Lecture 10
Distributions to Shareholders: Dividends & Repurchases

- Dividend Policy
- Cash Dividend
- Does dividend policy matter?
  - Theories of investor preferences
  - Clientele Effects & Signaling Effects
- Residual dividend model: Setting Target Distribution Level
- Other Forms of Distribution

Dividend or Distribution Policy

- A dividend policy is the decision on how much of a firm's earnings to pay out as dividend to shareholders vs. retaining and reinvesting the earnings.
- Distribution policy is concerned with:
  - The level of cash distributions
  - The form of distributions (dividend vs. stock repurchase)
  - The stability of distributions

Three Elements of Dividend Policy

- What percentage of earnings should be distributed?
- Should the cash distribution be in the form of dividends or passed on by stock repurchase?
- How stable should the distribution be?
  - Should the funds paid out from year to year be stable and dependable (i.e. increased by a given percentage each year), or
  - be allowed to vary with the firm's cash flows and investment requirements?

Different Types of Dividend

- Cash Dividends

  Most common; usually paid quarterly.
- Share Repurchases
- Stock Dividends

  Distribute shares instead of cash
- Stock Split
- Dividend Reinvestment Plans (DRIP)

Cash Dividends

- Types:
  - Regular cash dividend – cash payments made directly to stockholders, usually each quarter
  - Extra cash dividend – indication that the “extra” amount may not be repeated in the future
  - Special cash dividend – similar to extra dividend, but definitely will not be repeated
- Cash dividends reduce cash and retained earnings.

Important Dates of Dividends

- Declaration Date: the date on which the board of directors announces that the company will pay a dividend.
- Ex-dividend Date: the date on which a stock starts to trade without dividend.
- Record Date: the date on which the company looks at the list of “shareholders of record” to determine who has the right to receive dividend.
- Payment Date: the date on which dividend is mailed out to holders of record.

Important Dates of Dividends

- NYSE rule: shares are traded “ex-dividend” on and after the second business day before the day of record.
- Share price should drop ON the ex-dividend day by *about* the amount of the dividend.
- So if you buy on or after the ex-date, you will pay a lower price but won’t receive dividend.
- The record date is usually 2 weeks before payment date.

Dividend Yields for Selected Industries

Industry	Div. Yield %
Internet Service Providers	0.00
Biotechnology	0.87
Application Software	1.35
Paper & Paper Products	1.63
Restaurants	2.79
Tobacco Products	2.84
Chemical Manufacturing	2.90
Electric Utilities	4.26

(Source: http://biz.yahoo.com/p/sum_conameu.html as of May 2010**)**
http://www.indexarb.com/dividendYieldSortedsp.html

Does Dividend Policy Matter?

- Can a firm increase its value through its choice of distribution policy?
- The value of the stock is based on the present value of expected future dividends.
- Dividend policy is the decision to pay dividends versus retaining funds to reinvest in the firm.
- In theory, if the firm reinvests capital now, it will grow and can pay higher dividends in the future.

Does Dividend Policy Matter?

- There are three theories:
  - Dividends are irrelevant: Investors don't care about payout.
  - Bird-in-the-hand: Investors prefer a high payout.
  - Tax preference: Investors prefer a low payout, hence growth.

Dividend Irrelevance Theory

- MM (Modigliani-Miller) Theorem: a firm's value is determined only by its basic earning power and its business risk.
- Implications: The capital structure of a firm (how it raises capital – issuing stocks or selling debts) has no effect on either the stock price or the cost of capital of a firm.
- Investors are indifferent between dividends and retention-generated capital gains. If they want cash, they can sell stock. If they don't want cash, they can use dividends to buy stock.

Dividend Irrelevance Theory

- The MM (Modigliani-Miller) theorem supports irrelevance, but it assumes no taxes or bankruptcy costs, no asymmetric information*, and that the capital market is efficient.
- The assumptions are not realistic, so the theory may not hold and need empirical tests.

* Asymmetric information: when one party is better informed than the other party involved in a transaction.

Bird-in-the-Hand Theory*

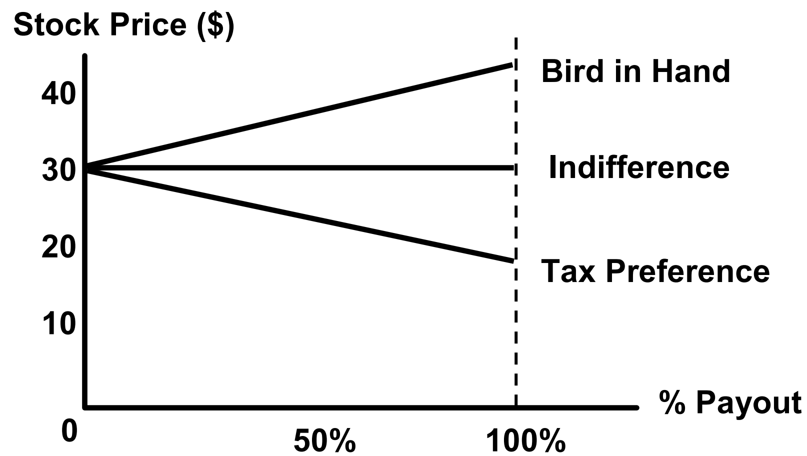
- Investors think dividends are less risky than potential future capital gains, hence they prefer dividends.
- If so, investors would value high payout firms more, i.e., a high dividend payout would result in a high P_0.
- Dividends may grow (*g > 0)* overtime*.*

* "*A bird in the hand is better than two in the bush*" is a proverb saying that it is better to stick with something you already have than to pursue something you may never get.

