

SNPS

Data Source: CAPIQ
 Price Target: \$87
 Consensus: \$171 / \$153 / \$107
 52-wk H/L: \$146.66 / \$79.14

Credit Rating: 0
 Credit Date: 1/0/1900
 Credit Watch: 0
 10yr US T-bill: 1.76%

Div. Yield: 0.00%
 Div. Ex-Date: TBD
 Beta (BL): 1.21
 ST Int. Ratio: 0.01
 Implied Vol.: .% / .%

Sector: Information Technology
 Industry: Application Software
 Industry ID: IQ2671274
 Employees: 13,245
 Next Earnings: 12/4/2019

SYNOPSYS®

Company Description

Synopsys, Inc. provides electronic design automation software products used to design and test integrated circuits (ICs). It offers Fusion Design Platform, a digital design implementation solution; Verification Continuum Platform that provides virtual prototyping, static and formal verification, simulation, emulation, field-programmable gate array (FPGA)-based prototyping, and debug solutions; and FPGA design products that are programmed to perform specific functions. The company also offers intellectual property (IP) solutions for USB, PCI Express, DDR, Ethernet, SATA, MIPI, HDMI, and Bluetooth low energy applications; analog IP, including d

Capitalization Detail

Share Price \$134.95
 Shares Out. 150
 Market Cap. 20,281
 - Cash, ST Inv. 687
 + Total Debt 142
 + Pref. Equity 0
 + Minority Int. 6
 TEV 19,742

Price Estimates

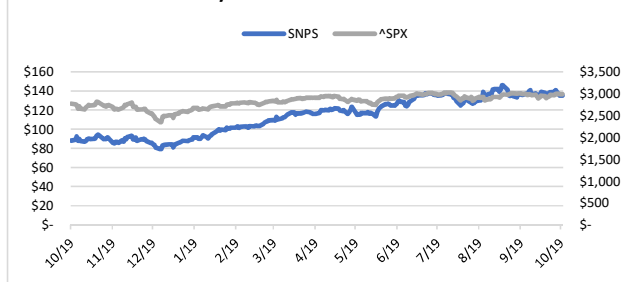
Rel. Value \$91
 Residual Inc. \$62
 DCF \$74
 Overall Target \$87

1 Based on pg2 Comps
 0 CFs to FY2028
 0 CFs to FY2023 + TV

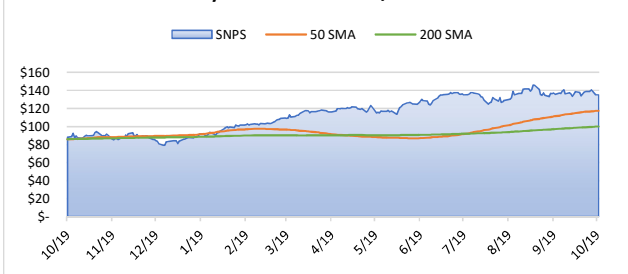
Multiples

	SNPS LTM	NTM Target	^SPX	IQ2671274
P/S:	6.1x	\$119	0.0x	0.0x
EV/Sales:	6.0x	\$111	2.5x	5.9x
EV/EBITDA:	30.9x	\$85	13.0x	24.1x
EV/EBIT:	39.7x	\$86	18.4x	35.6x
P/E:	33.1x	\$55	22.5x	59.9x
P/B:	5.2x			

