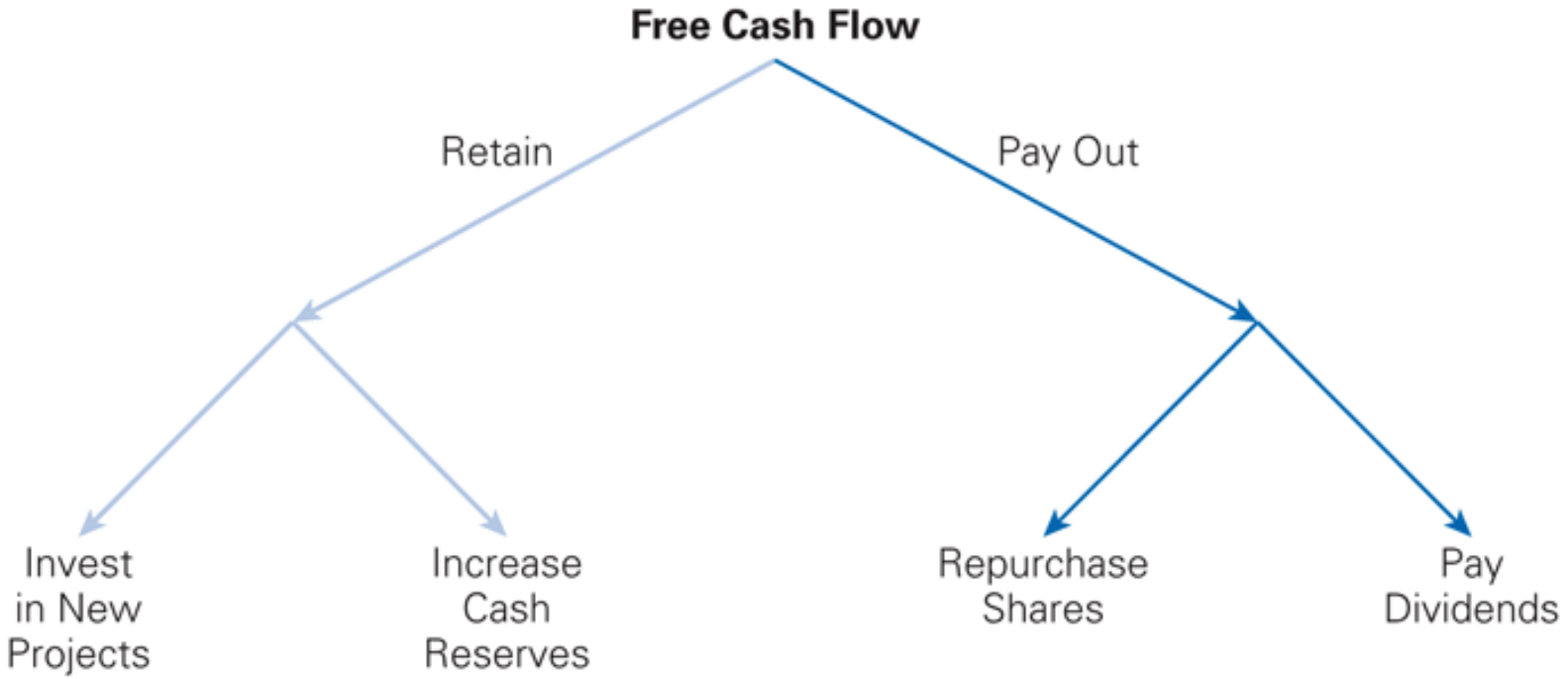
PAYOUT POLICY

Payout Policy:

