Topics in Corporate Finance

Lecture 5: Dividend Policy

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Microsoft

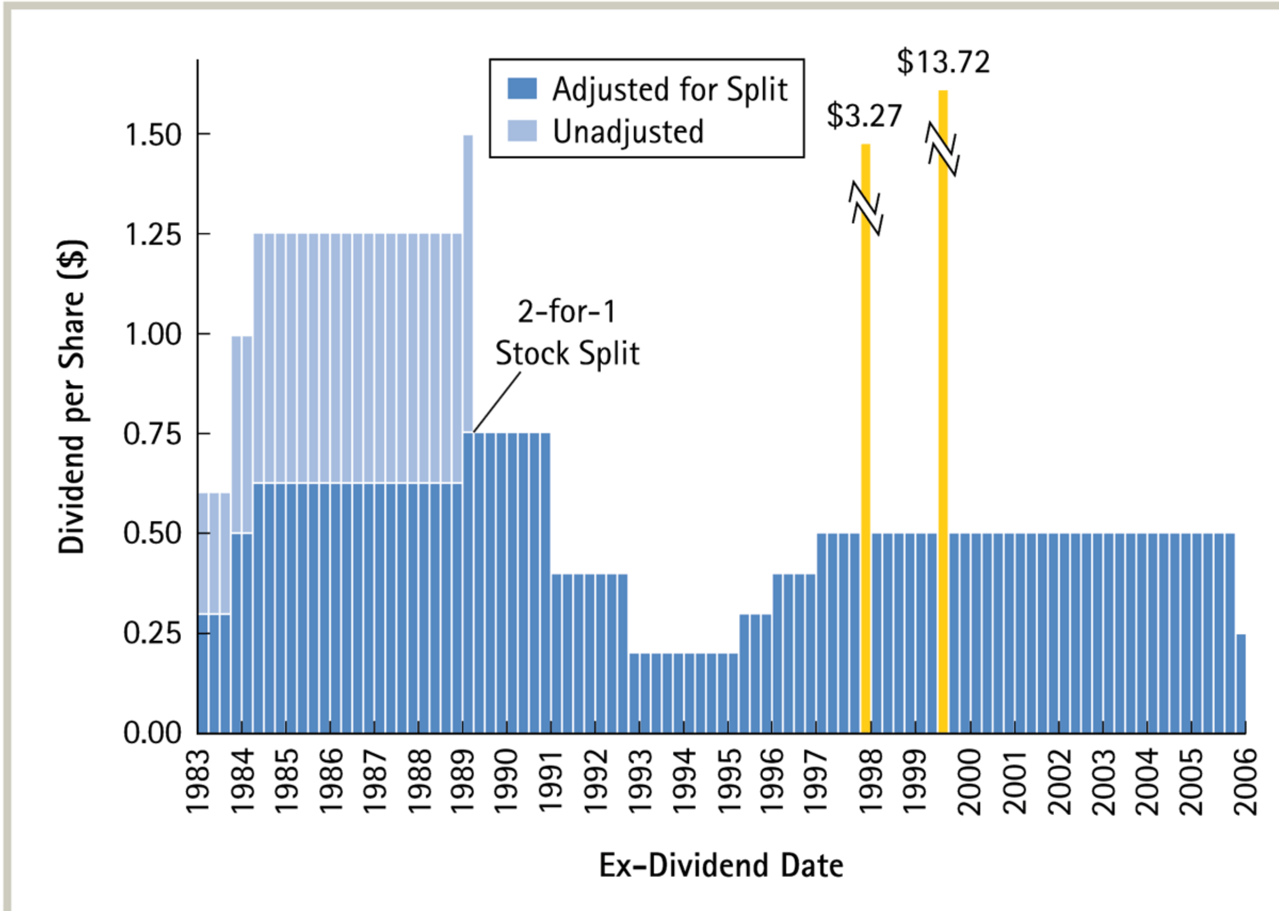
- Share repurchases:
  - 5.4b per year on average from 1999 until 2004
- Dividends:
  - “Starter” dividend of $0.08 per share in 2003
  - One-time dividend of $3 per share (total $32b) in 2004
- Four year plans from 2004:
  - Repurchase $30b of its stock
  - Pay regular annual dividends of $0.32 per share

