CHARTA LEARNING · LESSON NOTES

Share buybacks and dividends

Corporate Issuers

1 A company buys its own shares

- Calder Brewing: 50m shares, price $40
- $200m of spare cash in the bank
- Buy shares back from holders who sell
- Fewer shares left, bigger slice each

IN THE LESSON

- Picture a small brewery called Calder Brewing.
- It has fifty million shares in issue, each trading at forty dollars, and it has two hundred million dollars of spare cash sitting in the bank.
- The board can hand the cash back to its owners, and one way to do that is a share repurchase, also called a buyback.
- The brewery offers to buy some of its own shares from any holder who wants to sell, and then cancels them or holds them in the company's own name.
- The shares are gone, so every share left owns a slightly bigger slice of the business.
- The first question is how the brewery actually goes about buying them.

2 How a buyback works

One buyback, left to right

Company holds spare cash → Offers to buy its own shares → Fewer shares left in issue

IN THE LESSON

- Here is the idea as a short chain, read from left to right.
- On the left, the company holds spare cash that it does not need for the business.
- In the middle, it offers to buy its own shares from the people who own them, and some of those owners agree to sell.
- On the right, the shares are retired, so there are fewer shares in issue.
- Notice that the cash has left the company and gone to the sellers.
- So the company has fewer assets and fewer shares at the same time.
- Everything in this lesson comes from those two changes happening together, and from the price the company pays along the way.

3 Open market purchases and direct negotiation

- Open market: buy on the exchange over time
- Flexible and cheapest, but slow and uncertain
- Direct negotiation: buy a block from one holder
- May pay a premium for the block

IN THE LESSON

- There are four main methods.
- The first, and by far the most common, is the open market purchase.
- The company simply buys shares on the stock exchange, through a broker, over weeks or months, just as any investor would.
- It is flexible, because the board can speed up, slow down or stop.
- It is the cheapest, because there is no premium to pay.
- But it is slow, and the company cannot know in advance how many shares it will end up with.
- The fourth method is direct negotiation.
- The company buys a block of shares from one particular holder, perhaps a large investor who wants out, and it may pay a premium to get the deal done.

4 The fixed-price tender offer

- Company names one price and a number of shares
- Price is usually above the market: a premium
- Quick, with a known price
- Costs more than the open market

IN THE LESSON

- The second method is the fixed-price tender offer.
- A tender offer is a public invitation to every shareholder to sell.
- In the fixed-price version, the company names one price and the number of shares it wants.
- The price is usually set above the market price, a premium, to tempt holders to sell.
- Calder might offer forty-four dollars, ten per cent above its forty-dollar share price, for five million shares.
- Because the offer has a deadline, it can be completed quickly, and the company knows the price.
- The cost is the premium, which the sellers receive and the holders who keep their shares do not.
- If more shares are offered than the company wants, it takes a fair share from each seller.

5 The Dutch auction

- Company names a price range and a quantity
- Holders say how many shares and at what lowest price
- Clearing price = lowest price that fills the order
- Every accepted tender is paid that one price

IN THE LESSON

- The third method is the Dutch auction, and it is the one the exam likes.
- The company does not name one price.
- It names a range, say forty-one to forty-four dollars, and the number of shares it wants.
- Each shareholder says how many shares they would sell, and the lowest price in the range they would accept.
- The company then lines up the offers from the lowest price upward, and finds the lowest price at which enough shares have been offered to fill its order.
- That is the clearing price.
- And here is the key point.
- Every accepted seller is paid that same clearing price, even the ones who said they would take less.

