Zacks Small-Cap Research

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TowerJazz

(TSEM-NASDAQ)

TSEM: OUTPERFORM

Raising Price Target to $20 As Margins Improve

OUTLOOK

TowerJazz (formerly Tower Semiconductor) is a pure-play semiconductor wafer foundry that manufactures SiGe, MEMS, RF, embedded flash-based memory, analog/mixed-signal, and CMOS image-sensor devices. Its recent joint venture agreement with Panasonic should add $400m in new consolidated annual revenues. Additionally, with the closing of a fab, increased capacity utilization and lower costs should be a boom to earnings in 2015 and beyond.

Current Recommendation	**Outperform**
Prior Recommendation	Neutral
Date of Last Change	02/23/2012
Current Price (11/13/14)	$11.04
Target Price	**$20**

SUMMARY DATA

52-Week High	**$12.03**
52-Week Low	**$3.86**
One-Year Return (%)	**138.45**
Beta	**1.33**
Average Daily Volume (sh)	**706,957**
Shares Outstanding (mil)	**51**
Market Capitalization ($mil)	**$562**
Short Interest Ratio (days)	**4.03**
Institutional Ownership (%)	**19**
Insider Ownership (%)	**1**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**12.6**
Earnings Per Share (%)	**-19.3**
Dividend (%)	**N/A**
P/E using TTM EPS	**6.7**
P/E using 2014 Estimate	**6.3**
P/E using 2015 Estimate	**5.9**
Zacks Rank	**3**

Risk Level	**Above Average**
Type of Stock	**Small-Blend**
Industry	**Elect. Comp-Semi**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2012	168 A	140 A	176 A	148 R	639 R
2013	113 A	125 A	133 A	135 A	505 A
2014	133 A	234 A	226 A	236 E	829 E
2015					970 E

Earnings per Share
(Non-GAAP Fully Diluted)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2012	$0.68 A	$0.90 A	$0.90 A	$0.44 R	$2.65 A
2013	$0.15 A	$0.21 A	$0.25 A	$0.30 A	$0.97 A
2014	$0.30 A	$0.41 A	$0.40 A	$0.43 E	$1.53 E
2015					$1.88 E

Income Statement uses fully diluted shares outstanding

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WHATS NEW

Q3 Continues On Track With Slight Beat, Higher Gross Margins

This third quarter 2014 continued the high growth afforded by the new joint venture with Panasonic, now in its second quarter. Revenues were up 70% to $226 million versus our estimate of $223 million and $133 million last year before the joint venture. It was down $11 million sequentially as Micron revenues disappeared completely, but due to improved margins and closing of Nishiwaki, was more profitable on an operating income basis in Q3 than Q2. Fully diluted non-GAAP EPS came in at $0.40 versus $0.21 last year and $0.41 in Q2. We had forecasted $0.38. Sequentially the biggest difference in profitability is the reduction of the loss at the Panasonic joint venture (TPSC). The loss was added back was a $4.2 million difference sequentially.

The company guided a revenue range of $223 to $247 million with a mid point of $235 million. This is lower than our forecast of $240 million, but due entirely to the dollar yen exchange range and while it reduces revenues, the currency exchange should not reduce earnings due to natural hedging.

The most notable improvement was the increase in gross margin to 30% from 26.7% in Q2 but similar to the 29.8% a year ago. With the closing of Nishiwaki, gross margins should continue to improve this quarter and beyond. Near term because of the fab sale, and long term as capacity at TPSC is filled, as all incremental non-Panasonic revenues will be at much higher margins.

Now that the company has two quarters under its belt at TPSC, it has much better insights into prospects and its competitive advantage. We are heartened by three main drivers to growth in this venture in addition to general market growth.

- The first is that customers are being drawn to the business because of the outstanding reputation of the Japanese fabs for quality.
- Second is that Panasonic is a leader in imaging and it has only one competitor in certain products and that is Sony. As a result many competitors are attracted to this source for high quality imaging for smartphones, tablets and high end 4K and 3D technology.
- Third there is a trend toward using foundries rather than in-house particularly when moving to products that require great investment and initially require low volumes. In this case it is easier to go to TowerJazz at least until volumes make the large investment cost effective.