When firms distribute cash flows to shareholders…

i) *how much?*

ii) *in what form?*

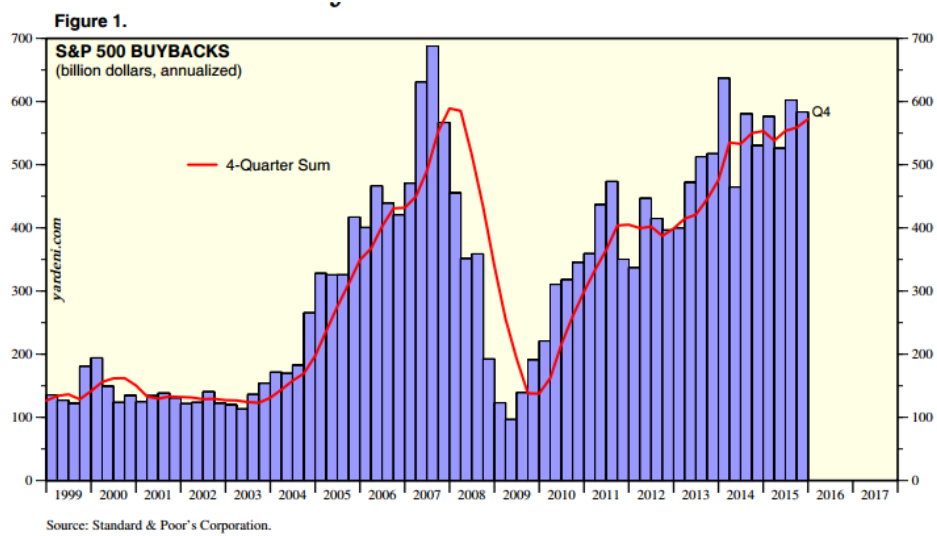


Trends in Payout Policy

- Most firms engage in some kind of payout to shareholders
- Possible payout forms: dividends, repurchases, or both
- The importance of dividends has decreased over last 20-30 years
  - Typical “Dividend yield” (Dividend/Stock Price) have fallen from about 5% to around 1.5%
- Share repurchases have become increasingly important
  - Among S&P 500 firms, share repurchases grew from almost nothing in 1980 to now being greater than dividends in aggregate
  - Average “Repurchase yield” currently around 2%
  - However, repurchases remain more volatile and pro-cyclical than dividends

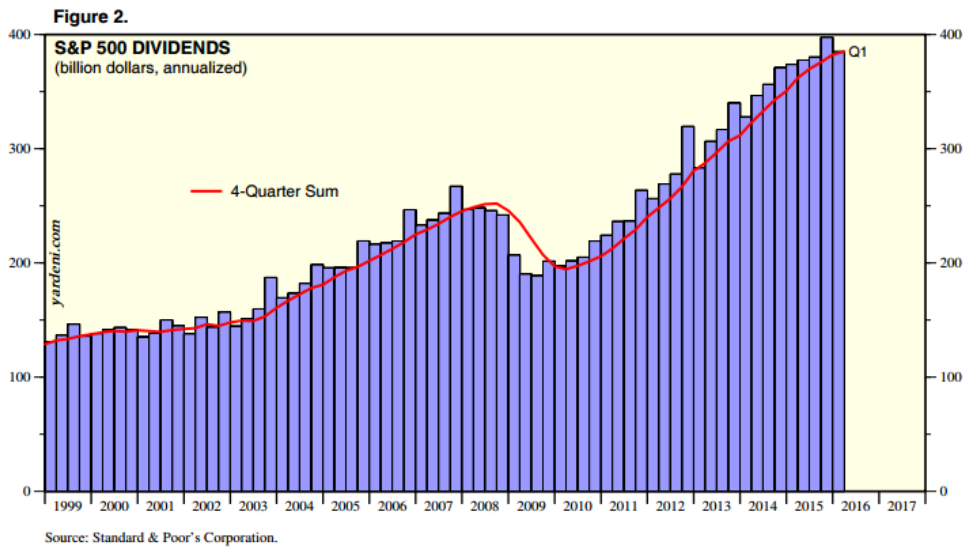
Corporations spend almost $1 trillion per year on repurchases (“buybacks”) and dividends combined

Figure 1.



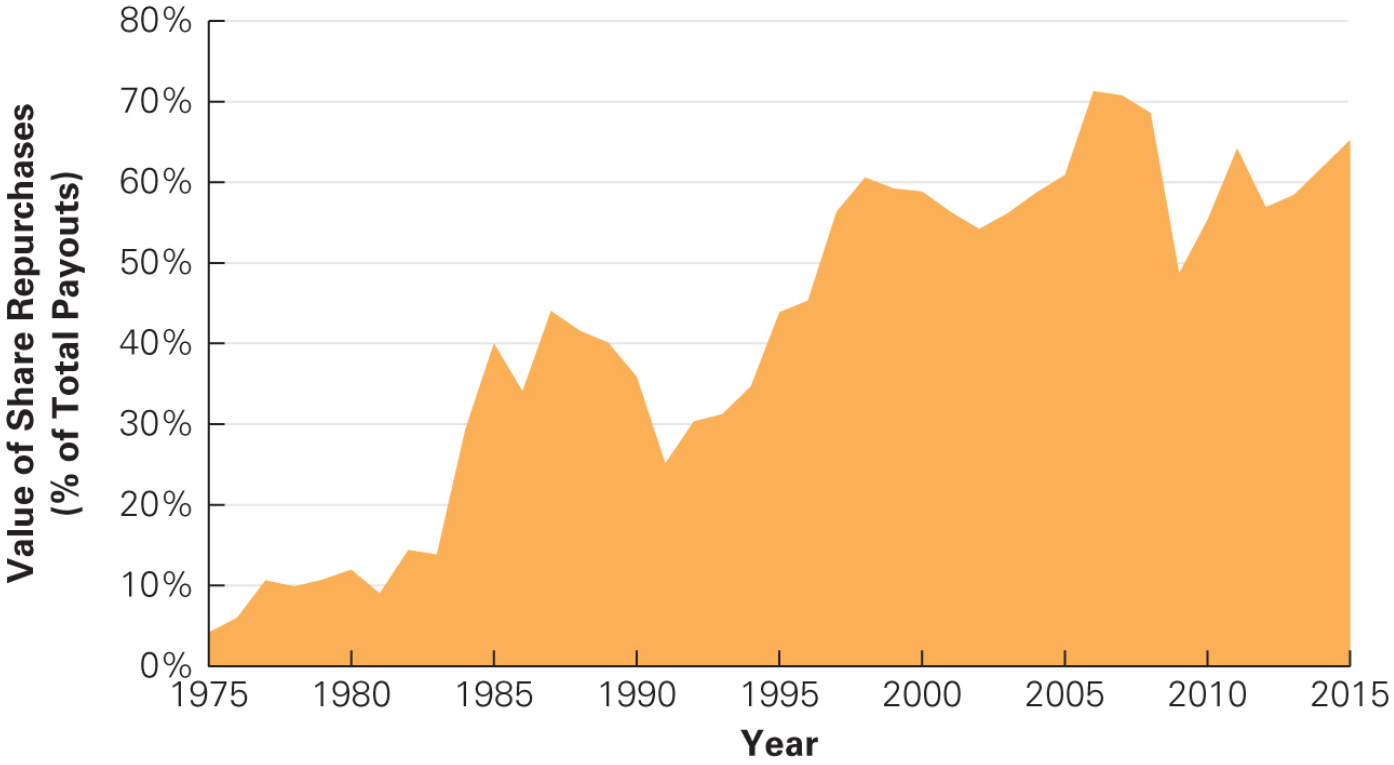
Source: Standard & Poor’s Corporation.