6 Brindle Tools: tenders added up

Shares offered up to this price (m)

$41	**1.5**
$42	**3.5**
$43	**6.0**
$44	**9.0**

Brindle's order: 5.0 million shares

IN THE LESSON

- Let's work an auction.
- A tool maker called Brindle wants to buy back five million shares, and invites tenders from forty-one to forty-four dollars.
- Holders tender one point five million shares at forty-one dollars or less.
- Another two million shares are offered at forty-two.
- Two and a half million more are offered at forty-three, and three million at forty-four.
- Now we add them up from the left, which is how the company reads them.
- By forty-one dollars, one point five million shares have been offered in total.
- By forty-two, three and a half million.
- By forty-three, six million.
- By forty-four, nine million.
- Each bar is a running total, so the bars only ever grow.

7 Brindle: finding the clearing price

Order: 5.0m shares. Range $41 to $44

Running total at $42	1.5 + 2.0	**3.5m**
Running total at $43	3.5 + 2.5	**6.0m**
Clearing price	first total of 5.0m or more	**$43**
Share of $43 tenders taken	1.5 ÷ 2.5	**60%**
Cost of the order	5.0m × $43	**$215m**

IN THE LESSON

- Now read the picture against the order of five million.
- At forty-one dollars the running total is one point five million, not enough.
- At forty-two it is three and a half, still short.
- At forty-three it reaches six million, which is more than five.
- So forty-three dollars is the first price that fills the order, and that is the clearing price.
- Every accepted seller gets forty-three dollars, including those who would have taken forty-one.
- The holders who asked for forty-four sell nothing.
- At forty-three, only one and a half million of the two and a half million offered are needed, so those sellers are scaled back to sixty per cent.
- The cost is five million times forty-three, or two hundred and fifteen million dollars.

8 The four methods on one line

- Open market
- Dutch auction
- Fixed-price tender
- Direct negotiation

IN THE LESSON

- Now let's set the four methods on one line.
- On the left are the slow, cheap and uncertain methods.
- On the right are the fast, certain and costly ones.
- This is an illustration of the trade-off, not a measurement.
- Furthest left is the open market purchase: lowest cost, but slow, and the company cannot say how many shares it will get.
- Next comes the Dutch auction, which pays one clearing price, usually below the top of the range, and gives the company a good chance of filling its order within a few weeks.
- Further right is the fixed-price tender offer, quick and certain on price, but with a premium.
- And furthest right, direct negotiation of a block, which is fast and certain but may carry a premium too.

9 The four methods at a glance

Match the method to its main feature

Method	Main feature
Open market	Cheapest, slow
Fixed-price tender	Premium, quick
Dutch auction	One clearing price
Direct negotiation	One big holder

IN THE LESSON

- Here is a one-line memory for each method, the way a question will test it.
- Open market: cheapest, but slow and the quantity is unknown.
- Fixed-price tender: a premium price and a quick finish.
- Dutch auction: one clearing price for everybody.
- Direct negotiation: one holder, possibly at a premium.
- A typical exam question gives you a table of tenders and asks for the price paid.
- The trap is to answer with the highest tender in the range, or the lowest one.
- Neither is right.
- Add up the offers from the lowest price, and the answer is the first price where the running total reaches the order.
- Practise that, and this outcome is safe.

10 Does a buyback lift earnings per share?

- EPS = net income ÷ shares outstanding
- Fewer shares, but the funding cost lowers income
- Calder: $120m ÷ 50m = $2.40 EPS
- Earnings yield = $2.40 ÷ $40 = 6.0%

IN THE LESSON

- Now the second question.
- Earnings per share, or E P S, is net income divided by the number of shares.
- A buyback shrinks the bottom of that fraction, the share count, so you might think E P S must rise.
- But the cash the company spends was doing a job.
- If it was earning interest, that interest is now gone.
- If the company borrowed to buy the shares, it now pays interest.
- So the top of the fraction shrinks too.
- The question is which shrinks faster.
- Calder earns one hundred and twenty million on fifty million shares, so E P S is two dollars forty.
- At forty dollars a share, the earnings yield, E P S divided by price, is six per cent.

