

Analyst: Sung Nam

Novellus Systems Inc (NVLS)

Market Price:	\$34.70	EBITDA/Share:	\$4.50	Net Asset/Share:	\$19.07
DCF: EV/EBITDA Terminal Value	9.652%	DCF: Net Tangible Asset excluding Cash/Debt Terminal Value	-0.777%		
EBITDA-Cap Ex/Share	\$4.20	EVA Analysis:	9.571%		

Overview

We based the calculations off Weds. closing share price, a day before the buyout announcement was revealed. Novellus has similar margins (gross mid-40s, EBITA low to mid-20s). They can create synergy by consolidating the R&D, and SG&A, which is a combined 20% for Novellus and Lam Research. They want to have annualized savings of \$100 MM/year.

The all share \$44.42 is a 28% premium over Weds.' closing price. Shareholders will receive 1.125 of Lam.

Dividend?

Dividend yield is 0.0%.

Cashflow Generation

Cashflows are \$300 MM from operating cashflow.

Capex is \$20 MM, intangibles are \$0 MM and dividend is \$0 MM.

Free cash flow is about \$280 MM.

22.2% EBITA margin.

The company has \$ 670 MM in cash/short term investment and \$100 MM in debt.

Profitability

ROA is a strong 14.3%, and ROC is 19.8%.

LBO?

We believe a 60% debt/40% equity would be sustainable.

Price

We are forecasting a \$50.40/share in Year 5, or a 14.5% holding return, or 7.75% annual return.

Thus, the 1 year forecasted price is \$37.40.

Novellus Systems, Inc. (Novellus), together with its subsidiaries, develops, manufactures, sells and supports equipment used in the fabrication of integrated circuits, commonly called chips or semiconductors. Customers for this equipment manufacture chips for sale or for incorporation in their own products, or provide chip-manufacturing services to third parties. Novellus also develops, manufactures, sells and supports grinding, lapping and polishing equipment for a range of industrial applications. Novellus operates in two segments: the Semiconductor Group and the Industrial Applications Group.

