Dividend irrelevance and the clientele effect

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University of Leicester, 2004

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Introduction

"AUSTIN, Texas (Reuters 18th July 2003) –

- No.1 personal computer maker Dell Inc. changed its name on Friday, but not its policy of using cash for share buybacks rather than dividend payouts.
- Shareholders got no joy when some asked the cash-rich company to start paying a dividend.
- Dell executives said the $5 billion the company has stashed in the bank could be put to better use buying back stock and funding their ambitious plans to double sales to $60 billion.
- "We would rather spend available cash flow on share repurchase rather than on a dividend," said chief financial officer Jim Schneider. "We think that's a better use of the money."
- Dell had bought back a billion shares since 1996 at an average cost of $12 a share.
- "I'd like to get some return on my investment," complained one shareholder.
- "How about a 50,000 percent return? Would that do it?" asked chief executive Michael Dell, referring to the increase in value of Dell stock since he founded the company out of his University of Texas dorm room in 1984. Many technology companies traditionally have not paid dividends, preferring to keep the cash for growth or acquisitions.
- Reductions in the top U.S. tax rate on dividends, and growing piles of cash are prompting some tech companies to change. In January, Microsoft, the world's largest software company, which has $49 billion in cash and short-term investments, announced plans for its first ever annual dividend of 8 cents a share."[1]

News items such as the one just quoted, remind us of the slippery concept of the dividend policy dilemma faced by financial officers in corporations and stakeholders alike. Associated with dividend policy is the 'clientele effect'.

[1] Reuters, UK - 18 Jul 2003, http://asia.reuters.com/newsArticle.jhtml?type=technologyNews&storyID=3117984

Companies attract investors whose characteristics cause them to prefer a particular dividend policy. Different preferences may put pressure on the market values of the firm and therefore on the management of corporations. Having said that, there seems to be modern consensus that dividend policy may be useful in signalling to the market, the earnings growth opportunities envisaged by management. But the core issue whether dividend policy can affect the value of the firm, about which situation the market is fully cognizant, remains debated.

The paper below is an attempt at spinning a plausible yarn about the theories of dividend 'irrelevance' and the 'clientele effect'.

Background

In 1961 a proposition that the value of the firm was independent of its dividend policy was made by professors Franco Modigliani and Merton Miller (M&M).[2] Their view was that the market value of a public company is determined only by the investment and operating decisions that generate cash flows. Capital structure and dividend policy are just 'financial' decisions, or ways of dividing up operating cash flows among investors. Both Franco Modigliani and Merton Miller won Nobel Prizes for this contribution.

It is often forgotten that prior to the 1940's, accounting and financial analysis focussed mainly upon cash flow and solvency. In the 1950's more interest mushroomed in corporate performance. Accrual-based historical cost records of stewardship based on the firm's choice of accounting policies, and their appropriateness for economic profit measurement and value analysis began to be debated. This is because it was understood that investor decisions and shareholder wealth could not be determined by current accounting conventions but rather on anticipated future cash flows. Most models of equity value see the

[2] This was preceded by a paper in June of 1958, published by professors Franco Modigliani and Merton Miller in *'The Cost of Capital, Corporation Finance and the Theory of Investment'*, which appeared in the American Economic Review. This paper argued that the value of the firm is independent of its capital structure.

valuation process as the summation of the expected future dividend stream prospects[3], discounted to present value.

The M&M proposition was the inception of so much academic thinking and financial economists have been producing studies of dividend policy ever since. As often happens, however, different researchers have come to different conclusions that attempt to explain investors' demand for dividends. The essence of the controversy pivots on the extent to which dividend policy affects the value of the enterprise. Apart from the M&M theory which germinated the case of *'dividend irrelevance'* and sparked off the whole controversy, there are the so-called *Rightists* and the *Radical Left Groups*, explained further below.