Tax Preference Theory

- Investors prefer low dividend payout in order to get growth and capital gains.
- Rationale: Retained earnings lead to capital gains, which are taxed at lower rates than dividends: 28% maximum vs. up to 39.6%.
- Capital gains taxes are also deferred until the stock is sold (when the gain is realized).
- This could cause investors to prefer firms with low payouts, i.e., a high payout results in a low P_0.

Possible Stock Price Effects



Implications of these 3 Theories for Managers

Theory	Implication
Irrelevance	Any payout "ok"
Bird-in-hand	Set high payout
Tax preference	Set low payout

But which, if any, is correct?

Which theory is most correct?

- Empirical testing has **not** been able to determine which theory, if any, is correct.
- Thus, managers must use judgment when setting policy.
- Analysis is used, but it must be applied with judgment.

“Clientele Effect” on Dividend Policy

- Different groups of investors, or clienteles, prefer different dividend policies.

  (e.g. retirees would prefer dividends)
- Firm’s past dividend policy determines its current clientele of investors.
- Clientele effects impede changing dividend policy. Taxes & brokerage costs hurt investors who want to switch companies due to a change in payout policy.

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"Clientele Effect" on Dividend Policy

- A change in dividend policy might
  - cause some existing clientele to sell the stock → price ↓
  - attract new clienteles who will buy the stock → price ↑
- Net effect is not clear!
- MM argues that one clientele is as good as another, so clientele effect does not mean one dividend policy is better than another.

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"Information Content" or "Signaling" Hypothesis of Dividend Policy

- Investors view dividend increases as *signals* of management's view of the future.
- So managers won't raise dividends unless they think the raise is sustainable → having to cut dividends later would send a negative signal.
- Therefore, a stock price increase at time of a dividend increase could reflect higher expectations for future EPS (earning per share), not a preference for dividends over retention.

"Information Content" or "Signaling" Hypothesis

- By the same token, a dividend cut could be interpreted as a signal that managers are worried about future earnings.
- So managers must use judgment when setting dividend policies.
- The signaling impact constrains dividend decisions by imposing a large cost on a dividend cut and by discouraging managers from raising dividends until they are sure about future earnings.

Setting Target Distribution Level: The Residual Dividend Model

- Find the retained earnings needed for the capital budget.
- Pay out any leftover or residual earnings as either dividends or stock repurchases.
- This policy minimizes flotation and equity signaling costs, hence minimizes the WACC.

Using the Residual Model to Calculate Dividends Paid

$$\text{Dividends} = \begin{matrix}\text{Net}\\ \text{income}\end{matrix} - \left(\begin{matrix}\text{Target}\\ \text{equity}\\ \text{ratio}\end{matrix}\right)\left(\begin{matrix}\text{Total}\\ \text{capital}\\ \text{budget}\end{matrix}\right)$$

Example

- Capital budget: $800,000.
- Target capital structure: 40% debt, 60% equity. Expected to maintain.
- Forecasted net income: $600,000.
- How much of the $600,000 should the firm pay out as dividends?

Example

Of the $800,000 capital budget:

- 0.6($800,000) = $480,000 must be equity
- 0.4($800,000) = $320,000 will be debt

to maintain the target capital structure.

- With $600,000 of net income, the residual is $600,000 - $480,000 = $120,000 = dividends paid.
- Payout ratio = $120,000 / $600,000 = 0.20 = 20%.

How would dividend be affected if
- NI dropped to $400,000?
- NI rose to $800,000?

- NI = $400,000:

  Need $480,000 of equity, so should retain the entire $400,000. Dividends = $0.

- NI = $800,000:

  Dividends = $800,000 - $480,000 = $320,000. Payout = $320,000/$800,000 = 40%.

How would a change in investment opportunities affect dividend under the "residual" policy?

- Fewer good investments would lead to smaller capital budget, hence to a **higher** dividend payout.
- More good investments would lead to a **lower** dividend payout.

Advantages and Disadvantages of the Residual Dividend Policy

- Advantage: Minimizes new stock issues and flotation costs.
- Disadvantages: Results in variable (unstable) dividends, sends conflicting signals, increases risk, and doesn't appeal to any specific clientele.
- Conclusion: Consider residual policy when setting target payout, but don't follow it rigidly.

Setting Dividend Policy

- Estimate earnings and investment opportunities over a planning horizon (say, 5 years or so).
- Forecast the average capital needs and set a target capital structure for the planning period.
- Estimate annual equity needs and set long-run target payout ratio based on the Residual Model – Smoothed Residual Dividend Policy
- Some dividend growth rate will emerge. Maintain target growth rate if possible, varying capital structure somewhat if necessary.

