White Knights or Machiavellians? Understanding the motivation for reverse takeovers in Singapore and Thailand

by

Pantisa Pavabutr

White Knights or Machiavellians? Understanding the motivation for reverse takeovers in Singapore and Thailand

Pantisa Pavabutr[1]

Abstract

This paper analyzes 47 reverse takeovers (RTOs), in which privately held firms acquire public firms to obtain listing status in Singapore and Thailand between 2007-2015. Unlike U.S. RTOs in prior studies, these transactions cannot be regarded as short-cuts to bypass listing rules since merged firms must meet the same minimum listing requirement as firms listing with IPOs. Rather, private firms treat RTOs as an opportunity to become public firms without immediate dilution by acquiring smaller firms at bargain prices. By examining shareholder circulars and analysis of transaction characteristics, we find that co-parties tend to cite growth from business diversification as their motivation for RTOs. Distressed public firms more frequently emphasize the motivation to reorganize and revive by merging with stronger private firms. Analysis of return and financial accounting performance shows that the merged firms experience improved growth and generate positive wealth impact; thus, offering opportunity for incumbent shareholders of public firms to recover some of their investment value.

Keywords Reverse takeovers, Back-door listings, Emerging markets, Bootstrapping.

JEL Classification G14, G34.

---

[1] e-mail: pantisa@tbs.tu.ac.th. Thammasat Business School, Thammasat University, 2 Prachan Rd. Bangkok 10200, Thailand.

1. Introduction

Equity markets have both an allocation and monitoring role. The challenge for regulators is striking a delicate balance between overseeing transparency and fair rules governing listings for efficient allocation of resources and protection of investors without delineating potential firms from entering organized Stock Exchanges. The dual paths to listing can be direct through an initial public offering (IPO) or indirect through a reverse takeover (RTO). An IPO is traditionally seen as a young company with full listing qualifications coming of age and offering shares to the public. An RTO is the process whereby a private company acquires a controlling stake in a public company in order to obtain listing status. In doing so, an RTO allows a private firm to list and seek out growth opportunities by merging with a public firm without too much dilution and vulnerability to market conditions. However, anecdotal and some selected empirical evidence suggest a dark side to RTOs as they are often referred to as "back-door listings" with transactions associated with opaque firms wanting to bypass stringent listing rules or methods in which holding companies of shell firms try to get rid of non-performing assets by passing them along to uninformed investors. (Adjej, Cyree, and Walker 2005; Floros and Shastri 2009). Other authors argue that the drawbacks of RTOs are that their speed and cost saving benefits are often overestimated even with on-going trends towards their heightened regulatory scrutiny in equity markets around the world (Sjostrom 2008; Vermeulen 2014). More recently, Dasilas Grose, and Talias (2017) study European firms that choose to go public through RTOs between 1992-2011 and document stronger positive reactions in markets with stronger governance. They also find that the short-term gains revert to substantial losses casting doubt on the ability of the transactions to create value. Pavkov (2006) concludes that a complete benefit- cost analysis of RTOs should include all stakeholders involved.

Two issues on RTOs are subject to debate. First, why should a firm choose to list through an RTO instead of an IPO when there is potential loss of reputational capital? Second, should RTOs be allowed or should regulations be tightened? Using 47 RTOs in Singapore and Thailand between 2007-2015, this paper addresses the first question by discussion of existing listing regulations on RTOs and analysis of transaction characteristics. To answer the second question, we investigate the behavior of short and long-term returns as well as examine the determinants merged firms' returns. In particular, we compare distressed and non-distressed public firms participating in the transactions to evaluate how the merger may affect their returns and post-merger financial accounting performance differently. This study contributes to the scarcity of research on RTOs outside the U.S. where the regulatory environment is different. In Singapore and Thailand regulators require the merged entity from an RTO to file a relisting application and comply with the same minimum standards as an IPO listing. Access to financial advisor

reports and shareholder circulars allows us to examine business motivations and how transaction specific characteristics affect post-merger returns.

The paper finds that given the existing regulatory screens and process imposed by Singapore and Thai Exchanges, the length of time to complete RTOs is around three months up to 200 days counting from the day of signing a memorandum of understanding (MOU) or announcement date to the day of shareholder final approval in an extraordinary shareholder meeting (EGM) or completion date. From our sample, 30 of 47 firms are financially distressed implying that private firms intending to takeover these public firms must have profitable track records and are larger not smaller than the public firms.[2] Furthermore, since the consolidated statements of the merged firms must meet relisting requirements, it must be that the private firms themselves also meet IPO general listing requirements. The analysis reveals that RTOs can be related to one firm's decision to exit as well as another firm's decision to access public capital market. Reviewing shareholder circulars, the most cited reasons by both co-parties for the transactions are growth and diversification. We also find public firms' transaction motivations are to provide existing public shareholders with improved business value and stock liquidity from business reorganization by connecting with financially stronger private firms. The motivations of private firms are not explicitly cited but we can glean from circular information that the mergers provide them with these potential benefits:- (i) become public firms without immediate large dilution in ownership and still have options to raise more funds later; (ii) acquire target public firms at bargain prices; and (iii) obtain tax write-offs when merging with loss-making firms.

Next, we measure cumulative abnormal returns (CARs) around the announcement dates. We find that the market regards the events as good news as the relative [-10,10] day average CAR around announcement dates increased by 20%. The average CAR of distressed firm announcements is 28.8% compared to only 8.4% of non-distressed firms. After the merger, we compute the buy-and-hold returns (BHRs) at 3, 6, and 12 months. Event firms continue to outperform bootstrapped benchmark portfolios at 3, and 6 months. However, there is no significant difference at 12 months. In cross-section multiple regressions, the 12-month BHR performance is increasing in the relative size of private firms compared to public firms, improvement in firms' accounting performance, and transactions between a distressed firm with a cross-industry co-party. In sum, we do not find evidence that the Stock Exchange approved RTO transactions in Singapore and Thailand are pump-and-dump schemes. Rather, RTOs provide an alternative mode to list other than traditional IPOs. The transactions also

---

[2] This is a feature unlike RTOs in the U.S. where Gleason, Rosenthal, and Wiggens (2005) categorized private firms going public through RTOs as smaller than the public firms they merge with.

improve merged firms' performance, especially those financially distressed, providing opportunity for shareholders to recover some of their investment value.

There are altogether five sections in this paper. Section 2 provides background discussions on RTOs including transaction structure, regulations, and related literature. Section 3 describes the sample data and key features of RTO transactions. Section 4 explains empirical methods and results. Finally, section 5 concludes.

2. Background on RTOs

2.1 Description of the transaction

In a typical RTO, a private firm acquires a controlling stake in a public firm in order to obtain listing status by allowing the public firm to acquire its assets or equity and in return receive issued shares of the public firm. Since private firms involved in Singapore and Thai RTOs are larger than public firms; the transaction is completed through a rights issue by the public firm to raise additional funds which enables a standby buyer or the private firm to acquire control.[3] Shareholder circulars refer to this rights offering price as a pre-consolidated stock price. Following the rights issue, the shares can be further consolidated at a predetermined swap ratio suggested by the financial advisor to reduce the impact of dilution or to adhere to a minimum listed stock price rule. This final price is called a post-consolidated issue price.