Figure 2.



Source: Standard & Poor’s Corporation.

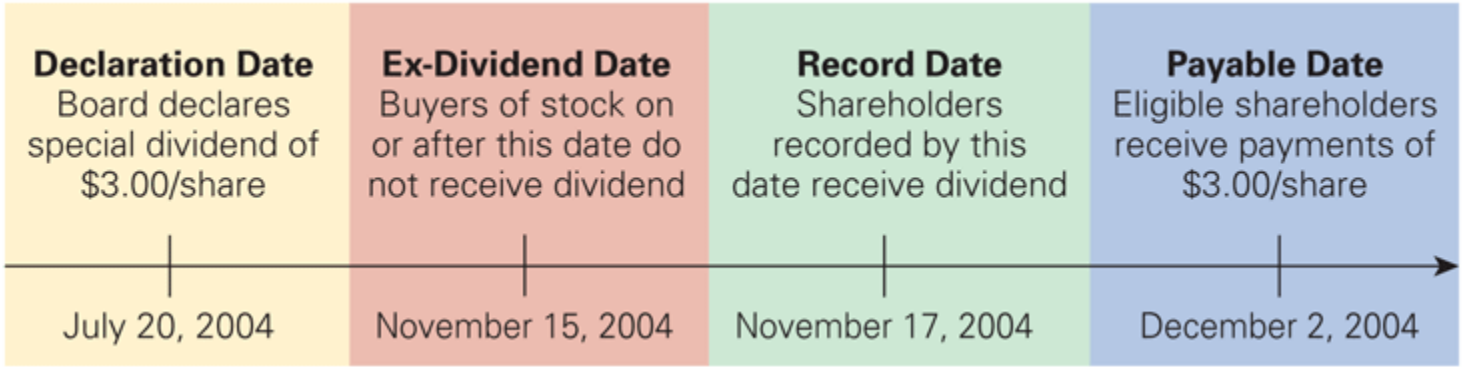
The Rising importance of Repurchases



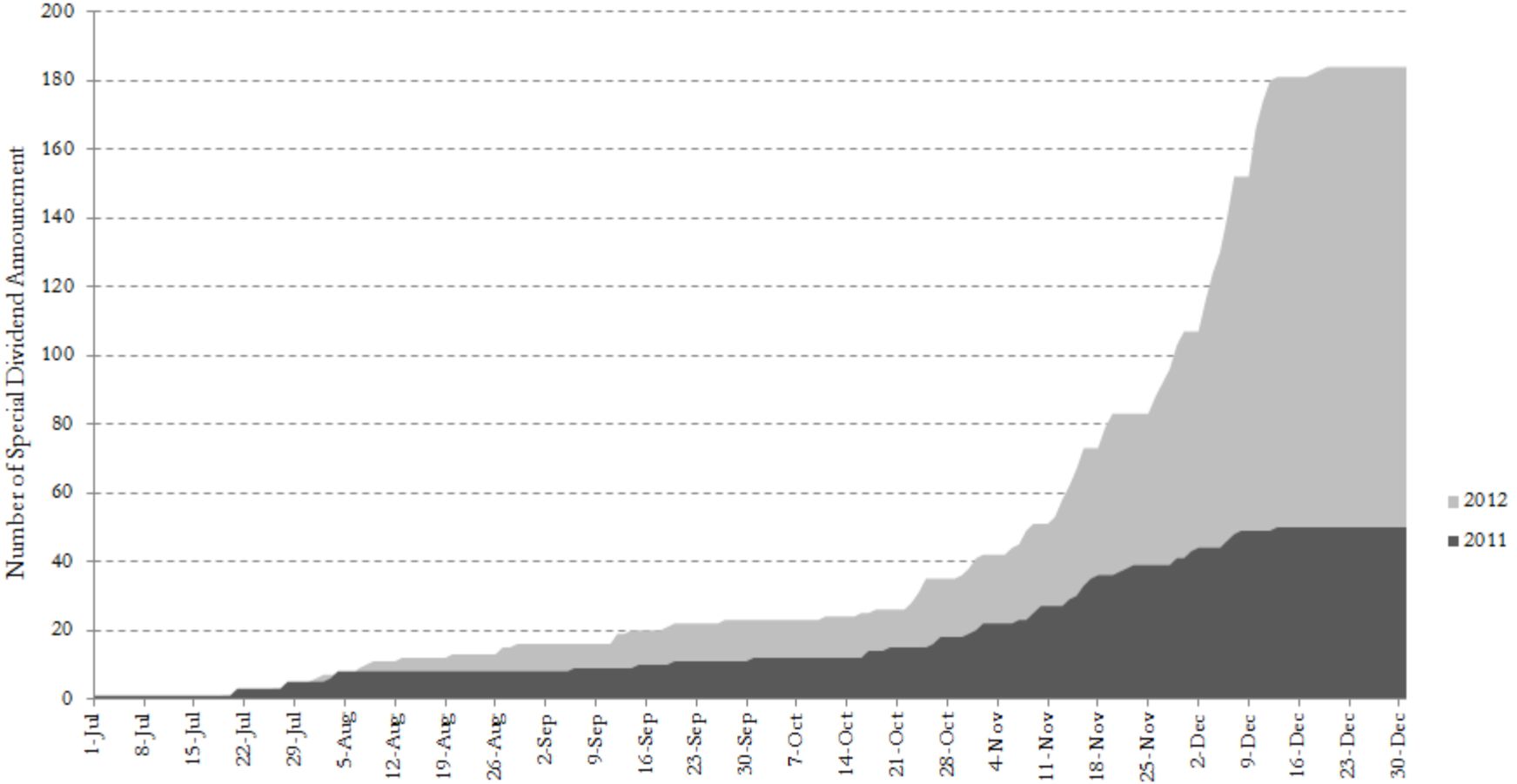
Dividends

- Dividends are regular (typically quarterly) payments to shareholders
- Firms sometimes pay additional (often larger-than-usual) “special dividends”
  - Special dividends were, for example, very common at the end of 2012 – why?

Example: Timeline of a dividend payment (Microsoft dividend in 2004)



Potential tax increases at the end of 2012 made companies rush to pay out special dividends



Source: Fos, Kim, Kronlund (2014)

Share Repurchases

- In a share repurchase, the firm buys back some of its own shares
- The effect for shareholders (as a group) is that they get money back from the firm in exchange for giving up some shares
- Because repurchases decrease the share count, they have the effect of increasing EPS and other “per-share” measures
- Types of repurchases:
  1. Open Market Repurchase
     - Firm buys shares on stock market
     - This method represents 95% of all repurchases
  2. Targeted Repurchase
     - Firm buys shares directly from a specific shareholder
  3. Tender Offer

Modigliani-Miller and Payout Policy Irrelevance

- M&M: In perfect capital markets, **payout policy is irrelevant**!
  - Sounds familiar?
  - *When* payouts are made and *how* they are made (whether through dividends or share repurchases) does not matter!
- The only thing that matters is the firm's FCFs and the systematic risk of those cash flows

Example: Dividends vs. Share Repurchases in Perfect Capital Markets (1)

- Genron expects to generate FCF of $48 million per year in subsequent years. Its unlevered cost of capital is 12%
