Dividend policy and payout decisions

Corporate Issuers

1 A story: the orchard and the apples

- Value leaves the company and lands in your pocket
- Your total wealth: the same, in a different form
- But the company's own accounts do change
- Stock dividends and splits hand out no cash at all

IN THE LESSON

- Imagine you own an orchard that gives a good crop of apples every autumn.
- You can eat some apples now, or leave them to grow more trees.
- If you eat a basket, the orchard has one basket less, but you are not poorer, because you swapped orchard value for apples in your hand.
- A company dividend works the same way.
- Value moves out of the company and into your pocket.
- The question for an analyst is what else changes.
- Does the share price fall?
- Do the company's liquidity and debt ratios shift?
- And what about stock dividends and splits, which hand out no cash at all?
- Those are the questions for this first part.

2 Meet Halden Packaging

Halden: 10m shares at $50, net income $40m ($ millions)

Balance sheet item	$ millions
Current assets (cash 80)	200
Current liabilities	100
Long-term debt	200
Equity (total assets 800)	500

IN THE LESSON

- Now meet our running company, Halden Packaging, a made-up maker of cardboard boxes.
- All figures are round numbers for teaching, in millions of dollars.
- Halden has ten million shares, trading at fifty dollars, so the market values its equity at five hundred million.
- Net income is forty million, so earnings per share are four dollars.
- On the balance sheet it holds eighty of cash and one hundred and twenty of other current assets, such as receivables and stock.
- Current liabilities are one hundred.
- Long-term debt is two hundred and equity is five hundred, so with total assets of eight hundred everything adds up.
- Book value per share is five hundred over ten million, fifty dollars.

3 What each payout does to the price

Ex-dividend price ≈ P − D
After a stock dividend = P ÷ (1 + s)
After a split = P ÷ f

Price before, P	Price per share before
Dividend per share, D	Cash paid per share
Stock dividend rate, s	Extra shares per share held
Split factor, f	Two for one split: f = 2

IN THE LESSON

- Three small formulas carry most of this first part.
- When a company pays a cash dividend, the share price falls on the ex-dividend date, the first day a buyer no longer receives the payment.
- In a frictionless market the fall is about the size of the dividend.
- So the price afterwards is the price before, minus the dividend per share.
- A stock dividend gives shareholders extra shares instead of cash.
- If the rate is s, each old share becomes one plus s shares, so the price is divided by one plus s.
- A split works the same way with a split factor.
- A two for one split has a factor of two, so the price is halved.
- A reverse split has a factor below one, so the price rises.

4 Example 1: wealth after a cash dividend

1,000 shares at $50. Special dividend of $5 a share.

Shares before	1,000 × $50	**$50,000**
Shares after	1,000 × $45	**$45,000**
Cash received	1,000 × $5	**$5,000**
Total wealth	45,000 + 5,000	**$50,000**
Company equity value	500m − 50m	**$450m**

IN THE LESSON

- Example one: wealth.
- An investor holds one thousand Halden shares, worth fifty thousand dollars.
- Halden declares a special cash dividend of five dollars a share.
- On the ex-dividend date the price falls by five, to forty-five.
- The investor's shares are now worth forty-five thousand.
- But she also receives five thousand in cash, one thousand times five.
- Add them together and she has fifty thousand, exactly as before.
- For the company as a whole, ten million shares times five dollars is fifty million paid out, so the value of its equity drops from five hundred million to four hundred and fifty million.
- Wealth did not change.
- Only its form did: part shares, part cash.

5 Example 2: the company's ratios afterwards

Before and after paying out $50m of cash ($ millions)

Current ratio	200 ÷ 100 → 150 ÷ 100	**2.0 → 1.5**
Cash ratio	80 ÷ 100 → 30 ÷ 100	**0.80 → 0.30**
Debt to equity	200 ÷ 500 → 200 ÷ 450	**0.40 → 0.44**
Debt to assets	200 ÷ 800 → 200 ÷ 750	**0.25 → 0.27**

IN THE LESSON

- Example two: what the company looks like afterwards.
- The fifty million dollars comes out of cash, and out of equity.
- Take the current ratio, current assets over current liabilities.
- Before, two hundred over one hundred, which is two.
- After, current assets are one hundred and fifty, so the ratio is one point five.
- The cash ratio, cash over current liabilities, falls from point eight to point three.
- Now leverage.
- The debt has not changed, but equity falls to four hundred and fifty and total assets to seven hundred and fifty.
- Debt to equity rises from point four to point four four, and debt to assets from point two five to point two seven.
- The company is less liquid and more leveraged, even though shareholders are not poorer.

