

## Synopsys Inc. (SNPS)

**\$135.91** (As of 04/06/20)

Price Target (6-12 Months): **\$143.00**

Long Term: 6-12 Months

**Zacks Recommendation:**
**Neutral**

(Since: 07/24/19)

Prior Recommendation: Outperform

Short Term: 1-3 Months

**Zacks Rank:** (1-5)

**2-Buy**

Zacks Style Scores:

VGM:F

Value: D

Growth: F

Momentum: D

## Summary

Synopsys is benefiting from rising demand for its products. Increasing global design activity and customer engagements is a tailwind. Growing demand for advanced technology, design, IP and security solutions is also creating solid prospects. Further, with the growing need for enhanced security measures, demand for the company's solutions is shooting up. Moreover, rising impact of AI, 5G, IoT and big data is driving investments in new compute and ML architectures. Strong momentum in Fusion Design Platform and Verification Continuum platform remains a key catalyst. However, headwinds in Maintenance and Services segment are a concern. Moreover, geopolitical challenges coupled with uncertainties related to restrictions over trade with Huawei are other woes. The company is also witnessing stiff competition.

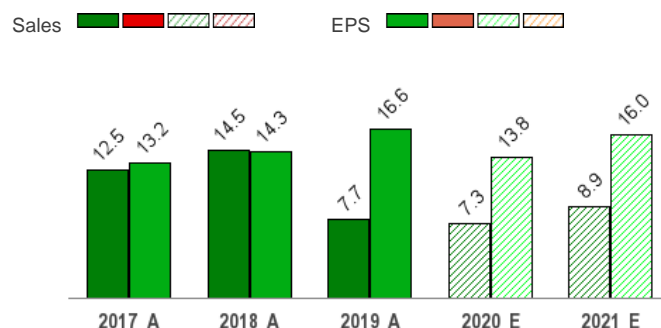
## Price, Consensus & Surprise



## Data Overview

52 Week High-Low	<b>\$166.87 - \$104.90</b>
20 Day Average Volume (sh)	<b>1,691,017</b>
Market Cap	<b>\$20.5 B</b>
YTD Price Change	<b>-2.4%</b>
Beta	<b>1.06</b>
Dividend / Div Yld	<b>\$0.00 / 0.0%</b>
Industry	<b><a href="#">Computer - Software</a></b>
Zacks Industry Rank	<b>Top 21% (54 out of 253)</b>

## Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	<b>9.8%</b>
Last Sales Surprise	<b>1.5%</b>
EPS F1 Est- 4 week change	<b>0.0%</b>
Expected Report Date	<b>05/27/2020</b>
Earnings ESP	<b>2.7%</b>
P/E TTM	<b>30.2</b>
P/E F1	<b>26.2</b>
PEG F1	<b>2.4</b>
P/S TTM	<b>6.1</b>

## Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	948 E	966 E	993 E	1,029 E	3,930 E
2020	834 A	839 E	932 E	1,003 E	3,608 E
2019	820 A	836 A	853 A	851 A	3,361 A

## EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$1.40 E	\$1.46 E	\$1.51 E	\$1.69 E	\$6.02 E
2020	\$1.01 A	\$0.99 E	\$1.42 E	\$1.75 E	\$5.19 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 04/06/2020. The reports text is as of 04/07/2020.

