Synopsys Inc. (SNPS)

$154.96 (As of 01/23/20)

Price Target (6-12 Months): **$163.00**

Long Term: 6-12 Months	**Zacks Recommendation:**	**Neutral**
	(Since: 07/24/19)	
	Prior Recommendation: Outperform	
Short Term: 1-3 Months	**Zacks Rank:** (1-5)	**1-Strong Buy**
	Zacks Style Scores:	VGM:F
	Value: F | Growth: D | Momentum: F	

Summary

Synopsys is gaining from a spurt in demand for its strong product portfolio. Increasing global design activity and customer engagements is a tailwind. Growing demand for advanced technology, design, IP and security solutions is also creating solid growth opportunities. 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 machine-learning architectures. Strong momentum in Fusion Design Platform and Verification Continuum platform is a key catalyst. Estimates have been stable lately ahead of its Q4 earnings release. However, geopolitical challenges coupled with uncertainties related to restrictions over trade with Huawei are concerns. Additionally, the company is witnessing stiff competition.
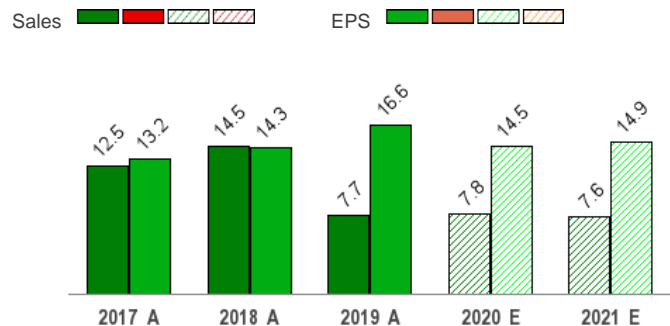
Price, Consensus & Surprise

Data Overview

52 Week High-Low	**$155.70 - $89.77**
20 Day Average Volume (sh)	**788,145**
Market Cap	**$23.3 B**
YTD Price Change	**11.3%**
Beta	**1.18**
Dividend / Div Yld	**$0.00 / 0.0%**
Industry	**Computer - Software**
Zacks Industry Rank	**Top 26% (66 out of 255)**
Last EPS Surprise	**1.8%**
Last Sales Surprise	**0.0%**
EPS F1 Est- 4 week change	**0.0%**
Expected Report Date	**02/19/2020**
Earnings ESP	**0.0%**
P/E TTM	**33.9**
P/E F1	**29.7**
PEG F1	**2.7**
P/S TTM	**6.9**

Sales and EPS Growth Rates (Y/Y %)

Sales Estimates (millions of $)

	Q1	Q2	Q3	Q4	Annual*
2021	959 E	959 E	974 E	1,002 E	3,899 E
2020	822 E	831 E	940 E	1,032 E	3,624 E
2019	820 A	836 A	853 A	851 A	3,361 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	$1.48 E	$1.44 E	$1.50 E	$1.60 E	$6.00 E
2020	$0.92 E	$0.95 E	$1.48 E	$1.88 E	$5.22 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 01/23/2020. The reports text is as of 01/24/2020.

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.

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.

EPS Hist. and Est.

Sales Hist. and Est.

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.
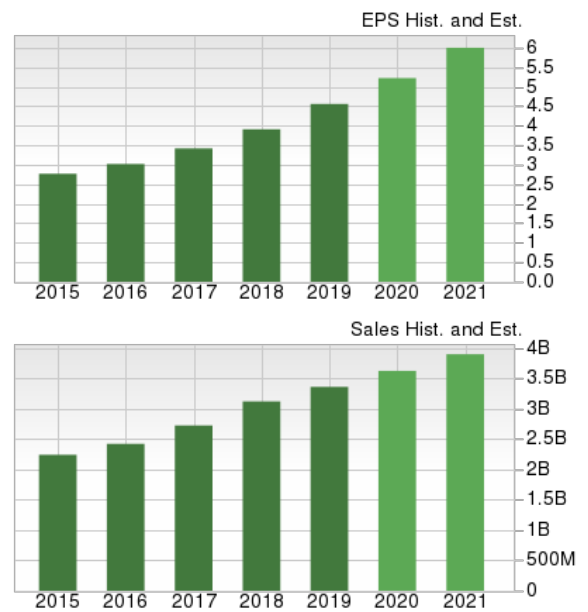
Reasons To Buy:

▲ 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 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.