Types of dividend and policies

Dividend distributions to stakeholders may be in the form of:

- Cash dividends – these are the most common and usually paid quarterly or biannually
- Stock dividends – these are payments to existing shareholders in the form of stock as a replacement for or a supplement to cash dividends. This method reduces the value per share even though the company's assets, profits and total value are unaffected.
- Stock splits – similar to a stock dividend and is commonly used to lower the market price of a firm's stock by increasing the number of shares belonging to each shareholder

[3] This is better known as the dividend valuation model and is calculated as $V_0 = \sum_{t=1}^{N} \frac{E}{(1+k_e)^t}$, where V_0 is the value of equity, E_t is the free cash flows in any year *t, and* k_e is the rate of return required by the shareholders. Even though there are varying schools of thought on the subject of valuing shareholders' wealth, such as the DVM (dividend valuation model) and DGM (the dividend growth model), SVA (shareholder value analysis) seems to have attracted widespread interest because the other models penalise companies that do not distribute dividends and that may surely have substantial value – case in point the Dell case mentioned in the introductory text. SVA promotes the value of a company as the value of its future cash flows discounted at the appropriate cost of capital. The real benefit of SVA model is simply that it spurs managers focus on value-creating activities. A closely related concept is EVA (economic value added), which is the Net Operating Profit after Tax less the Net Assets multiplied by the Cost of Capital.

Example of a 2-for-1 stock split

Before split	
Common stock (200,000 shares at $2 par)	$ 400,000
Paid-in capital in excess of par	4,000,000
Retained earnings	2,000,000
Total stockholders' equity	$6,400,000
After 2-for-1 split	
Common stock (400,000 shares at $1 par)	$ 400,000
Paid-in capital in excess of par	4,000,000
Retained earnings	2,000,000
Total stockholders' equity	$6,400,000

Lawrence J Gitman, Principles of Managerial Finance, P550

- Share repurchases – company repurchases from its shareholders outstanding shares in the marketplace. The desired effects are to enhance shareholder value and discourage hostile takeovers.

A dividend policy represents the firm's plan of action whenever the dividend decision has to be made keeping in mind the basic objectives of maximising shareholders' wealth and providing sufficient financing. Three of the more commonly used dividend policies are:

- Constant-payout-ratio – based on the payment of a certain percentage of earnings to owners every dividend period
- Regular dividend policy – payment of a fixed amount of dividend in each period
- Low-regular-and-extra dividend policy – payment of a low regular dividend supplemented by further dividends when earnings are sufficient

E.F. Fama and K.R. French studied dividend payment in the United States and found that the proportion of dividend payers declined sharply from 67% in 1978 and that only about a fifth of public companies pay a dividend.[4] Non-dividend payers were mostly found to be growth companies such as Microsoft, Cisco and Sun Microsystems.

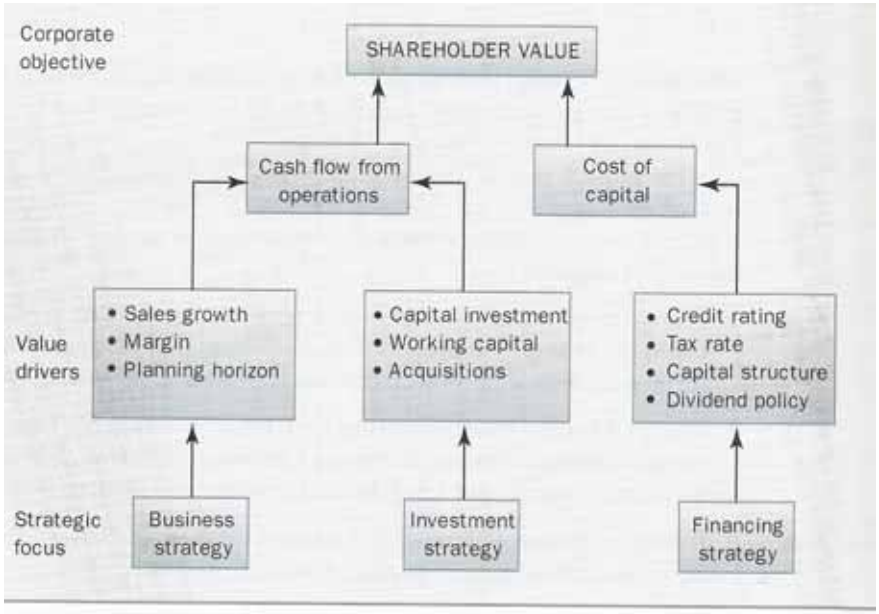
[4] Brealey Myers, Principles of Corporate Finance, McGraw-Hill/Irwin, see page 434

