Dividend policy (good)

Dividend Policy Vinod Kothari Corporations earn profits – they do not distribute all of it. Part of profit is ploughed back or held back as retained earnings. Part of the profit gets distributed to the shareholders. The part that is distributed is the dividend. The ratio of the actual distribution or dividend, and the total distributable profits, is called dividend payout ratio. How much of its profits should a corporation distribute? There are several considerations that apply in answering this question. Hence, companies have to frame and work on a definitive policy of dividend payout ratio.

Of course, no corporate management can afford to stick to a fixed dividend payout ratio year after year – neither is such fixity of dividend payout ratio required or expected. However, management has to broadly decide its policy on its broad attitude towards distribution – liberal dividend payout ratio, or conservative dividend payout ratio, etc. If one were to ask this question in context of debt sources of capital – for example, how much interest should a corporation pay to its bankers, the answer is straight forward. As interest paid is the cost of the borrowing, the lesser the interest a corporation pays, the better it is.

Besides, companies do not have choice on paying of interest to lenders – as the rate of interest is contractually fixed. Rate of dividends may be fixed in case of preference shares too. However, in case of equity shares, there is no fixed rate of dividends. It cannot be said that the dividend paid is the cost of equity capital – if that was the case, corporations may try to minimize the dividend distribution. Hence, the following points emerge as regards the dividend distribution policy: • The cost of equity is defined as the rate at

which the corporation must earn on its equity to keep the market price of the equity shares constant.

Let us further suppose that the market price of the shares is obtained by capitalizing the earnings of the corporation at a certain capitalization rate – the capitalization rate itself depending on the riskiness or beta of the industry. Suppose the corporation does not earn any profit. Shareholders were expecting a certain rate of return on their shareholding – hence, share prices will fall at the expected return on equity. On the other hand, if just the expected rate of return is earned by the corporation, the price of equity shares remains constant if the earnings are entirely distributed, and xactly grows by the expected rate of return if the earnings are entirely retained. The above discussion leads to the conclusion that the cost of equity is not the dividends but the return on equity – hence, a corporation cannot work on the objective of minimizing dividends. Equity shareholders are the owners of the corporation – hence, retained earnings ultimately belong to the shareholders. Supposing a company earns return on equity of 10%, and retains the whole of it, the retained earnings increase the net asset value (NAV) of the equity shares exactly at the rate of 10%.

Assuming there are no other factors affecting the equity price of the company, the market price of • • • • • • the shares should exactly go up by 10% commensurate with the increase in the NAV of the shares. That is to say, shareholders gain by way of appreciation in market price to the extent of 10%. On the other hand, if the company distributes the entire earnings, shareholders earn a cash return of 10%, and there is no impact on the NAV of the shares, hence, the same should remain unchanged.

Therefore, in both the cases, the shareholders earned a return of 10% – in the first case, by way of growth or capital appreciation, and in the second case, by way of income. In other words, merely because the corporation is not distributing profits does not mean it is depriving shareholders of the rate of return on equity. The above two points reflect the indifference, sometimes referred to as irrelevance of dividend policy (see Modigliani and Miller approach later in this Chapter) from the viewpoint of either the company or its shareholders. Supposing the corporation decides to retain the entire earning.

Obviously, the corporation would earn on this retained profit at the applicable return on equity. Note that the return on equity is relevant, as retained earnings would be leveraged and would, therefore, benefit from the impact of leverage too. On the other hand, if the corporation were to distribute the entire profits, shareholders reinvest/consume the income so distributed at their own rate of return. Hence, it may be contended that whether the company retains or distributes the earnings depends on whose reinvestment rate is higher – that of the company or that of the shareholders?

Quite clearly, the rate of reinvestment in the hands of the corporation is higher than that in the hands of the shareholders, (a) because of leverage which shareholders may not be able to garner; and (b) intuitively, that is the very reason for the shareholders to invest in the company in the first place. This argument generally favors retention of profits by the company rather than distribution. [As we discuss later, this argument is the basis of the

Walter formula] As a counter argument to this, it is contended that shareholders do not need growth only – they need current income too.

