Growth: A Momentum: C



Synopsys Inc. (SNPS) Long Term: 6-12 Months Zacks Recommendation: (Since: 07/24/19) Neutral \$215.16 (As of 08/20/20) Prior Recommendation: Outperform Prior Recommendation: Outperform Short Term: 1-3 Months Zacks Rank: (1-5) 3-Hold Zacks Style Scores: VGM:B

Summary

Synopsys is benefiting from strong design wins owing to a robust product portfolio. Growth in work-from-home and elearning trends induced by the coronavirus pandemic is driving demand for bandwidth. Moreover, strong traction for Synopsys' Fusion Compiler product boosted the top line. Growing demand for advanced technology, design, IP and security solutions is also creating solid prospects. Moreover, rising impact of AI, 5G, IoT and big data is driving investments in new compute and ML architectures. Shares of the company have outperformed the industry year-to-date. However, supply-chain disruptions stemming from the pandemic are a headwind. The company is also witnessing stiff competition. Moreover, geopolitical challenges coupled with uncertainties related to restrictions over trade with Huawei are other woes.

Price, Consensus & Surprise



Value: D

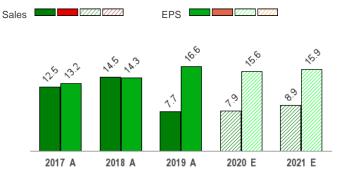
Data Overview

P/S TTM

52 Week High-Low	\$216.19 - \$104.90
20 Day Average Volume (sh)	764,737
Market Cap	\$32.4 B
YTD Price Change	54.6%
Beta	1.16
Dividend / Div Yld	\$0.00 / 0.0%
Industry	Computer - Software
Zacks Industry Rank	Top 33% (82 out of 252)

Last EPS Surprise	28.9%
Last Sales Surprise	7.9%
EPS F1 Est- 4 week change	10.9%
Expected Report Date	12/02/2020
Earnings ESP	0.0%
P/E TTM	42.0
P/E F1	40.8
PEG F1	3.7

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	953 E	969 E	996 E	1,046 E	3,950 E
2020	834 A	861 A	964 A	1,034 E	3,627 E
2019	820 A	836 A	853 A	851 A	3,361 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$1.42 E	\$1.47 E	\$1.55 E	\$1.73 E	\$6.11 E
2020	\$1.01 A	\$1.22 A	\$1.74 A	\$1.70 E	\$5.27 E
2019	\$1.08 A	\$1.16 A	\$1.18 A	\$1.15 A	\$4.56 A

*Quarterly figures may not add up to annual.

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 08/20/2020. The reports text is as of 08/21/2020.

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Overview

Synopsys is a vendor of electronic design automation (EDA) software to the semiconductor and electronics industries. The company offers a full suite of products used in the logic synthesis and functional verification phases of chip design, including a broad array of reusable design building blocks. It also sells physical synthesis and physical design products as well as physical verification products.

The company's products are used to design a chip, from concept to the point of delivery to the manufacturer for fabrication. Synopsis provides software and hardware, which are used to develop electronic systems that incorporate chips. Additionally, the company provides Intellectual Property (IP) used in semiconductor design and manufacturing to simplify the design process and accelerate time-to-market for its customers.

Synopsis reports revenues in three segments, namely Time-Based Products, Upfront Products and Maintenance and Service.

Time-Based Products (66% of fiscal 2019 revenues): Segment revenues are recognized as Technology Subscription License (TSL) revenues. Under this segment, the company recognizes revenues from fees over the period of the license or as and when the installments are paid by the customer, whichever is later.

Upfront Products (18%): These revenues are recognized as Term

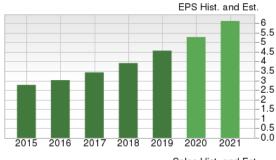
License revenues. Under this segment, the company recognizes revenues from term licenses in full after the completion of the shipment of the software, wherein at least 75% of the license fee is paid within a year of shipment, after fulfilling all other revenue recognition criteria.

Maintenance and Service (16%): Under this segment revenues come from maintenance fees that are generated over the maintenance period; along with revenues generated from professional service and training fees.

The company conducts its business across four geographic regions namely: The United States (51% of fiscal 2019 revenues), Asia-Pacific and Others (31%), Europe (10%) and Japan (8%).

Synopsys' competitors include EDA vendors like Cadence Design Systems Inc. and Mentor Graphics Corporation.







