

## Analog Devices, Inc. (ADI)

**\$85.08** (As of 03/20/20)

Price Target (6-12 Months): **\$89.00**

Long Term: 6-12 Months

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

(Since: 01/27/20)

Prior Recommendation: Underperform

Short Term: 1-3 Months

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

**3-Hold**

Zacks Style Scores:

VGM:F

Value: D

Growth: D

Momentum: F

## Summary

Analog Devices is benefiting from strengthening momentum across electric vehicle space on the back of its robust Battery Management System (BMS) solutions. Further growing power design wins are major positives. Additionally, rising adoption of advanced radio systems in 5G infrastructures is driving growth in the company's communication business. Furthermore, solid momentum of HEV platform across cabin electronics ecosystem remains a tailwind. The company remains optimistic about growth opportunities related to 5G. Notably, the stock has outperformed the industry it belongs to over a year. However, softness in the overall end-market conditions remains a major concern. Weakening momentum across major applications and sluggish communication activities are headwinds. Further, slowdown in global auto sales is a concern.

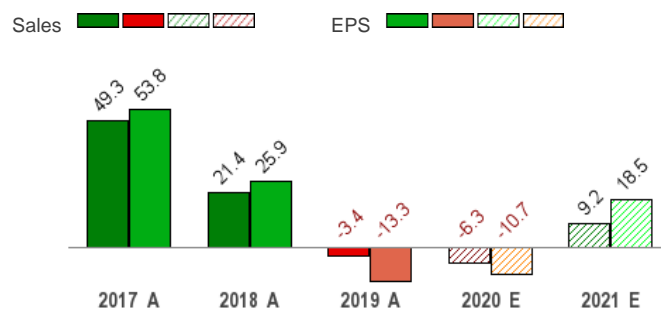
## Price, Consensus & Surprise



## Data Overview

52 Week High-Low	\$127.30 - \$79.08
20 Day Average Volume (sh)	4,426,544
Market Cap	\$31.3 B
YTD Price Change	-28.4%
Beta	1.25
Dividend / Div Yld	\$2.48 / 2.9%
Industry	<a href="#">Semiconductor - Analog and Mixed</a>
Zacks Industry Rank	Bottom 32% (173 out of 254)

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



Last EPS Surprise	3.0%
Last Sales Surprise	0.2%
EPS F1 Est- 4 week change	-3.3%
Expected Report Date	NA
Earnings ESP	-8.1%
P/E TTM	17.6
P/E F1	18.5
PEG F1	1.5
P/S TTM	5.5

## Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	1,481 E	1,504 E	1,539 E	1,574 E	6,129 E
2020	1,304 A	1,346 E	1,441 E	1,520 E	5,615 E
2019	1,541 A	1,527 A	1,480 A	1,443 A	5,991 A

## EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$1.28 E	\$1.33 E	\$1.38 E	\$1.45 E	\$5.45 E
2020	\$1.03 A	\$1.08 E	\$1.21 E	\$1.33 E	\$4.60 E
2019	\$1.33 A	\$1.36 A	\$1.26 A	\$1.19 A	\$5.15 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 03/20/2020. The reports text is as of 03/23/2020.

## Overview

Analog Devices, Inc. is headquartered in Norwood, Massachusetts. The company is an original equipment manufacturer of semiconductor devices, specifically, analog, mixed signal and digital signal processing (DSP) integrated circuits.

The product line is composed of amplifiers and comparators; analog to digital converters; digital to analog converters; video encoders and decoders; embedded processing products and DSPs; MEMS and temperature sensors; RF/IF components and converters; power and thermal management ICs, audio/video converters, amplifiers, CODECs, filters and processors.

The company also offers analog, digital and RF switches and multiplexers; analog microcontrollers; clock and timing products; voltage references; interface products such as isolators, translators and transceivers; wireless products and converters; broadband products including amplifiers, CODECs, chipsets, splitters.

Analog Devices has manufacturing facilities in the United States, Ireland, and Southeast Asia. The company also uses outside foundries, mainly Taiwan Semiconductor Manufacturing Company for front-end processing and third-party subcontractors for back-end operations.

Notably, the company generated \$5.9 billion revenues in fiscal 2019.

The company generates revenues from four organized end-markets – Industrial, Consumer, Communications and Automotive.

