

Zacks Small-Cap Research

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Tower Semiconductor (NASDAQ: TSEM)

Fab Shutdowns Due to Cyberevent Causes a Revenue Shortfall, but Within the Guidance Range

We believe that the stock could be worth \$22.15 next year using a 21.3x PE on 2021 EPS of \$1.04.

Current Price (09/10/20) \$17.94
Valuation **\$22.15**

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 \$100 million investment in its fab in Japan to fulfill the high demand for 300mm technology.

SUMMARY DATA

52-Week High **\$25.80**
52-Week Low **\$12.13**
One-Year Return (%) **-11.2**
Beta **1.3**
Average Daily Volume (sh) **298,518**

Shares Outstanding (mil) **107**
Market Capitalization (\$mil) **\$1,916**
Short Interest Ratio (days) **2.0**
Institutional Ownership (%) **54**
Insider Ownership (%) **1**

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

5-Yr. Historical Growth Rates
Sales (%) **4.7**
Earnings Per Share (%) **-21.2**
Dividend (%) **N/A**

P/E using TTM EPS **20.2**
P/E using 2020 Estimate **22.7**
P/E using 2021 Estimate **17.3**

Zacks Rank **N/A**

Risk Level **Below Average**
Type of Stock **Mid-Value**
Industry **Elec Comp-Semis**

ZACKS ESTIMATES

Revenue

(in millions of \$)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2018	313 A	345 A	323 A	334 A	1,304 A
2019	310 A	306 A	312 A	306 A	1,234 A
2020	300 A	310 A	309 E	325 E	1,244 E
2021					1,318 E

Earnings Per Share

(Adjusted non-GAAP Diluted)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2018	\$0.31 A	\$0.42 A	\$0.37 A	\$0.41 A	\$1.51 A
2019	\$0.30 A	\$0.24 A	\$0.25 A	\$0.22 A	\$1.00 A
2020	\$0.20 A	\$0.22 A	\$0.16 E	\$0.23 E	\$0.79 E
2021					\$1.04 E

Zacks Projected EPS Growth Rate - Next 5 Years % **10**

WHAT'S NEW

A Week Long Cyberevent Disruption Reduces Production in Q3

The current disruption in production being experienced by Tower Semiconductor is expected to reduce revenues in Q3. With all of its fabs outside of Japan offline for a week, we expect that revenues maybe reduced upwards of \$13 million in the quarter. Even with a reduction of this magnitude it would still put the company's Q3 revenues within its guidance range, the low end of which is \$304 million. As a result, we are reducing our Q3 revenue estimate down to \$309 million and adding \$2 million in one-time expenses associated with combatting the cyber intrusion as well as shutting down and bringing the fabs back online. This revision takes the GAAP EPS down to \$0.10 from \$0.18 and non-GAAP to \$0.16 from \$0.22. The full year is now \$0.63 per share GAAP and \$0.79 per share non-GAAP, assuming the one-time expenses are called out as such and taken out in the adjusted numbers as we think they should.

In future quarters we may see some payments by insurance for both business interruption and expenses, but we do not expect to see anything in Q3 or Q4, as it will take a while to sort out.

Utilization

Some of the revenue shortfall will be made up by increased utilization, however given it is already September 10th; this may not have much impact in Q3. The percent capacity utilized in Q2 was as seen below:

Fab1 Migdal Haemek, Israel 6"	60%
Fab2 Migdal Haemek, Israel 8"	70%
Fab3 Newport Beach, CA 8"	70%
San Antonio, 8"	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 discretetes.
- 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. When the company adds 12" revenues that blended percentage will trend higher as 12" can sell at 60+ gross margins. 300nm 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 2020 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 \$22.15 per share, and we expect continued sequential improvement in revenues, earnings, and margins from this Q3 low.

