

Zacks Small-Cap Research

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TowerJazz (TSEM-NASDAQ)

TSEM: Panasonic Exits Semi Business With June 2020 Sale to Nuvoton-- Including Its Portion of TowerJazz Joint Venture

We believe that the stock could be worth \$27.00 next year using industry average PE ratios given current earnings estimates.

Current Price (11/27/19) \$22.66
Valuation **\$27.00**

OUTLOOK

TowerJazz 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 such as RF High Position analog, CMOS image sensors, and power management. It is reached the end of its first contract with its partner Panasonic and is receiving lower revenues from them since March 31, affecting revenue growth but possibly not profits. Panasonic will be selling its interest in TPSCo to Nuvoton. TowerJazz is investing \$100 million its Japanese fabs.

SUMMARY DATA

52-Week High \$23.23
52-Week Low \$13.59
One-Year Return (%) 44.0
Beta 1.3
Average Daily Volume (sh) 491,411

Shares Outstanding (mil) 106.6
Market Capitalization (\$mil) \$2,416
Short Interest Ratio (days) 3.6
Institutional Ownership (%) 56
Insider Ownership (%) 1

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

5-Yr. Historical Growth Rates
Sales (%) 10.1
Earnings Per Share (%) -13.5
Dividend (%) N/A

P/E using TTM EPS 19.5
P/E using 2019 Estimate 23.7
P/E using 2020 Estimate 19.2

Zacks Rank N/A

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

ZACKS ESTIMATES

Revenue

(in millions of \$)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2017	330 A	345 A	355 A	358 A	1,387 A
2018	313 A	335 A	323 A	334 A	1,304 A
2019	310 A	306 A	312 A	312 E	1,240 E
2020					1,312 E

Earnings Per Share

(Adjusted non-GAAP Diluted)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2017	\$0.50 A	\$0.54 A	\$0.60 A	\$0.58 A	\$2.21 A
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	\$0.25 E	\$1.01 E
2020					\$1.26 E

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

WHAT'S NEW

Panasonic is Selling its Holding in TPSCo to Nuvoton as of June 1, 2020

As the result of the corporate-wide strategy of Panasonic Corp. to purge its unprofitable businesses, Panasonic is selling all its semiconductor operations to Nuvoton Technology Corporation (TSEC: 4919) for \$250 million in cash. This sale includes Panasonic's interest in TPSCo, the joint venture with TowerJazz. The sale set to happen on June 1, 2020 will keep the current Panasonic contract unchanged with TPSCo. This contract runs through 2022. TowerJazz say there will be no impact on its business relationship between its foundry customers, or on the manufacturing of any wafers in any of its fabs. We are not changing any estimates based on this sale. Nuvoton is a public company, based in Taiwan and a subsidiary of Winbond Electronics Corporation, who owns 62% of the company.

According to Nuvoton's press release, it believes this acquisition will generate greater value for customers and shareholders and will:

- Increase Nuvoton's presence in the global semiconductor industry through greater scale and volume of semiconductor solutions;
- Position Nuvoton well to capture secular growth trends in the electrification and automation of automotive and industrial fields;
- Broaden Nuvoton's distribution channels and customer base to explore cross-selling opportunities; and
- Strengthen Nuvoton's technology platform via deeper R&D resources and a broader intellectual property portfolio.

In 2018, Nuvoton generated \$329 million in revenues and was profitable. It is a digital/analog/mixed signal semiconductor company, and has leading positions in microcontrollers, microprocessor, audio, computer, and cloud computing IC applications. Nuvoton has subsidiaries in the US, Mainland China, Israel, and India.

Its portfolio includes:

- **Computer:** Super IO (SIO), Embedded Controllers (EC), Trusted Platform Modules (TPM), Power Management among others. It is one of the world's top three suppliers of Super IO, Embedded Controllers, and Trusted Platform Modules for the PC industry.
- **Microcontrollers:** ARM[®] Cortex[™] M0 plus ARM[®] 7/ ARM[®] 9 with others in development plus 8051 families. It is a leader in microcontrollers with its new fast growing portfolio of ARM[®] Cortex[™] microcontrollers plus a family of 8051 products. These families currently include a wide range of ARM[®] controllers including Cortex[™] M0, ARM[®] 7/ ARM[®] 9.
- **Mixed Signal:** Speech Playback and Record Products with embedded Flash. Audio Products including Power Amplifiers, Audio ADC's/DAC's and CODECS. It also has extremely high fidelity solutions for speech recording/playback and full range audio applications that serve consumer, automotive, white goods, and other markets.