Payout Policy

- Free cash flow can be reinvested or paid out
- Firms can hand back cash to shareholders by…
  - Paying dividends (quarterly, special,…)
  - Repurchasing stock or buyback:
    - Open market repurchases (buy over time as other investors)
    - Tender offer (offer to buy shares at a precise date)
    - Targeted repurchase (buy from major shareholder)

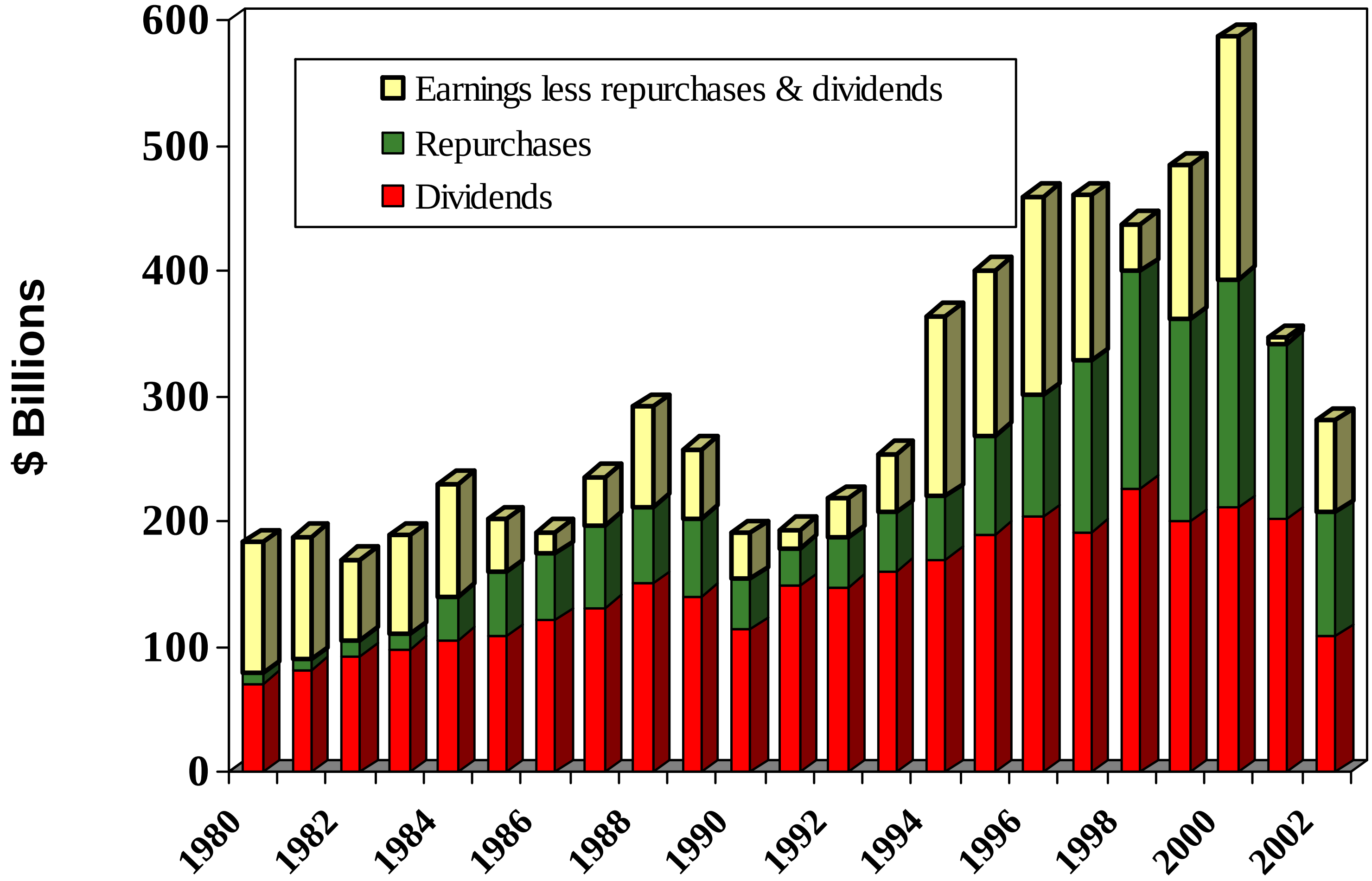
Dividend history for GM stock

GM has paid a regular dividend each quarter. GM paid special dividends in Dec. 1997 and May 1999



Dividend & Stock Repurchases

U.S. Data 1980 - 2002



Option 1

- Dividend policy:
  - Pay £2 dividend immediately
  - Pay out cash generated subsequently
  - Expected dividends following years?
- Share price:
  - Before cash dividend ("cum-dividend")?
  - After the cash dividend ("ex-dividend")?