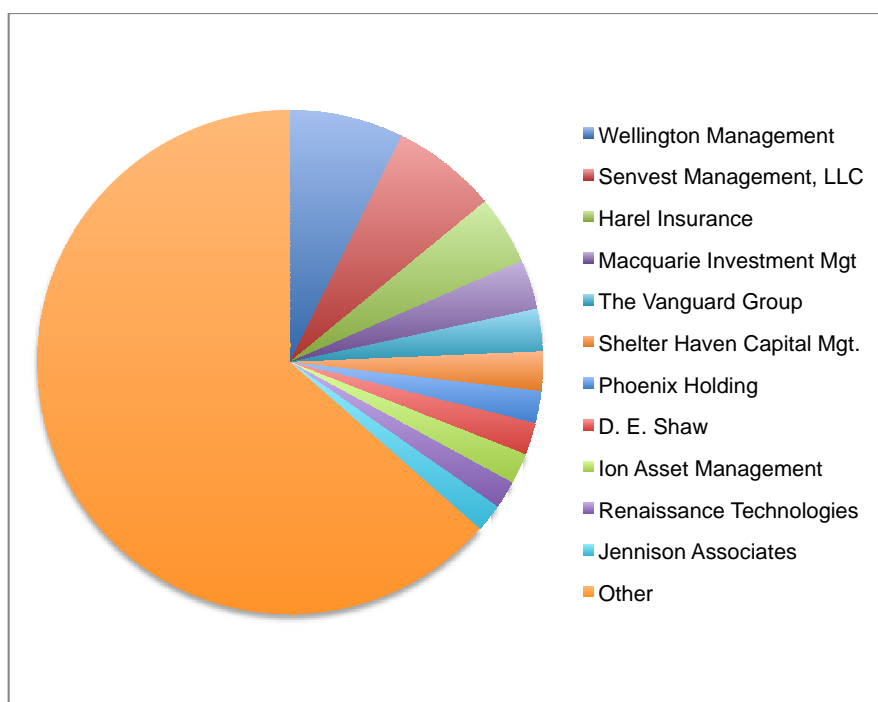
VALUATION

Our fully diluted non-GAAP EPS estimate for 2020 for TSEM is now \$0.79 and our 2021 EPS estimate is \$1.04. We believe the stock deserves a PE of at least 21.3xs in line with its peers. Applying that to 2021 estimate of \$1.04 gives us a stock price of \$22.15 per share by next year.

We expect that the stock will begin to move up once the company returns to more vibrant growth due to demand in end market. The biggest risks to the stock is that weakness in the industry in general caused by the pandemic and China in specific, continues or worsens, or somehow its ramp of 300 mm technology is impeded or constrained.

Foundry Companies	Ticker	EPS 20E	EPS 21E	Price	PE 2020E	PE 2021E	Growth Rate	2020E	
								Sales	EV/Sales
Company									
Taiwan Semiconductor	TSM	2.88	3.12	79.21	27.5	25.4	8.3%	41.76	8.69
United Microelectronics	UMC	0.26	0.31	3.90	15.0	12.6	19.2%	5.38	1.62
Average					21.3	19.0			5.2