Company Name: Novellus Systems Inc		Market Capitalization:	\$2,690,000,000.00	Income Statement	
Ticker Symbol:	NVLS	Total Debt:	\$105,590,000.00	Revenue:	\$1,450,000,000.00 100.0%
Last Price:	\$34.70	Total Cash:	\$671,250,000.00	Cost of Goods Sold:	\$784,670,000.00 54.1%
Net Cash/Share:	\$8.49	Net Cash/(Debt):	\$565,660,000.00	Gross Profit:	\$665,330,000.00 45.9%
Net Cash to Last Price:	24.48%	Enterprise Value:	\$2,124,340,000.00	EBITDA:	\$375,670,000.00 25.9%
Shares Outstanding:	66,590,000	Current EV/Share:	\$31.90	Net Income:	\$293,680,000.00 20.3%
Industry:	Semiconductor Equipment & Materials	EBITDA:	\$299,750,000.00	Balance Sheet	
Sector:	Technology	EV/EBITDA Multiple:	7.09	Cash:	\$247,060,000.00
		EV/FCF Multiple:	7.52	Short Term Investment:	\$424,200,000.00
		Upper Range		A/R:	\$256,730,000.00
		DCF: EV/EBITDA Terminal Value		PP&E:	\$788,650,000.00
Institutional Ownership:	#VALUE!	Implied TV from 5 X EV/EBITDA Multiple	\$1,674,136,841.37	Assets:	\$1,832,400,000.00
Mutual Fund Ownership:	2.64%			A/P:	\$0.00
Insider Ownership:	3.97%			Deferred Tax:	\$61,380,000.00
Retail Ownership:	#VALUE!			Other Liabilities:	\$337,290,000.00
Float:	96.03%			Short term Debt:	\$0.00
				Long Term Debt:	\$105,590,000.00
				Liabilities:	\$504,260,000.00
				Retained Earnings:	\$124,130,000.00
				Paid-In Capital:	\$0.00
				Treasury Stock:	\$0.00
				Stockholder's Equity:	\$1,328,140,000.00
				Cash Flow	
Technicals		Enterprise Value	\$1,674,136,841.37	Net Income:	262,330,000.00
52 week low:	\$25.95	Cash at Year 5:	\$1,989,247,040.73	Depreciation/Amortization:	39,950,000.00
Today from 52 week low:	33.72%	Debt at Year 5:	\$590,000.00	Change in Working capital:	-13,080,000.00
52 week high:	\$41.82	Equity Value Year 5:	\$3,662,793,882.10	Cash from Operating Activities:	336,420,000.00
Today from 52 week high:	20.52%	Equity/Share at Year 5:	\$55.01	Capital Expenditures:	-19,910,000.00
50 day Moving Average:	\$33.63	Annualized Return:	9.65%	Cash from Investing Activities:	-67,760,000.00
200 day Moving Average:	\$33.12	Lower Range		Total Cash Dividends Paid:	0.00
		DCF: Net Tangible Asset excluding Cash/Debt Terminal Value		Issuance (Retirement) of Stock:	-273,070,000.00
Analyst/Consensus		Year 5 Net Tangible Assets excluding cash and debt	\$233,597,203.65	Issuance (Retirement) of Debt:	-70,000.00
Analyst Sales Growth FY1:	-0.20%			Cash from Financing Activities:	-163,600,000.00
Analyst Sales Growth FY2:	-8.80%	Enterprise Value	\$233,597,203.65	Profitability Margins	
SN Valuation Estimate FY1:	5.00%	Cash at Year 5:	\$1,989,247,040.73	Debt to Equity:	7.95%
SN Valuation Estimate FY2:	3.00%	Debt at Year 5:	\$590,000.00	Return on Assets:	14.32%
		Equity Value Year 5:	\$2,222,254,244.38	Return on Capital:	18.30%
Analyst Earnings Estimate FY1:	\$3.06	Equity/Share at Year 5:	\$33.37	Return on Equity:	19.75%
Analyst Earnings Estimate FY2:	\$2.69	Annualized Return:	-0.78%		
SN Valuation Earnings Est. FY1:	\$3.36	EVA			
SN Valuation Earnings Est. FY2:	\$3.46	EVA today:	\$1,614,214,908.67		
		EVA in 5 Years:	\$2,549,457,168.85		
		EVA/Share:	\$38.29		
Multiples		T	\$1,989,247,040.73		
Market Value to Book:	2.03	Debt at Year 5:	\$590,000.00		
EV to Book:	1.60	Equity Value Year 5:	\$4,538,114,209.58		
P/E Ratio:	9.16	Equity/Share at Year 5:	\$68.15		
Trailing P/E Ratio:	11.53				
Forward P/E Ratio:	15.01				
Beta:	1.27				
Dividend:	0	Annualized return	9.57%		
Dividend Yield:	0.00%	Current Net Tangible Asset			
Dividend Date:	N/A	Net Tangible Asset/Share:	\$19.07		
Ex-Dividend Date:	Dec 16, 2004	Net Tangible Asset/Share in Year 5:	\$40.50		
		Annualized return	16.26%		
Competitors		Current Equity Price:	\$34.70		
Average EV to EBITDA:	N/A	Selling at Discount?	Premium		
Company EV to EBITDA:	7.09	Appreciation Potential:	-45.05%		
		Dividend Model			
Average EV to EBIT:	N/A	Next Year Dividend	\$0.00		
Company EV to EBIT:	7.09	WACC:	5.97%		
		Dividend:	\$0.00		
		Net Income:	\$293,680,000.00		
		Retention Ratio:	100.00%		
		Return on Equity:	19.75%		
		Dividend Growth Rate:	19.75%		

