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Zacks Small-Cap Research

Sponsored – Impartial - Comprehensive

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Tower Semiconductor (NASDAQ: TSEM)

Revenues Continue to Set Records as Capacity Builds and Customer Orders Grow

We believe that the stock should be worth \$37.73 using a 22.3x PE peer multiple on \$1.63 per share in earnings.

OUTLOOK

Tower Semiconductor is a pure-play analog semiconductor wafer foundry that manufactures SiGe, MEMS, RF, embedded flash-based memory, analog/mixed-signal, and CMOS image-sensor devices in the US, Israel and Japan. It is serving high growth markets in mobile such as RF High Position analog, as well as in CMOS image sensors, and power management. This year it is expanding capacity with a \$150 million investment to fulfill the high demand for both 200mm and 300mm product.

Current Price (05/12/21) \$25.29
Valuation \$37.73

SUMMARY DATA

52-Week High \$33.20
52-Week Low \$17.85
One-Year Return (%) 27.4
Beta 1.4
Average Daily Volume (sh) 395,206

Shares Outstanding (mil) 107.8
Market Capitalization (\$mil) \$2,701
Short Interest Ratio (days) 1.1
Institutional Ownership (%) 51
Insider Ownership (%) 1

Annual Cash Dividend \$0.00
Dividend Yield (%) 0.00

5-Yr. Historical Growth Rates
Sales (%) 1.4
Earnings Per Share (%) -22.9
Dividend (%) N/A

P/E using TTM EPS 26.2
P/E using 2021 Estimate 20.4
P/E using 2022 Estimate 17.6

Zacks Rank N/A

Risk Level
Type of Stock
Industry
Average
Mid-Blend
Elec Comp-Semis

ZACKS ESTIMATES

Revenue

(in millions of \$)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2019	310 A	306 A	312 A	306 A	1,234 A
2020	300 A	310 A	310 A	345 A	1,266 A
2021	347 A	360 E	366 E	375 E	1,448 E
2022					1,521 E

Earnings Per Share

(Adjusted non-GAAP Diluted)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2019	\$0.30 A	\$0.24 A	\$0.25 A	\$0.22 A	\$1.00 A
2020	\$0.20 A	\$0.22 A	\$0.18 A	\$0.34 A	\$0.94 A
2021	\$0.31 A	\$0.33 E	\$0.33 E	\$0.38 E	\$1.35 E
2022					\$1.63 E

Zacks Projected EPS Growth Rate - Next 5 Years % 10

WHAT'S NEW

Tower Semiconductor is hitting its stride as it ramps capacity to serve the worldwide increased demand for chips. While it does not benefit as much from shortages as digital chip providers due to the variation among analog chips it is certainly benefiting from overflow orders. Compounding its success is the high growth markets it serves. It announced it had hit record quarterly revenues for RF-SOI chips that go into mobile handsets and expects to set another record in Q2. 5G is driving the growth as 5G handsets have 30% more content than 4G and is showing a rapid market shift. The company also believes it is gaining market share when it looks to reports on its competitors and their forward guidance.

Its silicon germanium RF infrastructure business continues to see strong orders for 100GB transceivers for data centers, while the infrastructure market that buys 10GB and 25GB transceivers has seen some slowing with expectations of picking up in the second half.

Power ICs are also strong with and are well positioned in EVs where it has an established base in battery management.

Power discretes rebounded and are reaching the upper limit of capacity usage while image sensors, which had had weak order in dental and medical markets due to shutdowns, are back and the company is projecting a record year for imaging.

Tower continues to add capacity and will reap that addition in the second half of 2021. It is now suffering the expenses as it adds staff and machinery before it is able to increase production, which is suppressing margins. This year it will spend an additional \$150 million to increase its capacity in both 200mm and 300mm in fabs in the US, Israel and Japan. Cap ex spending for this effort will start in Q2 2021 and continue through Q1 2022.

