

# SNVH Automated Valuation Model - USA

Company Name:

Analog Devices Inc

Ticker: ADI

Analog Devices, Inc. designs, manufactures, and markets a portfolio of solutions that leverage analog, mixed-signal, and digital signal processing technology, including integrated circuits (ICs), algorithms, software, and subsystems. It offers data converter products, which translate real-world analog signals into digital data, as well as translates digital data into analog signals; high-performance amplifiers to condition analog signals; and radio frequency ICs to support cellular infrastructure. The company also offers micro-electro mechanical systems technology solutions, including accelerometers to sense acceleration, gyroscopes to sense rotation, and inertial measurement units to sense multiple degrees of freedom. In addition, it offers isolators for various applications, such as universal serial bus isolation in patient monitors; and smart metering and satellite applications. Further, the company provides power management and reference products that include functions, such as power conversion, driver monitoring, sequencing, and energy management; and digital signal processing products for high-speed numeric calculations. Its products are used in electronic equipment, including industrial process control systems, medical imaging equipment, factory automation systems, patient monitoring devices, instrumentation and measurement systems, wireless infrastructure equipment, energy management systems, networking equipment, aerospace and defense electronics, optical systems, automobiles, and portable electronic devices. The company serves clients in industrial, automotive, consumer, and communications markets through a direct sales force, third-party distributors, and

				Income Statement	
<b>Company Name:</b>	<b>Analog Devices Inc</b>	Market Capitalization:	\$19,416,730,500.00	Revenue:	\$3,400,000,000.00
Ticker Symbol:	<b>ADI</b>	Total Debt:	\$500,000,000.00	Cost of Goods Sold:	\$1,140,740,000.00
<b>Last Price:</b>	<b>\$63.15</b>	RC+ Total Cash:	\$3,803,430,000.00	Gross Profit:	\$2,259,260,000.00
		Net Cash/(Debt):	\$3,303,430,000.00	EBITDA:	\$1,230,000,000.00
Shares Outstanding:	307,470,000	Enterprise Value:	\$16,113,300,500.00	Net Income:	\$661,810,000.00
Industry:	Semiconductors	RC+ Current EV/Share:	\$52.41		
Sector:	Technology	EBITDA:	\$1,141,400,000.00		
		EV/EBITDA Multiple:	14.12	<b>Balance Sheet</b>	
<b>Analyst/Consensus</b>		EV/EBITDA Multiple Average Year 1-5:	12.83	Cash:	\$1,103,670,000.00
Analyst Sales Growth FY1:	-2.20%	EV/FCF Multiple (excluding acquisition):	21.37	Short Term Investment:	\$2,699,760,000.00
Analyst Sales Growth FY2:	7.00%			A/R:	\$467,000,000.00
SN Valuation Estimate FY1:	5.00%			PP&E:	\$614,000,000.00
SN Valuation Estimate FY2:	3.00%			Assets:	\$7,711,430,000.00
		<b>Upper Range</b>		A/P:	\$175,000,000.00
		<b>DCF: EV/EBITDA Terminal Value</b>		Deferred Tax:	\$133,410,000.00
Analyst Earnings Estimate FY1:	\$2.92	Implied TV from 3 X EV/EBITDA Multiple	\$3,531,795,677.11	Other Liabilities:	\$1,893,310,000.00
Analyst Earnings Estimate FY2:	\$3.30			Short term Debt:	\$0.00
SN Valuation Earnings Est. FY1:	\$2.19	Enterprise Value	\$3,531,795,677.11	Long Term Debt:	\$500,000,000.00
SN Valuation Earnings Est. FY2:	\$2.26	Cash at Year 5:	\$8,107,032,797.26	Liabilities:	\$2,701,720,000.00
		Debt at Year 5:	\$500,000,000.00	Retained Earnings:	\$4,437,000,000.00
<b>Multiples</b>		Equity Value Year 5:	\$11,138,828,474.37	Paid-In Capital:	\$687,010,000.00
<b>Price/Book:</b>	<b>3.79</b>	<b>Equity/Share at Year 5:</b>	<b>\$36.23</b>	Treasury Stock:	\$0.00
EV to Book:	3.14	Annualized Return:	-10.52%	Stockholder's Equity:	\$5,124,010,000.00
Market Value to Tangible Net Assets:	-90.63	<b>Lower Range</b>			
P/E Ratio:	29.34	<b>DCF: Net Tangible Asset excluding Cash/Debt Terminal Value</b>		<b>Cash Flow</b>	
Trailing P/E Ratio:	29.83	Year 5 Net Tangible Assets excluding cash and debt	\$655,700,000.00	Net Income:	41,523,000,000.00
Forward P/E Ratio:	19.14			Depreciation/Amortization:	6,110,000.00
Beta:	Error	Enterprise Value	\$655,700,000.00	Change in Working capital:	1,480,000.00
Dividend:	1.68	Cash at Year 5:	\$8,107,032,797.26	Cash from Operating Activities:	0.00
<b>Dividend Yield:</b>	<b>2.66%</b>	Debt at Year 5:	\$500,000,000.00	Capital Expenditures:	110,000.00
Dividend Date:	Sep 7, 2016	Equity Value Year 5:	\$8,262,732,797.26	Cash from Investing Activities:	0.00
Ex-Dividend Date:	Aug 24, 2016	<b>Equity/Share at Year 5:</b>	<b>\$26.87</b>		
<b>Competitors</b>		Annualized Return:	-15.71%	Total Cash Dividends Paid:	20,000.00
Average EV to EBITDA:	N/A			Issuance (Retirement) of Stock:	0.00
Company EV to EBITDA:	14.12	<b>EVA</b>		Issuance (Retirement) of Debt:	0.00
		EVA today:		Cash from Financing Activities:	14,322,000,000.00
Average EV to EBIT:	N/A	EVA in 5 Years:			
Company EV to EBITA:	#NAME?	EVA/Share:		<b>Profitability Margins</b>	
		Cash at Year 5:		Debt to Equity:	9.76%
		Debt at Year 5:		Return on Assets:	
		Equity Value Year 5:		Return on Capital:	
		<b>Equity/Share at Year 5:</b>		Return on Equity:	
		Annualized return	-332.65%	Net Cash/Share:	\$10.74
				Net Cash to Last Price:	17.01%
		<b>Current Net Tangible Asset</b>			
		<b>Net Tangible Asset/Share:</b>	<b>\$9.04</b>		
		<b>Net Tangible Asset/Share in Year 5:</b>	<b>\$20.68</b>		
		Annualized return	17.99%		
		Current Equity Price:	\$63.15		
		Selling at Discount?	Premium		
		Appreciation Potential:	-85.68%		

