Credit analysis: corporate, high yield and sovereign issuers

Fixed Income

1 A story: lending to a friend

- A bond = a loan sold to investors; borrower = issuer
- Credit risk = the chance of not being repaid in full, on time
- Default = the issuer fails to pay what it promised
- Credit analysis = judging that chance before you lend

IN THE LESSON

- Imagine a friend asks to borrow five thousand dollars.
- Before you say yes, you quietly ask yourself a few questions.
- A bond investor does exactly the same, only with much more money.
- A bond is a loan sold to investors.
- The company or government that borrows is called the issuer.
- Credit risk is the chance that the issuer does not pay the interest or the principal in full and on time.
- When it fails to pay, that is called a default.
- Credit analysis is the work of judging that chance before you lend, and the four Cs are the checklist most analysts use.

2 The four Cs and the question each asks

The four Cs of credit

The C	The question
Capacity	Can it pay?
Collateral	What if it cannot?
Covenants	What limits it?
Character	Will it pay?

IN THE LESSON

- Here are the four Cs as four questions.
- Capacity asks: can the borrower pay?
- That means, is its operating cash flow big enough to cover the debt.
- Collateral asks: what happens if it cannot pay?
- That means, what assets can lenders claim.
- Covenants ask: what stops it making things worse?
- These are promises written into the loan contract.
- Character asks: will management do the right thing by lenders?
- Think of the first C as the engine.
- For safe borrowers, capacity does most of the work, because default is unlikely and the other Cs rarely get tested.

3 Meet Kestrel Foods

Kestrel Foods, a packaged food maker ($ millions, made up)

Kestrel Foods	Value
Total debt	1,500
EBITDA	500
Interest paid a year	100
Credit rating	BBB

IN THE LESSON

- To make this real we will follow one company through the whole lesson, a maker of packaged food called Kestrel Foods.
- All figures are made-up round numbers, in millions of dollars.
- Kestrel has total debt of one thousand five hundred and earns an E B I T D A of five hundred.
- E B I T D A stands for earnings before interest, taxes, depreciation and amortisation.
- It is a rough measure of the cash profit the business makes from operations.
- Kestrel pays one hundred a year in interest.
- Rating agencies give it a triple B, which is investment grade, meaning a fairly safe borrower.
- Anything rated below triple B minus is called high yield.
- We will meet that later.

4 Capacity: the first C

- Capacity = ability to pay debts from operating cash flow
- Industry: steady demand, few rivals, high barriers
- Company: market share, brands, low costs, diverse sales
- Then the numbers: leverage and coverage ratios

IN THE LESSON

- Start with capacity, the borrower's ability to pay its debts out of the cash its operations produce.
- An analyst looks at it in layers.
- First, the industry.
- Bread and toothpaste sell in good times and bad, so cash is steady.
- Luxury cars and building materials swing with the economy, so cash is lumpy.
- Industries with few rivals and high barriers to entry are safer.
- Second, the company's own position: its market share, its brands, how low its costs are, and how spread out its sales are across products and customers.
- Third, management's strategy and how it funds growth.
- Only then do we turn to the numbers, which are leverage and coverage ratios.

5 Leverage and coverage

Leverage = Debt ÷ EBITDA
Coverage = EBITDA ÷ Interest expense

Total debt	Borrowings owed, in dollars
EBITDA	Cash profit from operations
Interest expense	Interest owed over the year

IN THE LESSON

- Two families of ratios do most of the work.
- A leverage ratio asks how big the debt is compared with the earnings that must service it.
- The most common is debt divided by E B I T D A, which says roughly how many years of operating profit it would take to repay everything.
- Lower is safer.
- A coverage ratio asks how comfortably earnings cover the interest bill.
- The usual one is E B I T D A divided by interest, which says how many times over the interest could be paid.
- Higher is safer.
- Analysts also use the same ratios with E B I T, which is profit after depreciation, and with funds from operations or free cash flow instead of E B I T D A.