Many investors may sustain their livelihood on dividend earnings. Of what avail is the increase in market value of shares, if I need cash to spend for my expenses? However, in the age of demat securities and liquid stock markets, growth and income are almost equivalent. For example, if I am holding equity shares worth $ 100, which appreciate in value to $ 110 due to retention, I can dispose off 10/110% of my shareholding, earn cash equal to $ 10, and still be left with stock worth $ 100, which is exactly the same as earning cash dividend of $ 10 with no retention at all.

While the above argument may point to indifference between growth and income, the reality of the marketplace is that investors do have varying preferences for growth and income. There are investors who are growth-inclined, and there are those who are income-inclined. Majority of retail investors insist on balance between growth and income, as they do not see an exact equivalence between appreciation in market value and current cashflows. Hence, the conclusion that emerges is that companies do have to strike a balance between shareholders' need for current income, and growth opportunities by retained earnings.

Hence, dividend policy still remains an important consideration. While making the above points, there are certain special points that affect particular situation that need to be borne in mind: • Company's reinvestment rate lower than that of shareholders: Sometimes, there are companies that do not have significant reinvestment opportunities. More

precisely, we say the reinvestment rate of the company is lesser than the reinvestment rate of shareholders. In such cases, obviously, it is better to pay earnings out than to retain them.

As the classic theories of impact of dividends on market value of a share (see Walter’s formula below) suggest, or what is anyway intuitively understandable, retention of earnings makes sense only where the reinvestment rate of the company is higher than that of shareholders. • Tax disparities between current dividends and growth: In our discussion on indifference between current dividends and share price appreciation, we have assumed that taxes do not play a spoilsport. In fact, quite often, they do.

For example, if a company distributes dividends, the same may be taxed (either as income in the hands of shareholders, or by way of tax on distribution – like dividend distribution tax in India). Alternatively, if the shareholders have a capital appreciation, which they encash by partial liquidation of holdings, shareholders have a capital gain. Taxability of a capital gain may not be the same as that of dividends. Hence, taxes may differentiate between current dividends and share price appreciation. Shares with fixed returns: Needless to say, there is no relevance of dividend policy where dividends are payable as per terms of issue – for example, in case of preference shares. • Entities requiring minimum distribution: There might also be situations where entities are required to do a minimum distribution under regulations. For example, in case of real estate investment trusts, a certain minimum distribution is required to attain tax transparent status.

There might be other regulations or regulatory motivations for companies to distribute their profits.

These regulations may impact our discussion on relevance of dividend policy on price of equity shares. • Unlisted companies: Finally, one must also note that discussion above on the parity between distributed earnings and retained earnings – the latter leading to market price appreciation – will have relevance only in case of listed firms. Technically speaking, in case of unlisted firms too, retained earnings belong to the shareholders, as shareholders after all are the owners of the residual wealth of the company. However, that residual ownership may be a myth as companies do not istribute assets except in event of winding, and winding up is a rarity. The discussion in this chapter on dividend policy, as far is relates to market price of equity shares, is keeping in mind listed firms. In case of unlisted firms, classical models such as Walter’s model or Gordon Growth model discussed below may hold relevance than market price-based models. From dividends to market value of equity: Dividend capitalisation approach: If, for a second, we were to ignore the stock market capitalisation of a company, what is the market value of an equity share?

Say, we take the case of an unlisted company. We know from our discussion on present values that the value of any asset is the value of its cashflows. What is the cashflow a shareholder gets from his equity? As long as the company is not wound up, and the shareholder does not sell the stock, the only cashflow of the shareholder is the dividends he gets. It is easy to understand that if we are not envisaging either a sale of the shares or a

liquidation of the company, then the stream of dividends may be assumed to continue in perpetuity. Hence, VE = ? ? (1 + K i = 1 Di E)i (1)

Where VE : Value of equity K E : Cost of equity Di : dividends in paid in year i Equation (1) is easy to understand. Shareholders continue to receive dividends year after year, and these dividends are discounted by the shareholders at the cost of equity, that is, the required return of the shareholders. If the stream of dividends is constant, then Equation (1) is actually a geometric progression. We can manipulate Equation (1) either to compute the price of equity, if the constant stream of dividends is known, or to compute the cost of equity, if the dividend rate and market price of the shares is known.