6 Regular, extra and liquidating dividends

- Regular: expected, paid every period
- Extra or special: a one-off, no promise
- Liquidating: a return of the owners' capital
- All three cut cash and equity

IN THE LESSON

- Not every cash dividend is the same animal.
- A regular dividend is the one investors expect, paid every quarter or every year, and managers try hard never to cut it.
- An extra dividend, also called a special dividend, is a one-off.
- The company says plainly that it is not a promise to repeat, so it carries less signal.
- A liquidating dividend is different again.
- It is paid out of capital the owners put in, not out of profits, so it is a return of capital, and it usually means the business is shrinking or being wound down.
- All three take cash out and shrink equity, which is why the ratios in the last example move.
- The accounting differs only in which equity account is reduced: retained earnings for the first two, paid-in capital for the liquidating one.

7 Example 3: stock dividends and splits

Before: 10m shares, price $50, EPS $4.00, book value per share $50

10% stock dividend: price	50 ÷ 1.10	**$45.45**
10% stock dividend: EPS	40 ÷ 11	**$3.64**
10% stock dividend: BVPS	500 ÷ 11	**$45.45**
Two for one split: price	50 ÷ 2	**$25.00**
Two for one split: EPS	40 ÷ 20	**$2.00**

IN THE LESSON

- Example three: no cash at all.
- Halden pays a ten per cent stock dividend.
- Every ten shares become eleven, so shares go from ten million to eleven million.
- The company itself has not changed, so the price is divided by one point one, giving forty-five dollars and forty-five cents.
- A holder of one thousand shares now has one thousand one hundred, worth the same fifty thousand.
- Per share figures are spread over more shares.
- Earnings per share fall from four dollars to three sixty-four, forty million over eleven million.
- Book value per share falls from fifty to forty-five forty-five.
- Now a two for one split.
- Shares double to twenty million, the price halves to twenty-five, and earnings per share halve to two.
- The balance sheet is untouched in all cases.

8 Same company, different share counts

Price per share ($)

Today	**$50**
10% stock div	**$45.45**
2-for-1 split	**$25**
1-for-5 reverse	**$250**

Every bar is the same $500m company

IN THE LESSON

- Here is the same idea as a picture.
- Each bar is the share price of the same company, worth five hundred million in all.
- The first bar is today, fifty dollars.
- After the ten per cent stock dividend, the second bar, the price is forty-five dollars and forty-five cents.
- After the two for one split the price is twenty-five dollars, the third bar.
- And a one for five reverse split, which swaps five old shares for one new one, lifts the price to two hundred and fifty dollars, the last bar.
- Notice what stays the same.
- Market value, shareholder wealth and every balance sheet ratio.
- The only things that move are the share count and the per share figures.
- A reverse split is often used to lift a very low price, and it too changes no value.

9 A story: eat the apples or sell the trees?

- Does the size of the payout change share value?
- Irrelevance: no, you can make your own payout
- Bird in the hand: yes, more payout, more value
- Tax aversion: yes, more payout, less value

IN THE LESSON

- Back to the orchard.
- Suppose one neighbour tells you the best orchards hand out their apples every year, and another says the best ones sell every apple and plant more trees.
- Both cannot be right, can they?
- In finance there are three famous answers to whether the size of a company's payout changes what its shares are worth.
- The first says it makes no difference at all, because you can always make your own payout: eat fewer apples than you are given, or sell a few trees.
- The second says investors prize the apple in the hand, so more payout means more value.
- The third says that if apples in the hand are taxed more heavily than tree growth, less payout is better.
- We will test each with numbers.