6 Example 1: Kestrel's ratios

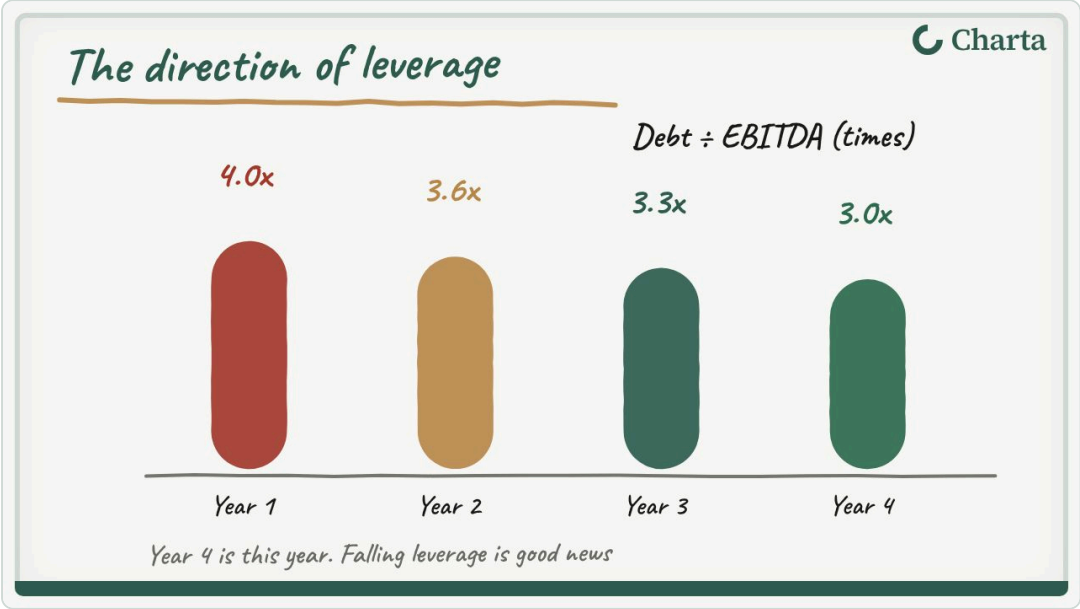
Debt 1,500, EBITDA 500, interest 100, EBIT 400, cash tax 70

Leverage: debt ÷ EBITDA	1,500 ÷ 500	**3.0x**
Coverage: EBITDA ÷ interest	500 ÷ 100	**5.0x**
Coverage: EBIT ÷ interest	400 ÷ 100	**4.0x**
FFO ÷ debt	330 ÷ 1,500	**22.0%**
Debt ÷ capital	1,500 ÷ 3,000	**50.0%**

IN THE LESSON

- Example one.
- Kestrel has debt of one thousand five hundred and E B I T D A of five hundred.
- Leverage is fifteen hundred divided by five hundred, which is three times.
- Coverage is five hundred divided by the interest of one hundred, which is five times.
- Using E B I T, which is E B I T D A less one hundred of depreciation, so four hundred, coverage is four times.
- Funds from operations, or F F O, is E B I T D A less interest and cash tax of seventy, so three hundred and thirty.
- Divided by debt that is twenty-two per cent.
- Finally debt to capital: debt of one thousand five hundred against equity of one thousand five hundred gives fifty per cent.
- Solid numbers for a triple B.

7 The direction of leverage



IN THE LESSON

- A single ratio is a snapshot.
- Analysts care just as much about the direction.
- Here is Kestrel's leverage over four years, shown as bars.
- The bottom axis is the year, and the side axis is debt divided by E B I T D A, in times.
- In year one the bar stands at four.
- Profits were lower and debt higher.
- In year two it falls to three point six, then to three point three, and this year to three.
- The company has been paying down debt while earnings grew.
- For an investment grade issuer that trend is exactly what the analyst wants to see, because the real worry is not default but a downgrade if the bars start climbing again.

8 Collateral and the order of payment

Who is paid first when a borrower fails

Claim	Paid
Secured debt, from pledged assets	First
Senior unsecured debt	Second
Subordinated debt	Third
Shareholders	Last

IN THE LESSON

- Collateral is the second C.
- It means assets that the borrower pledges, so that lenders can sell them to get repaid if the borrower fails.
- A bond backed by such assets is secured.
- A bond with no pledge, backed only by the issuer's general promise, is unsecured.
- In a default, claims are paid in a strict order.
- Secured lenders come first, from the pledged assets.
- Next come senior unsecured lenders.
- Then subordinated lenders, who agreed to wait behind everybody else, and last the shareholders.
- Most of Kestrel's debt is senior unsecured bonds.
- Remember what collateral does and does not do.
- It cannot stop a default, it only reduces the loss when one happens.

9 Covenants: promises in the contract

- Covenants = promises written into the bond contract
- Affirmative: must pay, insure, report
- Negative: must not over-borrow, over-pay or sell off assets
- Financial test: for example leverage below a set limit
- A breach gives lenders power to step in early

IN THE LESSON

- The third C is covenants.
- A bond is sold under a contract, often called the indenture, and the covenants are the promises inside it.
- Think of the rules a landlord writes into a lease.
- Affirmative covenants say what the issuer must do: pay interest on time, keep its assets insured, send audited accounts.
- Negative covenants say what it must not do: pile on extra debt, pledge assets to new lenders, sell its best business, or pay out too much to shareholders.
- Many bonds add a financial test, such as leverage no higher than a set limit.
- If the issuer breaks a covenant, lenders gain the right to demand a fix or even repayment, which gives them a seat at the table early.

