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Business in critical difficulty and the restructuring of bank debts

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Negotiation of financial covenants in bank debt restructuring agreements

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Definition of covenant – Focus

- Restrictions that require the borrower[1,2]:
  - to preserve collaterals
  - to disclose information;
  - not to leverage itself with new debt;
  - not to change the guarantee given to lenders;
  - not to change business;
  - not to change ownership;
  - not to sell / limiting selling assets;
  - limiting cash payouts;
  - to maintain stated level of financial performance.

- Focus is on financial covenant.

Accounting issues

- The key accounting issues are:
  - Definition and choice of accounting standards;
    - Local Gaap vs IFRS / US Gaap;
    - Firm-specific use of a standard;
    - Different Gaap in different countries, but same ownership;
  - Potential / planned changes of Gaap in the future (mandatory / voluntary changes) and related cost (i.e. charged interest rate) of flexibility in covenant calculation[3].
  - Use of separated and/or consolidated financial statement (and this may trigger the use of different standards, even locally. capital leases in Italy, off-balance sheet obligations, S.P.V.s);
  - The use of accrual accounting vs. cash accounting;
  - The use of ratios constructed from a balance sheet on an “as of date”[1] which may not represent the borrower actual situation;
  - There’s no standard set of covenants, at least in the US,.

Behavioral and cultural issues

- Accrual accounting (income statement - earning) easier to manipulate than cash accounting (cash flow statement);
- An older study shows that managers use income-increasing discretionary accruals if default is temporary and firm is OK. If financial distress is severe, then income-decreasing accruals are used[4].
- Higher likelihood of windows dressing policies if covenants are tighter;
- Tighter covenants sometimes used by banks as “Trojan horses”;
- Covenants frequently used as a screening device (no serious consequences on borrowing firms)[5];
- Are covenants determined endogenously as a function of firm characteristic? It remains to be seen[5].
- Corporations must learn to plan and report more timely and to disclose much more information to lending institutions (relevant IT, organizational and cultural issues);
- There’s no standard approach to the use of financial data between financial institutions and borrowers. Most commonly used restrictions are qualitative measures, not quantitative.

Covenants as target-setting. Comparables

- The mainly used quantitative covenants are:
  - Current ratio (current asset/current liabilities);
  - Leverage (financial debt/equity – financial debt/total asset)
  - Coverage (EBITDA/debt service – Free cash flow/debt service)
  - Capital expenditures (minimum amount to be spent / maximum amount allowed)

- It can be helpful to compare these covenants with industry averages and their distribution. More realistic planning and target setting.
- Databases (private non listed companies):
  - Centrale dei Bilanci[6] www.centralebilanci.it/:
  - AIDA www.bvdinfo.com/
  - AMADEUS www.bvdinfo.com
  - ORBIS www.bvdinfo.com

Quantitative data usually used to support covenant negotiation

- Typically, a firm structures a business plan as it follows:
  - Income statement;
  - Cash flow statement;
  - Balance sheet.

- The assumptions of the business plan are often subjective.
- The business plan often reflects subjective most-likely scenario (keep in mind potential bias as explained before).
- The likelihood of the business plan is (sometimes/often) tested using:
  - What-if analysis (or sensitivity analysis);
  - Scenario analysis

What-if analysis

- What-if analysis explains how a change in one or two inputs (assumptions) triggers a change in one or more specific outputs. Examples:
  - test how different combinations of price/quantity (i.e. testing demand curve) impact on net income, cash flow, debts , equity;
  - test how different variable production costs and/or fixed costs impact on net income, cash flow, debts , equity.

- What-if analysis (sensitivity analysis) helps understanding what triggers relevant changes, but provides no help to understand the impact of the combined change of more than 2 inputs.

Scenario analysis

- Many corporations try to understand the impact of the change of more than 2 inputs by simultaneously changing some of them (say change of price -5%, change of variable cost +5% and change of fixed cost + 3%) and printing some sets of the business plan.

- Usually the result of this subjective analysis is one worst-case scenario, one most likely case and one best case.

- Covenants are usually negotiated on the (supposed to be the) most likely scenario, keeping in mind the worst and best cases.

