



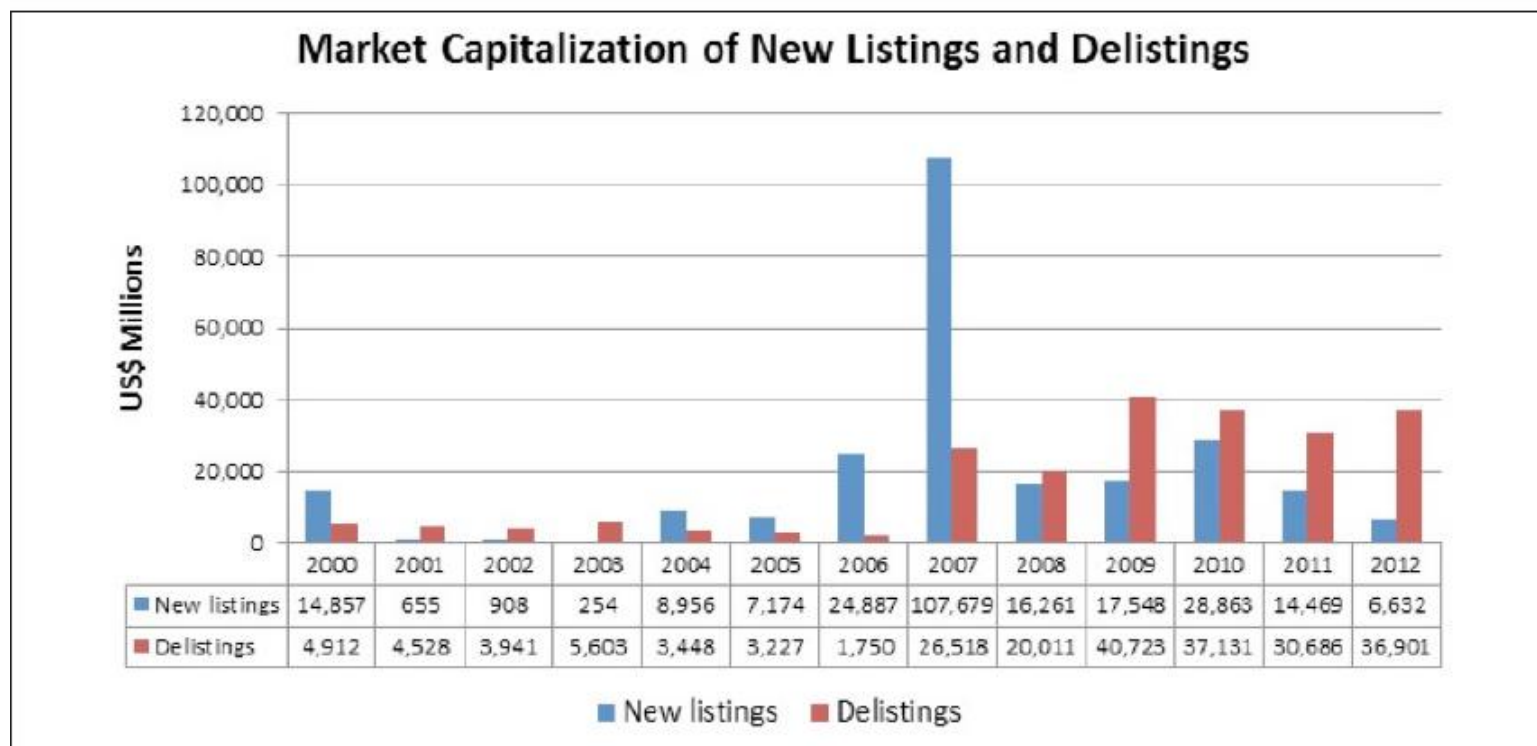
# White Knights or Machiavellians? Understanding the motivation for reverse takeovers in Singapore and Thailand

