# Ownership, governance and ESG exposure

Corporate Issuers

## 1 A story: the village shop and the family firm

- Dispersed owners: many small slices, hired managers
- Worry: managers serve themselves (principal-agent)
- Concentrated owner: a family, the state or another firm
- Worry: controller serves itself (principal-principal)

IN THE LESSON

- Picture two businesses.
- The first is owned by ten thousand ordinary savers, each holding a tiny slice, and they hire a manager to run it.
- Nobody owns enough to watch the manager closely, so the worry is that the manager runs the place for their own comfort.
- That is a principal agent conflict, between the owners, who are the principals, and the hired agent.
- The second business is owned by one family that holds the votes and sits on the board.
- Now the manager worry is small, because the owner is watching.
- But a new worry appears: the family might serve itself at the expense of the small outside holders.
- That is a principal principal conflict.

## 2 Ownership on one line

- Many small holders
- A few large blocks
- Family or state control

IN THE LESSON

- Here is ownership on a line.
- At the left end, ownership is dispersed: many small holders, no one with real control.
- The main risk there is the first conflict, managers against owners.
- As we move right, a few large holders appear, and they have the power and the reason to keep managers in check.
- At the right end, ownership is concentrated: a family, the government or a parent company holds control.
- Manager owner conflicts shrink, but the second conflict grows, controller against minority.
- Across the world, you find all of these.
- Some markets are full of widely held listed companies.
- In others, family and state control is the norm.
- So the first job of a governance analyst is to find out where on this line the firm sits.

## 3 Votes and money are not the same thing

**Votes % = votes held ÷ all votes**
**Equity % = shares held ÷ all shares**

| | |
|---|---|
| **Share of votes** | Votes held over all votes |
| **Share of equity** | Shares held over all shares |
| **Control gap** | Votes % minus equity % |

IN THE LESSON

- Control is about votes, but the owner's loss or gain depends on money invested.
- Usually the two match: one share, one vote.
- But a company can break that link.
- A holder's share of the votes is the votes it casts divided by all the votes cast.
- Its share of the equity is its shares divided by all the shares, because shares share the dividends and the value.
- The difference between the two is the wedge I will call the control gap.
- When votes exceed equity, the holder commands more than it pays for, and most of the cost of its decisions lands on other people.
- The wider the gap, the stronger the temptation.

## 4 Example 1: dual class shares at Ardent Foods

*Class A: 75m shares, 1 vote. Class B: 25m shares, 10 votes*

| | | |
|---|---|---|
| **Class A votes** | 75m × 1 | **75m** |
| **Class B votes (family)** | 25m × 10 | **250m** |
| **Family share of votes** | 250 ÷ 325 | **76.9%** |
| **Family share of equity** | 25 ÷ 100 | **25.0%** |
| **Control gap** | 76.9% − 25.0% | **51.9 pts** |

IN THE LESSON

- Example one.
- Ardent Foods has two classes of share with identical rights to dividends.
- Seventy-five million Class A shares carry one vote each.
- Twenty-five million Class B shares carry ten votes each, and the founding family owns every Class B share and nothing else.
- Votes from Class A are seventy-five million.
- Votes from Class B are twenty-five million times ten, two hundred fifty million.
- All votes: three hundred twenty-five million.
- The family's share of the votes is two hundred fifty over three hundred twenty-five, seventy-six point nine per cent.
- Its share of the equity is twenty-five over one hundred, twenty-five per cent.
- So a quarter of the money buys more than three quarters of the control.

## 5 Pyramids: control passes down the chain

**Economic interest = $stake_1 \times stake_2 \times stake_3$**

| | |
|---|---|
| **Each link's stake** | Multiply the stakes down the chain |
| **Economic interest** | What the family really owns |
| **Control** | Majority at each link keeps it |

IN THE LESSON

- Dual class shares are one way to stretch control.
- A pyramid is another.
- Here a family owns a majority of a holding company, which owns a majority of a second holding company, which owns a majority of the operating company.
- Control passes down every link, because a majority at each level lets the owner at the top cast the votes below.
- But the money does not pass down the same way.
- The family's true economic interest is found by multiplying the stakes along the chain.
- Each link takes a bite.
- Three fifty-one per cent links keep control at every level, yet leave the family owning barely over an eighth of the cash flows at the bottom.