Applying the geographical progression formula for adding up perpetual progressions, assuming constant dividends equal to D, Equation (1) above becomes: VE = = D (1 + K E) ? (1 ? 1) 1+ KE (2) D KE Example: Supposing a company the nominal value equity were $ 100, and the dividends at the rate of 10 % were $ 10, if the cost of equity is 8%, then the market price of the shares will given by 10/8%, or $ 125. Incorporating growth in dividends:

In our over-simplified example above, we have taken dividends to be constant. It would be unusual to expect that dividends will be constant, particularly where the company is not distributing all its earnings. That is to say, with the retained earnings, the company has increasing profits in successive years, and therefore, it continues to distribute more. If dividends grow at a certain compounded rate, say g, then, Equation (2) above

becomes: VE = D (1 + g) (1 + K E) = ? (1 ? 1+ g) 1+ KE (3) D (1 + g) KE ? g

Note that we have assumed here that even the first dividend will have grown at g rate, that is, the historical dividend has been D, but we are expecting the current year's dividend to have increased at the constant rate. If we assume the current year's dividend will not show the growth, and the growth will come from the forthcoming year, then we can remove (1+g) in the numerator above. The formula as it stands is also referred as Gordon's dividend growth formula, discussed below. Example: Supposing a company the nominal value equity were $ 100, and the dividends at the rate of 10 % were historically $10.

Going forward, we expect that the dividends will continue to grow at a rate of 5% per annum. If the cost of equity is 8%, what is the market value? We put the numbers in the formula and get a value of $350. Note that we can also test the valuation above on Excel. If we take sufficient number of dividends, say, 1000, successively growing at the rate of 5%, and we discount the entire stream at 8%, we will get the same value. Example: Supposing a company the nominal value equity were $ 100, and the dividends at the rate of 10 % were historically $10.

Going forward, we expect that the dividends will continue to grow at a rate of 12% per annum. If the cost of equity is 8%, what is the market value? This is a case where the growth in dividends is higher than the discounting rate. The growth in dividends is a multiplier; the discounting rate is a divisor. If the multiplier is higher than the divisor, then the present value of each

successive dividend will be higher than the previous one, and hence a perpetual series will have infinite value. There is yet another notable point – the growth rate g above may be also be visualised as the appreciation in the market value of the share.

That is, shareholders are rewarded in form of current earnings as well as growth in the value of their investment. Dividend-based equity models: Walter Approach: The Walter formula belongs to James E Walter, and is based on a simple argument that where the reinvestment rate, that is, rate of return that the company may earn on retained earnings, is higher than cost of equity (which, as we have discussed before, the expected returns of the shareholders, or rate of return of the shareholders), then, it would be in the interest of the firm to retain the earnings.

If the company’s reinvestment rate on retained earnings is the less than shareholders’ rate of return, the company should not retain earnings. If the two rates are the same, then the company should be indifferent between retaining and distributing. The Walter formula is based on a simple analysis that the market value of equity is the capitalisation of the current earnings and growth in price (g in our formula in equation 3 above). Hence, the basis of Walter formula is: VE = D +g KE (4) Here, the growth factor occurs because the rate of return on retention done by the company is higher than the cost of equity.

That is to say, the company continues to earn at r rate of return on the retained earnings, and this is what causes growth g. Hence, g= r (E-D)/ K E Inserting equations (5) into (4), we have VE = (5) D KE + r (E – D)/K E KE (6)

Where r = rate of return on retained earnings of the company E = earnings rate D = dividend rate Example: Supposing a company the nominal value equity is $ 100, and the dividends at the rate of 10 % are $10. Supposing the company earns at the rate of 12% , what is the market value of equity if the the cost of equity is 8%?

The market value of the share comes to $ 162. 50. This is explainable easily. As the company is earning $12, and distributing $10, it retains $ 2 every year, on which it earns at 12%. The capitalised value of 0. 24 at 8% will be the expected growth. Therefore, the sustainable earnings of the shareholders will be $ 10 +3, which, when capitalised at 8%, produces the value $ 162. 50. Of course, the key learning from Walter's approach is not what the market value of equity is, but how the market value of equity can be maximised by following a proper distribution policy.