2.2 Reverse takeover regulations and process

Both Singapore and Thailand apply bright line tests for two specific types of RTOs which are transactions involving a change in control of a listed issuer and a very substantial acquisition (VSA).[4]

---

[3] Singapore and Thai firms can seek a waiver from the SEC from making a mandatory takeover offer if the transaction is achieved through a rights issue procedure.

[4] These are a listed issuer's acquisition (or series of acquisitions) of assets where any percentage ratio is 100% or above in terms of net tangible assets, net profit, total consideration, equity value, or proven and probable reserves. Details are available from SGX rulebook Chapter 10, Part VIII section 1015 and SET's listing rule 11-00.

Table 1 IPO vs RTO: Process comparison

IPO	RTO
(1) Prelisting restructuring and completion of due diligence of the firm in order to comply with listing criteria before public disclosure.	(1) Negotiation and completion of due diligence between the public firm and the private firm leading to an MOU or sale and purchase agreement (SPA).
(2) Preparation of prospectus and application submission to the Securities Exchange Commission (SEC) and the Stock Exchange. The prospectus contains disclosures regarding the business and the firm's financial information.	(2) Preparation of shareholder's circular and filing for Stock Exchange approval. The circular contains description of the transaction, and financial information of co-parties.
(3) Public exposure through road shows and nomination of an underwriter.	(3) Disposal of listed firm assets (if any), share placement exercise, and share swap.
(4) Final approval by the Stock Exchange before share subscription begins.	(4) Conduct extraordinary shareholder meetings (EGM) to acknowledge share placement completion.
(5) Trading on the Stock Exchange begins.	(5) Trading of the merged group on the Stock Exchange begins.

Source: Rodyk and Davidson LLP, Singapore Exchange and Stock Exchange of Thailand Listing Guides.

Table 1 summarizes the IPO and RTO processes which bear some similarities. Both require detailed due diligence process, preparation of prospectus or circular containing disclosures regarding the transaction, compliance with the general listing criteria, and final approval from the Stock Exchange. However, an RTO transaction can be complicated further with more parties involved requiring due diligence on both public and private firms potentially adding time and cost to the transaction. Once the terms and price are agreed, upon board approval, an MOU is signed. Following MOU signing and approval from the Stock Exchange, the firm can hold various EGMs to obtain preliminary shareholder consent and carry separate share placement exercises to meet capital needs or listing requirements on free float.[5] The last known EGM date is treated as the beginning of the post-merger evaluation date.   Thus, there are two important event dates in the process, the MOU date, and the last EGM date;-henceforth we refer to them as announcement date and completion date, respectively.

2.2 Related literature

RTOs have been used as an alternative means to list on a Stock Exchange for decades. Historically, no significant regulatory review was required resulting in a shorter timeframe for listing completion and substantial costs saved in terms of underwriting fees as the process requires neither a prospectus nor an underwriter. In addition, timing of RTOs are not subject to market conditions as in IPOs. New controlling owners of the firm generally suffer less share dilution impact, obtain the public firm at a relatively economic price as opposed to regular mergers and

---

[5] A waiver for relisting application may be requested if the RTO involves same industry co-parties, maintains the same core business of the listed firm, and requires no change in board membership.

acquire an option to raise funds in the future. At the same time, incumbent shareholders of the public firm gain from increased price and improved liquidity of an otherwise forgotten illiquid stock.

Given a history of flexible regulatory environment, early research on RTOs supports a separating equilibrium where high quality firms choose listing via IPOs and low quality firms choose listing via RTOs. Arellano-Ostoa and Brusco (2002) introduce a model of separating equilibrium where a high type firm distinguished by high probability of obtaining positive NPV projects, choose to list with an IPO to obtain funds immediately despite higher listing cost whereas a low quality firm with low probability of positive NPV projects choose to list through an RTO which provides no immediate funding but at a lower listing cost.   A separating equilibrium exists when the high type firm chooses to list with high cost IPO which is offset by sufficiently large expected NPV in the next period. The low type firm will not mimic if the immediate cost of an IPO is greater than the cost of an RTO and that the expected NPV generated cannot sufficiently recover listing costs.   From their model, we can infer that when the costs of both listing approaches are similar, then the high type firm may instead choose an RTO if potential NPV value created from the merger is greater than its single firm NPV following an IPO.

Empirical papers mainly based on U.S. evidence also support a separating equilibrium in listing choice. Gleason et al. (2005) study 121 RTOs on AMEX, NYSE, and NASDAQ between 1987-2001 and find that they tend to be speculative in nature and fail to generate long-term wealth gains. In their sample, only 46% RTO firms survived after the first two years of listing. Using a slightly different sample period from the U.S. market between 1990-2002, Adjei et al. (2005) document 42% of their RTO sample firms become delisted within the first three years of listing. Floros and Shastri (2009) find that firms choosing to list by RTOs tend to be smaller firms with relatively higher level of information asymmetry. The authors view that RTOs should not be compared to regular IPOs but to penny stocks IPOs. Floros and Sapp (2011) focus on valuation of shell firms traded on OTC or pink-sheets that go through RTOs. They find up to 48% in abnormal return from RTO announcements, but the long term performance erases the gains as surviving firms earn post-event annual return of -91%. The Canadian experience with RTOs is similar as Carpentier, Cumming, and Suret (2012) document lower quality firms opt for the less regulated RTOs to obtain public listing.

Wan-Hussin (2002) documents the case of a high profile RTO completed in 1995 in Malaysia[6] that resulted in a backdoor listing of a private company, Jaya Tiasa Plywood, via listed Berjaya Textiles. The author finds

---

[6] The Kuala Lumpur Stock Exchange (KLSE); like SGX and SET, requires firms listing through RTOs to comply to the same listing standards as IPOs.

increase wealth effects of both minority shareholders and former controlling shareholders. However, the work is limited to one particular case and only short-term wealth effects were documented.