In practice however, many find it hard to accept that shareholders themselves are completely indifferent to the level and timing of dividend receipts. One would start to wonder what therefore affects the share price of such growth companies and whether dividend decision actually changes the value of shares rather than simply providing a signal to the market of the value of stock.

The purpose of a dividend policy should be to maximise shareholders' wealth. This depends on both current dividends and capital gains. Capital gains can be achieved by retaining some earnings for reinvestment and dividend growth in the future.

Shareholders' wealth

The highest priority of management is that of maximising the wealth of shareholders who have risked their capital in the firm.



4.1 *Shareholder value analysis framework*

Source: Corporate Finance and Investment, Pike & Neale, Page 112

To this end, management has three major categories of corporate financial decisions, namely:

- capital investment decisions,
- capital structure decisions and
- dividend decisions.

Assuming that a company's normative objective is this maximisation of shareholder wealth, financial managers are faced with a broad decision namely,

what proportion of surpluses should a company reinvest in the operations rather than distribute as dividends to its shareholders?

Dividends are set by the company's Board of Directors normally either quarterly or bi-annually, although there may be restrictions imposed by the company's lenders and legislation. In the case of Microsoft Corporation which only started paying an 8-cents-a-share dividend last March 2003, even though cash reserves have grown $10 billion since June 2002, the company said it will not change its dividend policy until it resolves continuing legal troubles including an antitrust case brought by Sun Microsystems and an antitrust investigation by the European Commission.[5]

Dividends as a Residual

According to what can be termed as the residual theory, maximisation of shareholders' wealth will be achieved by identifying projects with positive NPVs and investing in them, and paying out dividends only when these investment opportunities are exhausted.[6] We can look at this as a three-way split of profits: interest payments to the suppliers of debt capital, dividend payments to the shareholders and retention of after tax profits for plough-back into investment opportunities. Since the capital structure decision determines largely the level of

[5] Chief Financial Officer John Connors http://www.siliconvalley.com/mld/siliconvalley/6330173.htm, Posted on Fri, Jul. 18, 2003

[6] ACCA Study Text, BPP Publishing, sixth edition, London, UK, see page174

interest payments, what remains is how the annual net of tax and interest distributable cash earnings, should be divided between dividend payments and retention for investment.

Let us share the following case:

- An all-equity financed company distributes as dividend its entire cash flow every year. The equity of the firm is valued at GBP100,000 represented by GBP10,000 in the cash account and GBP90,000 in other assets which generate profits of GBP10,000 per annum.
- Assume a perfect world of no information asymmetries, no-tax, no-flotation costs and zero-transaction costs
- Management wishes to undertake a project that costs GBP10,000 and that would generate income in year 2 of GBP15,000. The NPV (net present values) of the investment is $NPV = -C_0 + \sum_{t=1}^{2} \frac{C_1}{(1+K_e)}$ where C_0 is the required investment and C_1 is the payoff. In this case, since the NPV is positive, management decides to undertake the project
- The project is financed from internal cash flows leaving no cash for dividend payment in year 1.
- Year 2 will however leave the company with an extra GBP15,000 in cash for distribution

The above over-simplified example shows that in year 1, the value of the shares was GBP100,000 or GBP10 per share assuming that the firm had an issued share capital of 10,000 shares. Had the amount of cash representing reserves been distributed, then the shareholders would have been GBP10,000 better off with money to spend or re-invest but their share would have depreciated in value by GBP10,000 or GBP1.00 per share distributed as dividends.