## 6 Example 2: a pyramid at Brindle Steel

*Family owns 51% of Holdco 1, which owns 51% of Holdco 2, which owns 51% of Brindle Steel*

| | | |
|---|---|---|
| **Link 1: 51% of Holdco 1** | | **0.51** |
| **Link 2: × 51%** | 0.51 × 0.51 | **0.2601** |
| **Link 3: × 51%** | 0.2601 × 0.51 | **0.1327** |
| **Economic interest** | | **13.3%** |
| **Control of Brindle Steel** | majority each link | **Yes** |

IN THE LESSON

- Example two.
- Brindle Steel is the operating company.
- The Brindle family owns fifty-one per cent of the first holding company.
- That owns fifty-one per cent of the second holding company.
- That owns fifty-one per cent of Brindle Steel.
- At every link the owner holds a majority, so the family controls the first company, and through it the second, and through it the steel business.
- Its control is a majority all the way down.
- Now the money.
- Zero point five one times zero point five one is zero point two six, and times zero point five one again is zero point one three three, thirteen point three per cent.
- The family controls the votes at the bottom while owning a little over an eighth of the cash flows.

## 7 Control against money, side by side

*Family share (%)*

| | |
|---|---|
| **Dual money** | **25%** |
| **Dual votes** | **76.9%** |
| **Chain money** | **13.3%** |
| **Chain votes** | **51%** |

*Gap between the two bars in a pair = the control gap*

IN THE LESSON

- Here are the two structures as bars.
- The vertical axis is the family's share in per cent.
- The labels under the bars say which structure and whether the bar is money or votes.
- The first pair is Ardent Foods, with dual class shares.
- The money bar is twenty-five per cent.
- The votes bar next to it is seventy-six point nine.
- The second pair is Brindle Steel, with its pyramid.
- The money bar is thirteen point three per cent, and the votes bar is fifty-one.
- Look at the gap inside each pair.
- A wide gap means a controller can make decisions that move value to itself, because the other holders bear most of the cost.
- In a normal company, the two bars in a pair are equal.

## 8 Example 3: who pays for a related-party deal

*Brindle Steel overpays a family-owned supplier by $20m a year*

| | | |
|---|---|---|
| **Family gains at supplier** | | **$20.00m** |
| **Family bears as owner** | 13.27% × 20 | **$2.65m** |
| **Other holders bear** | 20 − 2.65 | **$17.35m** |
| **Family net gain** | 20 − 2.65 | **$17.35m** |
| **Transfer from minorities** | same amount | **$17.35m** |

IN THE LESSON

- Example three shows why the gap matters.
- Brindle Steel buys services from a supplier that the Brindle family owns outright, and pays twenty million dollars a year more than an independent supplier would charge.
- The family gains the whole twenty million at the supplier.
- But as owner of thirteen point three per cent of Brindle Steel, it bears only a small share of the overpayment, about two point six five million.
- Everyone else bears the rest, seventeen point three five million.
- So the family is richer by seventeen point three five million a year, and the minority holders are poorer by the same amount.
- That is the principal principal conflict in numbers.