## 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.

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

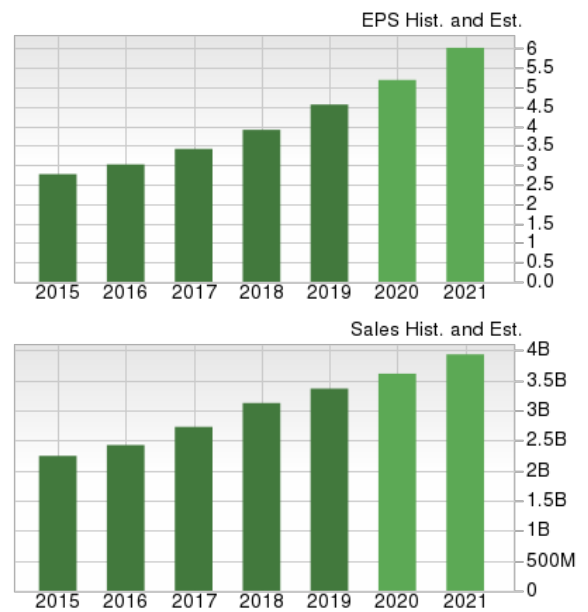
**Time-Based Products (66% of fiscal 2019 revenues):** Segment revenues are recognized as Technology Subscription License (TSL) revenues. Under this segment, the company recognizes revenues from fees over the period of the license or as and when the installments are paid by the customer, whichever is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



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## 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 in-house design is an upside. Notably, Fusion Design Platform, launched last November, is 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 AI 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 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 2019 and \$1.8 billion over the past five years, returning approximately 75% of free cash flow to its investors over that period.

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.

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## 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.
- ▼ 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 43.4. 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.

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

## Last Earnings Report

### Synopsys' Q1 Earnings and Revenues Surpass Estimates

Synopsys first-quarter fiscal 2020 non-GAAP earnings of \$1.01 per share beat the Zacks Consensus Estimate by 9.78%. However, the figure declined 6.5% year over year.

Further, revenues grew 1.7% year over year to \$834.4 million and surpassed the Zacks Consensus Estimate of \$822 million.

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

However, a challenging global market, geopolitical tensions and unevenness in the semiconductor industry are key headwinds.

### Quarter in Detail

Time-Based Product revenues (66.7% of the total revenues) of \$556.4 million were up 0.5% year over year. Moreover, Upfront Product revenues (18.1%) grew 15.5% to \$150.7 million. However, Maintenance and Service revenues (15.2%) declined 6.6% to \$127.2 million.

Segment-wise, Semiconductor & System Design revenues (89.7% of total) were \$748.8 million, driven by strong growth in IP. Within the same, EDA revenues were \$492.6 million and IP & Systems Integration revenues were \$255.1 million.

Software Integrity revenues were 85.6 million, accounting for approximately 10.3% of the top line in the reported quarter.

Geographically, Synopsys' revenues in North America (50% of total) were \$415.4 million, while that in Europe (11%) was \$94.4 million. Revenues from Japan (9%), Korea (11%) and the Asia Pacific (20%) were \$72.2 million, \$89.5 million and \$162.9 million, respectively.

### Margins

Non-GAAP operating margin was 22.4%, contracting 210 basis points year over year. While Semiconductor & System Design delivered an adjusted operating margin of 23.9%, the Software Integrity margin came in at 9.4%.

### Balance Sheet & Cash Flow

Synopsys exited the fiscal first quarter with cash and cash equivalents of \$700.4 million compared with \$728.6 million at the end of the previous quarter.

Operating cash flow for the quarter was \$9.8 million.

### Guidance

For second-quarter fiscal 2020, the company's revenues are expected to be \$820-\$850 million. Non-GAAP expenses are anticipated to be \$645-\$665 million. Management assumes non-GAAP earnings between 6 cents and \$1.01 per share.

For the fiscal, revenues are now projected in the range of \$3.60-\$3.65 billion. Non-GAAP earnings per share for the period are expected between \$5.18 and \$5.25.

Double-digit growth in non-GAAP earnings is likely to be driven by a revenue rise in high-single digits, indicating mid to high-single-digit growth for EDA, low-double-digit growth for IP and Software Integrity growth of 15-20%.

The company intends to split revenues for the first and second half of the year by roughly 45% and 55%. This reflects anticipated unfavorable delivery timing of IP and hardware as well as general uncertainty pertaining to the coronavirus situation.

The company estimates operating-margin expansion in the high-20s by 2021 and within the 30% range over the long haul.