Market Value	
Price:	\$63.15
Shares Outstanding:	307,470,000
<b>Market Cap:</b>	<b>\$19,416,730,500</b>
Cash:	\$3,803,430,000
Debt:	\$500,000,000
<b>Net Cash:</b>	<b>\$3,303,430,000</b>
<b>Enterprise Value:</b>	<b>\$16,113,300,500</b>

Book Value excluding Goodwill	
Book Value	\$5,073,280,000
Goodwill	\$1,636,530,000
Tang. Bk Value Incl. Cash, Excl. Goodwill:	<b>\$3,478,010,000</b>
<b>NTBVIC/Market Downside Recovery:</b>	<b>17.91%</b>
Coupon	
Op. Cash Flow:	\$810,235,733
5 Years Ops. Cash Flow:	\$4,051,178,666
Disposition Price	
Net Tang. Book Yr. 5 (Inc. Cash):	\$7,056,079,570.31
Avg. Year Op. Cash:	\$860,720,559.45
Year 5 Disposition FCF Multiple:	3.0
<b>Year 5 Disposition Price:</b>	<b>\$9,638,241,248.66</b>

Conclusion	
Intrinsic Value for 5 year Hold	\$10,111,350,344.61
<b>Market Value/Intrinsic IRR</b>	<b>-12.23%</b>
<b>Intrinsic Value/Share</b>	<b>\$32.89</b>
Breakeven Market Cap:	\$10,111,350,345
Breakeven Enterprise Value:	\$6,807,920,345

AI TEARSHEET USA

**Rationale:** From today to 5 years out, we would have accumulated 5 years of Op cash flow. Imagine the Ops Cash Flow was paid out fully as dividend, leaving no addition to the book value. Also, if we complete an acquisition today, we would now have to sell to another buyer 5 years later, so could also get disposition gain. What price could we sell for? Liken to collecting coupon for 5 years and getting appreciation on bond. Let's assume the Year 5 acquirer is willing to pay for 3 more years of Ops Cash flow. In essence, we would want to pay for Book value, excluding goodwill, plus 8 years of Ops Cash Flow.