Reasons To Buy:

- ▲ In the current economic scenario, as customers are strengthening their supplier relationships and focusing on cost efficiencies, many have selected Synopsys as their primary EDA partner. Relationships with companies such as Advanced Micro Devices, Juniper Networks, Realtek, Teradici, NetLogic Microsystems, Toshiba and Wolfson stand as evidence.
- Synopsys' penetration into new and growing artificial intelligence (AI) chip companies is a major growth driver. Further, with the growing need for enhanced security measures considering the rising security threats in interconnected systems laden with software, demand for the company's solutions is shooting up. Robust growth in software-based verification at both traditional semiconductor as well as emerging system companies focused on own inhouse design is an upside. Notably, Fusion Design Platform, launched last November, is

The company's recent product launches, acquisitions and deal wins will boost results. Also, unique intellectual properties and global support provided by the company are other positives.

witnessing high demand, which is helping it generate strong results. The company's Verification Continuum platform steadily witnesses excellent demand and competitive wins. Further, ZeBu Server 4 product is generating a broad-based adoption by customers' designing storage, networking and Al chips.

- ▲ Synopsys has also made a few important acquisitions to build its product portfolio and stimulate growth. Acquisitions are central to the company's growth strategy and are helping it to gain access to newer markets and technologies. Also, since intense competition is making the EDA market tougher to penetrate, acquisitions have helped the company to boost revenues. Notably, the acquisitions of Cigital and Black Duck are establishing tactical quality relations with clients, leading to higher demand creation, cross-selling and a substantial rise in brand recognition.
- ▲ Synopsys is considered as a lower-leveraged company. Its total debt-to-total capital ratio of 0.15 is significantly lower than the industry average of 0.43. As of Jul 31, 2020, the company's total debts (including current maturities) were \$131.4 million while its cash and equivalents were \$1.05 billion. Moreover, the company's strong cash-flow generation capability is noteworthy. In the first nine months of fiscal 2020, Synopsys has generated operating cash flow of \$789 million. Notably, the company's operating cash flows have grown significantly from \$495 million in fiscal 2015 to \$801 million in fiscal 2019.
- ▲ Synopsys returns cash to investors through share repurchases. According to the company, accelerated share repurchase (ASR) arrangements are an integral element of its overall framework for enhancing investors' worth. The company completed buybacks of \$329 million in fiscal 2019 and \$1.8 billion over the past five years, returning approximately 75% of free cash flow to its investors over that period. Additionally, in late February 2020, the company initiates an accelerated share repurchase (ASR) program worth \$100 million, which was completed as of May 15, 2020. During the first nine months of fiscal 2020, the company has repurchased stocks worth \$200 million.

Reasons To Sell:

▼ The company faces tough competition from EDA vendors such as Cadence Design Systems Inc. and Mentor Graphics Corporation. These companies offer products focused more on distinct phases of the IC design process and provide a range of services to companies throughout the world to help optimize their product development process, among other things. Their facilities could increase competition, leading to lower prices and profits for Synopsys.

Escalating costs and expenses, intense competition and uncertainty regarding the timeline for realization of acquisition synergies remain headwinds.

- ▼ The company also faces customer concentration risk, as small number of large customers account for significant portion of its revenues. Depending on a small number of customers for a large chunk of revenues could be risky, as loss of a single customer could affect operating performance significantly and jeopardize results. Therefore, the company is always under pressure to improve and maintain customer relations. As a result, the company needs to put more effort on customer retention through constant innovative product launches.
- ▼ A substantial portion of the company's sales is derived from outside the U.S. Hence, we believe that any unfavorable currency fluctuations and an uncertain macroeconomic environment may temper its growth prospects.
- ▼ Synopsys currently has a trailing 12 month P/E ratio of 70.1. This level compares unfavorably to some extent with what the industry saw over the last year. Hence, valuation looks slightly stretched from a P/E perspective.

Last Earnings Report

Synopsys' third-quarter fiscal 2020 non-GAAP earnings of \$1.74 per share beat the Zacks Consensus Estimate by 28.9%. Moreover, the figure improved 47.5% year over year.

Further, revenues increased 13% year over year to \$964.1 million and surpassed the Zacks Consensus Estimate by 7.9% as well.

The company is benefiting from increasing global design activity and customer engagements. The rising trend of machine learning, Al, 5G, IoT, Cloud, and the proliferation of Smart Everything are boosting demand for its advanced solutions.