11 New EPS after a buyback

New EPS = (Net income − after-tax cost of funds) ÷ (Shares − shares repurchased)

Net income	Before the buyback
After-tax cost of funds	Interest lost or paid, after tax
Shares before	Shares in issue at the start
Shares repurchased	Cash spent ÷ price paid
New EPS	Earnings over the shares left

IN THE LESSON

- Here is the formula.
- New E P S equals net income, minus the after-tax cost of the funds used, all divided by the shares left after the buyback.
- Take the pieces in turn.
- Net income is what the company earned before the buyback.
- The after-tax cost of funds is the earnings given up.
- If the buyback is paid from surplus cash, it is the interest income the cash would have earned, after tax.
- If it is paid by borrowing, it is the interest on the new debt, after tax.
- The shares left are the shares you started with, less the shares repurchased.
- The number of shares repurchased is the cash spent divided by the price paid per share.

12 The quick rule: earnings yield against cost

After-tax cost = pre-tax rate × (1 − tax rate)
EPS rises if earnings yield > after-tax cost

Earnings yield	EPS ÷ share price
Pre-tax rate	Interest earned or paid
Tax rate	Interest is tax-affected

IN THE LESSON

- There is a shortcut that saves you the full calculation.
- Each dollar spent on the buyback retires a fraction of a share, and with it a slice of earnings.
- That slice, per dollar, is the earnings yield: E P S divided by price.
- Each dollar also costs the company its after-tax funding rate.
- The after-tax rate is the pre-tax interest rate times one minus the tax rate.
- So E P S rises if the earnings yield is higher than the after-tax cost of funds.
- It is unchanged if they are equal, and it falls if the yield is lower.
- The common error is to compare the yield with the pre-tax rate, which ignores the tax saving on interest.

13 Calder's buyback: the set-up

Calder: income $120m, 50m shares, price $40, tax 25%

Old EPS	120 ÷ 50	**$2.40**
Earnings yield	2.40 ÷ 40	**6.0%**
Shares repurchased	200 ÷ 40	**5.0m**
Shares left	50 − 5	**45.0m**

IN THE LESSON

- Let's work the plan.
- Calder will spend two hundred million dollars buying its own shares at the market price of forty dollars.
- First the shares retired.
- Two hundred million divided by forty is five million shares, which leaves forty-five million.
- Next, the facts we need.
- The surplus cash earns four per cent a year before tax.
- If instead Calder borrows the two hundred million, the interest rate will be eight per cent before tax.
- The tax rate is twenty-five per cent.
- We assume that the purchase happens at the start of the year, that operating earnings do not change, and that the only effect on income is the interest.
- The old E P S is two dollars forty, and the earnings yield is six per cent.

14 Plan A: paid for from surplus cash

Plan A: cash earns 4% before tax

Interest given up, pre-tax	200 × 4%	**$8.0m**
Interest given up, after tax	8.0 × 0.75	**$6.0m**
Income after the buyback	120 − 6.0	**$114.0m**
New EPS	114 ÷ 45	**$2.53**

Cash yields 3.0% after tax, below the 6.0% earnings yield

IN THE LESSON

- Plan A uses the surplus cash.
- The cash was earning four per cent before tax, so two hundred million earned eight million dollars a year.
- After twenty-five per cent tax, the company keeps six million.
- That six million is the income given up.
- So net income falls from one hundred and twenty million to one hundred and fourteen million.
- Divide by the forty-five million shares left, and the new E P S is two dollars fifty-three.
- That is up from two dollars forty, a rise of about five and a half per cent.
- The quick rule agrees.
- The cash earns three per cent after tax, well below the six per cent earnings yield, so E P S has to rise.

