

Introduction to Financing

Prepared by Dr. Sara Abdallah

Lecture 9





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Dividends and Dividends Policy

Lecture 9

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Key Concepts and Skills

Understand:

- Dividend types and how they are paid
- The issues surrounding dividend policy decisions
- The difference between cash and stock dividends
- Why share repurchases are an alternative to dividends



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Outline

- 1 Cash Dividends and Dividend Payment
- 2 Does Dividend Policy Matter?
- 3 Establishing a Dividend Policy
- 4 Stock Repurchase: An Alternative to Cash Dividends
- 5 Stock Dividends

Cash Dividends

- Regular cash dividend = Cash payment by a firm to its owners as part of a firm's normal operations, 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 won't be repeated
- Liquidating dividend = some or all of the business has been sold

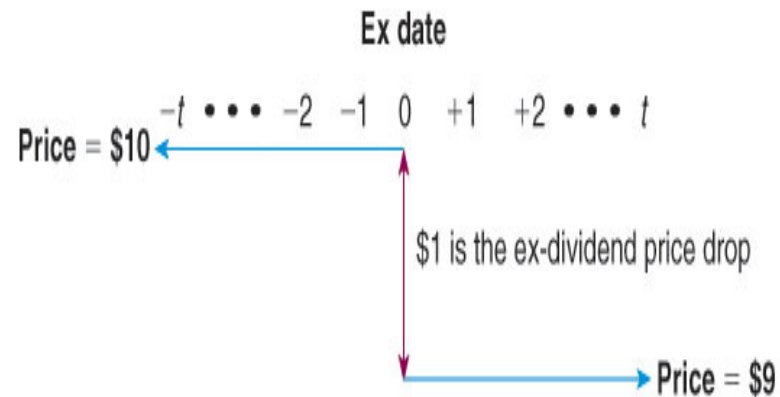
Dividend Payment Chronology -Dividend policy

- Declaration Date – Board declares the dividend and it becomes a liability of the firm
- Ex-dividend Date
 - Occurs two business days before date of record
 - If you buy stock on or after this date, you will not receive the upcoming dividend
 - Stock price generally drops by approximately the amount of the dividend
- Date of Record – holders of record are determined, and they will receive the dividend payment
- Date of Payment – checks are mailed

The Ex-Dividend Day Price Drop

FIGURE 14.2

Price behavior around
the ex-dividend date
for a \$1 cash dividend



The stock price will fall by the amount of the dividend on the ex date (Time 0). If the dividend is \$1 per share, the price will be equal to $\$10 - 1 = \9 on the ex date.

Before ex date (Time -1)	Dividend = \$0	Price = \$10
On ex date (Time 0)	Dividend = \$1	Price = \$9

Ex-Dividend Day Price Drop Practice

Gatto, Incorporated, has declared a \$5.85 per share dividend. Suppose capital gains are not taxed, but dividends are taxed at 15 percent. New IRS regulations require that taxes be withheld at the time the dividend is paid. The company's stock sells for \$78.35 per share, and the stock is about to go ex dividend.

What do you think the ex-dividend price will be? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

Ex-dividend price	\$ 73.38 _{+/-1%}
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Ex-Dividend Day Price Drop Practice

Explanation:

Note: Intermediate answers are shown below as rounded, but the full answer was used to complete the calculation.

The aftertax dividend is the pretax dividend times one minus the tax rate, so:

$$\text{Aftertax dividend} = \$5.85(1 - .15)$$

$$\text{Aftertax dividend} = \$4.97$$

The stock price should drop by the aftertax dividend amount, or:

$$\text{Ex-dividend price} = \$78.35 - 4.97$$

$$\text{Ex-dividend price} = \$73.38$$

Ex-Dividend Day Price Drop Practice

The market value balance sheet for Murray Manufacturing is shown here. The company has declared a stock dividend of 25 percent. The stock goes ex dividend tomorrow (the chronology for a stock dividend is similar to that for a cash dividend).