Interestingly, although Panasonic competes with many companies, the joint venture has not found that to be an obstacle as TPSC’s customer are chip level and in turn sell to the systems manufacturers or Integrated Device Manufacturers (IDM) that would compete with Panasonic.

Forecast for Q4

We are fine-tuning our Q4 model and 2014 Year given the yen currency exchange rates, and slightly higher interest expenses and gross margins than expected. We are now looking for revenues of $236 million and keeping our fully diluted non-GAAP EPS estimate of $0.43. The new revenue estimate and with the slight beat this quarter moves the annual number up to $829 million in revenues up 64% and a fully diluted non-GAAP number of $1.53 up 57% from last year.

Forecast for 2015

We are forecasting **revenues to reach $970 million in 2015.** This forecasted is based on 20% internal growth in the TSEM legacy business (minus the lost Micron revenues) combined with the addition of $360-420 million in annualized revenue from Panasonic and an additional new business landed for the TPS joint venture. The big story for 2015 however, is the drastically increased margins as the result of the closing of the Nishiwaki plant which should take $130 million out of costs as all production is shifted and the plant shut down. Additionally we expect improved margins from capacity utilization and higher margin product mix. The company believes it will be free cash flow positive and should need to raise no new capital. At this time we expect no changes that will increase shareholder dilution. The company believes that is will not reach full capacity until 2017 which should give investors some breathing room and give the company the chance to pay down debt.

INVESTMENT THESIS

- The company is showing high growth due to its new joint venture with Panasonic, which should expand margins and multiples.
- The closing of the Nishiwaki fab should greatly improve profitability and boost margins considerably in 2015.
- The new fab capacity will allow the company to double revenues and improve margins through capacity utilization. Capacity should be sufficient until 2017, giving the company breathing room to pay off debt and reap profits.
- Having Panasonic as a partner will give the company increased stature in the industry and attract 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 and thus should increase sales.
- The stock trades at a PE multiple of less than 6X 2015 fully diluted non-GAAP EPS despite organic growth of 30% and EPS growth expected for next year of over 20%. Its enterprise value to sales is also below industry average at only.
- We believe that the stock could move to $20 based on peer values by next year and rate the stock a buy.

Business Update by Product Line

The top ten customers (non-Panasonic) grew their business 33% over last year, versus 40% growth in Q2 for this group. In Q3 masks into the fab were 6,100 up 11% from Q2 2014, and 30% from last year. Design wins were also at record highs. This portends strong revenues in 2015 and beyond. TPSCo, the joint venture, won five new projects expected to bring in $40 million in revenues in 2016 and $60 million in 2017. Added to Q2 wins, this totals $100m in revenue in 2016 and $140m in 2017.

CMOS Image Sensors (CIS)

This business continues to be strong, and the company is even pursuing several new areas. Standard digital still and video cameras are shrinking quickly while high-end smartphones camera capability is increasing and now has comparable quality. In the high-end, mirror-less professional cameras with true DSLR quality with interchangeable lens on small lightweight cameras is also fueling growth.

Cinematography is now standardizing on super high definition Super HD which films in 4k resolution. IDC believes that 4K will be adopted faster than HD did and by the end of 2015, 4k will be a standard in high-end smartphones, and by 2016 there will be adoption in TVs and tablets. Panasonic is a leader in this technology. 3-D gesture control is also a growth market and Tower is a leader. 3D is used not only gaming consoles, but PC and tablets. It plans to be serving the market leaders and we look for some announcements after the Consumer Electronics Show in January.

TOPS Business

Tower's TOPS business transfers customers existing process flows to Tower so that these IDM customers can close existing factories or go fabless rather than building in-house. In past quarter 40 new products moving in and had its first production ramp active engagements with four customers.

Mixed Signal CMOS

Low power and low leakage for Internet of things sensors and LED lighting are driving growth in this product line.

