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STOCK PRICE, EARNING POWER AND RESERVE: HOW THEY ARE CORRELATED

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ABSTRACT

Stock price of a company basically is the reflection of net worth and future prospect of the same under demand and supply situation of the stock in the market. Future prospect is associated with future earning prospect of the company, which, however, is partly speculative in the nature because of uncertainty of future earnings. However, net worth virtually is the resultant effect of the earning power of the company over years. Earning power usually is represented by earning per share (EPS) of the stock which is instrumental in developing the reserve content of the company. Though, reserve can develop when the company issues shares at a premium or disposes of or revalues assets. These are not usual business course of action and happen only in a few occasions. Retained profit, arising out of undistributed profit (profit remains after distribution of dividend), plays a key role in creation of reserve of a stock. Thus the reserve which owes its existence and growth to EPS over years is a significant point in determination of price of a stock as book value of stock depends on net worth. In a particular point of time the EPS may suffer arising out of business situation but P/E (price earnings ratio) may sustain the adverse effect and grow. In other words price and even dividend element somehow manage to overcome the adverse situation because of reserve content. Attempt has been made to correlate how EPS and reserve are associated in visualizing the expected price movement of a stock under certain change in earning status and reserve element.

KEYWORDS: *Stock Price, EPS, Reserve, Net Worth, Retained Profit, Price Earnings Ratio.*

Introduction

EPS does not take into account the reserve content of a company. However, reserve, which grows over years because of undistributed profit, also takes part in the business to earn profit. Mere earning does not represent the true state of affairs of the company; retained profit over years consolidates the financial strength of the company. Many companies sometimes maintain steady or growing P/E (price earnings ratio) status in spite of falling or depressed earning (EPS) situation. In other words effect of falling or depressed earning is somewhat offset by some forces in the business entity. Here speculation comes in the play field. Market price less book value represents the measure of speculation with respect to the stock. The degree of speculation, though, however connected with a number of socio economic factors (both micro and macro economic factors), the major impetus to speculation is (i) earning capacity (EPS) and (ii) the reserve content of the enterprise. The reserve power subsequently can be available either as stock dividend (Bonus) or special or high dividend.

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Objective of the Study

To develop a relation preferably in mathematical form thereby an idea of the effect of reserve can be associated with earning or EPS of a stock on its price.

Approach of the Study

Tables 1 to 4 depicts the financial status of two reputed companies and explains that in spite of decrease in earning power between 2012-16, the price of the stock or p/e i.e. price earnings ratio has not suffered any significant change. Instead the prices of these stocks rather moved upwards, however with some hiccups.

Table 1

EPS (Rs)	2012	2013	2014	2015	2016
Company/Face Value					
AMBUJA CEMENTS / Rs 2/-	8.41	8.28	9.61	5.21	5.65
ACC/ Rs10/-	56.42	58.31	61.88	31.3	35.06
P/E	**2012**	**2013**	**2014**	**2015**	**2016**
Company/face value					
AMBUJA CEMENTS / Rs 2/-	21.3	21.7	20.6	37.9	41.4
ACC/ Rs10/-	23.0	20.3	20.5	43.0	45.5

https://www.equitymaster.com/stock-research/financial-data/ACC/ACC-LIMITED-Detailed-Share-Analysis?utm_source=researchit&utm_medium=website&utm_campaign=factsheet&utm_content=search

Table 2

Reserve Rs in Cr	2012	2013	2014	2015	2016
Ambuja cements	8488.97	9152.72	9760.02	9961.02	19148.32
ACC	7184.48	7625.43	8029.73	8233.19	8453.53
Equity Rs in Cr	2012	2013	2014	2015	2016
Ambuja cements	308.44	309.17	309.95	310.38	397.13
ACC	187.95	187.95	187.95	187.95	187.99

Table 3

R/E (Reserve Equity Ratio)	2012	2013	2014	2015	2016
Ambuja Cements	27.52	29.60	31.49	32.09	48.22
ACC	38.23	40.57	42.72	43.81	44.97

