/B PGPs vs nPGPs



Panel B.

## P/B valuation gap: PGPs-GEM vs nPGPs-GEM

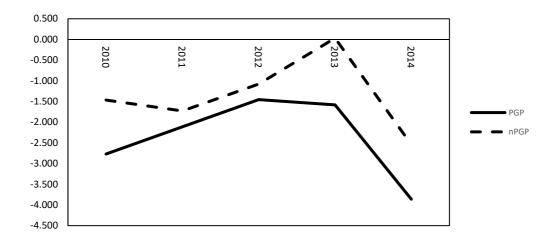
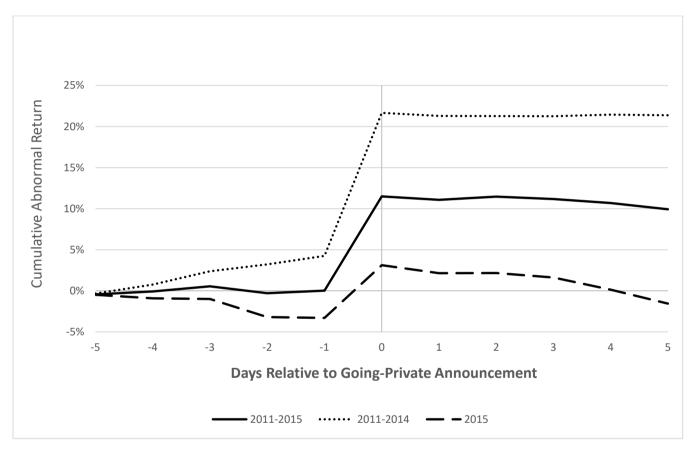


Figure 2

Cumulative abnormal returns around going-private announcement for PGPs: 2011-2014 versus 2015



## **APPENDIX**

Figure A1
Development of Chinese ADRs in the U.S.: 2005 to 2015



Figure A2
Process for Going-Private

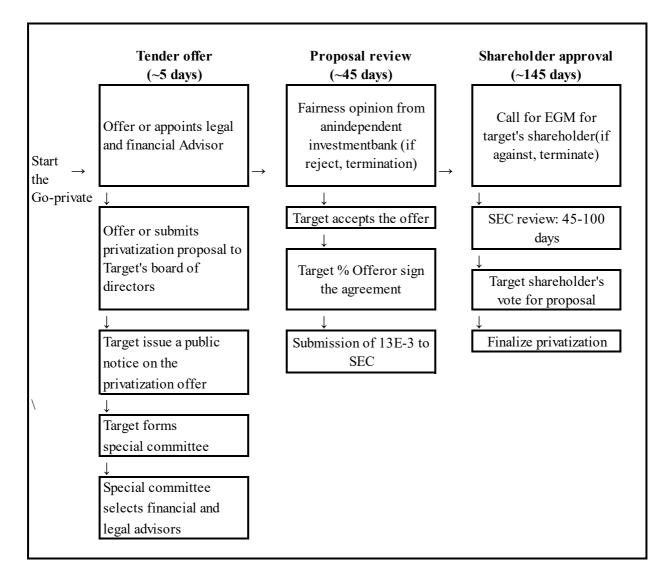
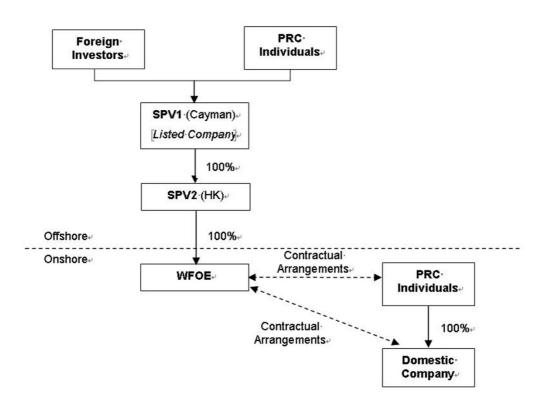