Rapid growth in the number of Chinese RTOs listed on U.S. markets drew considerable media attention when a number of them were accused of accounting frauds around 2000 motivating the study of Lee, Li, and Zhang (2015). The authors examine the financial health and long-term performance of RTOs that became active on U.S. stock markets between 2001 and 2010, particularly those from China (around 85% of all foreign RTOs). Despite the negative publicity of Chinese RTOs, the work finds little evidence that Chinese RTOs are more problematic than the control firms. In a study comparing the financial reporting quality of US RTOs and IPOs, Pollard (2016) also finds that lower RTO performance in the US market was not driven by Chinese RTOs. Nevertheless, increased reports of fraudulent RTOs in late 2000s have prompted the U.S. SEC to apply more stringent listing rules. These additional rules include minimum share price maintenance, filing requirements of financial reports, and a seasoning rule that the merged entity must trade on the OTC prior to official listing. Meanwhile, fraudulent RTOs involving Chinese firms in Hong Kong, prompted the Hong Kong Exchange to introduce Main Board RTO Rules in March 2004 which virtually eliminated the practice of injecting non-listed assets without a suitable track record for listing into a listed shell in conjunction with a change of control.[7]

Is the verdict out on RTOs? Pavkov (2006) notes that with no known database that tracks RTOs, regulators and practitioners are largely overshadowed by uncertainty as to the merits of the transactions. Vermulen (2014) notes that in recent years, there is increase in RTOs on ASEAN Exchanges. Existing work on RTOs are primarily limited to the U.S. experience and are not comparable to the ASEAN context where demand-supply and regulatory environments are different. But even from the U.S. perspective, analysis of Singapore and Thai RTOs is invaluable because it offers a comparative study on the issue which not only shows how regulators in other jurisdictions handle backdoor listings, but also highlights the costs, benefits and practicality of various different regulatory approaches.

Singapore and Thailand tightly regulate RTOs such that firms undergoing these transactions must complete a relisting application on the Stock Exchange and must meet the same minimum listing requirements as firms undergoing IPOs. Consequently, the listing speed advantage with RTOs is unlikely to be that great. Although the direct costs of underwriting fees present in regular IPOs is absent in RTOs, it re-emerges in form of merger advisory fees. Private firms engaging in such transactions also face numerous indirect costs. For example, the cost of restructuring the public firm, the risk of overpaying for the "shell" or distressed firm, and the risk that synergy value

---

[7] See Vermeulen (2014) and Charltons Solicitors, www.charltonslaw.com.

of the merged entity does not materialize. Sjotrom (2008) notes that the costs of RTOs are underestimated;- after including indirect costs, he finds their actual costs are in fact not that much different from IPO costs.

3. Sample Data Analysis

Between 2007-2015, we identify RTOs from the Stock Exchange and SEC websites. A list of Singapore RTOs can be found on the SGX website under the "Catalodge" page where important firm disclosure information is publicized. Thai RTOs can be tracked from the Thai SEC's website where tender offers, material asset acquisitions and disposals of public firms are reported.[8] Details of individual RTO transactions are gathered from a combination of financial advisor reports and minutes of shareholders meeting. Market trading data comes from Datastream and listed company accounting information from Worldscope. The sample includes firms listed on both the main and secondary boards which are the Singapore Exchange (SGX) and Catalist (CAT) for Singapore RTOs and Stock Exchange of Thailand (SET) and Market for Alternative Investment (MAI) for Thai RTOs.

Table 2 presents descriptive statistics for all RTOs, including unsuccessful ones, by sample year. A total of 42 RTOs in Singapore and 17 RTOs in Thailand are reported. Ten of the 42 in Singapore were aborted whereas two of 17 were unsuccessful in Thailand. These aborted transactions were either a consequence of unsuccessful negotiation or failure to meet relisting requirements. The number of RTOs in Singapore is highest in 2013 with 13 transactions; whereas for Thailand it is highest in 2014 with six transactions.

---

[8] See http://infopub.sgx.com and https://www.set.or.th/set for Singapore and Thai public firms' important announcements and circulars. MOU and EGM dates are available on these sites. If an MOU date is unavailable we use the date when the first circular is publicly available from the firm's website or news sources.

Table 2 Distribution of reverse takeovers between 2007-2015

Year	No. of firms			% of sample	Market index		Market return	
	All	Singapore	Thailand	All	Singapore	Thailand	Singapore	Thailand
2007	1	0	1	2%	3,466	858	19%	26%
2008	1	1	0	2%	1,762	450	-49%	-48%
2009	3	1	2	5%	2,898	735	64%	63%
2010	10	8	2	17%	3,190	1,033	10%	41%
2011	6	5	1	10%	2,646	1,025	-17%	-1%
2012	10	8	2	17%	3,167	1,392	20%	36%
2013	16	13	3	27%	3,167	1,299	0%	-7%
2014	10	4	6	17%	3,365	1,498	6%	15%
2015	2	2	0	3%	2,883	1,288	-14%	-14%
Total	59	42	17	100%				

This table reports the number of all RTOs (unsuccessful transactions included) based on announcement date by year along side with SGX and SET year end index levels and annual market returns. The sample include firms on main boards (SGX and SET) and secondary boards (CAT and MAI).

The last four columns of Table 2 provide end of year market index levels and annual market returns. There seems to be no association between market performance and intensity of RTOs in Singapore.[9] As shown in 2009, when the SGX annual market return surged by 64% only one RTO case was reported. In contrast, five RTOs were filed in 2011 when the SGX shed 17%. However, in Thailand, RTOs appear more frequent when market performance improves. In 2014, when the SET gained 15%, six transactions were reported. In the following year, when the Thai market fell 14%, none were filed.

Table 3 reports the characteristics of successful RTOs which are segmented by market of listing and then by distressed or non-distressed status. There are a total of 47 successful transactions of which 32 are listings in Singapore and 15 in Thailand. Thirty firms which represent more than half of the entire sample firms are declared financially distressed by the firms' auditors.' However, transactions are quite evenly split between main and secondary boards (51%: 49%) and between transactions with co-parties within the same industry and different industries (47%: 53%).

---

[9] This highlights the aspect of RTOs which is less sensitive to market conditions unlike IPOs shown in Leow and Lau (2018) in their study of Malaysian IPO performance between 2006-2011.

Distressed firms tend to choose cross-industry co-parties (20 out of 30) whereas non-distressed firms prefer to look for same industry partnerships (12 out of 17). The pattern is suggestive that non-distressed public firms tend to search for private co-parties that operate in the same or complementary industry to gain synergies. Cross-industry transactions; occurring more often in distressed firms, indicate that their public shareholders look for co-parties to merge as an exit strategy before moving into new businesses. Forty four percent of the transactions (14 out of 32) in Singapore occur in the engineering technology and electronics industries with more than half of these transactions made with cross-industry co-parties, which are usually in the property and healthcare sectors. In the Thai sample, more than half of the RTOs (8 out of 15) occur in an assortment of industries classified as others: - from furniture production, stationary retailing to medical equipment distribution. Most of these firms find partnerships with outsiders who are property developers, primarily interested in acquiring land.

