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Zacks Small-Cap Research

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TowerJazz (TSEM-NASDAQ)

TSEM: While Mobile Platforms May Stall in 2019, 5G Should Ramp Leading to Growth in 2020

We believe that the stock could be worth $26.20 next year using industry average PE ratios given current earnings estimates.

Current Price (02/20/19)	$18.39
Valuation	**$26.20**

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 has capacity to $1.6B in sales and is serving high growth markets such as RF High Position analog, CMOS image sensors, and power management. It is reaching the end of its contract with Panasonic and is expected to receive lower revenues from them after March affecting revenue growth but possibly not profits. We believe the company will benefit greatly from the shift to 5G.

SUMMARY DATA

52-Week High	**$33.85**
52-Week Low	**$13.59**
One-Year Return (%)	**-45.2**
Beta	**1.3**
Average Daily Volume (sh)	**936,147**
Shares Outstanding (mil)	**105.0**
Market Capitalization ($mil)	**$1,931**
Short Interest Ratio (days)	**1.2**
Institutional Ownership (%)	**45**
Insider Ownership (%)	**1**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**22.7**
Earnings Per Share (%)	**5.0**
Dividend (%)	**N/A**
P/E using TTM EPS	**12.2**
P/E using 2019 Estimate	**14.7**
P/E using 2020 Estimate	**11.8**
Zacks Rank	**N/A**

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

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (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 E	305 E	320 E	332 E	1,267 E
2020					1,348 E

Earnings Per Share
(Adjusted non-GAAP Diluted)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (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	$0.31 E	$0.28 E	$0.33 E	$0.39 E	$1.25 E
2020					$1.56 E

Zacks Projected EPS Growth Rate - Next 5 Years % **6**

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WHAT'S NEW

TowerJazz reported Q4 revenues of $334 million versus $358 million a year ago (down 7%.) This was near the lower end of its revised Q4 revenue guidance of $340 million plus or minus 5% ($323 million-$357 million.) Management says that business has been affected by current macroeconomic uncertainties that are driving tighter inventory management. The RF business was hard hit in the wireless sector while infrastructure continues to grow.

The company guided to a midpoint revenue range of $310 million plus or minus 5% for Q1 2019. New terms in TowerJazz's agreement with Panasonic are expected to go into effect after March 31, 2019. These terms will reduce the amount of revenues paid by Panasonic to the joint venture and we expect that to amount to be approximately $20 million dollars per quarter starting in Q2 2019. The company however believes that these new terms, while reducing revenues, should produce the same net income for TowerJazz from reduced taxes and the elimination of dividend payments to Panasonic. In 2017 TowerJazz paid Panasonic a $4.4 million dividend.

Gross margin for the fourth quarter was 22.7% versus 25.0% a year ago and 22.5% in Q3 2018. Gross margin is expected to improve with sequential sales increases, as higher margin SiG capacity increases, and higher margin 300mm product ramps.

R&D costs for the quarter were flat with last year and M, G&A was $514,000 higher than last year and $1.2 million higher sequentially. The operating margin declined three percentage points year over year. On a dollar basis it was down 26%.

Financing expense was $3.9 million compared to $2.3 million last year and $2.3 million in Q3. During the quarter TowerJazz repaid another $2.9 million in debt.

After getting a tax rebate of $183,000 and a return of $1.6 million in losses for minority interest, GAAP net income was $38 million versus $147 million, while non- GAAP net income was $44 million versus $60 million. In last year's numbers there were sizable one-time items comprised of $82 million benefit from an income tax benefit resulting from an Israeli deferred tax asset realization following a valuation allowance release. And $13 million due to an income tax benefit related to the U.S. 2017 tax reform.

Diluted GAAP EPS was $0.36 per share versus $1.40 last year. Adjusted non-GAAP EPS declined to $0.41 versus $0.58 a year ago. Average diluted shares for the quarter were 105.6 million down 1% from last year and now stand 105.0 million shares.

EBITDA for the fourth quarter of 2018 was $93 million compared to $89 million in Q3 and $107 million a year ago.

Balance Sheet and Capacity

The company has **cash, short-term deposits, and marketable securities of $641 million** compared to $607 million last quarter as it reduced debt by $26 million to $267 million versus $293 million last quarter.