KEY POINTS

- Although the semiconductor market is typically considered cyclical, we believe that based on the end-user markets for which TowerJazz's products used, it should be less so. The company is

currently being impacted in slow mobile handsets, data centers and infrastructure sales as well as weakness in China and the US ban on Huawei, which is delaying spending.

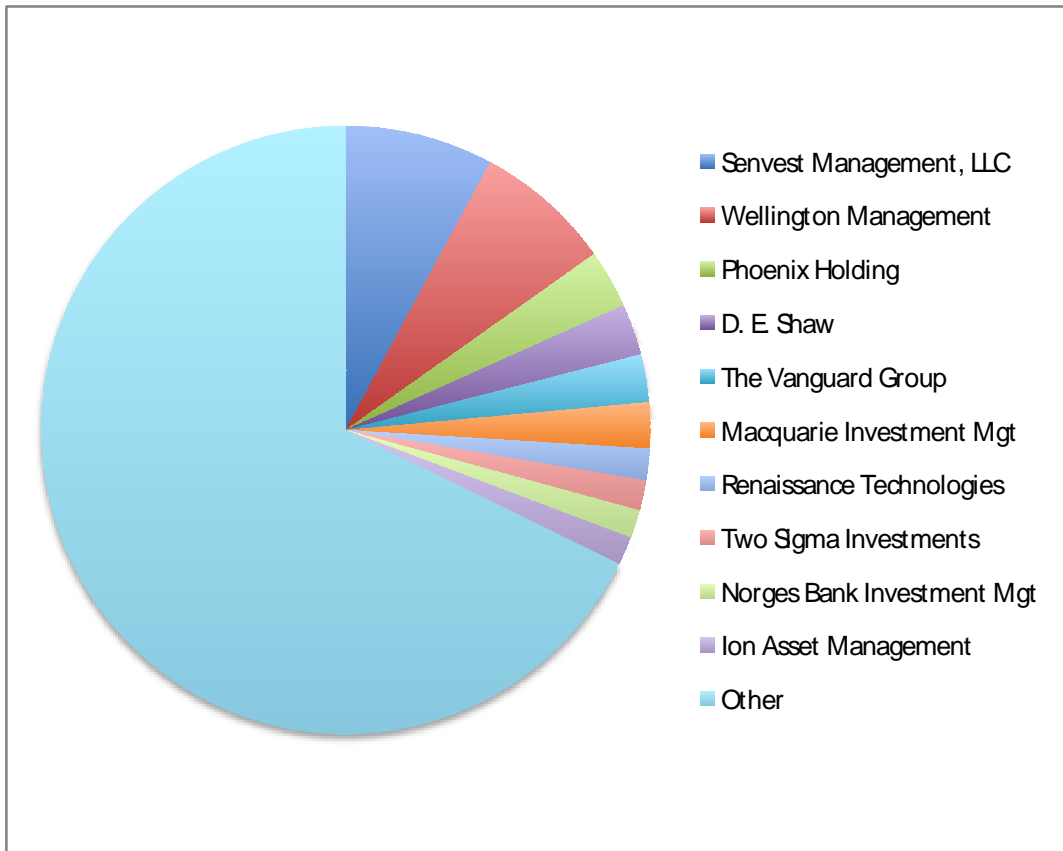
- As a foundry, the company has natural operating leverage given its high fixed costs. Every dollar in revenue tends to add over \$0.50 to gross margin. When the company adds 12" revenues that blended percentage will trend higher as 12" can sell at 60+ gross margins. 300nm product also enjoys higher 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. In this area its primary competition is Sony, which makes it a preferable source for many companies that compete with Sony.
- The company has considerable exposure to 5G and should be a major beneficiary of this transition in 2020.
- We believe the stock is currently undervalued on a PE basis versus peers. Our price target is \$27.00 per share, and we expect continued sequential improvement in earnings and margins going forward.

VALUATION

Our fully diluted non-GAAP EPS estimate for 2019 for TSEM is \$1.01 and our 2020 EPS estimate is \$1.26, leading to a price target of \$27.00 using an average of a 22x PE. The biggest risks to the stock is that weakness in the industry in general and China in specific continues, or the ramp to 300 mm technology is impeded or constrained, or that an acquisition causes dilution or earnings hit.