Q1 2021 Results

Q1 revenues came in near expectations at \$347.2 million, versus \$300.2 million a year ago, up 16%. It was also up sequentially from \$345.2 million in Q4 2020. Organic (i.e. excluding revenues generated by the Nuvoton Japan JV and Maxim) growth was up 26% year over year. Guidance for Q2 revenues was \$360 million \pm 5%, with quarterly sequential improvement expected throughout the year. This guidance points to Q2 year over year growth of 16.1% and a 3.7% sequential improvement. Within that 16.1% there is expected to be 26% year over year organic growth.

Q1 2021 gross margin increased to 20.1% from 17.5% a year ago and 20.2% in Q4 2020. Gross margin dollars increased \$17.3 million, or 33%. Operating expenses increased \$1.2 million year over year, and were up \$1.1 million sequentially. The operating margin improved to 9.4% from 5.5% year over year. On a dollar basis it increased 98%. Other income was an expense of \$7.8 million compared to \$2.1 million a year ago. In that number the company made a one-time journal entry balance sheet adjustment on the value of an asset based on the change in the price of the yen versus dollar. Since then the company changed terms so that would not happen in the future.

Pretax profit was \$24.6 million versus \$14.3 million a year ago. The company had a tax reversal of \$5.9 million in the quarter versus paying \$1.7 million last year (11.9%). For the remaining three quarters the tax rate is expected to be higher than in 2020 as incremental sales are mostly coming from Japan and Newport Beach, California where the taxes range from 20% to 30%. Last year the company paid a 6.0% tax rate.

GAAP net income was \$28.3 million versus \$17.0 million last year, while non-GAAP net income was \$33.7 million versus \$21.9 million, up 54%.

Diluted GAAP EPS was \$0.26 per share versus \$0.16 last year. Adjusted non-GAAP EPS increased to \$0.31 versus \$0.20 a year ago (up 28%). Average diluted shares for the quarter were 109.5 million, up from 108.1 million last year. EBITDA for the first quarter of 2021 was \$94.5 million compared to \$72.8 million a year ago but sequentially down from \$95.9 million in Q4 2020.

Balance Sheet and Capacity

The company has cash, short-term deposits, and marketable securities of \$710 million compared to \$711 million last quarter while decreasing debt by \$47.3 million to \$343 million. Its quick ratio is high at 3.3s and it has \$826 million in working capital. The company had been stockpiling cash to pay for both capacity expansion, as well as acquiring companies that contribute complementary products or technology. Operating cash flow this quarter was \$84 million and free cash flow was \$34 million.

In 2020, the company invested a total of \$100 million in capacity expansion in Japan, plus another \$20 million for QT9 capacity (TSEM's new 200-millimeter RF SOI technology). In Q1 2021, it spent \$49.4 million on investments in cap ex. It now has embarked on a new plan to increase capacity and will spend \$150 million starting in Q3 2021. The remaining three quarters cap ex spending is expected to be: Q2 \$45-49 million, Q3 \$75-79 million, Q4 \$75-79 million, and Q1 2022 \$75-79 million.

Utilization

The current fab capacity will allow the company to grow revenues and improve margins through capacity utilization. Tower expanded capacity at its TPSCo Uozu 300 millimeter foundry in Japan by investing \$100 million last year. The capacity utilization of the 8" TPSCo lines increased 65%, and the Uozu 300-millimeter foundry remained at 90%. All the other foundries increased utilization.

The company targets 85% utilization at its fabs and believes that level gives the company the capacity to generate over \$1.6 billion in revenues. It can run at 90% utilization for short periods, but then cycle time suffers. Its current fabs were at the following capacity utilization at quarter end:

	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021
Fab1 Migdal Haemek, Israel 6"	84%	76%	60%	70%	60%	60%	50%	64%	70%
Fab2 Migdal Haemek, Israel 8"	70%	80%	80%	70%	70%	70%	60%	76%	80%
Fab3 Newport Beach, CA 8"	80%	70%	50%	50%	55%	70%	70%	75%	75%
Three TPSCo factories	50%	50%	NA	NA	NA	NA	NA	NA	NA
8 inch	NA	NA	50%	55%	55%	60%	60%	65%	70%
12 inch	NA	NA	60%	70%	80%	85%	70%	90%	90%
San Antonio, 8"	50%	50%	50%	55%	65%	70%	60%	67%	70%