Market value balance sheet

	Cum-dividend	Ex-dividend
Cash	20	0
Other assets	400	400
Total market value of assets	420	400
Shares (millions)	10	10
Share price	£42	

Option 2

- Pay out policy:
  - No dividend
  - £20m to repurchase shares in the open market
- Share price:
  - How many shares will be able to buy?
  - How many shares will be outstanding?
  - Does the share price drop? Why?
  - What happens to the expected dividends per share?
  - What if Stanley (owns 2000 shares) prefers option I?

Market value balance sheet

	Cum-dividend	Ex-dividend
Cash	20	0
Other assets	400	400
Total market value of assets	420	400
Shares (millions)	10	?
Share price	£42	?

Option 3

- Pay out policy:
  - Suppose it wants to pay more than £2 per share
  - Suppose it wants to pay $48m in dividends (needs extra £28m)
  - Borrow or issue new stock
- Share price:
  - How many shares does it need to issue?
  - How many shares will be outstanding?
  - What will the dividend per share be?
  - What will be the share price ("cum-dividend")?
  - What if Stanley prefers option 3 but company adopts 1?

Modigliani-Miller theorem, again!

Choice of paying dividends or repurchasing stock is irrelevant for shareholders in the absence of…

- Arbitrage opportunities
- Taxes
- Transaction costs
- Information problems

and if the investment, financing and operating policies are held fixed (the firm knows how much to redistribute).

Proof

- Companies DiV and ShP…
  - will be worth the same (uncertain) amount at the end of year (after dividends and stock rep), $Xm (uncertain at the beginning of the year, but for sure between $100m and $200m)
  - each has today 1m shares outstanding
- However, at the end of the year…
  - Div will pay $10m in dividends
  - Shp will repurchase stock worth $10m
- What is the future value of a share (plus dividends)?

Proof (2)

- What is the value of a share of company DiV at the end of the year?
- What is the value of a share of ShP?
  - Need to find how many shares it will repurchase (N) and which will be the price (S)
  - How many shares will it repurchase for $10m?
  - What should be the value of the share?
- Why should the initial price be the same?