Figure A3
Price-to-Book Ratios for the Golden Dragon China Index (HXC), NASDAQ (CCMP), and the ChiNext (SZ399006)



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**Figure A4** VIE Structure



Source: https://www.chinalawinsight.com/2012/02/articles/corporate/foreign-investment/variable-interest-entity-structure-in-china/

Table A1
List of Chinese ADRs Announced Going Private (2011-2015)

Date	Company	Offer Price	Premium	<del>-</del>	Returns	
	o impuny	01101 11100		1 Wk	1 Mth	3 Mth
				before	before	before
12/14/2015	Trina Solar	11.6	22%	4%	13%	18%
11/2/2015	Ming Yang	2.51	-4%	1%	4%	-15%
10/30/2015	Sorl Auto	2.84	1%	12%	32%	-17%
10/16/2015	Youku	26.6	12%	22%	40%	27%
8/31/2015	Ikang Healthcare Group	17.8	11%	2%	10%	10%
8/14/2015	Country Style Cooking	5.23	19%	-7%	-2%	-6%
8/3/2015	ElongInc-Sponsored	18	24%	2%	-15%	-14%
7/21/2015	Mecox Lane Ltd	4	18%	-3%	6%	10%
7/9/2015	YyInc	68.5	17%	-2%	-4%	4%
7/9/2015	E-Commerce China	7.81	20%	-4%	-6%	6%
7/6/2015	China Nepstar Chain Drug	2.6	18%	7%	-4%	3%
6/29/2015	Kongzhong Corp	8.56	22%	-5%	-2%	10%
6/23/2015	MomoInc	18.9	20%	-9%	-2%	43%
6/22/2015	Vimicro International Co	13.5	9%	2%	14%	0%
6/22/2015	China Information Techno	4.43	32%	-10%	30%	173%
6/19/2015	Airmedia Group Inc	6	70%	-30%	-27%	-25%
6/17/2015	Qihoo 360 Technology Co	77	17%	-6%	6%	45%
6/15/2015	Idreamsky Technology Co	14	-4%	11%	21%	47%
6/12/2015	Bona Film Group Ltd	13.7	7%	-1%	11%	11%
6/11/2015	Homeinns Hotel Group	32.81	9%	-4%	1%	18%
6/10/2015	21Vianet Group Inc	23	16%	-9%	2%	10%
6/10/2015	RenrenInc	4.2	2%	3%	17%	45%
6/9/2015	E-House China Holdings	7.38	10%	-4%	12%	21%
6/5/2015	Ja Solar Holdings Co Ltd	9.69	20%	-11%	-4%	1%
6/4/2015	Mindray Medical Intl Ltd	27	-2%	-10%	-2%	16%
6/1/2015	Taomee Holdings Ltd	3.59	20%	-15%	-8%	3%
4/30/2015	Wuxi Pharmatech	46	16%	-9%	-8%	-5%
4/20/2015	Xueda Education	5.5	95%	-10%	-18%	-13%
4/13/2015	Sungy Mobile	4.9	9%	-11%	-5%	-2%
3/3/2015	Jiayuan.Com	7.2	55%	-11%	-9%	-43%
1/2/2015	Perfect World Co	20.2	28%	-18%	-17%	-16%
4/2/2014	Noah Education Holdings	2.85	6%	-2%	-3%	-3%
3/16/2014	Giant Interactive Group	12	5%	0%	-2%	-3%
1/27/2014	Shanda Games Ltd	6.9	22%	-13%	-15%	-15%
9/4/2013	China Hydroelectric Cp	3.51	57%	-17%	-10%	-10%
6/20/2013	Spreadtrum Com	31	31%	6%	-20%	-22%
6/20/2013	Chinaedu Corp	7	20%	-5%	-11%	-16%
6/6/2013	Isoftstone Holdings Ltd	5.7	18%	-8%	-6%	-6%