## 9 What these differences mean for governance practice

- Dispersed: independent board, say on pay, takeover threat
- Concentrated: related-party review, minority seats
- Weak minority law and slow courts magnify every risk
- Trap: judging by the board alone, not who holds the votes

**IN THE LESSON**

- So how should ownership shape the rules a company needs?
- Where ownership is dispersed, the weak point is oversight of management, so the useful safeguards are an independent board, shareholders' votes on pay and on directors, clear disclosure, and the threat of a takeover.
- Where ownership is concentrated, the weak point is the controller, so the useful safeguards are strict review of related party deals, board seats for minority holders, equal treatment of all holders in a sale, and legal remedies that outside holders can actually use.
- And remember the legal system.
- Where the law gives minorities little protection, and courts are slow, every risk we just met is magnified.
- The trap is judging governance by board makeup alone and ignoring who holds the votes.

## 10 A story: the club with a locked committee

- Rules on paper are not the same as protection in practice
- Check the people behind the label
- Ask: does this protect all shareholders, minorities too?

**IN THE LESSON**

- Imagine a members club whose rules say that an independent committee checks the accounts.
- A visitor reads the rules and is satisfied.
- Then she looks at who sits on the committee: the treasurer's brother, a man who ran the club's catering until last spring, and a friend of the chair whose firm the club pays.
- The label says independent, but the practice says otherwise.
- Judging a company's governance is the same exercise.
- You do not stop at what the policy says.
- You ask whether it actually protects every shareholder, and you check the people behind the labels.
- That is the test throughout this section: does it work in practice.

## 11 A checklist for judging governance

*What to check, and what a good answer looks like*

| Check | Good sign |
|---|---|
| Directors, chair | Independent majority; split roles |
| Committees | Independent members and chair |
| Related-party deals, pay | Independent approval; long-run pay |
| Voting rights, remedies | Equal votes; real legal remedies |

**IN THE LESSON**

- Here is a working checklist.
- First, the share of genuinely independent directors.
- Recent former executives, relatives of the controlling holder, and people paid large fees by the firm do not count.
- Second, whether the chair and the chief executive are different people.
- Third, who sits on the audit, pay and nomination committees, and whether independent directors lead them.
- Fourth, how related party deals are handled, ideally reviewed and approved by independent directors.
- Fifth, whether pay is linked to long run returns rather than to size or sales.
- Sixth, voting rights: dual class shares, staggered boards.
- Last, what legal remedies minority holders really have.

## 12 Example 4: counting independent directors

*Report: 6 of 9 directors independent. Analyst finds 3 who are not*

| | | |
|---|---|---|
| **Independent as reported** | 6 ÷ 9 | **66.7%** |
| **Former finance director** | left 18 months ago | **− 1** |
| **Chairman's cousin; fee-earner** | both disqualified | **− 2** |
| **Genuinely independent** | 6 − 3 | **3 of 9** |
| **As a share of the board** | 3 ÷ 9 | **33.3%** |

**IN THE LESSON**

- Example four.
- Brindle Steel's report says that six of its nine directors are independent, two thirds.
- An analyst checks the biographies.
- One of the six was Brindle's finance director until eighteen months ago.
- A second is the chairman's cousin.
- A third runs a consultancy that earns large fees from the family's supplier.
- None of the three can be treated as independent.
- That leaves three genuinely independent directors out of nine, one third.
- The company's own classification showed a comfortable majority.
- The analyst's check shows a minority, on a board that a family elects.
- The trap here is accepting the company's description of independence without checking the facts.

## 13 Weaknesses reinforce each other

*How it compounds*

Family picks board → Captive audit committee → Deals go unreviewed → Minorities pay

**IN THE LESSON**

- Now see how weaknesses combine.
- Read this chain from left to right.
- A controlling family picks the board.
- Some of those directors sit on the audit committee, and they are independent in name only.
- That committee is the body meant to review related party deals, so contracts with family businesses pass without real scrutiny.
- And the cost of any overpayment falls on minority holders, who had no say in any earlier step.
- Each weakness on its own might be tolerable.
- In a row, each one removes the check on the next.
- Break the chain at any point, with a truly independent committee or a legal remedy minorities can use, and everything after that point becomes much harder.

