ECO-ENA Inc 2nd Annual Conference of EFEIB

and

CEHAES 1st Annual Conference of Financial Economics

Venue: University of Ottawa, Ontario, Canada

Date: 2 – 4 February 2012

Paper Title:

How does undervaluation affect firms going private in Australia?

Presented by

Mamunur Rashid

PhD student at School of Economics and Finance

Curtin University, Perth, Western Australia

Paper Co-authored by: **Subhrendu Rath**, PhD

Abstract

- Theme: Market undervaluation is an important determinant for public firms in going private through private equity takeover

- Context: Firms listed in the ASX

- Our major finding: Private equity target firms suffer from market undervaluation, an effect perhaps due to asymmetric information existing between the market and the managerial perception

Introduction and Background

- Root causes for going-private transactions:

  To mitigate agency conflicts and remove information asymmetries (…publicly listed firms, with low financial visibility, are more likely to undertake PTP transactions (Mehran and Peristiani, 2010)

- What is the role of PTPs:

  PTPs eliminate asymmetric information and remove undervaluation => market undervaluation may provide incentives for managers to manipulate information to lower the value of the firm before they take the firm private for their own benefit (Lowenstein, 1985)

Private Equity Transactions

- The most common form of a Private Equity (PE) takeover: "a PTP transaction; a public company is taken over by PE firm(s); the target company goes private and is delisted from the stock market" (Frankfurter and Gunay, 1992)

- PE firm buys majority control; with a relatively small portion of equity and a large portion of outside debt financing, sometimes as large as 90% (often referred to as LBOs) (Kaplan and Stromberg, 2009)

Private Equity Transactions

- Leverage creates pressure on managers (Kaplan and Stromberg, 2009); reduces the 'free cash flow' problems described by Jensen (1986): => managers with weak corporate governance could dissipate cash flows rather than returning them to investors

- Jensen (1989): PE firms (and LBOs) would dominate corporate organizational form; they possess concentrated ownership stakes with high-powered incentives for management at low overhead costs

Private Equity Transactions

- PE firms raise equity through privately managed funds; organized as general and limited partners; Gpartners manage fund; Lpartners provide most of the capital; limited partners may include institutional investors and, in some cases, wealthy individuals

- PE firm serves as the general partner, who is compensated in three ways:

  earns a management fee

  earns a share of the profits of the fund

  charges dealing and monitoring fees (Kaplan and Stromberg, 2009)

What Does the Literature Suggest?

- Prior research on PE has been exclusively limited to US and UK samples; it is also questionable if those evidences can be generalized in the Australian context

- Australian studies on going private transactions exhibit only one empirical study (Chapple et al. 2010) on PE deals thus far, exploring the financial and governance characteristics of Australian PE deals

Empirical Propositions

- **Undervaluation**

  Managers have incentive to take the firm private to remove undervaluation where information on investment opportunities is not correctly transmitted. With undervaluation, managers may see listing costs as an unnecessary burden and may seek to realise some capital gains by taking the firm private [DeAngelo et al., 1984; Edlin and Stiglitz, 1995; Evans et al., 2005; Weir and Wright, 2006; Cumming et al., 2007; Kaplan and Stromberg, 2009]

  Renneboog et al. (2007) suggested that wealth gains from going private are largely the result of the elimination of listing costs. Therefore, delisting would enable the management to operate in conditions where they would not suffer from undervaluation

  It is, thus, hypothesized that undervaluation will create incentives for managers to take their firm private through PE-backed deals:

  Hypothesis 01: Firms with lower market valuation are more likely to be subject to PE transactions compared to the firms that did not go private

Empirical Propositions

- **High Liquidity**

  Generally, acquirers in a buyout transaction attempt to realize the true value of the assets of the firm through restructuring. This restructuring can be taken place through disposing off unprofitable assets. As a result, high liquidity can be a feature that is more likely to be found in going private firms (Evans, Poa & Rath 2005). Carroll, Zumpano & Elder (1988) also showed that LBO targets have greater liquidity compared to non-LBOs.

