

A CRITIQUE ON RE-INVESTMENT TRIGGER FALLACY

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Abstract

The forecasted profits and investments are elementary forces of futuristic and advance business strategy, both at micro and macroeconomic levels. Business plans are always required to probe into the possible course of action in future so as to be able to out smart their competitors and achieve the objective of doing the business. These questions range from asking as what drives a decision to build a new capital intensive production plant? Or be inquisitive if there is any room for a common “rule of thumb” which would explain the recent past and predict the future developments? It also require to explore that whether using such a rule of thumb, would not be quite a risky affair in forecasting, even in develop economies and even more so in highly volatile emerging markets? It has been observed that in the wake of globalization and exploration of newer and wider horizon, firms may fall into the comfort zone when they must look into environment around it instead of fooling around with some fallacies that are far from hard core realities. The aspiration of this paper is to evaluate and understand the fallacy of reinvestment trigger and to see why at times firms may look for easy and quicker ways to gain edge over the competitors, when they need to be careful in handling capital investment decision or else they may become easy prey to the harsh realities of the market. It also highlights the fact that in the ever changing environment, where survival is depending upon making plans that are flexible and at the same time concrete enough to give the firm cutting edge over its rivals.

Keywords: *Capital Investment Decision, Reinvestment, Asset Allocation*

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Re-Investment Economics Trigger, Fallacy or Realty

The interaction of capital investment and profits based on causal relationship is always remained a topic of major substance in fundamental and applied economics and finance.¹ *Within the same background it has been observed that the industry consultants, especially in developed economies, have devised a practice of 'reinvestment economics trigger' where they assume the existence of a "re-investment economics trigger", typically defined as 10% after-tax return on invested capital. This hypothesis calls for a company to invest capital in construction of new plant and capacity upon reaching such point. However, if this is taken as true, it becomes imperative for the organization to predict such threshold point precisely and timely, as a turning point in the new investment cycle. Sergey Vasnetsov (2005)² worked over a large diverse sample of companies over 17 year's period (1985-2003) to find if there is any correlation between profitability. It was concluded by the study that decisions of a large energy or petrochemical producer to invest in a new plant: the timing is much more likely driven by specific corporate priorities, rather than a general "profit trigger" mechanism.³ Given below is the tabular presentation of the correlation analysis between profitability and investment in the energy sector in US for 1987 – 2003.*

Capital Investment As A Function Of Profitability: Which Comes First?⁴

US Industry group	Sample Size	Sub-Group	Investments vs. Profits				Comment
			1-y Lead	No Lag	1-y Lag	2-y Lag	
R² Values							
Chemicals	10	ALL	0.04	0.14	0.18	0.14	No Lead, 1-y is best
	5	Large Caps**	0.03	0.08	0.08	0.08	No pronounced pattern
	5	Small Caps**	0.05	0.20	0.28	0.21	No lead, 1-y lag is better
Energy Integrated E&P	22	ALL	0.10	0.07	0.07	0.06	No clear pattern
	13	Large Caps	0.06	0.04	0.04	0.02	No pronounced pattern
	9	Small Caps	0.16	0.11	0.10	0.11	1-y is the best

1 Sergey Vasnetsov (2005), Exposing the Myth of "Re-Investment Economics Trigger" in Investment Decisions, Lehman Brothers Inc., Journal of American Academy of Business: Cambridge. Hollywood: Vol. 6, Iss. 1; pp. 267,268.

2 Ibid.

3 Thorsten Poddig, Albina Unger (2012). "On The Robustness of Risk-Based Asset Allocations", Financial Markets and Portfolio Management, Volume 26, Issue 3, pp 369-401

4 Sergey Vasnetsov. (2005), Op. Cit. p. 267

Energy Integrated E&P	6	Large Caps	0.08	0.10	0.08	0.13	No clear pattern
Energy independent Refiners	5	Small Caps	0.04	0.04	0.05	0.03	No clear pattern
The entire group	43	ALL	0.08	0.09	0.09	0.09	No clear pattern
	24	Large Caps	0.06	0.06	0.06	0.06	No clear pattern
	19	Small Caps	0.10	0.12	0.14	0.12	No lead, 1-y lag is better

*Capital Investment Intensity is defined as a ratio of Capital investment / Depreciation & Amortization.

