

CHAPTER 18: DIVIDEND (OR PAYOUT) POLICY

Assigned problems are 5, 7, 13, 15, 18, and 23. Read Appendix 18A

A firm that will never pay cash benefits to stockholders would have zero value. Firms need to pay excess capital (Free Cash Flow to Equity or FCFE) out to the stockholders. FCFE is defined as the surplus after-tax cash flow that is left over after all *positive* NPV projects have been taken.

How do corporations pay out their excess cash (excess capital) to stockholders?

1. Dividends

2. Share Repurchases

Dividend changes are typically viewed as a stronger management signal about future cash flow (since firms are very reluctant to reduce dividends). However, each method of distributing cash results in cash being paid out. The value of a firm's common stock should always be the Present Value of all the future FCFEs that are *expected* to be paid out to the stockholders — how the cash is paid out should be irrelevant.

The amount of cash paid out in the form of stock repurchases has been growing rapidly since 1982. In 1998, about \$182 billion was paid out through stock repurchases and \$174 billion was paid out through dividends in the U.S.

A firm should not cancel a positive NPV project in order to pay out a higher dividend or repurchase more stock.

I. Dividend Irrelevance in the Modigliani-Miller World

Modigliani and Miller (M&M) assumed a world of perfect markets: no transactions costs, corporate insiders and outsiders have identical information, no taxes, no costs to bankruptcy, etc.

M&M stated that the value of a firm is dependent on the cash flow that is generated by the firm's **assets**. Thus it is the firm's **investment policy** that creates the firm's value. As a result, in perfect and frictionless capital markets, dividend policy (how the cash is paid out) is *not* relevant in determining the firm's value.

To focus on issues exclusively concerning cash payout policy, my illustration assumes an all-equity firm. Accounting principles tell us that sources of cash must equal uses of cash. Sources include cash flow from operations and new external equity. Uses include net increases in assets (e.g., capital spending) and dividends. If cash flows from operations and planned increases in assets (investments) do not change, then any increase in cash dividends must be financed by issuing new external equity or debt.

Dividend Policy Irrelevance in an MM world: An Example

A firm currently has **1000** shares outstanding with a total market value of **\$102,000**, which consists of **\$2000** of surplus or Free Cash Flow to Equity (FCFE) plus **\$100,000** PV of future FCFE. For the (just ended) fiscal year the firm had cash flow from operations of **\$10,000** and a

+NPV project, which required an investment of **\$8000**. Thus this firm now has $\$10,000 - \$8000 = \mathbf{\$2000}$ of FCFE that it could pay out as a \$2 per share dividend.

Operating CF = \$10,000; Net Investment = \$8000; FCFE = \$2000

Shares Outstanding = 1000 Shares; **Price per share = \$102** before any cash is paid out.

Three dividend (payout) policies are described below. **Policy 1** is paying out just the current \$2000 FCFE as a \$2 per share dividend. **Policy 2** is paying a \$3 per share dividend. **Policy 3** is paying out the \$2000 FCFE by repurchasing common stock at \$102 per share (at \$102 per share, you can repurchase 19.6078 shares with \$2000).

	<u>Policy 1</u>	<u>Policy 2</u>	<u>Policy 3</u>
Stock price <u>before</u> distribution	\$102	\$102	\$102
Dividends per share	\$2	\$3	0
Common shares repurchased	0	0	19.6078
New equity issued	0	\$1000	0
Remaining shares outstanding	1000	1010.10	980.3922
Value of the firm after distribution	\$100,000	\$100,000	\$100,000
Stock price <u>after</u> distribution	\$100	\$99	\$102

Simply put, *sources* of cash have to equal *uses* of cash:

$$\text{Operating cash flow} + \text{New capital raised} = \text{Dividends} + \text{Investment}$$

$10,000 + 0 = 2000 + 8000$, under **Policy 1**. Under **Policy 2**, in order to pay out \$3000 in dividends, \$1000 in new stock must be sold (by selling 10.101 shares of stock at \$99 each).