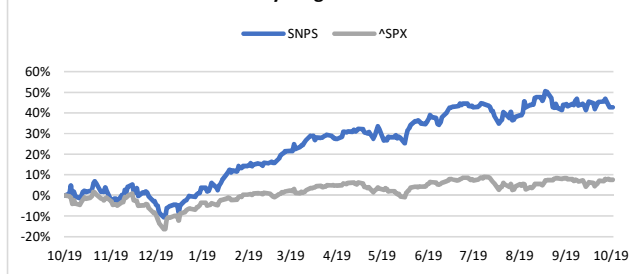
1-yr Historical Price vs Index



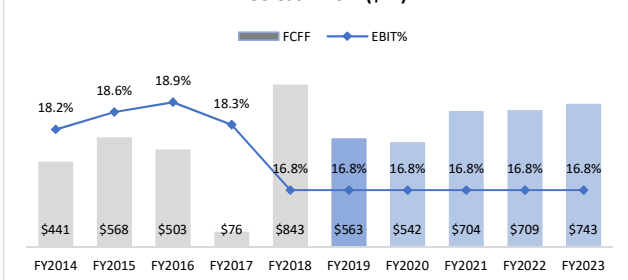
1-yr Historical Price w/ SMAs



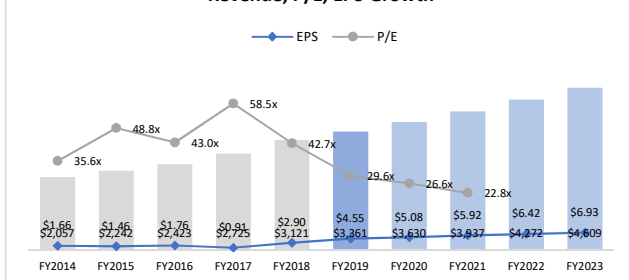
1-yr Log Return



Free Cash Flow (\$M)



Revenue, P/E, EPS Growth



Financial Ratios

Growth Metrics

5-yr Rev CAGR: 10.3%
 1-yr NI: 977.3%
 1-yr EPS: 999.0%
 1-yr FCFF: -17.1%
 1-yr CFO: 48.4%
 FCFF Yield: 11.5%

Profit Ratios

Gross Margin: 79.1%
 EBITDA Marg.: 19.3%
 Oper Margin: 15.0%
 NI Margin: 18.9%
 EPS: 2.13
 Cash / Share: 4.57

Return Ratios

ROA: 5.2%
 ROE: 17.6%
 ROIC: 15.9%
 Div. Pay Ratio: 0.00
 WACC: 9.1%
 EVA Spread: 165.5

Liquid / Solv. Ratios

Current Ratio: 1.0x
 CFO-Cur Liab: 0.4x
 Debt-Capital: 3.5x
 N.Dbt-EBITDA: NM
 Int. Cov. Ratio: 33.3x

Working Capital Ratios

AR Days: 64
 Inv Days:
 AP Days:
 Cash Conv:

B/(W)

Δ 1

SNPS

Income Statement Financials & Projections (Non-GAAP)

	FY2014	FY2015	FY2016	FY2017	FY2018	LTM	NTM	FY2019	FY2020	FY2021	FY2022	FY2023
Revenue	2,057	2,242	2,423	2,725	3,121	3,305	3,522	3,361	3,630	3,937	4,272	4,609
Rev. Growth	5%	9%	8%	12%	15%	21%	7%	8%	8%	8%	9%	8%
COGS	356	409	441	578	652	690	0	702	758	822	892	963
Gross Margin	1,702	1,833	1,982	2,147	2,469	2,614	3,522	2,659	2,872	3,115	3,380	3,646
% rev	83%	82%	82%	79%	79%	79%	100%	79%	79%	79%	79%	79%
OPEX	1,208	1,284	1,407	1,528	1,818	1,863	2,609	1,957	2,114	2,293	2,488	2,684
% rev	59%	57%	58%	56%	58%	56%	74%	58%	58%	58%	58%	58%
EBITDA	493	549	575	619	652	639	1,008	702	758	822	892	962
Dep & Amort.	63	72	74	78	80	96	156	86	93	101	109	118
Amort.GW.	55	59	44	42	47	46	46	50	54	59	64	69
EBIT	375	418	457	499	525	497	913	565	610	662	718	775
% rev	18%	19%	19%	18%	17%	15%	26%	17%	17%	17%	17%	17%
Eff. Tax Rate	5%	20%	19%	64%	0%	0%	21%	21%	21%	21%	21%	21%
NOPAT	357	335	370	178	525	497	722	446	482	523	568	612

