Tunneling, Propping and Expropriation
Evidence from Connected Party Transactions in Hong Kong

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Abstract

We examine a sample of 328 filings of "connected transactions" between Hong Kong listed companies and their controlling shareholders during 1998-2000. We address three questions: What types of connected transactions are likely to lead to expropriation of minority shareholders? Which firms are more likely to expropriate? Does the market anticipate the expropriation? On average, firms earn significant negative excess returns both around the initial announcement of the connected transactions (from −2.5 percent for firms making cash payments to directors to −5.9 percent for firms selling equity stakes to their controlling shareholders) and during the 12-month period following the announcement (from −7.2 percent for firms acquiring assets from their substantial shareholders to −21.9 percent for firms selling assets to them). Excess returns are significantly negatively related to percentage ownership by the controlling shareholder. They are also significantly negatively related to proxies for information disclosure. The likelihood of undertaking connected transactions is higher for firms whose ultimate owners can be traced to mainland China. Finally, we find limited evidence that the market anticipates the expropriation by discounting firms that undertake connected transactions.

Keywords: International corporate governance; Legal systems; Expropriation; Connected transactions; Pyramids; Tunneling; Propping

JEL Classification: G15; G34; K33

> This time it was the turn of China Logistics Group to confess that millions of dollars had gone missing from its coffers – leaving investors counting the cost. The bulk of the cash is suspected to have vanished across the border… A HK$200 million[1] deposit paid out for the acquisition of Shanghai Pudong CNCC Logistics Development was missing, the company admitted. Reports from Chinese language news agencies said the deal was never completed. While the money left China Logistics, it was allegedly never received by the vendor (Ogden, J., "Missing millions mystery", *South China Morning Post*, 18 September 2002)

1. Introduction

In companies with concentrated ownership, controlling shareholders can expropriate wealth from minority shareholders in many ways. For example, they can extract cash by selling assets, goods, or services to the company through self-dealing transactions, they can obtain loans on preferential terms, they can transfer assets from the listed company to other companies under their control, or they can dilute the interests of minority shareholders by acquiring additional shares at a preferential price (Johnson, La Porta, Lopez-de-Silanes and Shleifer, 2000).

However, despite considerable anecdotal evidence, there is little direct systematic evidence on the specific transactions through which expropriation actually occurs. Most of the academic literature has attempted to measure expropriation indirectly (see for example, Bertrand, Mehta, and Mullainathan, 2002; La Porta, Lopez-de-Silanes, Shleifer and Vishny, (LLSV), 2000a, 2002; Claessens, Djankov, Fan, and Lang, 2002; or Faccio, Lang and Young, 2001). Moreover, the literature also offers mixed evidence that minority shareholdings lose value as a result of specific expropriation actions (see for example, Bae, Kang, and Kim, 2002; or Buysschaert, Deloof and Jegers, 2002).

In contrast to earlier studies, we directly examine all transactions between publicly listed firms in Hong Kong and their controlling shareholders and directors, where expropriation might be likely to occur, and document their incidence and valuation effects. We derive our data from a sample of 328 filings of connected transactions, worth a combined HK$116 billion (US$15

[1] US$26 million (the HK dollar has been pegged to the US dollar since 1983 at the rate of HK$7.8=US$1).

billion), by companies listed on the Stock Exchange of Hong Kong during 1998-2000. In addition, we compile a comprehensive database of financial, ownership structure, and corporate governance data for 609 publicly listed Hong Kong firms, allowing us to compare the firms undertaking these types of transactions with firms that do not.

Our data enable us to describe in detail the mechanisms through which controlling shareholders might expropriate minority shareholders and to substantiate the occurrence of real tunneling in the Hong Kong market. We attempt to answer three questions. What types of connected transactions are likely to lead to expropriation of minority shareholders? What are the characteristics of firms more likely to expropriate? Does the market anticipate the expropriation by firms?

The Hong Kong market is appropriate for conducting this research for three reasons. First, the Hong Kong stock market is dominated by firms with concentrated ownership. In two-thirds of publicly listed Hong Kong firms, a family controls at least 20 percent of voting rights (Claessens, Djankov and Lang, 2000). This ownership structure implies that agency costs arising from the separation of ownership and control are less likely to be prevalent. However, there may be conflicts of interest between controlling shareholders and minority shareholders, making the expropriation of the latter a distinct possibility. Second, the corporate governance environment in Hong Kong has been influenced by developments in the UK (particularly the Cadbury committee report on corporate governance; Cadbury, 1992) and disclosure of connected transactions is mandated in the listing rules of the exchange. Third, approximately one-fifth of the firms listed in the exchange have ownerships that can be traced to mainland China, and a large number of the remaining firms have close business relationships with firms in China. The different legal systems between Hong Kong and China create additional opportunities for expropriation by companies who can shift assets across the border, since rulings by courts in Hong Kong are not enforceable in the mainland.

We classify the connected transactions in our sample into three broad categories – transactions that are *a priori* likely to result in expropriation (asset acquisitions, asset sales, equity sales, trading relationships, and cash payments to directors), transactions that are likely to benefit the listed firm (cash receipts and subsidiary relationships) and transactions that may have been driven by strategic rationales (takeover offers and joint ventures, joint venture stake

acquisitions and sales). For the first category of connected transactions, we find that considerable shareholder value is destroyed both during the initial announcement of the transaction and during the 12-month period following the announcement. On average, firms announcing connected transactions earn significant market adjusted abnormal returns of –3.4 percent during the 10-day window following the announcement day. More specifically, the announcement abnormal returns are –11.8 percent for sales of equity stakes to directors, –6.4 percent for asset sales, –7.5 percent for acquisitions of assets, –7.5 percent for trading relationships with the parent firm, and –2.1 percent for cash payments to directors by the firm. These results are robust to using a market model methodology and to alternative event window specifications. Firms undertaking these types of transactions also under-perform during the post-event 12-month period following the announcement month, earning significant size-and-market-to-book bias-adjusted abnormal returns of –12.6 percent, on average. Firms selling assets earn returns of –21.9 percent during the post-event period, firms initiating a trading relationship with their parents earn –21.8 percent, and firms making cash payouts earn –18.7 percent.

Multivariate analysis shows that these abnormal returns are negatively related to the percentage ownership by the main shareholder, suggesting that firms with concentrated ownership experience the largest value losses. The abnormal returns are also negatively related to proxies for information disclosure. Firms that do not provide an assessment of the deal by an independent financial advisor and firms whose auditors are not one of the Big 5 auditing firms experience a negative market reaction, while firms with Level II and III ADRs experience a positive market reaction. In contrast, we find limited evidence that the proportion of independent non-executive directors on the board and the presence of audit committees affect the market reaction.

The likelihood of undertaking connected transactions is higher for firms whose ultimate owners can be traced to mainland China. Furthermore, conditional on undertaking a connected transaction, the likelihood of poor information disclosure, and the likelihood of undertaking transactions that violate the exchange's listing rules are both higher for firms with mainland Chinese ultimate owners and for firms with concentrated ownership. The relation between expropriation and the firm's ultimate parent provides direct evidence of the impact of the legal system in allowing firms to undertake actions that benefit the controlling shareholders at the

expense of minority shareholders (LLSV 1998, 2000b; Johnson, La Porta, Lopez-de-Silanes, and Shleifer, 2000). Rulings by courts in Hong Kong are not enforceable in China, and therefore Hong Kong investors have little chance of recovering expropriated assets.

Finally, in contrast to prior literature, we find limited evidence that the market anticipates the expropriation by discounting firms that undertake connected transactions. On average, these firms trade at positive industry-adjusted market-to-book ratios, and do not earn consistently negative abnormal returns during the 12-month period preceding the deal. The only exception is firms with Chinese ultimate parents cross-listed in Hong Kong – these firms are heavily discounted.

This paper is organized as follows. The next section discusses prior evidence on the expropriation of minority shareholders. Section 3 describes the regulatory framework governing the disclosure of connected transactions in Hong Kong, presents our sources of data and defines the variables used in the empirical analysis. It also presents a descriptive analysis of the connected transactions included in our sample. Sections 4-6 report our empirical results, by addressing successively the three questions raised in the introduction. Section 7 reports further robustness tests. It compares connected transactions with similar arm's length transactions and also examines expropriation through pyramids, divergence between cash flow and control rights, and propping up through asset injections. Section 8 concludes.

2. Prior evidence on the expropriation of minority shareholders [2]

According to Shleifer and Vishny (1997), "Corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment … How do they make sure that managers do not steal the capital they supply…?" This problem is of particular significance in companies with concentrated ownership, because controlling shareholders have the power to expropriate minority shareholders. Such ownership structures are very common in many countries around the world and particularly in East Asia (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Claessens, Djankov, and Lang, 2000). Expropriation through such ownership structures may have both macro- and micro-economic

[2] For an extensive survey of the international literature on corporate governance see Denis and McConnell (2003). For a survey with particular emphasis on Asia see Claessens and Fan (2002).

consequences. At a macro level, Johnson, Boone, Breach and Friedman (2000) show that the degree of protection of minority shareholders explained the currency depreciations in East Asia, during the financial crisis of 1997 better than other macroeconomic explanations. At a micro level, Mitton (2002) shows that the quality of information disclosure and ownership structure had significant explanatory power for cross-sectional stock returns during the crisis. Baek, Kang, and Park (2002) find that firms with concentrated ownership belonging to business groups (chaebols) - i.e. firms in better positions to expropriate minority shareholders - experienced the largest value losses during the crisis in Korea. In these studies, the authors' arguments hinge on the presumption that in firms with concentrated ownership, controlling shareholders can expropriate minority shareholders.

Most of the current literature has, however, attempted to measure the expropriation of minority shareholders indirectly, using different proxies for the degree of expropriation. These studies do not provide evidence that the value of minority shareholdings has declined following specific corporate actions. Bertrand, Mehta, and Mullainathan (2002) for example, examine tunneling activities within Indian business groups by tracing the propagation of earnings shocks from group firms where the controlling shareholders have low cash flow rights to firms where they hold high cash flow rights. They show that this propagation takes place through non-operating earnings items, such as miscellaneous and non-recurring gains and losses (suggesting that tunneling may be the result of asset transfers as opposed to transfer pricing). They also show that firms in which fewer funds are tunneled away, trade at higher market-to-book ratios.

A second strand of literature uses the legal system as a proxy for the likelihood of expropriation. The importance of the legal system (in particular investor protection) for corporate governance has been discussed in detail by LLSV (1998; 2000b). Johnson, La Porta, Lopez-de-Silanes, and Shleifer (2000) provide clinical evidence of three legal cases in France, Italy and Belgium where companies were taken to court - and were acquitted - for alleged expropriation of minority shareholders. The cases are used to highlight how differences in the legal code may allow firms in some countries to undertake actions that benefit the controlling shareholders at the expense of minority shareholders. Brockman and Chung (2003) show that the legal system also affects liquidity costs - stocks of firms operating in legal systems with poor investor protection have wider bid-ask spreads and thinner depths. LLSV (2002) show that firms in countries with

civil law legal systems (with poor legal protection of minority shareholders) trade at lower Tobin's q ratios compared to firms in common law countries.

A third strand of literature uses the deviation of cash flow from control rights as a proxy for the likelihood of expropriation. These studies show that firms that are *ex ante* more likely to expropriate, trade at lower valuations. Using a South East Asian sample, Claessens, Djankov, Fan, and Lang (2002) find that market-to-book ratios are positively related to the cash flow rights held by the controlling shareholder (which is consistent with an incentive effect of concentrated ownership), but they are negatively related to the divergence between cash flow and control rights (which is consistent with an entrenchment effect). Thus, they find a discount for firms held via pyramids, cross-shareholdings and dual class shares. Similar results during the period of the East Asian crisis are reported by Lemmon and Lins (2002). Finally, Joh (2003) finds an inverse relationship between Korean firm profitability and the divergence between cash flow and control rights. She also finds that affiliation to business groups (chaebols) reduces profitability.

The final strand of literature uses dividend payouts as a proxy for expropriation. LLSV (2000a) show that firms in countries with poor legal protection of minority shareholders, make lower dividend payouts because investors have no legal avenues to force higher payouts from firms. In contrast, Faccio, Lang and Young (2001) assume that investors are able to anticipate the expropriation, demanding higher dividend payouts from firms that are more likely to expropriate, such as Western European and East Asian firms tightly affiliated to business groups and, within groups, firms with wider divergence of control and cash flow rights.

However, these studies do not provide direct evidence that the value of minority shareholdings has declined as a result of specific acts of expropriation. If minority shareholders buy their shares after concentrated ownership is established (which is usually the case because concentrated shareholdings are stable over time), then they may be able to purchase these shares at a discount that would, on average, compensate them for the expected expropriation (Fan and Wong, 2002).

In addition, measurements of market-to-book ratios, Tobin's q or accounting performance may suffer from endogeneity problems because concentrated ownership has been shown to affect the quality of the firm's reporting. The informativeness of earnings for stock returns is negatively related to controlling shareholder ownership and also negatively related to the magnitude of the

divergence between the controlling shareholder's control and cash flow rights (Fan and Wong, 2002). Investors mistrust reported accounting information because the controlling shareholder may manipulate earnings in order to expropriate or conceal expropriation. Alternatively, controlling shareholders possess proprietary information about their firms that they may not wish to disclose to competitors and reporting opaque financial statements may be a way to safeguard this information. In a related study, Liu and Lu (2003) provide evidence of earnings management in Chinese companies with controlling shareholders. They show that accruals are positively correlated with the shareholdings of the largest shareholders and top executives.

Two studies that have examined the valuation effects of specific actions that may result in expropriation offer mixed results. Bae, Kang and Kim (2002) examine rescue mergers within Korean industrial groups (chaebols). They find that the stock price of Korean companies affiliated with chaebols declines when they are asked to bail out other under-performing firms in the group through rescue mergers, while at the same time the value of the remaining firms in the group increases. In contrast, Buysschaert, Deloof and Jegers (2002) examine the valuation effects of transfers of equity stakes by companies belonging to Belgian business groups during the late 1990s but fail to find any expropriation of minority shareholders. [3]

3. Data and methodology

This section describes the regulatory framework governing the disclosure of connected transactions in Hong Kong, presents our sources of data, and defines the variables used in the empirical analysis. It also outlines our classification of connected transactions and presents a descriptive analysis of the sample.