SN VALUATION

LBO Analysis

WACC Terminal Value:		Intrinsic Price in 5 Years:	50.37	Non-LBO Forecast	Year 1 Target	37.38	Non-LBO Forecast	Desired Return Rate	20.00%
EV/EBITDA with 5X Multiple Terminal Value:	\$55.01	Market Price:	34.70		Year 2 Target	40.28		Implied Today's Price	20.24
Net Tangible Asset Terminal Value:	\$33.37	LBO Price:	44.00		Year 3 Target	43.39		Overvalued/(Undervalued)	71.42%
EV/EBITDA with Today's Multiple Terminal Value:	\$44.95	Premium to Market Price:	26.80%		Year 4 Target	46.75			
EVA Enterprise Value:	\$68.15	LBO Price/Intrinsic Price Target:	2.74%		Year 5 Target	50.37			
Dividend Discount Model:	N/A	LBO Price/EV/EBIT Exit Price:	-0.28%						
Average (Excluding Dividend Discount):	\$50.37	Implied IRR at today's EV/EBIT:	5.31%	Implied IRR (Market Price):	7.74%				
		5 Year Return:	14.48%						

Current Evaluation				Exit Evaluation			
Current Market Price:	34.70	LBO Price:	44.00	Exit Price:	50.37	Exit Price:	44.95
Outstanding Shares:	66,590,000	Outstanding Shares:	66,590,000	Outstanding Shares:	66,590,000	Outstanding Shares:	66,590,000
Market Capitalization:	2,310,673,000	Market Capitalization:	2,929,960,000	Market Capitalization:	3,354,075,370	Market Capitalization:	2,993,139,146
Available Cash:	671,250,000	Available Cash:	671,250,000	Available Cash:	1,989,247,041	Available Cash:	1,989,247,041
Debt:	105,590,000	Debt:	105,590,000	Debt:	590,000	Debt:	590,000
Net Cash:	565,660,000	Net Cash:	565,660,000	Net Cash:	1,988,657,041	Net Cash:	1,988,657,041
Enterprise Value:	1,745,013,000	Enterprise Value:	2,364,300,000	Enterprise Value:	1,365,418,330	Enterprise Value:	1,004,482,105
Original EV/EBIT:	7.09	EV/EBIT:	7.89	EV/EBIT at 5 Years:	4.08	EV/EBIT at 5 Years:	3.00
Original EV/EBITDA:	7.09	EV/EBITDA:	6.96	EV/EBITDA at 5 Years:	4.23	EV/EBITDA at 5 Years:	2.40
Competitor Average EV/EBIT:	N/A						
Competitor Average EV/EBITDA:	N/A						

Enterprise Valuation Calculation During Holding Period							
Time Period	0	Adjusted for LBO	1	2	3	4	5
Annualized Price Targets based off LBO Price:	44.00	44.00	45.21	46.45	47.72	49.03	50.37
Shares Outstanding:	66,590,000	66,590,000	66,590,000	66,590,000	66,590,000	66,590,000	66,590,000
Market Capitalization:	2,929,960,000	2,930,048,878	3,010,350,682	3,092,853,262	3,177,616,932	3,264,703,660	3,354,177,114
Available Cash:	671,260,000	671,260,000	836,363,783	1,115,318,846	1,400,289,263	1,686,509,153	1,989,247,041
Debt:	105,590,000	105,590,000	590,000	590,000	590,000	590,000	590,000
Net Cash:	565,670,000	565,670,000	835,773,783	1,114,728,846	1,399,699,263	1,685,919,153	1,988,657,041
Enterprise Value:	2,364,290,000	2,364,378,878	2,174,576,899	1,978,124,416	1,777,917,669	1,578,784,508	1,365,520,073
EBIT	299,750,000	299,750,000	297,489,780	306,414,473	315,606,908	325,075,115	334,827,368
EV/EBIT:	7.89	7.89	7.31	6.46	5.63	4.86	4.08
EBITDA	339,700,000	339,700,000	375,665,188	386,935,144	395,745,372	399,882,251	419,338,485
EV/EBITDA:	6.96	6.96	5.79	5.11	4.49	3.95	3.26

