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Price Estimation Using 'BEEE' Elasticity Factor

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Abstract. BEEE being the trajectory between the break-even point and the economics equilibrium point contains both systematic and unsystematic risk as asset or project price ascend and inverse till systematic beta bottoms nears previous low for the period. The uses of benchmarks within the trajectory of market-driven behavior subject themselves to market efficiency and hedging needs. Engineering cost behavior into BEEE to derive competitive pricing for desired EBIT and ROI in this paper's intent together with forming performance relationship between international trade performance and settlement with major currencies.

Keywords: break-even, economics-equilibrium, Fibonacci count, international trade, international monies

1. Introduction

The aim of this paper is to demonstrate that the distance between the theoretic break-even point BE and the economics equilibrium, EE; together known as BEEE factor is the profit evaluative characteristics towards estimating price of a project. The BEEE elasticity factor *Eyx* in Fig 1 factor measures market efficiency beta between systematic and unsystematic risks. While a company's BE is deterministic, EE varies according to pitting one's desired ROI against business intelligence of competitors' target prices which if are more effective in attracting the market will then reduce the chance of the company's ROI. In winning a bid, where the seller- buyer ratio is many-to-one, one-to-many, many-to-many, few-to-many and many-to-few, estimating competitors' BEEE is subject to manipulation hidden values and missing values according to twelve quantum games [1]. The equation developed in Fig.1 attempts to explain in three cases the extent that *Exy* can consider in benchmarking a company's pari passu price against competition using benchmark points such as Fibonacci counts [2] and Pareto's distribution points [3] [4] between y^5 and y^4.

2. Pricing Project: 3 Cases

Pricing a project for a tender bid, new product line and for product revision, begins the logic from estimating the independent working capital required and the desired ROI. That determination process builds from a budgeting process from a hypothetical quantity; finite if responding to a call for tender and estimated quantity if to revise a product model or to produce a new product model. Follow through into cash flow to estimate cash position by the end of the period. Thereafter in income statement determine the BE quantity and EBIT. Adjust cash and borrowings positions to obtain the desired ROI.

2.1. Case 1 of many-to-one: tender pricing

In the case to supply known quantity to a tender, competitors' bids are unknown. Assume own pari passu price as the BE centric benchmark at x^1 and one's bid inside the circumference of y4b y5. Expect competitors' pari passu bids within the circumference. As intelligence, infer bids from previous tenders to estimate bidders desired ROI for inputs to estimate current bidders pricing. Intelligence gathering can be advanced form using own costs of 8M [5] processes as benchmarks (market, money, manpower, material, methods, measurement, machine and maintenance) to enhance estimation of other bidders' 8M costs.

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1) Account for the variance between previous tender awards against its all bids including its own. This will require some asking around after previous bids were awarded as failed pricing may be directly or indirectly be established.
2) Plot previous bids of individual tender calls within the EE circumference of y^5 and y^{4b} of previous tender. Pari passu, from those points, each bidder's desired EBIT may be estimated within a band of BE centric on the company's own BE. Given a collective EBIT estimates, an *Eyx* analysis is possible and for effective benchmarking. Note that the selective Fibonacci number 0.618 is pari passu within the highest and lowest bids to establish the circumference.
3) Infer from the benchmark above in several past tenders to improve estimation of current working capital and EBIT expectations.

Though on pari passu basis, errors in estimating bidders' price may be derived from different treatment in applying charge-out rate by individual bidders even if all bidders stay on zero-sum non-absorption basis. The reality in variance between own and competitor bids can be expected from impute values arising from transfer costs practices as that destabilizes estimating costs behavior between fixed and variable X^2 due to competitive pressure to lower $X^{2.}$ Theoretically the order winner would be the lowest bid that also score in other factors e.g. tract record of on-time project completion. In market inefficiency of bidders pricing profiles, , BEEE elasticity *Eyx* can diagram price estimation scatters of all bidders to assist a company to articulate one's bid according to degree of wanting the project. The information becomes distorted when bidders with a lower y^1 reduces it's BE outside x^1 radius and therefore below y^5 and y^{4b} circumference when bidders practice non-theoretical impute costs from subsidies. Such distortions are to be noted but not included in building the database with above three processes

