

“Thinking back of equity issues in 2009 and cost of equity”

TOSHIBA

Whenever hearing the news about TOSHIBA, the equity issue boom in 2009 recalled to my mind. Japanese companies raised capital more than JPY7 trillion hitting the record for the year. Westinghouse was consolidated in 2006 for USD5.4 billion and the parent company raised the ownership in 2013. A number of queries are listed at this time. Did the company really do strict due diligence? How did the company plan future cash flow? Did the company actively make decision the acquisition or passively accept it by nuclear policy/agreement of US and Japan’s government? In either case, TOSHIBA replaced its debt by new equity capital of JPY300 billion in 2009.

Equity issues in 2009

Companies rushed raising capital for the year after capital market was recovered from financial crisis. Large financial institutions of banks, brokers and insurances and manufacturers issued common stocks. Of the 14 companies, a half of the companies pushed ROE higher for FY2015 than FY2010 just after equity issue, but the other pulled it down. And only 8 companies raised ROE more than 7% (See table below). It is not certain 7% of ROE is higher or lower than required rate of return of each company at this time. However, it is so sure that cost of equity was so high at lower share prices in 2009 and much higher than right now. Did the companies really analyze between cash flow return and cost of equity (cost of capital) in increasing additional common shares or impact of diluting existing shareholders’ value? In addition, Nomura and Mizuho FG raised capital at 2 times.

JP Sec #	Company Name	ROE (%)							
		FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
6432	TAKEUCHI MFG	-	-0.7	-4.7	1.7	11.7	13.7	18.5	19.2
3231	Nomura Real Estate Holdings	5.9	1.7	1.8	5.7	5.9	7.8	10.3	11.2
4183	Mitsui Chemicals	-22.4	-7.7	6.5	-0.3	-2.2	-6.9	4.5	5.8
6472	NTN	-4.7	-1.1	7.2	3.0	-7.2	-7.3	10.5	6.3
6502	TOSHIBA	-56.7	-9.9	21.1	0.4	1.7	6.5	-3.6	-65.1
6674	GS Yuasa	6.4	8.0	11.2	10.5	4.8	7.5	6.7	5.7
8591	ORIX	1.7	3.0	5.1	6.2	7.4	10.5	11.5	11.7
8601	Daiwa Securities Group	-11.1	5.3	-4.2	-4.9	8.6	17.0	12.8	9.5
8604	Nomura Holdings	-40.2	3.7	1.4	5.9	6.0	5.8	6.5	6.6
8795	T&D Holdings	-18.4	5.3	3.8	4.1	8.0	8.2	8.0	5.7
9101	Nippon Yusen	9.5	-2.9	11.7	-11.5	3.1	4.8	6.2	2.3
4842	USEN	-85.7	-309.1	36.7	51.8	48.7	43.3	40.6	29.0
4004	Showa Denko	0.9	-15.7	5.2	6.9	3.6	3.2	1.2	0.3
6141	DMG MORI SEIKI	12.3	-2.8	-26.2	1.9	1.6	4.3	10.9	17.0
8804	Tokyo Tatemono	4.4	2.7	-32.5	5.3	4.4	33.2	5.6	6.4
8306	Mitsubishi UFJ Financial Group	-4.0	4.9	6.6	10.6	8.0	8.1	7.4	6.2
8411	Mizuho Financial Group	0.2	0.0	5.4	11.4	11.0	11.7	8.6	8.4
9202	ANA Holdings	-1.1	-14.4	4.7	5.3	6.6	2.5	5.1	9.8

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Correlation analysis on Equity Issuance factor

Below table shows how equity issue and cancelation impact on ROE, ROA and Tobin's for 494 companies of METRICAL core research universe. The universe includes composites of TOPIX100 and JPX400 indices and candidates of both indices. For the universe companies, Equity Cancelation and METRICAL Score significantly positively correlate with all of ROE, ROA and Tobin's q. Interestingly Equity Issuance more significantly or highly significantly correlate with ROA and Tobin's q than ROE.

