Zacks Small-Cap Research

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TowerJazz

(TSEM-NASDAQ)

TSEM: Q3 Earnings In Line, But Invest for Acceleration in Key Product Lines

OUTLOOK

TowerJazz is a pure-play 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 ample capacity and is serving high growth markets such as RF High Position analog, CMOS image sensors, and power management that should accelerate both revenue and margin growth as these products grow to be a larger percentage of the revenue mix.

Current Recommendation	**Buy**
Prior Recommendation	Hold
Date of Last Change	02/23/2012
Current Price (11/13/15)	$14.89
Target Price	**$22**

SUMMARY DATA

52-Week High	**$17.95**
52-Week Low	**$10.42**
One-Year Return (%)	**30.0**
Beta	**1.58**
Average Daily Volume (sh)	**525,122**
Shares Outstanding (mil)	**78**
Market Capitalization ($mil)	**$1,164**
Short Interest Ratio (days)	**5.6**
Institutional Ownership (%)	**35**
Insider Ownership (%)	**1**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**10.2**
Earnings Per Share (%)	**2.1**
Dividend (%)	**N/A**
P/E using TTM EPS	**6.8**
P/E using 2015 Estimate	**6.5**
P/E using 2016 Estimate	**4.7**
Zacks Rank	**N/A**

Risk Level	**Above Average**
Type of Stock	**Mid-Growth**
Industry	**Elect. Comp-Semi.**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2013	113 A	125 A	133 A	135 R	505 A
2014	133 A	234 A	226 A	235 A	828 A
2015	226 A	236 A	244 A	252 E	958 E
2016	252 E	263 E	285 E	300 E	1,100 E

Earnings per Share
(Non-GAAP Fully Diluted)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
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	$0.54 A	$1.65 A
2015	$0.52 A	$0.54 A	$0.58 A	$0.67 E	$2.30 E
2016	$0.67 E	$0.75 E	$0.86 E	$0.94 E	$3.18 E

Income Statement uses fully diluted shares outstanding

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Q3 Earnings In Line…

Q3 revenues and earnings came in almost exactly in line with our forecast. The slightly higher gross margin reported was offset by slightly higher operating expenses and taxes, but the bottom line ended up in the same place. Non-GAAP EPS using primary shares came in at came in at $0.74, while non-GAAP fully diluted EPS was $0.58 versus our estimate of $0.58 and $0.39 a year ago.

Forecast

The company guided to revenue expectations of $252 million, plus or minus 5%. As such it is on track to reach its goal of $250 million in revenues in Q4 and GAAP gross margin of 40%. We are raising our revenue forecast slightly to $252 million from $250 million but keeping fully diluted non-GAAP EPS at $0.67, which yields annual revenue of $958 million and fully diluted non-GAAP EPS of $2.30. We are keeping 2016 forecasts the same at $1.1 billion and non-GAAP fully diluted EPS of $3.18.

…But Growth in Key Products Should Accelerate Total Sales

The company continues to be enthusiastic about 2016 and beyond and had three customers reserve capacity for next year by putting down deposits. The company now has about $400 million in revenues from Panasonic. If the Panasonic revenues stay flat at about $400 million a year, and the rest of the business grows an average of 30%, every year the company's growth will accelerate, as non-Panasonic business gets larger and larger. The company has given some range of idea of the size of various product lines and their growth rates. Using that as a guideline we can show how the math of acceleration works.