3.1. Rules governing the disclosure of connected transactions in Hong Kong

Regulations governing connected transactions appear in Chapter 14 of the *Rules Governing the Listing of Securities in the Stock Exchange of Hong Kong Ltd.* (Stock Exchange of

[3] Related to the literature on expropriation, the academic literature has also examined cronyism in East Asian countries where firms benefit from close ties with governments. These countries happen to be characterized by concentrated ownership of publicly listed corporations. See Fisman (2001) for Indonesia, and Johnson and Mitton (2003) for Malaysia.

Hong Kong, 2002). A connected transaction is defined as any transaction between a company (or any of its subsidiaries) and a connected person. Connected persons are the listed firm's (or the subsidiary's) substantial shareholders, the directors (current directors or anyone who held this position at any time during the preceding 12 months), the chief executive and their associates, including any company where the above hold a substantial shareholding. The definition also applies to any person co-habiting with the above and relatives (such as spouses, parents, step-parents, brothers/sisters, step-brothers/sisters, and in-laws). However, waivers of some of the requirements may be granted by the exchange in case of non-executive directors who do not control the listed company and whose directorship in this company is not their principal business interest.

With the exception of issues of new securities, transactions whose total value is less than HK$1 million (approximately US$130,000) or 3% of the book value of the firm's net tangible assets, whichever is highest, are not normally subject to any disclosure or shareholders approval requirement as connected transactions. Transactions whose total value is less than HK$10 million (approximately US$1.3 million) or 3% of the firm's book value of net tangible assets, whichever is highest, are required to be disclosed only by a press release and inclusion of the relevant details in the company's forthcoming annual report.

For all remaining transactions, in addition to a public announcement, the listed company must also notify the exchange by making a filing. The minutes of the board meeting where the transaction was approved, noting also the views of the company's independent non-executive directors, must be submitted to the exchange. Within three weeks of such notification, the listed company must send a circular, noting the exchange's comments, to shareholders, providing full details of the transaction, including an opinion by an independent expert. This circular is to be followed by approval of the transaction by shareholders in a general meeting, where any connected person interested in the transaction should abstain from voting (in practice, this requirement is less stringent than it appears because it does not cover many relatives, such as cousins, nephews and uncles, as well as friends and other members of the board of directors; consequently, connected transactions are regularly "approved" by shareholders). However, the listed company may apply to the exchange in order to obtain a waiver from some of these requirements.

3.2. Data

We obtain our sample of connected transactions from the 1998, 1999, and 2000 issues of the CD-ROM database *Hong Kong Listed Companies: Corporate Documents*. This database is published annually by the Stock Exchange of Hong Kong and contains copies of corporate documents filed with the exchange (excluding interim and annual reports). From this database we retrieve copies of all filings of connected transactions made by firms listed in the exchange. These filings are clearly identified as pertaining to connected transactions by the database. Each filing consists of a detailed description of the transaction, of the exchange's opinion about the transaction, and of the public press release announcing the transaction. In addition, most filings are accompanied by a report drafted by an independent financial advisor which presents an independent assessment of the transaction. Our sample consists of 328 filings made by 232 publicly listed firms during the period 1998-2000.[4]

We choose our sample period because of data availability considerations. However, starting our sample period in 1998 is appropriate for two additional reasons. The period of the Asian financial crisis of 1997 was a particularly volatile period. The leading stock market index in Hong Kong, the Hang Seng Index, reached a record high of 16,673 points in August 1997 but following the crisis, a negative report about Asian currencies by Morgan Stanley, and two large brokerage bankruptcies (Peregrine Investment Holdings and C.A. Pacific Group), it declined to 6,600 points a few months later. On the positive side, the Hong Kong Monetary Authority, the *de facto* central bank, successfully defended and maintained the peg of the Hong Kong dollar with the U.S. dollar, which had been in place since 1983. It has been suggested that firms may be more likely to expropriate when they face worse economic prospects (Johnson, Boone, Breach, and Friedman, 2000). Therefore, the impact of general economic conditions on expropriation may be different before, during, and after the crisis, and we prefer to concentrate our focus on one period. Furthermore, in this way we can also minimize the potential impact of the crisis on the estimation of abnormal returns.

[4] It would be interesting to extend our investigation of connected party transactions to earlier years, to examine whether tunneling had the same effects on firm value in all periods, whether the sensitivity of the market to tunneling has increased recently, and whether the frequency of such activities is higher during the period following the Asian financial crisis of 1997. Unfortunately, filings for earlier periods are not publicly available in electronic format. Hard copies of the filings, together with all other types of filings made by publicly listed firms, are kept by the Library of the Stock Exchange of Hong Kong. They are however not accessible to the public. Furthermore, the files are classified by company (and not by type of filing), which would necessitate a prohibitively time-consuming search.

We obtain data on ownership structure and corporate governance for the universe of listed Hong Kong firms (irrespective of whether they have filed for a connected transaction) from company annual reports. In total, we have ownership structure and corporate governance data for 609 firms. We obtain monthly stock returns, market capitalization, and financial data (total assets, book value of equity, net income, and long-term debt) for the universe of all listed Hong Kong firms from *Datastream*, *Bloomberg*, and *Reuters*. Industrial classification and industry membership are obtained from *Datastream*. Overall, we have monthly stock returns and financial data for 685 listed firms. We impose no requirement that firms should be listed continuously during this period - we allow firms to drop out of the sample when they are de-listed and we include newly listed firms when their information becomes available. The number of firms listed on the Main Board of the Stock Exchange of Hong Kong at year-end were 680 (1998), 701 (1999), and 736 (2000) respectively. Therefore, our sample represents almost the entirety of the firms listed on the exchange, and is much larger than the sample analyzed by Claessens, Djankov, Fan, and Lang (2002), which consists of 225 Hong Kong firms.

Our analysis has three aims. First, we wish to examine the extent to which the type of connected transaction, information disclosure, ownership structure and corporate governance explains the abnormal returns experienced by the listed firm when announcing the transaction. This will document whether expropriation of minority shareholders takes place, and what determines the magnitude of the expropriation. Second, we wish to determine which publicly listed firms in Hong Kong are more likely to expropriate, based on firm, ownership structure and corporate governance characteristics. Finally, we wish to examine whether expropriating firms are discounted in the market during the period preceding the event by estimating abnormal returns during the 12-month pre-event period and industry-adjusted market-to-book ratios.

3.3. Estimation of short- and long-horizon abnormal stock returns

To determine the extent to which the type of connected transaction, information disclosure, ownership structure and corporate governance explains the abnormal returns to the listed firm announcing the transaction, we compute abnormal returns during the announcement period and the 12-month period following the event.

As part of the filing to the stock exchange, the company notifying the exchange of a connected transaction is required to attach a copy of the public press release describing the

transaction. This is our source of the public announcement dates. We define as announcement day (d=0) the day of the public press release. We estimate daily abnormal returns for our sample of firms filing for connected transactions using the market model residuals approach, mean-adjusted returns approach, and market-adjusted returns approach, following Brown and Warner (1985). For the first two approaches we use an estimation period of 150 trading days, from day -180 to day –31 relative to the date of the announcement, d=0. We use the returns on the Hang Seng Index as the market index.

Long-horizon abnormal returns are computed using four different benchmarks – a size benchmark, an industry benchmark, a size and industry benchmark and a size- and market-to-book benchmark. The size and market-to-book benchmarks are formed by sorting our universe of Hong Kong listed firms into 5 independent quintiles each on the basis of their market-to-book ratio and market capitalization respectively, in the month before the announcement date. We use the industry classification codes from *Datastream* to sort our firms into industry sorted portfolios. Abnormal returns are calculated for each firm relative to its benchmark (as the difference between its monthly return and that of its control portfolio) every month from 12 months before to 12 months after the event date. CARs are calculated by averaging across all sample firms every month and then summing these averages over time. We test the statistical significance of these results using bootstrapping (as applied by Ikenberry, Lakonishok and Vermaelen, 1995).[5] Lyon, Barber and Tsai (1999) find that the bootstrap method yields well-specified test statistics and find moreover, that this method is more powerful than the control firm method, a method also commonly used to detect abnormal performance in event studies. Finally, since the empirical distribution computed through bootstrapping is not centered at zero (Kothari and Warner, 1997), following Rau and Vermaelen (1998), we subtract the mean CAR for the empirical distribution from the CAR value for the sample. This bias-adjusted CAR value gives us a better idea of the economic significance of the results. The statistical significance of the results is not affected.

[5] For each firm in the sample, we randomly select with replacement, a firm listed on the Hong Kong stock exchange that has the same matching portfolio ranking at that point in time. This matching firm is treated as though it had announced a connected transaction at that point in time. We carry out this process for each firm in the sample, ending up with a pseudo-portfolio consisting of a set of randomly drawn firms, matched in portfolio characteristics and time to the firms in the sample. We repeat this process till we have 1000 pseudo-portfolios and thus, 1000 abnormal return observations. This gives us an empirical distribution for the abnormal returns drawn under the null model specific to our hypotheses.

3.4. Ownership structure, corporate governance, and information disclosure variables

Hong Kong is an economy where an Anglo-Saxon corporate governance system has been imposed on an Asian family-controlled business environment. Only a small proportion of firms are widely held (Claessens, Djankov and Lang, 2000; La Porta, Lopez-de-Silanes and Shleifer, 1999). The main shareholders in Hong Kong take an active role in running their companies. They sit on the board of directors and usually hold the positions of chief executive and/or chairman. Our principal ownership structure variable is the percentage ownership by the main shareholder, which expresses the shareholdings of the main shareholder as a percentage of total number of shares outstanding. These shareholdings aggregate shares held in the director's name, shares held by corporations controlled by the director and shares held via other vehicles (such as trusts). We also use a dummy variable to indicate CEO duality, i.e. that the same person holds the positions of chairman of the board and chief executive.

During the 1990s, an increasing number of companies, whose ultimate ownership can be traced to mainland China, have been listed in Hong Kong. These firms can be categorized in two groups, "H-shares" and "Red Chips". H-shares are firms incorporated in China, originally listed in one of the two Chinese stock exchanges (Shanghai and Shenzhen), and later cross-listed in Hong Kong.[6] These companies are partially privatized state owned enterprises (SOEs), in which the state still retains majority control and appoints management. The directors of these firms hold few shares in the companies they manage. On the other hand, Red Chips are firms incorporated in Hong Kong and traded in the stock exchange of Hong Kong, whose ultimate owners are from China.

Companies with mainland Chinese ultimate owners are of particular significance when examining potential expropriation. Following the handover of Hong Kong by Britain in 1997, the territory has been administered as a Special Administrative Region (SAR) of the People's Republic of China. It retains its own British-inspired common law legal system and independent courts, under what is called the "one country, two systems" arrangement.[7] The operation of two

[6] The first H-share was Tsingtao Brewery, which was listed in the Stock Exchange of Hong Kong in 1993.

[7] Hong Kong's legal system is rated almost at a par with the UK and the U.S. LLSV (1998) construct an index of anti-director rights, which measures the protection afforded by law to minority shareholders against managers and controlling shareholders. Hong Kong is assigned the same score as the U.S. and the UK. In their index of creditor rights, Hong Kong is assigned the same score as the UK, and a higher score than the U.S. Hong Kong receives similar scores as the U.S. and the UK in the efficiency of the judicial system, the rule of law, and corruption, but

different legal systems creates potential opportunities for expropriation by companies who can shift assets from Hong Kong to the mainland. Rulings by courts in Hong Kong are not enforceable in China. The financial press has carried stories of cases in which assets of listed companies are alleged to have "disappeared" (often together with top executives) after being transferred across the border to China.[8] We obtain a list of H-shares and Red Chips each year from the December issue of the Chinese-language newspaper *Sing Tao Daily* and construct respective dummy variables.

The corporate governance of Hong Kong firms has been influenced by corporate governance in Britain. Following the publication of the Cadbury committee report on corporate governance in the UK (Cadbury, 1992), the listing regulations of the Stock Exchange of Hong Kong stipulated the mandatory introduction of at least two *independent* non-executive directors on all boards from 1995, and the requirement that these independent directors be clearly identified and disclosed (nevertheless, their small number raises questions about the ability of boards to perform adequate monitoring functions and to protect the interests of minority shareholders). Audit committees are not as widespread as in the U.S. The listing rules of the exchange included guidelines for the recommended introduction of audit committees in 1998. Remuneration and nomination committees are not mandatory. We also include as explanatory variables the proportion of independent non-executive directors on the board, and a dummy variable indicating the presence of an audit committee.

In addition, we use six variables that proxy for the quality of information disclosure concerning the transaction. First, we include a dummy variable for transactions for which no amount is specified in the filing. Second, we include a dummy variable for firms whose auditor is not one of the big five audit firms. Third, we use analyst following for each firm (number of analysts compiling reports during the fiscal year). The analyst data are obtained from I/B/E/S. Fourth, we use a dummy variable for firms with Level II and Level III ADRs traded in U.S. stock markets, which (unlike Level I ADRs) require full compliance with the reporting requirements of the SEC's Exchange Act. We obtain information on ADRs from the database maintained by *J.P. Morgan Chase & Co*. and *Thomson Financial* at www.adr.com. Fifth, we use a dummy variable to indicate filings which do not include a report by an independent financial

slightly lower scores for the risk of expropriation and contract repudiation. Accounting standards are rated almost at a par with the U.S. Dual class shares are not allowed (Fan and Wong, 2002).

[8] See for example Ogden, J., "Missing millions mystery", *South China Morning Post* (18-Sep-2002).

advisor. Sixth, we construct a proxy for financial advisor reputation using financial advisor league tables for Hong Kong mergers and acquisitions based on value of transactions for the period 1995-1997 obtained from the *SDC* database. Our advisor reputation proxy is the ratio of one divided by the ranking of the advisor in the league table. Advisors who do not appear in the league table are assigned the rank of one plus the total number of advisors ranked in the table. If the listed company does not attach a report by an independent financial advisor, our advisor quality proxy takes the value of zero.

