CHARTA LEARNING · LESSON NOTES

Distress Symptoms and Remedies

FRM Part II

1 A story: the furniture maker that ran short

- Westmoor Furniture: for decades a steady business
- New owners borrowed heavily; online rivals took sales
- Profit still reported while cash drained away
- Bond interest and a bank instalment fall due
- Decent business, heavy debt: what fixes it?

IN THE LESSON

- Meet Westmoor Furniture, a made up company that makes and sells furniture.
- For decades it was a steady business.
- Then new owners borrowed heavily against it, and at the same time online rivals began taking its customers.
- For a while the accounts still showed a profit, so few people worried, but cash was draining away.
- Now interest on its bonds is due, and its bank wants a large loan instalment.
- Westmoor is a decent business with a heavy load of debt, and throughout this lesson we ask what can fix it.
- You will see that the answer depends on the cause of the trouble, and not only on its symptoms.

2 What financial distress means

- Distress: cannot meet obligations as they fall due
- Flow-based: cash flow too small for interest and principal
- Stock-based: liabilities exceed the value of assets
- A firm can be in one without the other
- Flow is about cash now; stock is about value

IN THE LESSON

- Financial distress means a firm cannot meet its obligations as they fall due.
- There are two ways to see it.
- Flow based distress is about cash.
- The firm's cash flow is too small to pay the interest and principal that are due.
- Stock based distress is about value.
- The firm's liabilities exceed the value of its assets, so its net worth is negative.
- A firm can be in one kind without the other.
- A sound firm with a large loan due next month can be short of cash while still solvent.
- A firm whose assets have lost value can be insolvent, yet keep paying its bills while little is due.
- In short, flow is about cash now, and stock is about value.

3 Westmoor's debts

Westmoor's liabilities in $m, and this year's interest on each

Secured bank loan	200 × 4.5%	**$9m**
Senior unsecured bonds	150 × 5%	**$7.5m**
Subordinated bonds	50 × 7%	**$3.5m**
Trade creditors (suppliers)	50, no interest	**$0**
Total: liabilities 450	9 + 7.5 + 3.5	**$20m**

IN THE LESSON

- Here are Westmoor's debts, in millions of dollars, with this year's interest on each.
- First, a secured bank loan of two hundred million at four and a half per cent, nine million of interest.
- Secured means it is backed by specific assets, here the factory.
- Second, senior unsecured bonds of one hundred and fifty million at five per cent, seven point five million.
- Third, subordinated bonds of fifty million at seven per cent, three point five million.
- Subordinated means they rank behind the senior debts if the firm fails.
- Fourth, trade creditors, the suppliers waiting to be paid, fifty million, with no interest.
- In total, liabilities are four hundred and fifty million, and interest is nine plus seven point five plus three point five, twenty million a year.

4 Example 1: the flow test and the stock test

Cash flow before interest $10m; cash $15m; book assets $500m; liabilities $450m

Cash available	10 + 15	**$25m**
Debt service due	interest 20 + principal 40	**$60m**
Flow test: shortfall	60 − 25	**$35m**
Stock test, book values	500 − 450	**+$50m**
Verdict	short of cash, not insolvent	**Flow distress**

IN THE LESSON

- This year, Westmoor's operating cash flow before interest is ten million dollars, it has fifteen million of cash, its book assets are five hundred million, and its liabilities four hundred and fifty million.
- The cash available is ten plus fifteen, twenty five million.
- Debt service, meaning what must be paid this year, is interest of twenty million plus a principal instalment of forty million to the bank, sixty million in all.
- The flow test shows a shortfall of sixty minus twenty five, thirty five million.
- Now the stock test on book values.
- Assets minus liabilities is five hundred minus four hundred and fifty, a positive fifty million.
- The verdict: Westmoor is short of cash but not insolvent on its books.
- It is in flow based distress, though book values can flatter.

5 Five groups of causes

Separate the cause from the symptom

Cause	What goes wrong
Economic distress	Declining industry, lost edge, low returns
Excessive leverage	Viable business, too much debt
Weak management or governance	Poor decisions, weak oversight
Fraud	Assets or profits that are not real
External shock	For example, a credit squeeze

IN THE LESSON

- Separate the cause from the symptom.
- That is the first rule of this topic.
- The causes of distress fall into five groups.
- The first is economic distress.
- The industry is declining, the firm has lost its competitiveness, or its assets earn less than their cost of capital, the return investors require.
- The second is excessive leverage, meaning too much debt on an otherwise viable business.
- Third, weak management or governance, meaning poor decisions and weak oversight by the board.
- Fourth, fraud, where assets or profits are not real.
- Fifth, an external shock, for example a credit squeeze, when lenders suddenly stop renewing loans, even to sound borrowers.
- Real cases often mix causes.
- Westmoor's are lost sales and too much debt.