Its quick ratio is high at 4.0xs and it has $784 million in working capital. The company is stockpiling cash to increase future capacity internally as well as possibly through acquisition. Customers are adopting 300mm at a pace that TSEM expects that by the third quarter of 2019 it may need to make a decision as to how to add additional capacity by in order to meet 2020 and 2021 demand.

The company has a goal to reach $3.5 billion in revenues. It believes that it can grow organically to $2.3 billion to $2.5 billion with all its current and planned initiatives including the Takoma project, a new 8-inch semiconductor fab in Nanjing, China. The rest is expected to come from acquisitions. The Chinese government has taken major ownership of the project in China and TowerJazz has just gotten its first milestone payment of $10 million for services within the project scope.

The current fab capacity will allow the company to grow revenues and improve margins through capacity utilization. TowerJazz continues to increase capacity at its current fabs. The San Antonio factory, Fab 9, was at about 55% utilization, which is a 5-point reduction from previous quarter mainly due to some mobile related foundry weakness. Blended TPSCo factories had an average of about 50% utilization, but were up 12 points at the Uozu 300 millimeter foundry. The company targets 85% utilization at its fabs. Its current fabs were at the following capacity utilization at quarter end:

	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Fab1 Migdal Haemek, Israel 6"	87%	90%	91%	93%	90%	95%	90%	90%
Fab2 Migdal Haemek, Israel 8"	89%	85%	86%	85%	80%	85%	80%	76%
Fab3 Newport Beach, California 8"	87%	86%	81%	76%	80%	85%	85%	90%
Three TPSCo factories	50%	50%	58%	60%	50%	50%	60%	55%
San Antonio, 8"	60%	60%	60%	60%	55%	60%	50%	50%

Results for the 2018 Year

For the 2018 year the company generated $1.3 billion in revenues down from $1.4 billion a year ago or 6%. This is the first time the company has experienced down revenues and we believe it is solely because of weakness in the mobile handset business combined with the company's decision to move away from lower margin SOI platforms.

	% of Total Revenues			$ in Millions			
	2016	**2017**	**2018**	**2016**	**2017**	**2018**	**% Change**
RF	45%	29%	27%	$562.3	$402.3	$356.0	-11.5%
Infrastructure		8%	11%		111.0	143.4	29.2%
Wireless		21%	16%		291.3	212.6	-27.0%
Power Management	15%	30%	34%	187.4	420.0	438.0	4.3%
Image Sensor	25%	15%	18%	312.4	208.1	234.7	12.8%
Mixed-signal Other	0%	26%	21%	0.0	360.7	273.8	-24.1%
Total	100%	100%	100%	1249.6	1387.3	1304.0	-6.0%

RF Group

Within RF, SiGe continues to grow. It is being used in data centers, 5G infrastructure, automotive radar, mobile handset, and IoT markets. Capacity continues to be added in San Antonio and Newport Beach fabs and the company expects that SiGe revenue capability should increase approximately 40% (or $70 million) by Q4 2019 compared to the $50 million achieved in Q4 2017. During the quarter the company also began production shipments of its silicon photonics platform that integrates optical detectors, waveguide and modulators on a single die. The size and cost advantage of silicon photonics over discrete should allow it to take market share.

In the RF wireless business, revenues declined as the company decided to decline lower performance SOI platforms to allocate capacity to higher margin silicon germanium in Newport Beach. While its is expected that 2019 mobile revenues should be predominantly flat to 2018, they should yield much higher margins due to product mix. In 2020, revenues should again grow with the acceleration of 5G spend.

Power Management

In 2018 this business grew from 30% of total sales to 34% and grew 4% from $420 million to $438 million. This past year TowerJazz released two new power management IC platforms:

A 300 millimeter 65 nanometer BCD platform, which support power management ICs up to 16 volts and target mobile PMICs and load switches, battery management ICs, DC to DC converters with end applications, spanning automotive, mobile, consumer and computing.