Transactions	Market value of assets	Equity	Personal wealth of 'old' shareholders	Personal wealth of 'new' shareholders
Before dividend distribution	Cash = GBP10,000 Fixed assets = GBP90,000	GBP100,000	GBP100,000 shares GBP10.00 per share	
Cash distribution	Cash = GBP 0 Fixed assets = GBP90,000	GBP90,000	GBP90,000 shares GBP10,000 cash GBP9.00 per share GBP1.00 cash/share	

Having decided not to distribute the cash still left the shareholders worth GBP100,000 by virtue of the shares they hold. The investment decision based on a positive NPV[7], earned the company a further GBP15,000 in addition to the GBP10,000 from previous investments. Therefore it should be quite clear that the investment decision rather than the dividend distribution, left the company's shares valued at GBP15,000 better than the scenario had management decided not to invest.

Transactions	Market value of assets	Equity	Personal wealth of 'old' shareholders	Personal wealth of 'new' shareholders
Before investment	Cash = GBP10,000 Fixed assets = GBP90,000	GBP100,000	GBP100,000 shares GBP10.00 per share	
Cash Paid for investment	Cash = GBP 0 Fixed assets =GBP100,000	GBP100,000 +GBP15,000 (NPV)	GBP115,000 shares GBP0 cash GBP1.15 per share	

[7] since a negative NPV would have eroded the capital of the company

	NPV = GBP15,000	GBP0.00 cash/share

Let us now consider the case that the management of the above firm decides to distribute the dividend and also go ahead with the investment. The firm raises the capital required for the investment by an issue of stock. [8]

As soon as the investment is undertaken, the cash from the share issue of GBP10,000 is used up to acquire the required assets. Taking the NPV of the project to be GBP15,000 as assumed above, the value per share would work out as $\frac{GBP100{,}000+15{,}000}{11{,}000 shares} = GBP10.50\, per share$ and in year 2 when an additional GBP10,000 is earned from previous investments, the value per share would be $\frac{GBP100{,}000+15{,}000+10{,}000}{11{,}000 shares} = GBP11.40\, per share$

Transactions	Market value of assets	Equity	Personal wealth of 'old' shareholders	Personal wealth of 'new' shareholders
Before Investment And dividend	Cash GBP10,000 Fixed assets GBP90,000	GBP100,000	GBP100,000 shares GBP10.00 per share	
Payment of Dividend	Cash = GBP 0 Fixed assets = GBP90,000	GBP90,000	GBP90,000 shares GBP10,000 cash GBP9.00 per share GBP1.00 cash/share	
Issue of shares	Cash GBP10,000 Fixed assets GBP90,000	GBP100,000	GBP90,000 shares GBP9.00 per share GBP1.00 cash/share	GBP10,000shares GBP10.00 per share

[8] Before the transaction is undertaken, the value per 'old' share is $\frac{GBP100{,}000}{10{,}000 shares} = GBP10\, per share$. The resultant situation just before the investment is undertaken is that the old shareholders would have GBP10,000 cash to consume or reinvest and the value per share becomes $\frac{GBP100{,}000}{11{,}000 shares} = GBP9.00\, per share$, a devaluation of GBP1.00 per share, which is basically the value of the dividend distributed to the old shareholders and which is still part of their wealth. We are here making a crucial assumption that there is an efficient capital market and that the new shares are sold by the company at a fair price, that is to raise GBP10,000, the shares are actually worth GBP10,000.

Cash Paid for investment	Cash	GBP 0	GBP100,000	GBP104,500 shares	GBP10,500 shares
	Fixed assets	GBP100,000	+GBP15,000	GBP10,000 cash	
	NPV	GBP 15,000	(NPV)	GBP10.50 per share	GBP10.50per share
				GBP1.00 cash/share	

From the above academic example under the assumptions taken, it should be clear that dividend policy does not affect the shareholder wealth, nor does the capital structure policy have any such effect. It is the investment policy that has a bearing on shareholders' wealth.