For each existing share: Under **Policy 1** a shareholder ends up with \$2 cash and a share of stock worth \$100. Under **Policy 2** a shareholder ends up with \$3 cash and a share of stock worth \$99. Under **Policy 3**, selling shareholders receive \$102 per share and remaining shares are still worth \$102 per share. **No wealth is created by changing the dividend payout.**

The *ex-dividend* value of the firm is \$100,000 (PV of *future* FCFE) with either Policy 1, 2, or 3. Since dividend policy obviously cannot change the value of the firm, then what can? The answer is that **investment policy** (capital budgeting) is what creates wealth for the firm — finding additional +NPV investments will increase the value of the firm.

II Dividend Policy Decisions in the Real World

M&M tell us what should not matter under their (perfect market) conditions. We can now concentrate on what apparently does matter in the real world. In reality we observe important market reactions to dividend events.

The salient issue that largely explains the market's reaction is **Asymmetric Information**: we assume that managers possess superior information concerning the firm's value, risk, and its future prospects. Dividend announcements are selective management actions that communicate or *signal* important private information regarding management's perception of the firm.

Many individuals first think that announcements of dividend initiations or increases might actually tend to be bad news — firms have fewer investment opportunities and thus either begin to pay out or pay out more cash. However, while dividend increases and initiations are associated with mature or maturing firms, actual evidence *overwhelmingly* shows that higher dividends (especially higher than expected) are *good* news in the stock market.

When dividends are initiated or resumed, the stock price is observed to *increase* about 65-70% of the time. Stock prices also usually increase when existing dividends are increased. On the other hand, when dividends are reduced or omitted, stock prices are typically observed to *decrease*.

Lintner (1956) published a now famous study on dividend policy. In the study, Lintner interviewed corporate executives concerning actual dividend policy.

1. Managers tend to think of dividends in terms of a *proportion* to earnings. In other words, a *target* payout ratio of earnings is preferred by managers.
2. Managers will not make changes in the level of dividend payments if they perceive that the new level of payments cannot be sustained.
3. Dividend changes follow or lag behind changes in the **long run** (often referred to as *permanent*) earnings potential of firms.
4. Investments or capital spending had little effect on modifying the pattern of dividend behavior. Since it is the mature or maturing firms that generally pay dividends, I would conjecture that there is not much capital budgeting or investment uncertainly that remains in these firms, as opposed to the non-dividend paying firms.

A Lintner inspired model for illustrating how dividends change as earnings change would be:

$$\text{Dividend}(t=1) = \text{Dividend}(t=0) + s[p\text{EPS}(t=1) - \text{Dividend}(t=0)],$$

where p is the target proportion of earnings to be paid out, and s is the speed of adjustment to the new target dividend payout. Let $s=0.35$, $p=0.40$, and this year's Earnings per Share are \$6.00. Last year's dividend was \$2.00 per share.

This year's estimated dividend is $2.00 + [0.35][(0.40)(6.00) - 2.00] = \2.14

The dividend does not immediately move to 40% of the new earnings or \$2.40, rather it is adjusted gradually upward when earnings increase (**Partial Adjustment Hypothesis**).

Most famous is the **Permanent Earnings Hypothesis** (attributed to Lintner), suggested as:

$$\text{Dividend}(t=1) = (p)(\text{Permanent Earnings for period } t=1)$$

The managers examine the current level of earnings and ascertain what part of the earnings can be considered as **permanent** and what part as **temporary** (the temporary or *transitory* part might be either positive or negative). A dividend based upon the **permanent** portion of the earnings is considered as a dividend payment that can be sustained in the future (remember that managers

are very averse to decreasing dividends). Dividends will be increased only when **permanent** earnings are believed to be higher. If an increase in current earnings is believed to be only **temporary**, it then won't affect the level of dividend payments.

An increase in dividends is thus a credible management signal about the quality of current and future permanent cash flows, and it also decreases investor *uncertainty* concerning the quality of the firm's future. If managers were to falsely raise dividends today when permanent cash flows are not higher, then they will have to cut this unsustainable dividend in the future.

Evidence suggests that if earnings are *temporarily* high, then the temporary increase is more likely to be paid out as a share repurchase (or perhaps as a *special* dividend). This is why regular dividend changes are thought to be a stronger statement about the permanent earnings or earnings *quality* of a firm than share repurchases. However, managers may also tend to pursue share repurchases when they feel that the firm's shares are *undervalued* in the market. In any case, stock prices generally increase when a firm announces a share repurchase.