For instance, in the present case, it is not advisable for the company to distribute any dividend at all, as the company earns more than the shareholders' opportunity rate. If the company was not to distribute anything, the market value of the share may increase to $ 225. Gordon growth model: Gordon's growth model is simply Equation (3) above, that is, VE = D (1 + g) KE ? g This is, as we have seen above, derived from perpetual sum of a geometric progression, under the assumption that the growth rate is less than the cost of equity. Modigliani and Miller approach:

Franco Modigliani was awarded Nobel prize in 1985 and Merton Miller in 1990 (along with Markowitz and Sharpe). M&M have theorised on the irrelevance of the capital structure, and a corollary, irrelevance of the

dividend payout ratio to the value of the firm. Like several financial theories, M&M hypothesis is based on the argument of efficient capital markets. In addition, we believe that a firm has two options: (a) It retains earnings and finances its new investment plans with such retained earnings; (b) It distributes dividends, and finances its new investment plans by issuing new shares.

The intuitive background of the M&M approach is extremely simple, and in fact, almost selfexplanatory. It is based on the following propositions: • Why would a company retain earnings? Only tenable reason is that the company has investment opportunities. If the company does not retain earnings, where does it finance those investment opportunities from? We may assume a debt issuance, but then as M&M otherwise propounded irrelevance of the capital structure, they see a parity between debt and equity, and hence, it does not make a difference whether the new investments are funded by equity or debt.

So, let us assume that the new growth plans are funded by equity. Shareholders price the equity shares of the company to take into account the earnings and the retentions of the company. If the company distributes dividends, the shareholders take into account that fact in pricing of the shares; if the company does not distribute dividends, that is also reflected in the pricing of the shares. If dividends are distributed, the financing needs of the company will be funded by issuing new shares. The issue price of these shares will compensate for the fact that the dividends have been distributed.

That is to say, the market price of the share will remain unaffected by whether the dividends have been distributed or not. • • Let us take a one year time horizon to understand the indifference argument of M&M. We use the following new notations: Po P1 D1 n m I X : Price of the equity share at point 0 : Price of the equity share at point 1, that is, end of period 1 : Dividend per share being paid in period 1 : existing number of issued shares : new shares to be issued : Investment needs of the company in year 1 : Profits of the firm year in 1 The relation between the price at the beginning of the year (Po), and that at he end of the year (P1) is the simple question of discounted value at the shareholders' expected rate of return (KE). Hence, Po = (P1 +D1) / (1+(KE) (7) Equation (7) is quite easy to understand. Shareholders have got a cash return equal to D1 at the end of Year 1, and the share is still worth P1. Hence, discounted at the cost of equity, the discounted value is the price at the beginning of the period. Alternatively, it may also be stated that the P1 = (P0)* (1+(KE) – D1 (8) That is to say, if the company declares dividends, the price the end of year 1 comes down to the effect of the distribution.

Equation (7) can be manipulated. By multiplying both sides by n, and adding a self-cancelling number m, we may write (7) as follows: nPo = [(n+m)P1 - mP1 +nD1)]/(1+(KE) (9) Note that we have multiplied both sides by n, and the added number m along with m is cancelled by deducting the same outside the brackets. mP1 represents the new share capital raised by the company to finance its investment needs. How much share capital would the company need to raise? Given the investment needs I and the profits X, the new capital issued will be given by the following: mP1 = I – (X – nD1) (10)

Again, this is not difficult to understand, as the total amount of profit of the company is X, and the total amount distributed as dividends is nD1. Hence, the company is left with a funding gap as shown by equation (10). If the value of mP1 is substituted in Equation (9), we have the following: nPo = [(n+m)P1 – {I – (X – nD1)}+nD1)]/(1+(KE) (11) As nD1 would cancel out, we will be left with the following: nPo = [(n+m)P1 – I + X] /(1+(KE) (12) Since nPo is total value of the stock at point 0, it is seen from Equation (12) that dividend is not a factor in that valuation at all.