  It is, thus, hypothesized that the higher the liquidity of the assets of the firm, the higher the probability of going private:

  Hypothesis 02: Target Firms in a PE led bid are more likely to have high liquidity compared to the firms that did not go private

Empirical Propositions

- **Free Cash Flow and Internal Governance Structure**
  PE takeovers do not appear to focus on particular industries, indicating that the synergistic motive is less prominent and appear to play an 'opportunistic' role. Therefore, it is expected that such firms would have high free cash flows. In addition, evidence suggests that firms going private are more likely to have internal governance structure that are ineffective [Myer and Majluf, 1984; Lehn and Poulsen, 1989; Opler and Titman, 1993; Weir et al., 2005a, b; Chapple et al., 2010]

  It is, thus, hypothesized that the target firms with managerial private information would have high free cash flows and poor internal governance structure to attract PE-backed deals:

  Hypothesis 03: Target Firms in a PE led bid are more likely to have high free cash flows compared to the firms that did not go private

  Hypothesis 04: Target Firms in a PE led bid are more likely to have fewer independent non-executive directors compared to the firms that did not go private

  Hypothesis 05: Target Firms in a PE led bid are more likely to have the existence of Duality in their board compared to the firms that did not go private

Empirical Propositions

- **External Control Mechanism**

  Takeover threat acts as an external control mechanism and may reflect a market response to the existence of information asymmetries between management and outside shareholders. It is argued that management might team up with some outside financier to take their firm private to ensure that their company is not taken over by hostile raiders [Lehn and Poulsen, 1989; Eddy et al. 1996; Halpern et al., 1999; Weir et al. 2005a, b]

  It is, thus, considered that the existence of takeover threats might provide an impetuous for the going private deal. Going private through PE takeovers, henceforth, might be used as a form of takeover defence. The following hypothesis, therefore, is developed:

  Hypothesis 06: Target Firms in a PE led bid are more likely to experience takeover pressures from the market compared to the firms that did not go private

Data and Research Design

- **Data**

  Sample consists of all successful PE takeover target firms listed on the ASX and made between 1990 and 2010.

  Sample was drawn from Securities Data Corporation (SDC) Platinum ANZ M&A Database, Bureau Van-Dijk ORBIS Global Database, Aspect Huntley Morning Star DatAnalysis and FinAnalysis Database

  Based on the availability of complete information for at least the last 3 years of data, 129 PE target firms were selected. All variables are measured as of the balance sheet date prior to the year of the announcement of the takeover activity

  A matched sample of firms (matched by size, time & industry) that were acquired by public companies was also constructed

Data and Research Design

	All PTP Deals				All Non-PTP Deals		All Deals
	Only Private Equity		All Going Private				
Year	N	%	N	%	N	%	Total
1990 – 1992	0	0.00	11	6.07	171	93.95	182
1993 – 1995	1	2.94	34	9.09	340	90.91	374
1996 – 1998	5	12.50	40	7.97	462	92.03	502
1999 - 2001	19	37.25	51	13.01	341	86.99	392
2002 - 2004	33	35.48	93	10.69	777	89.31	870
2005 - 2007	52	39.09	133	14.27	799	85.73	932
2008 - 2010	19	12.26	155	11.98	1139	88.02	1294
Total	**129**	**24.95**	**517**	**11.37**	**4029**	**88.63**	**4546**

Data and Research Design

- **Model Specification**

  Dependent variable used in this study is PRIVEQ, which takes the value '1' if the company went private through PE and '0' otherwise (binary nature of the dependent variable leads to use logistic regression)

  Based on the empirical propositions, PE takeovers are expected to take the following functional form:

  PE = f(ev_1/ev_2, mtb, lnta, lvg, curr, fcf, capex, bso, bind, dual, threat)

  Following model is used to test the empirical propositions in this study:

  $PRIVEQ_i = \beta_0 + \beta_1 EV\_1/EV\_2_1 + \beta_2 MTB_2 + \beta_i LNTA_i + \beta_i LVG_i + \beta_i CURR_i + \beta_i FCF_i + \beta_i CAPEX_i + \beta_i BSO_i + \beta_i BIND_i + \beta_i DUAL_i + \beta_i THREAT_i + \varepsilon_i$

Univariate Analysis

	PE Sample		Non-PE Sample			
	Mean	SD	Mean	SD	t-statistic	p-value
EV_1	2.009	2.837	3.586	2.676	4.593	0.000**
EV_2	2.486	6.467	3.134	2.989	1.033	0.151
MTB	1.034	0.406	4.508	4.317	9.099	0.000**
LNTA	18.759	1.7143	18.316	2.031	-1.892	0.029*
LVG	0.4957	0.3022	0.3799	0.3359	-2.908	0.002**
CURR	4.095	9.422	1.332	0.6191	-3.324	0.000**
FCF	0.0999	0.2326	0.0369	0.4359	-1.449	0.074
CAPEX	0.0847	0.1178	0.1089	0.2292	1.072	0.142
BSO	0.1007	0.1535	0.0335	0.04239	-4.799	0.000**