Finally, we also use firm size (natural logarithm of total assets in HK$ millions) as a control variable. Larger firms are likely to have better visibility and coverage in the financial press. In addition, the political cost hypothesis (see for example, Watts and Zimmerman, 1978) suggests that they may be less likely to expropriate.

3.5. Classification of connected transactions and descriptive statistics

We classify the connected transactions in our sample into three categories, summarized in Table 1. First, there are transactions that are *a priori* likely to result in expropriation of the listed firm's minority shareholders. These involve sales of equity stakes in the listed company to connected parties (18 transactions), acquisitions of assets by the listed company from connected parties (92 transactions worth a total of HK$53 billion – US$6.8 billion), asset sales by the listed firm to connected parties (54 deals worth HK$20.2 billion – US$2.6 billion), trading relationships between the listed firm and connected parties, i.e. purchases and sales of goods and services (32 transactions), and direct cash payments or loan guarantees from the firm to a connected party (25 transactions).

Second, there are transactions likely to benefit the listed firm's minority shareholders, such as cash receipts by the listed company (what Friedman, Johnson and Mitton (2003) term "propping up"; 7 cases), and transactions between the listed firm and its subsidiaries (40 transactions, worth HK$20.5 billion – US$2.6 billion).

Finally, there are transactions that may have strategic rationales and may not be expropriation, such as takeover offers where the connected party is another publicly listed or foreign company and formation of joint ventures (18 transactions), acquisitions of joint venture

stakes from the remaining partners (25 cases), and sales of joint venture stakes to the remaining partners (33 cases).[9]

Table 2 reports descriptive statistics on the connected transactions in our sample. In total, there were 328 connected transactions worth at least HK$116 billion (US$14.8 billion) during 1998-2000. The value of the median transaction was HK$106 million (US$13.6 million), and represented 17.5 percent of the listed firm's stock market capitalization. However, the actual total value of connected transactions is likely to have been significantly larger, because in 49 cases (15 percent of the total) the listed company did not disclose the value of the transaction in the filing (20 of these cases were trading relationships, 7 were direct cash payments, and 11 were relationships with subsidiaries). In 9 cases, the firm did not attach a report by an independent financial advisor, and in 21 cases, the listed firm's auditor was not one of the Big 5 audit firms. In 35 cases, the listed firm applied to the exchange for a waiver from fulfilling some of the requirements stipulated in the listing rules with respect to connected transactions. In 11 cases, the connected transaction violated a previously granted waiver, in 23 cases, the transaction had taken place in the past but had not been disclosed to the exchange, and in 16 cases, the transaction constituted an outright breach of listing rules.

There are four additional points worth highlighting in the descriptive evidence reported above. First, only 45 of the connected transactions in the sample (14 percent of the total) would affect operating earnings on the firm's income statement (trading relationships and some of the subsidiary relationships). This is consistent with Bertrand, Mehta and Mullainathan (2000), who show that tunneling within Indian business groups occurs primarily via non-operating earnings items.

Second, there are twice as many transactions where the company acquires assets from its owners, as opposed to selling assets to them, and this is the most common type of connected transaction, involving 28 percent of all transactions in the sample. In these acquisitions by the company, cash flows from the listed company to the hands of its controlling owners. Furthermore, in one third of these deals, part of the consideration was in the form of stock, thus diluting the interests of minority shareholders.

[9] Our classification treats controlling shareholders equally, irrespective of whether they are individuals or other companies. Examining them separately does not reveal any differences in the market's response, although we recognize that some of these sub-samples are too small for robust conclusions.

Third, there are more than three times as many transactions where listed companies provide cash assistance to third parties as opposed to receiving assistance (25 cases compared to 7 respectively). Transactions of this type represent 64 percent of all transactions that violated a previously granted waiver (7 out of 11), 52 percent of all filings that disclosed a past previously undisclosed deal (12 out of 23), and 75 percent of all the transactions that breached exchange listing rules (12 out of 16). In fact, transactions in which listed firms receive cash assistance represent only 2 percent of the transactions in the sample.

Finally, data not reported in the table shows that in 69 percent of the deals for which the information is disclosed (29 out of 42 deals), the listed company appears to be entering the deal in unfavorable terms (acquiring assets at a premium or selling assets and shares at a discount to current value). Given that only 13 percent of the filings provide this information, and assuming that firms are more likely to report good news as opposed to bad news, this may suggest that a large proportion of these connected deals are on terms unfavorable to the listed company.

Table 3 reports financial data and corporate governance information for our sample of 609 publicly listed Hong Kong firms. Firms without connected transactions announcements have median total assets of HK$1.2 billion (US$151 million), and firms announcing connected transactions HK$1.6 billion (US$205 million). However, there is wide variation in median size across firms undertaking different types of connected transactions. *A priori*, firms undertaking connected transactions do not appear to trade at discounted values compared to other firms. Their median market-to-book ratio is 0.69, compared to 0.57 for firms not undertaking connected transactions. Not surprisingly, firms receiving cash assistance have the lowest market-to-book ratio (0.16), suggesting that these firms must be in severe financial difficulties. They also have the lowest net income over shareholders' equity (ROE) ratios (–43.2), and the highest debt-equity ratios (77.1 percent).

Ownership structure and corporate governance descriptive statistics in Table 3 appear similar between firms announcing connected transactions and firms that do not, and are in line with previously reported evidence (Claessens, Djankov, Fan, and Lang, 2002). Median percentage shareholdings by the top shareholder are 17.1 percent for firms undertaking connected transactions (and 19.8 percent respectively for firms that do not), the number of directors on the board of directors is 9 (8), percentage of independent non-executive directors on the board is 25 percent (27.3 percent), proportion of firms with an audit committee is 48.2

percent (50 percent), and proportion of firms with CEO duality is 25.6 percent (22.7 percent). There is a higher frequency of H-share companies undertaking connected transactions. In contrast, the proportions of Red Chips among firms undertaking connected transactions and the remaining population are almost identical.

4. Valuation effects of connected party transactions

4.1. Univariate results

Table 4 reports abnormal returns for firms undertaking connected transactions, and for the different types of connected transactions separately. In Panel A, we report daily market-adjusted and market model residuals abnormal returns for days [0,+1] and [0,+10] relative to the press release day, and monthly bias-adjusted abnormal returns for the month of the announcement (month 0). In Panel B, we report bias-adjusted abnormal returns for the post-event period over months [+1,+12]. The monthly abnormal returns reported are adjusted for firm size and for size- and market-to-book ratio.

Panel A documents strong evidence that connected transactions, that *a priori* might be most likely to result in expropriation of minority shareholders, destroy shareholder value. Firms announcing these types of connected transactions earn significantly negative abnormal returns during the days following the announcement for both windows [0,+1] and [0,+10]. On average, firms earn market-adjusted cumulative average abnormal returns of –3.4 percent (p-value 0.000) over the [0,+10] day window. Firms selling an equity stake earn –11.8 percent (p-value 0.001), firms selling assets earn –6.4 percent (p-value 0.021), firms acquiring assets earn –7.5 percent (p-value 0.005), firms announcing trading relationships earn –7.5 percent (p-value 0.011), firms making cash payments earn –2.5 percent (p-value 0.063) (the latter over the [0,+1] window; results for the longer window are not statistically significant). As we show in Section 7, these results are the opposite of what we observe in similar arm's length transactions. In contrast, as expected, firms receiving cash assistance and firms announcing subsidiary relationships experience positive abnormal returns (although mostly not statistically significant). Firms selling joint-venture stakes earn –6.1 percent (p-value 0.009) over the [0,+10] window. Finally, firms receiving takeover offers or entering into joint-ventures earn returns of 30.7 percent (p-value 0.015), in line with previous evidence on mergers and acquisitions. Similar results are obtained

when using market model residuals. The results using monthly returns for month 0 are also in the same direction, although less significant. This is expected, since monthly returns may not capture announcement returns accurately. Overall, there is overwhelming evidence that minority shareholders experience large value losses at the announcement of connected transactions by publicly listed firms. The results are consistent with expropriation of minority shareholders.

Firms undertaking connected transactions show significant under-performance during the 12 month post-event period that begins the month following the announcement. On average, sample firms earn size- and market-to-book adjusted cumulative abnormal returns of –12.6 percent (p-value 0.000) during this 12-month period. Firms earn negative returns, across all types of connected transactions, on average, although the ones that are statistically significant are those for firms selling assets (–21.9 percent; p-value 0.004), trading with their parent (–21.8 percent; p-value 0.031), paying out cash (–18.7 percent; p-value 0.061), receiving takeover offers and forming joint-ventures (–29.8 percent; p-value 0.031), and selling joint-venture stakes (–17.2 percent; p-value 0.067). The large negative post-event abnormal returns may indicate that investors shun these firms after they have observed the expropriation. It may also be the case that some of the expropriation may be on-going and difficult to quantify at the days of the announcement (e.g. for firms trading with their parent).[10] In contrast, firms announcing transactions that are unlikely to result in expropriation (cash receipts and subsidiary relationships) do not earn significant excess returns over the same period. Overall, firms announcing connected transactions that might be most likely to result in expropriation, lose between a third and a quarter of their market value over the announcement and the post-announcement period, suggesting substantial expropriation of minority shareholders.[11]

[10] An alternative interpretation would be that these firms are in distress anyway, and the transaction reveals the information to the market. However, as we show in Section 6, there is no evidence that firms undertaking connected transactions under-perform the market during the period preceding the deal.

[11] We also estimate the absolute value loss (CAR multiplied by the firm's market capitalization at the end of the last fiscal year before the transaction) per dollar of transaction for all types of transactions likely to expropriate minority shareholders. Based on CAR in the [0,+10] window, the largest median dollar loss per dollar of transaction is for equity sales (27 cents), followed by asset sales (16 cents), asset acquisitions (13 cents), trading relationships (13 cents), and cash payments (8 cents). Based on the total value loss from the date of the transaction until 12 months later, the ranking is cash payments (88 cents), equity sales (74 cents), trading relationships (59 cents), asset acquisitions (57 cents), and asset sales (48 cents). Based on this evidence therefore, the market appears to be penalizing expropriating firms by less than the stated amount of the transaction. Similarly, for transactions likely to benefit the listed firm, subsidiary relationships yield median long-horizon gains of 4 cents per dollar of transaction, whereas cash receipts are associated with value *losses* of 39 cents, indicating that propping up is not successful. However, this last sub-sample is too small to draw robust conclusions.

4.2. Multivariate analysis

Table 5 reports results of ordinary least squares regressions of announcement abnormal returns on proxies for ownership structure, corporate governance, and information disclosure. We estimate two models, one using proxies for corporate governance and one using proxies for information disclosure. We also estimate the models including and excluding dummy variables for the different types of connected transactions. We report results using market-adjusted returns for windows comprising days [0,+1] and [0,+10] relative to the announcement day, and size- and market-to-book adjusted returns for the announcement month. As we discuss in Section 7, all our results are robust to the choice of alternative windows and methods for estimating abnormal returns. All reported significance levels are for two-tailed tests based on White (1980) heteroskedasticity-consistent standard errors. To economize on space, we do not report the coefficients of the dummy variables indicating the different types of connected transactions, most of which are negative and statistically significant, in line with the results reported in the previous sub-section, consistent with significant expropriation of minority shareholders.

In the corporate governance model of Panel A, the coefficient of the percentage ownership by the main shareholder has a negative sign and is statistically significant in columns (3)-(6), and marginally not significant in columns (1)-(2). This result suggests that the larger the percentage ownership by the main shareholder, the more negative the market reaction experienced by the firm announcing a connected transaction, and hence the more significant the expropriation. The remaining corporate governance variables are not particularly significant in explaining the market reaction. The coefficients of the proportion of independent non-executive directors on the board are all positive, as expected; however, only one is statistically significant at the 10 percent level in column (5). Similarly, the coefficients of the dummy variable indicating the presence of an audit committee are all positive but statistically significant only in columns (1)-(2) (and marginally not significant in column (6)). The coefficients of the variable indicating CEO duality are not statistically significant. Therefore, ownership by the main shareholder appears to be positively related to expropriation, whereas independent non-executive directors and audit committees on the board appear to have only a small mitigating impact, if any.

Many of the variables that proxy for the quality of information disclosure in Panel B are also significant in explaining the market reaction, with less disclosure associated with negative abnormal returns. The dummy variable indicating that the firm does not attach an independent

assessment by a financial advisor, has negative coefficients which are statistically significant in columns (1)-(4). The coefficient of the dummy variable indicating that the firm's auditor is not one of the Big 5 audit firms, is also negative and statistically significant at the 5 percent level in columns (3)-(4). In contrast, firms with Level II and III ADRs experience a positive market reaction, with coefficients statistically significant in columns (2) and (6). As we show in the next section, these firms are more likely to undertake connected transactions that are classified in the strategic category, and may not represent expropriation. Interestingly, when we substitute for this variable a dummy for firms with Level I ADRs (which do not require compliance with the information disclosure requirements of the SEC's Exchange Act), this latter variable is never statistically significant. Overall, the results indicate that firms with poor disclosure experience a negative market reaction when announcing connected transactions.