10 Three answers to one question

Chart: Share value vs Payout ratio

- Bird in the hand
- Irrelevance
- Tax aversion

IN THE LESSON

- Here are the three answers on one picture.
- The bottom axis is the payout ratio, the share of earnings paid out as dividends, from nothing on the left to everything on the right.
- The side axis is share value.
- Start with the flat line.
- That is the irrelevance theory of Miller and Modigliani: with no taxes and no costs of trading, value is the same at every payout.
- The rising line is the bird in the hand view: more payout, lower required return, higher value.
- The falling line is tax aversion: when dividends are taxed more than gains, more payout leaves taxable investors with less.
- All three start from the same point, because with no payout there is nothing to disagree about.
- Which line describes a real market is an empirical question.

11 Example 4: the homemade dividend

1,000 shares, bought at $30, now $50. She wants $5,000.

Company pays $5 a share	45,000 + 5,000	**$50,000**
No dividend: sell 100 shares	900 × 50 + 5,000	**$50,000**
Tax if dividend: 30%	5,000 × 30%	**$1,500**
Tax if sale: 15% on gain	100 × (50 − 30) × 15%	**$300**

IN THE LESSON

- Example four: the homemade dividend, and what taxes do to it.
- An investor holds one thousand Halden shares, bought long ago at thirty dollars, now priced at fifty.
- She wants five thousand dollars to spend.
- Suppose first there are no taxes.
- If Halden pays five dollars a share, she gets five thousand in cash and holds shares worth forty-five thousand, fifty thousand in all.
- If Halden pays nothing, she sells one hundred shares at fifty for five thousand and keeps nine hundred shares worth forty-five thousand.
- Fifty thousand again.
- That is the homemade dividend.
- Now add tax.
- Dividends are taxed at thirty per cent, so the dividend route costs fifteen hundred dollars.
- Gains are taxed at fifteen per cent, and only the gain of twenty dollars a share on the hundred shares sold counts, so the sale route costs three hundred.

12 The value formula behind the theories

Value today = D1 ÷ (r − g)

Next dividend, D1	Dividend expected next year
Required return, r	What investors demand
Dividend growth, g	Steady yearly growth
Value today, P0	What the share is worth

IN THE LESSON

- The earlier level gave you the dividend discount model, and we need it for the next example.
- The value of a share today equals next year's dividend, divided by the required return on equity minus the growth rate of the dividend.
- The required return is what investors demand for bearing the risk.
- The growth rate is how fast the dividend is expected to rise, for ever.
- The model only works when the required return is above the growth rate.
- Notice what this formula says about the theories.
- Anything that lowers the required return, or raises the dividend or its growth, raises the value.
- Bird in the hand is a claim about the bottom of this fraction.

13 Example 5: the bird in the hand, in numbers

Next dividend $2.40, growth 4% a year for ever

Value if r = 10%	2.40 ÷ (10% − 4%)	**$40.00**
Value if r = 9%	2.40 ÷ (9% − 4%)	**$48.00**
Rise in value	48 ÷ 40 − 1	**+20%**

IN THE LESSON

- Example five: the bird in the hand, in numbers.
- Suppose a company's next dividend is two dollars forty, expected to grow at four per cent a year for ever.
- If investors require ten per cent, the value is two forty divided by ten minus four, which is six per cent, giving forty dollars.
- Now suppose the bird in the hand view is right, and investors who see a bigger, steadier dividend are content with nine per cent.
- The value is two forty divided by five per cent, forty-eight dollars.
- A one point drop in the required return lifts the price by twenty per cent.
- That is how sensitive value is to the gap.
- But remember, this is the claim of the theory.
- Miller and Modigliani reply that the risk of the business is set by its assets, not by how it slices the cash, so the required return should not move.

14 Which way does a higher payout push value?

Effect of a higher payout on share value

Theory	Higher payout means
Irrelevance (Miller, Modigliani)	No change
Bird in the hand	Value up
Tax aversion	Value down
Clientele effect	Owners sort

IN THE LESSON

- Let us put the three theories in one place.
- For each one, ask what a higher payout does to share value.
- Under irrelevance, nothing.
- Under the bird in the hand view, value rises, because the required return falls.
- Under tax aversion, value falls when dividends bear more tax than gains, because taxable investors keep less of each dollar paid out.
- The exam trap is mixing up the directions, so tie each theory to one word: nothing, up, down.
- Then there is a fourth idea that quietly sits behind all of them.
- Investors differ, so they gather around companies whose policy suits them.
- That is called the clientele effect, and it comes next.