Simulation analysis

- The question is: how likely are the assumed most-likely scenario, the worst and the best case ones? Can we calculate their probabilities?
- And what about all other potential scenarios that may result if inputs changes according to what the management thinks?
- The number of scenarios is always enormous. Let's assume a business plan has 3 inputs (I) which can have 5 (n) different values each. The number of possible scenario is 5X5X5=125 or I^n
- We are living in a world of high volatility and we need to create anti-fragile corporations, i.e. entities that can resist shock and that, at the same time, learn and get better. It is easier to understand if something can be damaged by volatility (i.e. it is fragile) rather than predicting "black swans" [7].
- How can simulation help?

Simulation analysis

- Company ABC has the following balance sheet

Assets	**0**	**Liabilities**	**0**
cash	1.500	Bank overdraft	6.500
receivables	22.000	Suppliers	12.000
inventory	5.000	Current Liabilities	18.500
Current Assets	28.500	Long term liabilities	50.000
Net tangible assets	60.000	equity	20.000
Total Assets	88.500	Total Liabilities	88.500

- Company ABC cannot pay the long term liability in 5 years as agreed with the lending institution due to decrease in expected sales. In order to negotiate a new 10 years term to pay off the debt, it has prepared a business plan according to its most-likely expected scenario, with the following assumptions:

Simulation analysis - assumptions

Uncertain inputs		**Parameters of distributions**			
		Distribution	Parameter 1	Parameter 2	Parameter 3
Investment cost	0	Invest. Triang	$0	$0	$0
Year 1 revenue	100.000	Year 1 rev.Triang.	$90.000	$100.000	$105.000
Annual fixed cost	45.000	Fixed c. Triang.	$38.000	$45.000	$50.000
Annual revenue growth rate	3%	Rev. Gr. Norm.	3%	10%	
Annual variable cost percentage	50%	Var. cost Norm.	50%	5%	
Days Sales Outstanding	60	DSO Triang	55	60	75
Days Payable Outstanding	45	DPO triang.	40	45	50
Days Inventory	25	D.I triang.	20	25	35
Income taxes	30%				
Interest on bank overdraft	7%				
Interest on long term liability	5,50%				
Maturity	10				
Payments	10				

Simulation analysis – income statement

Income statement	1	2	3	4	5
Investment cost					
Revenue	100.000	103.000	106.090	109.273	112.551
Variable cost	50.000	51.500	53.045	54.636	56.275
Fixed cost	45.000	45.000	45.000	45.000	45.000
EBITDA	5.000	6.500	8.045	9.636	11.275
depreciation	4.500	4.500	4.500	4.500	4.500
EBIT	500	2.000	3.545	5.136	6.775
interest expenses on overdraft	105	0	0	0	0
Interest expenses on long term liabili	2.750	2.536	2.311	2.073	1.823
Gross income	-2.355	-536	1.234	3.063	4.953
Income tax	0	0	370	919	1.486
Net income	-2.355	-536	864	2.144	3.467

Simulation analysis – prospective balance sheet

Assets	**1**	**2**	**3**	**4**	**5**
cash	1.500	1.500	1.500	1.833	4.540
receivables	16.438	16.932	17.439	17.963	18.502
inventory	3.425	3.527	3.633	3.742	3.854
Current Assets	21.363	21.959	22.573	23.538	26.896
Net tangible assets	55.500	51.000	46.500	42.000	37.500
Total Assets	76.863	72.959	69.073	65.538	64.396