Quarter Ending **01/2020**

Report Date	Feb 19, 2020
Sales Surprise	1.47%
EPS Surprise	9.78%
Quarterly EPS	1.01
Annual EPS (TTM)	4.50

## Recent News

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.

On Nov 20, 2019, Synopsys shared details of its collaboration with Samsung Foundry to deliver automotive chip design solutions that meet automotive safety integrity levels (ASILs) for autonomous driving and ADAS.

On Nov 19, 2019, Synopsys announced a multi-year agreement with AMD to utilize its ZeBu Server 4 emulation system. As part of this new agreement Synopsys will optimize its ZeBu and VCS software for execution on AMD EPYC processor-based servers.

On Nov 18, 2019, Synopsys announced that Samsung has adopted its Custom Design Platform, based on the Custom Compiler design environment, to design IP for its 5-nanometer (nm) Low-Power Early (LPE) process with Extreme Ultraviolet (EUV) lithography technology.

On Nov 15, 2019, Synopsys announced it has completed the acquisition of La Jolla, CA-based DINI Group, a dominant name in FPGA-based boards and solutions.

On Nov 13, 2019, Synopsys announced its new native automotive solutions for more efficient system-on-chip (SoC) design.

On Nov 11, 2019, Synopsys announced that it will acquire certain IP assets from eSilicon that will expand its DesignWare Embedded Memory IP portfolio with TCAMs and multi-port memory compilers, as well as its Interface IP portfolio with High-Bandwidth Interface (HBI) IP.

## Valuation

Synopsys shares are down 2.4% in the year-to-date (YTD) period while is up 16.7% over the trailing 12-month period. Stocks in the Zacks sub-industry decreased 1.6% and the Zacks Technology sector are down 18% YTD. Over the past year, while the Zacks sub-industry has increased 16.7%, the sector has fallen 9.2%.

The S&P 500 Index has plunged 22.7% in the past six months and 14.2% in the past year.

The stock is currently trading at 24.48X forward 12-month earnings, which compares to 26.33X for the Zacks sub-industry, 19.68X for the Zacks sector and 16.92X for the S&P 500 index.

Over the past five years, the stock has traded as high as 57.2X and as low as 21.77X, with a 5-year median of 33.96X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$143 price target reflects 25.7X forward 12-month earnings.

The table below shows summary valuation data for SNPS

Valuation Multiples - SNPS					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	24.48	26.33	19.68	16.92
	5-Year High	57.20	28.78	21.91	19.34
	5-Year Low	21.77	18.59	16.71	15.19
	5-Year Median	33.96	24.45	19.21	17.44
P/S F12M	Current	5.44	6.62	3.12	2.92
	5-Year High	6.70	7.23	3.58	3.44
	5-Year Low	2.55	3.88	2.32	2.54
	5-Year Median	4.09	5.42	3.09	3.00
EV/Sales TTM	Current	6.03	6.89	3.56	2.65
	5-Year High	7.33	8.11	4.44	3.46
	5-Year Low	2.39	3.19	2.57	2.16
	5-Year Median	4.04	5.43	3.55	2.83

As of 04/06/2020

## Industry Analysis Zacks Industry Rank: Top 21% (54 out of 253)



## Top Peers

Dassault Systemes SA ( <b>DASTY</b> )	Outperform
Autodesk, Inc. ( <b>ADSK</b> )	Neutral
ANSYS, Inc. ( <b>ANSS</b> )	Neutral
Cadence Design Systems, Inc. ( <b>CDNS</b> )	Neutral
Citrix Systems, Inc. ( <b>CTXS</b> )	Neutral
International Business Machines Corporation ( <b>IBM</b> )	Neutral
Keysight Technologies Inc. ( <b>KEYS</b> )	Neutral
Microsoft Corporation ( <b>MSFT</b> )	Neutral