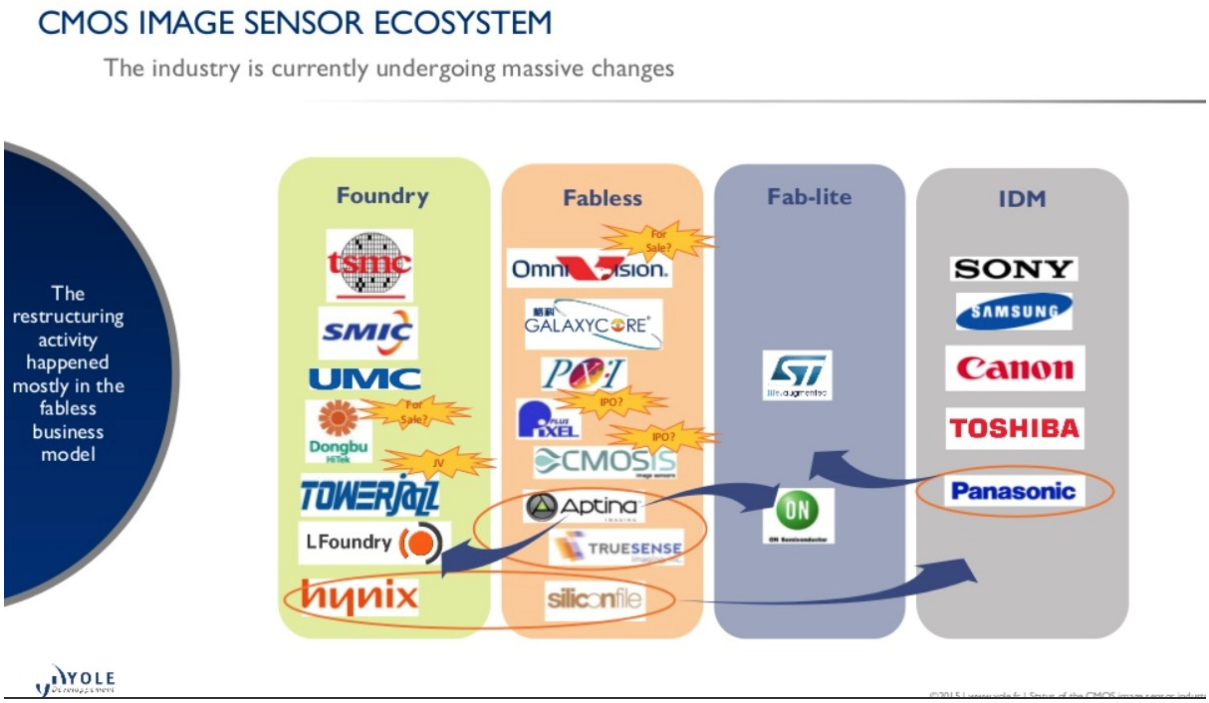
Revenue Breakdown Estimates

		2015		2016		2017
	% of sales	$	Growth Rate			
RF CMOS	30%	167	45%	243	45%	352
Silicon Germanium	15%	84	15%	96	15%	111
CMOS Imaging	15%	84	55%	130	55%	201
TOPS	17%	95	15%	109	15%	125
Power Management	9%	50	20%	60	20%	72
CMOS Mixed	9%	50	5%	53	5%	55
Aerospace and Defense	5%	28	10%	31	10%	34
	100%					
Non-Panasonic		558	58%	721	64%	951
Yr-to-yr growth				29%		32%
Panasonic	400	400	42%	400	36%	400
Total sales	**958**	**958**		**1121**		**1351**
Yr-to-yr growth				17%		20%

Growth is being driven by: switches and tuners for smartphones and high definition cameras, including for 4K recording and surveillance as well as mobile wearables. One major camera customer is the Chinese government, which already has 100% surveillance throughout Beijing and vows to have all major roads and public areas covered by 2020. HD and super HD perform much better in low light and assumedly smog.



The company is gaining market share as the industry shifts from GaAs to its technology. Network infrastructure is being driven by the migration to LTE worldwide. The company also has opportunities in its power business and its mixed signal CMOS business. In particular the company sees opportunity in integrating the components in LED lighting in the future. There may also be incremental opportunity to increase market share, specifically in the area of front-end modules and specifically silicon germanium. There is also opportunity to capture business from integrated device manufacturers (IDMs) who wish to outsource foundry work because their volumes may be too small to produce efficiently or they decide future investment in upgrading their fabs to new technology is not economical.



INVESTMENT THESIS

- The current fab capacity will allow the company to grow revenues and improve margins through capacity utilization. Capacity should be sufficient until 2017, giving the company breathing room to reap profits.
- 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.
- Its largest market segment, RF, sells into the smartphone market and will grow faster than that market as multiple chips are now being sold per device.
- The company has a strong market position in high quality imaging and 3D, which is increasing being used for gesturing controls 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 should have accelerating revenue growth over 15% and non-GAAP EPS growth for next year over 38%.
- We believe that the stock could move to $22 based on blend of enterprise value to sales and multiple of EBITDA ratios and PE ratios versus peer values by next year and rate the stock a buy.