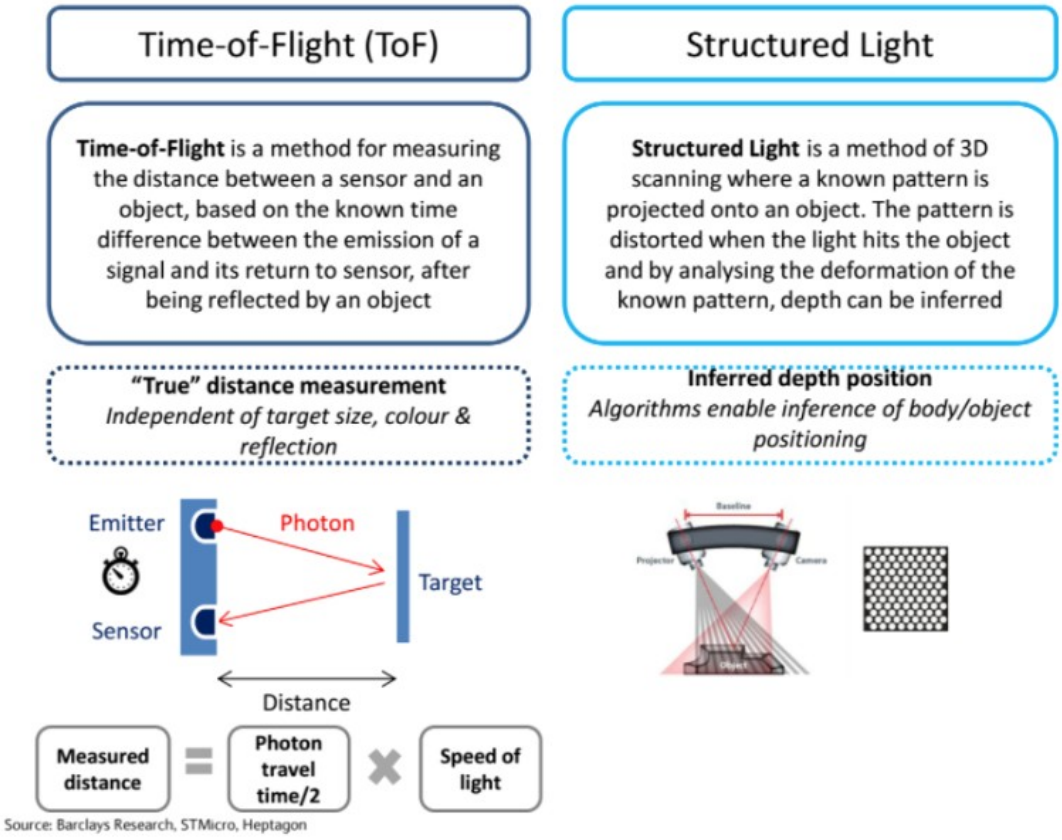
A reserve technology used for 48 volt architectures such as automotive and data centers.

Sensors Business

In 2018, sensors were 18% of total revenue or approximately $230 million compared with 15% in 2017 or approximately $210 million. Revenues were up 13% year over year. These sensors are sold into the industrial, medical, security and high-end professional markets.

In 2019, new products will ramp production and be used in machine vision, facial recognition, 3D mapping and augmented, and virtual reality. TowerJazz is also gaining sales in the medical X-ray market, particularly with large panel dental and medical CMOS detectors.

Going forward two areas of growth are In terms of upcoming growth drivers are Time of Flight (ToF) and structured light 3D sensing technologies.



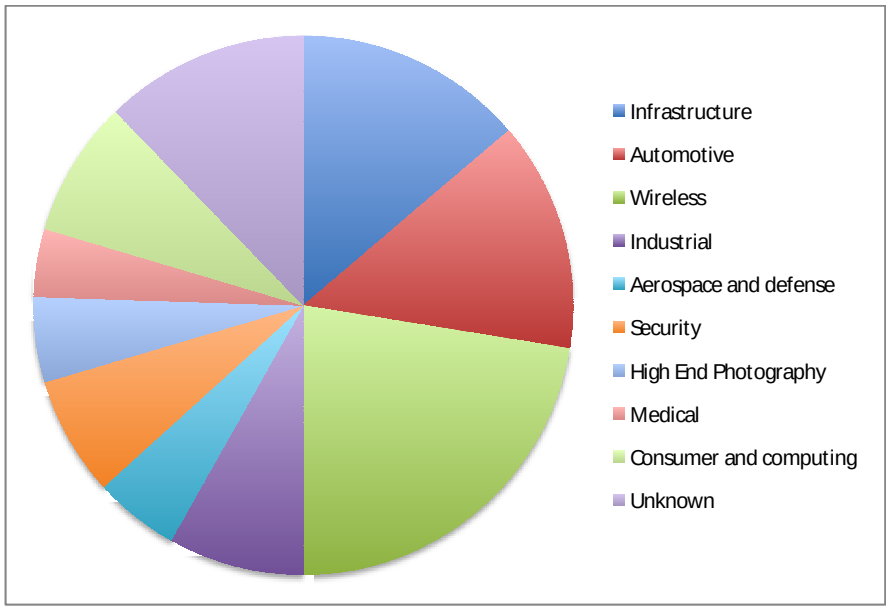
These technologies are used in mobile for facial recognition, front looking 3D mapping, commercial and augmented reality, and virtual reality.