Market Value Balance Sheet			
Cash	\$ 134,000	Debt	\$ 116,000
Fixed assets	652,000	Equity	670,000
Total		Total	
\$ 786,000		\$ 786,000	

There are 11,000 shares of stock outstanding. What is the current share price? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

What will the ex-dividend price be? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

Ex-Dividend Day Price Drop Practice

Explanation:

Note: Intermediate answers are shown below as rounded, but the full answer was used to complete the calculation.

The stock price is the total market value of equity divided by the shares outstanding, so:

$$P_0 = \$670,000 \text{ equity} / 11,000 \text{ shares}$$

$$P_0 = \$60.91 \text{ per share}$$

The shares outstanding will increase by 25 percent, so:

$$\text{New shares outstanding} = 11,000(1.25)$$

$$\text{New shares outstanding} = 13,750$$

The new stock price is the market value of equity divided by the new shares outstanding, so:

$$P_X = \$670,000 / 13,750 \text{ shares}$$

$$P_X = \$48.73$$

Does Dividend Policy Matter?

- Dividends matter
 - The value of the stock is based on the present value of expected future dividends
- Dividend policy may not matter
 - 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

Illustration of Irrelevance

Wharton Corporation

- All equity firm with 100 shares outstanding
- Investors require a 10% return.
- Expected cash flow = \$10,000 each year
- Plans to dissolve firm in 2 years
- Firm can either:
 - A. Pay out dividends of \$10,000 per year for each of the next two years (\$100 per share), or
 - B. Pay \$11,000 this year, raising the other \$1,000 by issuing stock (or bonds), then pay an amount in year 2 sufficient to provide new shareholders with a 10% return

Illustration of Irrelevance

Wharton Corporation

		PLAN A:		PLAN B:	
		Year 1	Year 2	Year 1	Year 2
Cash Flow		\$10,000	\$10,000	\$10,000	\$10,000
New stock		\$0	\$0	\$1,000	\$0
CF available to S/H:		\$10,000	\$10,000	\$11,000	
To New S/H:					
Dividends		\$0	\$0		\$1,100
DPS		\$0	\$0		\$110
To Old S/H:					
Dividends		\$10,000	\$10,000	\$11,000	\$8,900
DPS		\$100	\$100	\$110	\$89
Stock Price		\$ 173.55		\$ 173.55	
E(R)		10%		10%	

Factors Favoring a Low Payout

- Taxes:
 - Individuals in upper income tax brackets might prefer lower dividend payouts, with their immediate tax consequences, in favor of higher capital gains
- Flotation costs:
 - Low payouts can decrease the amount of capital that needs to be raised, thereby lowering flotation costs
- Dividend restrictions:
 - Debt covenants may limit the percentage of income that can be paid out as dividends

Factors Favoring a High Payout

- Desire for current income:
 - Individuals in low tax brackets
 - Groups that are prohibited from spending principal (trusts and endowments)
- Uncertainty resolution:
 - No guarantee that the higher future dividends will materialize
- Taxes:
 - Dividend exclusion for corporations
 - Dividends versus capital gains irrelevant to tax-exempt investors

Clientele Effects

- Investor preference:
 - Some investors prefer low dividend payouts
 - Some investors prefer high payouts
 - Investors will buy stock in companies that meet their dividend preferences
- What do you think will happen if a firm changes its policy from a high payout to a low payout? ... or vice versa?..... Dividend policy is irrelevant as long as each clientele group is currently satisfied.

Stock Repurchase

- Company buys back shares of its own stock
 - Open market = company buys its own stock in the open market
 - Tender offer = company states a purchase price and a desired number of shares to be bought
 - Targeted repurchase = firm repurchases shares from specific individual shareholders
- Repurchase vs. cash dividend:
 - Repurchase returns cash from the firm to the stockholders
 - Same as cash dividend in the absence of taxes and transactions costs

Tax Effects of Stock Repurchases

- Decrease in P/E ratio
- Cash dividends:
 - No investor control over timing or size
 - Taxed as ordinary income
- Repurchase:
 - Allows investors to decide if they want a current cash flow
 - Taxed only if:
 - They choose to sell AND
 - They reap a capital gain on the sale
 - Gain may qualify as lower taxed capital gains if shares owned more than one year.

Stock Repurchases Practice

The balance sheet for Quinn Corporation is shown here in market value terms. There are 12,000 shares of stock outstanding.