We also estimate these regressions using the 195 observations that disclose the amount of the transaction and including as regressor the stated value of the transaction divided by the firm's stock market capitalization and its total assets (not reported in the table). These variables have negative coefficients, indicating that larger transactions are associated with larger value losses, but they are not statistically significant. The lack of significance is probably due to the fact that relative size by itself does not indicate how bad the deal is for minority shareholders, although it may represent a limit to how much value can be dissipated (assuming, of course, that the value reported by the company is accurate).[12]

In summary, the results reported in this section show that the percentage ownership by the main shareholder is a significant determinant of announcement abnormal returns (with higher ownership associated with larger value losses). This result contrasts with Joh (2003) who finds higher profitability for firms with more concentrated ownership in Korea before the financial crisis. Since our sample period follows the crisis, a potential explanation could be related to the

[12] We examine the robustness of the results by estimating a number of alternative specifications, which are not reported in the table, and are discussed below. First, interaction terms between ownership by the main shareholder, proportion of independent non-executive directors, audit committee and the different types of connected transactions, and dummy variables indicating H-shares and Red Chips, are not statistically significant. Second, total family ownership (summing the shareholdings of all directors with the same surname) and total board ownership produces results in the same direction but less significant compared to ownership by the main shareholder. Third we include additional variables that are not significant in most specifications, namely dummies for assets located in mainland China, for overseas assets (not in Hong Kong or China), for joint venture partners located in mainland China, and dummies for firms applying to the exchange for a waiver of some of the requirements, violating a previously granted waiver, disclosing a past transaction, and announcing a transaction that breached listing rules. The results on the remaining variables discussed in this section, are unaffected in any of these alternative specifications.

argument advanced by Johnson, Boone, Breach and Friedman (2000), namely that controlling shareholders may be more likely to expropriate during periods with worsening economic prospects. Similarly, Baek, Kang, and Park (2002) find that chaebol firms with concentrated ownership (i.e. the firms in better position to expropriate minority shareholders) experienced the largest value losses during the crisis in Korea. We also find that lack of information disclosure about the connected transaction is associated with negative abnormal returns. We examine which types of firms are associated with less information disclosure in the next section.

5. Which firms are more likely to expropriate?

5.1. Determinants of information disclosure and violations of listing rules

In this section, we examine which firms are more likely to exhibit poor information disclosure, conditional on undertaking a connected transaction. In addition, we examine the determinants of the likelihood of violating regulations concerning connected transactions. From the filings data, we obtain information on whether the listed firm applies to the exchange for a waiver from some of the requirements of the listing rules; whether the filing is the result of the listed company having violated a previously granted waiver; whether the filing pertains to a transaction that took place in the past but had not been disclosed; and whether the disclosed transaction constitutes a breach of listing rules. We estimate logit models using ownership structure, corporate governance, information disclosure and firm size as explanatory variables.

Results are reported in Table 6. In columns (1)-(2), the likelihood of a firm not providing an assessment by an independent financial advisor and not disclosing the amount of the transaction is negatively related to firm size, i.e. small firms are less likely to provide a report or disclose the amount (coefficients –0.2174 and –0.1213; p-values 0.002 and 0.008 respectively). In column (3), the likelihood of disclosing a transaction that had taken place in the past but had not been disclosed previously is also negatively related to firm size (coefficient –0.2844; p-value 0.000), positively related to the percentage ownership by the main shareholder (coefficient 2.6891; p-value 0.094) and to the firm being an H-share (coefficient 2.1693; p-value 0.077). However, against expectations, it is also positively related to firms with ADRs.

The next three columns examine the likelihood of violating some of the requirements relating to connected transactions. In column (4), the likelihood of applying to the stock

exchange for a waiver from some of the requirements is negatively related to firm size (coefficient –0.1188; p-value 0.015). In column (5), the likelihood of filing for a transaction because a previously granted waiver has been violated is negatively related to firm size (coefficient –0.2011; p-value 0.089), and positively related to the percentage ownership by the main shareholder (coefficient 4.4873; p-value 0.042). It is also negatively related to the proportion of non-executive directors on the board (coefficient –5.9550; p-value 0.101).

Finally, column (6) reports the likelihood of a firm announcing a connected transaction that constitutes a breach of the stock exchange's listing rules. Most filings of transactions that breach listing rules disclose a transaction that had taken place in the past and had not been disclosed previously. The likelihood of breaching listing rules is negatively related to firm size (coefficient –0.2620; p-value 0.023), positively related to ownership by the main shareholder (coefficient 3.7068; p-value 0.073), positively related to the firm being an H-share (coefficient 3.4699; p-value 0.020) or a Red Chip (coefficient 1.8868; p-value 0.095), and finally, positively related to the firm having an auditor who is not one of the Big 5 audit firms (coefficient 1.7883; p-value 0.076). Therefore, concentrated ownership, ownership that can be traced to mainland China, and auditors with lower reputation increase the likelihood of connected transactions that breach listing rules.

The reputation of the financial advisor whose assessment report is attached to the filing does not appear to be related to the likelihood of information disclosure or of listing rules violations. *A priori* we would expect that advisors with better reputation would be associated with better disclosure and less likelihood of rules violations. In order to examine the determinants of financial advisor selection, in column (7) we regress the advisor reputation variable on ownership structure and corporate governance variables. Advisor reputation is positively related to the number of analysts following the firm (coefficient 0.0039; p-value 0.027), and negatively related to Red Chips (coefficient –0.0595; p-value 0.055). Therefore, firms followed by few (or no) analysts and Red Chips are more likely to hire low reputation financial advisors to advise on their connected transactions.[13]

In summary, the results reported in this section show that concentrated ownership and ownership that can be traced to mainland China (H-shares and Red Chips) are associated with

[13] The results are unchanged when we use all-Asia or mainland China league tables to construct our financial advisor reputation proxies (not reported).

worse information disclosure about connected transactions and with higher likelihood of violations of the exchange's requirements with respect to these transactions.

5.2. Which firms are more likely to undertake connected transactions?

In this section, we compare firms undertaking connected transactions with the universe of publicly listed Hong Kong firms and examine whether there are any firm characteristics that determine the likelihood of expropriation. We report estimates of logit models in Table 7. In column (1) the dependent variable is the likelihood of a firm undertaking any connected transaction, in column (2) it is the likelihood that the firm undertakes a value-destroying connected transaction (defined as a transaction where the firm earns a negative market-adjusted abnormal return in the [0,+1] window), and in columns (3) to (12) it is the likelihood of undertaking connected transactions falling in the different categories in which we have classified them. The independent variables are ownership structure and corporate governance variables, analyst coverage, ADRs, industry-adjusted market-to-book ratios (end of year market value of equity divided by book value of equity), median industry market-to-book, and industry-adjusted long-term debt-equity ratios in year −1 (ratios are industry-adjusted by subtracting industry median values from the firm's raw values). The last three variables are included because it has been suggested that firms may be more likely to expropriate when they face worse economic prospects (Johnson, Boone, Breach, and Friedman, 2000).

Overall, there is little evidence that the percentage ownership by the main shareholder, the proportion of independent non-executive directors on the board, and CEO duality affect the likelihood of undertaking any type of connected transaction. Percentage ownership by the main shareholder is negatively related to asset sales, whereas CEO duality is negatively related to undertaking connected transactions and asset acquisitions. The presence of an audit committee is positively related to the likelihood of undertaking connected transactions (coefficient 0.2874; p-value 0.090 in column (1)) but this result is driven by higher likelihood of takeovers and joint ventures, which are value-enhancing transactions (coefficient 1.0330; p-value 0.111 in column (10)). In general, the Hong Kong market is characterized by firms with concentrated ownership and with similar corporate governance characteristics. Therefore, firms undertaking connected transactions do not appear to differ with respect to these characteristics from the remaining Hong Kong firms.

On the other hand, H-shares and (even more significantly) Red Chips are more likely to undertake connected transactions. H-share firms are more likely to acquire assets from their parent (coefficient 1.8017; p-value 0.002 in column (5)), to enter into trading relationships with their parent (coefficient 2.0354; p-value 0.012 in column (6)), and to buy out their joint venture partners (coefficient 2.1628; p-value 0.026 in column (11)). They are also more likely to undertake any type of connected transaction but with a marginally not significant coefficient in column (1). Red Chips are more likely to announce any type of connected transaction (coefficient 0.8965; p-value 0.002 in column (1)), to announce value-destroying connected transactions (coefficient 1.1942; p-value 0.000 in column (2)), to acquire assets from their parent (coefficient 1.8027; p-value 0.000 in column (5)), and to make cash payments to their main shareholders (coefficient 1.9494; p-value 0.024 in column (7)). Also, two more coefficients are marginally not significant, namely for equity sales and trading relationships (columns (1) and (6)). As has been discussed previously, rulings by Hong Kong courts are not enforceable in China. Furthermore, due diligence and information disclosure about Chinese firms is often limited. Therefore, to the extent that assets or cash are transferred across the border, recovery by Hong Kong shareholders may be difficult. [14]

A final interesting point reported in Table 7 is that the industry-adjusted market-to-book ratios are not negatively related to the likelihood of connected transactions, as would be expected if the market anticipated the expropriation and discounted *ex ante* firms that are more likely to undertake connected transactions. In fact, the only significant coefficient is positive, suggesting that some firms may be timing the market and expropriating minority shareholders when valuations are high. The likelihood of selling assets is positively related to the firm's industry-adjusted market-to-book ratio (coefficient 0.0426; p-value 0.060 in column (4)), as is the case with the likelihood of undertaking connected transactions and value-destroying transactions (coefficients 0.0277 and 0.0299; p-values 0.129 and 0.116 respectively in columns (1) and (2)). Therefore, main shareholders and directors appear to be engaging in tunneling activities in companies that have performed well. We examine this issue further in the next section.

[14] We also use abnormal returns over other windows in order to classify connected transactions as value-destroying and define the dependent dummy variable. The results are qualitatively similar to the ones reported here. In addition, we estimate the models including return on equity (net income divided by shareholders' equity) or year dummies as independent variables, and by dropping the financial variables, and obtain similar results.

6. Does the market anticipate the expropriation?

It has been argued that minority shareholders in South East Asia may have been shielded from the expropriation by acquiring their shares at a discounted price (Fan and Wong, 2002). Our evidence so far does not support this conclusion, because minority shareholders experience significant value losses at the announcement and during the period following the connected transactions. In this section, we examine further the stock price performance and market-to-book ratios during the 12-month period preceding the transaction. Table 8 reports this evidence. In Panel A we report monthly bias-adjusted abnormal returns for the pre-event period comprising months [−12,−1] relative to the month of the announcement. In Panel B we report industry-adjusted market-to-book ratios for years –1 through +1 and in Panel C changes in market-to-book ratios.

There is mixed evidence with respect to performance during the pre-event period in Panel A. On average, firms undertaking connected transactions earn size- and market-to-book adjusted abnormal returns of –5 percent (p-value 0.092), which are driven by firms selling assets (–18.1 percent; p-value 0.025), receiving cash assistance (–121.4 percent; p-value 0.000), subsidiary relationships (–12.3 percent; p-value 0.069), and firms buying out their joint venture partners (–23.6 percent; p-value 0.032). Of these four types of transactions, only firms selling assets are likely subject to expropriation. The remaining types of firms earn mostly positive abnormal returns, though not statistically significant. Similar conclusions can be drawn when examining month [–24,–13] CAR (results not reported).

Industry-adjusted market-to-book ratios for years –1 through +1 in Panel B of Table 8 are even less supportive of the "anticipation" argument. Companies undertaking most types of transactions appear to trade at a premium relative to the market. Firms undertaking connected transactions have year –1 median industry-adjusted market-to-book ratios of 0.07 (p-value 0.000). Firms selling equity stakes have ratios of 0.21 (p-value 0.070; in year 0), firms selling assets 0.24 (p-value 0.003), firms acquiring assets 0.11 (p-value 0.005), and firms buying out their joint venture partner 0.22 (p-value 0.082). The remaining firms have positive or zero ratios (none statistically significant). Only the firms that receive cash assistance under-perform their industry during the pre-event year. This evidence is consistent with the hypothesis that the main shareholders time the market, and expropriate when their firms trade at valuations above the industry median. Valuations decline at around the industry median in year +1 following the

connected transaction (Panel C), by –0.04 overall (p-value 0.066), especially for firms selling equity stakes (–0.24; p-value 0.090), having trading relationships (–0.16; p-value 0.026), and subsidiary relationships (–0.06; p-value 0.074).

In Table 9 we report regressions of pre-event abnormal returns and market-to-book ratios. In columns (1) and (2), the dependent variables are size-adjusted and size- and market-to-book-adjusted cumulative abnormal returns during the 12 months preceding the announcement of the connected transaction [−12,−1]. The coefficients of the dummies indicating different types of transactions are not reported; only the coefficient for firms that receive cash assistance, firms presumably in severe financial difficulty, is negative and statistically significant. We also replicate this analysis using industry-adjusted and industry-and-size-adjusted abnormal returns as dependent variables, with similar results (not reported).

In columns (3)-(5), the dependent variables are industry-adjusted market-to-book ratios for the universe of all publicly listed Hong Kong firms. We construct a sample by including each publicly listed Hong Kong firm each year from 1998-2000 (irrespective of whether it has announced a transaction), and defining the previous year as year –1. Subsequently, we regress industry-adjusted market-to-book ratios for year –1 on dummy variables indicating that a firm announced a connected transaction in year 0 (alternatively, dummies indicating the type of the transaction), and controlling for ownership structure, corporate governance, long-term debt-to-equity ratios and year dummies (the latter are not reported).

In columns (3) and (4), the coefficients of the connected transaction dummy and the value-destroying transaction dummy are positive and statistically significant (coefficients 0.7071 and 0.9364; p-values 0.072 and 0.094 respectively), indicating that firms undertaking connected transactions trade at a premium relative to their industry. None of the connected transactions dummy variables are statistically significant in the specifications of column (5), with the exception of under-performing firms receiving cash assistance, and therefore these coefficients are not reported. We obtain similar results when using the total number of connected transactions undertaken by each firm as an independent variable, and in specifications that include industry fixed effects or dummies for industries exhibiting a higher frequency of firms announcing connected transactions than the frequency for the total population (not reported).