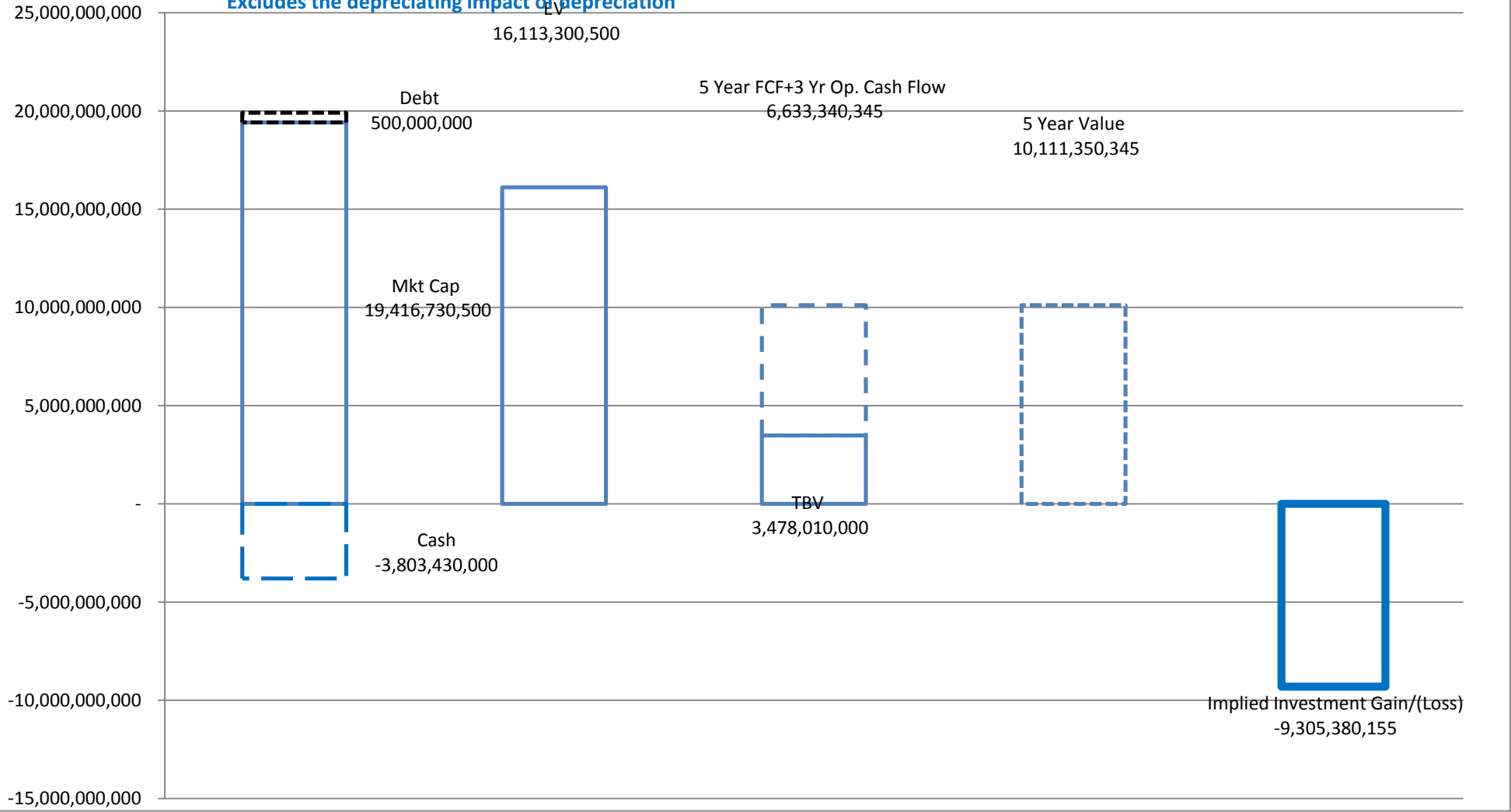
Supplier to Apple.

Makes touch controllers.

Also does business in automotive.

Revenue growing YoY.