Quarter Ending	07/2020		
Report Date	Aug 19, 2020		
Sales Surprise	7.90%		
EPS Surprise	28.89%		
Quarterly EPS	1.74		
Annual EPS (TTM)	5.12		

Quarter in Detail

Time-Based Product revenues (63.5% of total revenues) of \$612.1 million were up 13.9% year over year. Maintenance and Service revenues (14.6%) improved 2.4% to \$141.1 million. Upfront Product revenues (21.9%) grew 18.8% to \$210.9 million.

Segment wise, Semiconductor & System Design revenues (90.3% of total revenues) were \$870.7 million, up 13.2% year over year. Within the same, EDA revenues (55% of revenues) were \$531.8 million and IP & Systems Integration revenues (35% of revenues) came in at \$335.7 million. Software Integrity revenues totaled \$93.4 million, contributing approximately 10% to the top line in the reported quarter.

Geographically, Synopsys' revenues in North America (46% of total) were \$443.7 million, and \$94.3 million in Europe (10%). Revenues from Japan (8%), Korea (10%) and the Asia Pacific (26%) came in at \$77.8 million, \$96.3 million and \$251.9 million, respectively.

Non-GAAP operating margin was 33.6%, expanding 820 basis points (bps) year over year. Semiconductor & System Design delivered an adjusted operating margin of 35.4%, up 840 bps year over year, while Software Integrity margin expanded 530 bps year over year to 15.8%.

Balance Sheet & Cash Flow

Synopsys had cash and cash equivalents of \$1.05 billion as of Jul 31 compared with \$856.4 million as of Apr 30.

Total debt came in at \$131.4 million in the reported quarter compared with the previous quarter's \$235.8 million.

Operating cash flow in the first nine months of fiscal 2020 was \$789.2 million.

Guidance

For fourth-quarter fiscal 2020, the company's revenues are expected to be \$1-\$1.03billion. The Zacks Consensus Estimate for revenues is currently pegged at \$1.04 billion, which indicates growth of 22% from the year-ago quarter.

Management expects non-GAAP earnings between \$1.51 and \$1.56 per share. The consensus mark for earnings is pegged at \$1.70 cents, suggesting year-over-year growth of 47.8%.

Non-GAAP expenses are anticipated to be \$717-\$727 million.

For fiscal 2020, management projects revenues at \$3.66-\$3.69 billion, up from the previous forecast of \$3.60-\$3.65 billion. The Zacks Consensus Estimate for fiscal 2020 revenues is pinned at \$3.63 billion, calling for year-over-year growth of 7.9%.

Non-GAAP earnings for the fiscal year are now expected between \$5.48 and \$5.53 per share, up from the prior guided range of \$5.21-\$5.28. The consensus mark for fiscal 2020 earnings is pegged at \$5.27, which suggests growth of 15.6% from the year-earlier quarter.

For fiscal 2020, operating cash flow is expected to be approximately \$900 million, higher than the previous estimates of \$815-\$840 million.

Recent News

On Aug 20, Synopsys announced that it has appointed Sassine Ghazi as the company's new Chief Operating Officer.

On Aug 20, Synopsys announced that NSITEXE adopted its HAPS-80 prototyping solution to develop their current and next-generation Data Flow Processor (DFP) IP portfolio.

On Aug 3, Synopsys announced that it has appointed Jason Schmitt as the general manager of the Software Integrity Group and member of the senior executive team.

On Jul 14, Synopsys announced the availability of the industry's first JEDEC DDR5 (JESD79-5) compliant Verification IP (VIP) for Double Date Rate 5 (DDR5) DRAM/DIMM.

On Jun 25, Synopsys announced that the Defense Advanced Research Projects Agency (DARPA) has selected the company as a prime contractor for the Automatic Implementation of Secure Silicon (AISS) program.

On Jun 23, Synopsys announced that it is committed to reduce its greenhouse gas emissions by 25 percent by 2024, compared with its 2018 baseline.

On Jun 19, Synopsys revealed that its board of directors have replenishes the existing share repurchase authorization to \$500 million.

On Jun 11, Synopsys announced the acquisition of Qualtera, a fast-growing provider of collaborative high-performance, big data analytics for semiconductor test and manufacturing.