10 Example 2: covenant headroom

Covenant: debt ≤ 4.0 × EBITDA. Debt 1,500, EBITDA 500

Covenant limit	debt ÷ EBITDA at most	**4.0x**
Leverage today	1,500 ÷ 500	**3.0x**
EBITDA where it breaks	1,500 ÷ 4.0	**375**
Headroom	(500 − 375) ÷ 500	**25.0%**

IN THE LESSON

- Example two.
- Suppose Kestrel's bonds carry one financial covenant: debt must stay at or below four times E B I T D A.
- Today leverage is three times, so there is room.
- How much?
- With debt fixed at one thousand five hundred, the covenant breaks when E B I T D A falls to fifteen hundred divided by four, which is three hundred and seventy-five.
- Today it is five hundred.
- The fall that would trigger a breach is one hundred and twenty-five, which is twenty-five per cent of the current figure.
- That is the headroom: a twenty-five per cent drop in profit before lenders can step in.
- A bigger cushion means a safer bond.

11 Example 3: character and a buyback

Kestrel borrows 400 at 7% to buy back its shares

New debt	1,500 + 400	**1,900**
Leverage	1,900 ÷ 500	**3.8x**
Coverage	500 ÷ (100 + 28)	**3.9x**
Covenant headroom	(500 − 475) ÷ 500	**5.0%**

IN THE LESSON

- The fourth C is character: the integrity of management, its record with past lenders, and above all its appetite for rewarding shareholders at creditors' expense.
- A buyback is when a company borrows money to buy back its own shares.
- Suppose Kestrel borrows four hundred at seven per cent to do that.
- Interest rises by twenty-eight to one hundred and twenty-eight.
- Debt rises to one thousand nine hundred.
- Leverage becomes three point eight times and coverage drops to three point nine times, down from five.
- Under the covenant limit of four, it is still allowed, but the headroom shrinks from twenty-five per cent to five per cent.
- The business has not changed, yet the lenders are worse off.
- Character warns you before it happens.

12 A story: the check-up and the emergency room

- Investment grade: rated BBB− or better; default is remote
- High yield: rated below BBB−; default is a real chance
- Investment grade question: will the rating migrate?
- High yield question: will the issuer survive?

IN THE LESSON

- Picture two patients.
- One is a healthy person at a yearly check-up, and the doctor watches trends: is the blood pressure drifting up?
- The other is in the emergency room, and the doctor's question is far more basic: will this patient get through the night?
- Credit analysis splits the same way.
- Investment grade means rated triple B minus or better, and default is remote, so the analyst watches the direction of leverage and coverage.
- The risk being priced is a downgrade.
- High yield means rated below that, sometimes called junk.
- Default is a real possibility, so the analyst asks whether the issuer survives, and how much creditors would get back if it does not.

13 Kestrel after a leveraged buyout

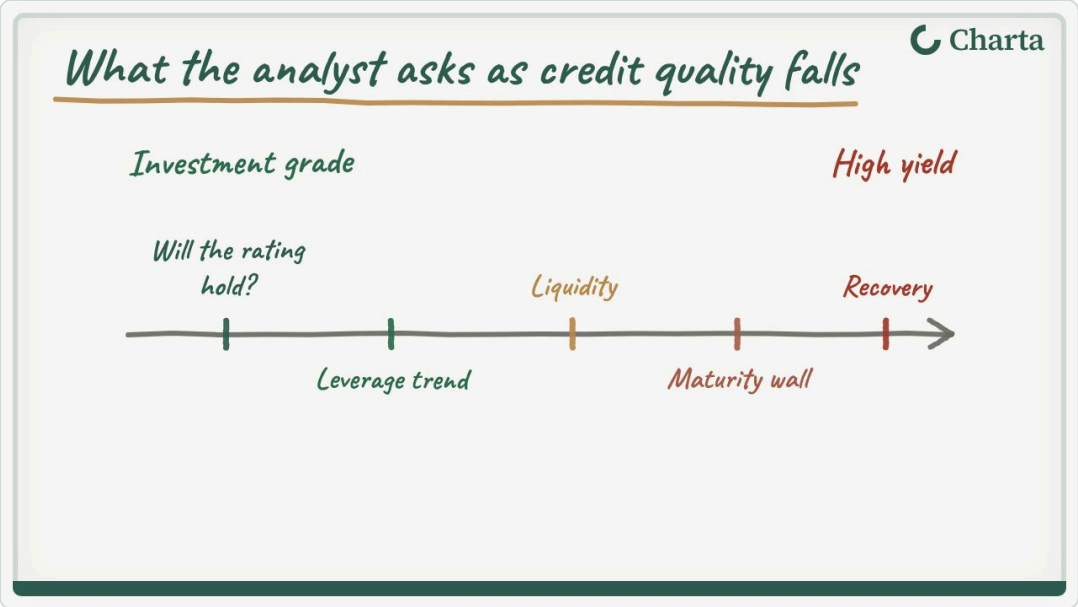
Kestrel Holdings after the buyout ($ millions, made up)

Kestrel Holdings	Value
Total debt	3,500
EBITDA	500
Debt ÷ EBITDA	7.0x
EBITDA ÷ interest	1.7x

IN THE LESSON

- Now imagine private investors buy Kestrel Foods using mostly borrowed money.
- This is called a leveraged buyout.
- The business is the same, with the same E B I T D A of five hundred, but the debt jumps to three thousand five hundred.
- It is split into a secured term loan of one thousand eight hundred, senior unsecured notes of one thousand two hundred and subordinated notes of five hundred, at rising rates of seven, nine and eleven per cent.
- Interest comes to two hundred and eighty-nine.
- Leverage is seven times and coverage only one point seven times.
- The rating falls to single B, deep in high yield territory.
- Same company, but a very different analysis.