Mixed Signal and Other

This category declined in 2018 from 26% of revenues to 21% or from $360 million to $275 million. The mixed signal products are sold to markets including aerospace and defense, industrial, IoT, computing and consumer.

While the company cannot track its products by end user market in all situations, it can in most. According to TowerJazz its products are widely used and not overly dependent on any one use as shown in the pie chart below.

Chart 1. 2018 Revenues By End User Market



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 handset sales.
- 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.
- 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.
- Having Panasonic as a partner gives the company increased stature in the industry and has attracted new customers who have a favorable disposition to working with a trusted and known company with high quality product and leading edge expertise in imaging. However TowerJazz expects to receive less revenue from Panasonic going forward and this has effected earnings expectations.

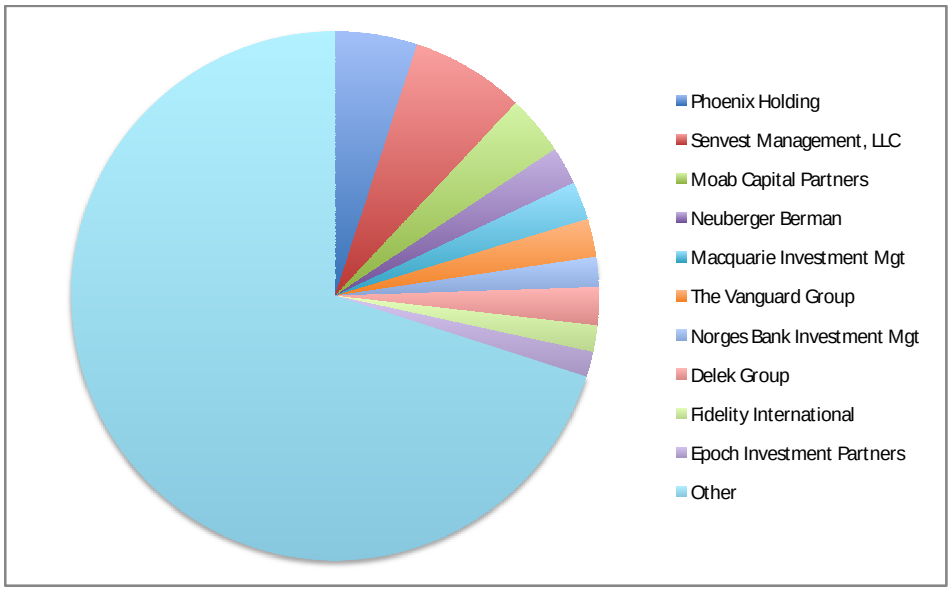
- The major long-term risk to the stock is the need to add capacity, which is currently $1.6 billion in revenue. The company can do this by increasing current fab capacities, buying a new fab either outright or in a joint venture. It has recently partnered with Tacoma to create capacity in China.
- We believe the stock is currently undervalued on a PE basis versus its peers, as well as by PE to long-term growth rate. Peer companies trade at an average PE of 16.8 times 2019 estimates. At an industry average PE, TSEM's stock could trade at $26.20 per share. However investors may be waiting to see the company return to revenue growth, which may not happen until Q4 of 2019 at the earliest.