Excludes the depreciating impact of depreciation



	Historical				Forecasted				
	52 weeks ending 2012-11-03	52 weeks ending 2013-11-02	52 weeks ending 2014-11-01	52 weeks ending 2015-10-31	2016	2017	2018	2019	2020
Revenue	2,701.14	2,633.69	2,864.77	3,435.09	3,606.84	3,715.05	3,826.50	3,941.30	4,059.54
COGS	960.14	941.28	1,034.59	1,175.83	1,298.46	1,337.42	1,377.54	1,418.87	1,461.43
<b>Gross margin</b>	<b>1,741.00</b>	<b>1,692.41</b>	<b>1,830.18</b>	<b>2,259.26</b>	<b>2,308.38</b>	<b>2,377.63</b>	<b>2,448.96</b>	<b>2,522.43</b>	<b>2,598.10</b>
SG&A	396.52	396.23	454.68	478.97	577.10	594.41	612.24	630.61	649.53
R&D	511.83	513.03	559.69	637.46	685.30	705.86	727.04	748.85	771.31
Unusual expense	8.43	29.85	37.32	0.00	0.00	0.00	0.00	0.00	0.00
Other operating expense	0.00	0.00	0.00	223.67	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
<b>Operating Income (EBITA)</b>	<b>824.22</b>	<b>753.30</b>	<b>778.49</b>	<b>919.16</b>	<b>1,045.98</b>	<b>1,077.36</b>	<b>1,109.69</b>	<b>1,142.98</b>	<b>1,177.27</b>
Interest income/(expense)	-11.98	-14.36	-22.60	-18.41	-9.71	-9.71	-9.71	-9.71	-9.71
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	1.46	76.60	-0.53	-2.32	0.00	0.00	0.00	0.00	0.00
<b>Income before tax</b>	<b>813.53</b>	<b>815.32</b>	<b>729.35</b>	<b>810.11</b>	<b>1,036.27</b>	<b>1,067.65</b>	<b>1,099.97</b>	<b>1,133.27</b>	<b>1,167.55</b>
Tax	162.29	141.83	100.03	113.23	362.70	373.68	384.99	396.64	408.64
<b>Income after tax</b>	<b>651.24</b>	<b>673.49</b>	<b>629.32</b>	<b>696.88</b>	<b>673.58</b>	<b>693.97</b>	<b>714.98</b>	<b>736.62</b>	<b>758.91</b>
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
<b>Net income</b>	<b>651.24</b>	<b>673.49</b>	<b>629.32</b>	<b>696.88</b>	<b>673.58</b>	<b>693.97</b>	<b>714.98</b>	<b>736.62</b>	<b>758.91</b>
*Figures are in millions (\$)									
EPS (based off today's share count)	\$2.12	\$2.19	\$2.05	\$2.27	\$2.19	\$2.26	\$2.33	\$2.40	\$2.47
<b>Revenue Growth</b>	<b>N/A</b>	<b>-2.50%</b>	<b>8.77%</b>	<b>19.91%</b>	<b>5.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>
Tax Rate	19.95%	17.40%	13.71%	13.98%	35.00%	35.00%	35.00%	35.00%	35.00%
Implied Debt Interest Rate	-1.46%	-1.65%	-2.59%	-2.12%	-1.94%	-1.94%	-1.94%	-1.94%	-1.94%
<b>Margins</b>									
COGS	35.55%	35.74%	36.11%	34.23%	36.00%	36.00%	36.00%	36.00%	36.00%
<b>Gross margin</b>	<b>64.45%</b>	<b>64.26%</b>	<b>63.89%</b>	<b>65.77%</b>	<b>64.00%</b>	<b>64.00%</b>	<b>64.00%</b>	<b>64.00%</b>	<b>64.00%</b>
SG&A	14.68%	15.04%	15.87%	13.94%	16.00%	16.00%	16.00%	16.00%	16.00%
R&D	18.95%	19.48%	19.54%	18.56%	19.00%	19.00%	19.00%	19.00%	19.00%
Unusual expense	0.31%	1.13%	1.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other operating expense	0.00%	0.00%	0.00%	6.51%	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%
<b>Operating Income (EBITA)</b>	<b>30.51%</b>	<b>28.60%</b>	<b>27.17%</b>	<b>26.76%</b>	<b>29.00%</b>	<b>29.00%</b>	<b>29.00%</b>	<b>29.00%</b>	<b>29.00%</b>
Interest income/(expense)	-0.44%	-0.55%	-0.79%	-0.54%	-0.27%	-0.26%	-0.25%	-0.25%	-0.24%
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	0.05%	2.91%	-0.02%	-0.07%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Income before tax</b>	<b>30.12%</b>	<b>30.96%</b>	<b>25.46%</b>	<b>23.58%</b>	<b>28.73%</b>	<b>28.74%</b>	<b>28.75%</b>	<b>28.75%</b>	<b>28.76%</b>
Tax	6.01%	5.39%	3.49%	3.30%	10.06%	10.06%	10.06%	10.06%	10.07%
<b>Income after tax</b>	<b>24.11%</b>	<b>25.57%</b>	<b>21.97%</b>	<b>20.29%</b>	<b>18.68%</b>	<b>19.24%</b>	<b>19.82%</b>	<b>20.42%</b>	<b>21.04%</b>
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%
<b>Net income</b>	<b>24.11%</b>	<b>25.57%</b>	<b>21.97%</b>	<b>20.29%</b>	<b>18.68%</b>	<b>18.68%</b>	<b>18.69%</b>	<b>18.69%</b>	<b>18.69%</b>