Table 3 Characteristics of reverse takeovers

Characteristics	Singapore			Thailand		
	All	Distress	Non-distress	All	Distress	Non-distress
Main board	14	9	5	10	6	4
Secondary	18	13	5	5	2	3
Same industry	14	7	7	8	3	5
Different industry	18	15	3	7	5	2
Engineering & electronics	14	9	5	None	None	None
Media & services	2	1	1	4	2	2
Property & construction	7	5	2	3	1	2
Others	1	1	1	8	5	3
Deal value (LCY mn)	279	324	151	2,701	1,185	4,349
Relative size	12.17	14.6	5.61	7.36	7.98	5.48
Premium	34.2%	35.7%	9.3%	12.9%	13.8%	-15.5%
VWAP (LCY)	0.12	0.08	0.19	7.86	3.69	9.66
Days from announcement to complete	248	260	222	73	79	65
%EPS growth 3 year pre-announcement	-111%	-153.1%	-83.6%	-176%	-237.3%	-154.3%
%Rev growth 3 year pre-announcement	-7.4%	-11.6%	1.2%	-33.1%	-46.5%	-16.2%
Stock swap	22	15	7	5	4	1
%Stock swap	69%	47%	22%	33%	27%	7%
Stock swap with cash/warrants	10	7	3	10	4	6
%Stock swap with cash/warrants	31%	22%	9%	67%	27%	40%

This table summarizes the characteristics of successful RTOs. Deal value is in millions of local currency (LCY). Relative deal size is computed from deal value divided by public firms' assets in the pre-announcement year. Premium is pre-consolidation issue price relative to 3-month pre-announcement volume weighted average closing price (VWAP) of the public firm. A firm is categorized as financially distressed if the public firm auditor's report indicates. A co-party firm is categorized as a same industry firm if the merged firm trade in the same industry as the public firm before the merger, and different otherwise.

Deal value in millions of local currency is the aggregate purchase consideration or the value of equity securities to be issued by the listed firm for the acquisition as reported in shareholder circulars. The average deal values in Singapore and Thailand are SGD 279 mn and THB 2,701 mn, respectively. Relative deal size is computed from deal value divided by public firms' assets in pre-announcement year as a measure of bargaining power in favor of the incoming private firm. This ratio is notably larger in distressed transactions;- 14.6 in Singapore and 7.98 in Thailand. In non-distressed transactions, this ratio is less than six times. We also compute the price premium, which is the percentage difference between pre-consolidation issue price and 3-month pre-announcement VWAP. Since distressed firms tend to have very depressed share prices (SGD 0.08 and THB 3.69), the premiums associated with their transactions are notably higher than those of non-distressed ones. The average premium of distressed firms is 35.7% for Singapore and 13.8% for Thailand. However, the premiums are not always in favor of the public firms. Non-distressed Thai firms are offered an average of 15% discount their historical VWAP. In a specific example, St. James Holdings, a night club listed on the CAT was offered a tender price approximately the same value as its current trading price by Perrenial China Trust. Nonetheless, the value of the offer is worth 52% discount relative to the appraised net asset value (NAV) of St. James.

Turning to financial performance, sample public firms experience deteriorating performance both in revenue generation and profitability. Distressed firms have substantially lower 3-year average growth rates in their pre-announcement EPS and pre-announcement revenue than non-distressed firms. In Singapore, the distressed group 3-year pre-announcement EPS growth is -153% while revenue growth is -11.6%. In Thailand, their growth performance looks more bleak, with 3-year average pre-announcement EPS declining at a rate of 237.3% and revenue declining at 46.5%.

To measure the length of time for transaction completion, we count the number of days between announcement date (MOU date) to completion date (EGM date). Overall, it takes on average a little over six months or over 200 days for Singapore transactions but around three months for Thai transactions. Transactions that involve distressed firms with cross-industry co-parties take a little longer as the Stock Exchanges require relisting application; waivers can be requested for same industry transactions.

Looking at the method of payment, most Singapore RTOs involve stock swaps whereas Thai transactions tend to use combination of stock swaps, cash, and warrants. The use of solely share exchange makes the terms of the exchange contingent on the target and potential post-merger synergy gains or losses which co-parties share (Hansen, 1987). However, the use of mixed mode payment suggests that the private firm is unsure of the merged

value which is typical in a merger problem (De La Bruslerie, 2013). Thus, it is likely that the cash component and share swap structure indicates the private firms' need to retain immediate value. The warrant issue component helps alleviate the impact of immediate dilution, and provides a delayed option to raise capital in the future if things go well. From our sample, 20 out of 47 RTOs have warrant issue plans contingent on successful business restructuring post-merger. Besides, the option to delay fund raising allows time for the merged firm to find an established market price: an idea similar to the model proposed in Hsieh, Lyandres, and Zhdanov (2011) that link's a firm's decision to go public with subsequent takeover strategy. According to the authors, completing an IPO reduces valuation uncertainty leading to a more efficient acquisition strategy.

Table 4 Reasons cited for the reverse takeovers

Reasons	Distressed		Non-distressed		Total	
	No. of firm reports	%	No. of firm reports	%	No. of firm reports	%
Acquisition of land or property	5	8%	8	18%	13	12%
Complementary business	2	3%	10	22%	12	11%
Diversification	11	18%	7	16%	18	17%
Economies of scale	1	2%	1	2%	2	2%
Enhance firm profile	6	10%	4	9%	10	9%
Growth	15	24%	10	22%	25	23%
Solid financial position of outsider	12	19%	3	7%	15	14%
Reorganization	10	16%	2	4%	12	11%
Total	62	100%	45	100%	107	100%

This table presents a summary of reasons cited in financial advisor reports or shareholders circulars from 47 RTOs by financial status between 2007-2015.

To gain insight into the motivations behind RTOs, we examine financial advisor reports or shareholder circulars for explicit statements about the rationale of the transactions. Table 4 provides a summary of reasons placed into eight categories. Co-parties cite multiple reasons for the transaction in shareholder circulars. The most cited reasons are growth (23%) and diversification (17%). Distressed firms tend to emphasize the motivation to reorganize and revive by merging with outsiders with strong financial position. In contrast, co-parties in non-distressed transactions more frequently express interest to acquire land or property in order to gain synergy from complementary businesses. Public firms are also motivated to merge with a well-known business group while some private firms seek opportunity to list on a more recognized Stock Exchange. For example, the Chaswood Group, a large Food & Beverage holding company listed on Bursa Malaysia completed an RTO with Singapore's Asia Silk Group. Chaswood's rationale to list via RTO on CAT among others is to help increase its international profile in

Asian markets.   Another example is India's leading architectural services firm, RSP Architects Planners transaction with Rowsley opens the door to listing on SGX.