  - So its Enterprise Value (EV) is: $48 million / 12% = $400 million
  - The firm also has $20 million in excess cash and no debt
- The firm current has 10 million shares outstanding.
  - The firm's equity value is $20 million + $400 million = $420 million, so $42 per share
- Genron's board is trying to decide on how to pay out the $20 million in excess cash to shareholders
- Specifically, the board is considering the following options:
  A. Pay a $2 cash dividend per share (a total of $20 million)
  B. Repurchase shares for $20m

Example: Dividends vs. Share Repurchases in Perfect Capital Markets (2)

Alternative (A): Pay $2 Dividend per Share

- Genron's share price before the dividend is:

$$P_{before\ dividend} = \frac{\$420\text{million}}{\$10\text{ million shares}} = \$42$$

- After the dividend is paid, the firm has no more excess cash and its share price will fall to:

$$P_{"ex-dividend"} = \frac{\$400\text{million}}{\$10\text{ million shares}} = \$40$$

- So each shareholder will have $2 in cash from the dividend and a share now worth $40

Alternative (B): Share Repurchase of $20 million

- With a share price of $42, Genron will repurchase $20 million ÷ $42 = 0.476 million shares
- This leaves 10 – 0.476 = 9.524 million shares after the repurchase
- After the repurchase, the firm has no excess cash, so the value of equity falls (from $420 million to $400 million)
- These changes in value of number of shares offset, so the share price remains at:

$$P_{after\ repurchase} = \frac{\$400\text{million}}{\$9.524\text{ million shares}} = \$42$$

- …But now the shareholders don't have the $2 in cash…

Which option would an investor prefer---A or B?