Multicolleniarity Test

Correlation Matrix

	EV_1	EV_2	MTB	LNTA	LVG	CURR	RFCF	CAPEX	BSO
EV_1	1								
EV_2	0.904	1							
MTB	0.425	0.312	1						
LNTA	-0.118	-0.059	-0.109	1					
LVG	-0.165	-0.133	-0.208	0.255	1				
CURR	-0.295	-0.257	-0.495	0.031	-0.024	1			
FCF	-0.056	0.017	0.013	0.469	0.217	-0.091	1		
CAPEX	0.007	0.027	0.113	-0.141	-0.149	0.068	0.039	1	
BSO	-0.176	-0.153	-0.212	-0.351	-0.098	0.129	-0.156	0.011	1

Multivariate Regression Analysis

- **Logistic Regression**

  Three sets of logit regression were employed to test the hypotheses:

  The first set of logistic regression analyses the effect of undervaluation in PE takeovers with only financial variables (without governance variables)

  The second set of regression analyses the effect of undervaluation in PE takeovers with the issue of internal governance mechanism taken into consideration

  The third set of regression includes the internal as well as external governance variables to analyse the effect of undervaluation in PE takeovers

Further Analysis on Valuation

	EV_1 Ratio					MTB Ratio				
	PE		Non-PE			PE		Non-PE		
	N	Percent	N	Percent	Avg (EV_1)	N	Percent	N	Percent	Avg (MTB)
Q 1	46	35.66%	5	3.88%	0.795	51	39.53%	0	0%	0.647
Q 2	40	31.01%	12	9.30%	1.237	49	37.98%	3	2.33%	1.128
Q 3	23	17.83%	29	22.48%	1.894	27	20.93%	25	19.38%	1.608
Q 4	10	7.75%	41	31.78%	2.868	2	1.55%	49	37.98%	2.961
Q 5	10	7.75%	42	32.56%	7.155	0	0%	52	40.31%	7.474

Empirical Results

- **Valuation Measures**

  EV_1 Ratio
  => negative and significant
  => no evidence available in Australia; thus, new evidence for Australia

  EV_2 Ratio
  => negative but insignificant
  => no evidence available in Australia; thus, new evidence for Australia
  => possible indication of opportunistic role of PE firms

  MTB Ratio
  => negative and significant
  => consistent with Australian PE studies but not with Australian PTP studies

  Undervaluation, therefore, plays a significant role in going private through PE Takeovers in Australia: New Evidence for Australia

Empirical Results

- **Financial Characteristics**

  Current Ratio

  => positive and significant

  => consistent with prior literature, Australian evidence is mixed

  Leverage Ratio

  => significant but positive; new evidence!!! Prior evidence is mixed

  => another possible indication of opportunistic role of PE firms!

  => or it is the 'wealth expropriation hypothesis'!

  FCF

  => positive and insignificant (empirical evidence is mixed)

  => consistent with prior literature including Australia

  CAPEX

  => positive and insignificant (empirical evidence is mixed)

  => consistent with prior literature including Australia

Empirical Results

- **Internal Governance Mechanism**

  BSO

  => positive and insignificant

  => no evidence available in Australia; thus, new evidence for Australia

  BIND

  => positive and insignificant

  => no evidence available in Australia; thus, new evidence for Australia

  DUAL

  => negative and insignificant (greater internal monitoring!!!)

  => no evidence available in Australia; thus, new evidence for Australia

  Internal Governance mechanism, therefore, does not have any clear role in going private through PE Takeovers in Australia: possible indication of weak internal governance structure; New Evidence for Australia

  Note: CGBPR are only in practice in Australia from 2004

Empirical Results

- **External Governance Mechanism**

  THREAT

  => positive and significant

  => empirical evidence is mixed, including Australia

  => new evidence for Australian PE takeovers

  => market response to the perceived abuse of asymmetric information between managers and widely diverse outside shareholders

  => PE takeovers in Australia is a form of takeover defence!!!

  => supports the basic role of market for control (Jensen and Meckling, 1976)

Market for Corporate Control, therefore, plays it's role with the possible existence of weak internal governance structure in Australian environment: New Evidence for Australia

Concluding Remarks

- An important new insight brought in by this study: the importance of valuation measures is dependent on the way the variables are defined

- No empirical analysis has been carried out to determine the possible existence of information asymmetry between insiders and outsiders. Future research on the evaluation of this possibility would shed light on understanding the managerial motivation in taking their firm private

- Nonetheless, the empirical results of this study have added some interesting and new facts to Australian PE literatures

Thank You All

Questions and/or Suggestions