To summarize, we do not find evidence that the market anticipates the expropriation by *ex ante* discounting firms undertaking connected transactions. The only firms discounted are H-

shares, mainland Chinese firms cross-listed in Hong Kong (they are also discounted in unreported regressions of industry-adjusted market-to-book ratios for year 0 and +1 using the same methodology). Our results on Hong Kong firms in general (with the exception of H-shares) do not support the conjecture by Fan and Wong (2002) that investors may be protected from expropriation by buying their shares at a discount. Previous evidence in Table 7 indicates that the market may have difficulty in identifying expropriating firms *ex ante*, thus suggesting the possibility that the whole Hong Kong market is discounted. Cross-country analyses are necessary to establish this fact. On the other hand, our results on H-shares are in line with the evidence reported by LLSV (2002), i.e. that firms in countries with poor legal protection of minority shareholders trade at lower valuations compared to firms in common law countries.

7. Robustness checks

This section reports additional robustness tests. First, it discusses results using alternative event windows and methods for estimating abnormal returns. Next, it compares connected transactions with similar arm's length transactions. Finally, it examines pyramids, the divergence between cash flow and control rights, and propping up through asset injections.

7.1. Alternative event windows and abnormal returns estimation methods

We redo both the univariate analyses of Table 4 and our main regressions in Table 5, using as dependent variables, market-adjusted, market model residuals and mean-adjusted abnormal returns for six different windows, over days [0,+1], [-1,+1], [0,+5], [-5,+5], [0,+10], and [-10,+10] (in total, 18 regressions), as well as using announcement month abnormal returns adjusted for industry, size, industry-and-size, and size-and-market-to-book (in total, 4 regressions). Our results are similar to the ones reported in Table 4 and Table 5, and therefore we do not report them in order to economize on space. Percentage ownership by the main shareholder is always negatively related to abnormal returns, as are the proxies for poor information disclosure (lack of financial advisor report, and no Big-5 auditor). Therefore, our main results are robust to the choice of event window and to alternative methods for estimating abnormal returns.

7.2. Connected versus arm's-length transactions

In this section we compare our results on equity sales, asset sales, and asset acquisitions between publicly listed companies and connected parties with results on similar arm's length transactions between Hong Kong firms and non-insiders. If the negative market reaction to connected party transactions that we find is the result of expropriation of minority shareholders, then we might expect a positive market reaction for arm's length transactions.

First, with respect to equity sales, we note that our results showing a negative market reaction to equity sales to connected parties are the opposite of what has been found in studies of share issues via placements to non-insiders in Hong Kong. The announcement of placements to non-insiders is associated with positive [-3, 0] day abnormal returns of between 4.2 percent (Wu and Wang, 2002) and 4.3 percent (Ching, Firth, and Rui, 2001). In the U.S., the results range from 1.7 percent (Hertzel and Smith, 1993) to 4.4 percent (Wruck, 1989).

With respect to arm's length asset sales and acquisitions, in the absence of studies pertaining to Hong Kong, we develop our own sample by searching the *SDC* database for divestitures by Hong Kong publicly listed parents during 1998-2000. This initial search results in 211 transactions, from which we derive our final sample of sellers and acquirers of assets. We delete any transactions involving connected parties or announced concurrently with connected transactions, multiple transactions on the same date, and transactions for which no stock price data are available in *Datastream*. We are left with a final sample of 118 arm's length asset sales, and 27 arm's length asset acquisitions involving publicly listed Hong Kong firms and third parties (the number of acquisitions is considerably smaller because in many cases the acquirers are non-listed firms, foreign firms or not disclosed).

Market-adjusted abnormal returns around the announcement of these divestitures and acquisitions are reported in Table 10. For easier comparison, we also report the comparable results for connected transactions from Table 4. In contrast to connected party transactions, which are associated with a negative market reaction, arm's length transactions are associated with a positive stock market reaction (3.8 percent for asset sales and 12 percent for acquisitions of assets over the [0,+1] window). Similar results are obtained for trading days [0,+10] (none statistically significant). Our results are in line with previous evidence on asset sales by U.S. parents (around 1.4 to 1.5 percent) (see Lang, Poulsen and Stulz, 1995 or John and Ofek, 1995), and acquisitions of assets by U.S. firms (around 1.2 to 1.3 percent) (see Sicherman and Pettway,

1987 or Servaes and Zenner, 1996). The differences in CARs between similar connected party and arm's length transactions are statistically significant at the 1 percent level (asset sales) and 5 percent level (asset acquisitions).

The results on similar arm's length transactions reported in this section lend further support to our hypothesis that the negative market reaction experienced by shareholders in connected party equity sales, asset sales, and asset acquisitions is likely to be attributed to the expropriation of minority shareholders.

7.3. Pyramids

Pyramidal structures are not very common in Hong Kong. Only a quarter of listed firms are controlled through pyramids (Claessens, Djankov, Fan, and Lang, 2002). An alternative test for the presence of expropriation is to identify transactions in which the connected party is another publicly listed company, and examine jointly the market reaction experienced by both parent and subsidiary. A negative market reaction for subsidiaries and a positive for parents would be consistent with expropriation.

Our sample does not include duplicate transactions, i.e. filings for the same transaction by both parent and subsidiary. Therefore, we trace the connected parties in our sample and identify 24 cases in which the connected party is another publicly listed Hong Kong firm. Market-adjusted abnormal returns and return on equity (ROE) for these 24 parents and subsidiaries are reported in Table 11. On average, the parents earn [0,+1] and [0,+10] day market-adjusted excess returns of zero and 1 percent respectively (none statistically significant). The subsidiaries involved in the transactions earn between –5.1 and –9.7 percent (statistically significant at the 3 percent level). The differences between parent and subsidiary CAR are statistically significant at better than the 4 percent level.

However, parent minority shareholders may not expect to capture the benefits from the expropriation of the subsidiary if the parent tunnels these gains towards firms higher up the pyramid. Consequently, we further divide the parent sample into 13 parents who announce other connected transactions during our sample period and 11 parents without other connected transactions. In line with expectations, the first group earns, on average, negative excess returns of between –0.1 and –1.2 percent, and the second group earns positive excess returns of between

0.5 and 4.1 percent when announcing connected transactions with their subsidiaries. However, due to the small sample, the differences are not statistically significant.

Bertrand, Mehta, and Mullainathan (2002) show that tunneling in pyramids can also be detected using accounting measures, as tunneling can differentially affect the earnings of firms at the bottom and the upper ends of the pyramid. Therefore, in columns (3) and (4) of Table 11 we report median changes in ROE (raw and industry-adjusted) from year −1 (the last income statement before the connected transaction) to year 0 (the first income statement following the connected transaction) for parents and subsidiaries. As expected, the results are in line with the stock price data reported previously and support the hypothesis of tunneling. Parents experience improvements in accounting performance (1.1 percentage points in raw ROE and 3.3 percentage points in industry-adjusted ROE; none statistically significant). In contrast, subsidiaries experience deterioration (−5.1 and −6 percentage points respectively; the former statistically significant at the 10 percent level). The differences between the changes in parent and subsidiary ROE are statistically significant at the 10 percent level.

7.4. The divergence between cash flow and control rights

Several cross-country studies have used the divergence between cash flow (ownership) and control rights as a measure of the *ex ante* likelihood of expropriation (see among others, Faccio, Lang and Young, 2001, Claessens, Djankov, Fan, and Lang, 2002, and Lemmon and Lins, 2002). In order to examine whether this ratio has explanatory power for the analysis reported in this paper, we combine our dataset with the data used by Claessens, Djankov, Fan, and Lang (2002).[15]

In analysis not reported in the tables, we replicate all regressions that appear in this paper by adding the ownership over control rights ratio. Merging the two datasets reduces the observations to 80 in the regressions of Table 5 and the logit models of Table 6, and to 524 in the logit models of Table 7 and the regressions of Table 9 respectively. We find that the coefficient of the divergence between cash flow and control rights is never statistically significant in any of the specifications, and often appears with the opposite sign to the one expected, whereas our other variables retain their statistical significance. We also replace our main shareholder

[15] We thank Larry Lang for making the data available to us through the Corporate Governance Data Archived Center at the Chinese University of Hong Kong.

ownership variable with the ownership-control rights ratio but still do not find any significance. It is particularly interesting that the divergence between cash flow and control rights has no explanatory power in the logit models of the likelihood of undertaking connected transactions (Table 7) and in the regressions of the *ex ante* discount for expropriating firms (Table 9).

There are three potential reasons why the divergence between cash flow and control rights has no explanatory power for our analysis. First, the data is available only for a sub-sample of the largest firms but as shown in Table 7, smaller firms are more likely to expropriate minority shareholders. Second, the ratio may have more explanatory power in markets dominated by pyramids which are not common in Hong Kong. Although the divergence of ownership and control may be sufficient for expropriation, it is not necessary. Finally, it is possible that the divergence between cash flow and control may proxy for expropriation that is not reflected in our data (small transactions that fall below the threshold requiring stock exchange notification or illegal transactions that the companies do not disclose).

7.5. Propping up through asset injections

Asset injections to newly acquired companies are a common occurrence in Hong Kong. Most often, but not exclusively, they are the result of a "back-door" listing, where a private firm acquires a small publicly listed shell company and transfers ("injects") assets to it in order to boost its performance and/or transform its operations. Back-door listings associated with asset injections have been the preferred method for the creation of many publicly listed Red Chips in Hong Kong.

We search our sample for such transactions and find two deals that clearly involve asset injections, where the listed company making the filing is being acquired by an acquirer who intends to inject assets. Both transactions are classified as "Takeover offers" in Table 4 and are associated with [0,+1] day CARs of 83.2 percent and 184.6 percent respectively. There is no clear evidence on whether they under-performed relative to the market before receiving the takeover offer. Their size- and market-to-book adjusted CARs over the 12 months leading up to the transaction are –20.5 and 25.9 percent respectively, and their industry-adjusted market-to-book ratios 1.22 and –0.23. However, both have negative industry-adjusted ROE (–135.7 and –1.9 percent), and high industry-adjusted debt-equity ratios (155.5 and 1.6 percent). In these cases, both acquirers were Hong Kong companies.

To further examine the potential presence of asset injections in our sample, especially in relation to mainland Chinese companies, which were more likely to acquire assets from their parents in Table 7, we classify as potential asset injections all acquisitions of assets from their controlling shareholder by Red Chips and H-share firms, and compare them with the remaining asset acquisitions from connected parties. These results are not reported in tables.

In line with expectations, the 18 connected asset acquisitions by Red Chips from their controlling shareholders are associated with positive median [0,+10] day CARs of 3.9 percent (compared to −5.5 percent for connected acquisitions by the remaining firms; difference statistically significant at the 2 percent level in Mann-Whitney tests). However, the difference for the two-day window is not statistically significant, as is also the case for the 13 connected acquisitions by H-shares, compared to the remaining connected acquisitions of assets.

During the 12-month period preceding the deal, out of 17 Red Chips with available information, 11 earn negative excess returns (median −17.1 percent) but 12 have positive industry-adjusted market-to-book ratios (median 0.42). Their ROE and debt-equity ratios are on par with their industry. However, during the 12-month period following the asset injection, 11 firms still earn negative excess returns (median −19.4 percent).

On the other hand, out of 10 H-shares with available data, 8 have negative 12-month pre-event CARs (median −21.6 percent), and negative industry-adjusted market-to-book ratios (median −0.32). However, their operating performance and debt levels are on par with their industry peers. In the 12 months following the transaction, 6 firms earn positive excess returns (median 20.7 percent). Therefore, assuming that these transactions are asset injections attempting to boost the performance of under-performing Red Chips and H-shares (which our data cannot determine conclusively), the evidence is inconclusive as to how effective the propping up is.

8. Conclusions

In this paper we report direct evidence of expropriation of minority shareholders using data on connected transactions between companies listed in the Stock Exchange of Hong Kong and their main shareholders or directors during 1998-2000. In contrast to previous studies which use indirect proxies for the likelihood of expropriation (LLSV, 2002; Claessens, Djankov, Fan and Lang, 2002; Lemmon and Lins, 2002; Joh, 2003), we analyze specific transactions that may lead to expropriation, and substantiate the presence of real tunneling in the Hong Kong stock

market. We find that minority shareholders experience significant value losses when companies undertake connected transactions, and our data allows us to explore in detail the mechanisms through which the expropriation takes place.

Our results provide support for some earlier studies. The effect of the legal system on expropriation (LLSV, 1998, 2000b; Johnson, La Porta, Lopez-de-Silanes and Shleifer, 2000) is highlighted in our data by the higher likelihood of connected transactions by firms whose ultimate ownership can be traced to mainland China, and who are therefore partially protected from litigation by transferring assets outside the jurisdiction of Hong Kong courts. Bertrand, Mehta and Mullainathan (2002) suggest that tunneling within Indian business groups occurs primarily through non-operating earnings items. Our evidence supports this view, since less than 15 percent of the transactions in our sample would impact operating earnings and the majority of transactions would give rise to exceptional non-operating earnings items. Finally, consistent with Bae, Kang and Kim (2002), we find that firms providing cash assistance to third parties experience value losses.

Some of our results however, conflict with conclusions reached in the earlier literature. In contrast to Buysschaert, Deloof and Jegers (2002), who do not find any evidence of expropriation of minority shareholders in equity transfers within Belgian business groups, we show that equity sales to connected persons in Hong Kong are associated with large value losses for minority shareholders. This suggests that their results may be due to Belgian groups in the process of simplifying their complex cross-ownership structures in the late 1990s rather than to firms expropriating minority shareholders.

More significantly, earlier studies have suggested that East Asian firms trade at a discount that is cross-sectionally related to the divergence between the cash flow and control rights of the main shareholders (Claessens, Djankov, Fan, and Lang, 2002; Lemmon and Lins, 2002; Joh, 2003). This divergence proxies for the likelihood of expropriation. Although the divergence between cash flow and control rights may proxy for expropriation that is not reflected in our data (small transactions that fall below the threshold requiring stock exchange notification or illegal transactions that the companies do not disclose), we fail to find that firms in which controlling shareholders do expropriate, trade at discounted valuations relative to other Hong Kong firms in our sample (with the exception of firms whose ultimate owners can be traced to mainland China).