15 Plan B: paid for with borrowed money

Plan B: new loan at 8% before tax

New interest, pre-tax	200 × 8%	**$16.0m**
New interest, after tax	16.0 × 0.75	**$12.0m**
Income after the buyback	120 − 12.0	**$108.0m**
New EPS	108 ÷ 45	**$2.40**

Debt costs 6.0% after tax, equal to the 6.0% earnings yield

IN THE LESSON

- Plan B leaves the cash alone and borrows two hundred million at eight per cent.
- The new interest is sixteen million dollars a year.
- Interest is tax deductible, so the cost after tax is twelve million.
- Income falls from one hundred and twenty million to one hundred and eight million.
- Divide by the same forty-five million shares, and the new E P S is exactly two dollars forty.
- It has not changed at all.
- The quick rule explains why.
- Eight per cent less a quarter of itself is six per cent, which is exactly the earnings yield.
- Cost equals yield, so E P S is unchanged.
- The buyback gave and took away the same amount.

16 The rates that decide it

Rate (% a year)

Earnings yield	**6.0%**
Cash, after tax	**3.0%**
Debt, after tax	**6.0%**
Debt, pre-tax	**8.0%**

Compare the yield with the AFTER-tax cost

IN THE LESSON

- Here are the rates side by side, so you can see the decision.
- The first bar is the earnings yield, six per cent.
- The second is the after-tax return on the cash, three per cent, comfortably below the yield, so a cash-funded buyback lifts E P S.
- The third is the after-tax cost of the new debt, six per cent, level with the yield, so E P S is unchanged.
- The last bar is the eight per cent pre-tax rate on the loan.
- It is the tallest, and it is the one that tempts people to say the debt-funded buyback must hurt E P S.
- But that rate is before the tax saving, and the right comparison is the third bar.

17 New EPS against the borrowing rate

Chart: EPS after the buyback vs Pre-tax rate on the loan (0 to 12%)

- Old EPS $2.40
- Break-even: 8%
- EPS rises
- EPS falls

IN THE LESSON

- Now the same thing as a picture.
- Along the bottom is the pre-tax interest rate on the loan, from nothing to twelve per cent.
- Up the side is the new E P S.
- The dashed line is the old E P S, two dollars forty.
- The solid line is the new E P S if Calder borrows.
- It slopes down, because a higher rate takes more income away while the share count stays at forty-five million.
- At a rate of zero the new E P S would be two dollars sixty-seven.
- The two lines cross at eight per cent before tax, our break-even rate.
- To the left of that point, borrowing raises E P S.
- To the right, at nine per cent for example, E P S falls to two dollars thirty-seven.

18 A higher EPS is not the same as more value

- Plan A: EPS up, but total income fell $6m
- Plan B adds $200m of debt and extra risk
- Riskier earnings can mean a lower P/E multiple
- Value comes from cash flows and risk, not EPS

IN THE LESSON

- One more warning, because it is a favourite trap.
- Suppose a director says, the buyback raises E P S, so it creates value.
- Look again at Plan A.
- The company gave up a safe three per cent after-tax return on its cash and got a six per cent earnings yield on the shares it bought, so earnings per share went up.
- But the total earnings fell, from one hundred and twenty million to one hundred and fourteen million.
- And in Plan B, the company took on two hundred million of extra debt.
- Shareholders now hold riskier earnings and may want a higher return, so the price to earnings ratio can fall by more than E P S rose.
- Value comes from the cash flows and the risk, not from the share count.

19 What a buyback does to book value per share

- Book value per share = book equity ÷ shares
- A buyback cuts equity by the cash paid out
- It also cuts the share count
- Calder: $800m ÷ 50m = $16.00 per share

IN THE LESSON

- Now the third question: book value per share.
- Book value of equity is what is left on the balance sheet after subtracting liabilities from assets.
- Divide it by the number of shares and you have book value per share, the accounting value attached to one share.
- When a company buys back shares, two things happen on the balance sheet.
- The cash paid out reduces assets, and so it reduces equity by the same amount.
- And the share count falls.
- Both the top and the bottom of the fraction change.
- Calder has equity of eight hundred million dollars on fifty million shares, so book value per share is sixteen dollars.
- The shares trade at forty, two and a half times book value.