494 Cos		Equity Issuance	Equity Cancelation	METRICAL SCORE
ROE (act)	correlation	0.013733385	0.114587214	0.08909075
	p-value	0.759350102	0.010337665	0.046467228
ROA (act)	correlation	0.09740207	0.174650882	0.102982095
	p-value	0.029426097	8.64137E-05	0.02127088
tobin's q	correlation	0.080549353	0.105664082	0.126982512
	p-value	0.071928474	0.018105287	0.004456777

(Source) METRICAL INC.

(Note) tobin's q is computed by (total liabilities + market capital of equity)/total assets.

As shown 3 tables in Appendix, Equity Issuance factor significantly correlate with ROE, ROA and Tobin's q for the same universe in regression analysis on 13 factors. Capital policy such as equity issue and cancelation closely connect to profitability and equity value. This is needless to say fundamentally true but also statistically verified by market data.

Conclusion

Correlation analysis above verifies equity issue statistically significant correlation with ROE, ROA and Tobin's q for major 494 companies in Japan. Less stock equity issue and more cancelation would raise profitability and equity value as well as share price. Managers of a company should keep it in mind and recall it in considering financing. Raising capital by equity results in much higher cost than debt. In bubble economy in Japan in late 1980s, companies are not conscious of the cost of equity that they believe it costs only dividend. It is not applied today, but some equity issues are seen that we are wondering if the company has carefully analyzed future cash flow return and shareholders value after raising capital. This would be a solution that a company keeps the cost of equity in mind. When a company raises additional capital, the company should submit regulator explicitly written number of cost of equity or required rate of return in Securities Registration Statement, as cost of debt financing is shown in the document with lenders and creditors. More interestingly, the regression analysis 3 tables in Appendix show Parent/Large Ownership factor also significantly correlates with ROE, ROA and Tobin's q. The score of the factor is designed that the lesser ownership by a large shareholder is, the higher the score is. Therefore, a subsidiary of a large company or a company run by founder's family tend to generate higher profitability and higher share price. These companies more prudently dealing equity issue and this would be a reason of higher profitability.

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Appendix

Multiple Regression Analysis: (y)=ROE (act), (x)=13 variables, All 494 Cos

<i>Multiple Regression Analysis</i>	
Correlation R	0.560286619
R2	0.313921096
Adjusted R2	0.295339792
STDEV	0.078175582
Sample #	494

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	13	1.342239209	0.10324917	16.89446023	4.44952E-32
Error	480	2.933482388	0.006111422		
Total	493	4.275721597			

	<i>Coefficient</i>	<i>STDEV</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.107251276	0.025169426	4.261172938	2.44857E-05	0.057795406	0.156707146
Nom Committee	-0.001779693	0.009645544	-0.184509322	0.853691842	-0.0207324	0.017173015
Com Committee	0.008770731	0.011318922	0.774873375	0.438796025	-0.013470028	0.031011491
Diversity	0.000288563	0.062328407	0.004629716	0.996307957	-0.122181677	0.122758802
Incentive Plan	-0.004391344	0.002560221	-1.715220524	0.086950176	-0.009421969	0.000639282
% of Independent Directors	-0.03818172	0.028418336	-1.343559312	0.179725734	-0.094021434	0.017657994
Stock Holding Score	0.003218484	0.001200322	2.681350029	0.007585106	0.000859949	0.005577019
Dividend Payout	-0.004247079	0.00328769	-1.291812263	0.197043811	-0.010707123	0.002212965
Equity Issuance	0.17025502	0.322401429	0.528083949	0.597685115	-0.46323751	0.80374755
Stock Cancellation	0.63466167	0.303905101	2.088354779	0.037292241	0.037512918	1.231810421
Growth Strategy	0.010112488	0.000898089	11.2600128	2.92931E-26	0.008347817	0.011877159
Cash Eqv/Sales	-0.011162097	0.002918301	-3.824862104	0.000148109	-0.01689632	-0.005427874
Takeover Defense	-0.000738531	0.000959395	-0.769788365	0.441804103	-0.002623664	0.001146602
Parent/large Ownership	-0.004406647	0.001229893	-3.582951994	0.000374419	-0.006823286	-0.001990008

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Multiple Regression Analysis: (y)=tobin's q (x)=13 variables, 494 Cos ex Financials