## 14 Example 5: pay that rewards size

*Bonus: $0.5m per 1% revenue growth. Revenue $800m. Deal costs $150m*

| | | |
|---|---|---|
| **Revenue added** | 10% × 800 | **$80m** |
| **Bonus paid** | 10 × $0.5m | **$5.0m** |
| **Return on the deal** | 6 ÷ 150 | **4.0%** |
| **Value of the profit** | 6 ÷ 0.09 | **$66.7m** |
| **Value created** | 66.7 − 150 | **−$83.3m** |

IN THE LESSON

- Example five looks at pay.
- Brindle Steel's chief executive earns a bonus of half a million dollars for each one per cent of revenue growth.
- Revenue is eight hundred million.
- The chief executive buys a rival for one hundred fifty million that lifts revenue by eighty million, ten per cent, and adds six million of after tax profit.
- The bonus is ten times half a million, five million dollars.
- Now the shareholders' side.
- Six million a year at a nine per cent cost of capital is worth sixty-six point seven million.
- The firm paid one hundred fifty.
- The value created is negative eighty-three point three million.
- Pay was linked to size, and it rewarded destroying value.

## 15 Mistakes to avoid so far

- Judging by the board and ignoring who holds the votes
- Accepting the company's own label for independence
- Confusing control with ownership: votes versus money
- Looking at weaknesses one at a time, not together
- Trusting a policy without asking about remedies

IN THE LESSON

- Before we move on, here are the common mistakes.
- One: judging governance by board composition alone, and ignoring who holds the votes.
- A board with a majority of independent directors still answers to the shareholder who elects it.
- Two: accepting the company's own label for independence.
- Check the biographies, the fees and the family ties.
- Three: forgetting that control and ownership differ.
- A family with a quarter of the money may hold most of the votes.
- Four: treating each weakness on its own.
- A captive audit committee next to unreviewed family deals is far worse than either alone.
- Five: assuming that a policy on paper protects anyone.
- Ask whether minorities have a remedy they can actually use.

## 16 A story: the warning lights

- Many ESG issues exist; few move a given company's value
- Material = likely to affect cash flows, risk or cost of capital
- What is material depends on the industry
- Trap: one checklist for every company

IN THE LESSON

- Think of a dashboard with dozens of warning lights.
- A sensible driver does not react to all of them equally.
- A low washer fluid light matters little.
- An oil pressure light matters a great deal.
- And which lights matter depends on the vehicle: a diesel truck and an electric scooter have different weak points.
- Investors face the same thing with E S G issues.
- Environmental, social and governance factors are everywhere, but only some will affect a given company's cash flows, risk or cost of capital.
- The word for this is materiality.
- Start with it, or you will drown in lights.
- The trap is treating every issue as equally relevant to every company.

## 17 Material depends on the industry

*The same issues, judged for two industries*

| Industry and issue | Materiality |
|---|---|
| Chemicals: emissions, water | High |
| Chemicals: data security | Lower |
| Software: data security | High |
| Software: emissions | Lower |

IN THE LESSON

- Here are two industries side by side.
- For a chemicals producer, emissions and water use matter most.
- Emissions bring permit costs and, where it exists, a carbon price.
- Water can limit production, and contamination brings clean up liabilities.
- Data security matters, but a breach is unlikely to change the valuation much.
- For a software company, it swaps around.
- Its emissions come from offices and data centres.
- A breach of customer data can bring fines, lawsuits and lost clients.
- Industry based materiality frameworks are this grid drawn up for every sector, and they are the place to start, before you read a single company report.

## 18 From first look to assessment

*Find*

Pick material issues → Gather evidence → Cross-check sources

*Assess*

Risk or opportunity? → Reach cash flows → Put in valuation

IN THE LESSON

- Now the process, in two rows.
- The top row is finding the issues.
- First, use an industry materiality framework to list the issues likely to matter.
- Second, gather evidence: company reports and sustainability disclosures, regulatory filings, news, industry bodies and data providers.
- Third, cross check, because no single source is complete.
- The bottom row is assessing them.
- Decide for each issue whether it is a risk, an opportunity or both.
- Estimate how it reaches cash flows, risk or the cost of capital.
- And then take it into the valuation, which is the next section.
- Look for opportunities as well as risks.
- Demand for cleaner products is as much a part of E S G as a fine.

