

Oil & Gas Modeling

– Certification Quiz Questions

Module 5 – Oilfield Services 3-Statement Model and Valuation

17. You are building a 3-statement model for China Oilfield Services [COSL], but the company discloses meaningful unit-level data only for its Drilling Services segment, which consists of Jack-Up Rigs and Semi-Submersible Rigs. Revenue in this segment is based on the Average Rig Count * Average Day Rate * Utilization Rate * Days in Period.

The company generates more than twice as much Revenue from its Well Services segment, but due to the lack of unit-level data, you have forecast Well Services Revenue based on the Average Total Rig Count from Drilling Services and a per-Rig figure, as shown in the image below this question. Your logic is that increased drilling activity will result in more wells for the company to service in the future.

The Operating Margin is a simple percentage of Revenue, and CapEx is also linked to the Average Total Rig Count.

What is the **BIGGEST POTENTIAL PROBLEM** with these projection methods for the Well Services segment?

	A	B	C	D	I	J	K	L	M
107									
108			Well Services Segment:		FY25	FY26	FY27	FY28	FY29
109			Well Services Revenue:	¥ M	¥ 29,945.2	¥ 31,323.2	¥ 33,581.3	¥ 34,924.8	¥ 36,137.3
110									
111			Average Total Rig Count:	#	64.3	65.3	68.3	69.3	70.3
112			Well Services Revenue per Average Rig:	¥ M / Rig	465.7	479.7	491.7	504.0	514.0
113			Selected Well Services per Avg. Util. Rig Growth:	%	3.0%	3.0%	2.5%	2.5%	2.0%
114			Upside	%	6.0%	5.5%	5.0%	4.5%	4.5%
115			Base	%	3.0%	3.0%	2.5%	2.5%	2.0%
116			Downside	%	2.0%	1.5%	1.0%	1.0%	0.5%
117									
118			Segment Operating Income (Incl. Eq. Inv.):	¥ M	5,090.7	5,450.2	5,977.5	6,356.3	6,721.5
119			Operating Margin:	%	17.0%	17.4%	17.8%	18.2%	18.6%
120									
121			Capital Expenditures:	¥ M	3,028.5	3,321.6	3,717.4	3,998.1	4,258.6
122			CapEx per Average Total Rig Count:	¥ M / Rig	47.1	50.9	54.4	57.7	60.6
123			Growth Rate in CapEx per Average Rig Count:	%	10.0%	8.0%	7.0%	6.0%	5.0%

- a. Effectively, this makes COSL's Well Services Revenue depend on the Day Rates and Utilization Rates in its Drilling Services segment, but the relationship is probably not that direct.
 - b. This makes COSL's Well Services Revenue depend partially on the Drilling Services CapEx, which might be an unrealistic assumption.
 - c. These assumptions mean that the Well Services CapEx will tend to progress evenly over time, but the Drilling Services CapEx may fluctuate significantly based on the company's scheduled Rig purchases.
 - d. The Operating Margin does not vary in the different scenarios, which may not be realistic if oil and gas prices decline significantly.
18. To value China Oilfield Services, you have selected a set of global Oilfield Services Public Comps and used (TEV Including Lease Liabilities) / EBITDAR multiples to normalize the lease accounting differences under IFRS vs. U.S. GAAP. The current comp set is shown in the image below this question.

Suppose that instead of normalizing the companies this way, you decided to use Enterprise Value **WITHOUT** Lease Liabilities and pair it with EBITDA metrics that **deduct** the full Lease Expense (Rent + Lease Depreciation + Lease Interest).

Which of the following answer choices **CORRECTLY** describe the consequences of this change?

This question has **2 correct answers** and 3 incorrect answers. You must select **BOTH** correct answers and no incorrect answers to earn a point for this question.