KEY POINTS

- Although the semiconductor market is typically considered cyclical, we believe that based on the end-user markets for which Tower Semiconductor's products used, it should be less so. The company is currently being impacted in slower sales of mobile handsets and discretes.
- As a foundry, the company has natural operating leverage given its high fixed costs. Every dollar in revenue tends to add over \$0.50 to gross margin although this year that is expected to be lower in the first three quarters as the company staffs up and invests in more capacity. When the company adds 12" revenues that blended percentage will trend higher as 12" can sell at 60+ gross margins. 300mm product also enjoys higher gross margins
- The company has a strong market position in high quality imaging and 3D, which is increasing being used for gesturing controls, machine vision, security anti-crash systems and self driving cars, as well as smartphones with high megapixel cameras.
- The company has considerable exposure to data center growth and 5G and should be a major beneficiary of these growing markets in 2021 and beyond.
- The company has no fabs in China and suffers less disruption to its business than its Chinese competitors due to the coronavirus or political supply chain directives.
- We believe the stock is currently undervalued on a PE basis versus peers. Our price target is \$37.73 per share, and we expect continued sequential improvement in revenues, earnings, and margins going forward.

VALUATION

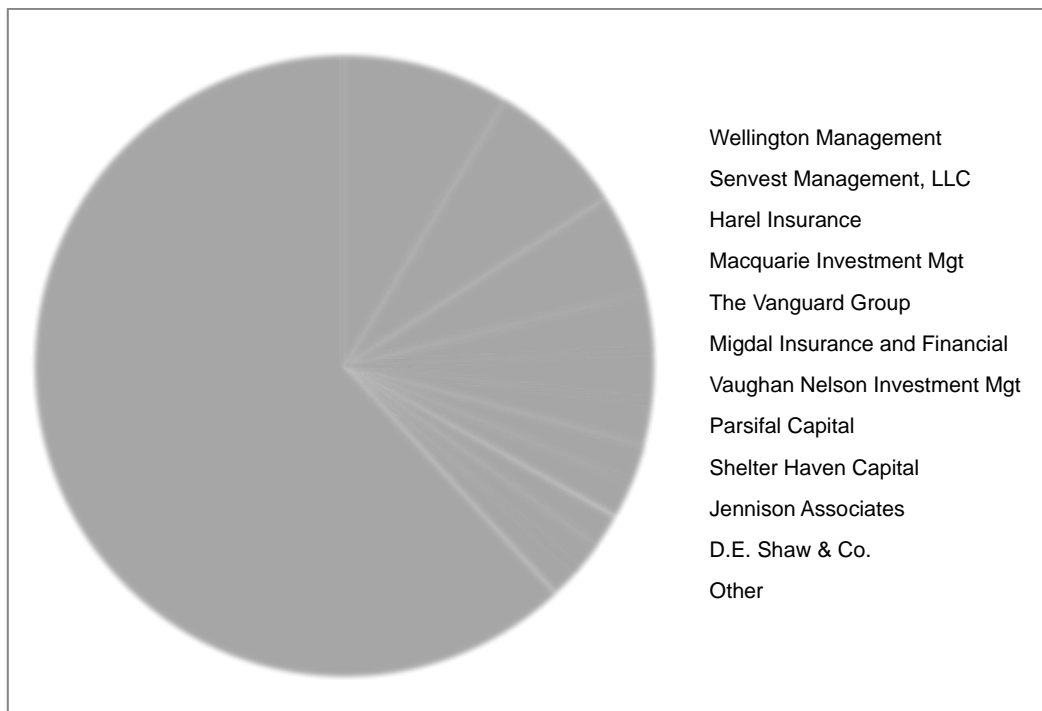
Our fully diluted non-GAAP EPS estimate for 2021 for TSEM is now \$1.35 and our 2022 EPS estimate is \$1.63. We believe the stock deserves a PE of at least 23.3xs in line with its peers. Applying that to 2022 estimate of \$1.63 gives us a stock price of \$36.30 per share. With its \$6.45 in cash per share we are leaving our price target at \$37.73. We expect that the stock will begin to move up as the company has returned to revenue growth due to demand in end markets as well as market share gains specifically in smartphones.