This creates an interesting puzzle. While the market seems to punish firms for tunneling episodes, there does not seem to be a systematic discount when we directly examine companies that have the potential to engage in such transactions. There are a number of potential explanations for this contradiction. First, as mentioned above, the discount observed when the divergence between cash flow and control rights is used to proxy for expropriation might either be related to factors other than expropriation or might proxy for forms of expropriation that our data does not capture. Second, investors may be over-optimistic, systematically underweighting the probability that firms might engage in expropriating wealth from their minority shareholders. Third, the contradiction may arise as an outcome of optimal firm contracting. For example, while controlling shareholders might extract wealth in periods when the economy is stable, they might choose to prop up firms in periods of macro-economic shocks. Overall therefore, we would not see investors *a priori* discounting firms with potential for expropriation. Since we examine the Hong Kong market over a period of time when the markets are stable, our data will not allow us to capture this effect. Finally, our results leave open the possibility that the entire Hong Kong market is discounted to reflect the possibility of expropriation.

In summary, our analysis allows us to understand in greater detail the ways through which expropriation of minority shareholders takes place in firms with concentrated ownership. Given that connected transactions have featured prominently in many recent corporate scandals around the world, such as the Enron collapse in the U.S., a systematic analysis of such deals can improve our understanding of different types of agency costs.

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Table 1
Classification of connected transactions

Type of connected transaction	Description
A. Transactions that are a priori likely to result in expropriation of the listed firm's minority shareholders:	
Asset acquisitions	Transactions which involve the acquisition of tangible or intangible assets by the listed company from a connected person or from a private company majority-controlled by this person.
Asset sales	Transactions which involve the sale of tangible or intangible assets by the listed company to a connected person or to a private company majority-controlled by this person.
Equity sales	Transactions which involve the sale of an equity stake in the listed company to a connected person or a private company majority-controlled by this person.
Trading relationships	Transactions which involve the trade of goods and services between the listed company and a private company majority-controlled by a connected person. They can be purchases by the listed company, sales, or both.
Cash payments	Transactions which involve direct cash payments by the listed company to a connected person or to a company controlled by this person (including loans and cash assistance), and the provision of cash guarantees by the listed company for debts owed by the connected person or by the companies controlled by this person.
B. Transactions likely to benefit the listed firm's minority shareholders:	
Cash receipts	Transactions which involve direct cash assistance or loans provided by the connected person to the listed company.
Subsidiary relationships	Transactions between a listed company and one of its subsidiaries. They may involve acquisitions or sales of equity stakes or assets and trading relationships.
C. Transactions that may have strategic rationales and may not be expropriation:	
Takeover offers and joint-ventures	Cases when the listed company receives a takeover offer by another publicly listed company that holds a toehold, and cases when the listed company forms a joint-venture or strategic alliance with another company that already holds a stake in the listed company.
Joint-venture stake acquisitions	Transactions which involve acquisitions by the listed company from a third party of a stake in a joint-venture in which the company participates as a joint-venture partner. The connected person is the third party in his/her capacity as subsidiary shareholder.
Joint-venture stake sales	Transactions which involve the sale by the listed company to a third party of a stake in a joint venture in which the company participates as a joint venture partner. The connected person is the third party in his/her capacity as subsidiary shareholder.

Table 2
Characteristics of connected transactions

The table reports characteristics of connected transactions for a sample of 328 filings by firms listed in the Stock Exchange of Hong Kong during 1998-2000. The definition of different types of connected transactions appears in Table 1. The HK$ is pegged to the US$ at the rate of HK$7.8=US$1.

	All Connected	Transactions that are a priori likely to result in expropriation of the listed firm's minority shareholders					Transactions likely to benefit the listed firm's minority shareholders		Transactions that may have strategic rationales and may not be expropriation		
		Asset acquisitions	Asset sales	Equity sales	Trading relationships	Cash payments	Cash receipts	Subsidiary relationships	Takeover offers and joint-ventures	Joint-venture stake acquisitions	Joint-venture stake sales
Amount (HK$mil) Total	116,026	52,966	20,181	2,206	7,605	3,366	515	20,516	3,102	5,917	7,113
Mean	416	595	412	130	634	187	74	707	194	237	229
Median	106	134	80	102	223	70	45	256	139	64	105
Amount/ Market Value											
Mean	44.7	36.0	58.3	44.1	50.4	32.9	24.0	60.1	81.3	31.5	29.6
Median	17.5	14.9	18.3	22.6	17.2	14.4	16.0	23.5	32.4	8.2	15.9
Number of transactions where											
No amount was disclosed	49	3	5	1	20	7	0	11	2	0	2
No financial advisor	9	1	1	0	1	1	0	1	1	1	3
No Big-5 auditor	21	3	3	1	1	4	2	1	2	1	3
Waiver application	35	6	2	1	17	1	1	7	0	0	2
Waiver violation	11	0	1	0	2	7	0	1	0	0	0
Past transaction not disclosed	23	4	2	0	3	12	0	1	1	0	0
Breach of listing rules	16	1	0	0	2	12	0	1	0	0	0
Total	328	92	54	18	32	25	7	40	18	25	33

Table 3

Financial data and corporate governance descriptive statistics for Hong Kong firms

The table reports financial data and corporate governance descriptive statistics for a sample of 609 firms listed in the Stock Exchange of Hong Kong during 1998-2000. Market-to-book is market value of equity divided by book value of equity. ROE is net income divided by end of year shareholders' equity. Debt-equity is long-term debt divided by shareholders' equity. Main shareholder ownership is the ratio of the shareholdings of the largest shareholder as a percentage of total number of shares outstanding. These shareholdings aggregate shares held in the director's name, shares held by corporations controlled by the director and shares held via other vehicles (such as trusts), provided that they are disclosed in the annual report. Board size is number of directors on the board. Proportion of independent non-executive directors is the number of independent directors divided by board size. Audit committee is the proportion of firms having an audit committee on the board. CEO duality is the proportion of firms where the same person holds the positions of CEO and chairman of the board. H-shares are firms incorporated in mainland China, originally listed in one of the two mainland Chinese stock exchanges (Shanghai and Shenzhen), and later cross-listed in Hong Kong. Red Chips are firms incorporated in Hong Kong and traded in the stock exchange of Hong Kong, whose ultimate owners are from mainland China. The definition of different types of connected transactions appears in Table 1. The HK$ is pegged to the US$ at the rate of HK$7.8=US$1.

			Transactions that are a priori likely to result in expropriation of the listed firm's minority shareholders					Transactions likely to benefit the listed firm's minority shareholders		Transactions that may have strategic rationales and may not be expropriation		
	Firms without Connected Transactions	All Connected Transactions	Asset acquisitions	Asset sales	Equity sales	Trading relationships	Cash payments	Cash receipts	Subsidiary relationships	Takeover offers and joint-ventures	Joint-venture stake acquisitions	Joint-venture stake sales
Total assets (HK$ mil) - median	1,176	1,597	1,496	984	1,031	1,439	2,021	11,366	2,798	1,813	2,265	1,319
Market-to-book - median	0.57	0.69	0.66	0.69	0.77	0.43	0.70	0.16	0.51	0.77	1.10	0.47
ROE (%) - median	3.2	1.9	1.4	-0.8	0.3	3.6	-3.5	-43.2	5.9	6.5	0.7	2.6
Debt equity (%) - median	6.8	10.5	9.0	9.2	9.1	14.0	5.9	77.1	16.9	5.9	12.0	20.8
Main shareholder ownership (%) – median	19.8	17.1	15.5	8.0	17.1	14.3	20.3	24.7	27.5	25.0	27.9	19.3
Board size - median	8	9	9	9	8	9	9	11	10	9	8	9
Proportion of independent non-executive directors (%) - median	27.3	25.0	27.3	25.0	25.0	25.0	27.3	18.2	25.8	25.0	26.7	28.6
Audit committee - proportion of sample	50.0	48.2	48.4	57.6	38.5	20.8	47.1	33.3	46.2	69.2	47.1	59.1
CEO duality - proportion of sample	22.7	25.6	23.4	18.2	38.5	16.7	17.6	0.0	34.6	15.4	29.4	18.2
H-shares - proportion of sample	4.5	8.2	14.1	3.0	0.0	20.8	5.9	0.0	0.0	0.0	11.8	0.0
Red Chips - proportion of sample	13.6	13.8	18.8	12.1	15.4	12.5	17.6	0.0	19.2	7.7	11.8	9.1
N	1,234	328	92	54	18	32	25	7	40	18	25	33

Table 4
Abnormal returns for firms undertaking connected transactions

The table reports cumulative abnormal returns (CARs) for a sample of 328 announcements of connected transactions by firms listed in the Stock Exchange of Hong Kong during 1998-2000. Market model residuals CARs are estimated using an estimation period from day –180 to day –31 relative to the date of the public press release announcement, *d*=0. We use the returns on the Hang Seng Index as the market index. Monthly CARs are estimated with reference to a size- and a size- and market-to-book based benchmark portfolio. They are bias-adjusted by subtracting in each case, the mean of the empirical distribution computed through bootstrapping, from the CAR. The definition of different types of connected transactions appears in Table 1. Significance levels for daily CARs are based on the Wilcoxon sign rank test. Significance levels for monthly CARs are p-values computed through bootstrapping. ***, **, * denote significance at the 1, 5, and 10 percent level respectively in two-tailed tests.

Panel A. Event period

	All Connected	Transactions that are a priori likely to result in expropriation of the listed firm's minority shareholders					Transactions likely to benefit the listed firm's minority shareholders		Transactions that may have strategic rationales and may not be expropriation		
		Equity sales	Asset sales	Asset acquisitions	Trading relationships	Cash payments	Cash receipts	Subsidiary relationships	Takeover offers and joint-ventures	Joint-venture stake acquisitions	Joint-venture stake sales
					A.1. Days [0,+1]						
Market adjusted	-0.7	-5.9	-3.1	-3.3	-3.1	-2.5	3.2	1.1	32.5	-1.3	-4.2
	(0.001)***	(0.001)***	(0.006)***	(0.023)**	(0.168)	(0.063)*	(0.272)	(0.318)	(0.005)***	(0.597)	(0.035)**
Market model	-0.4	-4.9	-3.1	-3.0	-3.0	-2.4	3.8	1.7	33.1	-0.5	-4.8
	(0.008)***	(0.002)***	(0.009)***	(0.063)*	(0.344)	(0.095)*	(0.205)	(0.093)*	(0.003)***	(0.989)	(0.009)***
					A.2. Days [0,+10]						
Market adjusted	-3.4	-11.8	-6.4	-7.5	-7.5	-2.1	2.2	0.0	30.7	-4.3	-6.1
	(0.000)***	(0.001)***	(0.021)**	(0.005)***	(0.011)**	(0.399)	(0.272)	(0.873)	(0.015)**	(0.184)	(0.009)***
Market model	-1.7	-10.2	-6.7	-5.0	-7.0	-0.8	8.8	2.6	31.7	-1.7	-5.1
	(0.06)*	(0.002)***	(0.063)*	(0.227)	(0.040)**	(0.611)	(0.023)**	(0.073)*	(0.007)***	(0.484)	(0.063)*
					A.3. Month 0						
Size adjusted	-0.3	-8.6	2.3	-6.1	0.2	3.0	-6.7	0.4	24.0	-0.6	-2.4
	(0.390)	(0.029)**	(0.208)	(0.003)***	(0.485)	(0.244)	(0.172)	(0.437)	(0.003)***	(0.451)	(0.279)
Size/market-to-book adjusted	-0.6	-9.6	1.1	-6.2	-0.5	1.9	-10.5	1.1	24.4	0.5	-1.9
	(0.325)	(0.018)**	(0.342)	(0.004)***	(0.449)	(0.382)	(0.074)*	(0.366)	(0.000)***	(0.440)	(0.320)

Panel B. Post-event period
Months [+1,+12]

	All Connected	Transactions that are a priori likely to result in expropriation of the listed firm's minority shareholders					Transactions likely to benefit the listed firm's minority shareholders		Transactions that may have strategic rationales and may not be expropriation		
		Equity sales	Asset sales	Asset acquisitions	Trading relationships	Cash payments	Cash receipts	Subsidiary relationships	Takeover offers and joint-ventures	Joint-venture stake acquisitions	Joint-venture stake sales
Size adjusted	-13.8	-18.7	-26.0	-8.4	-23.1	-19.6	-20.0	0.2	-26.3	2.5	-21.5
	(0.000)***	(0.124)	(0.001)***	(0.113)	(0.020)**	(0.082)*	(0.215)	(0.490)	(0.063)*	(0.413)	(0.035)**
Size/market-to-book adjusted	-12.6	-12.3	-21.9	-7.2	-21.8	-18.7	-14.1	-1.2	-29.8	3.6	-17.2
	(0.000)***	(0.235)	(0.004)***	(0.162)	(0.031)**	(0.061)*	(0.231)	(0.442)	(0.031)**	(0.377)	(0.067)*

Table 5

Regressions of announcement abnormal returns on corporate governance, and information disclosure variables

The table reports regressions of announcement CARs on corporate governance, and information disclosure variables for a sample of 328 announcements of connected transactions by firms listed in the Stock Exchange of Hong Kong during 1998-2000. Market adjusted CARs are estimated relative to the Hang Seng Index. Monthly CARs are estimated with reference to a size- and market-to-book based benchmark portfolio. They are bias-adjusted by subtracting in each case, the mean of the empirical distribution computed through bootstrapping, from the CAR. Main shareholder ownership is the ratio of the shareholdings of the largest shareholder as a percentage of total number of shares outstanding. These shareholdings aggregate shares held in the director's name, shares held by corporations controlled by the director and shares held via other vehicles (such as trusts), provided that they are disclosed in the annual report. Proportion of independent non-executive directors is the number of independent directors divided by board size. Audit committee is a dummy variable indicating the presence of an audit committee on the board. CEO duality is a dummy variable indicating that the same person holds the positions of CEO and chairman of the board. No amount disclosed, no financial advisor report, and no Big-5 auditor are dummy variables indicating respectively that the company does not disclose the value of the transaction, does not submit a report by an independent financial advisor, and its auditor is not one of the Big-5 auditing firms. Financial advisor reputation is estimated using financial advisor league tables for mergers and acquisitions in Hong Kong based on value of transactions for the period 1995-1997, as the ratio of one divided by the ranking of the advisor in the league table. Advisors who do not appear in the league table are assigned the rank of one plus the total number of advisors ranked in the table. If the listed company does not attach a report by an independent financial advisor our advisor quality proxy takes the value of zero. Analyst number is the number of analysts following the firm each fiscal year, obtained from I/B/E/S. ADR II/III is a dummy variable indicating that the firm has Type II or Type III ADRs listed in U.S. stock markets. Specifications in columns (1), (3), and (5) include dummies for different types of connected transactions (not reported). Definitions of the different types of connected transactions appear in Table 1. Significance levels (p-values) in parentheses are based on White (1980) heteroskedasticity consistent standard errors. ***, **, * denote significance at the 1, 5, and 10 percent level respectively in two-tailed tests.