OWNERSHIP



INCOME STATEMENT

	March Q1 19	June Q2 19	Sept Q3 19	Dec Q4 19	March Q1 20	June Q2 20	Sept Q3 20E	Dec Q4 20E	2019	2020E	2021E
REVENUE	310.1	306.1	312.1	305.7	300.2	310.1	309.0	325.0	1,234.0	1,244.3	1,318.0
Yr-to-yr Gr.	-1%	-9%	-3%	-8%	-3%	1%	-1%	6%	-5%	1%	6%
OPERATING EXPENSES											
Cost of goods sold	247.0	252.7	253.8	250.9	247.6	252.4	253.9	259.9	1,004.3	1,013.8	1,047.6
Gross Margin	63.2	53.4	58.3	54.8	52.5	57.7	55.1	65.1	229.7	230.4	270.4
% of Sales	20.4%	17.4%	18.7%	17.9%	17.5%	18.6%	17.8%	20.0%	18.6%	18.5%	20.5%
R&D	19.2	18.8	18.7	18.9	19.4	19.4	19.8	18.5	75.6	77.1	78.0
M, G&A	16.6	16.8	16.8	17.1	16.7	16.2	16.7	16.7	67.4	66.2	68.0
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
Tot Operating Exp.	35.8	35.7	35.6	35.9	36.1	35.6	36.5	35.2	143.0	143.4	146.0
Operating Income	27.3	17.8	22.7	18.9	16.4	22.1	18.6	29.9	86.7	87.1	124.4
Operating Margin	9%	6%	7%	6%	5%	7%	6%	9%	7.0%	7%	9%
Yr-to-yr Gr.	-14%	-60%	-41%	-53%	-40%	25%	-18%	58%	-44%	0%	43%
Interest & other non-cash financing	0.7	0.9	(0.4)	3.1	(2.1)	1.8	0.0	0.0	4.3	(0.3)	(1.0)
Other income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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
Profit before tax	28.1	18.7	22.3	22.0	14.3	24.0	18.6	29.9	91.0	86.8	123.4
Profit margin	9.1%	6.1%	7.1%	7.2%	4.8%	7.7%	6.0%	9.2%	7.4%	7.0%	9.4%
Taxes	(1.7)	1.0	0.1	(2.4)	1.7	(2.4)	(3.7)	(4.9)	(2.9)	(9.3)	(14.8)
Tax Rate	5.9%	5.4%	0.3%	10.7%	11.9%	10.1%	19.7%	16.5%	3.2%	10.7%	12.0%
Profit before non-controlling Minority Income	26.4 (0.2)	19.7 1.2	22.4 (0.2)	19.6 1.1	16.0 1.0	21.5 (2.4)	14.9 (3.6)	25.0 (4.6)	88.1 2.0	77.5 (9.7)	108.6 (12.0)
GAAP Net income	26.2	20.9	22.2	20.7	17.0	19.1	11.3	20.4	90.0	67.8	96.6
Yr-to-yr Gr.	0%	-45%	-34%	-46%	-35%	-9%	-49%	-2%	-34%	-25%	42%
Non-GAAP Net Income	31.7	25.3	26.5	24.2	21.9	23.4	17.5	24.7	107.68	85.52	112.49
GAAP primary EPS	\$0.25	\$0.20	\$0.21	\$0.19	\$0.16	\$0.18	\$0.11	\$0.19	\$0.85	\$0.64	\$0.90
Fully diluted GAAP	\$0.25	\$0.20	\$0.21	\$0.19	\$0.16	\$0.18	\$0.10	\$0.19	\$0.84	\$0.63	\$0.89
Adj Non-GAAP EPS-Fully dil.	\$0.30	\$0.24	\$0.25	\$0.22	\$0.20	\$0.22	\$0.16	\$0.23	\$1.00	\$0.79	\$1.04
Yr-to-yr Gr.	-20%	-53%	-45%	-53%	-47%	-25%	-58%	-16%	-34%	-21%	31%
Primary Share Out	105.3	106.3	106.6	106.7	106.8	107.0	107.0	107.1	106.3	106.7	107.1
Fully Diluted GAAP	107.0	107.2	107.6	108.0	108.1	108.3	108.3	108.3	107.4	108.0	108.3
All in shares	108.2	109.0	109.0	109.0	109.0	109.0	109.0	109.0	108.8	109.0	109.0
EBITDA	78.8	70.1	75.3	74.6	72.8	81.6	80.0	89.5	298.9	323.9	340.3
EBITDA Margin	25%	23%	24%	24%	24%	26%	26%	28%	24%	26%	26%
Yr-to-yr Gr.	-6%	-27%	-15%	-19%	-8%	16%	6%	20%	-17%	8%	5%

