Chapter 17: Payout Policy

I. Introduction

A. Overview

Payout Policy:

Main alternatives (as seen in Figure 17.1 from the text):



Other possibilities: acquire other firms (or parts of other firms), pay down debt.

B. Methods for Paying Cash to Stockholders

1. Dividends

=>

a. Important dates

- 1) Declaration date
 - => board authorizes a dividend
 - => firm is obligated to pay a dividend once declared
- 2) Ex-dividend date
 - => if purchase on or after this date, don't receive next dividend
 - => one business day before record date
 - => gives time to process transfer of ownership before record date
- 3) Record date
 - => firm pays dividend to shareholders of record on this date
 - => set by board of directors
- 4) Payable date
 - => firm mails check (or direct deposits them)
- b. Types of dividends (and other distributions)
 - 1) Regular => usually paid quarterly and changed infrequently
 - 2) Special => large dividend which unlikely to be repeated
 - 3) Liquidating => dividend that reduces firm's paid in capital => taxed as capital gain rather than dividend
 - 4) Stock dividend (or split) => firm issues shares rather than paying out cash => no real consequences for firm or stockholders
 - => may be used to keep stock prices in an "optimal range"
 - => if too high, stock may become less liquid as fewer small investors
 - => if too low, transaction costs become significant and can be delisted by exchange
 - 5) Spin-off
 - => firm distributes shares of subsidiaries to current stockholders
 - => not taxed
 - => avoids transaction costs of selling the division

2. Share Repurchases

=>

a. Open market purchases

=>

- => 95% of all repurchases
- => firm not obligated to make announced repurchases

b. Tender offer

=>

=> purchased at a premium to market price

c. Dutch auction

- 1)
 2)
 3)
 4)
 d. Targeted repurchase
 =>
 Reasons:
 1)
- II. Payout Policy in a Perfect Capital Markets

2)

Perfect Capital Markets (same as in Chapter 14):

- 1. Investors and firms can trade the same set of securities at competitive market prices equal to the present value of their cash flows.
- 2. There are no taxes, transaction costs, or issuance costs associated with security trading.
- 3. A firm's financing decisions do not change the cash flows generated by investments, nor do they reveal new information about them.

Basic idea:

Keys:

1)

=>

Note: arbitrage is possible if the drop in the stock price doesn't equal the dividend

Ex. Assume stock price is \$50 and firm declares a dividend of \$5 per share. The ex-dividend price must be \$45.

If ex-divided price is \$46:

=>

=> Arbitrage profit =

If ex-dividend price is \$43

=>

=> Arbitrage profit =

2)

=>

Reason: the fall in the number of shares offsets the fall in the market value of the firm's assets

Ex. Assume a firm with 5 million outstanding shares has assets with a market value of \$100 million and that \$10 million of this is in cash.

=> Price per share = 20

Assume the firm uses \$8,000,000 to repurchase shares at \$20 per share

=> number of shares repurchased = 400,000 =

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Price per share after the repurchase = $20 =
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3)

4)

III. Taxes and Payout Policy

A. Stockholder Taxes and Payout Policy

Let: $\tau_d = tax$ rate on dividends $\tau_g = tax$ rate on capital gains

Notes:

1) 2) 3)

1.

Ex. Assume the tax rate on capital gains and dividends is 15% (true for qualified dividends this year). Assume also that you have purchased all 100 outstanding shares of a firm worth \$4800 (for \$48 per share). Finally, assume that the firm will generate cash flow of \$200 per year.

Note: Qualified dividends are dividends paid by public firms to investors who have held the stock for 61 days. The IRS has laid out specific requirements. Sources:

Investopedia Article on Qualified Dividends Investopedia Article on Capital Gains Taxes 1: Assume firm pays you \$200 of dividends (\$2 per share) per year

Tax = \$30 =

- 2: Assume firm uses \$200 to repurchase shares (from you)
 - Note: in order to prevent arbitrage the price before the repurchase, the price at which the firm repurchases, and the price after the repurchase must be the same
 - => price at which firm will repurchase shares = price before repurchase = \$50 =

=> Number of shares firm will repurchase at end of 1^{st} year = 4 =

Tax = \$1.20 =

Notes:

1) with repurchase, total taxes catch up when you sell remaining shares. => repurchases shift taxes to the future

=>

2)

3) see "Ch17: Examples" from website for a 10-year holding period example.

2.