14 What the analyst asks as credit quality falls



IN THE LESSON

- Here is the idea as a picture.
- The line runs from investment grade on the left to high yield on the right.
- At the far left, the analyst asks whether the rating will stay where it is.
- Moving right, the main question becomes the leverage trend, as with Kestrel before the buyout.
- In the middle of the line, where the issuer is rated high yield but not in trouble, liquidity takes over: is there enough cash and credit available?
- Further right comes the maturity wall, the date when a big debt falls due.
- At the far right, where default is likely, the analyst models recovery, meaning how much creditors would collect.
- As you move right, the question shifts from direction to survival.

15 Example 4: the risk in investment grade

Duration 6.0. A downgrade widens the spread by 0.50 points

Modified duration		**6.0**
Spread widens	1.00% to 1.50%	**+0.50%**
Price change	−6.0 × 0.50%	**−3.0%**

IN THE LESSON

- For investment grade, the risk being priced is migration: a move to a lower rating.
- Suppose an investment grade Kestrel bond has a modified duration of six.
- Duration measures how much a price moves when yields move.
- If a one notch downgrade widens the credit spread, which is the extra yield investors demand over a safe government bond, from one per cent to one and a half per cent, the spread rises by half a point.
- The price falls by about duration times the change, six times half a per cent, which is three per cent.
- No default happened, yet investors lost about three per cent.
- That is the loss a trend in leverage helps you foresee.

16 Liquidity coverage

Liquidity coverage = (Cash + Undrawn lines + Free cash flow) ÷ Debt due

Cash on hand	Money in the bank today
Undrawn credit lines	Credit it can still draw
Free cash flow	Cash left after all costs
Debt falling due	Principal payable in the period

IN THE LESSON

- For a high yield issuer, the first question is survival, and survival depends on liquidity: can it find cash to pay what falls due in the near term?
- Liquidity means cash on hand plus credit lines the company can still draw on, which are called undrawn lines.
- To these we add the free cash flow it expects to generate.
- Free cash flow is the cash left after running the business, paying interest and tax, and buying equipment.
- Compare all of that with the debt that falls due over the same period.
- If the ratio is above one, the issuer can cover its near-term payments without borrowing anything new.
- Below one, it must depend on lenders being willing to refinance.

17 Example 5: Kestrel Holdings' liquidity

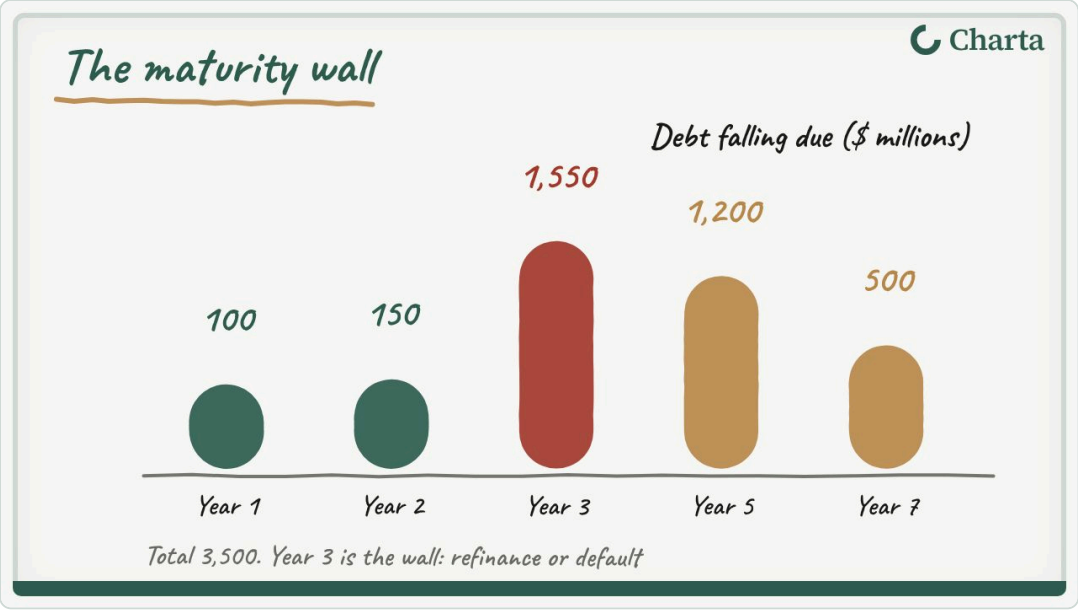
Next two years, $ millions

Cash		**150**
Undrawn credit line		**250**
Free cash flow, two years	2 × 41	**82**
Debt due, two years	100 + 150	**250**
Liquidity coverage	482 ÷ 250	**1.9x**