Industry Comparison Industry: Computer - Software				Industry Peers		
	SNPS <b>Neutral</b>	X Industry	S&P 500	ANSS <b>Neutral</b>	CDNS <b>Neutral</b>	IBM <b>Neutral</b>
<b>VGM Score</b>	<b>F</b>	-	-	<b>F</b>	<b>C</b>	<b>C</b>
Market Cap	20.46 B	1.39 B	18.06 B	20.83 B	19.45 B	102.01 B
# of Analysts	6	4	13	7	6	7
Dividend Yield	0.00%	0.00%	2.34%	0.00%	0.00%	5.64%
<b>Value Score</b>	<b>D</b>	-	-	<b>F</b>	<b>D</b>	<b>B</b>
Cash/Price	0.04	0.12	0.06	0.05	0.04	0.10
EV/EBITDA	25.11	17.16	11.15	33.84	30.71	8.37
PEG Ratio	2.38	2.29	1.87	NA	2.91	1.61
Price/Book (P/B)	4.92	4.34	2.46	5.91	9.24	4.85
Price/Cash Flow (P/CF)	25.64	17.64	9.59	36.97	17.46	5.81
P/E (F1)	26.19	26.02	15.66	38.35	28.61	8.81
Price/Sales (P/S)	6.06	3.70	1.92	13.74	8.32	1.32
Earnings Yield	3.82%	3.82%	6.30%	2.61%	3.50%	11.36%
Debt/Equity	0.14	0.16	0.70	0.15	0.16	2.58
Cash Flow (\$/share)	5.30	1.20	7.01	6.56	3.98	19.75
<b>Growth Score</b>	<b>F</b>	-	-	<b>C</b>	<b>A</b>	<b>D</b>
Hist. EPS Growth (3-5 yrs)	15.91%	9.78%	10.92%	14.19%	21.57%	-3.50%
Proj. EPS Growth (F1/F0)	13.89%	8.64%	0.33%	-3.91%	10.30%	1.77%
Curr. Cash Flow Growth	24.16%	10.55%	5.93%	8.84%	138.95%	2.09%
Hist. Cash Flow Growth (3-5 yrs)	8.09%	9.63%	8.55%	7.79%	24.55%	-3.76%
Current Ratio	0.95	1.50	1.24	2.24	1.74	1.02
Debt/Capital	12.28%	20.16%	42.36%	12.98%	14.13%	72.05%
Net Margin	14.31%	7.06%	11.64%	29.77%	42.33%	12.23%
Return on Equity	12.00%	11.82%	16.74%	15.76%	62.01%	62.27%
Sales/Assets	0.52	0.64	0.54	0.40	0.84	0.53
Proj. Sales Growth (F1/F0)	7.37%	4.82%	1.00%	7.85%	8.49%	-0.57%
<b>Momentum Score</b>	<b>D</b>	-	-	<b>D</b>	<b>F</b>	<b>B</b>
Daily Price Chg	9.12%	5.06%	7.93%	11.07%	8.59%	7.97%
1 Week Price Chg	0.14%	-1.89%	-4.40%	-2.12%	2.65%	-1.56%
4 Week Price Chg	6.43%	-2.42%	-6.89%	9.01%	16.18%	-2.54%
12 Week Price Chg	-9.35%	-20.30%	-24.81%	-8.18%	-5.41%	-15.94%
52 Week Price Chg	16.73%	-7.92%	-17.63%	30.07%	8.50%	-19.93%
20 Day Average Volume	1,691,017	110,977	4,147,873	969,078	3,105,068	8,414,028
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(F1) EPS Est 4 week change	0.00%	-0.24%	-4.97%	-2.85%	-2.58%	-2.43%
(F1) EPS Est 12 week change	0.66%	-1.31%	-6.79%	-9.63%	-5.92%	-1.25%
(Q1) EPS Est Mthly Chg	0.00%	-0.57%	-7.32%	-7.33%	-2.67%	-3.85%

## 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.

Value Score	D
Growth Score	F
Momentum Score	D
VGM Score	F

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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