20 Book value per share after a buyback

New BVPS = (Equity before − cash spent) ÷ (Shares − shares repurchased)

Book equity before	Balance sheet equity
Cash spent	Price × shares bought
Shares before	Shares in issue at the start
Shares repurchased	Cash spent ÷ price paid
New book value per share	Equity left per share left

IN THE LESSON

- The formula is simple, and it has two moving parts.
- New book value per share equals book equity before, minus the cash spent, all divided by the shares remaining.
- The cash spent is the number of shares bought times the price paid for each.
- The shares remaining are the original shares less the ones bought.
- Two slips are common, and both are marked wrong in the exam.
- One is to forget to take the cash spent out of equity.
- The other is to divide by the original share count instead of the smaller count.
- Whether the answer goes up or down depends on one comparison: the price paid for each share against the old book value per share.

21 Calder: book value per share after the buyback

Equity $800m, 50m shares, buys 5m shares at $40

BVPS before	800 ÷ 50	**$16.00**
Equity after	800 − 200	**$600m**
Shares after	50 − 5	**45m**
BVPS after	600 ÷ 45	**$13.33**

Paid $40 for shares carrying $16 of book value

IN THE LESSON

- Let's use Calder's own numbers.
- Before the buyback, equity is eight hundred million and there are fifty million shares, so book value per share is sixteen dollars.
- Calder spends two hundred million, buying five million shares at forty dollars.
- Equity falls to six hundred million.
- Shares fall to forty-five million.
- Six hundred divided by forty-five is thirteen dollars thirty-three.
- So book value per share falls, from sixteen to thirteen thirty-three.
- Why?
- Calder paid forty dollars for shares whose book value was only sixteen.
- It handed over far more equity than those shares carried, so the shares left behind carry less.

22 Book value per share against the price paid

Chart: Book value per share ($) vs Price paid per share ($8 to $40)

- Start: $16.00
- Pay $16: no change
- Pay $40: $13.33

IN THE LESSON

- Here is the whole story in one picture.
- Along the bottom is the price Calder pays per share, from eight dollars to forty.
- Up the side is book value per share afterwards, buying the same five million shares each time.
- The dashed line is where it started, sixteen dollars.
- The solid line slopes down, because every extra dollar paid per share takes another five million dollars out of equity.
- The lines cross at sixteen dollars, exactly the old book value per share.
- Pay less than that, to the left, and book value per share rises.
- Pay more, to the right, and it falls.
- At forty dollars, our case, the answer is thirteen dollars thirty-three.

23 Three prices, three answers

Calder buys 5m shares. BVPS started at $16.00

Price paid	New BVPS
$12: below book value	$16.44
$16: equal to book value	$16.00
$40: above book value	$13.33

IN THE LESSON

- Let's make it concrete with three prices for the same five million shares.
- Suppose Calder could buy them at twelve dollars, below book value.
- It spends sixty million, equity falls to seven hundred and forty, and dividing by forty-five gives sixteen dollars forty-four.
- Book value per share rises.
- Suppose it pays sixteen dollars, exactly book value.
- It spends eighty million, and seven hundred and twenty over forty-five is exactly sixteen.
- No change.
- And at forty dollars, the real case, it falls to thirteen thirty-three.
- For a profitable company the share price is normally well above book value, so the usual result is a fall.
- A fall in book value per share is not a loss to shareholders, because the cash they received is worth more.

24 Four mistakes to avoid

- 1. Dutch auction: not the top or bottom bid
- 2. Lost interest ignored; pre-tax rate used
- 3. Higher EPS taken as higher value
- 4. Cash not deducted; old share count used

IN THE LESSON

- Before the last part, the slips that cost marks.
- One.
- In a Dutch auction, naming the highest tender or the lowest tender as the price.
- The answer is the clearing price, the first price at which the running total fills the order, and everyone accepted receives it.
- Two.
- Forgetting the lost interest when cash pays for the buyback, or using the pre-tax interest rate when you compare with the earnings yield.
- Three.
- Assuming that a higher earnings per share means a higher value.
- Four.
- For book value per share, forgetting to take the cash spent out of equity, or dividing by the old share count.
- Remember the rule: paying above book value lowers it, paying below raises it.