4. Research methods and results

4.1 Announcement reactions and short-term performance

This section applies the standard event study method (Mackinlay, 1997) to calculate abnormal return (AR), and cumulative abnormal return (CAR) from short-term reactions to event announcements.
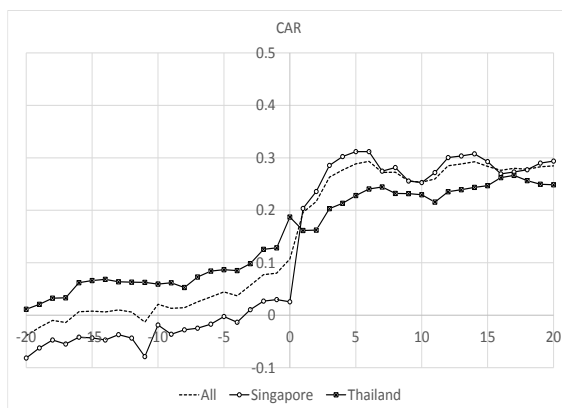
Fig. 1 a Singapore vs Thailand

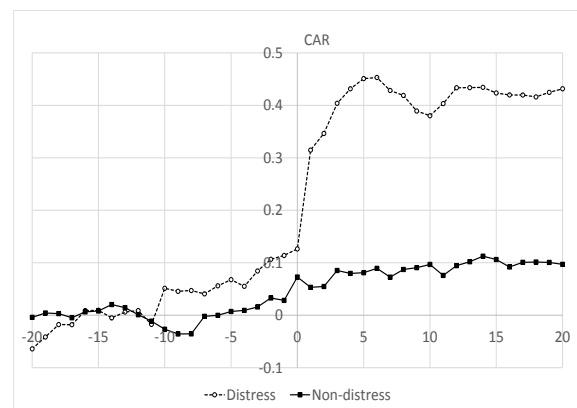Fig.1 b Distressed vs non-distressed

Fig.1 c Low vs high premium
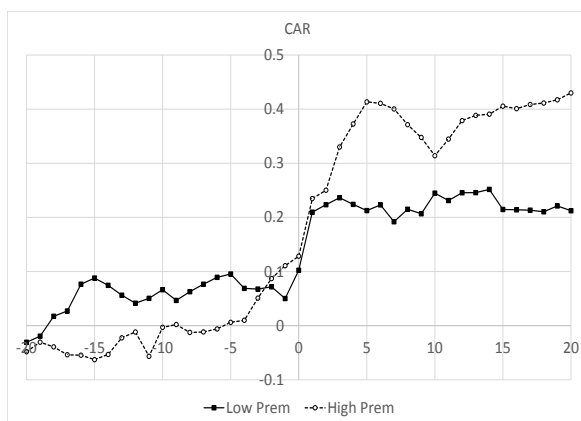
Fig.1 d Low vs high relative deal size
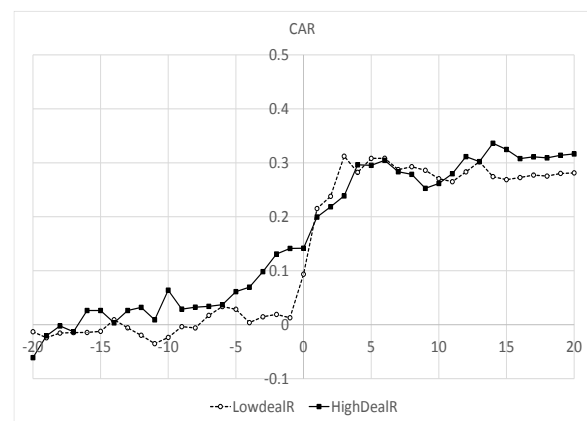
Fig 1 Cumulative abnormal return around RTO announcements. This figure plots equal weighted cumulative market model abnormal return around RTO announcement by market and transaction characteristics. Define abnormal return as $AR_{it} = R_{it} - E(R_{it} | \Omega_t)$ where AR_{it}, R_{it}, and $E(R_{it} | \Omega_t)$ are abnormal, actual, and expected returns respectively. The conditioning information, Ω_t is the market return. Low (high) premium and relative deal size are equal weighted CARs of event firms with premium and relative deal size below (above) median. In each figure, the Y-axis is CAR, the X-axis is the relative day around announcement date (t=0).

Fig. 1a plots equal weighted CARs for all RTO transactions and separated by market 20 days before and after the announcement date which is centered at day zero. The plot illustrates that the CAR drifts up to 28.5% by the 20th day after the announcement date, indicating that the market gradually learns about the forthcoming news. The announcement appears to be quite unexpected in Singapore with marginal price movement of less than 5% prior to announcement date. In contrast, investors anticipated Thai RTOs as their CAR moved up 20 days ahead of announcements by an average of 19%. Figs. 1b), 1c), and 1d) depict the CARs of firms separated by key transaction characteristics featured in Table 3 namely;-distress status, premium level, and relative deal size level. The labels low (high) premium and low (high) relative deal size are equal weighted CARs of event firms with premium and relative deal size below (above) median values. We find that the difference between distress and non-distressed CARs are the largest among transaction characteristics. Twenty days after announcements, the average CAR of distressed firms rise to 43% or four times above that of non-distressed firms with CAR edging up only to 10% . The CAR of low premium firms (21%) is about half the level of high premium firms (43%) suggesting that investors regard high premiums as a signal of higher consolidated valuation. From eyeballing, the differences in CARs are not so noticeable when high and low relative deal size portfolios are formed. We conduct more formal statistical tests next.

Table 5   Cumulative market model abnormal return around event windows

Firm type	Event window	CAR	t-CAR	SCAR	t-SCAR
All	[-10, 10]	0.204	3.31***	1.402	2.46**
	[-20, 20]	0.218	2.82***	1.119	2.63**
	[-10, 0]	0.095	2.37**	0.731	2.59**
	[-20, 0]	0.085	1.55	0.589	2.44**
	[0, 10]	0.132	2.22**	1.328	2.15**
	[0, 20]	0.156	2.74**	1.063	2.44**
Distressed	[-10, 10]	0.288	2.99***	1.796	1.98*
Non distressed	[-10, 10]	0.084	1.81*	0.796	2.11*
Distressed-Non-distressed	[-10, 10]	0.204		1.00	
Diff p-value		*0.067*		*0.319*	
Low Premium	[-10, 10]	0.135	1.75*	0.769	2.31**
High Premium	[-10, 10]	0.306	3.00***	2.19	1.97**
High-Low		0.171		1.42	
Diff p-value		*0.179*		*0.236*	
Low relative deal size	[-10, 10]	0.207	2.40**	1.731	1.68*
High relative deal size	[-10, 10]	0.201	2.22**	1.092	1.94*
High-Low		-0.006		-0.64	

Diff p-value	*0.560*	*0.592*

The sample consists of 47 firms on Singapore and Thai Exchanges. The table reports cumulative abnormal returns (CAR) around RTO announcement date (t=0). Define abnormal return as $AR_{it} = R_{it} - E(R_{it} \mid \Omega_t)$ where AR_{it}, R_{it}, and $E(R_{it} \mid \Omega_t)$ are the abnormal, actual, and expected returns respectively. The conditioning information, Ω_t is the market return. Cumulative abnormal return relative to announcement from days τ_1 and τ_2, denoted $[\tau_1, \tau_2]$

is derived from $CAR_i(\tau_1, \tau_2) = \sum_{t=\tau_1}^{\tau_2} AR_{it}$. The standard cumulative abnormal return is defined as

$$SCAR_i(\tau_1, \tau_2) = \frac{CAR_i(\tau_1, \tau_2)}{\sigma_i(\tau_1, \tau_2)}$$. T- statistics test for the null that CAR and SCAR are equal to zero. P-values

from tests of group differences in mean are in italics. ***,**, and * denote the 1%, 5%, and 10% statistical significance levels (two-tailed), respectively.