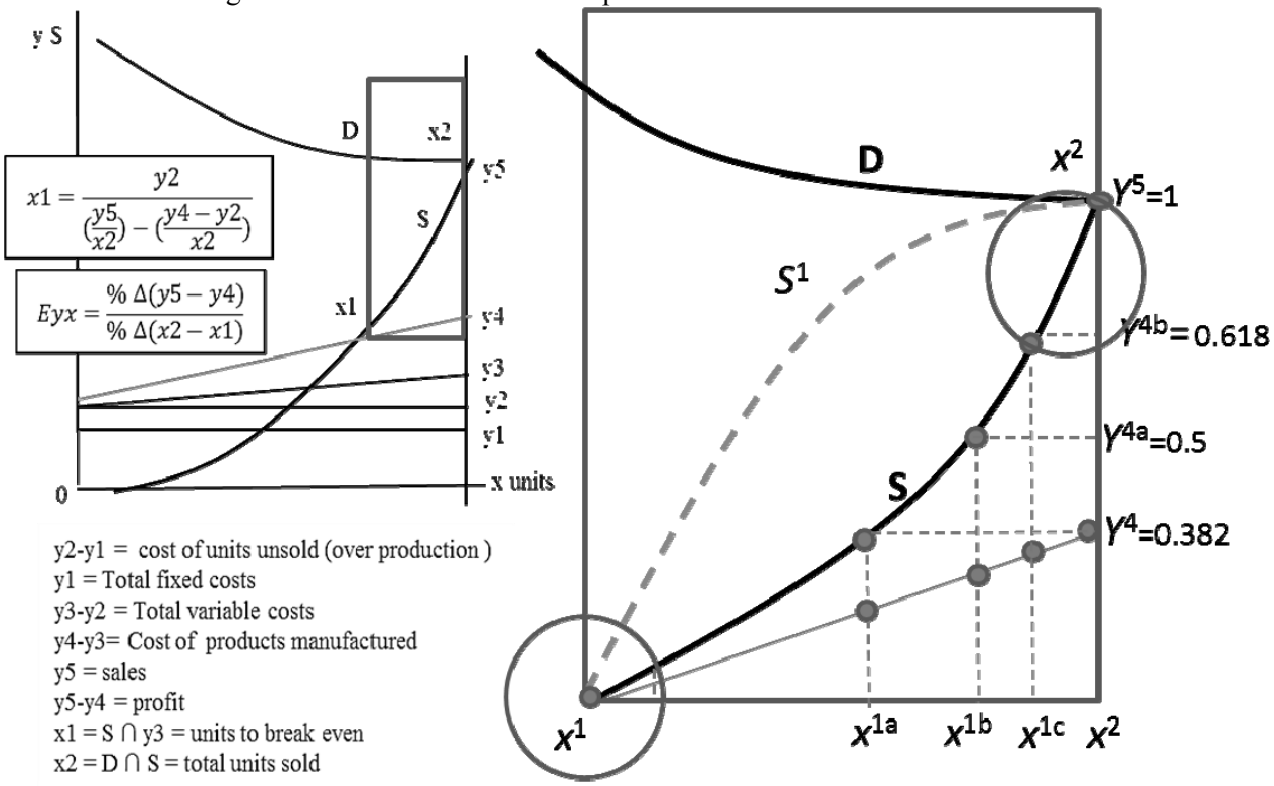

Fig. 1: Multi usage of BEEE concept map

2.2. Case2 of many-to-many: distribution channel pricing

In the case of an open market with estimated demand, the market size is very much larger than the above tender scenario which means many order winners and also many sellers. The selling price x^2 can come under pressure as corporate procurement would squeeze margin. In this scenario the sooner x^1 breaks even, the profit zone between x^1 and x^2 widens not just to profit but also to starve competitor with opportunity to mark down x^2 after BE is achieved as the risk is over for seller to recover cost with profit buffer to absorb lower profit and in so doing, sets to increase market share. Some manufacturers may pressure their distributors

through incentive stock option wherein upon progressively achieving certain quota, distributors are awarded scaled down prices for a certain tier of purchases. Under this situation, distributors would push hard to sell at negligible profit to reach x^1 especially near to seasonal demand periods to hit the quota, missing that would reduce qualifying for scaled down purchase price. Once they have achieved the quota, profit differential may offset earlier profit forgone of stocks sold purchase a normal price. Distributors who cannot qualify for incentive stock will either be uncompetitive or resort to raising working capital to purchase deficient stock level to arrive at the quota. In this scenario, parameters in the same three processes of section 2.1 may be altered for EBIT estimation.