RF High Precision Analog unit for Tower is driven by the wireless market and network infrastructure. It builds front-end RF components to and from antennae that are switches, power amplifier, load noise amplifiers and tuning elements. In addition to benefitting from the growth in smartphones, there are now more RF front-end modules per phone accelerating demand.

Update on Joint Venture with IBM in India

This venture continues on track as the company awaits a response from the Indian government. It has submitted three tiers of applications and has gotten a positive response from the first two and awaits a response on the last one. The company is keeping this project out of projections for now until there is more substantial information.

VALUATION

We have valued TowerJazz versus other foundry companies using a multiple of enterprise value to sales. As shown on the chart below, the average company is trading at a valuation of 1.4 to 1.5 times 2014 estimated revenues and last twelve-month sales respectively. In order to compare apple-to-apple though, we have taken out the 49% of revenues afforded to the Panasonic joint venture that TowerJazz does not own. If we estimate that approximately half of next year's revenues will be in the JV that reduced the 2015 revenue number to $772 million.

Foundary Companies

	Ticker	Revenue		EBIDTA	Enterprise Value / Sales		Included
Company		2014E	LTM	Margin	2014E	LTM	in Average?
Advanced Semiconductor	ASX	$8,420	$7,890	21%	1.3x	1.4x	y
Semiconductor Manufacturing	SMI	$2,030	$1,980	34%	1.8x	1.9x	y
Taiwan Semiconductor	TSM	$24,770	$22,190	62%	0.5x	0.5x	n
United Microelectronics	UMC	$4,570	$4,320	34%	1.2x	1.3x	y
Average				**30%**	**1.4x**	**1.5x**	

	Revenue		EBITDA	Enterprise Value / Sales		Valuation Range	
	2015E	LTM	Margin	2015E	LTM	Low	High
Tower Jazz	**$772**	**$633**	**17.50%**	**1.4x**	**1.5x**	**$958**	**$1,115**
YoY growth	**23%**						

Conclusion of Enterprise Value	**$1,036,542,266**
Market Value	**$826,748,266**
Shares Outstanding	53,200,000
Price per Share	**$15.54**

To calculate TSEM's enterprise value requires we subtract the cash on the balance sheet and add back the short and long-term debt. As of September 30, 2014, that would be $1 billion - $195 million in cash and equivalents + $405 million in debt. Since the company no longer separates the debentures from long-term debt, we are using primary shares since diluted shares would be double counting the converts.

Using a comparable valuation of 1.4 to 1.5 times sales, and looking at 2015 adjusted sales; we come up with a value of $15.54 per share that is 41% higher than today's price.

Valuation by PE Multiple versus Comparables

Another way to value TSEM is by looking at PE multiple versus other foundry companies. Using the same group of companies as above we see the average PE is 17.1 times. Were we to apply that multiple to TSEM's estimated 2014 non-GAAP EPS of $1.53; this would result in a valuation of $26.

Foundary Companies

Company	EPS 14	EPS 15	Price	PE 2014	PE 2015	Growth Rate
Advanced Semiconductor	$0.49	$0.52	$6.00	12.2	11.5	6%
Semiconductor Manufacturing	0.23	0.23	5.16	22.4	22.4	0%
Taiwan Semiconductor	1.64	1.69	22.06	13.5	13.1	3%
United Microelectronics	0.14	0.17	2.15	15.4	12.6	21%
Average				17.1	16.0	8.2%

Using a midpoint of the two methods results in a blended valuation of $20, which we believe is a reasonable target price for the stock.