Table 4

Ambuja Cements (Price Rs)	Open	High	Low	Close
2012	156.2	220.7	135.6	200.95
2013	201.05	211.9	147.55	182.75
2014	183.1	243.85	150.5	228.7
2015	229.4	286.85	187.7	203.35
2016	203	282	185	206.2
ACC (Price Rs)	open	high	low	close
2012	1145.2	1514.95	1083.1	1429.4
2013	1440	1452.7	912.05	1108.2
2014	1107	1570	971.25	1399.4
2015	1400	1774.8	1302	1343.95
2016	1355.05	1738	1173.25	1328.4

To explain the incidents help has been taken from following facts.

Back Ground of Discussion and Development of Concept

It has been found that some stock even after set back of earning power in a particular period of time, overcome the jolt in stock price rather quite quickly and comfortably. It is noted that in such case reserve is found to play a big role and price fluctuation of a stock somewhat gets a cushion even though transient jolt in stock price may happen. Now let us see how stock price is simultaneously connected with earning and reserve content.

Net worth_1= Equity_1 + Reserve_1, for a particular year 1 and Net worth_2= Equity_2 + Reserve_2, for year 2 therefore, Δ Net worth = ΔEquity + Δ reserve, if no change in equity content ΔEquity will be zero, thus Δ Net worth = Δ reserve, Now, to what extent reserve increases with respect to previous year. Amount sent to reserve is PAT-Dividend; therefore, in year2 reserve will increase by PAT_2-Div_2. PAT= Profit after tax, Div= Dividend. We know price of a share is directly connected to PAT or earning power or EPS and thus in turn EPS and reserve are connected.

Therefore price is not only connected to EPS but also to reserve and dividend component.

- Thus under declining EPS the reserve can grow with change in dividend component and price level can be stabilized with the support of reserve. This is an indirect and qualitative proof,

One fundamental aspect has been shown herein below: how Reserve affects ROE or return on equity and in turn the price of the stock:

We know, EPS x no. of shares = PAT, again ROE x Net worth = PAT (ROE in percentage)

EPS x no. of shares = ROE x Net worth = ROE x (Reserve + equity)

EPS x k = ROE x (Reserve + k_1) , so long k is fixed, k_1 is also fixed

Or ROE = (EPS x k)/ (Reserve +k_1) ...equation A

Or ROE is directly proportional to EPS but inversely proportional to Reserve

Here in this stage if growth rate of Reserve > growth rate of EPS, ROE declines and vice versa. Excessive growth of reserve has the propensity to suppress ROE, if PAT is not proportional.

Again, under declining but positive growth of EPS, the growth of reserve is usually slowed down to counter the dampening effect of ROE.

If ROE is not dampened the stock price at least theoretically is not bound to suffer much from the stand point of maximisation of wealth of share holders.

Growth of reserve undoubtedly provides a strong backbone to an enterprise, the weakening of ROE is virtually offset by the expectation of bonus issue by the investors and naturally stock price gets a boosting effect. With bonus issue the companies retains the fund in one hand and in the other hand it satisfies the investor expectation. However, in order to earn money investors have to rely on stock market and in the process they lose their stake in the business. Good dividend is an alternative process to neutralize the expectation of investors. This at the same time reduces excessive growth of reserve, maintains ROE at reasonable level and maximizes the wealth of investors.

The same inference can be drawn from traditional concept which says. Under market equilibrium condition that is when present value and market price remain same. The following equation can be derived

P_0 = the present value of a share, P_1 = value of share after a year

$P_0+P_0k = Div+P_1$, k=required rate of return of investor

if share grows at a rate " g" then, $g= (P_1-P_0)/P_0$ or $P_1=P_0(1+g)$......1

Now,$P_0=(Div+P_1)/(1+k)$ and putting the value of P_1. We get

$P_0=\{Div+P_0(1+g)\}/1+k$, or $k=(Div/P_0) + (P_1-P_0)/P_0$

$P_0=Div/(k-g)$ or

$P_0 = \frac{Div}{K_e-g}$, equation 2, this is based on following assumption, k=k_e, k_e= capitalization rate, (a) Capitalization rate > growth rate (b) initial dividend > 0 (c) relationship between K_e and g constant and perpetual