## 19 Two providers, one company

*Score (0-100)*

| | |
|---|---|
| **X social** | **70** |
| **Y social** | **30** |
| **X overall** | **78** |
| **Y overall** | **50** |

*Same company; scope, weights and data differ*

IN THE LESSON

- Data providers sell ratings, but they often disagree.
- Here is Marlow Chemicals, rated by two providers.
- The vertical axis is the score out of one hundred.
- Both give the environment pillar ninety and governance seventy.
- But the social pillar differs.
- Provider X looks at labour practices and scores it seventy.
- Provider Y weighs product safety and community disputes, and scores it thirty.
- Then the weights differ too.
- X weights environment, social and governance at forty, thirty and thirty per cent, giving an overall seventy-eight.
- Y weights them twenty, sixty and twenty, giving fifty.
- Same company, two very different headline scores.
- Ratings differ in scope, weighting and data, so they are inputs to question, not answers to accept.

## 20 Example 6: a materiality-weighted score

*Marlow Chemicals: scores out of 100, weighted by materiality*

| | | |
|---|---|---|
| **Equal-weighted average** | (35+50+60+70+90) ÷ 5 | **61.0** |
| **Emissions 40%, water 25%** | 0.40×35 + 0.25×50 | **26.5** |
| **Safety 20%, community 10%** | 0.20×60 + 0.10×70 | **19.0** |
| **Board diversity 5%** | 0.05 × 90 | **4.5** |
| **Materiality-weighted score** | 26.5 + 19.0 + 4.5 | **50.0** |

IN THE LESSON

- Example six shows how to use materiality yourself.
- Marlow Chemicals has five issues, each scored out of a hundred.
- The equal weighted average of the five scores, thirty-five, fifty, sixty, seventy and ninety, is sixty-one, which sounds decent.
- Now weight by materiality for a chemicals producer.
- Emissions carry forty per cent, with a score of thirty-five, contributing fourteen.
- Water, twenty-five per cent at fifty, contributes twelve point five.
- Safety, twenty per cent at sixty, gives twelve.
- Community, ten per cent at seventy, gives seven.
- Board diversity, five per cent at ninety, gives four point five.
- The total is fifty.
- A strong score on a minor issue was lifting the headline.

## 21 Risks and opportunities on one line

- Carbon price
- Data breach
- Strong data security
- Cleaner products

IN THE LESSON

- Finally, a reminder that E S G is not only about bad news.
- This line runs from risk to value on the left, to opportunity on the right.
- On the risk side sit a carbon price, which raises operating costs, and a data breach, which brings fines and lost clients.
- On the opportunity side sit strong data security, which gives clients a reason to stay, and cleaner products, which meet new demand.
- The same industry can show both, and the same issue can flip sides: a firm that cuts emissions faster than its rivals turns a cost for others into an edge for itself.
- Good analysis lists both sides before it puts a single number into a model.

## 22 A story: the bill at the till

- Most ESG effects work through cash flows
- Cost: how big, how much passed on, how much tax relief?
- Possible fines: probability times the amount, discounted
- Never count one issue in both cash flows and the rate

IN THE LESSON

- Suppose your supplier announces a new surcharge on every delivery.
- Before you panic, you ask three things.
- How big is the bill?
- Can I pass some of it on to my customers?
- And is it a cost I can deduct from my taxes?
- Only what is left after those answers is your real burden.
- That is how to take an E S G issue into a valuation.
- Most effects travel through cash flows: a carbon price adds cost, a probable fine is an expected outflow, a new product adds revenue.
- Some analysts instead raise the discount rate, but we must never do both for the same issue.
- We follow Marlow Chemicals, which the market values at one thousand eight hundred million dollars before any adjustment.