LBO Adjusted Proforma Balance Sheet

	Adjustment							Adjusted Proforma	2016	2017	2018	2019	2020
	As of 2012-11-03	As of 2013-11-02	As of 2014-11-01	As of 2015-10-31	As of 2016-07-30	+	-						
Cash	528.83	392.09	569.23	884.36	1,103.67			1,103.67	1913.905733	2,748.64	3,608.60	4,494.55	5,407.27
Short term investment	3,371.55	4,290.82	2,297.24	2,144.57	2,699.76			2,699.76	2,699.76	2,699.76	2,699.76	2,699.76	2,699.76
<b>Cash and Short term</b>	<b>3,900.38</b>	<b>4,682.91</b>	<b>2,866.47</b>	<b>3,028.93</b>	<b>3,803.43</b>			<b>3,803.43</b>	<b>4,613.67</b>	<b>5,448.40</b>	<b>6,308.36</b>	<b>7,194.31</b>	<b>8,107.03</b>
Accounts Receivable	339.88	325.14	396.61	466.53	467.00			467.00	467.00	467.00	467.00	467.00	467.00
Other receivables	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Receivables</b>	<b>339.88</b>	<b>325.14</b>	<b>396.61</b>	<b>466.53</b>	<b>467.00</b>			<b>467.00</b>	<b>467.00</b>	<b>467.00</b>	<b>467.00</b>	<b>467.00</b>	<b>467.00</b>
Total Inventory	313.72	283.34	367.93	412.31	392.30			392.30	392.30	392.30	392.30	392.30	392.30
Prepaid Expenses	51.87	44.73	51.95	42.54	78.55			78.55	78.55	78.55	78.55	78.55	78.55
Other Current Assets	90.33	136.30	128.93	129.24	0.66			0.66	0.66	0.66	0.66	0.66	0.66
<b>Current Assets</b>	<b>4,696.18</b>	<b>5,472.42</b>	<b>3,811.89</b>	<b>4,079.55</b>	<b>4,741.94</b>	<b>0.00</b>	<b>0.00</b>	<b>4,741.94</b>	<b>5552.175733</b>	<b>6,386.91</b>	<b>7,246.87</b>	<b>8,132.82</b>	<b>9,045.54</b>
PP&E, Gross	2,228.15	2,292.89	2,292.89	2,613.11	2,614.00			2,614.00	2,614.00	2,614.00	2,614.00	2,614.00	2,614.00
Change in Depreciation	109.70	110.20	114.06	130.15	130.15			130.15	136.66	140.76	144.98	149.33	153.81
Accumulated Depreciation	1,727.28	1,784.72	1,855.93	2,007.21	2,000.00			2,000.00	2,136.66	2,277.41	2,422.39	2,571.72	2,725.53
<b>PP&amp;E, Net</b>	<b>500.87</b>	<b>508.17</b>	<b>436.96</b>	<b>605.90</b>	<b>614.00</b>			<b>614.00</b>	<b>477.34</b>	<b>336.59</b>	<b>191.61</b>	<b>42.28</b>	<b>-111.53</b>
Goodwill	283.83	284.11	1,642.44	1,636.53	1,646.00			1,646.00	1,646.00	1,646.00	1,646.00	1,646.00	1,646.00
Intangibles	28.77	28.55	671.40	583.52	584.00			584.00	584.00	584.00	584.00	584.00	584.00
Long term investments	1.82	3.82	13.40	17.48	27.90			27.90	27.90	27.90	27.90	27.90	27.90
Other long term assets	108.87	84.67	98.14	97.59	97.59			97.59	97.59	97.59	97.59	97.59	97.59
<b>Long Term Assets</b>	<b>924.16</b>	<b>909.32</b>	<b>2,862.34</b>	<b>2,941.02</b>	<b>2,969.49</b>			<b>2,969.49</b>	<b>2,832.83</b>	<b>2,692.08</b>	<b>2,547.10</b>	<b>2,397.77</b>	<b>2,243.96</b>
<b>Total Assets</b>	<b>5,620.34</b>	<b>6,381.74</b>	<b>6,674.23</b>	<b>7,020.57</b>	<b>7,711.43</b>	<b>0.00</b>	<b>0.00</b>	<b>7,711.43</b>	<b>8,385.01</b>	<b>9,078.98</b>	<b>9,793.97</b>	<b>10,530.59</b>	<b>11,289.50</b>
Accounts Payable	117.03	119.99	138.97	174.25	175.00			175.00	175.00	175.00	175.00	175.00	175.00
Accrued Expense	148.91	157.60	218.30	246.50	247.00			247.00	247.00	247.00	247.00	247.00	247.00
Other current Liabilities	244.64	292.92	351.79	318.24	329.84			329.84	329.84	329.84	329.84	329.84	329.84
<b>Total Current Liabilities</b>	<b>510.58</b>	<b>570.51</b>	<b>709.06</b>	<b>738.99</b>	<b>751.84</b>	<b>0.00</b>	<b>0.00</b>	<b>751.84</b>	<b>751.84</b>	<b>751.84</b>	<b>751.84</b>	<b>751.84</b>	<b>751.84</b>
Notes Payables/Short Term Debt	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00