Market Value Balance Sheet			
Cash	\$ 49,300	Equity	\$ 404,300
Fixed assets	355,000		
Total		Total	\$ 404,300

The company has announced a share repurchase of \$17,400 worth of stock.

How many shares will be outstanding after the repurchase? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

What will the price per share be after the repurchase? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

Shares outstanding	11,483.55 ^{+/-0.1%}
New stock price	\$ 33.69 ^{+/-1%}

Stock Repurchases Practice

Explanation:

Note: Intermediate answers are shown below as rounded, but the full answer was used to complete the calculation.

The stock price is the total market value of equity divided by the shares outstanding, so:

$$P_0 = \$404,300 \text{ equity} / 12,000 \text{ shares}$$

$$P_0 = \$33.69 \text{ per share}$$

Repurchasing the shares will reduce cash and shareholders' equity by \$17,400. The shares repurchased will be the total purchase amount divided by the stock price, so:

$$\text{Shares bought} = \$17,400 / \$33.69$$

$$\text{Shares bought} = 516.45$$

And the new shares outstanding will be:

$$\text{New shares outstanding} = 12,000 - 516.45$$

$$\text{New shares outstanding} = 11,483.55$$

After repurchase, the new stock price is:

$$\text{Share price} = (\$404,300 - \$17,400) / 11,483.55 \text{ shares}$$

$$\text{Share price} = \$33.69$$

The repurchase is effectively the same as the cash dividend because you either hold a share worth \$33.69, or a share worth \$32.24 and \$1.45 in cash. Therefore, if you participate in the repurchase according to the dividend payout percentage, you are unaffected.

Stock Repurchases Practice

Erna Corporation is evaluating an extra dividend versus a share repurchase. In either case, \$53,500 would be spent. Current earnings are \$1.79 per share and the stock currently sells for \$64 per share. There are 9,000 shares outstanding. Ignore taxes and other imperfections.

- a. Evaluate the two alternatives in terms of the effect on the price per share of the stock and shareholder wealth per share. **(Do not round intermediate calculations and round your answers to 2 decimal places, e.g., 32.16.)**
- b. What will be the effect on the company's EPS and PE ratio under the two different scenarios? **(Do not round intermediate calculations and round your answers to 2 decimal places, e.g., 32.16.)**

a. Price per share with dividend	\$ 58.06 _{+/-1%}
a. Shareholder wealth with dividend	\$ 64.00 _{+/-1%}
a. Price per share with repurchase	\$ 64.00 _{+/-1%}
a. Shareholder wealth with repurchase	\$ 64.00 _{+/-1%}
b. EPS with dividend	\$ 1.79 _{+/-1%}
b. PE with dividend	32.43 _{+/-1%}
b. EPS with repurchase	\$ 1.97 _{+/-1%}
b. PE with repurchase	32.43 _{+/-1%}

Stock Repurchases Practice

Explanation:

Note: Intermediate answers are shown below as rounded, but the full answer was used to complete the calculation.

a.

If the company makes a dividend payment, we can calculate the wealth of a shareholder as:

Dividend per share = $\$53,500 / 9,000$ shares

Dividend per share = $\$5.94$

The stock price after the dividend payment will be:

$P_X = \$64 - 5.94$

$P_X = \$58.06$ per share

The shareholder will have a stock worth $\$58.06$ and a dividend of $\$5.94$ for a total wealth of $\$64$.

If the company makes a repurchase, it will repurchase:

Shares repurchased = $\$53,500 / \64

Shares repurchased = 835.94 shares

If the shareholder lets their shares be repurchased, they will have $\$64$ in cash. If the shareholder keeps their shares, they are still worth $\$64$.

Stock Repurchases Practice

b.