It is opportune here to reiterate the basic assumption of having a *perfect capital market,* [9] that is, the firm's capital market opportunities to invest funds withheld from shareholders are no better and no worse than those available to shareholders. This implies that management is denied the ability to create wealth by adjusting the time pattern of dividend payments. *Management can create value only by doing things that shareholders are incapable of doing*. In a perfect market environment, shareholders who prefer for example a steady level of consumption can easily borrow on the same terms as a firm in which she holds shares. This leaves management with the responsibility of identifying and exploiting opportunities for positive NPVs embodied in investment projects so as to create wealth.

This chain of reasoning brings us back to the M&M '*dividend irrelevancy hypothesis'* even though the name in itself can be misleading since as we shall see, it is not the dividend that is irrelevant but the dividend pattern.[10]

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[9] Assumptions of a perfect capital market spelt out by Brennan (1971) include:

i. All investors are maximisers of wealth and have similar expectations
ii. All investors behave rationally and believe that other market participants will behave rationally
iii. No transaction costs or brokerage fees
iv. All investors have equal and costless access to information
v. All investors can lend or borrow at the same rate of interest
vi. No buyer or seller of shares can influence prices
vii. No personal or corporate income or capital gains taxes
viii. Dividend decisions are not used to convey information

The source of this list is Richard Pike and Bill Neale, Corporate Finance and Investment – Decisions and Strategies, third edition, see page 530-531

[10] Steve Lumby & Chris Jones, Investment Appraisal & Financial Decisions, sixth edition, see page 523

Arguments for dividend irrelevance – the Middle-of-the-Roaders

The residual theory outlined above suggests that if the firm cannot invest further to earn in excess of its cost of capital, it should distribute the earnings to its shareholders. M&M argue that the firm's value is determined by the investment policy and that the split between dividends and funds to be reinvested does not affect this value, under the assumptions explained. This argument is also supported by Miller, Black and Scholes. This party raised the following question:

'If companies could increase their share price by distributing more or less cash dividends, why have they not already done so?' [11]

This brings us to the real world scenario with wrinkles of imperfection in its capital markets, a far cry from the understanding of a perfect capital market. The *clientele* of firms, in this context referring to persons with money to invest, come in all varieties of preferences, some with low-payout and others with high-payout demands. M&M argue therefore that changes in dividend policies from low-to-high payouts, for example, should not have a bearing on the market value of the shares, but rather on the clientele that the firm will attract. Looking at this from the other end, Miller, Black and Scholes argue that if all clienteles are satisfied, their demands for high or low payouts will have no effect on prices of shares.[12] In the real markets, studies have however shown that large changes in dividends do affect share prices.[13] However M&M's counter-argument to this is that the effects on the prices are attributable to the *informational content* of dividends with respect to future earnings rather than to the dividend itself. The shift in the clienteles questing to satisfy their preferences is what may cause prices to change. This characteristic allows firms to avoid having to identify the indifference curves of individual shareholders when establishing their investment policies.

There is a strong consistency between the M&M views and those of the *'dividend irrelevance'* proponents, and the *'residual theory'* discussed above.

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[11] Brealey Myers, Principles of Corporate Finance, McGraw-Hill/Irwin, see page 452
[12] Brealey Myers, Principles of Corporate Finance, McGraw-Hill/Irwin, see page 452
[13] Lawrence J Gitman, Principles of Managerial Finance, Tenth Edition, Page 564

Arguments for Dividend Relevance - The Rightists and the Radical Leftists

The dividend controversy over so many years of debate, has resulted in two extreme groups apart from the above discussed '*middle-of-the-roaders'*. A conservative group, the Rightists, believe that higher dividend payouts will result in an increase in the value of the firm. The *Leftists* on the other hand believe that a high dividend will decrease the firm's value.