Foundry Companies						
	<u>Ticker</u>	<u>EPS 19E</u>	<u>EPS 20E</u>	<u>Price</u>	<u>PE 2019</u>	<u>PE 2020E</u>
<u>Company</u>						
Semiconductor Manufacturing	SMICY	0.00	0.03	6.33	NM	211.0
Taiwan Semiconductor	TSM	2.13	2.69	52.15	24.5	19.4
United Microelectronics	UMC	0.12	0.18	2.35	19.6	13.1
X-Fab	XFAB.PA	0	0	4.17	NM	NM
Average					22.0	16.2

OWNERSHIP



Source: Zacks Investment Research

INCOME STATEMENT

	March Q1 18	June Q2 18	Sept Q3 18	Dec Q4 18	March Q1 19	June Q2 19	Sept Q3 19	Dec Q4 19E	2018	2019E	2020E
REVENUE	312.7	335.1	322.6	333.6	310.1	306.1	312.1	312.0	1,304.0	1,240.3	1,312.0
Yr-to-yr Gr.	-5%	-3%	-9%	-7%	-1%	-9%	-3%	-6%	-6%	-5%	6%
OPERATING EXPENSES											
Cost of goods sold	246.5	256.6	250.0	258.0	247.0	252.7	253.8	253.8	1,011.1	1,007.2	1,050.2
Gross Margin	66.2	78.5	72.6	75.6	63.2	53.4	58.3	58.2	292.9	233.1	261.8
% of Sales	21.2%	23.4%	22.5%	22.7%	20.4%	17.4%	18.7%	18.7%	22.5%	18.8%	20.0%
R&D	18.3	18.2	18.2	18.4	19.2	18.8	18.7	18.7	73.1	75.4	76.0
M, G&A	16.0	16.1	15.8	17.0	16.6	16.8	16.8	16.8	65.0	67.2	69.0
One-time charges	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Tot Operating Exp.	34.3	34.3	34.1	35.4	35.8	35.7	35.6	35.6	138.0	142.6	145.0
Operating Income	31.9	44.2	38.6	40.2	27.3	17.8	22.7	22.7	154.9	90.5	116.8
Operating Margin	10%	13%	12%	12%	9%	6%	7%	7%	12%	7%	9%
Yr-to-yr Gr.	-40%	-23%	-30%	-26%	-14%	-60%	-41%	-44%	-30%	-39%	22%
Net Interest	(0.6)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.6)	0.0	0.0
Other non-cash financing expense	(3.2)	(7.0)	(2.5)	(3.9)	0.7	0.9	(0.4)	0.0	(16.6)	1.2	1.3
Other income	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	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	38.8	36.1	36.3	28.1	18.7	22.3	22.7	139.3	91.7	118.1
Profit margin	9.0%	11.6%	11.2%	10.9%	9.1%	6.1%	7.1%	7.3%	10.7%	7.4%	9.0%
Taxes	(1.0)	(2.8)	(2.4)	0.2	(1.7)	1.0	0.1	(0.3)	(5.9)	(0.9)	(3.0)
Tax Rate	3.4%	7.2%	6.6%	-0.5%	5.9%	5.4%	0.3%	1.3%	4.3%	1.0%	2.5%
Profit before non-controlling Minority Income	27.2 (1.1)	36.0 1.7	33.7 (0.0)	36.5 1.6	26.4 (0.2)	19.7 1.2	22.4 (0.2)	22.4 (0.2)	133.4 2.2	90.8 0.7	115.1 8.0
GAAP Net income	26.1	37.7	33.6	38.1	26.2	20.9	22.2	22.2	135.6	91.5	123.1
Yr-to-yr Gr.	-43%	-25%	-39%	-74%	0%	-45%	-34%	-42%	-55%	-32%	34%
Non-GAAP Net Income	31.1	42.1	38.0	43.6	31.7	25.3	26.5	26.5	154.8	109.93	137.67
GAAP primary EPS	\$0.27	\$0.38	\$0.34	\$0.37	\$0.25	\$0.20	\$0.21	\$0.21	1.35	\$0.86	\$1.15
Fully diluted GAAP	\$0.26	\$0.37	\$0.33	\$0.36	\$0.25	\$0.20	\$0.21	\$0.21	1.32	\$0.85	\$1.14
Adj Non-GAAP EPS-Fully dil.	\$0.31	\$0.42	\$0.37	\$0.41	\$0.30	\$0.24	\$0.25	\$0.25	\$1.51	\$1.01	\$1.26
Yr-to-yr Gr.	-48%	-31%	-45%	-38%	-20%	-53%	-45%	-50%	-32%	-33%	25%
Primary Share Out	98.5	98.9	100.2	104.0	105.3	106.3	106.6	106.6	100.4	106.2	106.6
Fully Diluted GAAP	101.1	101.1	102.1	105.8	107.0	107.2	107.6	107.6	102.5	107.3	107.6
All in shares	107.7	107.9	108.1	108.1	108.2	109.0	109.0	109.0	108.0	108.8	109.0
EBITDA	84.3	95.5	89.1	92.7	78.8	70.1	75.3	78.9	361.6	294.5	320.8
EBITDA Margin	27%	29%	28%	28%	25%	23%	24%	25%	28%	24%	24%