*Pantisa Pavabutr*

PIER Research Workshop July 18-19, 2019

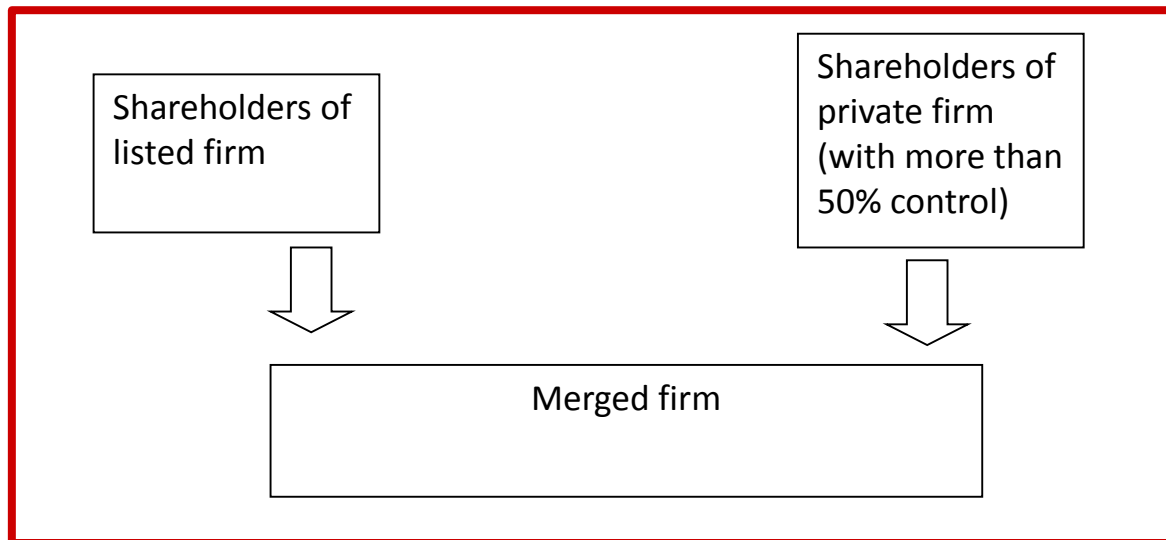
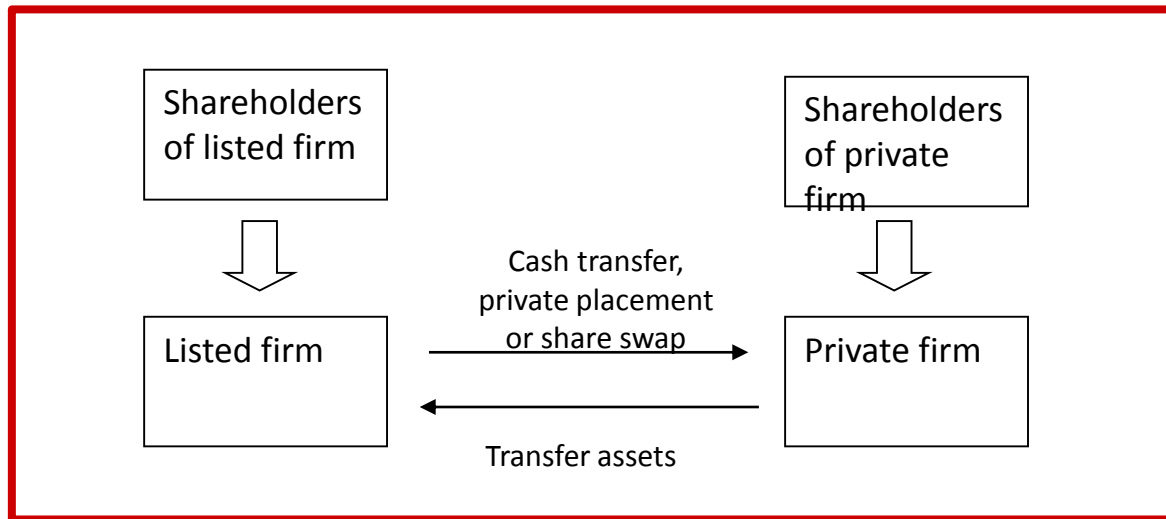
# Life after IPOs