A common belief in the business and investment communities is that earnings paid out as dividends should be allotted a much higher multiplier in evaluating shares than that to undistributed earnings.[14] The Rightist group argue that there seems to be a natural clientele for high-payout shares because dividends are regarded as *'spendable'* income whereas capital gains are additions to capital. Myron J Gordon and John Lintner suggested in the early sixties[15] that investors see current dividends as less risky than future dividends or capital gains. Their proposition came to be known as the *'bird in the hand'* argument, and suggested that the lower uncertainty attached to dividends received will result in a lower discount factor applied to the firm's earnings resulting in a higher stock value. That said, shareholders may realise capital gains by selling stocks, whenever they feel they have not received enough returns by way of dividends. However there still remains much sympathy with the argument that investors prefer higher dividends. One reason may be because mature companies may have plenty of free cash flow but few profitable investment opportunities.

Another major departure from the perfect market scenario is the effect of taxes which, together with other imperfections is likely to interfere seriously with the hypothesis of dividend irrelevancy. If dividends are taxed more heavily than

[14]This was historically expressed by Graham and Dodd in 1951. see Brealey Myers, Principles of Corporate Finance, McGraw-Hill/Irwin, see page 447

[15] Lawrence J Gitman, Principles of Managerial Finance, Tenth Edition, Page 565

capital gains[16], then it is more advantageous to transmute dividends into capital gains. It is a growing practice that when companies make large one-off distributions to shareholders, they do so by repurchasing stocks. However this cannot be done frequently because the tax authorities may identify the scheme, deem the distribution as a dividend and tax it accordingly with the higher rates.

Another argument put forward by the *'Leftist'* group is that taxes on dividends have to be paid immediately whereas capital gains tax can be deferred until shares are actually sold.

Apart from the distinction between income and capital gains, there is also the effect of differential rates of personal income tax and also the possibility that a company may have shareholders, both private and corporate, who are taxed under different tax regimes.

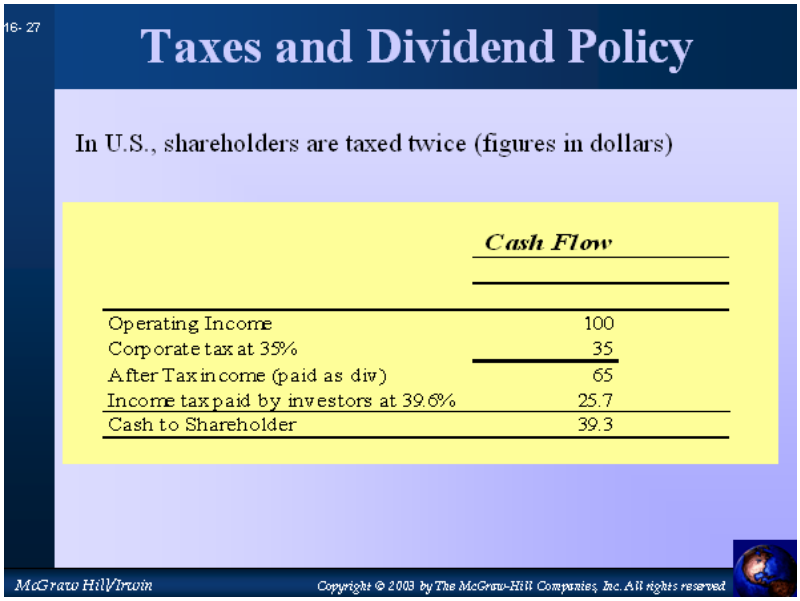
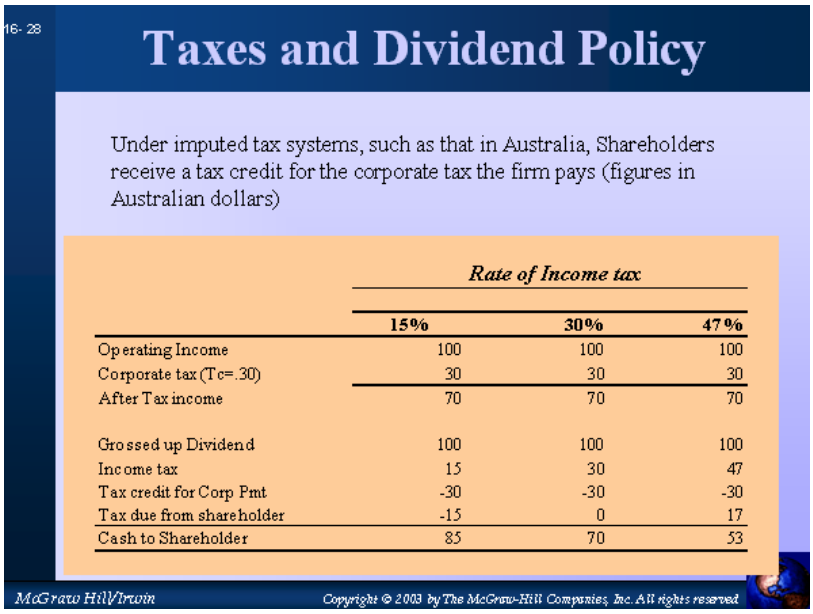