IN THE LESSON

- Example five.
- Look at the next two years.
- Kestrel Holdings has cash of one hundred and fifty and an undrawn credit line of two hundred and fifty.
- Its free cash flow is E B I T D A of five hundred less interest of two hundred and eighty-nine, tax of twenty and equipment spending of one hundred and fifty, which leaves just forty-one a year, or eighty-two over two years.
- Total sources are four hundred and eighty-two.
- The term loan requires repayments of one hundred in year one and one hundred and fifty in year two, so two hundred and fifty falls due.
- Liquidity coverage is four hundred and eighty-two divided by two hundred and fifty, or one point nine times.
- Safe for two years.
- But also notice that coverage of interest after equipment spending, three hundred and fifty over two hundred and eighty-nine, is only one point two times.

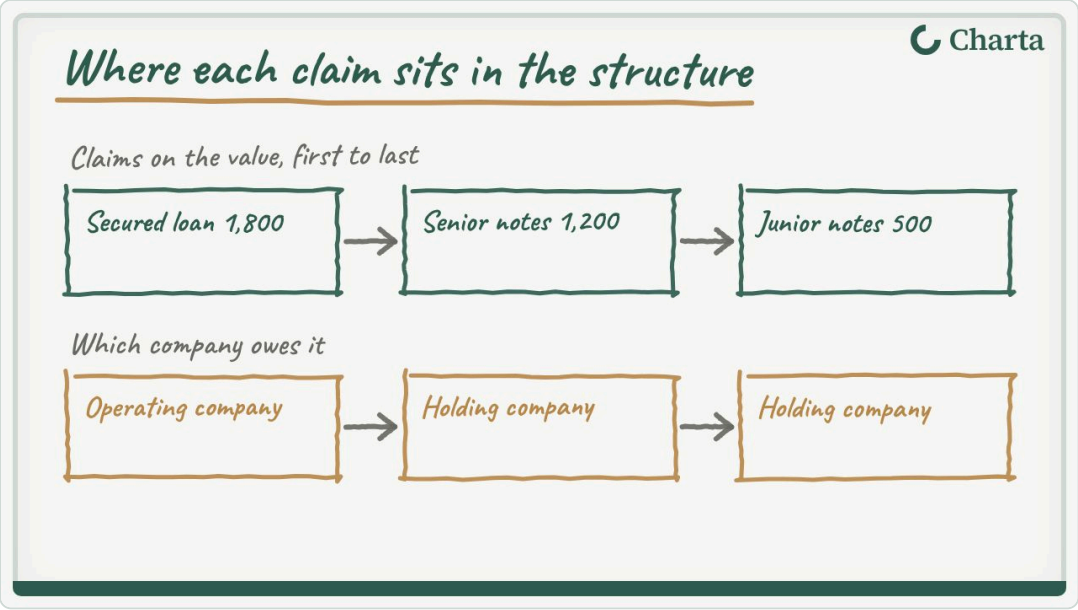
18 The maturity wall



IN THE LESSON

- Liquidity covers the near term.
- The maturity schedule shows what lies further ahead.
- The bars show how much of Kestrel Holdings' debt falls due in each year.
- The bottom axis is the year, and the side axis is the amount due, in millions of dollars.
- Year one has one hundred and year two one hundred and fifty, small repayments we can handle.
- Then year three has one thousand five hundred and fifty, the rest of the term loan.
- That is the wall.
- After two years we expect to have only two hundred and thirty-two available, so about one thousand three hundred and eighteen must be refinanced, meaning replaced by new borrowing.
- Year five has the senior notes of one thousand two hundred and year seven the subordinated notes of five hundred.
- A wall is dangerous if markets are closed when it arrives.

19 Where each claim sits in the structure



IN THE LESSON

- Next, the capital structure, which means the layers of debt and equity and their order of repayment.
- In a buyout, the debt often sits in different companies.
- The operating company owns the factories and the sales, and it owes the secured term loan.
- Above it sits a holding company, which owns the shares of the operating company and owes the two sets of notes.
- The notes are unsecured, but the holding company has no assets of its own except its shares.
- Lenders to the operating company must be paid out of the operating company's value first.
- Only what is left flows up to the holding company.
- This is structural subordination, and it hits the notes harder than their name suggests.

20 Example 6: recovery in default

Distressed EBITDA 400 × 6.0, $ millions

Value of the business	400 × 6.0	**2,400**
Secured loan paid	1,800 of 1,800	**100%**
Left for the notes	2,400 − 1,800	**600**
Senior notes recover	600 ÷ 1,200	**50%**
Junior notes recover	nothing left	**0%**

IN THE LESSON

- Example six.
- Suppose Kestrel Holdings gets into trouble and E B I T D A falls to four hundred.
- Distressed businesses sell for less, say six times E B I T D A, so the whole business is worth two thousand four hundred.
- The operating company's secured lenders are owed one thousand eight hundred and are paid in full.
- That leaves six hundred for the holding company's notes.
- The senior notes are owed one thousand two hundred, so they recover fifty per cent.
- The junior notes get nothing.
- Why model this?
- Expected loss is the chance of default times one minus recovery.
- At a ten per cent chance of default, recovery of thirty against seventy per cent swings the loss from seven point zero to three point zero per cent, four points.
- For an investment grade bond with a chance of default of two tenths of a per cent, the same swing is under a tenth of a point.