VALUATION

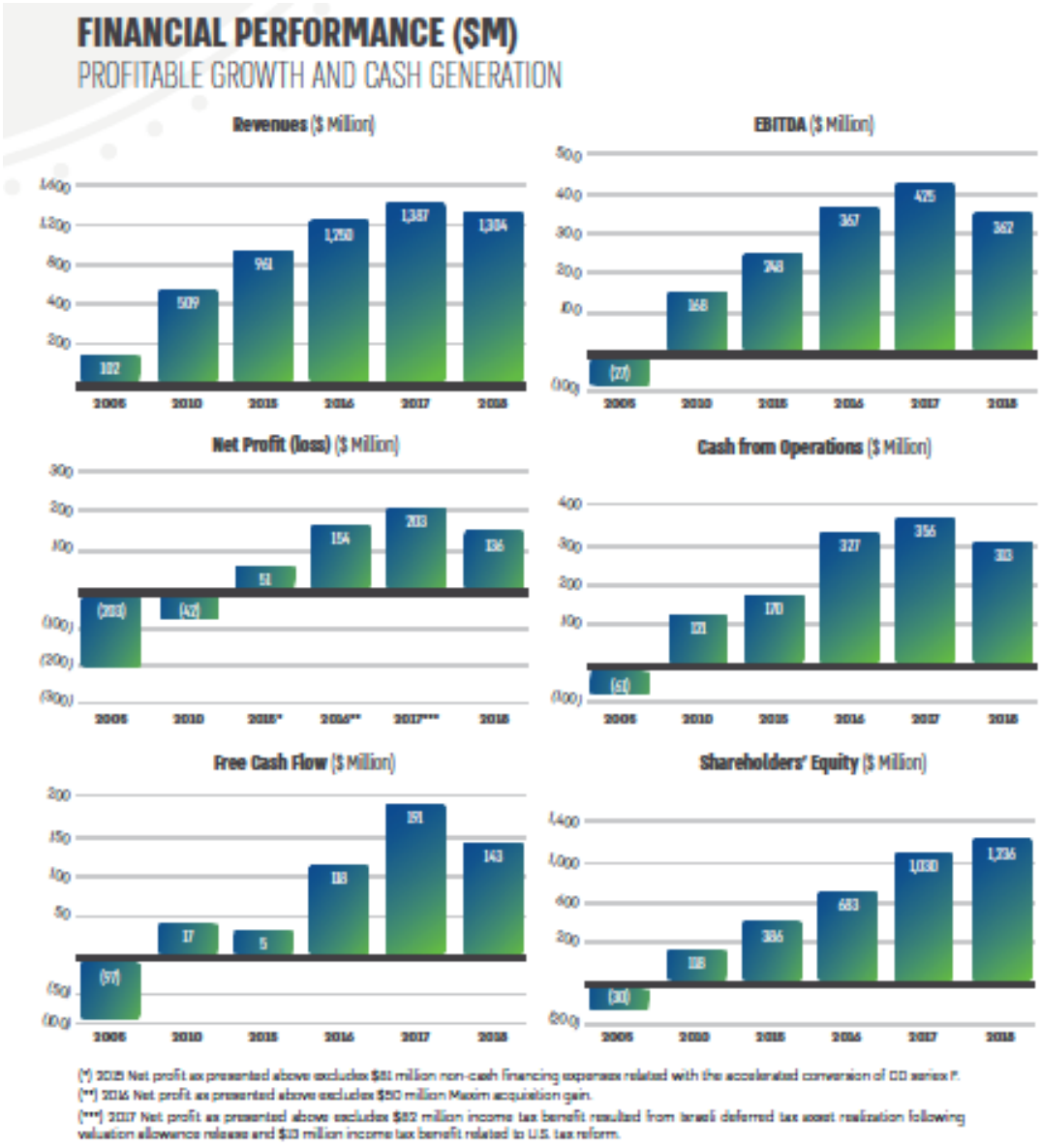
Our Fully diluted non-GAAP EPS estimate for 2018 for TSEM is now $1.25 and our 2019 EPS estimate is $1.56. Using 2019 estimates, TSEM could be worth 16.8 times $1.56 or $26.20 per share by next year. The biggest risks to the stock is that the mobile market continues its weakness beyond the expected time frame, the ramp to 300 mm technology is impeded or constrained, customer components continue to be in short supply, or that an acquisition of a fab or a joint venture could incur short-term earnings dilution. We also need more detail on the effect of Panasonic agreement changes on the income statement, which will start in Q2 2019.

	Ticker	EPS 18E	EPS 19E	Price	PE 2018	PE 2019E
Company						
Semiconductor Manufacturing	SMI	0.02	0.01	5.04	252.0	504.0
Taiwan Semiconductor	TSM	2.23	2.31	38.81	17.4	16.8
United Microelectronics	UMC	0.09	0.00	1.84	19.5	NM
Average					18.5	16.8

OWNERSHIP



Source: E*TRADE and SEC filings



(*) 2015 Net profit as presented above excludes $81 million non-cash financing expenses related with the accelerated conversion of CO series F.
(**) 2016 Net profit as presented above excludes $50 million Maxim acquisition gain.
(***) 2017 Net profit as presented above excludes $82 million income tax benefit resulted from Israeli deferred tax asset realization following valuation allowance release and $13 million income tax benefit related to U.S. tax reform.