BALANCE SHEET

\$ in thousands	Sept 30, 2019	June 30, 2019	Qtr-Qtr % Change	Sept 30, 2018	Yr-Yr % Change
CURRENT ASSETS					
Cash and cash equivalents	\$417,636	\$405,158	3.1%	\$464,446	-10.1%
Short term deposits	159,230	\$147,032	8.3%	0	NA
Marketable securities	146,264	\$146,893	-0.4%	143,041	2.3%
Trade accounts receivable	123,519	123,789	-0.2%	163,747	-24.6%
Inventories	187,902	174,806	7.5%	159,507	17.8%
Other current assets	21,571	22,374	-3.6%	20,967	2.9%
Total current assets	1,056,122	1,020,052	3.5%	951,708	11.0%
LONG-TERM INVESTMENTS	36,662	36,874	-0.6%	31,179	17.6%
PROPERTY AND EQUIPMENT, NET	703,569	707,122	-0.5%	639,042	10.1%
INTANGIBLE ASSETS, NET	10,800	11,279	-4.2%	15,006	-28.0%
GOODWILL	7,000	7,000	0.0%	7,000	0.0%
DEFERRED TAX & OTHER ASSETS, NET	90,269	89,171	1.2%	96,722	-6.7%
TOTAL ASSETS	1,904,422	1,871,498	1.8%	1,740,657	9.4%
CURRENT LIABILITIES					
Short term debt	64,774	45,173	43.4%	45,697	41.7%
Trade accounts payable	104,366	92,747	12.5%	114,375	-8.8%
Deferred revenue	6,539	7,975	-18.0%	10,059	-35.0%
Other current liabilities	59,065	65,904	-10.4%	72,160	-18.1%
Total current liabilities	234,744	211,799	10.8%	242,291	-3.1%
LONG-TERM DEBT					
	254,683	275,914	-7.7%	247,757	2.8%
LONG-TERM CUSTOMERS' ADVANCES	32,843	27,230	20.6%	29,978	9.6%
EMPLOYEE RELATED LIABILITIES	13,818	14,295	-3.3%	14,649	-5.7%
DEFERRED TAX LIABILITY	45,598	47,403	-3.8%	52,696	-13.5%
Total liabilities	581,686	576,641	0.9%	587,371	-1.0%
SHAREHOLDERS' EQUITY	1,322,736	1,294,857	2.2%	1,153,286	14.7%
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$1,904,422	\$1,871,498	1.8%	\$1,740,657	9.4%
Current Ratio	4.5	4.8	-6.6%	3.9	14.5%
Quick Ratio	3.7	4.0	-7.3%	3.3	13.1%
Working Capital	821,378	808,253	1.6%	709,417	15.8%
Debt Percent of Assets	17%	17%	-2.2%	17%	-0.5%
Debt to Equity	0.2	0.2	-2.6%	0.3	-5.1%
Cash and equivalents	\$723,130	\$699,083	3.4%	607,487	19.0%
Cash and equivalents per share	\$6.76	\$6.52	3.6%	\$6.07	11.5%
Debt	319,457	321,087	-0.5%	293,454	8.9%