Current port. Of LT Debt/Capital Leases	14.50	0.00	0.00	374.59	0.00			0.00	0.00	0.00	0.00	0.00	0.00
Long term Debt	807.10	872.24	872.79	495.34	500.00			500.00	500.00	500.00	500.00	500.00	500.00
Capital Lease Obligations	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Interest Earning Debt</b>	<b>821.60</b>	<b>872.24</b>	<b>872.79</b>	<b>869.93</b>	<b>500.00</b>	<b>0.00</b>	<b>0.00</b>	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>
Deferred Income tax	1.13	6.04	235.79	227.38	133.41			133.41	133.41	133.41	133.41	133.41	133.41
Minority Interest	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00
Other liabilities	121.68	193.38	284.16	149.52	1,316.47			1,316.47	1,316.47	1,316.47	1,316.47	1,316.47	1,316.47
<b>Total Liabilities</b>	<b>1,454.99</b>	<b>1,642.17</b>	<b>2,101.80</b>	<b>1,985.82</b>	<b>2,701.72</b>	<b>0.00</b>	<b>0.00</b>	<b>2,701.72</b>	<b>2,701.72</b>	<b>2,701.72</b>	<b>2,701.72</b>	<b>2,701.72</b>	<b>2,701.72</b>
Redeemable Preferred Stock	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00
Non-redeemable Preferred Stock	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00
Common Stock	50.23	51.84	51.87	52.01	52.01		0.00	52.01	52.01	52.01	52.01	52.01	52.01
Additional Paid-in capital	390.65	711.88	643.06	634.48	635.00	0.00	0.00	635.00	635.00	635.00	635.00	635.00	635.00
Dividends Paid	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00
Retained Earnings	3,788.87	4,056.40	4,231.50	4,437.31	4,437.00			4,437.00	5,110.58	5,804.55	6,519.54	7,256.16	8,015.07
Treasury Stock	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Equity	-65.58	-90.16	-169.40	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Equity</b>	<b>4,164.17</b>	<b>4,729.96</b>	<b>4,757.03</b>	<b>5,073.28</b>	<b>5,124.01</b>	<b>0.00</b>	<b>0.00</b>	<b>5,124.01</b>	<b>5,797.59</b>	<b>6,491.56</b>	<b>7,206.55</b>	<b>7,943.17</b>	<b>8,702.08</b>
<b>Liability + Equity</b>	<b>5,619.16</b>	<b>6,372.13</b>	<b>6,858.83</b>	<b>7,059.10</b>	<b>7,825.73</b>	<b>0.00</b>	<b>0.00</b>	<b>7,825.73</b>	<b>8,499.31</b>	<b>9,193.28</b>	<b>9,908.27</b>	<b>10,644.89</b>	<b>11,403.80</b>
<b>Variance</b>	<b>1.18</b>	<b>9.61</b>	<b>-184.60</b>	<b>-38.53</b>	<b>-114.30</b>			<b>-114.30</b>	<b>-114.30</b>	<b>-114.30</b>	<b>-114.30</b>	<b>-114.30</b>	<b>-114.30</b>
<b>Debt/Equity</b>	<b>0.20</b>	<b>0.18</b>	<b>0.18</b>	<b>0.17</b>	<b>0.10</b>			<b>0.10</b>	<b>0.09</b>	<b>0.08</b>	<b>0.07</b>	<b>0.06</b>	<b>0.06</b>
Inventory Turnover	8.61	9.30	7.79	8.33	9.19			8.76	9.19	9.47	9.75	10.05	10.35
Inventory Turnover Days	42.39	39.27	46.88	43.81	39.70			41.68	39.70	38.54	37.42	36.33	35.27
Days Inventory Outstanding	119.26	109.87	129.80	127.99	110.28			121.78	110.28	107.06	103.95	100.92	97.98
Accounts Receivable Turnover	7.95	8.10	7.22	7.36	7.72			7.36	7.72	7.96	8.19	8.44	8.69
Accounts Receivable Turnover Days	45.93	45.06	50.53	49.57	47.26			49.62	47.26	45.88	44.55	43.25	41.99
Days Payable Outstanding	44.49	46.53	49.03	54.09	49.19			54.32	49.19	47.76	46.37	45.02	43.71
Days Sales Outstanding	45.93	45.06	50.53	49.57	47.26			49.57	49.62	47.26	45.88	44.55	43.25
Cash Conversion Cycle	120.70	108.40	131.31	123.47	108.34			117.03	110.71	106.56	103.46	100.45	97.52
Net tangible assets/share	\$12.53	\$14.37	\$7.95	\$9.28	\$9.41			\$11.60	\$13.86	\$16.19	\$18.58	\$21.05	