INCOME STATEMENT

	March Q1 17	June Q2 17	Sept Q3 17	Dec Q4 17	March Q1 18	June Q2 18	Sept Q3 18	Dec Q4 18	March Q1 19E	June Q2 19E	Sept Q3 19E	Dec Q4 19E	2017	2018	2019E	2020E
REVENUE	330.1	345.1	354.6	357.6	312.7	335.1	322.6	333.6	310.0	305.0	320.0	332.0	1,387.3	1,304.0	1,267.0	1,348.2
Yr-to-yr Gr.	19%	13%	9%	5%	-5%	-3%	-9%	-7%	-1%	-9%	-1%	0%	11%	-6%	-3%	6%
OPERATING EXPENSES																
Cost of goods sold	245.3	254.0	265.4	268.3	246.5	256.6	250.0	258.0	243.8	240.8	249.8	257.0	1,033.0	1,011.1	991.4	1,040.2
Gross Margin	84.8	91.1	89.1	89.4	66.2	78.5	72.6	75.6	66.2	64.2	70.2	75.0	354.3	292.9	275.6	308.1
% of Sales	25.7%	26.4%	25.1%	25.0%	21.2%	23.4%	22.5%	22.7%	21.4%	21.0%	21.9%	22.6%	25.5%	22.5%	21.8%	22.9%
R&D	15.8	16.4	17.1	18.4	18.3	18.2	18.2	18.4	18.3	18.5	18.6	18.7	67.7	73.1	74.1	75
M, G&A	16.2	17.2	16.8	16.5	16.0	16.1	15.8	17.0	16.0	16.0	16.0	16.0	66.8	65.0	64.0	64
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	0.0	0.0	0.0	0
Tot Operating Exp.	32.0	33.7	33.9	34.9	34.3	34.3	34.1	35.4	34.3	34.5	34.6	34.7	134.5	138.0	138.1	139.0
Operating Income	52.8	57.4	55.2	54.5	31.9	44.2	38.6	40.2	31.9	29.7	35.6	40.3	219.8	154.9	137.5	169.1
Operating Margin	16%	17%	16%	15%	10%	13%	12%	12%	10%	10%	11%	12%	16%	12%	11%	13%
Yr-to-yr Gr.	71%	43%	13%	-1%	-40%	-23%	-30%	-26%	0%	-33%	-8%	0%	25.5%	-29.5%	-9%	16%
Net Interest	(2.2)	(2.1)	(1.8)	(1.8)	(0.6)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(7.8)	(0.6)	0.0	0.0
Other non-cash financing expense	(2.0)	(1.1)	(2.3)	(2.3)	(3.2)	(7.0)	(2.5)	(3.9)	(2.0)	(2.0)	(2.0)	(2.0)	(7.6)	(16.6)	(8.0)	(6.0)
Other income	0.5	0.1	(0.3)	(3.0)	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	(2.6)	1.6	0.0	0.0
Gain from acqusiition	0.0	0.0	0.0	0.0	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	49.0	54.4	50.9	47.4	28.1	38.8	36.1	36.3	30.0	27.7	33.6	38.3	201.8	139.3	129.6	163.1
Profit margin	14.9%	15.8%	14.4%	13.3%	9.0%	11.6%	11.2%	10.9%	9.7%	9.1%	10.5%	11.5%	14.5%	10.7%	10.2%	12.1%
Taxes	(2.0)	(2.7)	3.3	101.2	(1.0)	(2.8)	(2.4)	0.2	(1.6)	(1.5)	(1.8)	(2.1)	99.9	(5.9)	(7.0)	(5.5)
Tax Rate	4.1%	4.9%	-6.5%	213.6%	3.4%	7.2%	6.6%	-0.5%	5.4%	5.4%	5.4%	5.4%	-49.5%	4.3%	5.4%	3.4%
Profit before non-controlling	47.0	51.7	54.2	148.6	27.2	36.0	33.7	36.5	28.3	26.2	31.8	36.2	301.7	133.4	122.6	157.6
Minority Income	(1.5)	(1.7)	1.0	(1.4)	(1.1)	1.7	(0.0)	1.6	(1.0)	(1.0)	(1.0)	(1.0)	(3.6)	2.2	(4.0)	(4.0)
GAAP Net income	45.5	50.0	55.2	147.2	26.1	37.7	33.6	38.1	27.3	25.2	30.8	35.2	298.0	135.6	118.6	153.6
Yr-to-yr Gr.	-31%	30%	8%	205%	-43%	-25%	-39%	-74%	5%	-33%	-9%	-7%	46%	-55%	-13%	30%
Non-GAAP Net Income	52.1	54.6	61.2	59.9	31.1	42.1	38.0	43.6	32.3	29.5	35.1	40.7	227.76	154.8	135.15	169.18
GAAP primary EPS	$0.48	$0.52	$0.56	$1.50	$0.27	$0.38	$0.34	$0.37	$0.26	$0.24	$0.29	$0.34	$3.08	1.35	$1.13	$1.46
Fully diluted GAAP	$0.45	$0.49	$0.54	$1.40	$0.26	$0.37	$0.33	$0.36	$0.26	$0.24	$0.29	$0.33	$2.90	1.32	$1.12	$1.45
Adj Non-GAAP EPS-Fully dil.	**$0.50**	**$0.54**	**$0.60**	**$0.58**	**$0.31**	**$0.42**	**$0.37**	**$0.41**	**$0.31**	**$0.28**	**$0.33**	**$0.39**	**$2.21**	**$1.51**	**$1.25**	**$1.56**
Yr-to-yr Gr.	46%	28%	18%	9%	-48%	-31%	-45%	-38%	-16%	-43%	-22%	-19%	23%	-32%	-17%	25%
Primary Share Out	93.9	96.4	97.9	98.3	98.5	98.9	100.2	104.0	105.0	105.0	105.0	105.0	96.6	100.4	105.0	105.0
Fully Diluted GAAP	104.9	105.6	106.4	106.8	101.1	101.1	102.1	105.8	105.8	105.8	105.8	105.8	105.9	102.5	105.8	105.8
All in shares	107.2	107.4	107.7	107.7	107.7	107.9	108.1	108.1	108.1	108.1	108.1	108.1	107.7	108.0	108.1	108.1
EBITDA	**101.0**	**108.3**	**108.7**	**107.3**	**84.3**	**95.5**	**89.1**	**92.7**	**84.3**	**81.0**	**89.0**	**92.0**	**425.3**	**361.6**	**341.5**	**373.1**
EBITDA Margin	31%	31%	31%	30%	27%	29%	28%	28%	27%	27%	28%	28%	31%	28%	27%	28%
Yr-to-yr Gr.	30%	24%	12%	2%	-17%	-12%	-18%	-14%	0%	-15%	0%	-1%	16%	-15%	-3%	3%