- Pour and Lasfer (Journal of Banking and Finance, 2013): Using UK delisted firm samples (1995-2009), delisting occur about four years after IPO on London's Alternative Investment Market (AIM).
- Park, park, Shiroshita, and Sun, 2014 EFA Proceeding: Wealth effect of involuntary delisting between 2002-2012 in Japan is -70%. (TSE, Osaka, etc.)
- Saengow (MIF, Thammsat, 2015) Using IPOs between 2002-2005, 10 out of 93 firms posted NC status. The probability of becoming delisted increases considerably after year 6 of listing.

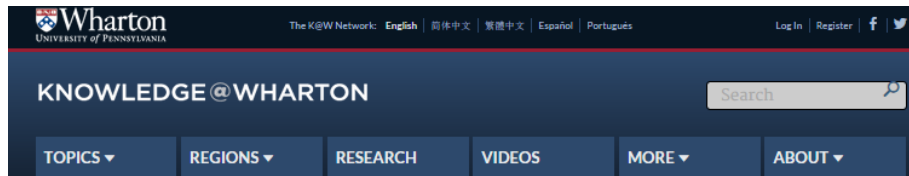


Source: World Federation of Exchanges (2014).

# Illustration of reverse takeover



# Many facets of RTOs



## FINANCE

### Reverse Mergers: Cross-border Regulation or Cold War with China?

Feb 12, 2013

Asia-Pacific, China, North America



*In the last several years, many small- to medium-sized Chinese companies found a way to trade on the New York Stock Exchange and NASDAQ through an obscure transaction called a reverse merger. Through these transactions, both U.S. and foreign companies can gain access to U.S. capital markets by merging with a U.S.-listed "shell" company without going through a more involved initial public offering (IPO).*

*However, according to U.S. regulators, shareholders' attorneys and others, the financial statements of many Chinese reverse-merger firms weren't altogether legitimate. James Doty, chairman of the U.S. Public Company Accounting Oversight Board (PCAOB), oversees auditors of U.S.-listed companies and has been actively negotiating with Chinese*



# ASX and availability of shells

## SHELL BE RIGHT

Recent and proposed back-door listings

New entity	Ticker	Activity	Proposed raising \$m	Shell	Previous activity
LionHub Group	LHB	Chinese property	\$7-12	Arasor	Electro-optical
Digital CC	DCC	Bitcoins	\$9	Macro Energy	Oil exploration
Sandon Capital	SDO	Listed investment company	\$35	Global Mining Invests	Resources investment
Reproductive Health Sciences	AOM	IVF	\$2.4	AO Energy	Minerals exploration
Ziptel	SKL	SIM cards	\$3	Skywards	Nickel exploration
Ecopropp	CKK	Fracking proppants	\$3	Coretrack	Drilling
Roxy Casino	CAQ	Cambodian casinos	\$0	Cell aquaculture	Barramundi farming
YPB	AUV	Anti-counterfeiting	\$3-6	AUV Enterprises	Sapphire exploration
Dairy Farm Investments	APA	Dairy farming	\$6-10	APA Fin Services	Portfolio administration
Future Generation Investment Fund	AIX	Charity listed investment company	\$100-200	Aust Infra Fund	Airport ownership







## Why do a reverse takeover?

January 23, 2014

 Read later

Caitlin Fitzsimmons

For technology firm Bulletproof, it made perfect sense to use a mining company's shell to list rather than do an IPO.

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It is possibly the 21st century Australian equivalent of swords to ploughshares: a technology company doing a reverse takeover of a mining company.