If the company pays dividends, the current EPS is \$1.79, and the PE ratio is:

$$PE = \$58.06 / \$1.79$$

$$PE = 32.43$$

If the company repurchases stock, the number of shares will decrease. The total net income is the EPS times the current number of shares outstanding. Dividing net income by the new number of shares outstanding, we find the EPS under the repurchase is:

$$EPS = \$1.79(9,000) / (9,000 - 835.94)$$

$$EPS = \$1.97$$

The stock price will remain at \$64 per share, so the PE ratio is:

$$PE = \$64 / \$1.97$$

$$PE = 32.43$$

Dividend Summary

1. Aggregate dividend and stock repurchases are massive and have increased steadily.
2. Dividends heavily concentrated among a small number of large firms
3. Managers very reluctant to cut dividends
4. Managers smooth dividends, raising them slowly as earnings grow.
5. Stock prices react to unanticipated changes in dividends

Information Content of Dividends & Repurchases

- Changes in the dividend signal management's view concerning the firm's future prospects
- Stock repurchases signal that management believes the current stock price is low
- Tender offers send a more positive signal than open market repurchases because the company is stating a specific stock price
- Stock prices often increase when repurchases are announced

Pros and Cons of Paying Dividends

Pros

1. Cash dividends underscore good results and provide support to stock price
2. Dividends may attract institutional investors
3. Stock price usually increases with a new or increased dividend
4. Dividends absorb excess cash and may reduce agency costs

Cons

1. Dividends are taxed to recipients
2. Dividends can reduce internal sources of funding
 - May force firm to forgo positive NPV projects
 - May require external financing
3. Once established, dividends cuts are hard to make without adversely affecting a firm's stock price.

Factors that Affect Dividend Decisions

Survey Results

Managers:

1. Try to avoid reducing dividends per share
2. Try to maintain a smooth dividend from year to year
3. Consider the level of dividends per share paid in recent quarters
4. Reluctant to make dividend changes that might have to be reversed in the future

Stock Dividends

- Distribute additional shares of stock instead of cash
- Increases the number of outstanding shares
- Small stock dividend
 - Less than 20 to 25%
 - If you own 100 shares and the company declared a 10% stock dividend, you would receive an additional 10 shares
- Large stock dividend – more than 20 to 25%

Stock Dividends Practice

The owners' equity accounts for Vulcano International are shown here:

Common stock (\$.50 par value)	\$ 20,000
Capital surplus	210,000
Retained earnings	587,300
Total owners' equity	\$ 817,300

- a- If the company's stock currently sells for \$42 per share and a 10 percent stock dividend is declared, how
1. many new shares will be distributed? **(Do not round intermediate calculations.)**

New shares issued

4,000_{+/-0.1%}

Stock Dividends Practice

- a- Show the new equity account balances after the stock dividend is paid. **(Do not round intermediate calculations.)**

Common stock	\$	22,000 ^{+/-0.1%}
Capital surplus		376,000 ^{+/-0.1%}
Retained earnings		419,300 ^{+/-0.1%}
Total owners' equity	\$	817,300 ^{+/-0.1%}

- b- If the company declared a 25 percent stock dividend, how many new shares will be distributed? **(Do not round intermediate calculations.)**

New shares issued	10,000 ^{+/-0.1%}
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- b- Show the new equity account balances after the stock dividend is paid. **(Do not round intermediate calculations.)**

Common stock	\$	25,000 ^{+/-0.1%}
Capital surplus		625,000 ^{+/-0.1%}
Retained earnings		167,300 ^{+/-0.1%}
Total owners' equity	\$	817,300 ^{+/-0.1%}

Stock Splits

- A non-cash payment made by a firm to its shareholders and is a payment that lessens the value of each outstanding share.
- Essentially the same as a stock dividend except expressed as a ratio
 - For example, a 2-for-1 stock split is the same as a 100% stock dividend
- Stock price is reduced when the stock splits
- Common explanation for split is to return price to a “more desirable trading range”

Stock Splits Practice

The owners' equity accounts for Vulcano International are shown here:

Common stock (\$.50 par value)	\$ 20,000
Capital surplus	210,000
Retained earnings	587,300
Total owners' equity	\$ 817,300