Table 5 formally tests the significance of CARs and standardized cumulative abnormal return (SCARs) over different windows from 20 days before and after announcements. Since SCAR is derived from CAR divided by the variance of CAR over the event window, extreme observations are given less weight and hence t-SCAR provides robustness check in addition to t-CAR. In general, we find that RTO announcements are good news. The announcements are also anticipated since CAR and SCAR over the [-10, 0] window are both positive and significant. Nevertheless, the post-announcement impact over the event windows of [0, 10] and [0, 20] are slightly larger in value and remain statistically significant. As the window period [-10, 10] exhibits the most pronounced value of CAR and SCAR, the remainder of Table 5 reports abnormal returns only for this interval and provides tests of differences in CAR and SCAR for transactions separated by distressed status, premium levels, and relative deal size levels. Distressed firms' CAR and SCAR (28.8% and 1.79) are significantly higher than those of non-distressed firms (8.4% and 0.79).   High premium (above median premium) firms also exhibit higher CAR and SCAR than those of low premium (below median premium) firms though the statistical significance is weak. Lastly, firms with high or low relative deal size produce similar levels of abnormal return responses as do other comparative transaction features which are not reported ie. same-different industry co-parties and with-without warrant issue. In sum, separating event firms by financial distress status seems to generate the strongest information content reflected in short-term price movements.

4.2 Long term performances of RTO firms

4.2.1 Buy-and-hold return performance

Buy-and-hold abnormal returns have become the standard for measuring long-term abnormal performances of corporate announcements (Barber and Lyon 1997; Kothari and Warner ; 2006). In this section, we start by

measuring the average multi-period return from holding event firms and benchmark portfolios consisting of non-event firms. To be included in the benchmark portfolios, for each event year sort, firms in the top third market capitalization of the Singapore and Thai markets are eliminated to screen for control firms with size more closely matching event firms. In an independent sort, we drop firms with price range above the top third price range of each market. A control group screened by price and size is preferred over a benchmark based on the entire market return which is influenced by performance of large firms. With sample size of 47 firms spread out over nine years, we assume that event firm abnormal returns are independent and that the chance returns will be overly-stated due to positive cross correlations from overlapping event periods should be small as Mitchell and Stafford (2000) and Brav (2000) point out.

With relatively smaller number of event firms, but a substantially larger set of controls; 501 firms for Singapore, and 398 for Thailand, we adopt the bootstrapping approach for statistical inference for BHRs used in Ikenberry, Lakonishok, and Vermaelen (1995); Michell and Stafford (2000); and Chou (2004). To do so, we generate an empirical distribution of BHRs by randomly selecting with replacement a firm from the control group stratified by market for each RTO completion date. This means drawing control samples from two separate bins corresponding to each market event sample size. In each round of matching process, a pseudo sample consisting of 47 firms is created: 32 draws from the Singapore control set and 15 from the Thai control set. The process is repeated 1,000 times, providing a distribution of BHRs under the null model. The bootstrap p-value is the fraction of random BHRs from the pseudo samples in larger magnitude than the event firm sample mean.

Table 6 reports the monthly average and compounded BHRs of equal weighted portfolios of event firms and non-event firms. The event firm monthly average returns in the first 3, 6, and 12 months are 30.86%, 63.42%, and 85.31% ; each value is 29.16%, 62.47%, and 84.7% above the average of the pseudo benchmark portfolios. The p-values associated with monthly mean abnormal returns are less than 5% when evaluated at 3, and 6 months and 5.6% evaluated at 12 months. The compounded BHRs also indicate positive differences between event and benchmark portfolios, though smaller in magnitude. With compounded BHRs, the p-values produce probabilities that the benchmark portfolios will perform just as well as event firm portfolios equivalent to 4.1%, 5.1%, and 14.1% for 3, 6, and 12 months, respectively. In any case, both measures point to gradual increase in event firm stock price performance over the course of 12 months confirming that the stock price increase is lasting.

Separating the event sample into distressed and non-distressed firms, we find distressed firm BHRs are superior to that of non-distressed firms in all evaluation periods From Table 6, p-values of distressed firms are

below 5% in all cases except for the compounded 12-month BHR. In addition, the differences between distressed and non-distressed groups are more distinct in average monthly returns than compounded BHRs. For example, the 12-month average return of distressed firms (128%) is more than four times as high than that of non-distressed firms (28%); whereas the compounded BHR of distressed firms (46.8%) is just about twice as high as that of non-distressed firms (24%).

Table 6 Monthly buy-and-hold returns after completion of reverse takeovers

| | Avg. monthly return | | | | Compounded buy-and-hold return | | | |
	RTO firms	Benchmark	Diff.	p-value	RTO firms	Benchmark	Diff.	p-value
All								
3 month	0.308	0.017	0.292	0.041	0.226	0.049	0.177	0.041
6 month	0.634	0.009	0.625	0.034	0.317	0.089	0.228	0.054
12 month	0.853	0.006	0.847	0.056	0.365	0.132	0.232	0.141
Distress								
Month avg return								
3 month	0.466	0.017	0.449	0.018	0.298	0.049	0.249	0.023
6 month	0.928	0.009	0.919	0.022	0.302	0.089	0.213	0.031
12 month	1.280	0.006	1.275	0.029	0.468	0.132	0.336	0.156
Non-distress								
Month avg return								
3 month	0.119	0.017	0.103	0.11	0.139	0.049	0.091	0.117
6 month	0.077	0.009	0.068	0.181	0.334	0.089	0.152	0.118
12 month	0.282	0.005	0.277	0.119	0.240	0.132	0.202	0.13

This table reports average monthly and compounded buy-and-hold returns ($BHR_{i(T_1,T_2))} = \Pi_{t=T_1}^{T_2}\left(1+R_{it}\right)-1$) of event firms and benchmark portfolios. The benchmark portfolio is formed by eliminating firms in the top third market capitalization on Singapore and Thai Exchanges. In a separate sort we drop firms with price range above the top third price range of the market. Diff. is the buy-and-hold abnormal return (BHAR) or the difference between equal weighted portfolio returns of event firms and the portfolio returns of 1,000 simulated benchmark pseudo samples. The bootstrap p-value is the fraction of random BHRs from the pseudo samples in larger magnitude than the event firm sample mean.

4.2.2 What explains differences in BHRs?

How much is the 12-month BHR post-merger explained by transaction specific characteristics and by improved earnings? We regress the BHRs on transaction specific arrangements and selected financial accounting performance controlling for firm size post-merger. In Table 7, models 1 and 2 differ by one explanatory variable;- model 1 includes price premium or percentage difference between pre-consolidation issue price and the 3-month pre-announcement VWAP whereas model 2 includes one year percentage change in post-merger ROE as measure

of profitability. Models 3 to 6 differ only by a dummy variable to capture pre-event financial distress status or

industry categorization.