21 Example 7: the equity cushion signal

Asset value 4,000 falls 10% to 3,600

Investment grade equity	4,000 − 1,500	**2,500**
After the fall	3,600 − 1,500	**2,100 (−16%)**
High yield equity	4,000 − 3,500	**500**
After the fall	3,600 − 3,500	**100 (−80%)**

IN THE LESSON

- The last tool is the share price.
- Shareholders are the residual claim, which means they get what is left after every lender is paid, so they absorb losses first.
- Their stake equals asset value minus debt.
- Suppose the business is valued at four thousand in both cases and then falls ten per cent to three thousand six hundred.
- Investment grade Kestrel, with debt of one thousand five hundred, has equity of two thousand five hundred that drops to two thousand one hundred, a fall of sixteen per cent.
- Not alarming.
- Kestrel Holdings, with debt of three thousand five hundred, has equity of five hundred that drops to one hundred, a fall of eighty per cent.
- The cushion is almost gone, so the share price is a live warning about the bonds.

22 Investment grade against high yield

Middle: investment grade. Right: high yield

Main question	migration	**survival**
Evidence	ratio trends	**liquidity, wall**
Covenants	helpful	**vital**
Recovery	a rough input	**modelled**
Share price	weak signal	**strong signal**

IN THE LESSON

- Let us put the two styles side by side.
- The middle column is investment grade, and the right column is high yield.
- The main question: for investment grade it is migration, for high yield it is survival.
- The evidence: ratio trends for the first, liquidity and the maturity wall for the second.
- Covenants: helpful for investment grade lenders, but vital for high yield lenders, because the cushion is thin and every promise about extra debt or payouts to shareholders matters.
- Recovery: for investment grade a rough assumption is enough, but for high yield it is modelled bond by bond.
- And the share price: a weak signal for strong credits, a strong signal for weak ones.

23 Mistakes to avoid so far

- Weak issuer: do not trust the ratio trend alone
- Recovery is not a constant; for high yield it is modelled
- Collateral cuts the loss; it does not stop a default
- Unsecured bonds are not equal: structure sets the order
- A loose covenant can allow a harmful buyback

IN THE LESSON

- Time to pause and look at the traps.
- Mistake one: judging a weak issuer by the trend in its ratios alone.
- A company with leverage of seven can still fail if the wall arrives when markets are shut.
- Mistake two: treating recovery as a fixed number.
- For high yield it changes the loss a lot.
- Mistake three: thinking collateral prevents default.
- It only reduces the loss afterwards.
- Mistake four: treating all unsecured bonds alike.
- Where they sit in the structure decides what they collect, as the junior notes showed.
- Mistake five: trusting that a covenant protects you.
- The buyback was allowed under a limit of four times, yet the headroom fell from twenty-five per cent to five.

24 A story: lending to a country

- Sovereign = a national government as borrower
- Ability to pay: does it have the resources?
- Willingness to pay: will it choose to repay?
- Usually no court can compel a sovereign to pay

IN THE LESSON

- Now a very different borrower: a sovereign, which is simply a national government.
- Suppose you lend to a company that stops paying.
- You can go to court, and the court can sell its assets.
- Suppose you lend to a country that stops paying.
- Which court will you use?
- There usually is none that can compel a government, and you cannot seize its parliament.
- So sovereign analysis asks two separate questions.
- Ability to pay: does the government have the resources to repay?
- And willingness to pay: will it choose to?
- A government that can pay may still decide not to, perhaps because repaying foreign lenders is politically unpopular.
- A company has no such choice.

25 Five things analysts weigh

Sovereign credit: five areas of evidence

Institutions and politics	rule of law, stable, trusted?	1
Economy	growth, diversity	2
Fiscal position	deficit, debt path	3
External position	reserves, foreign debt	4
Monetary flexibility	own currency, central bank?	5

IN THE LESSON

- Analysts group the evidence into five areas.
- First, institutions and politics: how strong are the courts, the rule of law, the tax system, the central bank, and how stable is the government?
- A record of past defaults counts here, and it speaks mostly to willingness.
- Second, the economy: its growth prospects, how wide its income base is, and whether it depends on a single export.
- Third, fiscal position: the budget deficit, the debt trajectory and the burden of interest.
- Fourth, the external position: how much it owes to foreigners, and the reserves it holds.
- Fifth, monetary flexibility: whether it has its own currency and a central bank that can act.