15 Clienteles: who likes which payout

- Clientele: owners who like the payout they get
- Retirees need income: favour high dividends
- Heavy taxpayers: favour low payouts, gains later
- Tax-exempt funds: indifferent

IN THE LESSON

- A clientele is a group of investors that prefers a certain payout.
- Retirees who live off their portfolio like high dividends, because they would otherwise pay trading costs to sell shares.
- Pension funds that pay no tax are indifferent between dividends and gains.
- Wealthy taxable investors in a high bracket prefer low payouts, and gains that are taxed later and more lightly.
- Over time shareholders sort themselves, so each company ends up with the owners its policy attracts.
- This has a sharp consequence.
- If a company changes its policy, it may simply swap one group of owners for another, with no change in value, as long as there are enough investors of each kind.
- It also explains why a change can move the price for a while, as the new owners must be found.

16 Four mistakes to avoid so far

- 1. A stock dividend moves no cash
- 2. A cash dividend also cuts equity: leverage rises
- 3. Bird in hand: up. Tax aversion: down.
- 4. Per share figures move opposite to share count

IN THE LESSON

- Before we move on, four mistakes that cost marks.
- One.
- Treating a stock dividend as a transfer of cash.
- No cash leaves, wealth is the same, and only the share count and the per share figures change.
- Two.
- Forgetting that a cash dividend also lowers equity, so leverage ratios rise as well as liquidity ratios falling.
- Three.
- Mixing up the theories.
- Bird in the hand says a higher payout raises value.
- Tax aversion says it lowers value.
- Irrelevance says it does nothing.
- Four.
- Forgetting to adjust per share figures after a split or stock dividend.
- Price and earnings per share move opposite to the share count, while total market value stays put.
- Keep these four in mind, and these marks are safe.

17 A story: the friend who stops paying

- Managers know more than outside investors
- Cutting a dividend is painful, so it is avoided
- So a change in the dividend is a message
- Usual reading, and when it fails

IN THE LESSON

- Think about a friend who always pays for dinner on their birthday.
- One year they stop.
- Nobody needs to explain, you immediately wonder whether money is tight.
- Dividends work in the same way.
- Managers know far more about the company's future than outsiders do.
- They also hate cutting a dividend, because investors punish a cut, so they raise it only when they believe they can keep paying it.
- That gives a dividend change a meaning beyond the cash itself.
- It is a message, called a signal.
- Investors read it and revise their view of future earnings.
- This section covers what each kind of message usually says and, just as important, when the usual reading fails.

18 How a dividend change becomes a signal

Why a change carries news

Insiders know more → Cuts are avoided → A change tells the news

How the market reads it

Raise: confident → Cut: weaker outlook → Context can flip it

IN THE LESSON

- Here is the chain of reasoning as a picture, in two rows.
- The top row says why a change carries news.
- Insiders know more than outside investors.
- A cut is painful, so managers avoid it unless they have to.
- So a change reveals something about how they see the future.
- The bottom row is how the market reads it.
- A raise or a start usually signals confidence, and the price tends to rise.
- A cut or an omission usually signals a weaker outlook, and the price tends to fall.
- But the third box is the one that matters on the exam: context can flip the reading.
- We will see both sides in the next slides, starting with the usual signals.

19 The usual signals

The usual reading of each dividend move

Dividend move	Usual signal
Initiate	Confident
Raise	Confident
Cut	Weaker outlook
Omit	Serious worry

IN THE LESSON

- Here are the four moves and their usual readings.
- Initiating a dividend, where none was paid before, signals that management expects the cash flow to last.
- Raising the dividend signals confidence that earnings will support the higher payment.
- Cutting the dividend signals that the outlook is weaker than it was, and omitting it altogether is a stronger warning still, because the board is willing to break a long habit.
- Notice we say usual.
- Each of these is a presumption, not a rule.
- A good analyst asks what else the company said, what it plans to do with the cash, and how it compares with others in its industry before drawing a conclusion.

20 Example 6: a cut that adds value

EPS $4.00, cost of equity 10%, projects earn 11%. Payout 50% → 30%.