Dividend Payout Ratios for Selected U.S. Industries

Industry	Payout ratio
Banking	38.29
Computer Software Services	13.70
Drug	38.06
Electric Utilities (Eastern U.S.)	67.09
Internet*	n/a
Semiconductors	24.91
Steel	51.96
Tobacco	55.00
Water utilities	67.35

***None of the internet companies included in the Value Line Investment Survey paid a dividend.**

Dividend Payout Ratios in 2007 Selected HK Listed Companies

Company	Payout ratio
Hang Seng Bank	66.04%
HSBC	54.55%
China Construction Bank	68.24%
Cheung Kong Holdings	20.5%
Sun Hung Kai Properties	23%
Henderson	14.59%
Hong Kong Exchange	89.79%
Esprit	80.61%

Alternative Forms of Distribution

Other Forms of Distribution:

- Stock Repurchases
- Stock Dividends & Stock Splits
- Dividend Reinvestment Plans

Stock Repurchases or “Buybacks”

- The company repurchases (buys back) its stocks from shareholders in one of two ways:
  - A Tender Offer stipulating the number shares and the price range (almost always at a premium).
  - Buy shares on the open market at the market price.
- Repurchased shares become Treasury Stock which can be sold again or used when employees exercise their stock options.

http://www.morevalue.com/glossary/restrict/Dividend-PGE.html

Reasons for Stock Repurchases

- An alternative to distributing cash dividends.
  - Distribute cash without setting high dividend that cannot be maintained.
- To dispose of a one-time cash flow from an asset sale.
- To make a large capital structure change.
  - E.g. increase its leverage by issuing debt and use the proceeds to buy back stock.

Reasons for Stock Repurchases

- Increase the stock's EPS (earning per share) because a repurchase decreases the number of shares outstanding.
- To reduce the risk of a take-over
  - Reduce the number of shares outstanding
  - Drain excess cash from the firm
- A positive signal effect:
  - management thinks stock is undervalued
  - higher expected earnings and CFs
- Treasury stocks can be use in takeovers or resold to raise cash when needed.

Advantages of Repurchases

- Stockholders have a choice: sell or decline to sell (no choice in receiving cash dividend).
- Stockholders pay tax only on the capital gains portion.
  - Income received is capital gains
  - Cash dividend is taxed as ordinary income at a higher rate.
- Repurchases may remove large block of stocks that have been overhanging the market and diluting share value.

Disadvantages of Repurchases

- May be viewed as a negative signal – the firm has poor investment opportunities.
- IRS could impose penalties if repurchases were being used primarily to avoid taxes on dividends.
- Selling stockholders may not be well-informed, hence be treated unfairly.
- Firm may have to bid up price to complete purchase, thus paying too much for its own stock.

Stock Dividends & Stock Splits

- Stock dividend: Firm issues new shares in lieu of paying a cash dividend.

  Example: A 10% stock dividend = get 10 shares for every 100 shares owned.
- Stock split: A 2-for-1 split, for example, will double the number of shares outstanding and half the earnings and dividends per share.

  (A reverse split is also possible.)

Stock Dividends vs. Stock Splits

- Both stock dividends and stock splits increase the number of shares outstanding, so “the pie is divided into smaller pieces” without affecting the fundamental position of the current stockholders.
- Unless the stock dividend or split conveys information, or is accompanied by another event like higher dividends, *the stock price will fall so as to keep each investor’s wealth unchanged*.
- Stock dividends or splits may get us to an “optimal price range”.

When should a firm consider splitting its stock?

- A widespread belief is that the *optimal price range* for stocks is between US$20 to $80.
- Stock splits can be used to keep the price in the optimal range.
- Stock splits generally occur when management is confident about the future, so are interpreted as *positive signals* → the announcement of a stock split usually result in a rise in the share price.

Dividend Reinvestment Plan (DRIP)

- Dividend reinvestment plans (DRIPS) allow investors who enrolled in the plan to reinvest dividend income back into the issuing company without paying commissions.
- Two types of plan:
  - Open market purchase
  - New stock

Open Market Purchase Plan

- Total amount available for reinvestment is turned over to a trustee who will buy “old” (outstanding) shares on the open market.
- Brokerage costs are reduced by volume purchases.
- Convenient, easy way to invest, thus useful for investors.

New Stock Plan

- Firm uses the dividends of DRIP enrollees to buy *newly issued* stocks and keeps the money as equity capital.
- No fees are charged to shareholders.
- New stock is typically sold at a discount of 3 - 5% below market price, which is roughly equal to flotation costs of underwritten stock offering.
- Shareholders will get more shares of stock than cash dividend.

Disadvantage of DRIP

- Investors must pay taxes as if they received cash dividend.
- Why? Because they could have received cash but have chosen not to do so.
- So dividends reinvested are still considered taxable income even investors did not receive any cash.

DRIP - Summary

- Firms that need new equity capital use new stock plans.
- Firms with no need for new equity capital use open market purchase plans.
- Most NYSE listed companies offer DRIPs.
- Useful for investors because they can acquire additional shares without brokerage.
- Dividend payments are taxable.