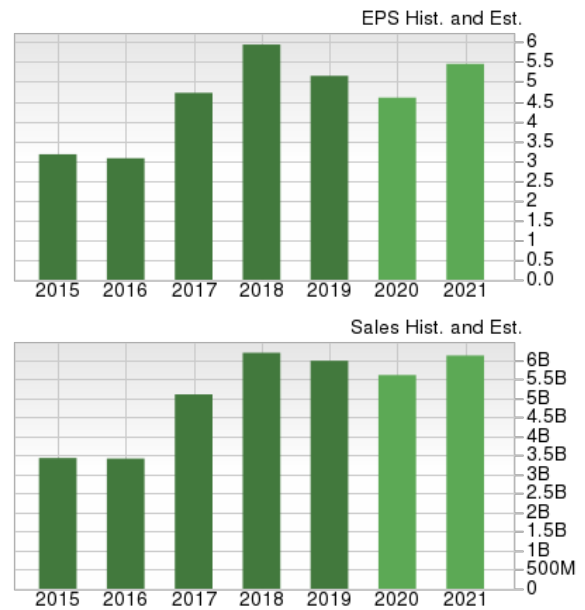
In Industrial market (50% of fiscal 2019 revenues), Analog Devices caters to the needs of industrial and instrumentation, defense/aerospace, energy management and healthcare sectors.

For Automotive market (16%), the company offers products that are utilized in infotainment, electrification, autonomous, ADAS and safety applications.

Further, the company takes care of the requirements in feature-rich, high-performance products such as portable devices and prosumer video/audio equipment in the Consumer market (13%).

In Communications market (21%), Analog Devices offers products required in internet infrastructures, broadband and wireless applications.

The company caters to the growing demand for its products in these afore mentioned markets via its strong sales channels. We note that it has direct sales offices, sales representatives and distributors in more than 50 countries.



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## Reasons To Buy:

- ▲ Analog Devices is the second largest producer of analog chips after Texas Instruments. The company should benefit from its strong market position in high performance analog (HPA), especially in the industrial, communications infrastructure and consumer markets. Within HPA, Analog Devices has a leading market position in converters, where it has around half the market share. Additionally, the company sells converters and amplifiers in integrated forms, which are categorized as “other analog” products. Analog Devices also has a leading position in the digital signal processor (DSP) market.
- ▲ The company has been investing in products for the automotive market, mainly because the electronic content in automobiles, particularly in the safety and infotainment areas, is on the rise. The Automotive electronics market is continuing to gain due to consumer demand for added technology and features in new vehicles and the transition to hybrid and electric vehicles. For instance, the company's start-stop technology that enables better fuel efficiency and compliance with CAFÉ standards has been widely adopted in Europe and is gaining traction in the U.S. Government mandated requirements that all new vehicles be equipped with better safety features and environmental controls is also an important growth driver. The fact that safety devices are moving from high-end to mainstream vehicles is also a positive for a company such as Analog Devices. Management's continuous collaboration with innovative TAR brands, development of new technology along with a strengthening in Europe and China should benefit the company. We expect the company to leverage its already-strong market position to drive deeper penetration, and possibly, take some market share.
- ▲ Analog Devices has a healthy communications business, where twin trends are currently driving revenues for the company. In the more developed economies, the market is driven by data density, meaning the need to expand infrastructure capacity to allow for rich media transfers (photos, video and so on). Moreover, the move to digital networks by carriers, such as AT&T is also driving demand for the company's products. In lesser developed economies, basic infrastructure needs have not yet been met in many cases. Therefore, growth in these regions is based on demand for building the network. The communications market (one of the largest consumers of analog chips) should see strong growth over the next few years. Most of the strength will however come from the wireless segment. We believe growing adoption of advanced radio systems in 5G infrastructure should continue to benefit the communications segment.

Analog Devices' diversified product portfolio is the key catalyst. Its leading market position and focus on communications, automotive and industrial markets remain major positive.

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## Reasons To Sell:

- ▼ Analog Devices is one of the older players in the analog market. While Maxim provides significant competition, Texas Instruments in particular could be something to worry about, as it has been taking market share in the high performance analog space. Since the National Semiconductor takeover, Texas Instruments' position in the market has strengthened further. Analog Devices continues to lead in the converter segment, but Texas Instruments remains a strong leader in all other categories.
- ▼ The company has been hoarding cash for quite some. Management could have been maintaining liquidity due to the economic uncertainty, but maintaining the huge balance seems unjustified. While both share repurchases and dividends continue, it does not look as if they are going to make other major acquisitions any time soon. In the absence of scope for investment, more of the cash should be returned to shareholders in some form or the other.
- ▼ Moreover, the company is trading at premium in terms of Price/Earnings (P/E). Analog Devices currently has a trailing 12-month P/E ratio of 17.48. This level compares unfavorably with what the industry witnessed in the last year. Additionally, the ratio is near the high end of the valuation range in this period. Consequently, the valuation looks slightly stretched from P/E perspective.

Analog Devices suffers from intensifying competition in the analog market which remains a risk for its market position.

## Last Earnings Report

### Analog Devices Q1 Earnings & Revenues Beat Estimates

Analog Devices reported first-quarter fiscal 2020 adjusted earnings of \$1.03 per share, beating the Zacks Consensus Estimate by 3%. However, the bottom line decreased 22.6% year over year and 13.4% sequentially.