	Market adjusted CAR Days [0,+1]		Market adjusted CAR Days [0,+10]		Size and market-to-book adjusted CAR Month 0	
	(1)	(2)	(3)	(4)	(5)	(6)
A. Corporate governance model						
Intercept	0.1543	-0.0439	0.1363	-0.0698	0.1159	-0.0170
	(0.222)	(0.228)	(0.193)	(0.117)	(0.300)	(0.687)
Main shareholder ownership	-0.0796	-0.0635	-0.1338	-0.1141	-0.3079	-0.2875
	(0.115)	(0.170)	(0.015)**	(0.030)**	(0.000)***	(0.000)***
Proportion of independent non-executive directors	0.1048	0.0554	0.1799	0.1222	0.2475	0.1600
	(0.411)	(0.630)	(0.211)	(0.378)	(0.091)*	(0.248)
Audit committee	0.0373	0.0526	0.0177	0.0365	0.0311	0.0476
	(0.065)*	(0.045)**	(0.505)	(0.211)	(0.205)	(0.101)
CEO duality	0.0094	0.0180	0.0210	0.0295	0.0085	0.0165
	(0.662)	(0.343)	(0.482)	(0.310)	(0.804)	(0.615)
Type of connected transaction dummies	Yes	No	Yes	No	Yes	No
Adj. R^2	0.06	0.02	0.07	0.02	0.10	0.05
N	229	229	229	229	229	229

	Market adjusted CAR Days [0,+1]		Market adjusted CAR Days [0,+10]		Size and market-to-book adjusted CAR Month 0	
	(1)	(2)	(3)	(4)	(5)	(6)
B. Information disclosure model						
Intercept	0.2241	0.0026	0.2242	-0.0120	0.1477	-0.0129
	(0.117)	(0.904)	(0.043)*	(0.571)	(0.244)	(0.560)
No amount disclosed	-0.0650	-0.0294	-0.0466	-0.0185	-0.0045	0.0354
	(0.110)	(0.321)	(0.422)	(0.637)	(0.939)	(0.446)
No financial advisor report	-0.1413	-0.1400	-0.1617	-0.1591	0.0248	0.0376
	(0.059)*	(0.050)**	(0.037)**	(0.022)**	(0.580)	(0.179)
Financial advisor reputation	0.0044	0.0441	-0.1177	-0.0719	-0.0359	-0.0073
	(0.962)	(0.656)	(0.264)	(0.417)	(0.716)	(0.945)
No Big-5 auditor	-0.0294	-0.0014	-0.1412	-0.1100	-0.0826	-0.0530
	(0.454)	(0.968)	(0.012)**	(0.041)**	(0.115)	(0.305)
Analyst number	-0.0013	-0.0010	-0.0008	-0.0005	0.0002	0.0005
	(0.177)	(0.313)	(0.391)	(0.580)	(0.868)	(0.692)
ADR II/III	0.0201	0.0443	-0.0119	0.0108	0.0723	0.0861
	(0.647)	(0.016)**	(0.847)	(0.804)	(0.200)	(0.045)**
Type of connected transaction dummies	Yes	No	Yes	No	Yes	No
Adj. R^2	0.07	0.02	0.09	0.03	0.02	0.01
N	229	229	229	229	229	229

Table 6
Likelihood of poor information disclosure and violation of connected transactions regulations

The table reports logit and ordinary least squares regressions of the likelihood of poor information disclosure and violation of connected transactions regulations for a sample of 328 announcements of connected transactions by firms listed in the Stock Exchange of Hong Kong during 1998-2000. Monthly CARs are estimated with reference to a size- and a size- and market-to-book based benchmark portfolio. They are bias-adjusted by subtracting in each case, the mean of the empirical distribution computed through bootstrapping, from the CAR. Ln (total assets) is the natural logarithm of the firm's total assets in millions of HK$. No amount disclosed, no financial advisor report, and no Big-5 auditor are dummy variables indicating respectively that the company does not disclose the value of the transaction, does not submit a report by an independent financial advisor, and its auditor is not one of the Big-5 auditing firms. Main shareholder ownership is the ratio of the shareholdings of the largest shareholder as a percentage of total number of shares outstanding. These shareholdings aggregate shares held in the director's name, shares held by corporations controlled by the director and shares held via other vehicles (such as trusts), provided that they are disclosed in the annual report. Proportion of independent non-executive directors is the number of independent directors divided by board size. Audit committee is a dummy variable indicating the presence of an audit committee on the board. CEO duality is a dummy variable indicating that the same person holds the positions of CEO and chairman of the board. Financial advisor reputation is estimated using financial advisor league tables for mergers and acquisitions in Hong Kong based on value of transactions for the period 1995-1997, as the ratio of one divided by the ranking of the advisor in the league table. Advisors who do not appear in the league table are assigned the rank of one plus the total number of advisors ranked in the table. If the listed company does not attach a report by an independent financial advisor our advisor quality proxy takes the value of zero. H-shares are firms incorporated in mainland China, originally listed in one of the two mainland Chinese stock exchanges (Shanghai and Shenzhen), and later cross-listed in Hong Kong. Red Chips are firms incorporated in Hong Kong and traded in the stock exchange of Hong Kong, whose ultimate owners are from mainland China. The Number of analysts are the number of analysts following the firm each fiscal year, obtained from I/B/E/S. ADR II/III is a dummy variable indicating that the firm has Type II or Type III ADRs listed in U.S. stock markets. Waiver application, Waiver violation, Past previously undisclosed deal, and Breach of listing rules are dummy variables indicating respectively that the listed firm applies to the exchange for a waiver from some of the requirements of the listing rules, that the filing is the result of the listed company having violated a previously granted waiver, that the filing pertains to a transaction that took place in the past but was not disclosed, and that the disclosed transaction constitutes a breach of listing rules. For the OLS regressions, significance levels (p-values) in parentheses are based on White (1980) heteroskedasticity consistent standard errors. ***, **, * denote significance at the 1, 5, and 10 percent level respectively in two-tailed tests.

	Logit models						Ordinary least squares
	No financial advisor report (1)	No amount disclosed (2)	Past previously undisclosed deal (3)	Waiver application (4)	Waiver violation (5)	Breach of listing rules (6)	Financial advisor reputation (7)
Intercept							-0.1097 (0.390)
Ln (total assets)	-0.2174 (0.002)***	-0.1213 (0.008)***	-0.2844 (0.000)***	-0.1188 (0.015)**	-0.2011 (0.089)*	-0.2620 (0.023)**	0.0081 (0.371)
Main shareholder ownership	-0.7787 (0.689)	1.5109 (0.153)	2.6891 (0.094)*	1.3863 (0.230)	4.4873 (0.042)**	3.7068 (0.073)*	0.0542 (0.229)
Proportion of independent non-executive directors	1.4879 (0.614)	-1.7696 (0.299)	-0.0345 (0.989)	-2.2623 (0.224)	-5.9550 (0.101)	-1.4436 (0.662)	0.0077 (0.927)
Audit committee	-1.1796 (0.163)	0.1328 (0.740)	0.1745 (0.775)	-0.1148 (0.792)	0.6403 (0.477)	0.1743 (0.816)	0.0055 (0.686)

CEO duality		0.4868	-0.3950	0.0436	-0.9002	-0.3107	0.0033
		(0.240)	(0.569)	(0.928)	(0.435)	(0.719)	(0.845)
Financial advisor reputation		-4.4677	1.6009	-2.0879	-54.3125	-55.8839	
		(0.407)	(0.303)	(0.507)	(0.472)	(0.387)	
No Big-5 auditor		-1.1687	1.2044	-0.8505		1.7883	-0.0246
		(0.277)	(0.181)	(0.430)		(0.076)*	(0.164)
H-shares		0.9801	2.1693	0.8233	2.5352	3.4699	0.0862
		(0.217)	(0.077)*	(0.359)	(0.130)	(0.020)**	(0.147)
Red Chips		-0.0381	1.0444	0.5006	0.8051	1.8868	-0.0595
		(0.958)	(0.290)	(0.470)	(0.519)	(0.095)*	(0.055)*
Number of analysts	-0.0490	-0.0012	0.0157	0.0008	0.0223	0.0214	0.0039
	(0.520)	(0.955)	(0.590)	(0.971)	(0.574)	(0.555)	(0.027)**
ADR II/III		1.0916	2.4218	-0.1702			-0.0749
		(0.218)	(0.028)**	(0.890)			(0.161)
Pseudo-R^2 / Adj. R^2	0.81	0.42	0.67	0.49	0.83	0.78	0.13
N	229	229	229	229	229	229	229

Table 7

Logit regressions of probability of undertaking connected transactions

The table reports logit regressions of the likelihood of undertaking connected transactions for a sample of 609 firms listed in the Stock Exchange of Hong Kong during 1998-2000. Ln (total assets) is the natural logarithm of the firm's total assets in millions of HK$. Main shareholder ownership is the ratio of the shareholdings of the largest shareholder as a percentage of total number of shares outstanding. These shareholdings aggregate shares held in the director's name, shares held by corporations controlled by the director and shares held via other vehicles (such as trusts), provided that they are disclosed in the annual report. Proportion of independent non-executive directors is the number of independent directors divided by board size. Audit committee is a dummy variable indicating the presence of an audit committee on the board. CEO duality is a dummy variable indicating that the same person holds the positions of CEO and chairman of the board. H-shares are firms incorporated in mainland China, originally listed in one of the two mainland Chinese stock exchanges (Shanghai and Shenzhen), and later cross-listed in Hong Kong. Red Chips are firms incorporated in Hong Kong and traded in the stock exchange of Hong Kong, whose ultimate owners are from mainland China. Number of Analysts are the number of analysts following the firm each fiscal year, obtained from I/B/E/S. ADR II/III is a dummy variable indicating that the firm has Type II or Type III ADRs listed in U.S. stock markets. Industry-adjusted market-to-book ratios (end of year market value of equity divided by book value of equity), and industry-adjusted long-term debt-equity ratios are for year-end –1 (ratios are industry-adjusted by subtracting industry median values from the firm's raw values). All connected is a dummy variable indicating that the firm has undertaken a connected transaction. Value-destroying connected is a dummy variable indicating that the firm has undertaken a connected transaction associated with negative market-adjusted CARs for days [0,+1]. The definition of remaining types of connected transactions appears in Table 1. Significance levels (p-values) are in parentheses. ***, **, * denote significance at the 1, 5, and 10 percent level respectively in two-tailed tests.

	All connected	Value-destroying connected	Transactions that are a priori likely to result in expropriation of the listed firm's minority shareholders					Transactions likely to benefit the listed firm's minority shareholders		Transactions that may have strategic rationales and may not be expropriation		
			Equity sales	Asset sales	Asset acquisitions	Trading relationships	Cash payments	Cash receipts	Subsidiary relationships	Takeover offers and joint-ventures	Joint-venture stake acquisitions	Joint-venture stake sales
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Ln (total assets)	-0.1543 (0.000)***	-0.1676 (0.000)***	-0.3234 (0.000)***	-0.2641 (0.000)***	-0.2895 (0.000)***	-0.3081 (0.000)***	-0.2883 (0.000)***	-0.2790 (0.000)***	-0.2293 (0.000)***	-0.3791 (0.000)***	-0.3987 (0.000)***	-0.2986 (0.000)***
Main shareholder ownership	-0.3592 (0.432)	-0.2979 (0.589)	-0.3587 (0.816)	-2.3100 (0.043)**	0.2691 (0.746)	0.8513 (0.511)	1.2548 (0.392)	-0.2079 (0.921)	-0.4188 (0.710)	-0.2649 (0.867)	0.8495 (0.523)	-0.5458 (0.627)
Proportion of independent non-executive directors	0.4108 (0.541)	0.2730 (0.737)	1.0152 (0.671)	-0.9970 (0.511)	2.7364 (0.029)**	-0.8534 (0.629)	-1.0625 (0.641)	-3.3261 (0.321)	-2.0962 (0.209)	-0.3486 (0.884)	1.9474 (0.349)	0.0358 (0.983)
Audit committee	0.2874 (0.090)*	-0.0322 (0.875)	-0.2992 (0.622)	0.5803 (0.131)	-0.0646 (0.827)	-0.2259 (0.632)	0.0408 (0.944)		-0.2427 (0.588)	1.0330 (0.111)	0.6216 (0.223)	0.5869 (0.178)
CEO duality	-0.4287 (0.031)**	-0.3390 (0.153)	0.5213 (0.405)	0.0732 (0.861)	-1.0223 (0.015)**	-0.9850 (0.128)	-0.9604 (0.232)		0.0860 (0.859)		-0.3448 (0.563)	-0.8277 (0.148)
H- shares	0.6036 (0.118)	0.6535 (0.153)		-0.7324 (0.524)	1.8017 (0.002)***	2.0354 (0.012)**	0.8902 (0.476)				2.1628 (0.026)**	