Example: Dividends vs. Share Repurchases in Perfect Capital Markets (3)

- Suppose an investor holds 2000 shares of Genron Stock
- The value of the investor's holdings after the dividend vs. the share repurchase are:

Dividend	Repurchase
$40 × 2,000 = $80,000 stock	$42 × 2,000 = $84,000 stock
$2 × 2,000 = $4,000 cash	

- The investor has the same amount of wealth regardless, so it doesn't matter which option the firm chooses!

“Homemade dividends”

- Suppose the firm chooses option B and repurchases shares…
- But the investor with 2000 shares would have preferred a dividend instead!
  - *i.e.*, the investor now has shares worth $84,000, but would have wanted $4000 cash (and $80,000 in shares)
- Is there anything the investor can do?
  - The investor could sell $4,000 of her shares, to now have $4000 cash and $80,000 in shares
  - In fact, the investor can “create” *any* size of dividend the investor likes (up to $42 per share)
- What if the firm chooses option A and pays a dividend but the investor did not want any cash?
  - The investor could use the cash from the dividend to buy shares

Trade-off theory of dividends (vs. repurchases)

Let's break some of the M&M assumptions:

Why/when might dividends be preferred vs. disadvantaged to repurchases?

Dividend Benefits:

- Agency problems: If managers are not making good investment decisions, then it is better to get cash out of the firm on *a more regular basis*
- Transaction costs: If investors want a steady investment income, it is easier/cheaper to receive regular dividend payments than to constantly sell a few shares (to create "homemade dividends")

Dividend Disadvantages:

- Loss of flexibility: Dividends are difficult to cut (shareholders learn to count on them), so they reduce financial flexibility
- Taxes: If dividends are taxed more heavily than capital gains, repurchases are better than dividends

Optimal Payout Policy with Taxes

- Shareholders typically pay taxes on both dividends and capital gains
- Dividend taxes are paid in the year the investor receives the dividends (e.g., $\$4{,}000 * t_{dividend}$)
- If the firm repurchases shares instead, then there won't be a dividend (and a dividend tax) but the share price will be higher…
- As a result, the investor's capital gains will be higher when the investor sells her shares (she will pay, e.g., $\$4{,}000 * t_{capitalgains}$ *more* in taxes then)
- But, $t_{dividend}$ and $t_{capitalgains}$ are often different!
- If $t_{dividend} > t_{capitalgains}$, then repurchases are tax-preferred for shareholders
- Even if $t_{dividend} = t_{capitalgains}$, investors can *defer* the capital gains taxes until they sell, so the present value of taxes can be lower

Year	$t_{dividend}$	$t_{capital\ gains}$
1971-1978	70%	35%
1979-1981	70%	28%
1982-1986	50%	20%
1987	39%	28%
1988-1990	28%	28%
1991-1992	31%	28%
1993-1996	40%	28%
1997-2000	40%	20%
2001-2002	39%	20%
2003-2012	15%	15%
2013-	23.8%	23.8%

A Dividend Puzzle

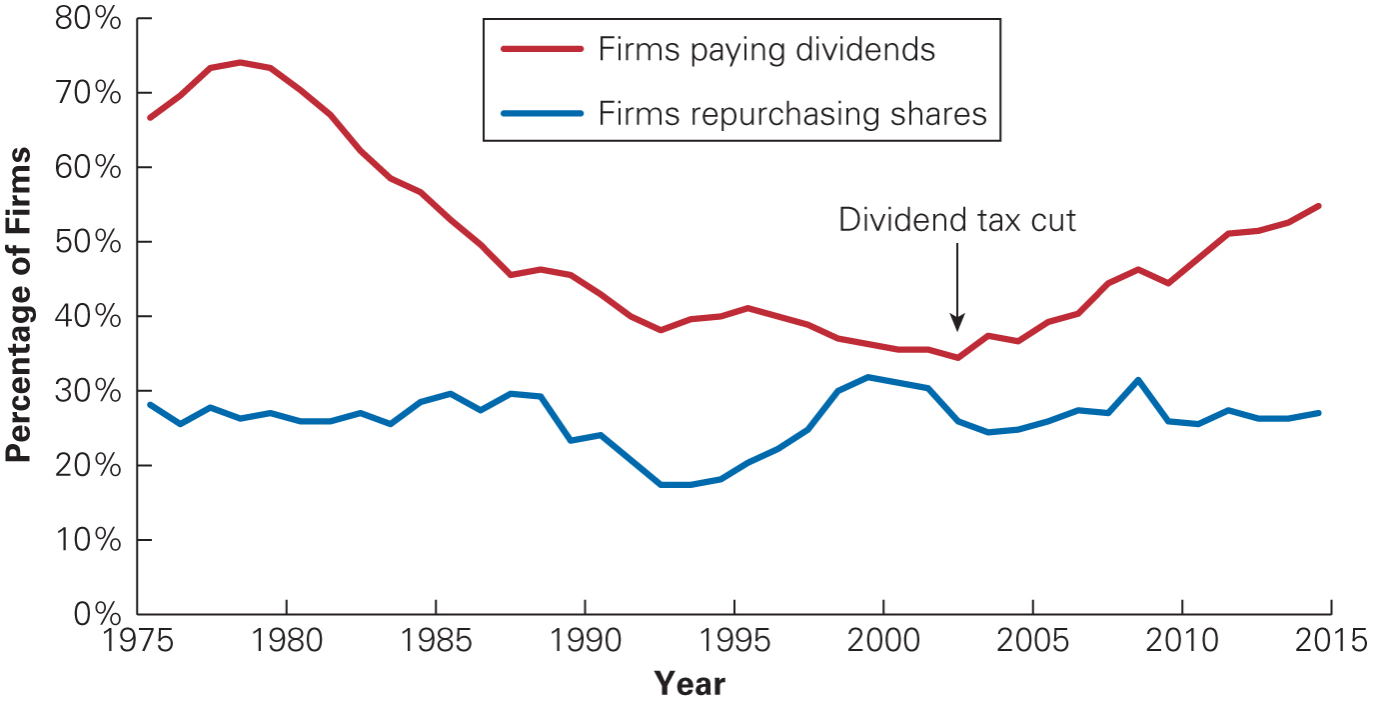
Optimal Payout Policy with Taxes:

When $t_{dividend} \geq t_{capital\ gains}$, firms should only pay shareholders in the form of share repurchases and not pay dividends at all

The Puzzle: Firms continue to pay dividends despite their tax disadvantage!

Don’t firms realize that this is a bad idea from a tax perspective?

Dividends have been falling, but started rising again after tax cut



A Complication: Tax Differences Across Investors

- Investors' tax rates differ based on their:
  1. Income Level
  2. Type of Account (taxable vs. tax free)
  3. Investment Horizon
  4. Type of Investor (e.g., pensions funds vs. individual investors)
- **"Dividend Clientele":** When the payout policy of a firm reflects the preferences of its investors
  - Recall: We discussed similar clientele considerations for capital structure

Payout vs. Retention

- Before choosing between dividends and repurchases, a firm must decide *how much* to pay out vs. how much cash to retain
- Payout vs. Retention in Perfect Capital Markets
  - **MM: In perfect capital markets, the retention vs. payout decision is irrelevant!**
  - Holding cash (or investing in cash-like financial securities) is a zero-NPV transaction, so it should not affect firm value
- "Home-made retention": If shareholders like to own cash (or invest in any investment securities the firm owns), they can do so on their own!

Example: Payout vs. Retention

- Barston Corp. has $100,000 in excess cash, and is considering the following payout options:
  A. Pay a dividend immediately, OR
  B. Invest the cash in one-year Treasury bills paying 2% interest, and then use the (now slightly greater) cash to pay a dividend next year
- In perfect capital markets, which option will shareholders prefer?

Solution

- If Barston retains the cash (option (B)), the company will be able to pay a dividend of $\$100{,}000 \times (1.02) = \$102{,}000$ in one year
- This payoff is the same as if shareholders had received the dividend immediately (option (A)) and invested the $100,000 in Treasury bills themselves
- Thus, shareholders are indifferent about whether the firm pays the dividend immediately or retains the cash and pays next year

Payout vs. Retention with Taxes

- When a firm retains cash, it must pay corporate tax on any interest it earns
- We can think of cash as negative leverage:
  - Recall: Higher leverage and paying interest has a tax advantage
  - Conversely, retaining cash and earning taxable interest implies a *tax disadvantage*

Example: Payout vs. Retention with Taxes

- Suppose Barston pays a corporate tax rate of $t_c = 35\%$
- Does a pension fund (that does not pay taxes on its own investment income) prefer that Barston would use its excess cash to pay a $100,000 dividend immediately vs. retain the cash until next year (by investing in a treasury that earns a 2% interest rate)

Solution

- If the dividend is paid immediately, the pension fund could invest it in the treasury bill itself, earn 2%, and have a total of $102,000 in one year
- If Barston retains the cash for one year, it will earn an after-tax return on the Treasury bills of 2% $\times$ (1 – 0.35) = 1.3%. Thus, at the end of the year, Barston will pay a dividend of $100,000 $\times$ (1.013) = $101,300.
- This investor is better off if Barston pays the dividend immediately!
- Whether or not an investor prefers the firm to invest cash for them depends on if $t_{investor} < or > t_c$