6 Economic or financial distress?

- Economic: the business earns less than its capital costs
- Financial: a viable business with too much debt
- Test: is it worth more alive than broken up?
- Westmoor: weaker sales, but mainly too much debt
- The cause decides the cure

IN THE LESSON

- The exam asks you to tell the two main causes apart.
- Economic distress means the business earns less than its capital costs.
- Cutting its debt would not save it, because the problem is in the operations.
- Financial distress, in this narrow sense, means a viable business carrying too much debt, so fixing the balance sheet can save it.
- The test is whether the business is worth more alive, as a going concern, than broken up and sold.
- Westmoor has a little of both.
- Its sales are weaker, but it still makes an operating profit, and as we will see, it is worth more alive.
- Its main problem is debt.
- The cause decides the cure.
- A balance sheet fix suits financial distress, while economic distress needs operational change or an orderly exit.

7 Warning signs from lenders and markets

- Covenant breaches
- Rating downgrades
- Widening credit spreads and a falling share price
- A going-concern opinion from the auditor

IN THE LESSON

- How can you tell that distress is coming?
- Start with signals from lenders and markets.
- First, covenant breaches.
- A covenant is a promise in a loan agreement, for example to keep interest cover above a set level, and a breach lets lenders demand new terms or early repayment.
- Second, rating downgrades by the credit rating agencies.
- Third, widening credit spreads and a falling share price.
- The credit spread is the extra yield investors demand over a safe government bond, so a wider spread means the market sees more risk of default.
- Fourth, a going concern opinion from the auditor, a warning in the audit report of serious doubt that the firm can carry on in business.

8 Warning signs inside the business

- Suppliers tighten terms: cash before delivery
- Late payments to suppliers, staff or lenders
- Profits not backed by operating cash flow
- Rising receivables and inventory soak up cash
- A symptom is a signal, not a cause

IN THE LESSON

- The second group of signs comes from inside the business.
- Suppliers tighten their terms, and demand cash before they deliver, which drains cash just when it is scarce.
- Then come late payments, to suppliers, to staff or to lenders.
- Then the subtlest sign, profits that are not backed by operating cash flow.
- A firm can report a profit while its cash shrinks.
- Rising receivables, the amounts customers owe, and rising inventory, unsold stock, both soak up cash.
- Accounting choices can flatter profit, but cash is much harder to fake.
- One caution covers all these signs.
- A symptom is a signal that distress is happening.
- It is not the cause, and the cure must address the cause.

9 Example 2: Westmoor's signals

Covenant: interest cover of at least 2.0. The market value of the shares has fallen

Interest cover	EBIT ÷ interest = 25 ÷ 20	**1.25 times**
Covenant test	1.25 is below 2.0	**Breach**
Market value of shares	two years ago, and now	**$400m to $60m**
Fall in share value	(400 − 60) ÷ 400	**−85%**

IN THE LESSON

- Westmoor's bank loan has a covenant that interest cover must be at least two times, and the market value of its shares has fallen.
- Interest cover is E B I T, meaning earnings before interest and taxes, divided by interest.
- Westmoor's E B I T is twenty five million and its interest is twenty million, so cover is one point two five times.
- That is below the covenant level of two, so the covenant is breached, and the bank can demand repayment or new terms.
- Now the market.
- Two years ago, Westmoor's shares were worth four hundred million dollars in total, and now sixty million.
- The fall is four hundred minus sixty, divided by four hundred, eighty five per cent.
- A lender signal and a market signal point the same way.