Revenues of \$1.304 billion surpassed the Zacks Consensus Estimate of \$1.301 billion. However, the top line declined 15% year over year and 9.6% from the fiscal fourth quarter.

This downside can be attributed to weak performance of the company in all the end-markets served. Moreover, the top line was negatively impacted by macroeconomic headwinds.

Nevertheless, Analog Devices' deepening focus on efficient capital deployment and executing customer-centric approach remains a positive. Additionally, the company expects stabilization in the end-market demand in second-quarter fiscal 2020.

### Revenues by End Markets

Industrial: The company generated revenues of \$744.1 million (accounting for 52% of total revenues), which was flat year over year.

Communications: Revenues from this market came in at \$260.1 million (18% of revenues), decreasing 19% year over year.

Automotive: Revenues from this market came in at \$226.1 million (16% of revenues), down 8% from the year-ago quarter.

Consumer: This market generated revenues of \$212.8 million (15% of revenues), reflecting a decline of 7% on a year-over-year basis.

### Operating Details

Non-GAAP gross margin contracted 180 basis points (bps) on a year-over-year basis to 68.5%.

As a percentage of revenues, adjusted operating expenses were 31.6%, expanding 250 bps from the year-ago quarter.

Non-GAAP operating margin contracted 430 bps on a year-over-year basis to 36.9% during the reported quarter.

### Balance Sheet & Cash Flow

As of Feb 1, 2020, cash and cash equivalents were \$654.4 million, up from \$648.3 million as of Nov 2, 2019.

Long-term debt was approximately \$4.7 billion, down from \$5.2 billion in the prior quarter.

Net cash provided by operations was \$349.6 million in the fiscal first quarter, down from \$658 million in the prior quarter.

The company generated \$294.8 million of free cash flow during the fiscal first quarter.

Additionally, Analog Devices returned \$300 million to shareholders through dividends and share repurchases in the reported quarter.

### Guidance

For second-quarter fiscal 2020, Analog Devices expects revenues to be \$1.35 billion (+/- \$50 million).

Outbreak of coronavirus remains a concern for the company.

Non-GAAP earnings are expected to be \$1.10 (+/- \$0.08) per share.

The company anticipates non-GAAP operating margins to be approximately 37.5% (+/- 100 bps).

Quarter Ending 01/2020

Report Date	Feb 19, 2020
Sales Surprise	0.21%
EPS Surprise	3.00%
Quarterly EPS	1.03
Annual EPS (TTM)	4.84

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## Recent News

On **Jan 22, 2020**, Analog Devices entered into partnership with Hyundai per which its Automotive Audio Bus technology will be leveraged to introduce all-digital road noise cancellation system, the first of its kind in the automotive industry.

On **Dec 2, 2019**, Analog Devices acquired a client namely Rimac Automobili. Notably, the latter plans to integrate the former's precision battery management system (BMS) integrated circuits into its own BMS.

On **Oct 29, 2019**, Analog Devices announced the acquisition of Test Motors, which offers products and services that detect faults in electric motors before they cause damage to production cycles. The move bodes well for Analog Devices' continued focus toward Industry 4.0. The latest buyout will strengthen the company's condition-based monitoring solutions offerings.

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## Valuation

Analog Devices shares are down 23.3% in the past six-month period and 19.2% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are down 28.3% and 14.2% in the past six-month period, respectively. Over the past year, the Zacks sub-industry and the sector are down 21.8% and 12.1%, respectively.

The S&P 500 index is down 21.8% in the past six-month period and 18.3% in the past year.

The stock is currently trading at 16.83X forward 12-month earnings, which compares to 14.78X for the Zacks sub-industry, 16.55X for the Zacks sector and 13.76X for the S&P 500 index.

Over the past five years, the stock has traded as high as 24.82X and as low as 13.31X, with a 5-year median of 18.51X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$89 price target reflects 17.62X forward 12-month earnings.

The table below shows summary valuation data for ADI

Valuation Multiples - ADI					
		Stock	Sub-Industry	Sector	S&P 500
P/E F 12M	Current	16.83	14.78	16.55	13.76
	5-Year High	24.82	22.8	22.01	19.34
	5-Year Low	13.31	13.42	16.55	13.76
	5-Year Median	18.51	18.12	19.3	17.42
P/S F12M	Current	5.38	2.97	2.69	2.5
	5-Year High	7.91	4.52	3.58	3.43
	5-Year Low	4.26	2.81	2.3	2.5
	5-Year Median	5.58	3.69	3.02	3
EV/Sales TTM	Current	6.16	3.62	3.17	2.31
	5-Year High	8.94	5.52	4.45	3.46
	5-Year Low	3.75	3.13	2.54	2.14
	5-Year Median	6.41	4.37	3.53	2.82