Profitability is defined as Income earned prior to paying Interest, Taxes, and Depreciation & Amortization (EBITDA).

**Large and Small Caps decide large (>\$10B) and Small (<\$10B) Market Capitalization respectively.

Agreeing to *Sergey Vasnetsov* that believing such a hypothesis is a hard nut to crack and it must be expressed at *this point* that this assumption is based on very fuzzy foundations. There is no denial from *the fact that it is part and parcel of doing business that one* usually need to decide at some point in time about re-investing and restructuring, but the failure of *this conjecture* is that *it tries to generalize* the timing of such restructuring and re-investment. Such decisions are critical to the long term success and stability of the business and therefore should be based on rational criteria. It should be driven by the set of priorities of the company rather than relying on any general rule of thumb, say “profit trigger” mechanism. Further down these set of priorities depends on a range of factors of the environment and thus makes a complex situation where one cannot take things for granted.

The very essence of financial decision making is that it has to deal with the uncertainties of the time factor. Each outcome faced today is based on decisions taken in the past like wise every decision taken today will have its results known tomorrow depending upon the circumstances then. With the world changing so rapidly every long term decision becomes even more important and multifaceted due to the mercurial nature of the business environment. Only those investments have higher chance to succeed in getting the desired result which tunes it self to market timing more efficiently. Campbell and Viceira (2005) expressed one important implication of the time variation as that investor particularly aggressive investor, may want to engage in market timing (tactical asset allocation), based on the prediction of their return-forecasting model, in order to maximize their short term return. There is considerable uncertainty, however, about the

degree of asset predictability, which makes it hard to identify the optimal market timing strategy.”⁵

With changes taking place all around the firm as the time tickles, and the existence of cut throat competition, the business environment is bound to fluctuate very quickly as these firms strive hard and keep on looking for innovations and improvements.⁶ Under such a situation it seems highly impractical for businesses to take investment and reinvestment decisions out of simplicity and convenience. Also it is very difficult to find a strong correlation between profitability and reinvestment particularly in terms of defining the precise timing for it. It is imperative to work upon the correlation between profitability and reinvestment in an attempt to explore the intensity of correlation between the two and also to identify if that correlation has the capacity to be generalized.

CORRELATION ANALYSIS FOR THE SAMPLE OF CHEMICAL COMPANIES⁷

		Cap Ex / D&A relative to EBITDA					
		1-y lead	No lag	1-y lag	2-y lag	Correlation	
Chemicals		R^2 Values					
Large Capitalization Companies (>\$10 B)	1. DD	0.02	0.06	0.27	0.18	Moderate	
	2. DOW	0.08	0.13	0.07	0.00		
	4. APD	0.00	0.07	0.07	0.12		
	3. PRG	0.01	0.08	0.01	0.04		Low
	5. PX	0.04	0.04	0.01	0.04		Low
Small Capitalization Companies (<\$10B)	6. EMN	0.01	0.19	0.58	0.49	High	
	8. GGC	0.08	0.38	0.56	0.07	High	
	9. OLN	0.15	0.37	0.27	0.17	High	
	7. LYO	0.00	0.06	0.01	0.31	Moderate	
	10. VAL	0.00	0.00	0.00	0.01	Extremely low	
Energy Independent E&P Large Capitalization Companies (>\$10 B)	1. KMG	0.13	0.01	0.28	0.01	Moderate	
	2. TLM	0.17	0.13	0.03	0.09	Moderate	
	3. EOG	0.05	0.16	0.03	0.07	Low	
	4. ECA	0.01	0.04	0.11	0.04	Low	
	5. APA	0.08	0.07	0.01	0.01	Low	
	6. BR	0.07	0.03	0.02	0.02	Low	
	7. UCL	0.04	0.00	0.04	0.04	Extremely low	