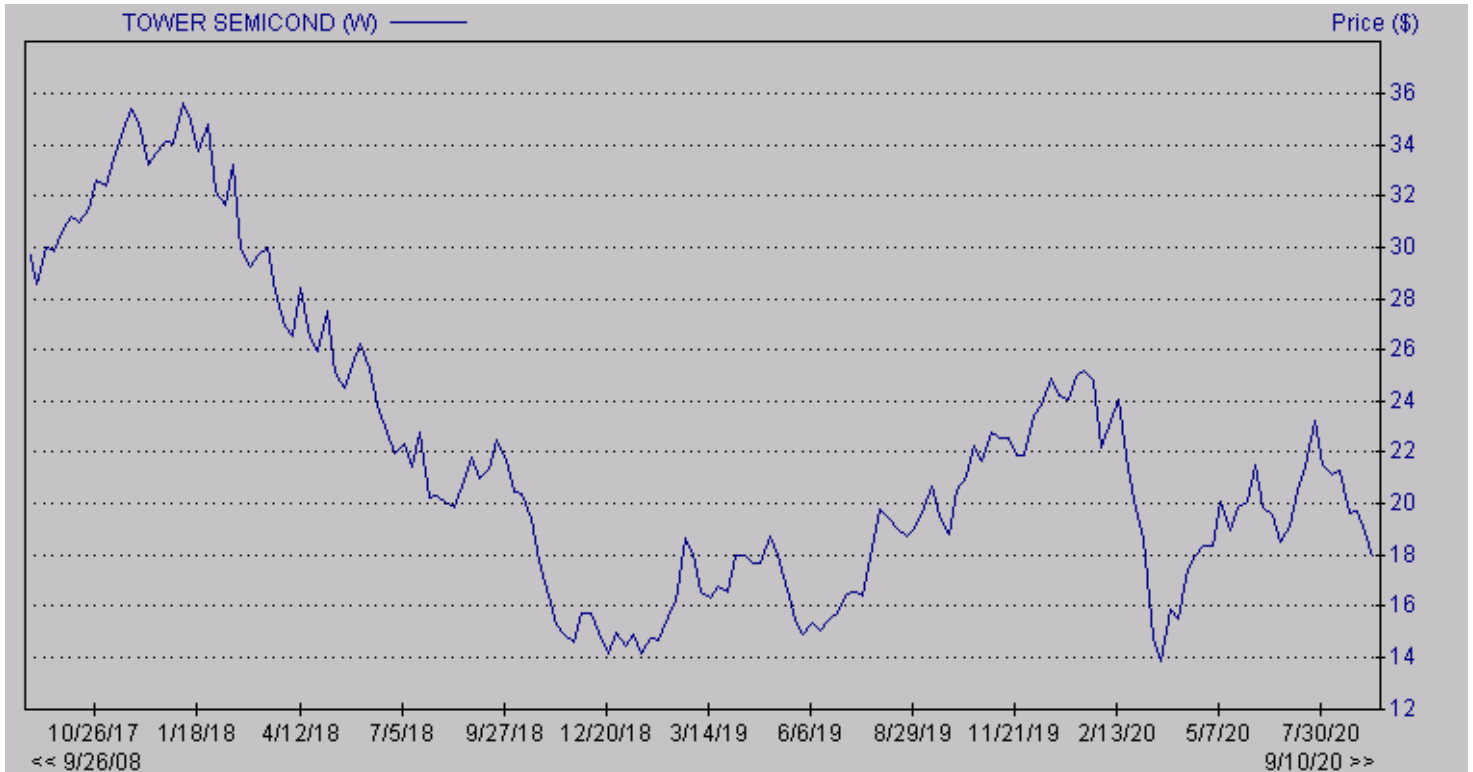
BALANCE SHEET

\$ in thousands	June 30, 2020	Mar. 31, 2019	Qtr-Qtr % Change	June 30, 2019	Yr-Yr % Change
CURRENT ASSETS					
Cash and cash equivalents	\$258,793	\$251,348	3.0%	\$405,158	-36.1%
Short term deposits	269,263	277,857	-3.1%	147,032	83.1%
Marketable securities	195,886	191,434	2.3%	146,893	33.4%
Trade accounts receivable	128,401	115,194	11.5%	123,789	3.7%
Inventories	210,129	198,285	6.0%	174,806	20.2%
Other current assets	28,158	22,332	26.1%	22,374	25.9%
Total current assets	1,090,630	1,056,450	3.2%	1,020,052	6.9%
LONG-TERM INVESTMENTS					
LONG-TERM INVESTMENTS	41,219	39,562	4.2%	36,874	11.8%
PROPERTY AND EQUIPMENT, NET	765,895	732,169	4.6%	707,122	8.3%
INTANGIBLE ASSETS, NET	0	9,963	-100.0%	11,279	-100.0%
GOODWILL	16,298	7,000	132.8%	7,000	132.8%
DEFERRED TAX & OTHER ASSETS, NET	91,834	93,032	-1.3%	89,171	3.0%
TOTAL ASSETS	2,005,876	1,938,176	3.5%	1,871,498	7.2%
CURRENT LIABILITIES					
Short term debt	79,668	62,885	26.7%	45,173	76.4%
Trade accounts payable	154,517	148,671	3.9%	92,747	66.6%
Deferred revenue	8,455	10,191	-17.0%	7,975	6.0%
Other current liabilities	68,192	54,192	25.8%	65,904	3.5%
Total current liabilities	310,832	275,939	12.6%	211,799	46.8%
LONG-TERM DEBT					
LONG-TERM DEBT	219,764	220,216	-0.2%	275,914	-20.4%
LONG-TERM CUSTOMERS' ADVANCES	27,570	27,755	-0.7%	27,230	1.2%
EMPLOYEE RELATED LIABILITIES	14,970	12,730	17.6%	14,295	4.7%
DEFERRED TAX LIABILITY	40,596	40,941	-0.8%	47,403	-14.4%
Total liabilities	613,732	577,581	6.3%	576,641	6.4%
SHAREHOLDERS' EQUITY	1,392,144	1,360,595	2.3%	1,294,857	7.5%
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$2,005,876	\$1,938,176	3.5%	\$1,871,498	7.2%
Current Ratio	3.5	3.8	-8.4%	4.8	-27.1%
Quick Ratio	2.8	3.1	-8.9%	4.0	-29.0%
Working Capital	779,798	780,511	-0.1%	808,253	-3.5%
Debt Percent of Assets	15%	15%	2.2%	17%	-13.0%
Debt to Equity	0.2	0.2	3.4%	0.2	-13.3%
Cash and equivalents	\$723,942	720,639	0.5%	\$699,083	3.6%
Cash and equivalents per share	\$6.77	\$6.75	0.3%	\$6.56	3.2%
Debt	299,432	283,101	5.8%	321,087	-6.7%