VALUATION

TSEM's public foundry competitors have shown lackluster results of late. SMI grew 4.3% in the second quarter, while TSMC was flat and UMC saw a 13% decline in sales. SMI now expects its revenue to grow 3-6% in Q4, while TSMC and UMC expect a decline. A bright spot for SMI is fingerprint sensors due to accelerating adoption in smartphones as well as diversification of its customer base to U.S. and Eurasia.

Given its product mix however, TowerJazz has not seen the same slowdown. As shown on the chart below, the average company is trading at a valuation of 2.0 times 2015 estimated revenues. In using these companies as comparables, we have taken out the 49% of revenues we estimate are afforded to the Panasonic joint venture, as TowerJazz only owns 51%. That reduces the 2016 revenue number to $831 million.

Valuation Based on Enterprise Value to Sales

Foundry Companies

Company	Ticker	Revenue 2015E	Revenue LTM	EBIDTA Margin	Enterprise Value / Sales 2015E	Enterprise Value / Sales LTM	Included in Average?	EV
Advanced Semiconductor	ASX	$8,810	$8,510	13%	1.2x	1.2x	y	1063
Semiconductor Manufacturing	SMI	$2,180	$2,110	33%	1.9x	2.0x	y	418
Taiwan Semiconductor	TSM	$26,220	$25,810	65%	4.0x	4.1x	Y	10520
United Microelectronics	UMC	$4,570	$4,440	38%	1.0x	1.1x	y	470
Average				**37%**	**2.0x**	**2.1x**		
Avg Without no-growth companies								

	Revenue* 2016E	Revenue* LTM	EBITDA Margin	Enterprise Value / Sales 2016E	Enterprise Value / Sales LTM	Valuation Range Low	Valuation Range High
Tower Jazz- 11/16/15	**$831**	**$741**	**26%**	**2.0x**	**2.1x**	**$1,550**	**$1,696**
YoY growth	**23%**						

Conclusion of Enterprise Value	**$1,623,037,681**
Market Value	**$1,367,168,029**
Shares Outstanding	95,900,000
Price per Share	**$14.26**

* Adjusted for minority revenues

Valuation Based on EBITDA

The same peer group as above trades at 4.8x enterprise value to EBITDA. TSEM should generate about $243 million in EBITDA this year and $350 million next year. Using the 4.8 multiple, the company should have an enterprise value of $1.68 billion by next year. This equates to $14.50 per share.

Foundry Companies Company	**Ticker**	**Ent. Value**	**LTM 12-Mo EBITDA**	**EV/EBITDA**
Advanced Semiconductor	ASX	10,630	$1,700	6.3
Semiconductor Manufacturing	SMI	4,185	$698	6.0
Taiwan Semiconductor	TSM	105,200	$17,580	6.0
United Microelectronics	UMC	2,030	$1,750	1.2
Average				**4.8x**

Valuing Based on PE

The PE ratio of the other foundry companies we see an average of 15 to 17 times. To compare, we need to add back the depreciation and amortization into TSEM's EPS number to get an equivalent PE to these companies. If we assume TSEM has $156 million in depreciation and amortization in 2016 and subtract that from the non-GAAP net income and divide by fully diluted shares we get $1.70 per share. Using a PE of 17 times that give us a stock price of $29 per share. Of course as the fastest grower of the group, TSEM deserves a higher multiple than that.