2.3. Case 3 of many-to- few: industry oligopoly pricing of consumer products

In an oligopoly industry of consumer products, product sourcing and costing is intensively competitive even when investment outlays are huge even in China consumer markets otherwise uncontrollable opportunities for replica markets are created as has been. In the case of fashion electronics, the cycle time of competitive models are shortening with more frequent new models sold on-line as more available software swings consumer preferences. Unless continuous market surveys track consumer preferences or dissatisfaction, a model's market share risks dilution. A brand is much dependent on knowing its EE price to gauge the best possible future market size and revisions that has to improve rapidly onto existing model. Due to huge investment outlay and volatile demand, sustainable brands, unsystematic beta can fast effect price mark downs causing volatility in managing a manufacturer Eyx factor. Hence the reality of scaling down production cost with scaled up production for the competitive consumer market can be supported when consumers can exit their existing asset into secondary markets which may be the connection with China Telecom's bilateral projects with populace countries such as Indonesia, Africa and Brazil. By altering the parameters in the same three processes of section 2.1 for fast cycle competition in the mass electronic consumer markets, the dynamics of EBIT estimation is expect to be more volatile as product pricing process becomes more acute towards redefining efficient and effective cost measures [6].

3. BEEE and Canton Fair International Trade

Superimposing BEEE factor onto Canton Fair performance behavior in Fig. 2 points to 2007 peak and gives an idea of that trade turnover reduced by 24% from 2007. Is this a pull back or the beginning of a major correction? Technically speaking an economics cycle that has gone parabolic high will need to correct. Reduced turnover in 2008 after providing for global downturn of 2008 to 2009 implied that "made-in-China" has gotten expensive and this augment well for the departure of the first US$15b of Canton fair turnover out of China. According to W.D. Gann, "Time is more important than price; when time is up price will reverse" [7]. Higher cost of production delivery and being nearer to buyers' markets are likely reasons for that correction that can only expedite when the Yuan appreciates further. Prior 2008 every other foreign company had tried to jump onto the bandwagon to relocate in China despite the rising cost of doing business [8]. A fiscal spending of $600b in Nov. 2008 to stabilize social order with infrastructure building compensated export fall and at the same time cheaper major currencies allowed China to gain on both ends on asset acquisitions to expand its infrastructure [9] [10]. Given China's increased outbound FDI from both major industries in banking, energy exploration, engineering and manufacturing, its SME followed the lead to venture abroad for competitive access to market. China's outbound FDI increased from 2008 seems to have begun benefitting few.

A main assumption that China companies will venture abroad is to be expected. The reasons for these outbound FDI can be expected to be quite similar to inbound FDI when the Yuan and labor cost were both cheap. The secondary assumption of this main assumption identifies the electrical and automotive as two important SME sectors [11]; more China companies venturing into preferred countries that have near corresponding manufacturing efficiency with their Chinese bases. The significance of this assumption is due to much improved Chinese global branding of electrical. Chinese automotive companies have franchised assembly and distribution off-shore, much the same reason that many labels had relocated to China in the eighties [12]. Other light industries that rely on soft commodities and their by-products may follow new economics opportunities are becoming available from China's costal rich provinces that are considering relocating to outside China and to inner provinces. Should Fibonacci counts be seriously considered,

regions with ready human resources to receive some of Canton Fair fallouts have the potential to see their GDP increase.

Table 1 Canton Fair Business Turnover [13]

Year	Business Turnover (Million USD)		Business Turnover for Whole Year (Million USD)	%more (less) than Last Year
	Spring Session	Autumn Session		
2011	36,860			
2010	34,300			
2009	26,230	30,470	56,700	-18.7%
2008	38,230	31,550	69,780	-5.5
2007	36,390	37,450	73,840	11.4