Tower Jazz

Foundry Companies

	<u>Ticker</u>	<u>EPS 21E</u>	<u>EPS 22E</u>	<u>Price</u>	<u>PE 2021E</u>	<u>PE 2022E</u>	<u>Growth Rate</u>	<u>2021E Sales</u>	<u>EV/Sales</u>	<u>EV</u>
<u>Company</u>										
Taiwan Semiconductor	TSM	3.95	4.56	114.33	28.9	25.1	15.4%	55.69	9.52	530.0
United Microelectronics	UMC	0.53	0.61	9.36	17.7	15.3	15.1%	7.20	2.87	20.7
Average					23.3	20.2			6.2	

OWNERSHIP



INCOME STATEMENT

	March Q1 20	June Q2 20	Sept Q3 20	Dec Q4 20	March Q1 21	June Q2 21E	Sept Q3 21E	Dec Q4 21E	2019	2020	2021E	2022E
REVENUE	300.2	310.1	310.2	345.2	347.2	360.0	366.0	375.0	1,234.0	1,265.7	1,448.2	1,520.6
Yr-to-yr Gr.	-3%	1%	-1%	13%	16%	16%	18%	9%	-5%	3%	14%	5%
OPERATING EXPENSES												
Cost of goods sold	247.6	252.4	256.8	275.6	277.4	286.4	290.6	295.1	1,004.3	1,032.4	1,149.4	1,185.6
Gross Margin	52.5	57.7	53.5	69.6	69.8	73.6	75.4	79.9	229.7	233.3	298.9	335.1
% of Sales	17.5%	18.6%	17.2%	20.2%	20.1%	20.5%	20.6%	21.3%	18.6%	18.4%	20.6%	22.0%
R&D	19.4	19.4	19.6	19.9	20.3	20.3	20.3	20.4	75.6	78.3	81.4	83.5
M, G&A	16.7	16.2	14.8	16.3	17.0	17.0	17.1	17.4	67.4	64.0	68.5	70.6
One-time charges	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tot Operating Exp.	36.1	35.6	34.4	36.2	37.3	37.3	37.4	37.8	143.0	142.3	149.9	154.1
Operating Income	16.4	22.1	19.1	33.4	32.5	36.3	38.0	42.1	86.7	91.0	149.0	181.0
Operating Margin	5%	7%	6%	10%	9.4%	10%	10.4%	11%	7.0%	7%	10%	12%
Yr-to-yr Gr.	-40%	25%	-16%	77%	98%	64%	99%	26%	-44%	5%	43%	99%
Interest & other non-cash financing	(2.1)	1.8	(0.6)	(1.5)	(7.8)	(1.0)	(1.0)	(1.0)	4.3	(2.3)	(10.8)	(4.0)
Other income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gain from acquisition	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Profit before tax	14.3	24.0	18.5	31.9	24.6	35.3	37.0	41.1	91.0	88.7	138.2	177.0
Profit margin	4.8%	7.7%	6.0%	9.2%	7.1%	9.8%	10.1%	11.0%	7.4%	7.0%	9.5%	11.6%
Taxes	1.7	(2.4)	(2.8)	(1.8)	5.9	(2.5)	(3.0)	(3.5)	(2.9)	(5.3)	(3.1)	(10.6)
Tax Rate	11.9%	10.1%	15.1%	5.7%	-23.8%	7.0%	8.0%	8.5%	3.2%	6.0%	2.2%	6.0%
Profit before non-controlling	16.0	21.5	15.7	30.1	30.5	32.9	34.1	37.7	88.1	83.4	135.1	166.4
Minority Income	1.0	(2.4)	(0.5)	1.0	(2.2)	(1.5)	(1.5)	(1.5)	2.0	(1.0)	(6.7)	(8.0)
GAAP Net income	17.0	19.1	15.2	31.0	28.3	31.4	32.6	36.2	90.0	82.4	128.4	158.4
Yr-to-yr Gr.	-35%	-9%	-32%	50%	66%	64%	114%	16%	-34%	-9%	56%	92%
Non-GAAP Net Income	21.9	23.4	19.1	36.6	33.7	35.9	36.8	41.6	107.68	101.01	148.08	177.75
GAAP primary EPS	\$0.16	\$0.18	\$0.14	\$0.29	\$0.26	\$0.29	\$0.30	\$0.33	\$0.85	\$0.77	\$1.19	\$1.47
Fully diluted GAAP	\$0.16	\$0.18	\$0.14	\$0.28	\$0.26	\$0.29	\$0.30	\$0.33	\$0.84	\$0.76	\$1.17	\$1.45
Adj Non-GAAP EPS-Fully dil.	\$0.20	\$0.22	\$0.18	\$0.34	\$0.31	\$0.33	\$0.33	\$0.38	\$1.00	\$0.94	\$1.35	\$1.63
Yr-to-yr Gr.	-47%	-25%	-43%	27%	27%	32%	68%	-2%	-34%	-7%	-17%	74%
Primary Share Out	106.8	107.0	107.5	107.8	108.0	108.2	108.4	108.6	106.3	106.7	108.3	107.8
Fully Diluted GAAP	108.1	108.3	108.5	109.0	110.0	110.0	110.0	110.0	107.4	108.0	110.0	109.0
All in shares	109.0	109.0	109.0	110.0	110.0	110.0	110.0	110.0	108.8	109.0	110.0	110.0
EBITDA	72.8	81.6	79.2	95.9	94.5	97.8	99.3	104.6	298.9	329.4	396.2	424.8
EBITDA Margin	24%	26%	26%	28%	27%	27%	27%	28%	24%	26%	27%	28%
Yr-to-yr Gr.	-8%	16%	5%	28%	30%	20%	25%	9%	-17%	10%	5%	29%