A Trade-off Theory of Retention

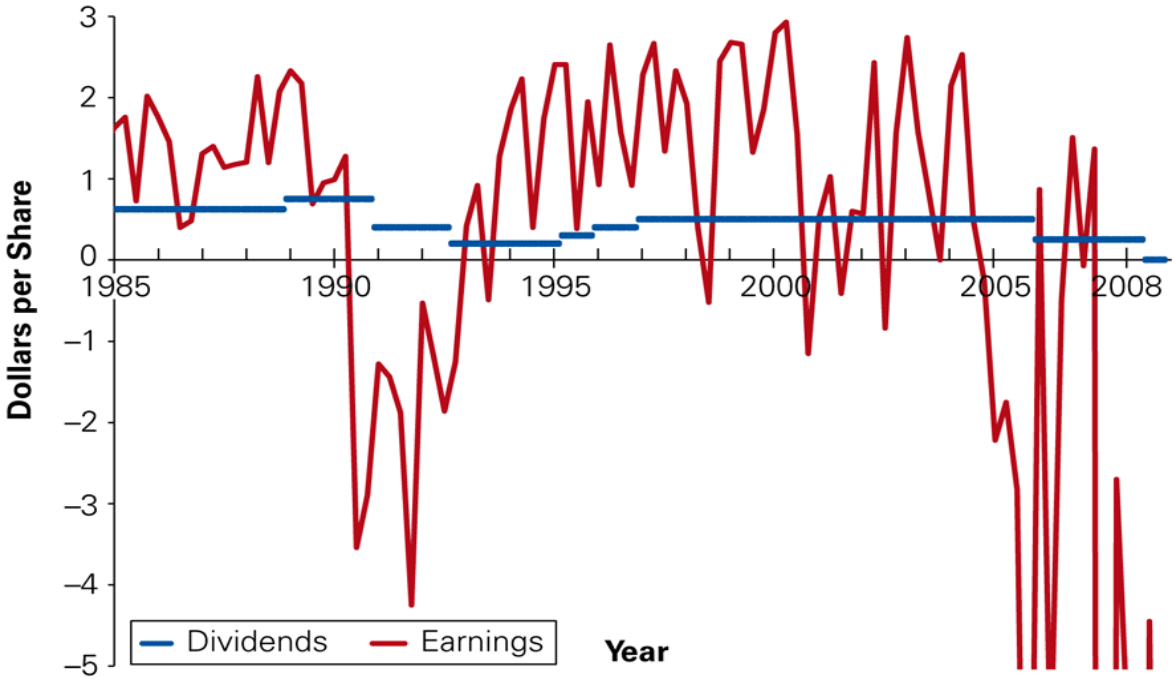
- Benefits of retaining cash:
  1. Easily cover potential future cash shortfalls that could lead to financial distress
  2. Avoid the transaction costs of selling new debt or equity issues when the firm needs cash for investments
  3. In the US: Defer/avoid U.S. Corporate tax by investing earnings abroad
- Disdadvantes of retaining cash:
  1. Tax disadvantage
  2. Agency costs associated with having too much cash; e.g. excessive investments, over-paying for acquisitions, etc.
- A firm must balance the costs of retaining cash with the benefits

Dividend Smoothing

- Starting and increasing a dividend is seen by shareholders as an implicit commitment to maintain this level of payout
- Firms tend to engage in dividend smoothing: Firm's change dividends only slowly as their earnings change
  - Firms tend to raise their dividends only when they think they are sustainable for a long time, and cut dividends only as a last resort
- By contrast, firms seem much less committed to maintaining a constant level of share repurchases

Example: Dividend Smoothing

GM's Earnings and Dividends per Share, 1985–2008



Source: Compustat and Capital IQ.

Market reactions to payout decisons

- Stock prices tend to **rise** in response to dividend initiations and increases
  - Start dividend $\Rightarrow$ stock price rises 4-5% on announcement
- Stock prices tend to **fall** in response to dividend cuts and stops in dividend payments
  - Eliminate dividend $\Rightarrow$ stock price falls 10% on announcement
- Why?

Why might investors react to payout decisions?

Dividend Signaling Hypothesis:

Dividend changes reflect managers' views about a firm's future prospects

When a firm increases its dividend, it may signal that the management expects the firm to afford the higher dividend going forward → good for firm value

- But, a dividend increase could also mean that firm lacks positive-NPV investment opportunities → bad for firm value

When a firm cuts its dividend, it may signal that management has given up hope that its current dividend is sustainable → bad for firm value

- But, a dividend cut could also mean that the firm has many positive-NPV investment opportunities that it needs to invest in → good for firm value

Share repurchases may signal that the firm thinks that its shares are under-priced

- Because if shares were over-priced, a share repurchase would be disadvantageous for current shareholders

Summary: Navigating the Payout Decision

Retain or Pay Out	Dividend or Repurchase
• Do we have any unfunded positive-NPV projects?	• What are the tax implications for our shareholders?
• What are our future investment plans?	• Do we value the flexibility that repurchases allow?
• Do we have sufficient cash reserves to weather a recession without distress?	• Do we need to send the “signal” that increased dividends would convey?