10 Example 3: a profit without cash

This year: EBIT $25m, interest $20m, no tax, depreciation $15m

Net profit	25 − 20	**$5m**
Add back depreciation	not a cash cost	**+$15m**
Receivables rose	customers slower to pay	**−$18m**
Inventory rose	unsold furniture	**−$12m**
Operating cash flow	5 + 15 − 18 − 12	**−$10m**

Before interest: −10 + 20 = $10m, the figure in Example 1

IN THE LESSON

- This year Westmoor has E B I T of twenty five million dollars and interest of twenty million, pays no tax because of past losses, and charges depreciation of fifteen million.
- Net profit is twenty five minus twenty, five million, so the accounts show a profit.
- Add back depreciation of fifteen million, because it is not a cash cost.
- But receivables rose by eighteen million as customers took longer to pay, and inventory rose by twelve million as unsold furniture piled up.
- Operating cash flow is five plus fifteen, minus eighteen, minus twelve, which is minus ten million.
- A profit of five million comes with ten million of cash going out.
- Adding back the twenty million of interest gives ten million before interest, the figure in Example one.

11 The Altman Z-score

$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$
Below 1.81: distress. 1.81 to 2.99: grey zone. Above 2.99: safe

X_1: liquidity	Working capital ÷ total assets
X_2: past profits	Retained earnings ÷ total assets
X_3: operating return	EBIT ÷ total assets
X_4: market leverage	Equity market value ÷ liabilities
X_5: asset turnover	Sales ÷ total assets

IN THE LESSON

- One way to combine warning signs is the Altman Z score.
- It adds up five ratios, each multiplied by a fixed weight.
- Z equals one point two times X one, plus one point four times X two, plus three point three times X three, plus zero point six times X four, plus one times X five.
- A score below one point eight one signals distress, between one point eight one and two point nine nine is a grey zone, and above two point nine nine, safety.
- X one measures liquidity: working capital, which is current assets minus current liabilities, over total assets.
- X two measures past profits: retained earnings over total assets.
- X three is the operating return, E B I T over total assets, with the biggest weight.
- X four is market leverage, the market value of equity over total liabilities.
- X five is asset turnover, sales over total assets.

12 Example 4: Westmoor's Z-score today

$m: assets 500, WC 30, RE 20, EBIT 25, equity value 60, liabilities 450, sales 600

$X_1 \times 1.2$	30 ÷ 500 = 0.06	**0.072**
$X_2 \times 1.4$	20 ÷ 500 = 0.04	**0.056**
$X_3 \times 3.3$	25 ÷ 500 = 0.05	**0.165**
$X_4 \times 0.6$	60 ÷ 450 = 0.133	**0.080**
$X_5 \times 1.0$	600 ÷ 500 = 1.2	**1.200**

Z = 1.573: below 1.81, the distress zone

IN THE LESSON

- In millions of dollars, Westmoor's total assets are five hundred, working capital thirty, retained earnings twenty, E B I T twenty five, the market value of its equity sixty, total liabilities four hundred and fifty, and sales six hundred.
- X one is thirty over five hundred, point zero six, times one point two, point zero seven two.
- X two is twenty over five hundred, point zero four, times one point four, point zero five six.
- X three is twenty five over five hundred, point zero five, times three point three, point one six five.
- X four is sixty over four hundred and fifty, about point one three three, times point six, point zero eight.
- X five is six hundred over five hundred, one point two, times one.
- The total is one point five seven three, below one point eight one, the distress zone.