- a- The company declares a 4-for-1 stock split. How many shares are outstanding now? **(Do not round 1. intermediate calculations.)**
- a- The company declares a 4-for-1 stock split. What is the new par value per share? **(Do not round 2. intermediate calculation and round your answer to 3 decimal places, e.g., 32.161.)**
- b- The company declares a 1-for-5 reverse stock split. How many shares are outstanding now? **(Do not 1. round intermediate calculations.)**
- b- The company declares a 1-for-5 reverse stock split. What is the new par value per share? **(Do not 2. round intermediate calculation and round your answer to 2 decimal places, e.g., 32.16.)**

a-1. New shares outstanding	160,000 $\pm 0.1\%$	
a-2. New par value	\$ 0.125 $\pm 1\%$	per share
b-1. New shares outstanding	8,000 $\pm 0.1\%$	
b-2. New par value	\$ 2.50 $\pm 1\%$	per share

Stock Splits Practice

Explanation:

Note: Intermediate answers are shown below as rounded, but the full answer was used to complete the calculation.

a-1.

Since the par value is \$.50 and the common stock account is \$20,000, there are 40,000 shares outstanding. To find the new shares outstanding, we multiply the current shares outstanding times the ratio of new shares to old shares, so:

New shares outstanding = $40,000(4/1)$

New shares outstanding = 160,000

a-2.

The equity accounts are unchanged except the par value of the stock is changed by the ratio of new shares to old shares, so the new par value is:

New par value = $$.50(1/4)$

New par value = \$.125 per share

b-1.

To find the new shares outstanding, we multiply the current shares outstanding times the ratio of new shares to old shares, so:

New shares outstanding = $40,000(1/5)$

New shares outstanding = 8,000

b-2.

The equity accounts are unchanged except the par value of the stock is changed by the ratio of new shares to old shares, so the new par value is:

New par value = $$.50(5/1)$

New par value = \$2.50 per share

Reverse Stock Splits

- Reverse Split reduces number of shares outstanding with no change in total Equity
 - For example, a 1-for-5 stock split replaces every 5 shares of stock with one share
- Reasons:
 1. Transactions costs may be less for investors
 2. Liquidity might be improved
 3. Too low a price not considered “respectable”
 4. Exchange minimum price per share requirements

Stock Splits and Stock Dividends Practice

Stockton Mineral Operations, Incorporated (SMO), currently has 540,000 shares of stock outstanding that sell for \$83 per share. Assuming no market imperfections or tax effects exist, what will the share price be after:

- a. SMO has a 5-for-3 stock split? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**
- b. SMO has a 15 percent stock dividend? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**
- c. SMO has a 42.5 percent stock dividend? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**
- d. SMO has a 4-for-7 reverse stock split? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

Stock Splits and Stock Dividends Practice

Explanation:

Note: Intermediate answers are shown below as rounded, but the full answer was used to complete the calculation.

To find the new stock price, we multiply the current stock price by the ratio of old shares to new shares, so:

a.

New share price = $\$83(3/5)$

New share price = \$49.80

b.

New share price = $\$83(1/1.15)$

New share price = \$72.17

c.

New share price = $\$83(1/1.425)$

New share price = \$58.25

d.

New share price = $\$83(7/4)$

New share price = \$145.25

Stock Splits and Stock Dividends Practice

- e. Determine the new number of shares outstanding in parts (a) through (d). **(Do not round intermediate calculations and round your answers to the nearest whole number, e.g., 32.)**

a. New shares outstanding	900,000 $\pm$ 0.1%
b. New shares outstanding	621,000 $\pm$ 0.1%
c. New shares outstanding	769,500 $\pm$ 0.1%
d. New shares outstanding	308,571 $\pm$ 0.1%

Stock Splits and Stock Dividends Practice

e.

To find the new shares outstanding, we multiply the current shares outstanding times the ratio of new shares to old shares, so:

a: New shares outstanding = $540,000(5/3)$
New shares outstanding = 900,000

b: New shares outstanding = $540,000(1.15)$
New shares outstanding = 621,000

c: New shares outstanding = $540,000(1.425)$
New shares outstanding = 769,500

d: New shares outstanding = $540,000(4/7)$
New shares outstanding = 308,571

Quick Quiz

1. What are the different types of cash dividends?
2. How is a dividend paid?
3. What is the clientele effect?
4. What are stock dividends, and how do they differ from cash dividends?
5. How are share repurchases an alternative to dividends, and why might investors prefer them?



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