On May 21, Synopsys announced that document-related solutions and services provider Fuji Xerox, has adopted the Synopsys ZeBu Server emulation system for software development and performance enhancement of the latter company's next-generation multifunction printer system-on-chip (SoC).

On Apr 13, Synopsys' ZeBu Server 4 product is generating a broad-based adoption by customers' designing storage, networking and Al chips. Recently, the company announced that Groq has adopted the ZeBu Server 4 emulation solution to develop its Tensor Streaming Processor (TSP).

On Jan 7, 2020, Synopsys announced the acquisition of certain assets of INVECAS IP, to broaden its DesignWare Logic Library, General Purpose I/O, Embedded Memory, Interface and Analog IP portfolio.

Valuation

Synopsys shares are up 54.6% in the year-to-date (YTD) period while is up 54.8% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector have increased 27.8% and 21.5% YTD, respectively. Over the past year, while the Zacks sub-industry increased 41%, the sector gained 36%.

The S&P 500 Index has gained 4.7% YTD and 15.7% in the past year.

The stock is currently trading at 36.18X forward 12-month earnings, which compares to 32.72X for the Zacks sub-industry, 26.4X for the Zacks sector and 22.77X for the S&P 500 index.

Over the past five years, the stock has traded as high as 57.2X and as low as 23.63X, with a 5-year median of 34.76X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$226 price target reflects 38X forward 12-month earnings.

The table below shows summary valuation data for SNPS

Valuation Multiples - SNPS						
		Stock	Sub-Industry	Sector	S&P 500	
	Current	36.18	32.72	26.40	22.77	
P/E F12M	5-Year High	57.20	32.72	26.40	22.77	
	5-Year Low	23.63	18.62	16.72	15.25	
	5-Year Median	34.76	25.13	19.61	17.58	
	Current	7.59	7.59	4.10	3.70	
P/S F12M	5-Year High	8.33	8.00	4.10	3.70	
	5-Year Low	2.55	3.88	2.32	2.53	
	5-Year Median	4.21	5.63	3.14	3.05	
	Current	9.45	8.42	4.78	3.29	
EV/Sales TTM	5-Year High	9.45	8.60	4.80	3.46	
	5-Year Low	2.39	3.19	2.59	2.14	
	5-Year Median	4.21	5.84	3.63	2.87	

As of 08/20/2020

Industry Analysis Zacks Industry Rank: Top 33% (82 out of 252)

■ Industry Price Industry **■** Price -200 -80

Top Peers

Company (Ticker)	Rec R	ank
Autodesk, Inc. (ADSK)	Neutral	2
ANSYS, Inc. (ANSS)	Neutral	2
Cadence Design Systems, Inc. (CDNS)	Neutral	2
Citrix Systems, Inc. (CTXS)	Neutral	3
Dassault Systemes SA (DASTY)	Neutral	2
International Business Machines Corporation (IBM)	Neutral	4
Keysight Technologies Inc. (KEYS)	Neutral	3
Microsoft Corporation (MSFT)	Neutral	3