BALANCE SHEET

$ in thousands	Dec. 31, 2018	Sept 30, 2018	Qtr-Qtr % Change	Dec. 31, 2017	Yr-Yr % Change
CURRENT ASSETS					
Cash and cash equivalents	**$385,091**	**$464,446**	-17.1%	**$445,961**	-13.6%
Short term deposits	**$120,079**	**$0**	NM	**$0**	NM
Marketable securities	**135,850**	**$143,041**	-5.0%	**113,874**	19.3%
Trade accounts receivable	153,409	163,747	-6.3%	149,666	2.5%
Inventories	170,778	159,507	7.1%	143,315	19.2%
Other current assets	22,752	20,967	8.5%	21,516	5.7%
Total current assets	**987,959**	**951,708**	3.8%	**874,332**	13.0%
LONG-TERM INVESTMENTS	35,945	31,179	15.3%	26,073	37.9%
PROPERTY AND EQUIPMENT, NET	657,234	639,042	2.8%	635,124	3.5%
INTANGIBLE ASSETS, NET	13,435	15,006	-10.5%	19,841	-32.3%
GOODWILL	7,000	7,000	0.0%	7,000	0.0%
DEFERRED TAX & OTHER ASSETS, NET	88,404	96,722	-8.6%	111,269	-20.5%
TOTAL ASSETS	1,789,977	1,740,657	2.8%	1,673,639	7.0%
CURRENT LIABILITIES					
Short term debt	**10,814**	**45,697**	-76.3%	**105,958**	-89.8%
Trade accounts payable	104,329	114,375	-8.8%	115,347	-9.6%
Deferred revenue	20,711	10,059	105.9%	14,338	44.4%
Other current liabilities	67,867	72,160	-5.9%	66,730	1.7%
Total current liabilities	**203,721**	**242,291**	-15.9%	**302,373**	-32.6%
LONG-TERM DEBT	**256,669**	**247,757**	3.6%	**228,723**	12.2%
LONG-TERM CUSTOMERS' ADVANCES	28,131	29,978	-6.2%	31,908	-11.8%
EMPLOYEE RELATED LIABILITIES	13,898	14,649	-5.1%	14,662	-5.2%
DEFERRED TAX LIABILITY	51,353	52,696	-2.5%	66,267	-22.5%
Total liabilities	553,772	587,371	-5.7%	643,933	-14.0%
SHAREHOLDERS' EQUITY	1,236,205	1,153,286	7.2%	1,029,706	20.1%
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$1,789,977	$1,740,657	2.8%	$1,673,639	7.0%
Current Ratio	4.8	3.9	23.5%	2.9	67.7%
Quick Ratio	4.0	3.3	22.7%	2.4	65.9%
Working Capital	784,238	709,417	10.5%	571,959	37.1%
Debt Percent of Assets	15%	17%	-11.4%	20%	-25.3%
Debt to Equity	0.2	0.3	-15.0%	0.3	-33.4%
Cash	641,020	607,487	5.5%	559,835	14.5%
Cash per share	$6.16	$6.07	1.6%	$5.69	8.2%
Debt	267,483	293,454	-8.9%	334,681	-20.1%