	52 weeks ending 2012-11-03	52 weeks ending 2013-11-02	52 weeks ending 2014-11-01	52 weeks ending 2015-10-31	2016	2017	2018	2019	2020
Net Income	651.24	673.49	629.32	696.88	673.58	693.97	714.98	736.62	758.91
Depreciation	109.70	110.20	114.06	130.15	136.66	140.76	144.98	149.33	153.81
<b>Net Income + Depreciation</b>	<b>760.94</b>	<b>783.69</b>	<b>743.38</b>	<b>827.03</b>	<b>810.24</b>	<b>834.73</b>	<b>859.96</b>	<b>885.95</b>	<b>912.72</b>
Amortization	0.13	0.22	27.91	92.09	0.00	0.00	0.00	0.00	0.00
Deferred Taxes	-9.80	-17.70	-77.71	-52.21	0.00	0.00	0.00	0.00	0.00
Non Cash Items	37.07	-34.71	33.00	50.85	0.00	0.00	0.00	0.00	0.00
Change in Working capital	26.20	180.85	145.02	-9.95	0.00	0.00	0.00	0.00	0.00
Accounts Receivable	0.00	14.74	-71.47	-69.92	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	30.38	-84.59	-44.38	0.00	0.00	0.00	0.00	0.00
Prepaid Expenses	0.00	7.14	-7.22	9.41	0.00	0.00	0.00	0.00	0.00
Accounts Payable	0.00	2.96	18.98	35.28	0.00	0.00	0.00	0.00	0.00
<b>Cash from Operating Activities</b>	<b>814.54</b>	<b>912.35</b>	<b>871.60</b>	<b>907.81</b>	<b>810.24</b>	<b>834.73</b>	<b>859.96</b>	<b>885.95</b>	<b>912.72</b>
Capital Expenditures Expenditures	-132.18	-123.07	-177.91	-153.96	0.00	0.00	0.00	0.00	0.00
Long term investment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other investing Activities	-1,207.51	-826.85	63.16	136.84	0.00	0.00	0.00	0.00	0.00
<b>Cash from Investing Activities</b>	<b>-1,339.69</b>	<b>-949.92</b>	<b>-114.75</b>	<b>-17.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Financing Cash flow items	20.89	18.67	33.85	23.78	0.00	0.00	0.00	0.00	0.00
Total Cash Dividends Paid	-344.70	-405.95	-454.23	-491.06	0.00	0.00	0.00	0.00	0.00
Issuance (Retirement) of Stock	30.68	245.75	-156.23	-104.32	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	-56.50	40.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Cash from Financing Activities</b>	<b>-349.63</b>	<b>-100.55</b>	<b>-576.61</b>	<b>-571.60</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Foreign Exchange effect	-1.49	1.39	-3.10	-3.95	0.00	0.00	0.00	0.00	0.00
Beginning Cash Balance	1,405.10	528.83	392.09	569.23	1,103.67	1,913.91	2,748.64	3,608.60	4,494.55
<b>Net Change in Cash</b>	<b>-876.27</b>	<b>-136.74</b>	<b>177.14</b>	<b>315.12</b>	<b>810.24</b>	<b>834.73</b>	<b>859.96</b>	<b>885.95</b>	<b>912.72</b>
Ending Cash Balance	528.83	392.09	569.23	884.35	1,913.91	2,748.64	3,608.60	4,494.55	5,407.27
Capex to Revenue	4.89%	4.67%	6.21%	4.48%	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciation to Sales	4.06%	4.18%	3.98%	3.79%	3.79%	3.79%	3.79%	3.79%	3.79%
Amortization to Sales	0.00%	0.01%	0.97%	2.68%	0.92%	1.15%	1.43%	1.54%	1.26%
A/R to Sales	12.58%	12.35%	13.84%	13.58%	12.93%	12.56%	12.19%	11.84%	11.49%
Distributable FCF/EV Yield	-3.26%	-0.23%	4.70%	5.53%	5.03%	5.18%	5.34%	5.50%	5.66%
Dividend Yield	-1.78%	-2.09%	-2.34%	-2.53%	0.00%	0.00%	0.00%	0.00%	0.00%
FCF (Ops-Investing)	<b>1,027.06</b>	<b>1,195.23</b>	<b>1,147.92</b>	<b>1,244.91</b>	<b>810.24</b>	<b>834.73</b>	<b>859.96</b>	<b>885.95</b>	<b>912.72</b>