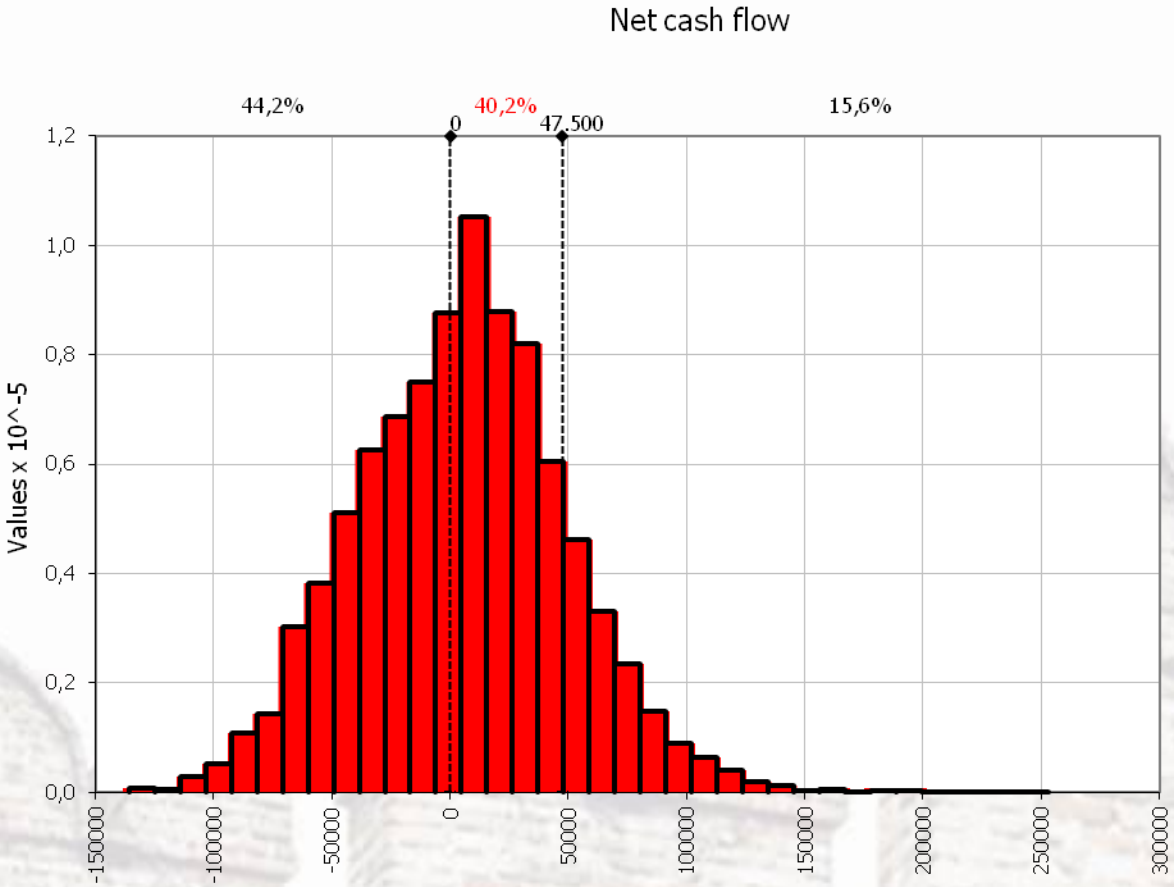
Liabilities	**1**	**2**	**3**	**4**	**5**
Bank overdraft	1.389	1.933	1.315	0	0
Suppliers	11.712	11.897	12.088	12.284	12.486
Current Liabilities	13.101	13.831	13.403	12.284	12.486
Long term liabilities	46.117	42.020	37.697	33.137	28.326
equity	17.645	17.109	17.972	20.116	23.583
Total Liabilities	76.863	72.959	69.073	65.538	64.396