While there has been a lot of focus on initial public offerings in the technology space lately, with high-profile floats such as [Matt Barrie's Freelancer.com](#), the founders of Bulletproof Networks opted to list on the Australian Securities Exchange via a reverse takeover of mining company Spencer Resources instead.

The company is now on the ASX with the ticker BPF, opening on Thursday at 50c and falling to 41c by 11am.



Anthony Woodward and his co-founders will own about 73 per cent of Bulletproof Networks after a reverse takeover.

Source: The Australian Business  
Review: July 2014



# TSE vs OSE: Strategic consolidation








**33°C** P/SUNNY  
TOKYO (1 p.m.)

**MARKETS** 124 ¥/\$ (12 a.m.)

The Japan Times

## NEWS

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### TSE merger with Osaka bourse up, running

KYODO

The Tokyo and Osaka bourses integrated the trading of shares Tuesday at the Tokyo Stock Exchange, making it the world's third-largest exchange by number of listed companies.

Japan Exchange Group Inc., created this year through the merger of the operating companies of the TSE and the Osaka Securities Exchange, aims to attract more foreign funds by boosting trading efficiency through the integration to meet fierce international competition.

"Now I can breathe a little easier," TSE President Akira Kiyota said at the start of trading, which went off without a hitch and saw the Nikkei 225 stock average

JUL 16, 2013

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**KEYWORDS**

[OSAKA SECURITIES EXCHANGE,](#)

[TOKYO STOCK EXCHANGE](#)

**BUSINESS**

- [Spending slips as consumer prices inch](#)

# Importance of study on RTOs

- Regulators need to strike balance between investor protection without delineating potential firms to enter the exchanges.
- Anecdotal evidence suggests firms that choose to list via RTOs (*back-door listing*) are low quality firms and that these transactions can be associated with pump-and-dump schemes.
- Evaluation on the merits of RTOs should be based on different regulations on each exchange (Vermeulen, 2014)

# Research questions posed

- What are the characteristics of firms involved in RTO transactions in Singapore and Thailand?
- What is the investors' experience in RTO transactions over short and long-term periods?
- What is the financial accounting performance of the merged entity?



# Agenda

- Is there a pecking order for listing?
- RTO rules on Singapore and Thai Exchanges
- Data source and characteristics
- Empirical results
- Conclusions and policy discussion

**IS THERE A PECKING ORDER  
FOR LISTING MODE?**

# Pecking order for public listing

- RTOs tend to be smaller firms with higher levels of information asymmetry: Floros and Shastri (2009) ; Floros and Sapp (2011) ; Carpentier, Cumming, and Suret (2009)
- RTOs are self selection process as the firms tend to be earlier stage, more speculative, and face tighter financing constraints (Lee, Li, and Zhang 2014)
- RTOs have high failure rates and does not generate long-term wealth gains: Gleason et al. (2005) ; Adjai, Cyree, and Walker (2005)

# Critique of separating equilibrium

- A possible model concept:
  - High type firm with high prob. of positive NPV choose to list with IPO and obtain funds immediately despite of higher IPO listing costs.
  - Low type firm with low prob of positive NPV choose to list with RTO because of lower costs.
  - What will break the separating equilibrium?
- Costs of RTOs are undermined: Sjostrom (2008) and Winyuhuttakit (2011)
- Different regulations leads to different incentives and results: Vermeulen (2014)

**RTO RULES: ARE COSTS OF  
RTOS REALLY LOWER THAN  
IPOS?**

# RTO rules in Singapore and Thailand

Method	Computation
Net tangible asset (NTA)	$\frac{\text{Equity increase} \times \text{NTA of listed firm}}{\text{NTA of listed firm}}$
Net income	$\frac{\text{Equity increase} \times \text{Net income of listed firm}}{\text{Net income of listed firm}}$
Total considerations	$\frac{\text{Total consideration paid to listed firm}}{\text{Total assets of listed firm}}$
Equity value	$\frac{\text{New equity increase}}{\text{Total equity of listed firm}}$
Proven and probable reserves*	$\frac{\text{Proven and probable reserve to be disposed}}{\text{Total group proven and probable reserves}}$