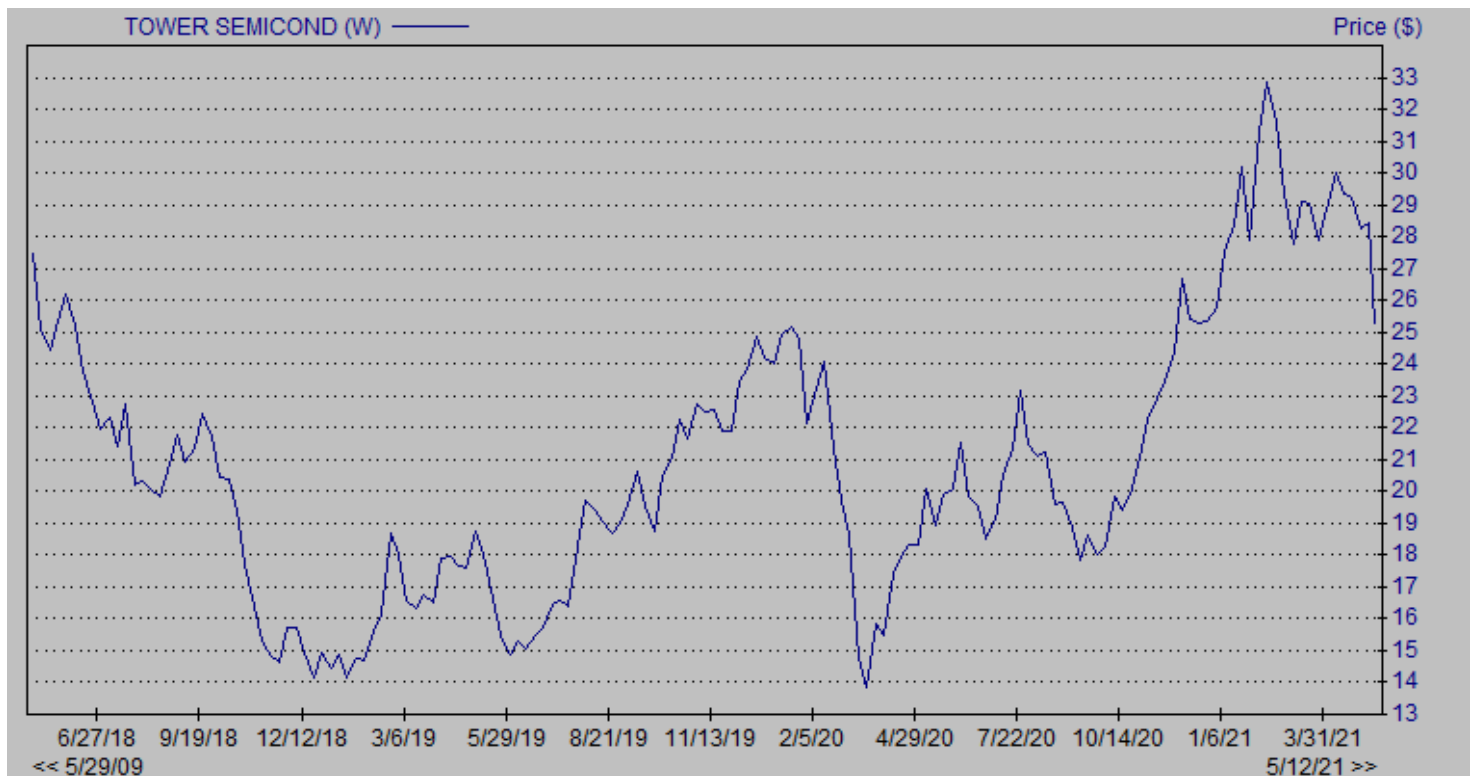
BALANCE SHEET

\$ in thousands	Mar. 31, 2021	Dec. 31, 2020	Qtr-Qtr % Change	Mar. 31, 2020	Yr-Yr % Change
CURRENT ASSETS					
Cash and cash equivalents	\$215,581	\$211,683	1.8%	\$251,348	-14.2%
Short term deposits	307,386	310,230	-0.9%	277,857	10.6%
Marketable securities	187,027	188,967	-1.0%	191,434	-2.3%
Trade accounts receivable	164,166	162,100	1.3%	115,194	42.5%
Inventories	197,189	199,126	-1.0%	198,285	-0.6%
Other current assets	27,854	30,810	-9.6%	22,332	24.7%
Total current assets	1,099,203	1,102,916	-0.3%	1,056,450	4.0%
 LONG-TERM INVESTMENTS	 40,765	 40,699	 0.2%	 39,562	 3.0%
PROPERTY AND EQUIPMENT, NET	827,230	839,171	-1.4%	732,169	13.0%
GOODWILL & INTANGIBLE ASSETS, NET	17,471	17,962	-2.7%	9,963	75.4%
DEFERRED TAX & OTHER ASSETS, NET	92,980	93,401	-0.5%	93,032	-0.1%
TOTAL ASSETS	2,077,649	2,094,149	-0.8%	1,938,176	7.2%
 CURRENT LIABILITIES					
Short term debt	101,295	106,513	-4.9%	62,885	61.1%
Trade accounts payable	85,288	96,940	-12.0%	148,671	-42.6%