CASH FLOW

	3-Mo	3-Mo	3-Mo	3-Mo	Year	3-Mo	3-Mo	3-Mo	3-Mo	Year	3-Mo	3-Mo	3-Mo
	31-Mar-17	30-Jun-17	30-Sep-17	31-Dec-17	2017	31-Mar-18	30-Jun-18	30-Sep-18	31-Dec-18	2018	31-Mar-19	30-Jun-19	30-Sep-19
CASH FLOWS - OPERATING ACTIVITIES													
Net profit (loss)	\$ 47,046	\$ 51,727	\$ 54,241	\$ 148,642	\$ 301,656	\$ 27,181	\$ 36,009	\$ 33,674	\$ 36,515	\$ 133,379	\$ 26,400	\$ 19,722	\$ 22,354
Income and non-cash expense items:													
Depreciation and amortization	49,698	52,389	55,014	51,310	208,411	53,977	53,493	52,764	54,157	214,391	52,014	52,853	53,203
Effect of fair value measurement on debt	6,888	4,873	(1,177)	2,281	12,865	(1,740)	(4,797)	788	(4,042)	(9,791)	4,001	2,204	3,095
Other expense (income), net	(511)	(142)	253	3,027	2,627	(22)	(1,578)	36	4,006	2,442	(17)	(428)	(266)
Changes in assets and liabilities:													
Trade accounts receivable	9,529	(17,242)	361	788	(6,564)	8,089	(18,351)	(3,767)	10,933	(3,096)	18,606	12,665	(496)
Other receivables and other current assets	(4,439)	(7,307)	2,980	445	(8,321)	3,370	5,713	(919)	3,096	11,260	(3,705)	(2,050)	(1,978)
Inventories	(1,421)	1,688	(4,636)	92	(4,277)	(2,692)	(6,713)	(7,237)	(9,702)	(26,344)	(3,395)	378	(13,276)
Trade accounts payable	(4,128)	(6,530)	4,795	(2,786)	(8,649)	(6,313)	10,222	(2,688)	(4,783)	(3,562)	(2,651)	(12,553)	12,110
Deferred revenue and customers' advances	(8,735)	(4,564)	9,378	(17,882)	(21,803)	(712)	(5,466)	35	8,768	2,625	(10,685)	(2,964)	4,178
Other current liabilities	(9,090)	12,866	(13,760)	1,765	(8,219)	(4,219)	13,355	(2,764)	(7,239)	(867)	(4,803)	2,957	(6,494)
Employee related liabilities	(257)	(234)	(274)	(2,482)	(3,247)	(387)	193	(240)	(361)	(795)	68	(29)	(32)
Deferred tax liability, net	(2,440)	(3,230)	(3,259)	(99,915)	(108,844)	(1,531)	(5,151)	(211)	148	(6,745)	(965)	(599)	337
Net cash provided by operating activities	82,140	84,294	103,916	85,285	355,635	75,001	76,929	69,471	91,496	312,897	74,868	72,156	72,735
CASH FLOWS - INVESTING ACTIVITIES													
Investments in property and equipment, net	(40,348)	(41,312)	(41,708)	(41,349)	(164,717)	(40,047)	(40,148)	(40,892)	(48,654)	(169,741)	(41,718)	(43,727)	(43,017)
Interest bearing deposits, including designated deposits	(5,118)	0	(49,869)	(64,867)	(114,736)	(14,963)	(15,488)	(4,899)	(123,126)	(158,476)	(6,726)	(27,099)	(11,573)
Net cash provided by (used in) investing activities	(45,466)	(41,312)	(91,577)	(106,216)	(279,453)	(55,010)	(55,636)	(45,791)	(171,780)	(328,217)	(48,444)	(70,826)	(54,590)
CASH FLOWS - FINANCING ACTIVITIES													
Exercise of warrants and options	12,756	14,254	1,027	3,278	31,315	658	26	21	9	714	397	0	43
Debt repayment	(11,805)	(5,655)	(15,932)	(16,863)	(50,255)	(6,656)	3,809	(43,078)	(2,924)	(48,849)	(3,074)	(7,475)	(5,606)
TPSCO dividend to Panasonic	(4,378)	0	0	0	(4,378)	0	0	0	0	0	0	0	0
Net cash used in financing activities	(3,427)	8,599	(14,905)	(13,585)	(23,318)	(5,998)	3,835	(43,057)	(2,915)	(48,135)	(2,677)	(7,475)	(5,563)
Effect of foreign exchange rate change	4,371	(91)	(630)	70	3,720	4,707	(2,909)	(3,057)	3,844	2,585	(740)	3,205	(104)
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	37,618	51,490	51,771	(34,446)	56,584	18,700	22,219	(22,434)	(79,355)	(60,870)	23,007	(2,940)	12,478
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	355,284	432,113	311,062	480,407	389,377	445,961	464,661	486,880	464,446	445,961	385,091	408,098	405,158
CASH AND CASH EQUIVALENTS - END OF PERIOD	392,902	483,603	362,833	445,961	445,961	464,661	486,880	464,446	385,091	385,091	408,098	405,158	417,636
Operating Cash Flow	\$ 103,121	\$ 108,847	\$ 108,331	\$ 205,260	\$ 525,559	\$ 79,396	\$ 83,127	\$ 87,262	\$ 90,636	\$ 340,421	\$ 82,398	\$ 74,351	\$ 78,386
Free cash flow	\$ 62,773	\$ 67,535	\$ 66,623	\$ 163,911	\$ 360,842	\$ 39,349	\$ 42,979	\$ 46,370	\$ 41,982	\$ 170,680	\$ 40,680	\$ 30,624	\$ 35,369

HISTORICAL STOCK PRICE



Source: Zacks Investment Research

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