	Dec Q4 12R	March Q1 13	June Q2 13	Sept Q3 13	Dec Q4 13	March Q1 14A	June Q2 14A	Sept Q3 14A	Dec Q4 14E	March Q1 15E	2010	2011	Non-GAAP 2012	Non-GAAP 2013	Non-GAAP 2014E	Non-GAAP 2015E
REVENUE																
Net Revenue	147.6	112.6	125.2	$132.6	134.6	132.7	234.1	226.0	236.0	228.0	509.3	611.0	638.8	505.0	828.7	970.0
Yr-to-yr Gr.	6%	-24%	11.0%	6.0%	-9%	18%	87%	70%	75%	72%	70%	20%	5%	-21%	64%	17%
OPERATING EXPENSES																
Cost of goods sold	98.3	78.9	81.2	93.1	88.6	88.2	171.7	158.2	165.0	156.0	402.1	526.2	405.4	341.9	583.0	583.0
Gross Margin	49.3	33.7	44.0	39.5	45.9	44.5	62.4	67.8	71.0	72.0	107.2	84.8	233.4	163.2	245.7	387.0
% of Sales	33.4%	29.9%	35.2%	29.8%	34.1%	33.5%	26.7%	30.0%	30.1%	31.6%	21.0%	13.9%	36.5%	32.3%	29.6%	39.9%
R&D	7.1	9.3	7.4	8.1	7.8	7.2	13.7	15.4	16.0	14.0	23.9	24.9	29.1	32.5	52.3	73.0
M, G&A	9.7	9.4	10.9	10.2	10.4	9.9	15.6	15.0	15.2	15.0	40.0	48.2	39.2	40.5	55.6	70.0
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	1.5	0.0	0.0	0.0	0.0
Tot Operating Exp.	16.9	18.8	18.3	18.4	18.2	17.0	29.3	30.4	31.2	29.0	63.9	74.6	68.2	73.0	107.9	143.0
															13.02%	14.74%
Operating Income	32.4	15.0	25.7	21.1	27.8	27.5	33.1	37.4	39.8	43.0	43.3	10.2	165.2	90.1	137.8	244.0
Operating Margin						21%	14%	17%	17%	19%			26%	18%	17%	25%
Yr-to-yr Gr.					-14%	84%	29%	77%	43%	-9%					17%	25.2%
Net Interest	(8.6)	(8.0)	(8.3)	(8.4)	(8.2)	(8.1)	(8.8)	(8.7)	(8.0)	(8.0)	(26.4)	(27.8)	(31.8)	(33.0)	(33.6)	(32.0)
Other income	0.1	(0.3)	(8.0)	(0.5)	(0.4)	0.1	0.1	(0.4)	0.0	0.1	(46.5)	20.4	(1.0)	(0.9)	(0.2)	(0.2)
Minority Income						0.0	6.7	2.5	2.0	(10.8)			0.0	0.0	11.2	(56.1)
Pretax Income	23.9	6.7	9.4	12.2	19.2	19.5	31.1	30.9	33.8	35.1	(29.5)	2.8	132.3	56.3	115.2	155.7
		5.9%				14.7%	13.3%	13.7%	14.3%	15.4%			20.7%	11.1%	13.9%	16.1%
Taxes	1.9	0.2	(1.4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.8	21.4	0.9	0.2	0.0	0.7
Tax Rate	8.1%	2.9%	-15.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-43.4%	754.3%	0.6%	0.3%	0.0%	0.4%
Net Income	21.9	6.5	10.8	12.2	19.2	19.5	31.1	30.9	33.8	35.1	(42.4)	(18.5)	131.5	56.1	115.2	155.0
Yr-to-yr Gr.					-13%	201%	188%	153%	76%	80%						
Adj Non-GAAP EPS-Basic	$0.96	$0.28	$0.78	$0.26	$0.40	$0.41	$0.62	$0.58	$0.63	$0.66	($2.70)	($0.92)	$5.94	$1.42	$2.25	$2.85
Adj Non-GAAP EPS-Fully dil.	**$0.36**	**$0.15**	**$0.25**	**$0.21**	**$0.30**	**$0.30**	**$0.41**	**$0.40**	**$0.43**	**$0.43**			**$2.65**	**$0.97**	**$1.52**	**$1.88**
Yr-to-yr Gr.						95%	68%	87%	43%	45%					57%	24%
Share Out	22.8	23.0	39.1	47.0	47.9	48.1	50.1	53.2	53.4	53.6	15.7	20.1	22.2	39.6	51.2	54.4
Fully diluted shares	72.7	72.1	62.3	78.8	79.6	81.2	89.1	92.2	92.4	92.6			49.6	76.1	89.6	94.2
						13%	43%	17%	16%	14%				53.4%	17.7%	5.1%