Source: SGX rule book Chapter 10 section 1006 and SEC circular 20/2551

\*Applies to SGX rule book Chapter 10 section 1006



# IPOs vs RTOs: Process

*Table 1 IPOs vs RTOs process*

IPO	RTO
(1) Prelisting restructuring and due diligence of firm in order to comply to listing criteria and ready firm for public disclosure.	(1) Negotiation and 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 SEC and SET. The prospectus contains disclosures required regarding business and firm.	(2) Preparation of circulars to shareholders and for stock exchange approval. Circulars contain description of the transactions, financial information of target group and merged group.
(3) Public exposure: Road shows and nomination of underwriter.	(3) Disposal of listed firm assets (if any), share placement exercise, and share swap.
(4) Final approval by the stock exchanges and share subscription begins.	(4) Extraordinary shareholder meeting (EGM) to acknowledge share placement completion.
(5) Trading on exchange commences.	(5) Trading of merged group begins.

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

# Data source and overview

- RTO cases in Singapore and Thailand 2007-2015
- List of RTO cases from SGX website (under “Catalodge” submenu) and Thai SEC websites
- Listed firm circulars and announcements  
<http://infopub.sgx.com> and <https://www.set.or.th/set>
- IFA reports
- Key event dates: MOU and EGM

# Data characteristics

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%

# Reasons cited for RTO

	Distressed	%Diss	Non-Distressed	%Non-diss	Total	%Tot
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 advisors' reports or shareholders circulars from 47 RTO cases by financial status between 2007-2015.

# EMPIRICAL FINDINGS

# Empirical methods and results: Market gradually learns about forthcoming MOU and MOU is event date carrying most information

Figure 1 Plot of cumulative market model abnormal return for RTO announcements (MOU date)

This figure plots the cumulative market model abnormal return for RTO announcements (MOU date). 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 the abnormal, actual, and normal returns respectively. The conditioning information,  $\Omega_t$  is the market return.