13 Example 5: the Z-score two years ago

$m: WC 80, RE 170, EBIT 60, equity 400, liabilities 300, sales 650, assets 500

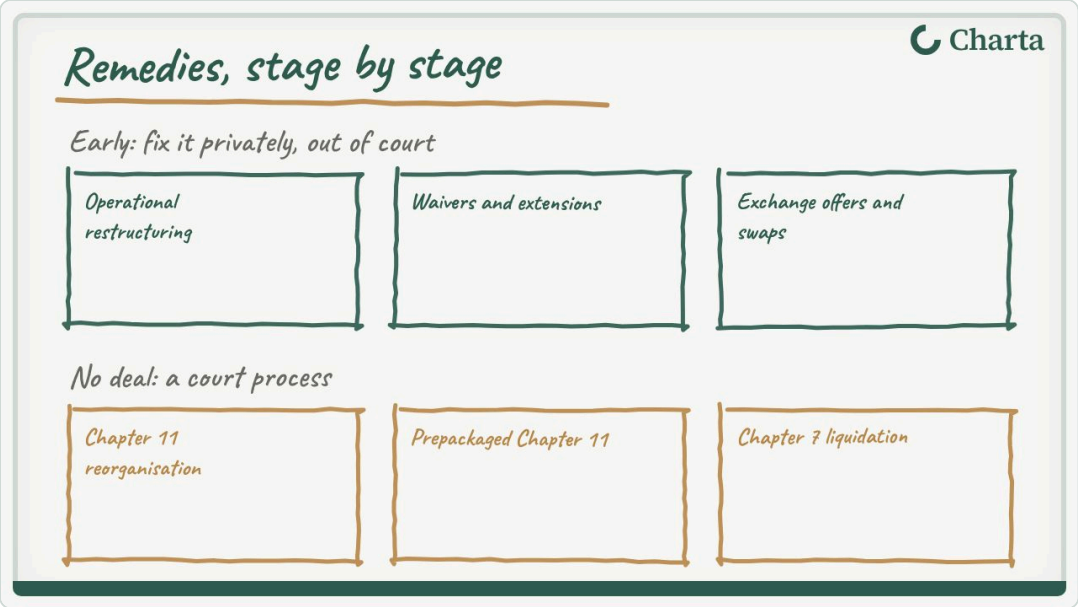
X_1 and X_2 weighted	0.16×1.2 + 0.34×1.4	**0.668**
X_3 weighted	0.12 × 3.3	**0.396**
X_4 weighted	400 ÷ 300 × 0.6	**0.800**
X_5 weighted	650 ÷ 500 × 1.0	**1.300**
Z two years ago	sum of the four rows	**3.164: safe**

X_4 term fell from 0.80 to 0.08: equity value collapsed

IN THE LESSON

- Two years ago, before the new borrowing, working capital was eighty, retained earnings one hundred and seventy, E B I T sixty, equity value four hundred, liabilities three hundred, sales six hundred and fifty, and assets five hundred.
- X one is point one six times one point two, and X two is point three four times one point four, together point six six eight.
- X three is point one two times three point three, point three nine six.
- X four is four hundred over three hundred, times point six, point eight.
- X five is six hundred and fifty over five hundred, times one, one point three.
- The sum of the four rows is three point one six four, above two point nine nine, safe.
- The X four term fell from point eight to point zero eight, because the market value of equity collapsed.

14 Remedies, stage by stage



IN THE LESSON

- Remedies depend on how deep the distress is, and whether the business is worth more alive than liquidated.
- The top row is the early stage, where the firm tries to fix things privately, out of court.
- First comes operational restructuring, fixing the business itself.
- Then covenant waivers and maturity extensions, which buy time.
- Then exchange offers and debt for equity swaps, which cut the debt.
- Now the bottom row.
- If no deal can be reached, the firm turns to a court process.
- In the United States, that means a Chapter eleven reorganisation under the Bankruptcy Code, in which the business keeps running.
- A prepackaged Chapter eleven is negotiated and voted on before filing, so the court stage is short.
- Or the firm is liquidated under Chapter seven.

15 Operational restructuring

- Cut costs and close loss-making plants
- Replace management
- Sell non-core assets for cash
- Implies: fixes the business, not the debt
- Difficulties: slow, costly up front, fire-sale prices

IN THE LESSON

- Operational restructuring works on the business rather than on the debts.
- The firm cuts costs and closes plants that lose money.
- It may replace management, often a sign that the board accepts the old team caused the problem.
- And it sells non core assets, businesses that do not fit the strategy, for cash to pay down debt.
- What does this imply?
- It is the right cure for economic distress, because it fixes the business, but it does not fix the debt.
- And the difficulties?
- It is slow, while the debts keep falling due.
- Closing plants costs money up front, and assets sold in a hurry, by a firm known to be in trouble, may fetch only fire sale prices.

16 Example 6: savings alone are not enough

Westmoor cuts costs by $8m a year. Interest $20m, instalment $40m, cash $15m

New EBIT	25 + 8	**$33m**
Interest cover	33 ÷ 20	**1.65 times**
Covenant	1.65 is below 2.0	**Still breached**
Cash available	10 + 8 + 15	**$33m**
Shortfall	60 − 33	**$27m**

IN THE LESSON

- Westmoor cuts costs by eight million dollars a year, with interest still twenty million, the bank instalment forty million and cash fifteen million.
- E B I T rises from twenty five to thirty three million.
- Interest cover becomes thirty three over twenty, one point six five times.
- That is still below the covenant level of two, so the covenant is still breached.
- Cash available rises to ten plus eight plus fifteen, thirty three million.
- Against debt service of sixty million, the shortfall is twenty seven million.
- The savings make the business stronger, but they do not solve the problem, because the problem is the debt.
- This is what the cause test predicted.
- When the main trouble is leverage, operating fixes alone fall short.