Now, Div = EPS (1-b), b is the retention rate of earning, g = r x b, r = ROE,

P_0 =EPS (1-b)/K_e-g

$P_0 = \frac{EPS\,(1-b)}{K_e-rb}$ = (EPS – EPS x b)/ k_e-rb ...equation B

The factor 'EPS x b' represents the amount transferred to reserve; thus price is reflective of both earning power and reserve content. Smaller "b" may cause price to grow at faster rate. In other words slow growth of reserve may pushes up the price.

Direct Correlation of Price, EPS and Reserve

We know, stock price P α EPS, and EPS builds book value.

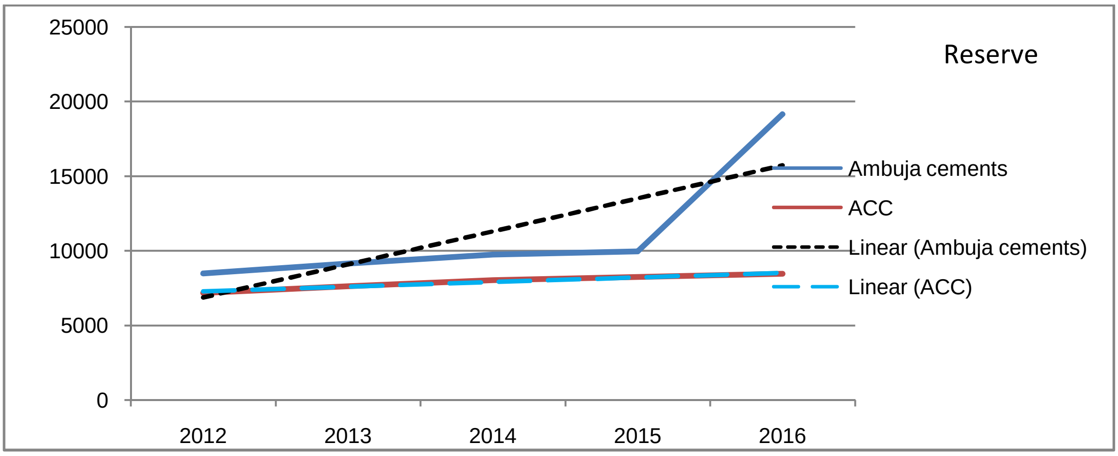
So, P α Book value, book value α Net worth, Net worth α Reserve

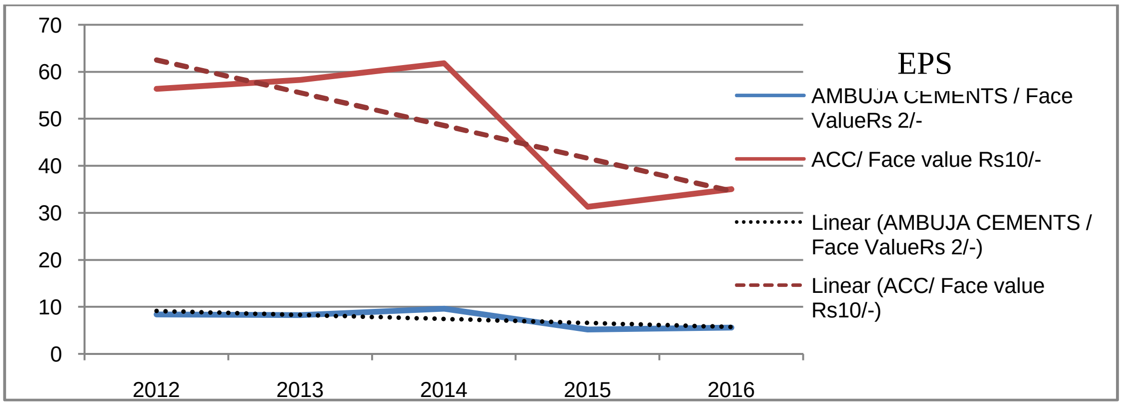
So, Price α Reserve i.e. gradual growth of reserve can push up the stock price.