Dividend *increases* and *initiations* usually follow a period of increased and strongly increased earnings, respectively. A dividend increase or initiation is interpreted as a management signal that the earnings increase is permanent in nature. There doesn't appear to be much evidence of any above normal increase in future earnings. The evidence documents that the new level of earnings is unlikely to fall.

Also, Boehme and Sorescu (*Journal of Finance*, 2002) report that firms that initiate or resume dividends are observed to experience large decreases in future *systematic* risk. There is evidence that firms announcing large increases in dividends also experience future (albeit smaller) decreases in risk (Grullon, Michaely, and Swaminathan (*Journal of Business*, 2002)). Stock prices are a function of both future cash flow (FCFE) and risk (discount rate being r_E)? Stock prices will certainly increase when the discount rate is lowered.

III. More on Dividend Policy Decisions in the Real World

Discussed below are reasons commonly cited for favoring a high dividend policy (high dividend yield) and reasons for favoring a low dividend policy (low dividend yield).

Reasons for Low Dividends

1. Taxes: Dividends were traditionally taxed as ordinary personal income for the calendar year they were received, whereas capital gains are taxed only in the year in which they are realized (traditionally at a lower tax rate than dividends).¹

The firm can avoid (or delay) this transfer from shareholders to the IRS by omitting dividends and reinvesting the funds in zero NPV investments. Another and far better option to have avoided the dividend tax would have been to repurchase stock from shareholders that are willing to sell their shares (only those that choose to sell will pay the capital gains tax).

¹ The 2003 tax law changes reduce both the dividend and capital gains tax rate to equal levels, e.g., those in higher tax brackets will be taxed at 15% for both dividends and long-term capital gains.

2. Transactions Costs: Individuals who do not want dividends will reinvest them in the firm and incur an unnecessary brokerage fee. This problem can be reduced through a dividend reinvestment plan (DRIP). Another solution is for investors to own mutual funds, where dividends are generally reinvested into the fund at very low transaction costs.

Reasons given for High Dividends

1. Lower Agency Costs of Free Cash Flow!!! (important for mature or declining industries)

Potential conflicts between stockholders and managers exist since ownership and control of a corporation are separated. Managers of large mature firms that are mostly equity financed may have an incentive to accept *negative* NPV projects. If inactive or passive stockholders primarily own the firm, then the problem is exacerbated. Paying out high dividends reduces the amount of cash flows available to managers and will also reduce agency costs (since they can no longer waste this cash). The incentive to *overinvest* is curtailed.

Interest payments to bondholders are an alternative way to distribute cash and thus curtail *overinvestment*. Debt strongly acts as a control against managers deviating from stockholders' best interests. This is especially important for mature firms and industries that have ample cash flow but few positive NPV investments. Firms are not legally committed to dividend decisions but interest payments to bondholders are a binding legal commitment to pay out cash.

This problem is called the *Agency Costs of Free Cash Flow* (Michael Jensen, *American Economic Review*, 1986). Anything that forces discipline upon the firm to be more efficient and pay out excess capital should be beneficial. High leverage or debt acts as a control or disciplining force on the firm and thus forces it to pay out its excess capital as interest payments. This is one reason why *Leveraged Recapitalizations* (Chapter 15 notes) are seen as good news (existing stock price increases about 25% in price during the announcement).

2. Bird-in-the-hand: Theory or Fallacy?

This idea argues that present dividends are preferred to future dividends. However, are near-term dividends less uncertain than dividends in the far future? The riskiness (uncertainty) of dividends depends on the firm's systematic business and financial risk. The bird-in-the-hand argument implies that the risk of the firm increases over time. There is no reason to believe that risk increases over time.

3. Desire for Current Income

a. Many trust and endowment funds can only spend the dividend portion of returns. In addition, many are only allowed to invest in dividend paying stocks, since these represent the safer, less speculative stocks.

b. Some individuals will desire high dividend stocks for current income reasons. The transaction costs of creating *artificial* dividends from low dividend stocks by selling small amounts of stocks at regular intervals for current income can be very expensive.