17 Out-of-court financial restructuring

- Covenant waivers: lenders do not act on a breach
- Maturity extensions: repay later
- Exchange offers: new securities for old bonds
- Debt-for-equity swaps: creditors become owners
- Quick and cheap, but holdouts can block the deal

IN THE LESSON

- Next comes financial restructuring out of court, a private deal with the lenders.
- A covenant waiver is the lender agreeing not to act on a breach, often for a fee or a higher rate.
- A maturity extension pushes repayment dates later.
- An exchange offer invites bondholders to swap their bonds for new securities, usually with a smaller face value but safer or paid sooner.
- A debt for equity swap goes further, and turns creditors into shareholders.
- Why try this before going to court?
- Out of court deals are quick and cheap.
- There are no court fees, and the business is less disturbed.
- Their weakness is holdouts, creditors who refuse to join, and that is harder to overcome than it looks.

18 Example 7: the holdout problem

Offer: $65 of new bonds per $100 of senior bonds, if 90% accept. Court recovery: $50

Accept, and the deal succeeds	per $100 of bonds	**$65**
Hold out, and the deal succeeds	others carry the cut	**$100**
Deal fails: court process	estimated recovery	**$50**
Debt cut if exactly 90% accept	150 × 90% × 35%	**$47.25m**
Each holder's best move	hold out	**Deal fails**

IN THE LESSON

- Westmoor offers its senior bondholders sixty five dollars of new bonds for every one hundred dollars of old bonds, if ninety per cent accept.
- In court, advisers estimate the bonds would recover fifty dollars.
- Look at one bondholder's choices.
- If it accepts and the deal succeeds, it gets sixty five.
- If it holds out and the deal succeeds anyway, it keeps its old bond and is paid one hundred in full, because the others carry the cut.
- If the deal fails, everyone gets about fifty in court.
- If exactly ninety per cent of the one hundred and fifty million accept, the debt is cut by one hundred and fifty, times ninety per cent, times thirty five per cent, forty seven point two five million.
- But each holder's best move is to hold out, so the deal fails, and all get fifty instead of sixty five.

19 Why holdouts are hard to overcome

- Each bondholder gains by refusing while others concede
- Public bonds: near-unanimous consent to change payments
- So out of court, a majority cannot bind the minority
- Answers: better terms, or a court process
- Chapter 11: a class vote binds the dissenters

IN THE LESSON

- Each bondholder gains by refusing while the others concede.
- It is a free rider problem, because the holdout enjoys the benefit of the deal without paying for it.
- And changing the payment terms of public bonds, meaning the amount or date of payment, usually needs near unanimous consent from the holders.
- So, out of court, a majority cannot bind the minority.
- What can the firm do?
- It can offer better terms to win over more holders, at a cost, or it can use a court process.
- Under Chapter eleven, a plan approved by the required majority of a class of creditors binds the whole class, including those who voted no.
- That is a big reason for a prepack, which joins the speed of a private deal to the court's power to bind holdouts.

20 Example 8: what a debt-for-equity swap would do

All $200m of bonds swapped for 80% of the shares. 20m shares today. Bank extends $40m

Interest-bearing debt	400 − 200 (trade 50 left out)	**$200m**
Interest	20 − 7.5 − 3.5	**$9m**
Interest cover	25 ÷ 9	**2.78 times**
New shares to bondholders	20m ÷ 20% − 20m	**80m**
Old shareholders now own	20m ÷ 100m	**20%**

Debt and interest cut; old owners diluted; creditors take control

IN THE LESSON

- All the bondholders would swap their two hundred million dollars of bonds for eighty per cent of the shares.
- Westmoor has twenty million shares today, and the bank would extend its forty million instalment.
- Interest bearing debt, leaving out the fifty million owed to trade creditors, falls from four hundred million to two hundred.
- Interest falls by the seven point five million on the senior bonds and the three point five million on the subordinated bonds, from twenty to nine million.
- Interest cover rises to twenty five over nine, two point seven eight times, above the covenant.
- The old twenty million shares are to be twenty per cent of the total, so the total is one hundred million, and eighty million new shares go to the bondholders.
- Old shareholders now own twenty per cent.
- Debt and interest are cut, but the old owners are diluted, and creditors take control.