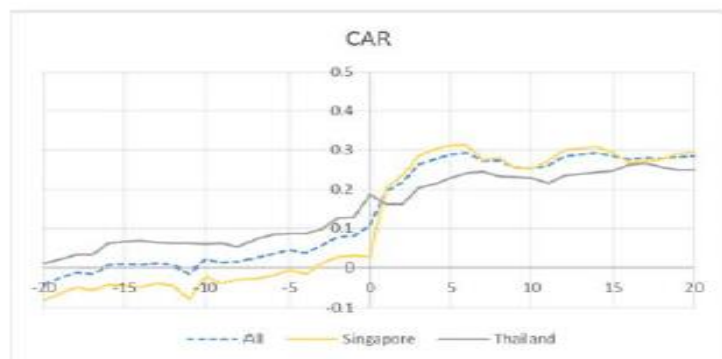


Figure 1 a All sample and by market

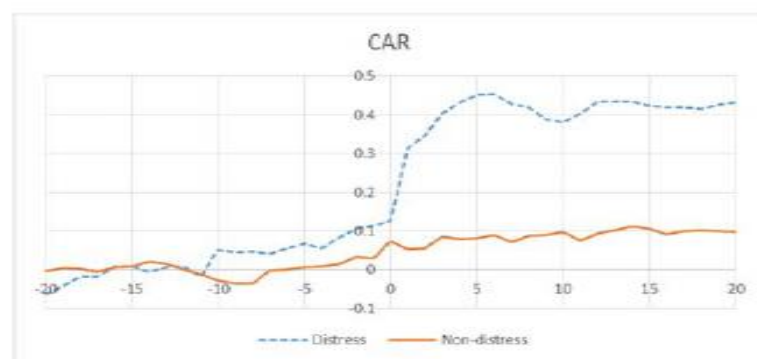


Figure 1 b Distressed vs non-distressed

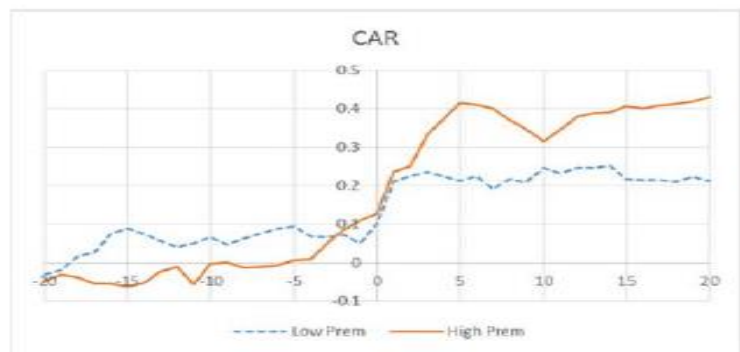


Figure 1 c Low vs high premium

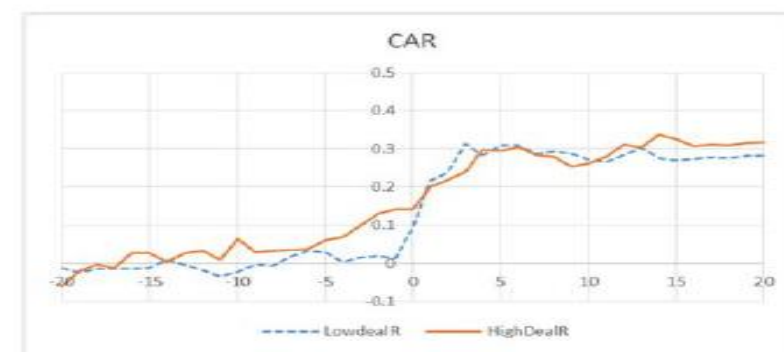


Figure 1 d Low vs high relative deal size



# Empirical methods and results: Formal tests of CAR and SCAR with varying event windows around MOU showing distressed vs non-distressed performance significantly different.

	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**
Distress	[-10, 10]	0.288	2.99***	1.796	1.98*
Non distress	[-10, 10]	0.084	1.81*	0.796	2.11*
Distress-Non-distress	[-10, 10]	0.204		1.00	
Diff p-value		0.0673		0.3194	
Diff p-value Wilcoxon		0.0990		0.3370	
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		0.5604		0.5918	
Diff value Wilcoxon		0.5677		0.5522	
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		0.1798		0.2369	
Diff value Wilcoxon		0.2311		0.3391	

# Monthly BHR post RTO with stratified bootstrapped resampling

	Month avg return				Compounded holding period return			
	RTO firms	Benchmark	Diff.	p-value	RTO firms	Benchmark	Diff.	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All								
3 month	0.3086	0.0170	0.2916	0.041	0.226	0.049	0.177	0.041
6 month	0.6342	0.0096	0.6247	0.034	0.317	0.089	0.228	0.054
12 month	0.8531	0.0057	0.8473	0.056	0.365	0.132	0.232	0.141
Distress								
Month avg return								
3 month	0.4660	0.0170	0.4491	0.018	0.298	0.049	0.249	0.023
6 month	0.9289	0.0096	0.9193	0.022	0.302	0.089	0.213	0.031
12 month	1.2807	0.0057	1.2750	0.029	0.468	0.132	0.336	0.156
Non-distress								
Month avg return								
3 month	0.1196	0.0170	0.1026	0.11	0.139	0.049	0.091	0.117
6 month	0.0777	0.0096	0.0681	0.181	0.334	0.089	0.152	0.118
12 month	0.2829	0.0057	0.2772	0.119	0.240	0.132	0.202	0.13

This table reports mean monthly and compounded buy-and-hold returns ( $BHR_{t(T_1, T_2)} = \prod_{t=T_1}^{T_2} (1 + R_{it}) - 1$ ) of event firms and benchmark portfolios. The benchmark portfolio is formed by eliminating firms in the top third market capitalization on both 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 the fraction of random BHRs from the pseudo samples in larger magnitude than the event firm sample mean.