As of 03/20/2020

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## Industry Analysis Zacks Industry Rank: Bottom 32% (173 out of 254)



## Top Peers

Applied Materials, Inc. (AMAT)	Outperform
Broadcom Inc. (AVGO)	Neutral
Infineon Technologies AG (IFNNY)	Neutral
Microchip Technology Incorporated (MCHP)	Neutral
Monolithic Power Systems, Inc. (MPWR)	Neutral
Maxim Integrated Products, Inc. (MXIM)	Neutral
NXP Semiconductors N.V. (NXPI)	Neutral
Texas Instruments Incorporated (TXN)	Neutral

Industry Comparison Industry: Semiconductor - Analog And Mixed				Industry Peers		
	ADI Neutral	X Industry	S&P 500	AMAT Outperform	AVGO Neutral	MXIM Neutral
<b>VGM Score</b>	<b>F</b>	-	-	<b>C</b>	<b>D</b>	<b>D</b>
Market Cap	31.33 B	3.76 B	15.82 B	34.89 B	76.85 B	11.89 B
# of Analysts	12	8.5	13	10	13	10
Dividend Yield	2.91%	0.00%	2.79%	2.21%	6.76%	4.35%
<b>Value Score</b>	<b>D</b>	-	-	<b>B</b>	<b>D</b>	<b>C</b>
Cash/Price	0.02	0.13	0.06	0.08	0.05	0.14
EV/EBITDA	14.02	13.44	9.77	9.21	14.70	12.83
PEG Ratio	1.49	1.32	1.42	0.93	0.83	1.98
Price/Book (P/B)	2.68	2.73	2.07	4.03	NA	6.88
Price/Cash Flow (P/CF)	11.46	13.39	8.39	10.84	5.66	15.31
P/E (F1)	18.50	19.16	12.42	9.25	8.68	19.82
Price/Sales (P/S)	5.45	3.19	1.68	2.32	3.39	5.44
Earnings Yield	5.41%	5.23%	7.97%	10.82%	11.52%	5.05%
Debt/Equity	0.41	0.55	0.70	0.54	-321.27	0.58
Cash Flow (\$/share)	7.42	2.91	7.01	3.51	33.97	2.88
<b>Growth Score</b>	<b>D</b>	-	-	<b>C</b>	<b>C</b>	<b>C</b>
Hist. EPS Growth (3-5 yrs)	19.53%	13.72%	10.85%	35.63%	25.01%	13.72%
Proj. EPS Growth (F1/F0)	-10.68%	-10.00%	4.90%	35.07%	4.02%	-8.40%
Curr. Cash Flow Growth	-9.88%	-12.47%	6.03%	-35.58%	8.07%	-14.31%
Hist. Cash Flow Growth (3-5 yrs)	24.75%	22.53%	8.55%	13.90%	48.32%	2.00%
Current Ratio	1.08	2.78	1.23	2.36	1.56	6.60
Debt/Capital	28.87%	36.52%	42.57%	35.25%	63.52%	36.52%
Net Margin	21.06%	3.29%	11.57%	18.83%	11.64%	35.93%
Return on Equity	15.38%	12.19%	16.74%	36.15%	69.53%	33.82%
Sales/Assets	0.27	0.48	0.54	0.79	0.31	0.59
Proj. Sales Growth (F1/F0)	-6.28%	1.64%	3.13%	19.27%	5.58%	-3.43%
<b>Momentum Score</b>	<b>F</b>	-	-	<b>D</b>	<b>D</b>	<b>F</b>
Daily Price Chg	-5.80%	-4.27%	-4.39%	-5.47%	-1.15%	-3.58%
1 Week Price Chg	-6.74%	-12.91%	-11.01%	-11.94%	-13.07%	-11.35%
4 Week Price Chg	-31.69%	-38.91%	-36.57%	-42.79%	-37.84%	-29.33%
12 Week Price Chg	-28.94%	-38.46%	-34.28%	-38.04%	-39.55%	-28.48%
52 Week Price Chg	-22.78%	-21.06%	-27.95%	-8.08%	-35.24%	-20.16%
20 Day Average Volume	4,426,544	1,021,952	3,981,936	12,648,195	4,703,913	2,843,056
(F1) EPS Est 1 week change	-2.52%	-1.04%	-0.01%	-0.85%	-5.09%	-2.75%
(F1) EPS Est 4 week change	-3.29%	-3.84%	-0.85%	-0.85%	-6.35%	-4.38%
(F1) EPS Est 12 week change	-3.63%	-7.37%	-1.70%	8.80%	-5.95%	0.45%
(Q1) EPS Est Mthly Chg	-4.41%	-11.17%	-0.88%	0.00%	-4.23%	-4.26%

## 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	D
Momentum Score	F
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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