21 Example 9: debt overhang

New stores: $30m of equity, worth $40m. Creditors capture 80% of the project's value

Value to the whole firm	40 − 30	**+$10m**
Value going to creditors	80% × 40	**$32m**
Value left for shareholders	40 − 32	**$8m**
Shareholders' net payoff	8 − 30	**−$22m**
Decision	good project refused	**No funding**

IN THE LESSON

- Westmoor's new store format needs thirty million dollars of new equity and would be worth forty million.
- Because Westmoor's debts are worth less than their face value, assume creditors capture eighty per cent of the project's value, because their debt becomes safer.
- For the whole firm, the project is worth forty minus thirty, ten million, so it should go ahead.
- But eighty per cent of the forty million, thirty two million, goes to creditors.
- That leaves forty minus thirty two, eight million, for shareholders.
- Their net payoff is eight minus thirty, minus twenty two million.
- So the decision is no funding, and a good project is refused.
- This is debt overhang.
- Shareholders will not fund projects whose value goes mostly to creditors.
- Cutting the debt, as the swap would, removes the overhang.

22 Chapter 11 or Chapter 7

- Chapter 11: reorganise; the business keeps running
- Prepack: plan agreed and voted before filing
- Chapter 7: liquidate; assets sold, cash shared out
- Reorganise if going-concern value beats liquidation
- Court costs are high, and the process can be slow

IN THE LESSON

- If the private deal fails, the firm files.
- Under Chapter eleven, the firm reorganises.
- The business keeps running while a plan is agreed that changes its debts.
- A prepackaged Chapter eleven, a prepack for short, is one where the plan is agreed and voted on before filing, so the time in court is short.
- Under Chapter seven, the firm is liquidated.
- Its assets are sold, often piece by piece, and the cash is shared out among the creditors.
- How do you choose?
- Reorganise when the going concern value of the business exceeds its liquidation value, each net of its costs.
- Otherwise, liquidate.
- The difficulties are real.
- Court costs, such as lawyers' fees, are high, and the process can be slow, which harms the business.

23 Example 10: reorganise or liquidate?

Going-concern value $330m, costs $30m. Liquidation value $260m, costs $30m

Reorganise: net value	330 − 30	**$300m**
Liquidate: net value	260 − 30	**$230m**
Decision	300 is above 230	**Reorganise**
Stock test now	330 vs liabilities 450	**Insolvent**
If going concern were $220m	220 − 30 = 190 < 230	**Liquidate**

IN THE LESSON

- Advisers value Westmoor as a going concern at three hundred and thirty million dollars, with reorganisation costs of thirty million.
- Sold off, its assets would fetch two hundred and sixty million, with liquidation costs of thirty million.
- Holdouts sank the exchange offer, so Westmoor has filed.
- Reorganising leaves three hundred and thirty minus thirty, three hundred million.
- Liquidating leaves two hundred and sixty minus thirty, two hundred and thirty million.
- Since three hundred is above two hundred and thirty, Westmoor should reorganise.
- Now the stock test.
- A going concern value of three hundred and thirty, against liabilities of four hundred and fifty, means Westmoor is now insolvent.
- Finally, if it were worth only two hundred and twenty as a going concern, the net value would be one hundred and ninety, below two hundred and thirty, so it should liquidate.

24 Remedies: what each implies, and the catch

Each remedy fixes something and costs something

Remedy	Implies	Difficulty
Operational restructuring	Fixes the business	Slow; costly up front
Waivers and extensions	Buys time	Debt stays the same
Exchange offer	Cuts debt out of court	Holdouts
Debt-for-equity swap	Cuts debt and interest	Dilution; creditor control
Chapter 11 or Chapter 7	Binds all creditors	Costly, slow, damaging

IN THE LESSON

- Each remedy fixes something and costs something.
- Here is the whole menu, with what each implies and its difficulty.
- Operational restructuring fixes the business, but it is slow and costly up front.
- Waivers and extensions buy time, but the debt stays the same.
- An exchange offer cuts debt out of court, but holdouts can sink it.
- A debt for equity swap cuts debt and interest, but it dilutes the old shareholders and hands control to creditors.
- A court process under Chapter eleven or Chapter seven binds all creditors, but it is costly, slow and damaging.
- For the exam, link the remedy to the stage.
- Mild, early distress calls for operational and out of court fixes, while deep distress, or a failed deal, leads to court.