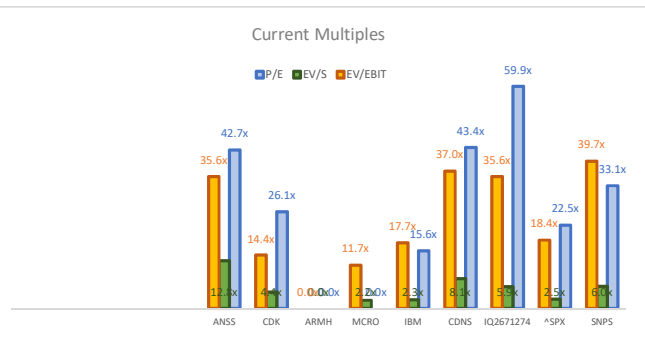
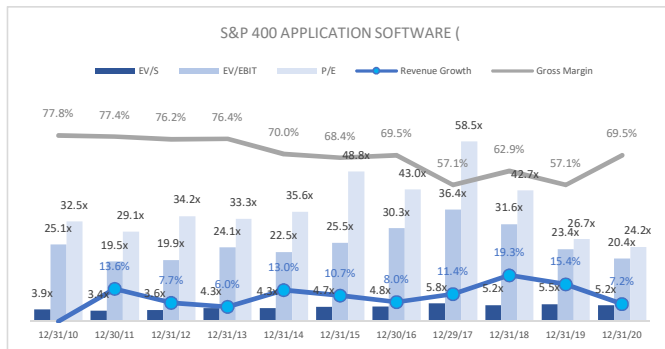
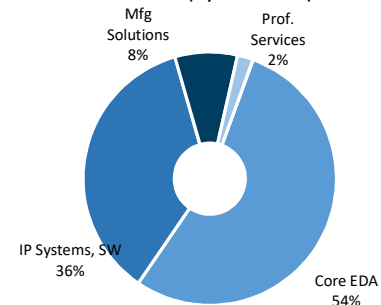
Balance Sheet Financials

	FY2014	FY2015	FY2016	FY2017	FY2018	LTM
Cash & ST Inv.	986	965	1,117	1,048	723	687
Working Cap.	118	-110	2	68	-559	-13
Total Assets	4,775	5,046	5,240	5,396	6,146	6,153
Total Debt	75	205	205	144	469	142
Total Liabilities	1,719	1,912	2,045	2,117	2,661	2,214
Total Equity	3,056	3,134	3,195	3,280	3,485	3,940
Liab. & Equity	4,775	5,046	5,240	5,396	6,146	6,153

Discounted Cash Flows

	FY2014	FY2015	FY2016	FY2017	FY2018	LTM
NOPAT	357	335	370	178	525	497
-CAPEX	103	87	67	70	99	151
+Depr.&A.	63	72	74	78	80	96
+Amrt.GW.	55	59	44	42	47	46
- Δ NOWC	-68	-188	-82	151	-290	589
FCFF	441	568	503	76	843	-101

FY2018 - Rev \$3,121 - FCFF \$843



Relative Valuation

ID	Company	EV	Beta (βL)	Div Yield	Cash / Share	Rev Growth	GM %	Oper %	NTM P/S	NTM EV/S	EV/EBITDA	EV/EBIT	NTM P/E
0	SNPS	\$ 19,742	1.21	0.00%	\$ 4.57	6.6%	79.1%	25.9%	5.1x	4.6x	12.3x	13.7x	15.9x
1	CDNS	\$ 18,211	1.16	0.00%	\$ 2.26	5.6%	88.1%	30.7%	7.7x	7.6x	23.3x	24.8x	30.5x
2	IBM	\$ 179,600	1.33	4.83%	\$ 11.38	2.6%	46.8%	18.1%	1.5x	2.3x	9.4x	12.5x	10.2x
3	MICRO	\$ 6,632	1.17	10.04%	\$ 7.77	8.4%	75.8%	38.2%	1.4x	2.0x	4.9x	5.3x	6.3x
4	ARMH	\$ -	0.00	0.00%	\$ 0.09	0.0%	96.2%			0.0x	0.0x	0.0x	0.0x
5	CDK	\$ 8,501	0.94	1.24%	\$ 2.57	5.6%	54.1%	31.1%	2.9x	4.2x	10.6x	13.5x	14.2x
6	ANSS	\$ 17,846	1.39	0.00%	\$ 7.51	12.2%	90.4%	44.4%	11.8x	11.4x	25.5x	25.7x	34.3x
7													
8													
9													
10													