# Explaining BHR variation: It's the financials and cross industry mergers that matters.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Relative deal size	<b>-0.0168</b> (-1.82)*	-0.0364 (-1.56)	-0.0431 (-1.44)	-0.0093 (-0.37)	-0.0246 (-1.09)	-0.0106 (-0.5)
Premium	0.1454 (0.97)					
% Chg ROE		<b>0.0544</b> 1.76*	0.0492 1.43	0.0322 1.38	<b>0.0715</b> 2.01**	0.0453 1.44
Log of firm size	<b>0.1540</b> 1.90*	<b>0.1751</b> 2.47**	<b>0.1831</b> 2.14**	0.1141 1.31	<b>0.1918</b> 2.37**	<b>0.1433</b> 1.97*
Dummy =1 if distressed	0.4199 1.16	0.2764 0.68				
Distress dummy * Deal size			0.0592 1.48			
Dummy =1 if in different industry				-0.343 -0.69		
Dummy =1 if distressed and in different industry					<b>0.8494</b> 2.02**	
Dummy=1 if not distressed and in different industry						<b>-0.8660</b> (-2.46)**
Adj Rsq	0.1574	0.2083	0.1928	0.165	0.1642	0.2271
F-stat	1.46	2.38*	1.61	1.38	2.18*	2.76**
No. of observations	47	47	47	47	47	47

# Post-merger performance

Mean

	Distressed	Non distressed	Difference	p-value	D
Panel A: 2Y post-merger					
% Revenue gr	59.23%	51.81%	7.42%	0.9028	
% Book Equity gr	91.31%	30.17%	61.13%	0.3615	
% NI gr	129.92%	107.48%	22.44%	0.8417	
% EPS gr	110.89%	89.80%	21.09%	0.8445	
% ROE gr	17.33%	37.51%	-20.18%	0.4831	
% Chg. Cash ratio	18.92%	-9.01%	27.93%	0.2739	
% Chg. Debt ratio	25.66%	12.52%	13.14%	0.7105	
%Chg. Market cap	20.26%	5.67%	14.59%	0.4839	
Panel B: 2Y-1Y post-merger					
% Revenue gr	38.30%	57.20%	-18.90%	0.0820	
% Book equity gr	23.95%	31.83%	-7.88%	0.8250	
% NI gr	16.67%	17.14%	-0.47%	0.3840	
% EPS gr	-5.40%	-24.70%	19.30%	0.2847	
% ROE gr	7.00%	-11.22%	18.22%	0.3050	
% Chg. Cash ratio	5.15%	-9.95%	15.10%	0.3455	
% Chg. Debt ratio	16.23%	3.76%	19.99%	0.5123	
% Chg. Market cap	15.32%	-9.58%	24.90%	0.2690	

This table reports the 2-year mean and median compounded annual growth rate

# Conclusion and Policy discussion

## Conclusion

- No evidence that firms use RTOs as a short-cut to listings after review of regulation, analysis of characteristics, and readings of motivations to conduct RTOs in circulars.
- Short-term positive CAR and improved liquidity suggesting incumbent shareholders can exit on more favorable terms.
- Mixed payment terms are used with warrant issues pending are used suggesting incoming firms also carry valuation risk.
- Management conduct RTO not as a means to list but merger strategy to obtain short-cut to synergy, diversification opportunities, and international listings.

## Thoughts for policy

- Given regulatory screens, firms choosing to list via RTOs should not be view as low type firms.
- In the case of these successful RTOs there is no evidence that incoming firms engage in pump and dump schemes.
- RTO announcement provides exit opportunity for incumbent shareholders.
- Banning RTOs or raising regulatory barrier not necessary.
- Improved communications to investors and media to avoid misunderstanding