Enterprise Valuation Calculation During Holding Period							
Time Period	0	Adjusted for LBO	1	2	3	4	5
Annualized Price Targets based off LBO Price:	44.00	44.00	47.79	53.04	58.40	63.82	69.53
Shares Outstanding:	66,590,000	66,590,000	66,590,000	66,590,000	66,590,000	66,590,000	66,590,000
Market Capitalization:	2,929,960,000	2,930,048,878	3,182,324,417	3,531,675,998	3,889,154,830	4,250,058,387	4,629,720,452
Available Cash:	671,260,000	671,260,000	836,363,783	1,115,318,846	1,400,289,263	1,686,509,153	1,989,247,041
Debt:	105,590,000	105,590,000	590,000	590,000	590,000	590,000	590,000
Net Cash:	565,670,000	565,670,000	835,773,783	1,114,728,846	1,399,699,263	1,685,919,153	1,988,657,041
Enterprise Value:	2,364,290,000	2,364,378,878	2,346,550,633	2,416,947,152	2,489,455,567	2,564,139,234	2,641,063,411
EBIT	299,750,000	299,750,000	297,489,780	306,414,473	315,606,908	325,075,115	334,827,368
EV/EBIT:	7.89	7.89	7.89	7.89	7.89	7.89	7.89
EBITDA	339,700,000	339,700,000	375,665,188	386,935,144	395,745,372	399,882,251	419,338,485
EV/EBITDA:	6.96	6.96	6.25	6.25	6.29	6.41	6.30

LBO Price	44.00	Equity Partners:	3,035,550,000	Weighting	100.00%	Annualized Return for Equity Partners:	-0.28%
Shares Outstanding	66,590,000	Debt Partners:	0		0.00%		
Market Capitalization	2,929,960,000	Total Funds for LBO:	3,035,550,000		100.00%		
Debt	105,590,000						
Cash	671,250,000						
Enterprise Value	2,364,300,000						
Capital Investment	3,035,550,000						

Book Value		Enterprise Value		Stock Valuation		Debt Reduction	
Beginning Book Value	1,336.60	Beginning Enterprise Value	2,364.30	Current Market Price	\$34.70	Starting Debt	105.59
Year 5 Book Value	2,461.43	Year 5 Enterprise Value	1,004.48	Year 5 Market Price	\$44.95	Debt Repayment	0.00
Annualized Return	12.99%	Annualized Return	-15.73%	Annualized Return	5.31%	Year 5 Ending Debt	0.59
						% of Starting Debt	0.56%