CASH FLOW

	Year	3-Mo	3-Mo	3-Mo	3-Mo	Year	3-Mo	3-Mo
	2018	31-Mar-19	30-Jun-19	30-Sep-19	31-Dec-19	2019	31-Mar-20	30-Jun-20
CASH FLOWS - OPERATING ACTIVITIES								
Net profit (loss)	\$ 133,379	\$ 26,400	\$ 19,722	\$ 22,354	\$ 19,597	\$ 88,073	\$ 16,031	\$ 21,474
Income and non-cash expense items:								
Depreciation and amortization	214,391	52,014	52,853	53,203	56,404	214,474	56,796	60,268
Effect of fair value measurement on debt	(9,791)	4,001	2,204	3,095	994	10,294	(4,069)	3,159
Other expense (income), net	2,442	(17)	(428)	(266)	(3,582)	(4,293)	(14)	(876)
Changes in assets and liabilities:								
Trade accounts receivable	(3,096)	18,606	12,665	(496)	(3,458)	27,317	11,685	(12,981)
Other receivables and other current assets	11,260	(3,705)	(2,050)	(1,978)	3,133	(4,600)	7,355	(1,998)
Inventories	(26,344)	(3,395)	378	(13,276)	(4,728)	(21,021)	(6,171)	(11,209)
Trade accounts payable	(3,562)	(2,651)	(12,553)	12,110	2,755	(339)	(6,199)	(6,751)
Deferred revenue and customers' advances	2,625	(10,685)	(2,964)	4,178	(860)	(10,331)	(571)	(1,927)
Other current liabilities	(867)	(4,803)	2,957	(6,494)	(1,095)	(9,435)	(3,248)	13,977
Employee related liabilities	(795)	68	(29)	(32)	(317)	(310)	(31)	2,109
Deferred tax liability, net	(6,745)	(965)	(599)	337	2,718	1,491	(3,228)	1,358
Net cash provided by operating activities	312,897	74,868	72,156	72,735	71,561	291,320	68,336	66,603
CASH FLOWS - INVESTING ACTIVITIES								
Investments in property and equipment, net	(169,741)	(41,718)	(43,727)	(43,017)	(43,704)	(172,166)	(62,907)	(62,537)
Interest bearing deposits, including designated deposits	(158,476)	(6,726)	(27,099)	(11,573)	(87,530)	(132,928)	(85,356)	6,570
Net cash provided by (used in) investing activities	(328,217)	(48,444)	(70,826)	(54,590)	(131,234)	(305,094)	(148,263)	(55,967)
CASH FLOWS - FINANCING ACTIVITIES								
Exercise of warrants and options	714	397	0	43	1,402	1,842	87	1,127
Debt repayment	(48,849)	(3,074)	(7,475)	(5,606)	(3,247)	(19,402)	(24,197)	(5,000)
TPSCo dividend to Panasonic	0	0	0	0	0	0	0	0
Net cash used in financing activities	(48,135)	(2,677)	(7,475)	(5,563)	(1,845)	(17,560)	(24,110)	(3,873)
Effect of foreign exchange rate change	2,585	(740)	3,205	(104)	(557)	1,804	(176)	682
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(60,870)	23,007	(2,940)	12,478	(62,075)	(29,530)	(104,213)	7,445
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	445,961	385,091	408,098	405,158	417,636	385,091	355,561	251,348
CASH AND CASH EQUIVALENTS - END OF PERIOD	385,091	408,098	405,158	417,636	355,561	355,561	251,348	258,793
Operating Cash Flow	\$ 340,421	\$ 82,398	\$ 74,351	\$ 78,386	\$ 73,413	\$ 308,548	\$ 68,744	\$ 84,025
Free cash flow	\$ 170,680	\$ 40,680	\$ 30,624	\$ 35,369	\$ 29,709	\$ 136,382	\$ 5,837	\$ 21,488

HISTORICAL STOCK PRICE



Source: Zacks Investment Research

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