Stock Dividends and Stock Splits

- In a stock dividend, the company gives additional shares rather than a cash payment to shareholders
  - E.g., in a 10% stock dividend, each shareholder will receive one new share for every 10 shares she owns

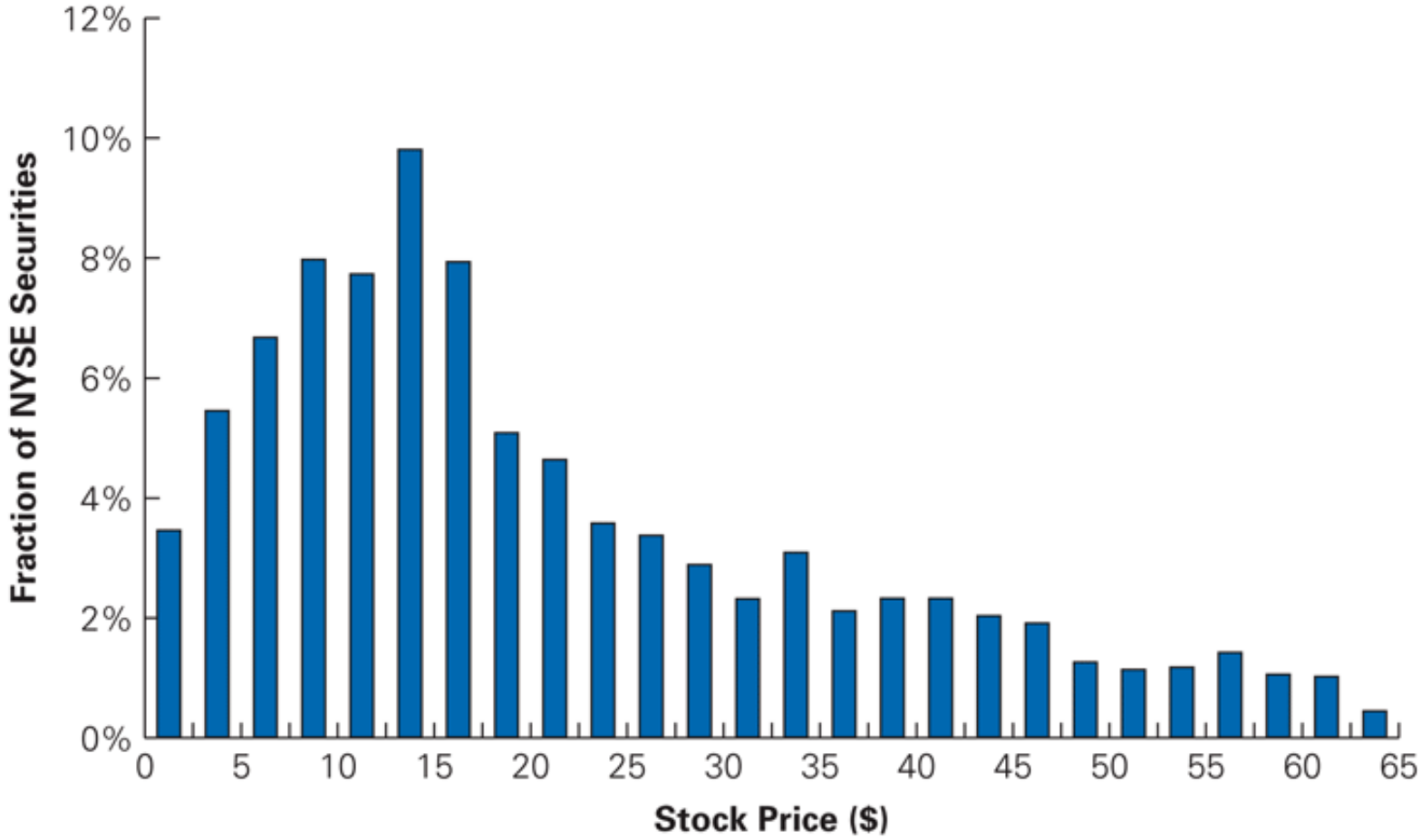
- Stock Splits: Defined as stock dividends of 50% or higher
  - With a 50% stock dividend, each shareholder will receive one new share for every two shares she owns. This would also be called a 3:2 (“3-for-2”) stock split
  - The most common type of stock split is 2:1 (equivalent to a 100% stock dividend)

- The value of the firm is unchanged in a stock split/stock dividend!
  - The number of shares increases and the price per share falls, but the total value stays the same

Stock Dividends and Stock Splits (cont.)

- If nothing of consequence happens, why do firms engage in stock splits?
  - On average, announcements of stock splits are associated with a 2% increase in the stock price
  - Why? This is a puzzle!

- The typical motivation for a stock split is to keep the share price in a *range* thought to be attractive to some (e.g., “mom-and-pop”) investors
  - Thought to increase the liquidity of the stock, which may in turn boost the stock price
  - Most firms that do stock splits target a stock price around $10-$60
- But why do investors like stock prices in precisely this range?
  - Even more puzzling: This price range has remained the same for the last 100 years even though the value of a dollar has changed a lot!


Fraction of NYSE Securities
12%
10%
8%
6%
4%
2%
0%
0
5
10
15
20
25
30
35
40
45
50
55
60
65
Stock Price ($)

Perhaps the whole split silliness is finally over?
Despite rising share prices, splits are increasingly rare