Figure 1 - Source Student CD-Rom, Brealey/Myers, Priciples of Corporate Finance 7th edition, McGraw-Hill/Irwin

[16] In developed jurisdictions nowadays, the gap between taxes on capital gains and those on dividends has been narrowed and therefore the attempt to measure the effect of taxes on the option of distributing cash by way of dividends or else accretion of capital, is becoming historical. See Brealey Myers, Principles of Corporate Finance, McGraw-Hill/Irwin, see page 451.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Taxes and Dividend Policy

Under imputed tax systems, such as that in Australia, Shareholders receive a tax credit for the corporate tax the firm pays (figures in Australian dollars)

	Rate of Income tax		
	15%	30%	47%
Operating Income	100	100	100
Corporate tax (Tc=.30)	30	30	30
After Tax income	70	70	70
Grossed up Dividend	100	100	100
Income tax	15	30	47
Tax credit for Corp Pmt	-30	-30	-30
Tax due from shareholder	-15	0	17
Cash to Shareholder	85	70	53

McGraw Hill/Irwin

Figure 2 - Source Student CD-Rom, Brealey/Myers, Priciples of Corporate Finance 7th edition, McGraw-Hill/Irwin

The above two figures illustrate the different amounts received in cash by shareholders who are taxed under different regimes based on the same distribution amount.

'Clientele' effect

Capital market imperfections include also substantial transaction costs and differential interest rates. These all interfere with the dividend irrelevancy argument based on perfect capital markets, meaning that an individual cannot *'costlessly'* adjust her dividend pattern to fit her preferred consumption pattern. Therefore shareholders may prefer companies to supply them with their desired dividend pattern thereby creating a certain demand for specific patterns. Investors are attracted to different company policies, and when the company policy changes, investors will adjust their stock holdings accordingly. As a result of this adjustment, the stock price will move. Unfortunately, this may mean that the shareholders may incur costs of adjustment. Therefore, an easily identifiable dividend pattern may avoid such costs to the shareholder. At the same time, the company may incur consequential costs in the form of missed investment opportunities or costs of raising finance due to free cash flow shortage.

That said, it is probably best that a company follows a consistent dividend policy that will hopefully attract the suitable clientele and minimise both adjustment costs[17] for the investors and also the discussed consequential costs.[18] Investors who prefer regular cash income, are in a relatively low tax bracket and are risk averse, will probably be attracted companies that have high payouts, such as utilities companies. Growth companies normally pay lower dividends and reinvest more of their free cash flows in new projects and expansion, thus providing higher capital appreciation. These companies attract investors in the high tax brackets with no pressing needs for cash.[19]

Another imperfection of capital markets is the need for information which is neither costless nor universally available. Therefore, a dividend declaration which is both free and universally available is thought to signal information to the market. Managers are extremely reluctant to cut dividends because a reduction in dividend is often read by the clientele as unfavourable information. Therefore, they generally increase dividends only if they are confident that future free cash flows will enable them to retain the established pattern.

In 1994, a profitable utility called Florida Power & Light (FPL) announced a dividend cut by a hefty 33%. FPL was a pioneer in this strategic move. The stock price immediately fell by 15%, just as had been predicted. However in just two weeks, FPL's stock was outperforming the electric utility index as shown below.