The “Clientele” Effect

High dividend stocks traditionally tended to attract a low or non-taxed clientele, or those that want current dividend income. Low or no dividend stocks tended to attract the higher taxed clienteles. The expected returns to stocks are not determined by the dividend yield or higher dividend payout.²

It is more important for a firm to concentrate on maximizing shareholder value through its Investment Policy and efficiency in ongoing operations. If there is any excess cash remaining, then pay it out to stockholders. The high growth firms will tend to have no or low dividends and mature firms will tend to have the high dividends. Investors that want the high dividend will buy the stocks of mature firms and those that don't want the high taxes on dividends will buy the stock of either growth firms or the firms with share repurchases.

IV. Share Repurchases

In general, shareholders are better off if the firm buys back common stock instead of paying dividends and thus allowing investors to avoid dividend taxes. *Regular* stock repurchases may be challenged by the IRS, as repurchases may appear as an attempt to allow shareholders to save on taxes. So far, the IRS isn't going after firms that repurchase shares (also note that repurchases *exceeded* dividends in 1998). Another advantage to a share repurchase is that investors can just choose to keep their stock and thus avoid paying any tax (until they finally choose to sell their shares and realize their capital gains). By not selling their shares, they are not missing anything.

Managers may also use share repurchases to signal that the current market stock price is too low. If managers have more or better information than outside investors, then insiders may be able to identify when their company is undervalued. Companies can repurchase shares through (1) a tender offer or (2) the open market (the most common method).

In a tender offer repurchase, setting the offer price to stockholders can be difficult. If the offer price is set too low, then stockholders who tender their shares will lose. If the offer price is set too high, then stockholders who do not tender will lose.

PepsiCo Inc.'s Board of Directors announced the following open-market stock repurchase program on November 21, 2000. The stock price increased at the announcement that morning by almost 3%, which is about the average reaction. During the one year prior to this stock repurchase announcement, PepsiCo had also paid out about **\$800 million in regular dividends** to its common stockholders, in addition to the **\$1.3 billion** reported in this article that it had paid out by repurchasing stock from January to November 2000. PepsiCo is one of many large mature corporations that return their excess capital or Free Cash Flow to Equity (FCFE) to the capital markets by both repurchasing shares and paying out regular dividends.

² Say that two stocks, A and B, have the same Beta, and the CAPM model states that each stock should have a 10% annual required return (as measured before personal income taxes). Stock A may have a 3% dividend yield and 7% capital gains yield, while stock B has a 0% dividend yield and a 10% capital gains yield. The typical investor would pay more in taxes on stock A than B, since the dividends are taxed at a higher rate. Yet, stock A will not offer a higher pretax rate of return, in order for investors to be compensated for the higher taxes on stock A. Investors in high and low tax brackets will tend to own stocks B and A, respectively.

Tuesday November 21, 2000, 11:33 AM ET

PepsiCo Board Clears New Stock Buyback

PURCHASE, N.Y. (Reuters) - PepsiCo Inc. (NYSE:PEP - news) said on Tuesday its board has authorized a new share repurchase program under which the soft drink and snack company plans to buy back \$4 billion worth of stock over the next three years.

The new program will go into effect once the current \$3 billion program is complete. PepsiCo expects the current program, which was authorized in March 1999, to be completed by early 2001.

“This new share repurchase program is a reflection of the strength of our businesses and our confidence in the consistent growth of PepsiCo's already powerful cash flow,” Chairman and Chief Executive Officer Roger Enrico said in a statement. “We are fortunate in being able to invest in growth opportunities, pay a healthy dividend and buy back a substantial number of shares all at the same time.”

Just last week, Chief Financial Officer Indra Nooyi said the current buyback program is on track to be completed a year ahead of the original schedule. Since the beginning of 1996, PepsiCo has invested about \$9 billion in share repurchases, including \$1.3 billion so far this year.

Shares of Purchase, N.Y.-based PepsiCo were up \$1-1/4, or 2.78 percent, at \$46-1/4 in late Tuesday morning trading.