Valuation Statistics:	Corporate HQ	Equity Value	Enterprise Value	Enterprise Value Incl. Leases / EBITDAR			
Company Name				LTM	CY 25	CY 26	CY 27
SLB N.V.	U.S.; U.K.; FR; NL	\$ 46,949.4	\$ 56,840.3	6.4 x	6.6 x	6.2 x	5.9 x
Baker Hughes Company	U.S.; U.K.	48,281.5	49,507.1	10.5 x	9.7 x	9.3 x	8.7 x
Halliburton Company	U.S.; UAE	21,082.2	27,362.9	5.5 x	6.2 x	6.3 x	5.8 x
Saipem SpA	Italy	6,408.5	6,944.3	3.9 x	3.6 x	3.2 x	3.1 x
Tenaris S.A.	Luxembourg	19,044.0	13,475.6	4.8 x	4.7 x	4.9 x	4.7 x
TechnipFMC plc	U.S. / U.K.	16,588.7	17,046.7	10.1 x	8.7 x	7.7 x	7.2 x
NOV Inc.	U.S.	4,982.0	5,783.9	5.1 x	5.3 x	5.4 x	5.0 x
SBM Offshore N.V.	Netherlands	4,502.2	14,949.0	11.8 x	9.1 x	9.2 x	8.2 x
Weatherford International plc	U.S.	4,954.3	5,743.9	4.8 x	5.2 x	5.2 x	4.8 x
ADNOC Drilling Company P.J.S.C.	UAE	24,534.1	26,233.5	12.2 x	11.9 x	11.4 x	10.8 x
Transocean Ltd.	Switzerland; U.S.	3,391.0	8,890.5	7.1 x	6.4 x	6.6 x	7.2 x
Noble Corporation plc	U.S. / U.K.	4,568.0	6,343.9	5.5 x	5.6 x	6.1 x	4.8 x
Maximum		\$ 48,281.5	\$ 56,840.3	12.2 x	11.9 x	11.4 x	10.8 x
75th Percentile		21,945.2	26,515.9	10.2 x	8.8 x	8.1 x	7.5 x
Median		11,498.6	14,212.3	6.0 x	6.3 x	6.3 x	5.9 x
25th Percentile		4,857.8	6,794.2	5.0 x	5.3 x	5.3 x	4.8 x
Minimum		3,391.0	5,743.9	3.9 x	3.6 x	3.2 x	3.1 x
China Oilfield Services Limited		\$ 7,153.4	\$ 8,695.7	5.1 x	5.0 x	4.7 x	4.3 x

- Since the numerator of each multiple will fall by a greater percentage than the denominator, you would expect these new TEV / EBITDA multiples to be lower than the current (TEV + Leases) / EBITDAR multiples.
- For the IFRS-based companies, you would have to find the Lease Interest and Lease Depreciation from all sources and deduct them from the standard EBITDA figures.
- For the U.S. GAAP-based companies, no adjustments are required because the standard EBITDA figure already deducts the full Rental Expense.
- One challenge with this approach is that under U.S. GAAP, some companies do not disclose their Finance Lease Liabilities separately from their Debt balances.
- The Discount Rate that each company applies to its Operating and Finance Lease Liabilities to calculate the Lease Interest could indicate the “spreads” between the two versions of this multiple.

19. You are using this China Oilfield Services valuation to argue that the company’s share price might increase if it spins off or divests its less-profitable divisions, such as Drilling Services and Geophysical / Maritime Services.

As part of this process, you have completed a simple Sum-of-the-Parts valuation showing each division’s potential Enterprise Value and how the sale of two divisions could boost the remaining company’s Equity Value (“Remain Co. Equity Value”).

Your analysis applies the 25th percentile EBITDAR multiples to the two less-profitable divisions and the 75th percentile multiples to the Well Services division.

The output of this analysis, indicating that the share price may increase by more than 50% following these transactions, is shown in the image below this question.

Which of the following answer choices represents the **BIGGEST POTENTIAL PROBLEM** with this approach?

Potential Divestitures:	EBITDA:	Multiple:	TEV:
Drilling Services:	¥ 3,101.9	5.0 x	¥ 15,603.2
Well Services:	6,433.9	10.2 x	65,561.7
Other:	1,500.2	5.0 x	7,546.5
Remain Co. TEV (Well Services):			65,561.7
(-) Net Debt:			(10,977.1)
(+) Proceeds from Divestitures:			23,149.7
Remain Co. Equity Value:			77,734.3
Remain Co. Implied Share Price:			¥ 16.29

- You cannot apply EBITDAR multiples from the Public Comps to the segment-level EBITDA figures.
- Your analysis does not include the value of the additional corporate overhead expenses that will be incurred if the company divests or spins off these two divisions.
- Your analysis assumes that COSL will receive the Enterprise Value of each division as proceeds, but only the Equity Proceeds will go to the parent company.

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- d. It may not be appropriate to assume the 25th and 75th percentile multiples for the divisions based solely on profitability; growth rates and industry dynamics should also factor in.