SN VALUATION

LBO Pro Forma Income Statement

Name: Novellus Systems Inc

Ticker: NVLS

	Historical				Forecasted				
	12 months ending 2007-12-31	12 months ending 2008-12-31	12 months ending 2009-12-31	12 months ending 2010-12-31	2011	2012	2013	2014	2015
Revenue	1,570.05	1,011.00	639.19	1,349.16	1,416.62	1,459.12	1,502.89	1,547.98	1,594.42
COGS	800.86	575.06	398.10	683.82	722.48	744.15	766.47	789.47	813.15
Gross margin	769.19	435.94	241.09	665.34	694.14	714.97	736.42	758.51	781.26
SG&A	266.02	218.03	156.43	189.48	212.49	218.87	225.43	232.20	239.16
R&D	241.03	211.06	147.00	174.74	184.16	189.69	195.38	201.24	207.27
Unusual expense	-6.25	123.09	13.64	1.37	0.00	0.00	0.00	0.00	0.00
Other operating expense	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation is: Excluded from COGS									
Operating Income (EBITA)	268.39	-116.24	-75.98	299.75	297.49	306.41	315.61	325.08	334.83
Interest income/(expense)	36.91	2.56	5.89	4.91	6.67	6.67	6.67	6.67	6.67
Gain (loss) on sale of asset	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	9.48	6.58	0.71	0.01	1.40	1.03	1.08	1.15	1.17
Income before tax	314.79	-107.10	-69.38	304.66	302.75	312.05	321.19	330.59	340.32
Tax	101.09	8.61	15.85	42.33	90.83	93.61	96.36	99.18	102.10
Income after tax	213.70	-115.71	-85.23	262.33	211.93	218.43	224.83	231.41	238.23
Minority Interest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Equity in affiliates	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net income	213.70	-115.71	-85.23	262.33	211.93	218.43	224.83	231.41	238.23
*Figures are in millions (\$)									
Revenue Growth	N/A	-35.61%	-36.78%	111.07%	5.00%	3.00%	3.00%	3.00%	3.00%
Tax Rate	32.11%	-8.04%	-22.85%	13.89%	30.00%	30.00%	30.00%	30.00%	30.00%
Implied Debt Interest Rate	25.49%	2.27%	5.16%	4.65%	6.31%	1129.73%	1129.73%	1129.73%	1129.73%
Margins									
COGS	51.01%	56.88%	62.28%	50.68%	51.00%	51.00%	51.00%	51.00%	51.00%
Gross margin	48.99%	43.12%	37.72%	49.32%	49.00%	49.00%	49.00%	49.00%	49.00%
SG&A	16.94%	21.57%	24.47%	14.04%	15.00%	15.00%	15.00%	15.00%	15.00%
R&D	15.35%	20.88%	23.00%	12.95%	13.00%	13.00%	13.00%	13.00%	13.00%
Unusual expense	-0.40%	12.18%	2.13%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%
Other operating expense	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciation is: Excluded from COGS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Operating Income (EBITA)	17.09%	-11.50%	-11.89%	22.22%	21.00%	21.00%	21.00%	21.00%	21.00%
Interest income/(expense)	2.35%	0.25%	0.92%	0.36%	0.47%	0.46%	0.44%	0.43%	0.42%
Gain (loss) on sale of asset	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other	0.60%	0.65%	0.11%	0.00%	0.10%	0.07%	0.07%	0.07%	0.07%
Income before tax	20.05%	-10.59%	-10.85%	22.58%	21.37%	21.39%	21.37%	21.36%	21.34%
Tax	6.44%	0.85%	2.48%	3.14%	6.41%	6.42%	6.41%	6.41%	6.40%
Income after tax	13.61%	-11.45%	-13.33%	19.44%	14.96%	15.42%	15.87%	16.34%	16.82%
Minority Interest	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Equity in affiliates	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net income	13.61%	-11.45%	-13.33%	19.44%	14.96%	14.97%	14.96%	14.95%	14.94%