Table 7 Multiple regressions of 12 month buy-and-hold returns

Explanatory variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Relative deal size	**-0.017**	-0.036	-0.043	-0.009	-0.025	-0.011
	(-1.82)*	(-1.56)	(-1.44)	(-0.37)	(-1.09)	(-0.5)
Premium	0.1454					
	(0.97)					
% Chg ROE		**0.054**	0.049	0.032	**0.072**	0.045
		1.76*	1.43	1.38	2.01**	1.44
Log of firm size	**0.154**	**0.175**	**0.183**	0.114	**0.192**	**0.143**
	1.90*	2.47**	2.14**	1.31	2.37**	1.97*
Dummy =1 if distressed	0.419	0.276				
	1.16	0.68				
Distress dummy * Deal size			0.059			
			1.48			
Dummy =1 if in different industry				-0.343		
				-0.69		
Dummy =1 if distressed and in different industry					**0.849**	
					2.02**	
Dummy=1 if not distressed and in different industry						**-0.866**
						(-2.46)**
Adj Rsq	0.157	0.208	0.192	0.165	0.164	0.227
F-stat	1.46	2.38*	1.61	1.38	2.18*	2.76**
No. of observations	47	47	47	47	47	47

This table reports the coefficients from six OLS models with t-statistics in parentheses. The dependent variable is 12 month post-merger BHRs of 47 RTO sample firms from Singapore and Thai Exchanges. Relative deal size is computed from deal value divided by public firms' assets in pre-announcement year. Premium is derived from pre-consolidation issue price relative to 3-month pre-announcement volume weighted average closing price (VWAP) of the public firm. Percentage changes in return on equity is change over one year post-merger. ***,**, and * denote the 1%, 5%, and 10% statistical significance levels (two-tailed), respectively.

From Table 7, all models show that BHR declines in relative deal size, but the association is weak in all

models except the first one. Transaction premium which seems to generate strong short-term response captured by

CAR do not explain longer term performance. Instead, the improvement in ROE is significantly related to returns

in two out of five models where it is present. The results are similar when we substitute change in ROE by other

measures of profitability such as change in earnings per share and net income. BHR is higher when the public firm

is distressed and engaged in a transaction with a cross-industry co-party, but lower when the transaction involves a

non-distressed firm. Both the size of the coefficients and t-statistics are highest on the dummy variables of models 5 and 6 indicating that cross-industry transactions with distressed firms have the strongest positive effect on long-term stock price. Comparing the size of the coefficients;- when the transaction involves a distressed firm, the BHR is 41.9% higher than a non-distressed transaction. Moreover, when the transaction involves a distressed firm with a cross-industry co-party, the BHR is about 84.9% or twice as high.

Table 8 Post-merger performance

	Mean				Median			
	Distressed	Non distressed	Diff.	p-value	Distressed	Non distressed	Diff.	Wilcoxon p-value
				Panel A: 2Y post-merger				
% Revenue gr	59.23%	51.81%	7.42%	0.903	24.02%	27.10%	-3.08%	0.037
% Book Equity gr	91.31%	30.17%	61.13%	0.362	25.61%	22.62%	2.99%	0.366
% NI gr	129.92%	107.48%	22.44%	0.842	28.61%	68.36%	-39.75%	0.122
% EPS gr	110.89%	89.80%	21.09%	0.845	28.70%	55.92%	-27.22%	0.266
% ROE gr	17.33%	37.51%	-20.18%	0.483	5.44%	31.52%	-26.08%	0.101
% Chg. Cash ratio	18.92%	-9.01%	27.93%	0.274	12.82%	-22.23%	36.04%	0.011
% Chg. Debt ratio	25.66%	12.52%	13.14%	0.711	7.39%	17.29%	-9.90%	0.183
%Chg. Market cap	20.26%	5.67%	14.59%	0.484	-0.09%	2.66%	-2.75%	0.919
				Panel B: 2Y-1Y post-merger				
% Revenue gr	38.30%	57.20%	-18.90%	0.082	-1.22%	22.0%	-23.32%	0.038
% Book equity gr	23.95%	31.83%	-7.88%	0.825	6.99%	16.85%	-9.86%	0.075
% NI gr	16.67%	17.14%	-0.47%	0.384	-3.80%	20.66%	-24.46%	0.268
% EPS gr	-5.40%	-24.70%	19.30%	0.285	-34.40%	-10.37%	-24.03%	0.189
% ROE gr	7.00%	-11.22%	18.22%	0.305	-21.00%	-14.20%	-6.80%	0.915
% Chg. Cash ratio	5.15%	-9.95%	15.10%	0.346	-24.60%	-16.05%	-8.55%	0.305
% Chg. Debt ratio	16.23%	3.76%	19.99%	0.512	15.20%	18.83%	-3.63%	0.722
% Chg. Market cap	15.32%	-9.58%	24.90%	0.269	-1.97%	-7.46%	5.49%	0.739

This table reports the mean and median of 2-year compounded annual growth rate of selected post-merger financial accounting performance of distressed and non-distressed firms. Cash ratio and debt ratio are computed from cash divided by total assets and total debt divided by total assets, respectively. P-values from tests of group mean and median differences are provided.

Extending the evaluation of merged firm performance even further, Table 8 compares the 2-year post-merger financial accounting performance of distressed and non-distressed firms in Panel A, and the differences in their post-merger performances between years 1 and 2 in Panel B. Unlike the findings of Gleason et al. (2005) where only around half the RTO firms in their sample survived after two years, we find that all our sample RTOs survive through the second year post-merger. As a whole, post-merger performance measured by revenue, net income, EPS, and ROE improved markedly, a finding that departs from Dasilas et al. (2017) in their study of

European reverse takeovers which the authors find negligible improvement in financial performance. In Panel A, Table 8, the mean profitability performance of distressed firms are in general higher than that of non-distressed firms in all measures except for ROE. However, the median profitability performance of distressed firms is lower indicating that their performance is more right-skewed. Nevertheless, neither the mean difference nor the median difference between the two groups is statistically significant. In addition, the average book value of equity growth of distressed firms is around three times higher than that of non-distressed firms ie. 91.31% compared to 30.17%, which most likely lead to their relatively lower percentage change in ROE. Turning to financials, percentage increases in cash ratios (18.92%) and debt ratios (25.66%) in distressed firms suggest that rising revenue and equity base must have a positive impact on liquidity and general working capital conditions. There is overall 20% increase in average market capitalization value but little change in their median values.