CASH FLOW

	3-Mo 31-Mar-17	3-Mo 30-Jun-17	3-Mo 30-Sep-17	3-Mo 31-Dec-17	Year 2017	3-Mo 31-Mar-18	3-Mo 30-Jun-18	3-Mo 30-Sep-18	3-Mo 31-Dec-18	Year 2018
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
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
Financing expense associated with deb. series F	0	0	0	0	0	0	0	0	0	0
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)
Other expense (income), net	(511)	(142)	253	3,027	2,627	(22)	(1,578)	36	4,006	2,442
Gain from acquisition	0	0	0	0	0	0	0	0	0	0
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)
Other receivables and other current assets	(4,439)	(7,307)	2,980	445	(8,321)	3,370	5,713	(919)	3,096	11,260
Inventories	(1,421)	1,688	(4,636)	92	(4,277)	(2,692)	(6,713)	(7,237)	(9,702)	(26,344)
Trade accounts payable	(4,128)	(6,530)	4,795	(2,786)	(8,649)	(6,313)	10,222	(2,688)	(4,783)	(3,562)
Deferred revenue and customers' advances	(8,735)	(4,564)	9,378	(17,882)	(21,803)	(712)	(5,466)	35	8,768	2,625
Other current liabilities	(9,090)	12,866	(13,760)	1,765	(8,219)	(4,219)	13,355	(2,764)	(7,239)	(867)
Employee related liabilities	(257)	(234)	(274)	(2,482)	(3,247)	(387)	193	(240)	(361)	(795)
Deferred tax liability, net	(2,440)	(3,230)	(3,259)	(99,915)	(108,844)	(1,531)	(5,151)	(211)	148	(6,745)
Other long-term liabilities	0	0	0	0	0	0	0	0	0	0
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**
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)**
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)
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)
CASH FLOWS - FINANCING ACTIVITIES										
Exercise of warrants and options	12,756	14,254	1,027	3,278	31,315	658	26	21	9	714
Proceeds from long-term loans	0	0	0	0	0	0	0	0	0	0
Debt repayment	(11,805)	(5,655)	(15,932)	(16,863)	(50,255)	(6,656)	3,809	(43,078)	(2,924)	(48,849)
Debenture repayment	0	0	0	0	0	0	0	0	0	0
TPSCo dividend to Panasonic	(4,378)	0	0	0	(4,378)	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)
Effect of foreign exchange rate change	4,371	(91)	(630)	70	3,720	4,707	(2,909)	(3,057)	3,844	2,585
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)
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
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
Operating Cash Flow	$ 103,121	$ 108,847	$ 108,331	$ 205,260	$ 525,559	$ 79,396	$ 83,127	$ 87,262	$ 90,636	$ 340,421
Free cash flow	$ 62,773	$ 67,535	$ 66,623	$ 163,911	$ 360,842	$ 39,349	$ 42,979	$ 46,370	$ 41,982	$ 170,680

HISTORICAL STOCK PRICE



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