Deferred revenue	20,814	10,027	107.6%	10,191	104.2%
Other current liabilities	66,160	59,432	11.3%	54,192	22.1%
Total current liabilities	273,557	272,912	0.2%	275,939	-0.9%
 LONG-TERM DEBT	241,634	283,765	-14.8%	220,216	9.7%
LONG-TERM CUSTOMERS' ADVANCES	33,971	25,451	33.5%	27,755	22.4%
EMPLOYEE RELATED LIABILITIES	15,447	15,833	-2.4%	12,730	21.3%
DEFERRED TAX LIABILITY	35,011	41,286	-15.2%	40,941	-14.5%
Total liabilities	599,620	639,247	-6.2%	577,581	3.8%
 SHAREHOLDERS' EQUITY	 1,478,029	 1,454,902	 1.6%	 1,360,595	 8.6%
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$2,077,649	\$2,094,149	-0.8%	\$1,938,176	7.2%
 Current Ratio	 4.0	 4.0	 -0.6%	 3.8	 5.0%
Quick Ratio	3.3	3.3	-0.4%	3.1	6.0%
Working Capital	825,646	830,004	-0.5%	780,511	5.8%
Debt Percent of Assets	17%	19%	-11.4%	15%	13.0%
Debt to Equity	0.2	0.3	-13.5%	0.2	11.5%
Cash and equivalents	709,994	710,880	-0.1%	720,639	-1.5%
Cash and equivalents per share	\$6.49	\$6.69	-3.0%	\$6.75	-3.9%
Debt	342,929	390,278	-12.1%	283,101	21.1%