It may be argued that the jumps in 2-year post-merger performance is driven largely by consolidation of financial reports of merged firms, and hence over-presenting the benefits of the transactions to the public firm. To better gauge the impact on the private firm after it becomes a merged entity, we compare the post-merger performance difference between years 1 and 2. From Panel B of Table 8, the mean earnings performance measured by revenue and net income rise at lower rate rates compared to growth rates in Panel A. The median profitability growth of non-distressed firms clearly outperforms that of distressed ones. Median revenue and net income growth of non-distressed firms are around 20%, whereas the growth rates for those distressed drop by -1.22% and -3.80%, respectively. Furthermore, ROE growth becomes smaller or even negative over this period as expansion of equity base outpace net income growth: a finding that contrasts the ROE jump reported in Panel A when the entire 2 year post-merger period reflected more so an immediate boost effect from consolidation. Taken together, the results in both panels point to relatively larger benefit gained by public firms, particularly those in financial distress. There is weaker growth in market capitalization value, which demonstrates that while the book value of equity expands, there must be some stock price reversion post-merger. The most relevant takeaway from Table 8 is that the merged firms survived and experienced improved growth in earnings and equity base.

5. Conclusion

We analyze 47 RTOs in Singapore and Thailand to understand their motivations as well as examine their wealth and financial accounting performance impact to help answer the standing debate on the merits of these transactions and how they should be regulated. Should regulators loosen requirements on RTOs? Even when the same listing requirements as IPOs are applied, RTOs are often treated by the popular press as suspicious transactions

where opportunistic private firms create speculative hype on small caps. This is because RTOs can be predicted to cause huge percentage-wise increases in stock prices of target public firms upon the release of news as we might find in any merger news. In particular for small cap stocks with very low trading prices, even if their stock prices rise from virtually zero to only a few cents, the gains could be enormous. As the study sample shows, the public firms were trading at average VWAPs of SGD 0.12 and THB 7.36 (both values less than 25 U.S. cents) before RTO announcements. Without investor savvy and adequate enforcement, the combination of potentially huge gains and relatively unsophisticated players is a recipe for market abuse. In the end, a totally unobtrusive approach towards RTOs is likely to attract opportunistic Machiavellian behavior.

Why should private firms want to list this way, if they are already of caliber to list through an IPO with their own profile? Our review of financial advisor reports and shareholder circulars indicates that an RTO is not considered as a means to list *per se* but a corporate action strategy mainly cited for growth and diversification. Private firms also view the transaction as a tool to become a public company without immediate large dilution in ownership and still have the option to raise more funds later, obtain a target public firm, especially one with valuable property at a bargain price, and gain tax write-offs benefits. For public firms, the transaction is an opportunity for synergy or continued survival. The empirical results in this paper convey the idea that theoretical analysis of factors determining a firm's choice to engage in an RTO can be related to exit choice and corporate merger strategy rather than a model of a firm using listing mode to signal its type. Taken together, an RTO provide a valuable listing alternative to a traditional IPO.

Can we regard private firms as White Knights? Our analysis of return performance indicates that the market perceives RTOs as good news in the short-term. The wealth impact is not reversed as the 12 month post-merger BHR produces compounded return of 36.5%. Confirming that these transactions do not destroy value, we find that the firms survived two years post-merger and experienced improved growth in earnings as well as a stronger equity base. Our study provides evidence that RTOs can help mitigate financial distressed costs of underperforming public firms and allow shareholders a chance to liquidate and recover some of their investment value.

References

Adjei F, Cyree K, Walker M (2008) The determinants and survival of reverse mergers vs. IPOs, Journal of Economics and Finance 32: 176-194.

Arellano-Ostoa A, Brusco S (2002) Understanding reverse mergers: A first approach, Working paper, Universidad Carlos III de Madrid.

Barber BM, Lyon JD (1997) Detecting long-run abnormal stock returns: The empirical power and specification statistics, Journal of Financial Economics 43(3): 341-372.

Brav A (2000) Inference in long-horizon event studies: A Bayesian approach with application to initial public offerings, Journal of Finance 55(5): 1979-2016.

Carpentier C, Cumming, D, Suret, JM, (2012). The value of capital market regulation: IPO versus reverse mergers, Journal of Empirical Legal Studies, 9(1), 56-91.

Chou, P (2004) Bootstrap tests for multivariate event studies, Review of Quantitative Finance and Accounting, 23: 275-290.

Dasilas A, Grose C, Talias, MA (2017) Investigating the valuation effects of reverse takeovers: evidence from Europe, Review of Quantitative Finance and Accounting, 49 (4): 973-1004.

De La Bruslerie, H, (2013). Crossing takeover premiums and mix of payment: An empirical test of contractual setting in M&A transactions," Journal of Banking and Finance, 37(6), 2106-2123.

Floros, IV, Sapp TRA (2011) Shell games: On the value of shell companies, Journal of Corporate Finance 17: 850-867.

Floros IV, Shastri K (2009) A comparison of penny stock initial public offerings and reverse mergers as alternative mechanisms for going public, SSRN Working Paper.

Gleason KC, Rosenthal L, Wiggins, RA (2005) Backing into being public: an exploratory analysis of reverse takeovers, Journal of Corporate Finance 12: 54-79.

Hansen R (1987) A theory of medium of exchange in mergers and acquisitions, Journal of Business, 60, 75-96.

Hseih J, Lyandres E, Zhdanov A (2011) A theory of merger-driven IPOs, Journal of Financial and Quantitative Analysis, 46, 1367-1405.

Kothari SP, Warner JB (2006) Econometrics of Event Studies, Handbook of Corporate Finance: Empirical Corporate Finance. Vol A (Handbooks in Finance Series, Elsevier/North-Holland) Ch. 1., pp 3-32.

Ikenberry D, Lakonishok J, Vermaelen T, (1995) Market underreaction to open market share repurchases, Journal of Financial Economics 39(2): 181-208.

Lee, CM, Li KK, Zhang R, (2015). Shell games: The long-term performance of Chinese reverse merger firms, Accounting Review, 90 (4), 1547-1589.

Leow HW, Lau WY (2018) The impact of global financial crisis on IPO underpricing in Malaysian stock market, Review of Pacific Basin Financial Markets and Policies, 21(4), 1-17.

MacKinlay AG (1997) Event studies in economics and finance, Journal of Economic Literature 34: 13-39.

Mitchell L, Stafford E (2000) Managerial decisions and long-term stock price performance, Journal of Business, 73(3), 287-329.

Pakov, AR (2006) Ghouls and Godsends? A critique of reverse merger policy, Berkeley Business Law Journal 3(2): 474-513.

Pollard T (2016) Sneaking in the backdoor? An evaluation of reverse mergers and IPOs, Review of Quantitative Finance and Accounting, 47(2). 305-341.

Sjostrom W (2008) The truth about reverse mergers, Entrepreneurial Business Law Journal 2(2): 744-759.

Vermeulen EPM (2014) Rules on backdoor listings: A global survey, Indonesia-OECD Corporate Governance Policy Dialogue. OECD Working Paper.

Wan-Hussin WN (2002) The reverse takeover of Berjaya Textiles and back-door listing of Jaya Tiasa: A Malaysian case, SSRN Working Paper.