<i>Multiple Regression Analysis</i>	
Correlation R	0.490145035
R2	0.240242155
Adjusted R2	0.21966538
STDEV	1.198158897
Sample #	494

ANOVA

	<i>dF</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	13	217.8934091	16.76103147	11.67540375	4.48435E-22
Error	480	689.0806759	1.435584742		
Total	493	906.974085			

	<i>Coefficient</i>	<i>STDEV</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	1.016528994	0.377564989	2.692328533	0.007343509	0.274644565	1.758413423
Nom Committe	-0.05337428	0.144296524	-0.369893043	0.711625329	-0.336905189	0.230156628
Com Committer	-0.094781262	0.172162544	-0.550533582	0.582209565	-0.433066629	0.243504104
Diversity	-0.556091035	0.992358078	-0.560373365	0.575486241	-2.505993771	1.393811701
Incentive Plan	-0.03506321	0.039430951	-0.889230648	0.374324556	-0.112541814	0.042415394
% of Independe	0.320795175	0.46529216	0.689448915	0.490873964	-0.593465994	1.235056344
Stock Holding Si	0.064931227	0.018590581	3.492694926	0.000522398	0.028402251	0.101460202
Dividend Payout	0.142044329	0.050460243	2.814975131	0.00507865	0.042894065	0.241194594
Equity Issuance	9.433545166	4.937912394	1.910431861	0.056673182	-0.269050199	19.13614053
Stock Cancelati	1.636154687	4.63176559	0.353246436	0.724058781	-7.464887162	10.73719654
Growth Strateg	0.113481191	0.013791052	8.228610455	1.79723E-15	0.086382899	0.140579483
Cash Eqv/Sales	-0.198457352	0.045440333	-4.367427298	1.54129E-05	-0.287743903	-0.109170801
Takeover Defen	-0.011613587	0.014760408	-0.786806628	0.431783362	-0.040616586	0.017389412
Parent/large Ov	-0.037993891	0.018838286	-2.016844395	0.044268043	-0.075009586	-0.000978195

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Multiple Regression Analysis: (y)=ROA (act), (x)=13 variables, All 494 Cos

<i>Multiple Regression Analysis</i>	
Correlation R	0.576572306
R2	0.332435624
Adjusted R2	0.314355756
STDEV	0.045191332
Sample #	494

ANOVA					
	dF	SS	MS	F	Significance F
Regression	13	0.488164199	0.037551092	18.38705985	8.54991E-35
Error	480	0.980283114	0.002042256		
Total	493	1.468447314			

	Coefficient	STDEV	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.051007866	0.01454981	3.505741029	0.000498063	0.022418675	0.079597057
Nom Committee	-0.007937205	0.005575846	-1.423497929	0.155241525	-0.018893287	0.003018877
Com Committee	0.006936631	0.006543183	1.060130862	0.289618216	-0.005920191	0.019793452
Diversity	-0.030590386	0.03603048	-0.849014123	0.396296653	-0.101387342	0.04020657
Incentive Plan	-0.000696724	0.001479999	-0.47075991	0.638026048	-0.003604802	0.002211354
% of Independent Directo	-0.023549086	0.016427923	-1.433479193	0.152371979	-0.055828616	0.008730444
Stock Holding Score	0.003189893	0.000693876	4.59720995	5.48261E-06	0.001826484	0.004553303
Dividend Payout	-0.000975026	0.001900531	-0.513028396	0.608167482	-0.004709415	0.002759362
Equity Issuance	0.437991498	0.186372134	2.350091132	0.019172811	0.071785447	0.80419755
Stock Cancellation	0.528461195	0.175679873	3.008091864	0.002767012	0.183264565	0.873657825
Growth Strategy	0.005259534	0.000519162	10.13080775	5.45834E-22	0.004239422	0.006279645
Cash Eqv/Sales	-0.010016306	0.001686996	-5.937362306	5.56059E-09	-0.013331115	-0.006701496
Takeover Defense	-0.000762775	0.000554602	-1.375356087	0.169662598	-0.001852523	0.000326972
Parent/large Ownership	-0.002378527	0.00071097	-3.345466743	0.000885839	-0.003775525	-0.000981528

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