5 John Y Campbell, Luis M. Viceira. (2005), “The Term Structure of Risk-Return Trade-off” Financial Analysts Journal, Chartered Financial Analysts Institute: Charlottesville; Vol.61, Iss. 1; p. 38

6 Morris, D., Haeusler, F., (2010). “Engineering a safer investment”, FT Mandate: London.

7 Sergey Vasnetsov. (2005), Op. Cit. p. 267

	8. XTO	0.09	0.00	0.00	0.01	Extremely low
	9. OXY	0.03	0.02	0.01	0.00	Extremely low
	10. NXY	0.01	0.05	0.00	0.00	Extremely low
	11. APC	0.04	0.00	0.01	0.00	Extremely low
	12. DVN	0.00	0.02	0.03	0.00	Extremely low
	13. NBL	0.00	0.00	0.00	0.01	Extremely low
Small Capitalization Companies (< \$10 B)	1. THX	0.35	0.37	0.17	0.09	High
	2. VPI	0.00	0.07	0.36	0.34	Moderate
	3. SGY	0.27	0.31	0.00	0.15	Moderate
	4. DNR	0.57	0.00	0.01	0.09	Moderate
	5. MHR	0.16	0.11	0.12	0.17	Moderate
	6. PPP	0.06	0.06	0.08	0.12	Moderate
	7. FST	0.02	0.04	0.12	0.02	Moderate
	8. CHK	0.04	0.02	0.00	0.06	Extremely low
	9. SFY	0.00	0.01	0.04	0.01	Extremely low
Energy Integrated E&P	1. MRO	0.07	0.16	0.09	0.44	Moderate
	2. SU. TO	0.12	0.10	0.26	0.15	Moderate
	3. MUR	0.16	0.24	0.07	0.00	Moderate
	4. XOM	0.11	0.06	0.02	0.07	Low
	5. CVX	0.02	0.05	0.01	0.08	Low
	6. AHC	0.01	0.01	0.01	0.01	Extremely low
Energy Independent Refiners	1. TSO	0.08	0.04	0.22	0.02	Moderate
	2. ASH	0.00	0.12	0.01	0.08	Low
	3. FTO	0.09	0.02	0.00	0.01	Extremely low
	4. SUN	0.01	0.00	0.03	0.05	Extremely low
	5. VLO	0.00	0.02	0.01	0.00	Extremely low

Knowing that there exist a weak correlation between profitability and reinvestment, now it becomes imperative to explore if there is any possibility of identifying any threshold

point for investment or not. Each business even though tries to make a well thought out plan but can never sit back and be relax about it as the rivals keep on looking for the opportunities to throw them out or at least take a leading position in the market.⁸ Samsung Electronics Co. planned to invest 286.7 billion won (\$270 million) initially to build a liquid-crystal-display production line based on seventh-generation technology in Tajeong, South Korea, to meet rapid growth in demand for large panels.⁹ However, very quickly Samsung realized that Sharp Corp. also came up with their invest plan where Sharp would be investing about \$1.5 billion to build a state- of-the-art factory for liquid-crystal display panels, as the Japanese electronics company works to counter competition from rivals in South Korea and Taiwan.¹⁰