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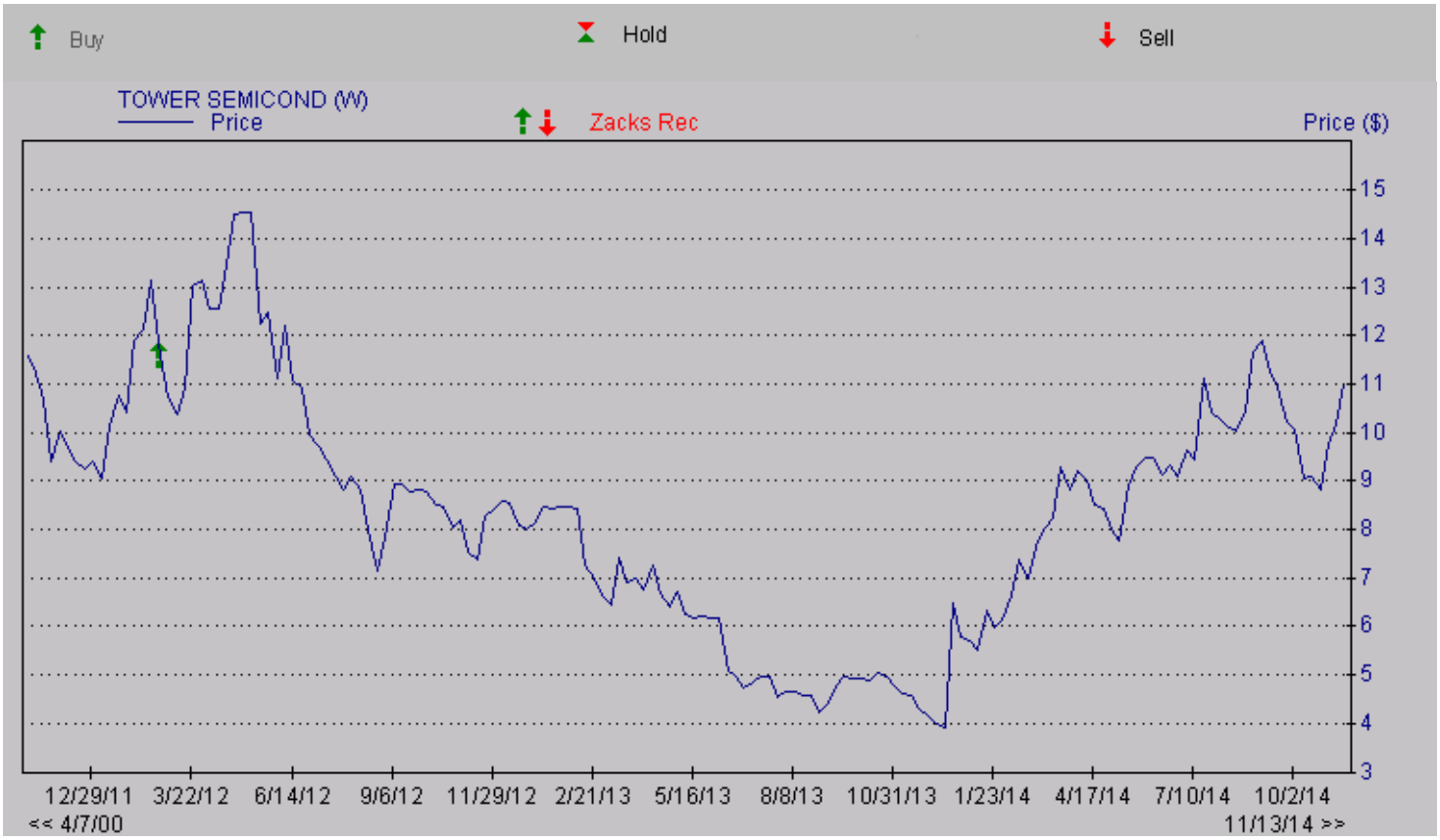

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