Before: growth	50% kept × 11%	**5.5%**
Before: value	2.00 ÷ (10% − 5.5%)	**$44.44**
After: growth	70% kept × 11%	**7.7%**
After: value	1.20 ÷ (10% − 7.7%)	**$52.17**
Projects earn only 10%	same value either way	**$40.00**

IN THE LESSON

- Example six: a cut that adds value.
- Suppose Halden earns four dollars a share and pays half out, two dollars.
- Its cost of equity is ten per cent and its new projects earn eleven per cent.
- Growth equals the retention rate times the return on reinvestment.
- With half retained, growth is five and a half per cent, and value is two divided by ten minus five and a half, about forty-four dollars forty-four.
- Now the board cuts the payout to thirty per cent.
- The dividend falls to one twenty, retention rises to seventy per cent, growth rises to seven point seven, and value becomes one twenty divided by two point three per cent, fifty-two dollars seventeen.
- The cut raised value.
- But it works only because eleven beats ten.
- If the projects earned just ten per cent, value would be forty dollars either way.

21 When the usual reading fails

- A start may mean: no good projects left
- A cut for profitable projects can be neutral or good
- An extra dividend promises nothing, little signal
- Never read a cut or a start without the context

IN THE LESSON

- Now the other readings.
- A start can disappoint.
- Suppose a fast-growing company that never paid a dividend begins one, saying its markets have matured.
- Investors may hear: we have run out of good projects.
- That is not great news for a share priced for growth.
- A cut can be neutral or even good, as we just saw, when it is explained by profitable projects, or when it avoids issuing expensive new shares.
- An extra dividend carries little signal because it promises nothing.
- And a long record of steady dividends is not proof of safety if cash flow no longer supports it.
- So the trap runs both ways: do not treat every cut as bad news, and do not assume every start is good news.

22 A story: the house-sitter with your card

- Owners hire managers: managers may spend freely
- Surplus cash invites empire building
- Lenders fear cash leaking out to owners
- Agency costs: the price of these conflicts

IN THE LESSON

- Picture hiring a house-sitter while you travel.
- You hope they look after the house.
- But if they hold a spare credit card with your name on it, a few expensive dinners would not surprise you.
- A company has the same problem.
- Shareholders own it, but managers run it, and managers may spend spare cash in ways that suit them, such as a grand head office or an acquisition that builds an empire, rather than ways that maximise shareholder value.
- Lenders have a different worry.
- They lent against a company with certain assets, and they fear that cash is leaking out.
- Differences in interest between those who own, run and lend to a firm are called agency conflicts, and the costs they create are agency costs.
- Payout policy can ease one and sharpen the other.

23 Same payout, opposite conflicts

Owners against managers

Surplus cash, few projects → Pay it out → Less to waste

Owners against lenders

Borrow to pay a dividend → Default risk rises → Value moves to owners

IN THE LESSON

- Here are the two conflicts as two rows.
- The top row is owners against managers.
- A company has surplus cash and few good projects.
- If it pays the cash out, there is less left to waste.
- And any new investment now needs fresh money from the market, where investors and lenders ask hard questions.
- So paying out disciplines managers.
- The bottom row is owners against lenders, and it runs the other way.
- If a company borrows to pay a large dividend, there are more claims on the same assets, default risk rises, and value moves from lenders to owners.
- The same act, paying out cash, helps in one conflict and hurts in the other.
- That is the point of this slide, and it is the point examiners test.

24 Example 7: the cost of idle cash

Surplus cash $60m, 10m shares. Pet deal costs $60m, worth $45m.

Pay the cash out	to shareholders	**$60m**
Spend it on the deal	what they own instead	**$45m**
Value lost	60 − 45	**$15m**
Lost per share	15 ÷ 10m shares	**$1.50**

IN THE LESSON

- Example seven: the cost of idle cash.
- Halden's managers have sixty million dollars of surplus cash.
- One manager wants to buy a business in an unrelated field.
- The price is sixty million, but analysts think it is worth only forty-five.
- If the cash is paid out, shareholders receive sixty million.
- If it is spent on the deal, they own something worth forty-five.
- The value lost is fifteen million dollars, which across ten million shares is a dollar fifty a share.
- That is an agency cost, in numbers.
- It is exactly the waste that shareholders of cash-rich firms with few good projects want to prevent by pushing for a higher payout.