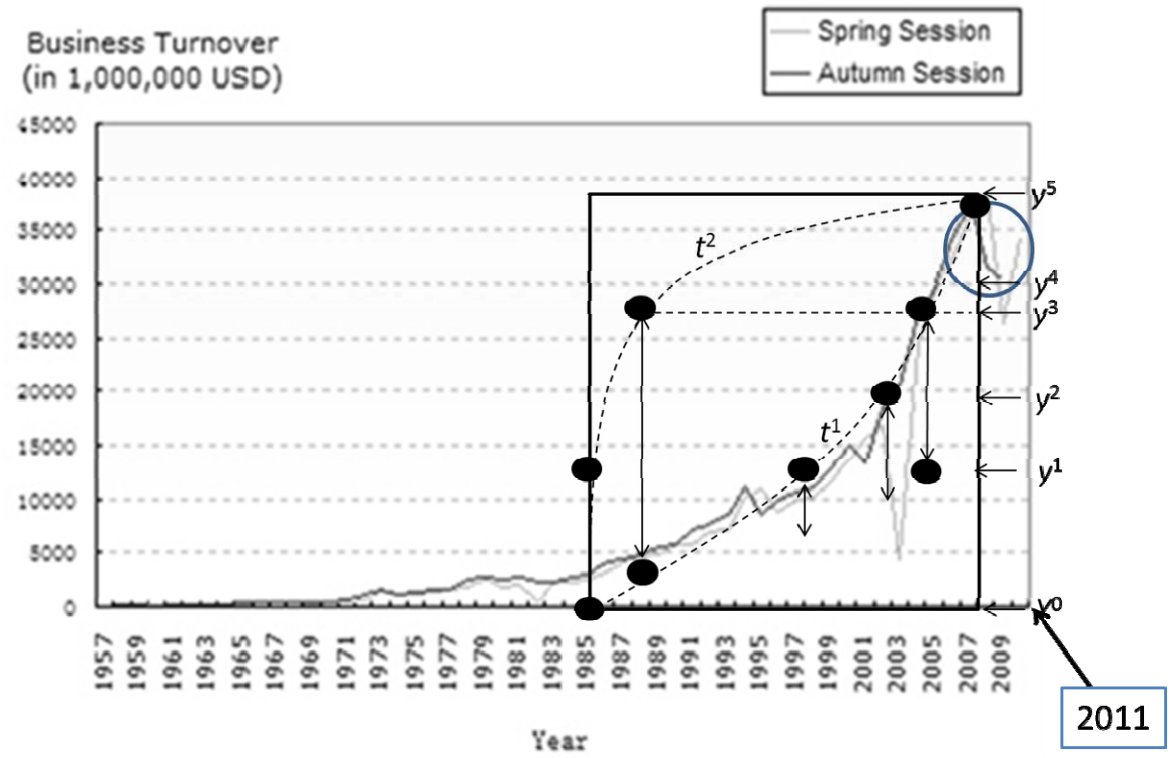

Fig. 2 Canton Fair Statistics by Business Turnover [14]

4. BEEE and International Monies

Collective reserve currencies; US$, Euro, Gold and to some extend CNY due to direct swaps arrangement with China for translation risk avoidance on the back of the undervalue CNY. While Kitco [15] offers a huge collection of analysis from authoritative writers of precious metal, crude and currencies international monies, this paper by superimposing the BEEE factor in Fig 1 suggest a parallel to the technical analysis in Kitco that uses Fibonacci counts. When x^1 is assume to be the deterministic entrance point into this asset class and x^2 the theoretic exit point of each cycle, using Fibonacci count, one can develop buy and hold strategies while watching how the theoretic exit point unfold. On a positive trajectory from the estimate of x^1 being the bottom of the last cycle. Appling Elliot waves to international monies as well as after the trajectory will show the downtrend instead of a pull back from the current cycle. [16]. From the CAPM perspective, the superimposed *Exy* equation onto international monies class can correspondingly indicate increased unsystematic risk-premium within the y4b y5 circumference in preparation for exiting that asset class assuming that wave counts are correct. International monies and Canton Fair performance correspondingly affect each other due to international trade settlement in major currencies as explained along

a positive trajectory in the Canton Fair case the holds true the inverse in using Fibonacci counts to guide risk reward ratio in reentering currency futures.

5. Conclusion

The BEEE elastic factor *Exy* offers a simple way at looking at the magnitude of change in various scenarios mentioned because it demonstrates combinatorial effects of both BE and EE points while factoring risk premium onto the efficient frontier. *Eyx* being the measurement of elasticity provide the indication as to where and when risks premium are to be diversified. In section 2, investment for tender, drive distribution channel to hype sales volume or to recapture market share with product revision, the BEEE factor provides a guide as to what can be the limited working capital investment to reap a hypothetical EBIT. The canton fair case using BEEE suggest a top, whether it's an intermediate top, a pull back or major turn may require some companies analyze their portfolio further before decisive relocating while some companies may have already decided relocation. International monies and international trade are binding upon each other due to trade settlement. As a result several BEEE together may indicate the combinatorial effects for gauging the final outcome in a company's policy direction to base its trade settlement in a choice currency through hedging and timely swaps.

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