# LBO Debt Schedule

Ticker:

ADI

	Proforma	2016	2017	2018	2019	2020
<b>Net Change in Cash</b>	<b>315.12</b>	<b>810.24</b>	<b>834.73</b>	<b>859.96</b>	<b>885.95</b>	<b>912.72</b>
Current Portion Debt Repayment						
Long Term Debt Repayment						
<b>Outstanding Debt</b>	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>	<b>500.00</b>
Current Portion Debt Balance	0.00	0.00	0.00	0.00	0.00	0.00
Long Term Debt Balance	500.00	500.00	500.00	500.00	500.00	500.00
Forward Libor Curve		3.00%	3.00%	3.00%	3.00%	3.00%
Spread		5.00%	5.00%	5.00%	5.00%	5.00%
<b>Interest Rate</b>		<b>8.00%</b>	<b>8.00%</b>	<b>8.00%</b>	<b>8.00%</b>	<b>8.00%</b>
<b>Interest Expense</b>		<b>40.00</b>	<b>40.00</b>	<b>40.00</b>	<b>40.00</b>	<b>40.00</b>
Cash Balance		3,028.93				
Interest @ 1.0%		30.29	30.29	30.29	30.29	30.29
<b>Net Interest Expense/(Income)</b>		<b>9.71</b>	<b>9.71</b>	<b>9.71</b>	<b>9.71</b>	<b>9.71</b>
<b>Net Interest Rate</b>		<b>1.94%</b>	<b>1.94%</b>	<b>1.94%</b>	<b>1.94%</b>	<b>1.94%</b>
EBITDA		1,045.98	1,077.36	1,109.69	1,142.98	1,177.27
<b>EBITDA/Interest Expense Coverage</b>		<b>26.15</b>	<b>26.93</b>	<b>27.74</b>	<b>28.57</b>	<b>29.43</b>

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

SNVH Automated Valuation Model - USA

## Altman Z Score

Company Name:

Analog Devices Inc

Ticker:

ADI

Period	2012	2013	2014	2015	2016	2017	2018	2019	2020
Working Capital	4,185.60	4,901.91	3,102.83	3,990.10	4,800.34	5,635.07	6,495.03	7,380.98	8,293.70
Total Assets	5,620.34	6,381.74	6,674.23	7,711.43	8,385.01	9,078.98	9,793.97	10,530.59	11,289.50
<b>X1</b>	<b>0.74</b>	<b>0.77</b>	<b>0.46</b>	<b>0.52</b>	<b>0.57</b>	<b>0.62</b>	<b>0.66</b>	<b>0.70</b>	<b>0.73</b>
Retained Earnings	3,788.87	4,056.40	4,231.50	4,437.00	5,110.58	5,804.55	6,519.54	7,256.16	8,015.07
Total Assets	5,620.34	6,381.74	6,674.23	7,711.43	8,385.01	9,078.98	9,793.97	10,530.59	11,289.50
<b>X2</b>	<b>0.67</b>	<b>0.64</b>	<b>0.63</b>	<b>0.58</b>	<b>0.61</b>	<b>0.64</b>	<b>0.67</b>	<b>0.69</b>	<b>0.71</b>
EBITDA	824.22	753.30	778.49	919.16	1,045.98	1,077.36	1,109.69	1,142.98	1,177.27
Total Assets	5,620.34	6,381.74	6,674.23	7,711.43	8,385.01	9,078.98	9,793.97	10,530.59	11,289.50
<b>X3</b>	<b>0.15</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.11</b>	<b>0.11</b>	<b>0.10</b>
Market Value of Equity	19,416.73	19,416.73	19,416.73	19,416.73	19,416.73	19,416.73	19,416.73	19,416.73	19,416.73
Total Liabilities	1,454.99	1,642.17	2,101.80	2,701.72	2,701.72	2,701.72	2,701.72	2,701.72	2,701.72
<b>X4</b>	<b>13.34</b>	<b>11.82</b>	<b>9.24</b>	<b>7.19</b>	<b>7.19</b>	<b>7.19</b>	<b>7.19</b>	<b>7.19</b>	<b>7.19</b>
Net Sales	2,701.14	2,633.69	2,864.77	3,435.09	3,606.84	3,715.05	3,826.50	3,941.30	4,059.54
Total Assets	5,620.34	6,381.74	6,674.23	7,711.43	8,385.01	9,078.98	9,793.97	10,530.59	11,289.50
<b>X5</b>	<b>0.48</b>	<b>0.41</b>	<b>0.43</b>	<b>0.45</b>	<b>0.43</b>	<b>0.41</b>	<b>0.39</b>	<b>0.37</b>	<b>0.36</b>
<b>Altman Z Score</b>	<b>10.81</b>	<b>9.71</b>	<b>7.80</b>	<b>6.58</b>	<b>6.69</b>	<b>6.75</b>	<b>6.80</b>	<b>6.85</b>	<b>6.89</b>

$$Z = 1.2 \times X1 + 1.4 \times X2 + 3.3 \times X3 + 0.6 \times X4 + 1.0 \times X5$$

Z-SCORE ABOVE 3.0 –The company is considered 'Safe' based on the financial figures only.

Blue

Z-SCORE BETWEEN 2.7 and 2.99 – 'On Alert'. This zone is an area where one should 'Exercise Caution'.

Green

Z-SCORE BETWEEN 1.8 and 2.7 – Good chance of the company going bankrupt within 2 years.

Yellow

Z-SCORE BELOW 1.80- Probability of Financial Catastrophe is Very High.

Red