V. Stock Splits:

People often think that they receive some free gift when a firm issues a stock split. Nothing could be further from the truth. However, stock prices typically do increase by 2 to 3% when firms announce that they will issue a stock split. Two primary reasons exist and, of course, deal with **information asymmetry** between managers and outsiders. First, for dividend paying firms, stock splits are very often followed by an **increase** in dividend payments. Second, stock splits themselves are a signal that the stock price is being split down to a lower price level, and that the price is not expected to further decrease due to disappointing future news (managers of non-dividend paying firms can perhaps *signal* the firm's quality by issuing a stock split). A longstanding (unfortunately widespread) view is that stock splits return the stock price to an *optimal trading range* where the *liquidity* or trading volume of the stock will be improved; however, this view is not at all well-supported in the actual empirical evidence.

Technically, a stock split is a *non-cash* distribution to the stockholders. Assume that HiTek Corp. has common stock that is worth a total of **\$1 billion** (the Market Capitalization is \$1 billion). HiTek has **10 million** shares of common stock outstanding. As a result the market price of a share of stock is $(\$1 \text{ billion}) / (10 \text{ million shares}) = \mathbf{\$100 \text{ per share}}$.

HiTek announces a **5 for 1 stock split**. Each existing share now becomes 5 shares of stock. Perhaps managers believe they will improve liquidity, but it is more likely that they want to *signal* their positive private beliefs about the firm's future. Ignoring any information effect of the split announcement; the market value of the firm is still **\$1 billion**, which is now spread across **50 million** shares of stock. The new market price of the stock is now **\$20 per share**.

If you had owned one share of HiTek stock, worth \$100 before the split, you now have five shares of stock worth \$20 each, still worth a total of \$100. This is similar to exchanging one \$100 bill for five \$20 bills. Your wealth is the same as before. If you had owned \$1 million of stock before the split, you still own \$1 million of stock after the split. Again, here we are ignoring the typical information effect that a split has on the stock price.

We expect stock prices to increase over time. Assume that a share of XTC stock was worth \$25 forty years ago. It has increased in price at an average annual rate of 10% per year. Without issuing any stock splits, the share price of XTC stock will be around $(\$25)(1+0.10)^{40} = \1131 today (of course, an original \$25 investment would still have grown to \$1131, regardless of how many stock splits had been issued by the firm). We do not typically see such extremely high stock prices (**Berkshire Hathaway** being the most prominent exception!). The traditional view is that corporations issue stock splits to keep the stock price within what many consider to be an *optimal trading range*; typically considered to be \$20 to \$80 per share, although much debate exists on that view. The *signaling* effect is probably the leading factor behind most splits and the post-split price is usually in the \$20 to \$80 range.³ The average price per share on the NYSE is probably actually lower today than 75 years ago, due to the practice of issuing stock splits.

There is also the **Reverse Stock Split**. Imagine holding \$100 of stock; comprised of 10 shares worth \$10 each. Assume that the firm issues a 1 for 10 reverse stock split. You now hold one share of stock that is worth \$100. There is no wealth effect in an MM world. In reality, the stock price usually decreases when a reverse split is announced. It is often interpreted as a sign of management pessimism about the future, since a reverse split is the exact opposite of the conventional stock split that was discussed above (managers don't feel that any future good news will increase the stock price). What follows is a news story about AT&T's recent 1-for-5 reverse stock split announcement.

Wednesday April 10, 2002, 7:14 pm Eastern Time

AT&T Seeks OK for Reverse Stock Split

By Jessica Hall

PHILADELPHIA (Reuters) - Telephone and cable television giant AT&T Corp. said on Wednesday it plans a one-for-five reverse stock split as it sells its cable television business to Comcast Corp. in a move to bulk up a stock price that has fallen 30 percent in the past year.

The reverse stock split will not give AT&T (NYSE:T - news) shareholders more value for their investment. It merely boosts the stock price by reducing the number of shares outstanding. It is the same as getting one \$50 bill instead of five \$10 bills.

"It's cosmetic. They just don't want a stock price that's a few bucks a share. It would be kind of an embarrassment. I don't think AT&T wants a penny stock on their hands," said Guzman & Co. analyst Patrick Comack.

Shares of New York-based AT&T closed at \$14.42, down 59 cents, or 3.93 percent. Over the past 12 months, the stock has underperformed the Standard & Poor's 500 Index (^SPX - news) by 30 percent, but outperformed the North American Telecom Index (^XTC - news) by 14 percent.