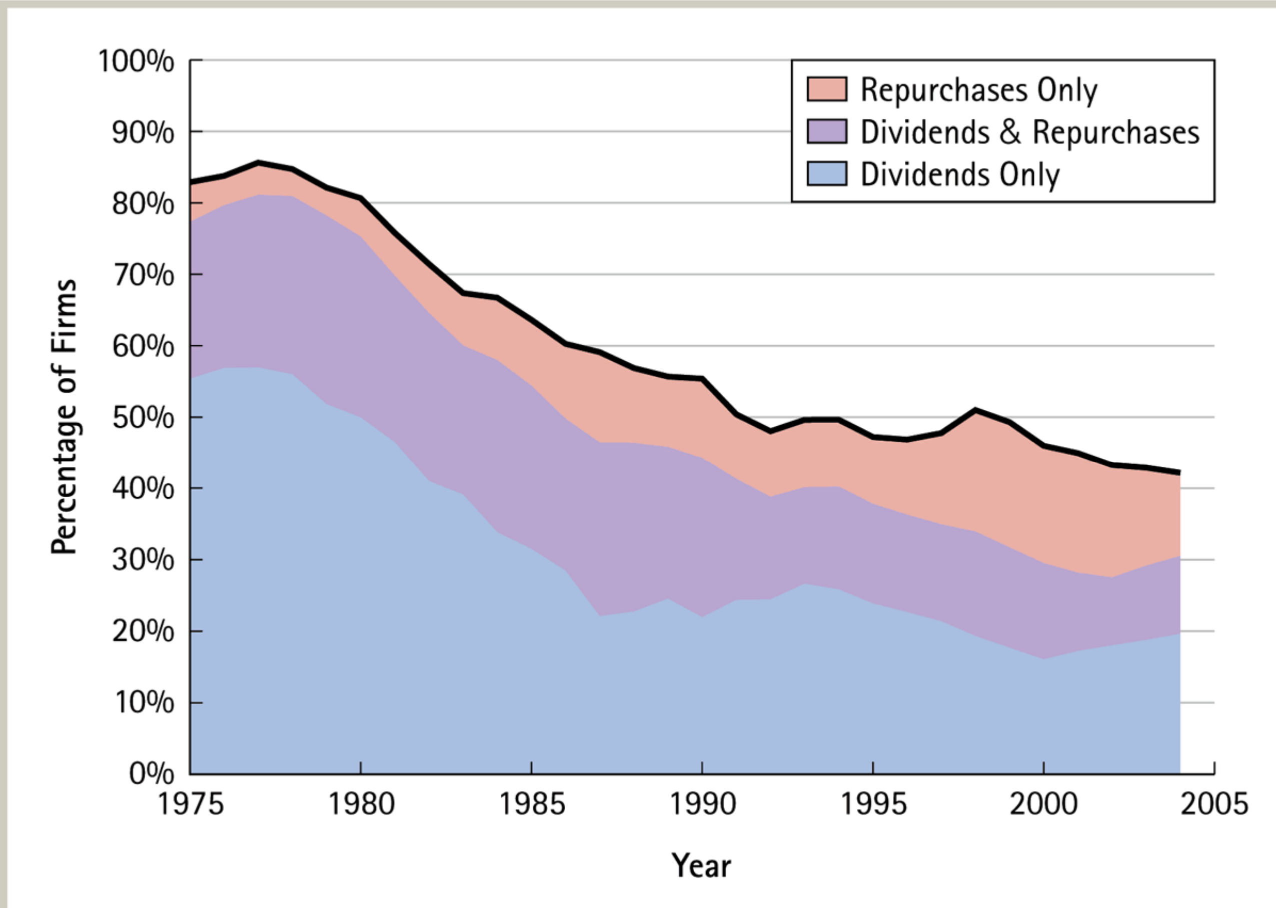
Effects of Taxes

- Remember that…
  - Companies pay corporate taxes on earnings
  - Shareholders' dividends are taxed as ordinary income
  - Shareholders' capital gains are taxed at a lower rate
- Different taxation levels and systems around the world

How Taxes Affect Dividend Policy

- Indifference between pretax distribution through stock rep or dividends. However,
- *Immediate* tax liability substantially higher for dividends:
  - Higher rate
  - All gains are immediately taxed
- *Future* tax liability is lower for dividends because capital gains will be lower
- However, the total amount paid in taxes (and its present value) will be higher for dividends

Recognising tax advantages?



Quantifying the debt advantage

- Suppose that an investor…
  - buys stock just before the tax dividend and
  - sells it just afterwards
- By arbitrage, capital losses equal to dividend:

$$(P_{cum} - P_{ex})\ (1 - T_g) = Div\ (1 - T_d)$$

- Rearranging,

$(P_{cum} - P_{ex}) = Div\ (1 - T_d^*)$ where T_d^* (effective dividend tax) is

$$T_d^* = (T_d - T_g) / (1 - T_g)$$

- T_d^* : additional tax paid by the investor per dollar of after-tax capital gains income that is received as dividend

Tax differences across investors

- Effective tax rate differs because of…
  - Income level
  - Income horizon
  - Tax jurisdiction
  - Type of investor or investor account
- Investors have different preferences
- Clientele effects: dividend policy is optimised

Dividend Puzzle

- Why firms still issue dividends:
  - Tax-exempt shareholders may prefer dividends, because of transaction costs:
    - Brokerage fees for share repurchases
    - Registration costs for share repurchases
  - Corporations that hold shares of other corporations may prefer dividends because they are taxed at a lower rate

- Summarising, firms may have different payout ratios to appeal different investor clienteles

Retaining versus paying out

- Suppose firm has cash available…
  - Clearly if positive NPV available, invest!
- If not ...
  - Paying it out, hold it in bank or buy financial assets?
  - In perfect capital markets, it should not matter!
  - Shareholders could do the same investment
  - Modigliani and Miller again!

Dividend Policy and Taxes

- Taxes and transaction costs may also distort payout choices
- For example, tax-paying shareholders may prefer that the company invests generated income rather than paying it out
  - If paid out, shareholders can only invest after-personal-tax money
  - If not, interests also earned on the pre-tax money

Reading

- Allen and Michaely (2003): “Payout policy”, Handbook of Economics and Finance
- Bagwell and Shoven (1989) “Cash Distributions to Shareholders”, Journal of Economic Perspectives