Red Chips	0.8965 (0.002)***	1.1942 (0.000)***	1.3079 (0.171)	0.0061 (0.993)	1.8027 (0.000)***	1.2119 (0.120)	1.9494 (0.024)**		0.7757 (0.288)	-0.2899 (0.807)	1.0752 (0.193)	0.2184 (0.791)
Number of Analysts	0.0148 (0.067)*	0.0107 (0.285)	0.0296 (0.289)	0.0155 (0.386)	0.0098 (0.533)	0.0190 (0.429)	0.0106 (0.722)	0.0454 (0.220)	0.0330 (0.069)*	0.0594 (0.016)**	0.0503 (0.028)**	0.0020 (0.936)
ADR II/III	0.5292 (0.360)	-0.0862 (0.917)		0.9702 (0.410)	-0.3107 (0.781)	1.1813 (0.202)				2.9983 (0.021)**		
Ind. Adj. market-to-book	0.0277 (0.129)	0.0299 (0.116)	0.0408 (0.208)	0.0426 (0.060)*	-0.0285 (0.656)	0.0444 (0.137)	-0.1563 (0.299)	-0.1803 (0.275)	0.0131 (0.727)	0.0001 (0.999)	-0.0198 (0.738)	-0.1509 (0.128)
Ind. Adj. debt-equity	0.3174 (0.021)**	0.2591 (0.085)*	-0.1900 (0.752)	0.4655 (0.012)**	-0.0389 (0.917)	-0.3417 (0.504)	-0.3703 (0.749)	0.6465 (0.016)**	0.1757 (0.591)	-0.3236 (0.743)	0.4206 (0.111)	0.3993 (0.098)*
Industry market-to-book	-0.0892 (0.323)	-0.2639 (0.107)	-1.2474 (0.171)	0.1060 (0.372)	-0.1749 (0.354)	0.0124 (0.931)	-1.0957 (0.176)	-2.1970 (0.079)*	-0.7769 (0.174)	-0.5395 (0.334)	-0.5712 (0.303)	0.0540 (0.692)
Pseudo-R^2	0.47	0.60	0.93	0.85	0.78	0.89	0.93	0.97	0.88	0.93	0.91	0.88
N	1338	1338	1338	1338	1338	1338	1338	1338	1338	1338	1338	1338

Table 8
Pre-event CARs and industry-adjusted market-to-book ratios for firms undertaking connected transactions

The table reports pre-event CARs and market-to-book ratios for a sample of 328 firms listed in the Stock Exchange of Hong Kong undertaking connected transactions during 1998-2000. Monthly CARs are estimated with reference to a size- and a size- and market-to-book based benchmark portfolio. They are bias-adjusted by subtracting in each case, the mean of the empirical distribution computed through bootstrapping, from the CAR. Industry-adjusted market-to-book ratios (end of year market value of equity divided by book value of equity) are adjusted by subtracting industry median values from the firm's raw values. The definition of different types of connected transactions appears in Table 1. Significance levels for monthly CARs are p-values computed through bootstrapping. Significance levels for market-to-book ratios are computed using the Wicoxon sign rank test. The number of observations are reported in curly brackets. ***, **, * denote significance at the 1, 5, and 10 percent level respectively in two-tailed tests.

	All Connected	Transactions that are a priori likely to result in expropriation of the listed firm's minority shareholders					Transactions likely to benefit the listed firm's minority shareholders		Transactions that may have strategic rationales and may not be expropriation		
		Equity sales	Asset sales	Asset acquisitions	Trading relationships	Cash payments	Cash receipts	Subsidiary relationships	Takeover offers and joint-ventures	Joint-venture stake acquisitions	Joint-venture stake sales
Panel A. CARs for months [-12,-1]											
Size adjusted	-4.7 (0.114)	0.5 (0.483)	-13.9 (0.076)*	-3.8 (0.313)	15.8 (0.098)*	-1.9 (0.436)	-118.1 (0.000)***	-11.7 (0.290)	19.3 (0.108)	-17.4 (0.075)*	3.5 (0.383)
Size/market-to-book adjusted	-5.0 (0.092)*	3.0 (0.436)	-18.1 (0.025)**	-0.8 (0.479)	12.3 (0.135)	9.1 (0.269)	-121.4 (0.000)***	-12.3 (0.069)*	18.1 (0.127)	-23.6 (0.032)**	-0.1 (0.498)
Panel B. Industry-adjusted market-to-book (median absolute levels)											
Year -1	0.07 (0.000)*** {200}	0.11 (0.204) {14}	0.24 (0.003)*** {36}	0.11 (0.005)*** {64}	0.00 (0.603) {24}	0.00 (0.576) {17}	-0.15 (0.201) {4}	0.03 (0.237) {26}	0.27 (0.184) {13}	0.22 (0.082)* {18}	0.04 (0.330) {22}
Year 0	0.04 (0.000)*** {197}	0.21 (0.070)* {14}	0.01 (0.098)* {34}	0.16 (0.001)*** {65}	-0.02 (0.668) {24}	-0.01 (0.590) {16}	-0.10 (0.584) {4}	0.01 (0.420) {26}	0.19 (0.055)* {13}	0.21 (0.094)* {16}	0.01 (0.614) {21}
Year +1	0.01 (0.002)***	-0.04 (0.529)	0.08 (0.109)	0.03 (0.033)**	-0.04 (0.651)	-0.06 (0.576)	-0.19 (0.181	0.00 (0.920)	0.00 (0.724)	0.05 (0.218)	0.00 (0.240)

	{190}	{14}	{33}	{63}	{24}	{14}	{3}	{24}	{13}	{17}	{21}
Panel C. Industry-adjusted market-to-book (median changes)											
Year 0 to +1	-0.04	-0.24	0.06	-0.03	-0.16	-0.03	-0.04	-0.06	-0.14	-0.24	0.09
	(0.066)*	(0.090)*	(0.674)	(0.306)	(0.026)**	(0.675)	(0.790)	(0.074)*	(0.124)	(0.366)	(0.126)
	{189}	{14}	{33}	{63}	{24}	{14}	{3}	{24}	{13}	{16}	{21}
Year -1 to +1	-0.04	-0.01	0.00	-0.00	-0.01	0.00	0.01	-0.06	-0.02	-0.20	-0.04
	(0.145)	(0.402)	(0.930)	(0.693)	(0.271)	(0.529)	(0.789)	(0.236)	(0.485)	(0.368)	(0.651)
	{187}	{13}	{33}	{62}	{23}	{14}	{3}	{24}	{13}	{17}	{21}

Table 9

Regressions of pre-event CARs and industry-adjusted market-to-book ratios on corporate governance variables

The table reports regressions of pre-event CARs for a sample of 328 announcements of connected transactions by publicly listed firms, and regressions of industry-adjusted market-to-book ratios for a sample of 609 firms listed in the Stock Exchange of Hong Kong during 1998-2000. Monthly CARs are estimated with reference to a size- and a size- and market-to-book based benchmark portfolio. They are bias-adjusted by subtracting in each case, the mean of the empirical distribution computed through bootstrapping, from the CAR. Ln (total assets) is the natural logarithm of the firm's total assets in millions of HK$. Main shareholder ownership is the ratio of the shareholdings of the largest shareholder as a percentage of total number of shares outstanding. These shareholdings aggregate shares held in the director's name, shares held by corporations controlled by the director and shares held via other vehicles (such as trusts), provided that they are disclosed in the annual report. Proportion of independent non-executive directors is the number of independent directors divided by board size. Audit committee is a dummy variable indicating the presence of an audit committee on the board. CEO duality is a dummy variable indicating that the same person holds the positions of CEO and chairman of the board. H-shares are firms incorporated in mainland China, originally listed in one of the two mainland Chinese stock exchanges (Shanghai and Shenzhen), and later cross-listed in Hong Kong. Red Chips are firms incorporated in Hong Kong and traded in the stock exchange of Hong Kong, whose ultimate owners are from mainland China. ADR II/III is a dummy variable indicating that the firm has Type II or Type III ADRs listed in U.S. stock markets. Industry-adjusted market-to-book ratios (end of year market value of equity divided by book value of equity), and industry-adjusted long-term debt-equity ratios are for year-end −1 (ratios are industry-adjusted by subtracting industry median values from the firm's raw values). All connected transactions is a dummy variable indicating that the firm has undertaken a connected transaction. Value-destroying connected transactions is a dummy variable indicating that the firm has undertaken a connected transaction associated with negative market-adjusted CARs for days [0,+1]. Specifications in columns (1), (2), and (5) include dummies for different types of connected transactions (not reported). The definition of different types of connected transactions appears in Table 1. Specifications in columns (3)-(5) include year dummies (not reported). Significance levels (p-values) in parentheses are based on White (1980) heteroskedasticity-adjusted standard errors. ***, **, * denote significance at the 1, 5, and 10 percent level respectively in two-tailed tests.

	CAR Months [-12,-1]		Industry-adjusted market-to-book ratio (Year −1)		
	Size adjusted	Size and market-to-book adjusted			
	(1)	(2)	(3)	(4)	(5)
Intercept	-2.0722 (0.001)***	-1.7042 (0.005)***	4.3812 (0.017)**	4.3411 (0.018)**	4.2539 (0.017)**
All connected transactions			0.7071 (0.072)*		
Value-destroying connected transactions				0.9367 (0.094)*	
Ln (total assets)	0.1223 (0.000)***	0.1041 (0.002)***	-0.2641 (0.026)**	-0.2614 (0.027)**	-0.2575 (0.024)**
Main shareholder ownership	0.0270 (0.905)	-0.0435 (0.841)	-0.4302 (0.317)	-0.4344 (0.313)	-0.3311 (0.449)

Proportion of independent non-executive directors	0.7053	0.5905	-0.7500	-0.7409	-0.6340
	(0.434)	(0.467)	(0.258)	(0.261)	(0.341)
Audit committee	0.1751	0.1426	-0.0756	-0.0576	-0.0862
	(0.088)*	(0.158)	(0.727)	(0.790)	(0.705)
CEO duality	0.0697	-0.0095	0.0808	0.0728	0.0333
	(0.653)	(0.947)	(0.732)	(0.758)	(0.892)
H-shares	-0.2332	-0.2896	-0.8475	-0.8552	-0.7660
	(0.225)	(0.096)*	(0.001)***	(0.000)***	(0.004)***
Red Chips	-0.1442	-0.1232	0.2493	0.2289	0.3412
	(0.358)	(0.445)	(0.430)	(0.464)	(0.292)
ADR II/III	0.1979	0.1670	0.3530	0.4059	0.2540
	(0.315)	(0.372)	(0.521)	(0.452)	(0.618)
Ind. Adj. debt-equity (Year -1)			1.7194	1.7221	1.6683
			(0.129)	(0.126)	(0.117)
Type of connected transaction dummies	Yes	Yes	No	No	Yes
Year dummies	No	No	Yes	Yes	Yes
Adj. R^2	0.06	0.04	0.07	0.07	0.07
N	229	229	1338	1338	1338

Table 10
Comparison of asset sales and acquisitions to/from connected parties with similar arm's length transactions

The table reports a comparison of cumulative abnormal returns (CARs) between asset sales and asset acquisitions to/from connected parties with similar arm's length transactions for a sample of 54 announcements of asset sales to connected parties, 92 announcements of asset acquisitions from connected parties, 118 announcements of asset sales to third (non-connected) parties, and 27 announcements of asset acquisitions from third parties by firms listed in the Stock Exchange of Hong Kong during 1998-2000. The sample of third party transactions has been obtained from the SDC database. Market adjusted CARs are estimated relative to the Hang Seng Index. Significance levels in parentheses are based on the Wilcoxon sign rank test. Significance levels in curly brackets are based on the Mann-Whitney test. ***, **, * denote significance at the 1, 5, and 10 percent level respectively in two-tailed tests.

	Connected party transactions		Arm's length transactions		Differences	
	Asset sales to connected parties (N=54)	Asset acquisitions from connected parties (N=92)	Asset sales to third parties (N=118)	Asset acquisitions from third parties (N=27)	Asset sales to connected parties vs. asset sales to third parties	Asset acquisitions from connected parties vs. asset acquisitions from third parties
A. Days [0,+1]						
Market adjusted CAR	-3.1 (0.006)***	-3.3 (0.023)**	3.8 (0.119)	12.0 (0.307)	-6.9 {0.001}***	-15.3 {0.033}**
B. Days [0,+10]						
Market adjusted CAR	-6.4 (0.021)**	-7.5 (0.005)***	3.6 (0.790)	10.6 (0.421)	-10.0 {0.024}**	-18.1 {0.039}**

Table 11
Analysis of pyramids

The table reports a comparison of cumulative abnormal returns (CARs) and changes in operating performance around announcements of connected party transactions between 24 parents and their subsidiaries in pyramids, when both are listed in the Stock Exchange of Hong Kong during 1998-2000. Market adjusted CARs are estimated relative to the Hang Seng Index. ΔROE is the change in return on equity (net income divided by shareholders' funds). Δ Ind.Adj. ROE is the change in industry-adjusted return on equity ratios (ratios are industry-adjusted by subtracting industry median values from the firm's raw values). Significance levels in parentheses are based on the Wilcoxon sign rank test. Significance levels in curly brackets are based on the Mann-Whitney test. ***, **, * denote significance at the 1, 5, and 10 percent level respectively in two-tailed tests.

	Announcement stock market returns		Operating performance	
	CAR [0, +1]	CAR [0, +10]	ΔROE [year -1, year 0]	Δ Ind.Adj. ROE [year -1, year 0]
	(1)	(2)	(3)	(4)
A. Parents				
All parents (N=24)	0.0 (0.808)	1.0 (0.679)	1.1 (0.988)	3.3 (0.308)
Parents with other connected transactions	-0.1 (0.414)	-1.2 (0.530)	-2.6 (0.900)	2.2 (0.379)
Parents without other connected transactions	0.5 (0.683)	4.1 (0.999)	2.0 (0.553)	3.3 (0.553)
B. Subsidiaries				
All subsidiaries (N=24)	-5.1 (0.012)**	-9.7 (0.027)**	-5.1 (0.089)*	-6.0 (0.161)
C. Differences				
All parents vs. All subsidiaries	{0.018}**	{0.040}**	{0.086}*	{0.086}*
Parents with vs. Parents without other connected transactions	{0.578}	{0.838}	{0.682}	{0.975}