25 Legal problems: the automatic stay

- US code: filing halts collection actions and lawsuits
- The bank cannot seize the factory it holds as security
- Suppliers' lawsuits are paused
- Why: it stops a race to grab assets
- It gives time to plan a reorganisation

IN THE LESSON

- We now turn to the legal problems, using the United States Bankruptcy Code, since other countries differ.
- When Westmoor files, the automatic stay applies at once.
- It halts collection actions and lawsuits against the firm.
- So the bank, although its loan is secured, cannot simply seize the factory it holds as security.
- The suppliers who were suing for unpaid invoices must pause their lawsuits.
- Why does the law do this?
- Without it, creditors would race to grab assets, and the first to court would win, while the business was torn apart, even though it is worth more as a whole.
- The stay stops that race, so value is kept for all the creditors together.
- It gives Westmoor time to plan a reorganisation.

26 Example 11: the absolute priority rule

Value after reorganisation, net of costs: $300m. The bank's security is worth over $200m

Secured bank loan	claim 200, paid first	**$200m: 100%**
Left for unsecured	300 − 200	**$100m**
Senior bonds and trade	100 ÷ (150 + 50)	**50%**
Subordinated bonds	nothing left	**0%**
Shareholders	last in line	**Nothing**

IN THE LESSON

- Westmoor's value after reorganisation, net of costs, is three hundred million dollars, and the bank's security is worth more than two hundred million.
- Under the absolute priority rule, secured creditors are paid first, then unsecured creditors in order of seniority, and equity last.
- The secured bank loan claims two hundred million and is paid first, in full.
- That leaves three hundred minus two hundred, one hundred million, for unsecured creditors.
- The senior bonds and the trade creditors rank equally, with claims of one hundred and fifty plus fifty, two hundred million.
- They share the one hundred, so each recovers fifty per cent, the fifty dollars per hundred the bondholders expected.
- Nothing is left for the subordinated bonds, and the shareholders, last in line, get nothing.

27 Preferences and fraudulent transfers

- Preference: old debt paid while insolvent; creditor gets more
- Window: 90 days before filing; 1 year for insiders
- Fraudulent transfer: below reasonably equivalent value
- Made while insolvent
- Look-back: 2 years federal; often longer under state law

IN THE LESSON

- The trustee, or the debtor itself acting for the creditors, can reverse two kinds of transaction made before filing.
- A preference is a payment on an existing debt, made while the firm is insolvent, that lets a creditor receive more than it would in a liquidation.
- The window is ninety days before filing, or one year for insiders, such as directors.
- The aim is to stop a failing firm paying off favoured creditors at the expense of the rest.
- A fraudulent transfer is a transfer for less than reasonably equivalent value, made while the firm was insolvent.
- The look-back for fraudulent transfers is two years under the federal Bankruptcy Code, and state law often reaches back further.

28 Example 12: what can be reversed?

Westmoor's payments and sales before filing. Unsecured creditors will recover 50%

$2m to supplier Lark Timber	old invoice, 60 days before	**Preference**
$1m to supplier Fenn Glass	outsider, 120 days before	**Stands**
$3m loan repaid to a director	insider, 200 days before	**Preference**
Warehouse ($12m) sold for $4m	insolvent, 18 months before	**Fraudulent**
Value given away in the sale	12 − 4	**$8m**

IN THE LESSON

- Here are Westmoor's payments and sales before filing.
- Unsecured creditors will recover fifty per cent.
- Sixty days before filing, it paid two million dollars on an old invoice to a supplier, Lark Timber.
- That is inside ninety days, and Lark was paid in full instead of fifty per cent, so it is a preference.
- At one hundred and twenty days, Westmoor paid one million to another supplier, Fenn Glass, an outsider.
- That is outside ninety days, so the payment stands.
- At two hundred days, it repaid a three million loan from a director, an insider, so the window is one year, and this is a preference.
- Eighteen months before, already insolvent, it sold a warehouse worth twelve million to the founder's cousin for four million.
- That is within two years, a fraudulent transfer.
- The value given away is twelve minus four, eight million.

