HARBOR MAINTENANCE: ANSWERS

Every number here comes from the same engine as the case page checks and the completed workbook. Try the case before reading this.

MODE 1 · PAPER LBO

ANSWER	VALUE
Entry enterprise value	200.0
Sponsor equity in (incl. fees)	84.0
Exit proceeds to the sponsor	146.0
MOIC	1.738x
IRR	11.69%
Downside MOIC	1.024x
Downside IRR	0.47%
Maximum entry EV at the hurdle	174.7

1. Entry EV = 25 x 8 = 200. Uses including fees = 204. Sponsor equity = 204 - 120 = 84.
2. Exit debt = 120 - 10 = 110. Exit EV = 32 x 8 = 256. Proceeds = 256 - 110 = 146.
3. MOIC = 146 / 84 = 1.738x. IRR = 1.738^(1/5) - 1 = 11.69%.
4. Attribution at an unchanged multiple: EBITDA growth +56, debt repayment +10, multiple change +0, fees -4. Total 62 = 146 - 84.
5. Exit sensitivity: 28 x 7 = 196, less 110 debt -> 1.024x, 0.47%.
6. Reverse solve: max equity = 146 / 1.20^5 = 58.674. Max EV = 58.674 + 120 - 4 = 174.7, or 6.99x EBITDA. That's a ceiling from this return logic, not a market valuation.

Rubric, 10 points. Pass: 8 or more, with the enterprise value versus equity distinction right and nothing double counted.

CRITERION	PTS	WHAT EARNS IT
Sources and uses	2	EV, fees, debt and equity reconcile; fees paid by the sponsor.
Exit bridge	2	Exit EV less remaining debt, repayment counted once.
Returns	2	MOIC and IRR on equity including fees; hold period right.
Attribution	2	Growth, repayment, multiple and fees add up to the total gain, with the convention stated.
Limits and a recommendation	2	Says the downside is exit-only, and whether the hurdle is met.

MODE 2 · ONE HOUR MODEL

Sources and uses: EV 200.0 + fees 4.0 + minimum cash 5.0 = 209.0; term loan 120.0; sponsor equity 89.0.

$M	YR 1	YR 2	YR 3	YR 4	YR 5
Revenue	190.8	202.2	212.4	223.0	231.9
EBITDA	26.7	29.3	31.9	34.6	37.1
One-time costs	0.0	0.0	0.0	0.0	0.0
Interest	10.20	9.62	8.87	7.92	6.77

Cash taxes	2.94	3.66	4.42	5.27	6.14
Cash before debt	6.77	8.83	11.18	13.62	16.35
Mandatory + sweep	6.77	8.83	11.18	13.62	16.35
Term loan, end	113.2	104.4	93.2	79.6	63.2
Cash, end	5.0	5.0	5.0	5.0	5.0

RETURNS	$M
Sponsor equity in	89.0
Exit EV	296.8
Net debt at exit	58.2
Sponsor proceeds	238.6
MOIC	2.68x
IRR	21.8%

Attribution (growth at the entry multiple, then multiple change on exit EBITDA): EBITDA growth +96.8, multiple change 0.0, net debt reduction +56.8, fees -4.0. Total gain 149.6.

Why 22% here and 11.7% on paper: the paper case used the sponsor's haircut (exit EBITDA of 32.0 and only 10.0 of repayment). The model uses management's plan, which grows EBITDA to 37.1 and repays about 57 of debt. Which plan you believe is the diligence question.

CRITERION	PTS	WHAT EARNS IT
Sources and uses	2	Minimum cash and fees funded; sources equal uses.
Operating build	2	Revenue, EBITDA, D&A, taxes, capex and working capital from the drivers.
Debt schedule	3	Beginning-balance interest, floor applied correctly, mandatory then sweep, cash held at the minimum.
Returns and recommendation	3	Net debt at exit, MOIC and IRR, and a clear view against a 20% hurdle.

MODE 3 · LINKED DOWNSIDE

$M	YR 1	YR 2	YR 3	YR 4	YR 5
Revenue	190.8	156.5	161.1	167.6	174.3
EBITDA	26.7	18.8	20.9	22.6	24.4
One-time costs	0.0	14.0	0.0	0.0	0.0
Interest	10.20	10.76	11.28	11.03	10.70
Cash taxes	2.94	0.00	1.41	1.85	2.34
Cash before debt	6.77	-7.24	2.96	4.07	5.47
Mandatory + sweep	6.77	1.20	1.20	1.20	1.66
Revolver draw/(repay)	-0.00	8.44	-1.76	-2.87	-3.81
Term loan, end	113.2	112.0	110.8	109.6	108.0
Revolver, end	0.00	8.44	6.68	3.81	0.00
Cash, end	5.0	5.0	5.0	5.0	5.0

RETURNS	$M
Sponsor equity in	89.0
Exit EV	170.8
Net debt at exit	103.0
Sponsor proceeds	67.8

MOIC	0.76x
IRR	-5.3%

The revolver peaks at 8.44 in year 2, inside the 20.0 commitment, so there's no funding shortfall. The lenders are covered; the sponsor gets back 0.76x.

A strong memo leads with the recommendation, shows base and downside side by side, names contract renewal and cash conversion as the facts diligence must settle, and says what price would make the downside tolerable.

CRITERION	PTS	WHAT EARNS IT
Linked downside	3	Revenue, margins, one-off, rates and exit all flow through, not just a changed exit.
Liquidity	3	Revolver drawn only to hold minimum cash, repaid before sweep; no shortfall hidden.
Returns under stress	2	Downside MOIC and IRR from net debt at exit.
IC memo	2	One page: thesis, base vs downside, what would change your mind, recommendation.