Therefore, P = K_c (EPS x Reserve), K_c constant, equation C

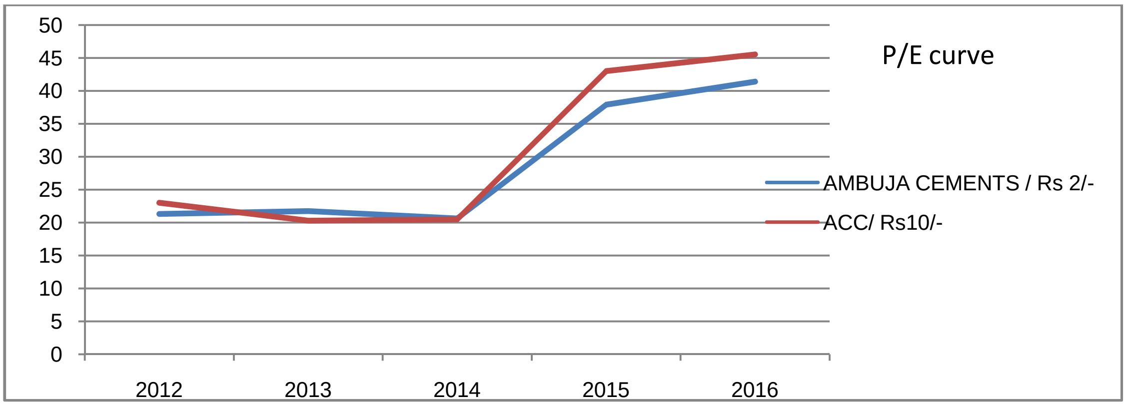
This reflects when reserve is sufficiently large marginal deceleration of EPS even over a few years may be offset by the by the reserve component (as because so long EPS is positive reserve will continue to grow howsoever small it may be, as all profit does not go as dividend). This is generally manifested in the stock price of companies with appreciable earning status. In other words reserve provides some cushion to stock prices though initial impact in the market may be disappointing.

With the help of equation A and B we can say if growth of EPS exceeds growth of Reserve ROE energised and stock price at least theoretically gets a boosting effect. Similarly if growth of reserve exceeds growth of EPS, ROE is dampened and price theoretically may also suffer some dampening effect. Equation C directly correlates stock price EPS and Reserve. Our given examples can be shown here in below graphically also. The behavior can be explained in the light of the equations.





At lower EPS reserve growth also slows down and at higher EPS, reserve grows quite faster. When significant reserve is stored in the account marginal or small degree of deceleration of EPS is generally taken care of by reserve. The price as shown by P/E curve here in below has not been badly affected by deceleration of EPS in all these years. Here we have discussed only two examples, however many such examples can be found out in the stock market such as Alstom T & D, JK Lakshmi etc.



However, growth of reserve provides cushion to business entity and bonus opportunity rises. This acts as stimulant to price. Usually, a trade-off forms between reserve and stock price in the long run. For Reliance Industries the stock price moved to over Rs1600/- during the period of last bonus issue (1:1) from Rs 900/- region. After that stock price again tumbled to Rs 900/- region.

Conclusion

This concept more or less develops a relation between price, EPS and reserve. It also indicates that if sufficient reserve is there in the business marginal deceleration of EPS even over a few years may be offset by reserve power. However, the stock price is the reflection of many micro and macro economic factors and naturally this concept is true partially. The speculation factor is human derived perception and quantitatively cannot be ascertained. Thus price prediction with the help of this concept cannot be made accurately. However under normal situation this may provide useful guide to investors whether stock price has the opportunity to move up or go down or to thwart the adverse earning situation in the short run.

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