25 Dividend or buyback: same cash, same wealth?

- Same $200m, two ways to hand it back
- Dividend: price falls by the cash paid
- Buyback at market price: price stays put
- No taxes, no signals: equal wealth

IN THE LESSON

- Now the last question.
- A company has two hundred million dollars to give back.
- It can pay a dividend, or it can buy shares.
- Which is better for shareholders?
- Think of a pizza.
- A dividend hands out slices of cash to everyone, and the pizza that remains is smaller.
- A buyback buys back some of the pizza from the people who want to sell it, and the rest of it is shared among fewer people.
- In a perfect world, with no taxes and no hidden information, the shareholder ends up with the same wealth either way.
- The price after a dividend drops by the dividend.
- The price after a buyback at the market price does not move.
- Let's check with Calder's numbers.

26 One holder, two routes, the same wealth

Holder has 100 shares at $40. Calder pays out $200m

Dividend cash	100 × $4.00	**$400**
Shares ex-dividend	100 × $36.00	**$3,600**
Buyback: sell 10 shares	10 × $40	**$400**
Buyback: keep 90 shares	90 × $40	**$3,600**
Either route, total	$400 + $3,600	**$4,000**

IN THE LESSON

- Take a shareholder with one hundred Calder shares, worth four thousand dollars.
- Route one, a dividend of four dollars a share, which is two hundred million over fifty million shares.
- The holder gets four hundred dollars in cash.
- The firm is now worth eighteen hundred million, so the price drops to thirty-six dollars, and the hundred shares are worth thirty-six hundred.
- Total, four thousand.
- Route two, the buyback.
- Five million of fifty million shares, one tenth, are bought at forty dollars.
- The holder sells ten shares for four hundred in cash, and the ninety left are worth forty each, thirty-six hundred.
- Again, four thousand.
- The price did not move, since eighteen hundred million over forty-five million is still forty.

27 The two routes side by side

Dividend

Pays $4.00 a share → Price falls to $36 → Holder: $36 plus $4 cash

Buyback at market

Buys one tenth at $40 → Price stays at $40 → Sellers hold cash, others shares

IN THE LESSON

- Here are the two routes drawn out.
- On the top row, the dividend.
- The company pays four dollars a share to everybody.
- The price drops from forty to thirty-six, because that cash has left the company.
- The holder owns shares worth thirty-six, and also has four dollars in cash.
- On the bottom row, the buyback.
- The company buys one tenth of the shares at forty.
- The price stays at forty.
- Holders who sold have cash, and holders who did not have shares at the same price, each now a larger slice of a smaller company.
- The wealth is equal in both rows.
- What differs is whether you were handed cash whether you wanted it or not, or only if you chose to sell.

28 Why firms choose buybacks in practice

- Flexible: no implied promise to repeat
- Signal that management sees undervaluation
- Offset dilution from employee share plans
- Adjust leverage: retire equity, add debt
- Tax: gains often taxed more lightly

IN THE LESSON

- In the real world there are taxes, and managers know more than outsiders, so the choice matters.
- Firms prefer buybacks for five reasons.
- First, flexibility: a buyback carries no implied promise, so next year it can be cut without alarming anyone, while a dividend cut is read as bad news.
- Second, a signal: if managers think their shares are undervalued, buying them back says so.
- Third, to offset dilution from employee share plans, which keep creating new shares.
- Fourth, to adjust leverage: using cash or debt to retire equity shifts the balance toward debt.
- Fifth, tax: in many places, capital gains are taxed more lightly than dividends.