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 44.66. 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 Reports Q4 Results

Quarter Ending	10/2019
Report Date	**Dec 04, 2019**
Sales Surprise	**0.00%**
EPS Surprise	**1.77%**
Quarterly EPS	**1.15**
Annual EPS (TTM)	**4.57**

Synopsys's fourth-quarter fiscal 2019 non-GAAP earnings of $1.15 per share beat the Zacks Consensus Estimate by 1.77% and also the year-ago quarterly figure by 47.4%.

Further, revenues grew 7% year over year to $851.1 million and surpassed the Zacks Consensus Estimate of $846 million as well.

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

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

Quarter in Detail

Time-Based Products revenues (64% of the total generated) of $548.4 million were down 9.4% year over year. However, Upfront Products revenues (20%) soared 152.9% to $168.3 million. Maintenance and Service revenues (16%) too grew 9.3% to $134.4 million.

Segment wise, Semiconductor & System Design revenues (90% of total) were $765.8 million. Within the same, EDA revenues were $489.2 million and the metric from IP & Systems Integration was $275.5 million

Software Integrity revenues were 85.3 million, accounting for approximately 10% of the top line in the reported quarter.

Geographically, Synopsys' revenues in North America (53% of total) were $450 million while Revenues in Europe (11%) were $91.5 million.

Asia Pacific revenues (26%) were $240.3 million whereas revenues in Japan (8%) were $69.2 million.

Margins

Per ASC 606, non-GAAP operating margin was 24.8%. While Semiconductor & System Design delivered an adjusted operating margin of 26.4%. Software Integrity's margin came in at 11%.

Balance Sheet & Cash Flow

Synopsys exited the fiscal fourth quarter with cash and cash equivalents of $728.6 million compared with $686.8 million at the end of the previous reported quarter.

Operating cash flow for the year was $801 million.

The company completed buybacks of $329 million in the year and $1.8 billion over the past five years, returning approximately 75% of free cash flow to its investors over that period.

Guidance

For first-quarter fiscal 2020, the company's revenues are expected in the $805-$835 million band. Non-GAAP expenses are anticipated within $635-$655 million. Management assumes non-GAAP earnings per share of 89-94 cents.

For the full fiscal, revenues are now projected in the range of $3.60-$3.65 billion. Non-GAAP earnings per share for the period are forecast 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 growth in mid-to-high single digits for EDA, low-double-digits' growth for IP and Software Integrity growth within the 15-20% range.

The company estimates to boost its operating margin in the high-20s by 2021 and in the long haul, within the 30% range.

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, Synopsis 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, Synopsis announced its new native automotive solutions for more efficient system-on-chip (SoC) design.

On Nov 11, 2019, Synopsis 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.

On Oct 29, 2019, Synopsys launched its DesignWare Die-to-Die PHY IP for ultra- and extra-short reach connectivity in multi-chip modules (MCM) for hyperscale data center, AI, and networking designs.

On Oct 28, 2019, Synopsys and Infineon collaborated to boost AI in automotive applications.

On Oct 25, 2019, Synopsys introduced DesignWare 112G Ethernet PHY IP on TSMC's N7 process supporting true long reach channels for up to 800G networking applications.

On Oct 15, 2019, Synopsys announced that NXP plans to deploy Synopsys' native automotive design solutions to improve quality-of-results and time-to-results for its next-generation, safety-critical SoC designs.

On Oct 10, 2019, Synopsys completed its acquisition of QTronic.

Valuation

Synopsys shares are up 12.7% in the past six months and 65.7% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 12.3% and 16.3% in the past six months, respectively. Over the past year, while the Zacks sub-industry gained 41.6%, while the sector grew 32.1%.

The S&P 500 index is up 11.5% in the past six months and 23.9% in the past year.