AT&T and other long-distance telephone companies have been hurt by price wars, increased competition as the Baby Bells enter the long-distance market, and weak demand for voice and data services in the weak economy.

REVERSE SPLITS: NOT JUST FOR PENNY STOCKS

³ In his 1983 letter to **Berkshire Hathaway** shareholders, **Warren Buffett** expressed the following cynical view concerning stock splits: "Were we to split the stock or take other actions focusing on stock price rather than business value, we would attract an entering class of buyers inferior to the exiting class of sellers. At \$1300, there are very few investors who can't afford a Berkshire share. Would a potential one-share purchaser be better off if we split 100 for 1 so he could buy 100 shares? Those who think so and who would buy the stock because of the split or in anticipation of one would definitely downgrade the quality of our present shareholder group. (Could we really improve our shareholder group by trading some of our present clear-thinking members for impressionable new ones who, preferring paper to value, feel wealthier with nine \$10 bills than with one \$100 bill?) People who buy for non-value reasons are likely to sell for non-value reasons. Their presence in the picture will accentuate erratic price swings unrelated to underlying business developments." Source: www.berkshirehathaway.com

Since the dot-com bust, several small companies have used reverse stock splits to beef up low stock prices to meet listing requirements for the New York Stock Exchange or Nasdaq.

In contrast, AT&T is one of the 30 stocks that make up the Dow Jones industrial average. It is one of the nation's most widely held stocks.

"Some companies do this so they can stay listed. That's what penny stocks do. Dow 30 companies don't typically need to do this. Generally they'd get kicked out of the Dow before needing to worry about this," said Debra McNeill, a portfolio manager with Fremont Investment Advisors.

FEWER SHARES, FATTER PRICE

In AT&T's case, it aims to conduct the reverse split as it sells its cable business to Comcast. Under that deal, the AT&T Broadband unit is valued at about \$10 a share. Based on AT&T's current stock price of \$14.50, that means its core long-distance telephone operations are valued at about \$4.50 a share.

The reverse stock split would reduce the company's shares outstanding to 700 million from 3.5 billion, and boost the price tag on the telephone business to about \$22.50 a share, based on today's prices. The core business sells communications services to about 4 million corporate customers and 50 million residential customers.

Without the split, AT&T's stock would be so inexpensive that it may fall below the radar screen of some institutional investors, since some are restricted from buying stocks that cost less than \$5 a share, analysts said.

VI. Important Dates for Cash Dividend Payments

1. **Announcement Date:** The corporation's Board of Directors announces the dividend decision, e.g., "all shareholders of *record* as of 1/12/2002 will receive a cash dividend of \$0.25 per share, to be *paid* on 2/15/2002".
2. **Ex-Dividend Date:** the first day the stock trades without the right to receive the dividend. The stock price will fall by the amount of the dividend when it begins trading that day. This date will typically be two business days before the Record Date. This day will be 1/10/2002, so if you purchase the stock on or after this day, you will not receive the \$0.25 dividend (since there won't be enough time to list you as an official stockholder of record as of 1/12/2002).
3. **Record Date:** stockholder's name must appear as a valid owner of stock on this date in order to receive the dividend (1/12/2002).
4. **Payment Date:** cash dividend payments are made on this date (2/15/2002).

Thursday April 11, 2002, 3:00 pm Eastern Time

Kodak Board Declares Semi-Annual Cash Dividend

ROCHESTER, N.Y.--(BUSINESS WIRE)--April 11, 2002--Eastman Kodak Company's board of directors today declared a semi-annual cash dividend of 90 cents per share on the outstanding common stock of the company.

The 90 cent per share dividend declared today will be payable July 16, 2002, to shareholders of record at the close of business on June 3, 2002.

This payment represents the first dividend being distributed this year, consistent with a policy the board adopted in October 2001 to change the dividend disbursement to semi-annual from quarterly. The new schedule reflects an initiative by Kodak to align its cash disbursements with the seasonal cash flow pattern of the business.

While solely the discretion of the board, Kodak also anticipates that dividends, when declared, will be paid on the company's 10th business day each July and December, to shareholders of record the first business day of the preceding month.