Simulation analysis – cash flow and covenants

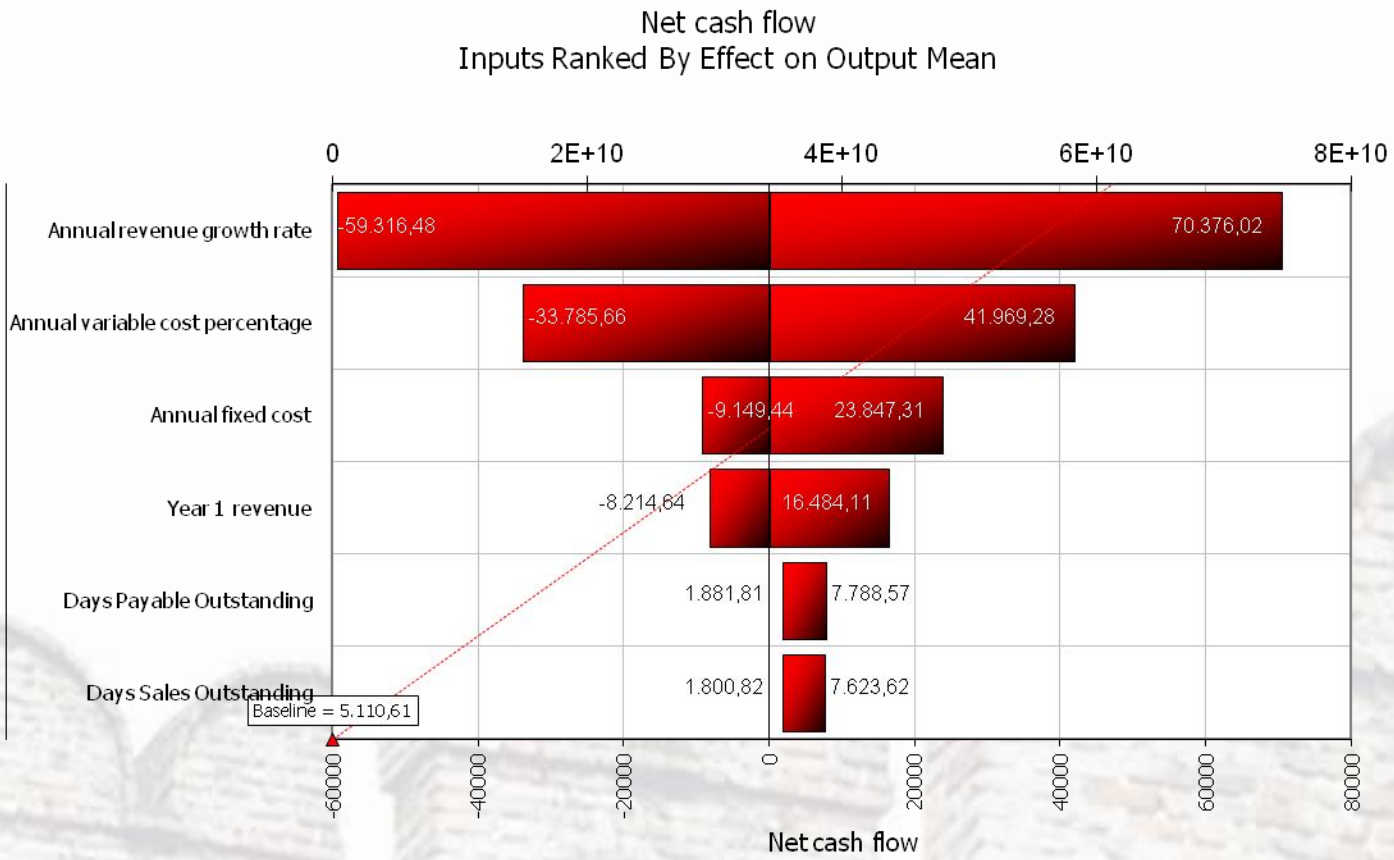
Cash flow statement	1	2	3	4	5
EBITDA	5.000	6.500	8.045	9.636	11.275
change in receivables	5.562	-493	-508	-523	-539
change in inventories	1.575	-103	-106	-109	-112
change in suppliers	-288	185	190	196	202
OPERATING CASH FLOW	11.849	6.089	7.622	9.200	10.826
Interest payable on bank overdraft	-105	0	0	0	0
long term debt service	-6.633	-6.633	-6.633	-6.633	-6.633
income taxes	0	0	-370	-919	-1.486
Cash flow	5.111	-544	618	1.648	2.707
beginning net cash	-5.000	111	-433	185	1.833
ending net cash	111	-433	185	1.833	4.540

Covenants / Outputs	1	2	3	4	5
5 years operating cash flow	45.587	46.239	54.376		
Net cash flow	9.540	8.225	13.685		
Leverage (fin. Debt/equity)	2,69	2,57	2,17	1,65	1,20
Coverage (EBITDA/Debt service)	0,74	0,98	1,21	1,45	1,70