29 How committed is each route?

- Open market buyback
- Tender offer
- Special dividend
- Regular dividend

IN THE LESSON

- This line shows how binding each way of returning cash feels to the market.
- On the left is the most flexible: an open market buyback, which the board can pause at any time without announcement.
- Next, a tender offer, which is a one-off, and an obvious one at that.
- In the middle sits a special dividend, paid once and labelled as a one-off, so nobody expects it again.
- On the right is the regular dividend, which works like a promise.
- Boards raise it only when they think they can keep it, and cut it only when forced to, so the market reads a cut as bad news.
- That is why steady, mature firms with stable cash flows favour dividends, and firms with lumpy cash flows favour buybacks.

30 Which route fits which situation?

A guide, not a rule: what each situation leans toward

Situation	Leans toward
Steady cash, commitment	Dividend
Lumpy cash flows	Buyback
Shares look cheap	Buyback
Employee plans add shares	Buyback

IN THE LESSON

- Let's use that as a quick guide.
- If a company has steady cash flows and wants to show a lasting commitment, and many of its holders want income, a dividend fits.
- If cash flows are lumpy, a buyback fits, because it asks nothing of next year.
- If the board believes the shares are cheap, a buyback signals it.
- If employee share plans keep adding shares, a buyback holds the count steady.
- And if you see the argument that a buyback is better because it raises earnings per share, treat it as the weak one.
- Earnings per share can rise while value does not.
- Without taxes or signals, a dividend and a buyback of equal size leave holders equally well off.

31 Recap: the lesson in four lines

Dutch auction: first price whose running total ≥ order
EPS up if earnings yield > after-tax cost
New BVPS = (Equity − cash spent) ÷ (Shares − bought)

Dutch auction price	One price for all accepted
Earnings yield	Beats after-tax cost: EPS up
After-tax cost of funds	Pre-tax rate × (1 − tax)
Cash spent	Above BVPS: BVPS falls
New book value per share	Below BVPS: BVPS rises

IN THE LESSON

- Let's pull it together.
- A Dutch auction pays every accepted seller the clearing price, the first price where the running total fills the order.
- New earnings per share is net income less the after-tax cost of the funds, over the shares left.
- It rises if the earnings yield is higher than that after-tax cost.
- New book value per share is equity less the cash spent, over the shares left.
- It falls if the price paid is above old book value per share, and rises if below.
- A dividend and a buyback of the same size leave holders equally well off, without taxes or signals.
- And a higher earnings per share is not the same as more value.

32 Try three quick questions

1. Price $50, EPS $4, debt costs 7% pre-tax, tax 25%. EPS up or down?
   Answer: Yield 8.0% > cost 5.25% after tax, so EPS rises.
2. Equity $500m, 20m shares. Buys 2m at $30. New BVPS?
   Answer: (500 − 60) ÷ 18 = $24.44, down from $25.00.
3. Wants 3.0m shares. Running totals: 1.0m at $20, 2.5m at $21, 4.0m at $22. Price paid?
   Answer: $22 for every accepted tender.

IN THE LESSON

- Now try three quick questions yourself.
- Pause after each one.
- Question one.
- A share trades at fifty dollars with earnings per share of four dollars, and a buyback costs seven per cent before tax with tax at twenty-five per cent.
- Does earnings per share rise?
- The earnings yield is four over fifty, eight per cent.
- The cost after tax is five point two five per cent.
- Yield is higher, so it rises.
- Question two.
- Equity is five hundred million on twenty million shares, and the firm buys back two million shares at thirty dollars.
- What is the new book value per share?
- Five hundred less sixty is four hundred and forty, over eighteen, twenty-four forty-four, down from twenty-five.
- Question three.
- A Dutch auction wants three million shares, with one million offered at twenty dollars or less, two and a half million by twenty-one, and four million by twenty-two.
- All accepted holders are paid twenty-two.