26 Meet Norland

Norland, a made-up country (billions of local currency)

GDP, annual output		1,000
Government debt	450 local, 150 foreign	600
Budget deficit	spending less revenue	40
Interest paid	on the debt	36
Tax revenue		250

IN THE LESSON

- Our sovereign is Norland, a made-up country.
- Its figures are in billions of its own currency.
- Annual output, called gross domestic product or G D P, is one thousand.
- Government debt is six hundred, of which four hundred and fifty is borrowed in Norland's own currency and one hundred and fifty in a foreign currency, which we will treat as dollars.
- The government runs a budget deficit of forty a year, which means it spends that much more than it collects.
- It pays thirty-six of interest on its debt, and its tax revenue is two hundred and fifty.
- We will test Norland the way an analyst would: first its fiscal position, then its debt path, then its foreign position.

27 Example 8: Norland's fiscal position

Debt 600, GDP 1,000, deficit 40, interest 36, revenue 250

Debt ÷ GDP	600 ÷ 1,000	**60.0%**
Deficit ÷ GDP	40 ÷ 1,000	**4.0%**
Interest ÷ revenue	36 ÷ 250	**14.4%**
Primary deficit	40 − 36	**4**

IN THE LESSON

- Example eight, fiscal strength.
- Compare everything with the size of the economy.
- Debt divided by G D P is six hundred over one thousand, which is sixty per cent.
- The deficit over G D P is four per cent.
- The interest burden is interest divided by revenue: thirty-six over two hundred and fifty, which is fourteen point four per cent.
- Out of every hundred collected in tax, about fourteen goes to lenders before schools or hospitals get anything.
- Finally the primary balance, which is the budget before interest.
- The deficit of forty includes interest of thirty-six, so the primary deficit is only four.
- Most of the gap is the cost of past borrowing.

28 Where the debt ratio is heading

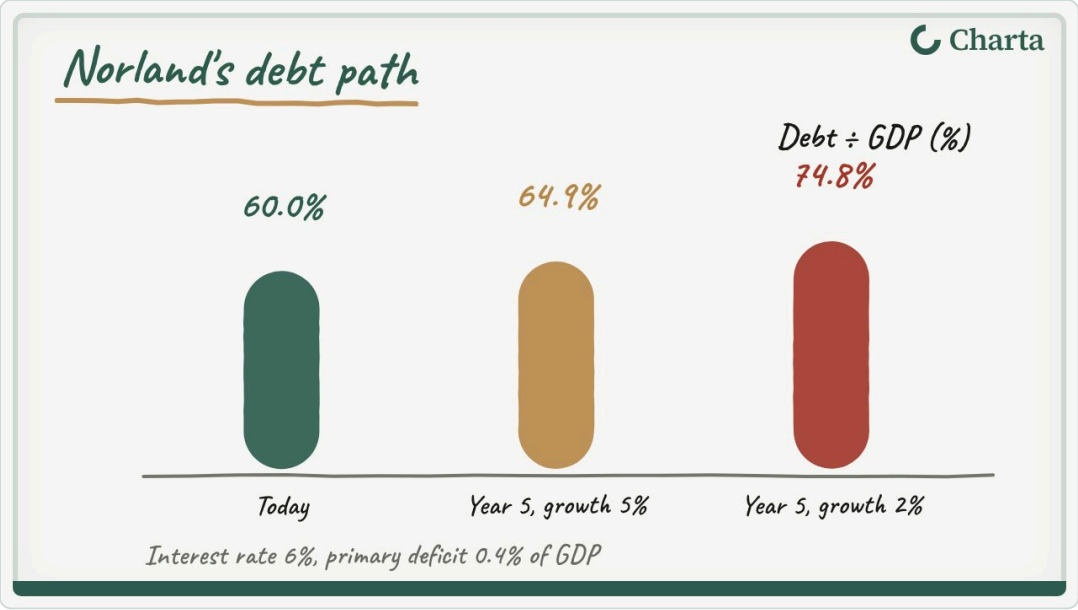
Next year's debt ratio = [d × (1 + r) + p] ÷ (1 + g)

Debt ratio, d	Debt ÷ GDP this year
Interest rate, r	Average interest on the debt
Primary deficit, p	Deficit before interest ÷ GDP
Growth, g	Growth of nominal GDP

IN THE LESSON

- Today's debt ratio is only part of the story.
- The trajectory matters.
- Here is a simple rule for next year's debt ratio.
- Start with this year's debt ratio and add interest on it, so multiply by one plus the average interest rate.
- Then add the primary deficit as a share of G D P, the new borrowing before interest.
- Finally divide by one plus the growth rate of the economy, because a growing economy makes the same debt smaller relative to income.
- The lesson is that when the interest rate is above the growth rate, debt compounds faster than the economy, and the ratio climbs unless the government runs a primary surplus.

29 Norland's debt path



IN THE LESSON

- Let us run Norland's numbers.
- The average interest rate is thirty-six over six hundred, which is six per cent.
- The primary deficit is four over one thousand, or zero point four per cent of G D P.
- In the first year, with economic growth of five per cent, the debt ratio becomes six hundred and thirty-six plus four, over one thousand and fifty, which is about sixty-one per cent.
- The bars show the debt ratio today and after five years.
- The side axis is debt as a share of G D P.
- With growth of five per cent the ratio drifts up to sixty-four point nine per cent.
- If growth slows to two per cent, it climbs to seventy-four point eight.
- Same budget, different future.