[17] Adjustment costs include brokerage costs and capital gains taxes

[18] Steve Lumby & Chris Jones, Investment Appraisal & Financial Decisions, sixth edition, see page 530

[19] The most well known empirical evidence about this issue is that of Elton and Gruber (1970).Steve Lumby & Chris Jones, Investment Appraisal & Financial Decisions, sixth edition, see page 532

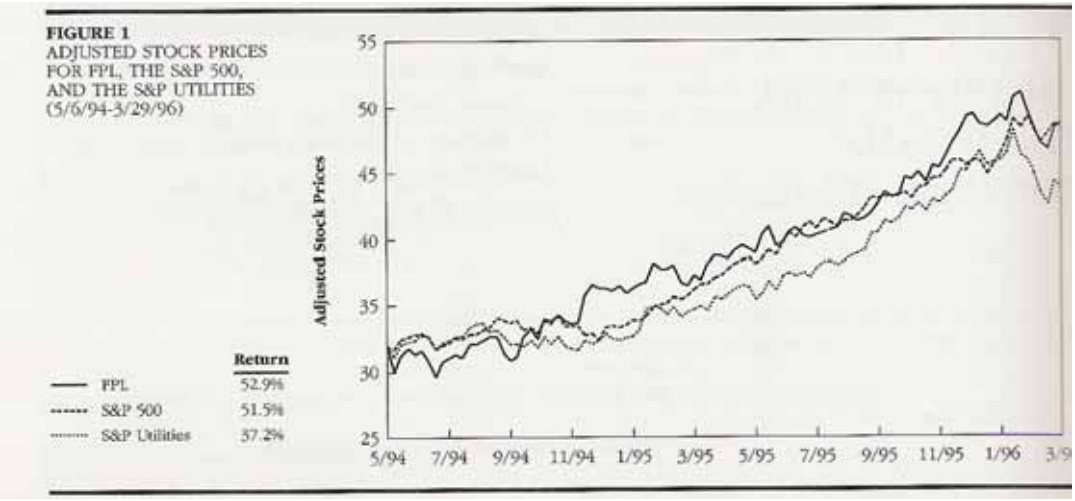

Figure 3 - Source - Donald H Chew, The New Corporate Finance Where Theory meets Practice, third edition, see page 236

In its dividend announcement, FPL stressed that it was no longer in the best interest of the shareholders to retain the high dividend payout averaging 90%. In order to minimise the signalling effect on the clientele, management also announced that the policy was to be reviewed in February rather than May starting in 1995. At the same time the Board authorised the repurchase of 10 million shares over the next three years. At that time in the United States, changes in the tax code made capital gains more attractive than dividends. After digesting the news, analysts concluded that the action of FPL was not a signal of financial distress but a strategic decision that was intended to strengthen the company's prospects for growth.[20] This tactic gained new ground in limiting clientele effect.

Conclusions

It seems that there is no conclusion set in stone on the dividend irrelevancy controversy. Since the formulation of the M&M proposition in 1961, financial economists have been arguing about whether dividends have any effect on the long-term market value of the firm. The case of FPL seems to confirm the validity

[20] Donald H Chew, The New Corporate Finance Where Theory meets Practice, third edition, see page 236 – The dividend cut "Heard 'round the world": The case of FPL by Dennis Soter, Stern Stewart & Co, Eugene Brigham, University of Florida and Paul Evanson, Florida Power & Light Company

of the M&M logic. We started off this paper by quoting current issues reported about Dell Inc which suggests that growth companies are still holding on to stacks of cash and prefer stock repurchases to dividend payouts. At the same time they still seem to perform well in increasing shareholder wealth. The same report forecasts possible changes to this policy-trend because of reductions in the top U.S. tax rate on dividends. In fact Microsoft has already been reported as changing its tactics. This brings us back to the controversy and the three schools of thought about dividend policy entwined with the clientele effect.