The stock is currently trading at 28.69X forward 12-month earnings, which compares to 29.88X for the Zacks sub-industry, 23.17X for the Zacks sector and 19.15X 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 33.79X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our $163 price target reflects 30.12X 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	28.69	29.88	23.17	19.15
	5-Year High	57.2	29.88	23.17	19.34
	5-Year Low	23.63	17.61	16.87	15.17
	5-Year Median	33.79	24.13	19.24	17.44
P/S F12M	Current	6.33	7.37	3.59	3.47
	5-Year High	6.33	7.37	3.59	3.47
	5-Year Low	2.55	3.88	2.3	2.54
	5-Year Median	4.05	5.29	3.01	3
EV/Sales TTM	Current	6.34	7.38	4.42	3.33
	5-Year High	6.47	7.43	4.42	3.33
	5-Year Low	2.39	3.19	2.56	2.16
	5-Year Median	3.96	5.23	3.46	2.8

As of 01/23/2020

Industry Analysis Zacks Industry Rank: Top 26% (66 out of 255)

Top Peers

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

Industry Comparison Industry: Computer - Software / Industry Peers

	SNPS Neutral	X Industry	S&P 500	ANSS Neutral	CDNS Neutral	IBM Neutral
VGM Score	F	-	-	F	D	C
Market Cap	23.33 B	2.11 B	24.46 B	23.38 B	21.16 B	126.53 B
# of Analysts	4	3.5	13	7	5	8
Dividend Yield	0.00%	0.00%	1.75%	0.00%	0.00%	4.54%
Value Score	F	-	-	F	D	A
Cash/Price	0.03	0.10	0.04	0.03	0.03	0.09
EV/EBITDA	28.05	22.16	14.11	41.62	40.14	10.71
PEG Ratio	2.70	2.31	2.04	NA	3.07	2.15
Price/Book (P/B)	5.70	5.70	3.40	7.99	14.30	6.99
Price/Cash Flow (P/CF)	29.23	28.12	13.66	45.74	45.69	7.58
P/E (F1)	29.69	33.53	19.10	41.21	32.20	10.73
Price/Sales (P/S)	6.94	4.90	2.67	16.18	9.17	1.64
Earnings Yield	3.37%	2.78%	5.23%	2.43%	3.10%	9.32%
Debt/Equity	0.03	0.16	0.72	0.03	0.23	3.40
Cash Flow ($/share)	5.30	1.01	6.94	6.07	1.65	18.86
Growth Score	D	-	-	D	B	D
Hist. EPS Growth (3-5 yrs)	12.85%	9.51%	10.60%	12.93%	14.82%	-3.75%
Proj. EPS Growth (F1/F0)	14.53%	12.12%	7.59%	6.79%	6.94%	3.93%
Curr. Cash Flow Growth	24.16%	7.45%	13.90%	33.15%	12.67%	-1.93%
Hist. Cash Flow Growth (3-5 yrs)	8.09%	8.09%	9.00%	6.57%	6.11%	-5.41%
Current Ratio	0.99	1.49	1.22	2.55	1.70	1.09
Debt/Capital	2.85%	18.28%	42.99%	3.02%	18.94%	77.29%
Net Margin	15.84%	6.51%	11.35%	30.35%	18.54%	12.23%
Return on Equity	13.54%	12.42%	17.10%	16.65%	30.74%	65.38%
Sales/Assets	0.54	0.65	0.55	0.42	0.90	0.53
Proj. Sales Growth (F1/F0)	7.85%	7.04%	4.03%	10.88%	6.66%	2.34%
Momentum Score	F	-	-	F	F	D
Daily Price Chg	1.01%	0.00%	0.26%	1.08%	0.83%	-0.71%
1 Week Price Chg	2.29%	1.32%	2.29%	3.63%	0.96%	1.19%
4 Week Price Chg	10.63%	6.31%	2.24%	7.50%	7.67%	5.90%
12 Week Price Chg	14.15%	15.41%	7.79%	26.15%	15.41%	6.83%
52 Week Price Chg	69.50%	33.83%	21.61%	75.65%	64.17%	7.80%
20 Day Average Volume	788,145	79,486	1,536,379	429,366	1,194,092	4,189,252
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	0.00%	1.08%
(F1) EPS Est 4 week change	0.00%	0.00%	0.00%	0.00%	0.00%	0.93%
(F1) EPS Est 12 week change	10.59%	0.00%	-0.23%	-0.83%	0.00%	1.02%
(Q1) EPS Est Mthly Chg	0.00%	0.00%	0.00%	0.00%	0.00%	-8.66%

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.

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

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.

Disclosures