29 Example 13: voting on the plan

Plan vote. Bonds: 30 holders voted $120m. Trade: 40 suppliers voted $45m

Bonds: amount voting yes	90 ÷ 120	**75% ≥ 2/3**
Bonds: holders voting yes	18 ÷ 30	**60% > 1/2**
Trade: amount voting yes	35 ÷ 45	**77.8% ≥ 2/3**
Trade: holders voting yes	15 ÷ 40	**37.5% < 1/2**
Result	bonds accept, trade rejects	**Cram-down test**

IN THE LESSON

- In the plan vote, thirty senior bondholders with one hundred and twenty million dollars of claims voted, and in the trade class forty suppliers with forty five million voted.
- A class accepts when the yes votes hold at least two thirds of the amount, and are more than half of the number, of the claims that voted.
- In the bond class, holders with ninety million voted yes.
- Ninety over one hundred and twenty is seventy five per cent, at least two thirds.
- Eighteen of the thirty holders voted yes, sixty per cent, more than half.
- In the trade class, fifteen suppliers holding thirty five million voted yes.
- Thirty five over forty five is seventy seven point eight per cent, enough.
- But fifteen of forty is thirty seven point five per cent, less than half.
- So the bonds accept, the trade class rejects, and Westmoor needs a cram-down.

30 Cram-down and equitable subordination

- Cram-down: plan confirmed over a class's rejection
- Only if fair and equitable to that class
- Juniors get nothing until the rejecting class is paid in full
- Equitable subordination: claim pushed behind others
- Example: a lender using control to jump the queue

IN THE LESSON

- What happens when a class rejects?
- The court can still confirm the plan through a cram-down, over that class's rejection.
- It can do so only if the plan is fair and equitable to that class.
- In essence, that means respecting absolute priority.
- No class junior to the trade creditors, here the subordinated bondholders and the shareholders, may receive anything until the trade creditors are paid in full.
- Westmoor's plan gives the juniors nothing, so this test is met.
- The other tool is equitable subordination.
- A court may push the claim of a creditor that acted inequitably behind the claims of others.
- For example, a lender that used its control over Westmoor's board to jump the queue could have its claim subordinated, and be paid only after the creditors it harmed.

31 Mistakes to avoid: the legal traps

- 90-day preference window is not the 2-year look-back
- Insiders: the preference window is 1 year
- Only the claims that voted are counted
- Two-thirds by amount AND more than half by number
- The stay halts secured creditors too

IN THE LESSON

- Here are the legal traps.
- The most common is to confuse the two windows.
- The ninety day preference window is not the two year look-back for fraudulent transfers.
- A preference is about favouring one creditor, and a fraudulent transfer is about giving value away.
- Second, for insiders the preference window is one year.
- Third, only the claims that actually voted are counted, not every claim in the class.
- Fourth, a class needs both tests, two thirds by amount and more than half by number.
- A few large holders can carry the amount while the class fails on number, as Westmoor's trade class showed.
- Last, the automatic stay halts secured creditors too, so even Westmoor's bank had to wait.

32 Try three quick questions

1. Z ratios X_1 to X_5: 0.10, 0.20, 0.08, 0.50, 1.1. Z-score and zone?
   Answer: 0.12 + 0.28 + 0.264 + 0.30 + 1.1 = 2.064: grey zone.
2. Net value $220m. Secured claims $100m, unsecured $160m. Unsecured recovery?
   Answer: 120 left; 120 ÷ 160 = 75%. Equity: nothing.
3. CEO's loan repaid 150 days before filing. Reversible?
   Answer: Yes: an insider, so a 1-year preference window.

IN THE LESSON

- Pause the video and think, then listen.
- Question one.
- A firm's five Z score ratios, in order, are point one, point two, point zero eight, point five and one point one.
- What is its Z score, and which zone?
- The weighted terms are point one two, point two eight, point two six four, point three and one point one, which sum to two point zero six four, between one point eight one and two point nine nine, the grey zone.
- Question two.
- A firm is worth two hundred and twenty million dollars net of costs.
- Secured claims are one hundred million and unsecured claims one hundred and sixty million.
- What do unsecured creditors recover?
- One hundred and twenty million is left, and over one hundred and sixty that is seventy five per cent.
- Equity gets nothing.
- Question three.
- A firm repaid its chief executive's loan one hundred and fifty days before filing.
- Reversible?
- Yes.
- An insider has a one year preference window.