SN VALUATION

LBO Adjusted Proforma Cash Flow

	12 months ending 2007-12-31	12 months ending 2008-12-31	12 months ending 2009-12-31	12 months ending 2010-12-31	2011	2012	2013	2014	2015
Net Income	213.70	-115.71	-85.23	262.33	211.93	218.43	224.83	231.41	238.23
Depreciation	66.92	63.32	46.86	39.95	78.18	80.52	80.14	74.81	84.51
Net Income + Depreciation	280.62	-52.39	-38.37	302.28	290.10	298.96	304.97	306.22	322.74
Amortization	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deferred Taxes	31.86	-10.46	5.79	-5.15	0.00	0.00	0.00	0.00	0.00
Non Cash Items	27.65	147.91	39.52	52.36	0.00	0.00	0.00	0.00	0.00
Change in Working capital	-34.44	104.18	56.39	-13.08	0.00	0.00	0.00	0.00	0.00
Accounts Receivable	0.00	198.37	-6.23	-106.11	0.00	0.00	0.00	0.00	0.00
Other Receivables	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Inventory	0.00	40.05	51.10	-46.68	0.00	0.00	0.00	0.00	0.00
Prepaid Expenses	0.00	-31.27	16.49	21.19	0.00	0.00	0.00	0.00	0.00
Accounts Payable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cash from Operating Activities	305.69	189.24	63.33	336.41	290.10	298.96	304.97	306.22	322.74
Capital Expenditures	-33.22	-17.90	-13.89	-19.91	-20.00	-20.00	-20.00	-20.00	-20.00
Long term investment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Intangibles	397.32	61.50	-67.52	-47.85	0.00	0.00	0.00	0.00	0.00
Cash from Investing Activities	364.10	43.60	-81.41	-67.76	-20.00	-20.00	-20.00	-20.00	-20.00
Financing Cash flow items	42.77	10.77	8.10	109.54	0.00	0.00	0.00	0.00	0.00
Total Cash Dividends Paid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Issuance (Retirement) of Stock	-578.47	-208.13	-30.66	-273.07	0.00	0.00	0.00	0.00	0.00
Issuance (Retirement) of Current Portion Debt	-	-	-	-	0.00	0.00	0.00	0.00	0.00
Issuance (Retirement) of Long Term Debt	-18.16	-26.94	-1.23	-0.07	-105.00	0.00	0.00	0.00	0.00
Cash from Financing Activities	-553.86	-224.30	-23.79	-163.60	-105.00	0.00	0.00	0.00	0.00
Foreign Exchange effect	0.67	0.73	-0.42	-0.05	0.00	0.00	0.00	0.00	0.00
Beginning Cash Balance	58.46	175.07	184.33	142.05	247.06	412.16	691.12	976.09	1,262.31
Net Change in Cash	116.61	9.26	-42.28	105.01	165.10	278.96	284.97	286.22	302.74
Ending Cash Balance	175.07	184.33	142.05	247.06	412.16	691.12	976.09	1,262.31	1,565.05
Depreciation to Sales	4.26%	6.26%	7.33%	2.96%	5.52%	5.52%	5.33%	4.83%	5.30%
Amortization to Sales	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
A/R to Sales	21.87%	14.28%	23.56%	19.03%	18.12%	17.59%	17.08%	16.58%	16.10%

SN VALUATION

LBO Debt Schedule

	Proforma	2011	2012	2013	2014	2015
Net Change in Cash	105.01	165.10	278.96	284.97	286.22	302.74
Current Portion Debt Repayment						
Long Term Debt Repayment		105.00				
Outstanding Debt	105.59	0.59	0.59	0.59	0.59	0.59
Current Portion Debt Balance	0	0.00	0.00	0.00	0.00	0.00
Long Term Debt Balance	105.59	0.59	0.59	0.59	0.59	0.59
Forward Libor Curve		4.00%	4.00%	4.00%	4.00%	4.00%
Spread		4.00%	4.00%	4.00%	4.00%	4.00%
Interest Rate		8.00%	8.00%	8.00%	8.00%	8.00%
Interest Expense		0.05	0.05	0.05	0.05	0.05
Cash Balance		671.26				
Interest @ 1.0%		6.71	6.71	6.71	6.71	6.71
Net Interest Expense/(Income)		(6.67)	(6.67)	(6.67)	(6.67)	(6.67)
Net Interest Rate		-6.31%	-1129.73%	-1129.73%	-1129.73%	-1129.73%
EBITDA		297.49	306.41	315.61	325.08	334.83
EBITDA/Interest Expense Coverage		6302.75	6491.83	6686.59	6887.18	7093.80

Interest Rate Coverage Table

Debt Rating					
AAA	AAA	AAA	AAA	AAA	AAA
AA					
A+					
A					
A-					
BBB					
BB+					
BB					
B+					
B					
B-					
CCC					
CC					
C					
D					

*Source: NYU; Professor Damodaran