## 23 The net annual cost of a carbon price

**Net cost = gross × (1 − passed on) × (1 − tax rate)**

| | |
|---|---|
| **Gross cost** | Tonnes emitted × price per tonne |
| **Passed on** | Share raised in customers' prices |
| **Tax relief** | Tax deduction on what is kept |
| **Net annual cost** | The cost that belongs in value |

IN THE LESSON

- Here is the carbon calculation as a formula.
- Gross cost is the tonnes emitted times the carbon price per tonne.
- Where competitors face the same price, the firm can raise its own prices and pass part of the cost to customers, so we multiply by one minus the share passed on.
- What remains is a business expense, which reduces taxable profit, so tax relief returns part of it.
- Multiply by one minus the tax rate.
- The result is the net annual cost that belongs in the valuation.
- Note the order: tax relief applies only to the share the company keeps, because the share passed on was never its cost.
- Each step is a place to go wrong.

## 24 Example 7: Marlow's carbon bill

*3.0m tonnes at $30; 40% passed on; tax 20%; cost of capital 10%*

| | | |
|---|---|---|
| **Gross bill** | 3.0m × $30 | **$90.0m** |
| **Kept after pass-on** | 90 × 0.60 | **$54.0m** |
| **After tax relief** | 54 × 0.80 | **$43.2m** |
| **Capitalised at 10%** | 43.2 ÷ 0.10 | **$432m** |
| **Per share (60m shares)** | 432 ÷ 60 | **$7.20** |

IN THE LESSON

- Example seven.
- Marlow Chemicals emits three million tonnes a year.
- The government sets a carbon price of thirty dollars a tonne.
- The gross bill is three million times thirty, ninety million.
- Marlow expects to pass forty per cent on to customers, so it keeps sixty per cent, fifty-four million before tax.
- The tax rate is twenty per cent, so after tax relief the cost is forty-three point two million a year.
- To turn that into value, capitalise it at the ten per cent cost of capital.
- Forty-three point two divided by zero point one is four hundred thirty-two million.
- Spread over sixty million shares, that is seven dollars and twenty cents off each share.

## 25 From the headline bill to the real one

*Cost per year ($m)*

| | |
|---|---|
| **Gross** | **90.0** |
| **Kept** | **54.0** |
| **After tax** | **43.2** |

*Only the last bar belongs in the valuation*

IN THE LESSON

- Here is the same calculation as bars.
- The vertical axis is millions of dollars a year.
- The first bar is the headline: ninety million, the figure in the news.
- The second is what Marlow keeps after passing on forty per cent, fifty-four million.
- The third is what is left after tax relief, forty-three point two million.
- Each step makes the bar shorter, and only the last bar belongs in the valuation.
- Less than half of the headline figure.
- Capitalising the first bar would give nine hundred million, more than double the right answer of four hundred thirty-two million.
- That is a mistake that costs the analyst about four hundred sixty-eight million dollars of value, and it is the commonest one.

## 26 Example 8: three ways to get it wrong

*Correct value of the carbon cost: $432m*

| | | |
|---|---|---|
| **Correct: 90 × 0.6 × 0.8 ÷ 0.10** | | **$432m** |
| **Forget the pass-on** | 90 × 0.8 ÷ 0.10 | **$720m** |
| **Forget the tax relief** | 54 ÷ 0.10 | **$540m** |
| **Forget both** | 90 ÷ 0.10 | **$900m** |

IN THE LESSON

- Example eight is about the traps.
- We know the correct value is four hundred thirty-two million.
- Trap one: ignore the pass through and deduct the whole bill after tax.
- Ninety times zero point eight is seventy-two, over zero point one, seven hundred twenty million, an overstatement of two hundred eighty-eight million.
- Trap two: forget the tax relief.
- Fifty-four over zero point one is five hundred forty million, a hundred and eight million too much.
- Trap three: do both, and capitalise the ninety million headline.
- That is nine hundred million.
- Every step in the formula matters, and the errors all run in the same direction: they overstate the damage.