CASH FLOW

	Year	3-Mo	3-Mo	3-Mo	3-Mo	Year	3-Mo
	2019	31-Mar-20	30-Jun-20	30-Sep-20	31-Dec-20	2020	31-Mar-21
CASH FLOWS - OPERATING ACTIVITIES							
Net profit (loss)	\$ 88,073	\$ 16,031	\$ 21,474	\$ 15,726	\$ 30,058	\$ 83,289	\$ 30,514
Income and non-cash expense items:							
Depreciation and amortization	214,474	56,796	60,268	60,277	63,190	240,531	62,053
Effect of fair value measurement on debt	10,294	(4,069)	3,159	828	6,727	6,645	(3,792)
Other expense (income), net	(4,293)	(14)	(876)	558	5,547	5,215	(4,985)
Changes in assets and liabilities:							
Trade accounts receivable	27,317	11,685	(12,981)	11,556	(43,347)	(33,087)	(6,274)
Other assets	(4,600)	7,355	(1,998)	(7,630)	(5,726)	(7,999)	7,082
Inventories	(21,021)	(6,171)	(11,209)	6,689	7,800	(2,891)	(3,407)
Trade accounts payable	(339)	(6,199)	(6,751)	(10,299)	4,673	(18,576)	(9,266)
Deferred revenue and customers' advances	(10,331)	(571)	(1,927)	(596)	22	(3,072)	19,340
Other current liabilities	(9,435)	(3,248)	13,977	(10,832)	450	347	7,084
Employee related liabilities	(310)	(31)	2,109	1,793	65	3,936	(107)
Deferred tax liability, net	1,491	(3,228)	1,358	542	3,551	2,223	(10,829)
Net cash provided by operating activities	291,320	68,336	66,603	68,612	73,010	276,561	87,413
CASH FLOWS - INVESTING ACTIVITIES							
Investments in property and equipment, net	(172,166)	(62,907)	(62,537)	(66,862)	(64,233)	(256,539)	(49,415)
Interest bearing deposits, including designated deposits	(132,928)	(85,356)	6,570	(28,983)	699	(107,070)	(1,611)
Net cash provided by (used in) investing activities	(305,094)	(148,263)	(55,967)	(95,845)	(63,534)	(363,609)	(51,026)
CASH FLOWS - FINANCING ACTIVITIES							
Exercise of warrants and options	1,842	87	1,127	272	1,026	2,512	364
Debt repayment	(19,402)	(24,197)	(5,000)	(26,355)	(8,147)	(63,699)	(29,375)
Net cash used in financing activities	(17,560)	(24,110)	(3,873)	(26,083)	(7,121)	(61,187)	(29,011)
Effect of foreign exchange rate change	1,804	(176)	682	2,227	1,624	4,357	(3,478)
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(29,530)	(104,213)	7,445	(51,089)	3,979	(143,878)	3,898
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	385,091	355,561	251,348	258,793	207,704	355,561	211,683
CASH AND CASH EQUIVALENTS - END OF PERIOD	355,561	251,348	258,793	207,704	211,683	211,683	215,581
Operating Cash Flow	\$ 308,548	\$ 68,744	\$ 84,025	\$ 77,389	\$ 105,522	\$ 335,680	\$ 83,790
Free cash flow	\$ 136,382	\$ 5,837	\$ 21,488	\$ 10,527	\$ 41,289	\$ 79,141	\$ 34,375

HISTORICAL STOCK PRICE



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