30 Example 9: the foreign currency cushion

Reserves 90, imports 360 a year, short-term foreign debt 60

Reserves	foreign currency held	**90**
Monthly imports	360 ÷ 12	**30**
Import cover	90 ÷ 30	**3.0 months**
Short-term foreign debt	due within a year	**60**
Reserves ÷ short-term debt	90 ÷ 60	**1.5x**

IN THE LESSON

- Example nine, the external position.
- Norland owes one hundred and fifty in foreign currency, and it cannot print dollars.
- It can only pay from foreign exchange reserves, which are the foreign currency held by the central bank, or from what the country earns abroad.
- Norland holds reserves of ninety.
- Its imports are three hundred and sixty a year, which is thirty a month, so import cover is ninety over thirty, or three months.
- Short-term external debt, meaning foreign debt due within a year, is sixty.
- Reserves over that is one point five times.
- So the reserves cover the near term, but they are well short of the full one hundred and fifty, a gap of sixty.

31 Local currency against foreign currency

One government, two kinds of debt

Debt in...	Main risk
Local currency	Inflation
Foreign currency	Running out of reserves
Typical rating	Foreign is lower

IN THE LESSON

- Here is the decisive distinction.
- A government with its own currency and central bank can, in principle, create the money to pay debts in that currency.
- So an outright missed payment on local currency debt is unlikely.
- The price is inflation: creating too much money pushes prices up, and the bondholder is paid back in money that buys less.
- It can never do the same for dollars or euros.
- Foreign currency debt must be paid from reserves, export earnings or fresh borrowing, and all of those can run out.
- That is why one government often has two ratings, and the foreign currency rating is usually the lower one.
- Sovereigns have still defaulted on local debt when institutions failed, so it is not a guarantee.

32 Example 10: paid in full, yet poorer

Local bond yields 5%. Inflation 8% a year for 3 years

Nominal yield		**5.0%**
Inflation	per year	**8.0%**
Real return	1.05 ÷ 1.08 − 1	**−2.8%**
100 repaid in year 3 buys	100 ÷ 1.08^3	**79.4**

IN THE LESSON

- Example ten.
- Norland pays every bond on time, so no default has happened.
- But suppose inflation runs at eight per cent a year, and a local bond yields five per cent.
- The real return, which is the return after inflation, is one point zero five divided by one point zero eight, minus one.
- That is minus two point seven seven seven eight per cent, so about minus three.
- The bondholder loses buying power.
- And the hundred repaid after three years of eight per cent inflation buys what only seventy-nine point three eight three two buys today.
- The rating agencies measure the chance of a missed payment, so they would not warn you.
- For a holder of local currency government bonds, the real return matters more than the rating.

33 Recap: what to remember

- 4 Cs: capacity, collateral, covenants, character
- Investment grade: direction of leverage and coverage
- High yield: survival, liquidity, maturity wall, recovery
- Sovereign: ability and willingness to pay
- Local currency can be printed; foreign cannot

IN THE LESSON

- Let us pull the lesson together.
- The four Cs are capacity, collateral, covenants and character.
- Capacity is judged from the industry, the company and the ratios of leverage and coverage, and for investment grade issuers it dominates.
- Collateral sets the order of payment and cuts the loss.
- Covenants limit behaviour, and character asks whether management will use the room it has.
- For high yield the question changes from direction to survival: liquidity, the maturity wall, the capital structure, recovery and the share price.
- For sovereigns, ask about ability and willingness, five areas of evidence, and above all the split between local currency debt, which can be printed, and foreign currency debt, which cannot.

34 Try three quick questions

1. Debt 2,400, EBITDA 600, interest 120. Leverage and coverage?
   Answer: 2,400 ÷ 600 = 4.0x. 600 ÷ 120 = 5.0x.
2. Value 900, secured debt 600 owed first, unsecured 600. Unsecured recovery?
   Answer: (900 − 600) ÷ 600 = 50%.
3. Reserves 60, short-term foreign debt 40. Cover? Why is local debt rated higher?
   Answer: 60 ÷ 40 = 1.5x. It can print local currency.

IN THE LESSON

- Now try three quick questions yourself.
- Pause after each one.
- Question one.
- A company has debt of two thousand four hundred, E B I T D A of six hundred and interest of one hundred and twenty.
- What are its leverage and coverage?
- Leverage is four times, and coverage is five times.
- Question two.
- A defaulted issuer is worth nine hundred.
- It owes six hundred to secured lenders and six hundred to unsecured lenders.
- What do the unsecured lenders recover?
- Nine hundred less six hundred leaves three hundred, so fifty per cent.
- Question three.
- A government holds reserves of sixty against foreign debt of forty falling due within a year.
- How well do reserves cover it?
- one point five times.
- And why is local currency debt usually rated higher?
- Because the government can create that currency, while it cannot create foreign currency.