## 27 A possible fine counts at its expected value

**Value of a steady cost = net cost ÷ r**
**Expected cost today = p × loss ÷ (1 + r)**

| | |
|---|---|
| **Value effect** | Perpetuity of net costs |
| **Cost of capital** | Rate used to discount |
| **Probability** | Chance it happens |
| **Loss if it happens** | Amount if it does |

IN THE LESSON

- Not every E S G cost is certain.
- Suppose a regulator may order a clean up.
- We do not deduct the full amount, and we do not ignore it.
- We weight it by its probability.
- Expected cost is the probability times the loss.
- If the payment falls next year, we also discount it back to today at the cost of capital.
- The second line of the formula turns a stream of costs into value: a steady net annual cost, divided by the cost of capital, is its value today, because a level cost forever is a perpetuity.
- Counting a possible fine at its full amount, rather than its probability weighted value, is the classic trap.

## 28 Example 9: an uncertain clean-up order

*25% chance of a $120m clean-up order next year; not tax deductible*

| | | |
|---|---|---|
| **Expected cost** | 0.25 × 120 | **$30.00m** |
| **Discounted one year** | 30 ÷ 1.10 | **$27.27m** |
| **Full amount, discounted** | 120 ÷ 1.10 | **$109.09m** |
| **Overstated by** | 109.09 − 27.27 | **$81.82m** |

IN THE LESSON

- Example nine.
- Marlow faces a twenty-five per cent chance that a regulator orders a clean up costing one hundred twenty million dollars next year.
- The payment would not be tax deductible.
- The expected cost is zero point two five times one hundred twenty, thirty million.
- Discounted one year at ten per cent, thirty divided by one point one, twenty-seven point two seven million.
- Compare that with counting the full amount: one hundred twenty divided by one point one is one hundred nine point zero nine million.
- The careless method overstates the effect by more than eighty-one million dollars.
- If the order never comes, the true cost is zero, and if it does, it is the full amount.
- The expected value is the fair summary of the odds.

## 29 Example 10: an opportunity, too

*$50m new revenue a year, 12% margin, tax 20%, $20m up front*

| | | |
|---|---|---|
| **Operating profit** | 50 × 0.12 | **$6.0m** |
| **After tax** | 6.0 × 0.80 | **$4.8m** |
| **Value of the profits** | 4.8 ÷ 0.10 | **$48.0m** |
| **Less investment** | | **−$20.0m** |
| **Net present value** | 48 − 20 | **$28.0m** |

IN THE LESSON

- Example ten adds the good news.
- Marlow plans a line of cleaner solvents.
- It expects fifty million dollars of new revenue a year at an operating margin of twelve per cent, so six million a year of operating profit.
- After twenty per cent tax that is four point eight million.
- Capitalised at ten per cent, forty-eight million.
- The line needs twenty million of investment up front, so the net present value is twenty-eight million.
- Notice that it follows the same logic as the costs: forecast the cash flow, tax it, discount it, and subtract what it costs to get there.
- An E S G driven opportunity is valued like any other project, and it earns its place in the valuation only when it is likely to happen.

## 30 Example 11: back to the value per share

*Unadjusted equity value $1,800m = $30.00 a share (60m shares)*

| | | |
|---|---|---|
| **Less carbon cost** | | **−$432.00m** |
| **Less expected clean-up** | | **−$27.27m** |
| **Plus cleaner solvents** | | **+$28.00m** |
| **Adjusted equity value** | 1,800 − 432 − 27.27 + 28 | **$1,368.73m** |
| **Per share** | 1,368.73 ÷ 60 | **$22.81** |

IN THE LESSON

- Example eleven puts it all together.
- Start with the unadjusted equity value, one thousand eight hundred million, thirty dollars a share on sixty million shares.
- Subtract the capitalised carbon cost, four hundred thirty-two million.
- Subtract the expected clean up cost, twenty-seven point two seven million.
- Add the cleaner solvent line, twenty-eight million.
- The adjusted equity value is one thousand three hundred sixty-eight point seven three million.
- Divide by sixty million shares: twenty-two dollars eighty-one cents a share.
- The E S G analysis reduces the value by about twenty-four per cent.
- Notice that the opportunity is small next to the carbon bill, so the net conclusion is still firmly negative.