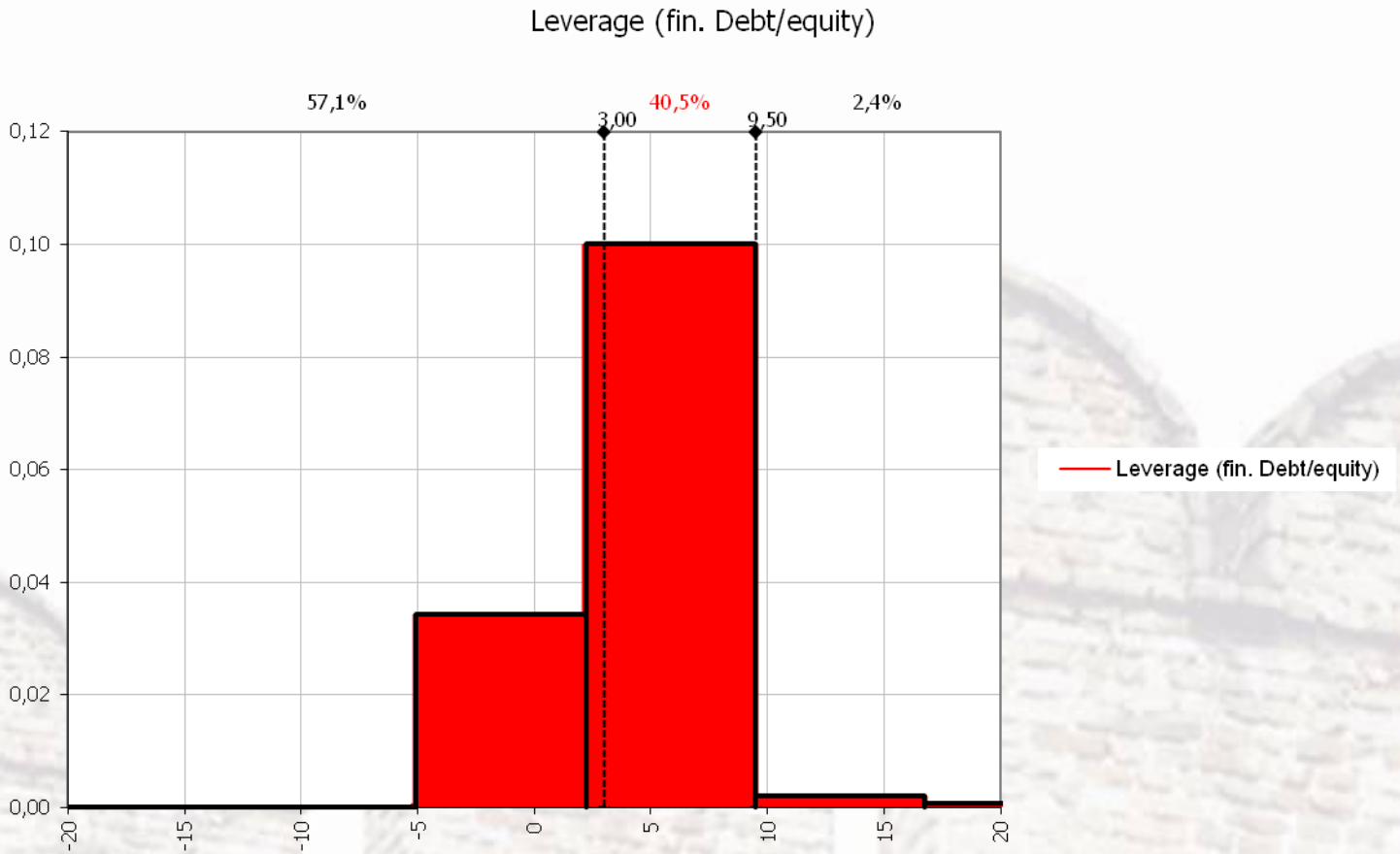
Simulation analysis – net cash flow



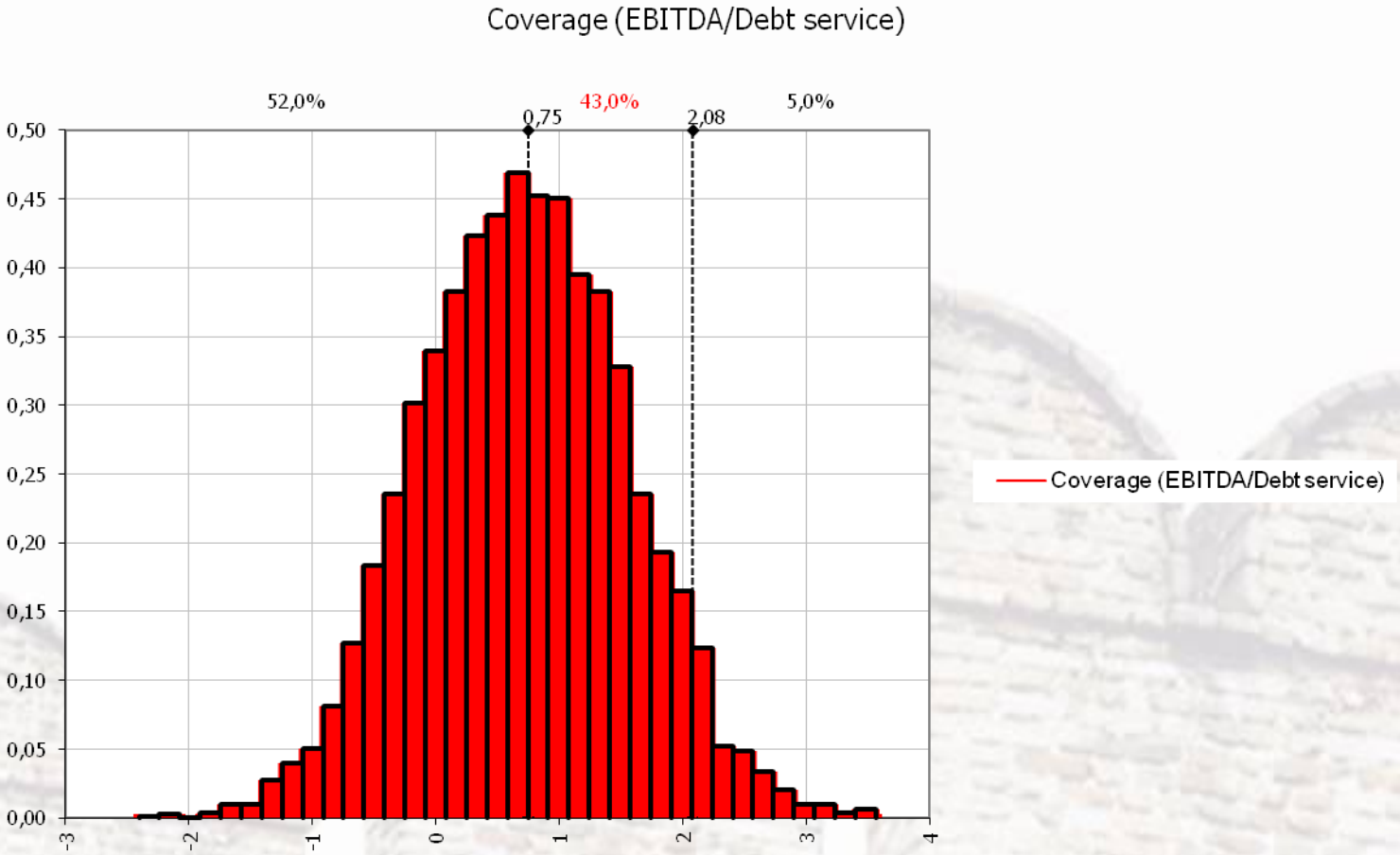
Simulation analysis – key factors



Simulation analysis – leverage year 1



Simulation analysis – coverage year 1



Simulation analysis

- Chart 1 regarding net cash flow's probability distribution shows 44,2% probability of a negative net cash flow in the following 5 years (i.e not to pay part or all the debt service as rescheduled in 10 years);

- Chart 2 regarding key factors shows that:
  - the first critical success factor is revenue growth;
  - the second critical success factor is variable cost;
  - days receivable / payable are not a relevant success factor.

- Chart 3 regarding covenant leverage's probability distribution shows more than 42% probability to exceed "3" during year 1 (i.e. to be in default if our potential negotiation target, based on prop. scenario, is 3);

- Chart 4 regarding covenant coverage's (EBITDA/debt service) probability distribution shows 52% probability to be below 0,75 during year 1 (i.e. to be in default if our potential negotiation target, based on prop. scenario, is 0,75).

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