25 Example 8: owners against lenders

Firm worth $700m: equity 500, debt 200. Borrow $100m, pay it out.

Old debt re-priced	200 → 185	**−$15m**
Equity afterwards	700 − 185 − 100	**$415m**
Shareholders in total	415 + 100 dividend	**$515m**
Gain to shareholders	515 − 500	**+$15m**
Loss to old bondholders	200 − 185	**−$15m**

IN THE LESSON

- Example eight: owners against lenders.
- Halden's equity is worth five hundred million and its debt two hundred, so the firm is worth seven hundred.
- Suppose it borrows another hundred million and pays it all out as a dividend.
- The firm is still worth seven hundred, because the cash came in and went straight out.
- But the old lenders now share the assets with new lenders, so their bonds fall in value from two hundred to one hundred and eighty-five.
- Equity is what is left: seven hundred minus one eighty-five minus the new debt of a hundred, which is four hundred and fifteen.
- Shareholders hold four hundred and fifteen of shares plus the hundred in cash, five hundred and fifteen, up fifteen.
- Exactly the fifteen that the old bondholders lost.
- Nothing was created.
- It was moved.

26 Covenants, and the trap

- Covenant: the bond contract caps distributions
- Example: 60% of net income = $24m for Halden
- A $50m special dividend would break it
- Payout can help owners and hurt lenders

IN THE LESSON

- Lenders know all this, so they protect themselves before they lend.
- A covenant is a promise written into the bond contract.
- A common one caps total distributions, for example at sixty per cent of net income.
- Halden earns forty million, so the cap is twenty-four million.
- Our fifty million special dividend from the start of the lesson would break it.
- Notice the trap.
- A higher payout does not reduce agency costs for every stakeholder.
- It may cut the cost between owners and managers while raising it between owners and lenders.
- So when a question says that a dividend funded by borrowing reduces agency costs for everyone, including bondholders, it is wrong.

27 A story: the family budget

- Profitable projects: how much cash is needed
- Earnings: steady or volatile
- Tax, issue costs, flexibility
- Legal and contractual limits

IN THE LESSON

- Think about how a family decides how much of the monthly pay to spend.
- Plenty of good uses, such as a home improvement that will pay for itself, argue for saving.
- An irregular income argues for a modest, steady budget that survives lean months.
- Tax rules matter, and so does any promise made to the bank.
- Companies face the same trade-offs.
- Practical forces push a company's payout up or down: how many profitable projects it has, how stable its earnings are, how dividends are taxed against gains, the cost of issuing new shares, the wish for flexibility, and legal and contractual limits.
- The skill is to know which way each force pushes, because the exam loves to offer a factor that points the wrong way.

28 Which way each force pushes

- Many good projects
- Volatile earnings
- Heavy dividend tax
- Few good projects
- Stable earnings
- Tax-exempt owners

IN THE LESSON

- Here are the forces on one line from pay less to pay more.
- On the left are the reasons to hold back.
- Many profitable projects, because retained earnings are the cheapest funding.
- Volatile earnings, because a high dividend is hard to keep in a bad year.
- And heavy tax on dividends relative to gains, because taxable holders would rather keep the money inside the company.
- On the right are conditions that allow a higher payout.
- Few good projects, so cash has no better home.
- Stable earnings, so the dividend is safe.
- And tax-exempt owners, who feel no tax penalty on dividends.
- Note the word allow.
- Forces on the right permit more payout.
- They do not force it.

29 Example 9: flotation costs

Earnings $120m, projects $90m, usual dividend $70m, issue fee 4%

Left after projects	120 − 90	**$30m**
Shortfall if $70m is paid	70 − 30	**$40m**
Gross issue to net $40m	40 ÷ 0.96	**$41.67m**
Cost of issuing	41.67 − 40	**$1.67m**

IN THE LESSON

- Example nine: flotation costs.
- Suppose Halden earns one hundred and twenty million, and has projects costing ninety million that are worth doing.
- If it keeps its habit of paying seventy million in dividends, it is short.
- Earnings less projects leave only thirty to pay out, so paying seventy leaves a shortfall of forty.
- To fill it, the company must sell new shares, and the bankers charge four per cent of the gross proceeds.
- To receive forty net, it must raise forty divided by ninety-six per cent, which is forty-one point six seven.
- The cost is one point six seven million, paid to the bankers, not to shareholders.
- That is why companies with strong investment needs pay modest dividends rather than pay and then raise equity again.