## 31 Example 12: do not count it twice

*Cash flow $180m a year before the carbon cost*

| | | |
|---|---|---|
| **Cash-flow route, rate 10%** | (180 − 43.2) ÷ 0.10 | **$1,368m** |
| **Rate route only, rate 11%** | 180 ÷ 0.11 | **$1,636m** |
| **Both together (wrong)** | 136.8 ÷ 0.11 | **$1,244m** |

IN THE LESSON

- Some analysts prefer to adjust the discount rate instead of the cash flows.
- Take Marlow's cash flow of one hundred eighty million a year before the carbon cost, which gives the one thousand eight hundred million at ten per cent.
- Route one, through cash flows: one hundred eighty less forty-three point two is one hundred thirty-six point eight, divided by ten per cent, one thousand three hundred sixty-eight million.
- Route two, through the rate: raise the rate to eleven per cent for climate risk and value the unadjusted cash flow, about one thousand six hundred thirty-six million.
- Do both, and you get one thousand two hundred forty-four million, which counts the same risk twice.
- Pick one route per issue and keep to it.

## 32 Recap: what to take away

- Votes and money differ: dual class shares, pyramids
- Judge governance in practice: check independence yourself
- ESG: start with materiality; ratings are inputs to question
- Value: net of pass-on and tax, weighted, no double count

**IN THE LESSON**

- Let us pull the lesson together.
- Ownership runs from dispersed to concentrated.
- Dispersed ownership brings manager owner conflicts, concentrated ownership brings controller minority conflicts, and dual class shares and pyramids widen the gap between votes and money.
- Judge governance by what works in practice, with the independence of directors checked, not accepted.
- Weaknesses combine.
- For E S G, begin with materiality, which depends on the industry, use ratings as inputs to question, and look for opportunities as well as risks.
- Then value the effect: net out the pass through and the tax, weight uncertain costs by probability, discount, capitalise, and never count the same issue in both the cash flows and the discount rate.

## 33 Try three quick questions

1. Class A 60m (1 vote), Class B 10m (10 votes), all B held by a family. Votes? Equity?
   **Answer:** 100 ÷ 160 = 62.5% votes; 10 ÷ 70 = 14.3% equity.
2. Board of 10: 6 labelled independent; 2 left as executives last year. Genuinely independent?
   **Answer:** 6 − 2 = 4 of 10 = 40%.
3. Gross carbon cost $50m, half passed on, tax 20%, r = 10%. Value of the cost?
   **Answer:** 50 × 0.5 × 0.8 = 20; 20 ÷ 0.10 = $200m.

**IN THE LESSON**

- Now try three quick questions yourself.
- Pause after each one.
- Question one.
- A company has sixty million Class A shares with one vote each, and ten million Class B shares with ten votes each, all held by one family.
- What share of the votes does the family hold, and what share of the equity?
- The votes are one hundred out of one hundred sixty, sixty-two point five per cent, and the equity is ten out of seventy, fourteen point three per cent.
- Question two.
- A board of ten says six are independent, but two are former executives who left last year.
- How many are genuinely independent?
- Four of ten, forty per cent.
- Question three.
- A gross carbon cost of fifty million, half passed on, tax twenty per cent, cost of capital ten per cent.
- What is the value of the cost?
- Fifty times one half times zero point eight, twenty million, divided by zero point one, two hundred million.