Industry Comparison Industry	Industry Comparison Industry: Computer - Software			Industry Peers			
	SNPS	X Industry	S&P 500	ANSS	CDNS	IBN	
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutra	
Zacks Rank (Short Term)	3	-	-	2	2	4	
VGM Score	В	-	-	F	D	Α	
Market Cap	32.39 B	1.74 B	23.46 B	28.17 B	31.02 B	109.67 E	
# of Analysts	6	4	14	6	6	6	
Dividend Yield	0.00%	0.00%	1.65%	0.00%	0.00%	5.29%	
Value Score	D	-	-	F	D	Α	
Cash/Price	0.03	0.07	0.07	0.03	0.04	0.13	
EV/EBITDA	39.64	18.45	13.34	46.19	48.55	8.59	
PEG Ratio	3.66	2.69	3.00	NA	3.18	3.39	
Price/Book (P/B)	7.57	6.06	3.12	8.17	13.75	5.30	
Price/Cash Flow (P/CF)	40.58	23.07	12.60	50.06	27.98	6.23	
P/E (F1)	40.27	35.97	21.61	53.49	43.69	11.12	
Price/Sales (P/S)	9.23	4.88	2.44	18.52	12.74	1.45	
Earnings Yield	2.45%	2.68%	4.43%	1.87%	2.29%	8.99%	
Debt/Equity	0.13	0.21	0.76	0.15	0.15	2.68	
Cash Flow (\$/share)	5.30	1.17	6.93	6.56	3.98	19.75	
Growth Score	Α	-	-	D	В	В	
Hist. EPS Growth (3-5 yrs)	18.01%	9.39%	10.44%	14.28%	33.78%	-3.28%	
Proj. EPS Growth (F1/F0)	15.61%	10.11%	-5.53%	-6.71%	15.76%	-13.54%	
Curr. Cash Flow Growth	24.16%	6.56%	5.20%	8.84%	138.95%	2.09%	
Hist. Cash Flow Growth (3-5 yrs)	8.09%	9.63%	8.52%	7.79%	24.55%	-3.76%	
Current Ratio	0.95	1.51	1.33	2.38	1.42	1.04	
Debt/Capital	11.87%	26.43%	44.50%	13.30%	13.31%	72.83%	
Net Margin	17.88%	5.84%	10.13%	26.17%	41.74%	10.44%	
Return on Equity	15.03%	10.54%	14.67%	12.91%	50.84%	51.06%	
Sales/Assets	0.50	0.60	0.51	0.35	0.71	0.50	
Proj. Sales Growth (F1/F0)	7.93%	2.07%	-1.54%	5.63%	11.49%	-4.43%	
Momentum Score	С	-	-	F	D	В	
Daily Price Chg	8.55%	0.00%	-0.59%	2.75%	2.52%	-0.56%	
1 Week Price Chg	-1.32%	0.00%	1.09%	0.26%	-0.49%	0.25%	
4 Week Price Chg	8.78%	2.62%	1.91%	9.39%	8.08%	-3.28%	
12 Week Price Chg	23.62%	11.11%	6.82%	19.35%	26.35%	-1.11%	
52 Week Price Chg	54.79%	21.26%	1.47%	51.23%	59.38%	-8.32%	
20 Day Average Volume	764,737	118,288	1,873,576	360,426	1,432,574	3,621,047	
(F1) EPS Est 1 week change	10.95%	0.00%	0.00%	0.00%	0.00%	0.00%	
(F1) EPS Est 4 week change	10.95%	0.00%	1.79%	2.20%	0.00%	0.00%	
(F1) EPS Est 12 week change	9.63%	2.80%	3.35%	2.41%	16.77%	-1.88%	
(Q1) EPS Est Mthly Chg	-14.44%	0.00%	0.42%	-11.59%	0.00%	0.00%	

Zacks Stock Rating System

We offer two rating systems that take into account investors' holding horizons: Zacks Rank and Zacks Recommendation. Each provides valuable insights into the future profitability of the stock and can be used separately or in combination with each other depending on your investment style.

Zacks Recommendation

The Zacks Recommendation aims to predict performance over the next 6 to 12 months. The foundation for the quantitatively determined Zacks Recommendation is trends in the company's estimate revisions and earnings outlook. The Zacks Recommendation is broken down into 3 Levels; Outperform, Neutral and Underperform. Unlike many Wall Street firms, we have an excellent balance between the number of Outperform and Neutral recommendations. Our team of 70 analysts are fully versed in the benefits of earnings estimate revisions and how that is harnessed through the Zacks quantitative rating system. But we have given our analysts the ability to override the Zacks Recommendation for the 1200 stocks that they follow. The reason for the analyst over-rides is that there are often factors such as valuation, industry conditions and management effectiveness that a trained investment professional can spot better than a quantitative model.

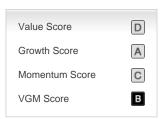
Zacks Rank

The Zacks Rank is our short-term rating system that is most effective over the one- to three-month holding horizon. The underlying driver for the quantitatively-determined Zacks Rank is the same as the Zacks Recommendation, and reflects trends in earnings estimate revisions.

Zacks Style Scores

The Zacks Style Score is as a complementary indicator to the Zacks rating system, giving investors a way to focus on the highest rated stocks that best fit their own stock picking preferences.

Academic research has proven that stocks with the best Value, Growth and Momentum characteristics outperform the market. The Zacks Style Scores rate stocks on each of these individual styles and assigns a rating of A, B, C, D and F. We also produce the VGM Score (V for Value, G for Growth and M for Momentum), which combines the weighted average of the individual Style Scores into one score. This is perfectly suited for those who want their stocks to have the best scores across the board.



As an investor, you want to buy stocks with the highest probability of success. That means buying stocks with a Zacks Recommendation of Outperform, which also has a Style Score of an A or a B.

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