It is also important to note that the Capital Investment Decisions hold a sizeable amount of the business resources for a long period of time and therefore the decision constitutes focal point of any business plan. Such an important and core issue can by no means be driven by only one factor i.e. profitability and above all at a preconceived rate of return. Mistakes in investment policy, asset allocation, and excessive incorrect exposure come about because of investor confusion. *Michelle Bolhuis, Ned Goodman (2005) expressed that investors are pushed and pulled by emotions, and as a result make errors in judgment.*¹¹ Firm requires being very cautious in identifying the timing of entering into new business cycle and need not to be emotional or complacent. At making such decisions the firm needs to evaluate all the ingredients of the rational decision making and should do the evaluation of their strengths and weaknesses in addition to consider the opportunities available to them before embarking on an investment decision. This will place the firm in a better position to achieve its business targets. Market is not a serene place where you could be looking for comfort zone based on certain fallacy but all the times look for more information and facts.¹² Slight delay or non availability of any fact or information may place the firm under chaotic situation making the investor more frightened. Jeffrey Marshall, Ellen Heffes (2005) were of the view that market is much more likely to panic when it feel it hasn't got all the facts.¹³

Furthermore, it is highly dubious that making a generalized magnitude of investment based on one criterion will make it possible to accomplish the business plans successfully. In the ever changing world of business, technology, for instance, changes so quickly that people often blames the technological changes for the failure to realize the targets. *Tom Berry (2005) expressed that when technology goes wrong in business it usually has nothing to do with the kit itself but with the way businesses allocate*

8 Neukirch T (2008), "Portfolio Optimization with respect to Risk Diversification," Online available at <http://ssrn.com/abstract=1301430>, pp. 1-7

9 Wall Street Journal. (Eastern edition). New York, N.Y.: Dec 28, 2004. p. 1

10 Kanji Ishibashi and Phred Dvorak. Wall Street Journal. (Eastern edition). New York, N.Y.: Jan 13, 2005. p. B.4

11 Michelle Bolhuis, Ned Goodman (2005), "Reading between the Lines of Investor Biases", Journal of Financial Planning, Financial Planning Association: Denver; Vol.18, Iss. 1; p. 62.

12 Jones C K (2009), "Digital Portfolio Theory: Portfolio Size Versus Alpha, Beta and Horizon Risk" downloaded from <http://ssrn.com/abstract=1362162>, pp. 1-56

13 Jeffrey Marshall, Ellen M. Heffes, (2005), "In Quotes" Financial Executive, Financial Executive Institute: Morristown, NJ; Vol. 21, Iss. 2, p. 11.

resources necessary to deal with it.¹⁴ Resource allocation is very vital in the long term planning of the business and therefore should be well thought out rather than blindly following any particular path. It must be mentioned here that there should be a pernickety balance between the innovations and following what is available for the taking as sometimes the businesses in order to out smart the rivals take too enterprising and adventurous decisions and fall into self created predicament.¹⁵ Moreover the other important feature which should be imbedded in the capital investment decision is the flexibility. It should be kept in mind while planning that even if all the methods and technique to forecast have been attempted accurately and made a fool proof plan, businesses cannot be fully certain that what they have expected turns out to be exactly same. Their forecasting and subsequently planning have to pass the test of time and there exists every chance of volatility between expected scenario and the actual outcome.

Conclusion

From the above analysis, it can be concluded that what really needed is that there should be rational planning with open and broad vision. It should always be kept in mind that there has to be flexibility in the plans so as to make fine tuning as and when required during the implementation phase due to the changes in the ecology surrounding the business and its operations. Such a planning process is not a rocket science but in fact simply knowing what you have in your hands and using it efficiently and effectively. It also highlights the fact that in the ever changing environment, where survival is depending upon making plans that are flexible and the same time concrete enough to give the firm cutting edge over its rivals. Business plans must look into environment around it instead of fooling around some fallacies that are far from hard core realities. Despite all the potential changes in the market if a business plan out its course of play well and play according to what they have planned then there is greater chances of achieving the targets set out in the first place.

14 Tom Berry, (2005), "Analysis Paralysis" Financial Directors Journal, Incisive Media, Gale Group: Michigan p. 24.

15 Montier, J. (2007). Behavioral Investing A Practitioners Guide to Applying Behavioral Finance, John Wiley & Sons. pp 45 – 76.