5/20/2013	Pactera Technology	7.3	39%	-23%	-22%	-21%
5/13/2013	Asiainfo-Linkage	12	3%	1%	0%	1%
3/12/2013	Camelot Information Sys	2.05	37%	-11%	-12%	-13%
3/11/2013	Simcere Pharmaceutical	9.66	21%	-14%	-14%	-15%
10/15/2012	Yongye International	7.1	48%	-15%	-5%	-18%
10/12/2012	Ninetowns Internet Tech	1.8	67%	-38%	-36%	-39%
10/3/2012	Feihe International	7.4	21%	-8%	-4%	-11%
9/26/2012	7 Days Group Holdings	13.8	31%	-12%	-11%	-13%
9/7/2012	SyswinInc	2.1	28%	-14%	-18%	-12%
8/13/2012	Focus Media Holding	27.5	18%	-8%	-3%	-7%
7/6/2012	Shangpharma Corp	9	26%	-13%	-12%	-10%
5/9/2012	China Nuokang Bio	5.8	26%	-21%	-19%	-24%
3/27/2012	Zhongpin	13.5	26%	-18%	-5%	1%
1/9/2012	Pansoft Co	4.2	26%	-35%	-37%	-33%
10/17/2011	Shanda Interactive	41.4	26%	-13%	-15%	-17%
6/3/2011	Acorn International Inc	6	26%	-23%	-20%	12%
3/25/2011	Funtalk China Holdings	7.2	27%	-8%	-4%	-8%
3/8/2011	China Security &Surv	6.5	27%	-22%	-15%	-8%

Table A2
Breakdown of Chinese ADRs Going-Private by Industry

	Industry	No. of firms	Names
<u> </u>	G 0 0 G		D. C. W. 11 Y. GMGD 21 Y
1	Software & Computer	23	Perfect World, Jiayuan, CMGE, 21 Vianet, Idreamsky,
			Qihoo, China Info Vimircro, Momo, Shanda
			Games, Giant, Camelot, Asianinfo, Pactera,
			Isoftstone, Spreadtrum, Pansoft, Syswin, Ninetowns,
		_	China Security Funtalk, Acorn, Shanda Interactive
2	Media	7	Taomee, Renren, Bona Film, Airmedia, YY,
			Youku,China Mass, FocusMedia
3	HealthCare Equip.&	6	Wuxi Pharm, Mindray, Ikang, Simcere, Nuokang,
	Svc		Shangpharm
4	General Retailers	6	Xueda, Dang Dang, Mecox Lane, Noah, Wsp, Chinaedu
5	Food & Drug Retailers	5	Nepstar, Country Style Cooking, Zhongpin,
			Feihe, Yongye
6	Alternative Energy	4	JA Solar, Ming Yang, Trina Solar, China
			Hydroelectric
7	Travel & Leisure	3	Homeinns, elong, 7days
8	Mobile Telecom	2	Sungy Mobile, Kongzhong
9	Real Estate Inv& Svc	1	E-house
10	Automobile & Parts	1	SORL Auto
11	Leisure Goods	1	Taomee

 Table A3

 Policies Facilitating the Return of Chinese VIE Companies to China

Time	Policy/News	VIE-related Content
30/11/2014	First draft of reform program on stock issuance registration system submitted to State Council	Discussion on cancellation of profitability standards for stock issuance; reducing Rmb5m threshold for investors of NEEQ
19/01/2015	Foreign Investment Law of PRC	Adopt "Substantial Control" to define the foreign investors, the nationality of the Actual Controller determines if the enterprise is foreign-funded or not
5/19/2015	Scheme for construction of Strategic Emerging Industry Board unveiled	Target enterprises in emerging industries and innovative enterprises; implement the different listing requirements
6/19/2015	Notice from the Ministry of Industry and Information Technology on Liberalizing Foreign Equity Ratio in E-commerce	Liberalize the foreign equity ratio for online data processing business (ecommerce) to 100%

Source: Public Data Compiled by Zero2IPO Research Center, July 2015.