30 Example 10: volatile earnings

Earnings: 120, 80, 150, 50 ($ millions). Average 100.

Steady dividend	40% × 100 average	**$40m**
Payout in worst year	40 ÷ 50	**80%**
Payout in best year	40 ÷ 150	**26.7%**
60% rule: dividend range	30 in worst, 90 in best	**swing $60m**

IN THE LESSON

- Example ten: volatile earnings.
- Suppose Halden's earnings over four years were one hundred and twenty, eighty, one hundred and fifty and fifty million, an average of one hundred.
- A board that sets a steady dividend of forty million, forty per cent of the average, never has to cut.
- Even in the worst year, earnings of fifty cover it, a payout of eighty per cent.
- In the best year the payout is only twenty-six point seven per cent.
- Compare a rule that pays sixty per cent of each year's earnings.
- Dividends would swing from thirty million in the worst year to ninety in the best, a swing of sixty.
- Investors dislike that swing, and managers fear cutting, so firms with volatile earnings set a lower dividend that can be sustained.

31 Tax, flexibility and legal limits

- Tax: taxable holders favour less, tax-exempt indifferent
- Flexibility: modest dividend plus buybacks
- Limits: covenants and impairment of capital rules
- Trap: stable earnings point to more, not less

IN THE LESSON

- Three more forces.
- First, taxes.
- Where dividends are taxed more heavily than capital gains, taxable investors prefer lower payouts and companies lean on buybacks, while tax-exempt investors are indifferent.
- Second, financial flexibility.
- A modest regular dividend, topped up with repurchases in good years, keeps options open, because a buyback commits the company to nothing.
- Third, legal and contractual limits.
- Bond covenants may cap payouts, as we saw.
- And impairment of capital rules stop a company paying dividends that exceed its retained earnings or that would leave it unable to pay its debts.
- These are ceilings, not preferences.
- Remember the trap: stable earnings are a reason to pay more, not a reason to cut.

32 Recap: the formulas to remember

Ex-dividend price ≈ P − D
Value today = D1 ÷ (r − g)

Price before, P	Price before the payout
Dividend per share, D	Cash paid per share
Next dividend, D1	Dividend expected next year
Required return, r	What investors demand
Dividend growth, g	Steady yearly growth

IN THE LESSON

- Let us pull everything together.
- A cash dividend moves value from company to holder.
- The price falls by about the dividend, wealth is unchanged, cash and equity fall, liquidity ratios fall and leverage ratios rise.
- Stock dividends and splits only change the share count, so price, earnings per share and book value per share adjust, and nothing else does.
- On the theories, irrelevance says nothing, bird in the hand says up, tax aversion says down, and clienteles sort investors.
- Raises and starts usually signal confidence, cuts and omissions a weaker outlook, but context matters.
- Payout disciplines managers and can move value from lenders.
- And policy is shaped by projects, earnings, tax, issue costs, flexibility and legal limits.
- One formula ties the theories together: next dividend over required return minus growth.

33 Try three quick questions

1. Price 80, cash dividend 4. Ex-dividend price? Current ratio?
   Answer: 76. The current ratio falls: cash has left.
2. Price 60, 20% stock dividend. New price?
   Answer: 60 ÷ 1.20 = 50. Wealth is unchanged.
3. Which theory says higher payout lowers value, and which raises it?
   Answer: Tax aversion lowers it. Bird in the hand raises it.

IN THE LESSON

- Now try three quick questions yourself.
- Pause after each one.
- Question one.
- A share trades at eighty and the company pays a cash dividend of four.
- Where does it open ex-dividend, and which way does the current ratio move?
- It opens at seventy-six, and the current ratio falls, because cash has left.
- Question two.
- A share is priced at sixty and the company pays a twenty per cent stock dividend.
- What is the new price?
- Sixty divided by one point two, which is fifty, and wealth is unchanged.
- Question three.
- Which theory says a higher payout lowers value, and which says it raises it?
- Tax aversion lowers it, and the bird in the hand view raises it.
- Well done.