Example: Assume firm currently has assets worth \$100 million but no surplus cash. Assume firm decides to pay \$10 million in dividends by issuing stock to the general public. Assume also that the dividend tax rate is 39% and the capital gain tax rate is 20% (these were the rates in 2001-2002).

a. impact on value of firm:

=>

b. impact on new stockholders:

1) 2)

c. Impact on original stockholders:

1)

2) tax on dividend = \$3.9 million =

3) impact on value of original stock

=> value of original stock = \$90 million

=> value of firm unchanged at \$100 million

=> new stockholders have stock worth \$10 million

4) tax savings due to reduction in capital gains

=> tax savings = \$2 million =

=> value of stock and cash = 98.1 =

5) Net impact

=> value of stock and cash = 98.1 =

=> net gain/loss =

Notes:

1)

2) see "Ch17: Examples" from website to examine the impact of issuing stock to pay dividends at various historical tax rates.

3. Tax Clienteles

a. Basic idea: in order for the to be no tax arbitrage, the after-tax capital loss when a stock goes ex-dividend must equal the after-tax gain from the dividend

=> can use this relationship to show the following:

$$P_{cum} - P_{ex} = Div\left(1 - \tau_d^*\right) \tag{17.2}$$

where:

$$\tau_d^* = \left(\frac{\tau_d - \tau_g}{1 - \tau_g}\right) \tag{17.3}$$

=> see supplement for proof

Example: Assume tax rate on dividends is 40% and on capital gains is 20% (these rates existed from 1997-2000).

$$\tau_d^* = .25 = \left(\frac{.4-.2}{1-.2}\right)$$

$$P_{cum} - P_{ex} = Div(1 - .25) =$$

$$=> \text{ net tax loss on dividend:}$$

=>

b. Tax Differences Across Investors

Key:

Ex. IRA or 401k Investors:

$$\tau_d = 0, \ \tau_g = 0; \ \tau_d^* = 0 =$$

Ex. Corporation w/ $\tau_c = .35$

Note: can exclude 70% of dividends received but capital gains fully taxed

$$\tau_d = .3^*.35 = .105, \ \tau_g = .35; \ \tau_d^* = -.3769 =$$

c. Clientele Effects

Basic idea: investor attitude towards dividends v. repurchases depends on tax rates

1) 2) 3)

B. Personal Taxes, Corporate Taxes, and Payout Policy

Basic idea: investor preferences for payouts rather than retention depends on tax rates

If pays out excess cash, stockholders can reinvest and pay taxes on interest at rate τ_i If firm retains cash and invests it, the firm will pay taxes on interest it earns at rate τ_c and the stockholder will pay capital gains taxes at rate τ_g

Using equation (17.2), the authors show that:

$$\tau_{retain}^* = 1 - \frac{(1 - \tau_c)(1 - \tau_g)}{(1 - \tau_i)}$$
(17.A)

where: τ_{retain}^* = effective tax disadvantage of retaining rather than paying out cash

Note: the tax disadvantage/disadvantage of retaining cash has changed over time as Congress has changed tax rates.

See Table 15.3 on p. 472 for a list tax rates from 1971-2005

Ex. From 2001-2002, $\tau_C = .35$, $\tau_i = .39$, $\tau_g = .15$

$$\tau^*_{retain} = .09426 =$$

=>

Ex. From 1979-1981, τ_{C} = .46, τ_{i} = .70, τ_{g} = .28

$$\tau^*_{retain} = -0.2960 =$$

IV. Other Issues in Payout Policy

A. Signaling

1. Dividend Smoothing

Two observations lead us to believe that management smoothes out dividends:

firms do not change dividends very often even if earnings are volatile
 firms increase dividends far more often than they decrease them

2. Dividend signaling

Basic ideas:

1)

2)

=> dividend increase:

=> dividend decrease:

Note: studies find evidence consistent with signaling hypothesis

3. Signaling and Share Repurchases

a. Share repurchases provide less of a signal about future earnings than dividends

=> unlike dividends:

1)

2)

b.

B. Issuance costs

Basic idea:

Note: relevant to firms with:

C. Distress costs

Basic idea:

Note: most relevant to firms with:

D. Agency Costs of Retaining Cash

Basic idea: excess cash allows managers to pursue pet projects or acquisitions, receive excessive perks, etc.

=>

V. Optimal payout

=> balance benefits and costs of retaining cash

Benefits: help firm avoid issuance costs and financial distress costs Costs: tax disadvantage, agency costs associated with excess cash

VI. Stock Dividends, Splits and Spinoffs

A. Stock Dividends and Splits

=>

=> % specifies percent of shares owned that receive in new shares Ex. 20% stock dividend = receive new shares = 20% of shares owned => receive 1 new share for every 5 owned

Stock split:

Implications:

Stock price:

- => firms might use to keep price per share between \$10 and \$60
- => as shown in Figure 17.8 in the textbook, most firms keep their stock price in this range.

Taxes:

B. Spinoffs

=>

Advantages to selling assets or division and paying proceeds as cash dividend:

1) Avoids transaction costs

2) Not taxed for stockholders