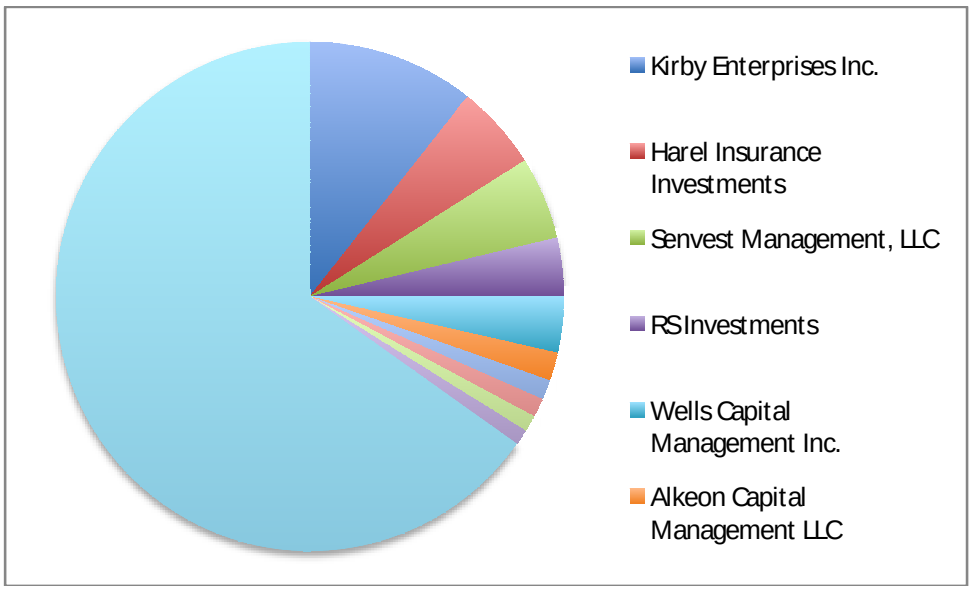
Foundry Companies

Company	Ticker	EPS 15	EPS 16	Price	PE 2015	PE 2016	Growth Rate	PE/Growth
Advanced Semiconductor	ASX	$0.37	$0.48	$5.41	14.6	11.3	30%	
Semiconductor Manufacturing	SMI	0.27	0.30	5.45	20.2	18.2	11%	
Taiwan Semiconductor	TSM	1.77	1.74	22.32	12.6	12.8	-2%	
United Microelectronics	UMC	0.15	0.14	1.82	12.1	13.0	-7%	
Average					14.9	14.7	0.9%	1.02
Avg Without no-growth companies					17.4	14.7	20%	0.85

By taking a blended valuation of these three methods, we arrive with an average expected price of $22 per share.

OWNERSHIP

Chart 1: Largest Investors



Source: E*TRADE and SEC filings

INCOME STATEMENT

	Sept Q3 14A	Dec Q4 14A	March Q1 15	June Q2 15	Sept Q3 15	Dec Q4 15E	March Q1 16E	June Q2 16E	Sept Q3 16E	Dec Q4 16E	Non-GAAP 2013	Non-GAAP 2014	Non-GAAP 2015E	Non-GAAP 2016E
REVENUE														
Net Revenue	226.0	235.3	226.2	235.6	244.2	252.0	252.0	263.0	285.0	300.0	505.0	828.0	958.0	1,100.0
Yr-to-yr Gr.	70%	75%	71%	1%	8%	7%	11%	12%	17%	19%	-21%	64%	16%	15%
OPERATING EXPENSES														
Cost of goods sold	158.2	151.1	145.5	148.2	150.6	150.0	150.0	152.0	161.0	167.0	341.9	569.1	600.0	630.0
Gross Margin	67.8	84.2	80.7	87.4	93.6	102.0	102.0	111.0	124.0	133.0	163.2	258.9	358.0	470.0
% of Sales	30.0%	35.8%	35.7%	37.1%	38.3%	40.5%	40.5%	42.2%	43.5%	44.3%	32.3%	31.3%	37.4%	42.7%
R&D	15.4	13.7	14.4	14.4	15.8	15.8	15.8	15.8	16.0	16.0	32.5	50.0	60.4	63.6
M, G&A	15.0	14.6	14.9	14.4	14.8	14.8	14.8	15.0	15.1	15.2	40.5	55.1	58.9	60.1
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
Tot Operating Exp.	30.4	28.3	29.4	28.8	30.6	30.6	30.6	30.8	31.1	31.2	73.0	105.0	119.3	123.7
Operating Income	37.4	55.9	51.3	58.6	63.1	71.4	71.4	80.2	92.9	101.8	90.1	153.9	238.7	346.3
Operating Margin	17%	24%	23%	25%	26%	28%	28%	30%	33%	34%	18%	19%	25%	31%
Yr-to-yr Gr.	77%	101%	87%	77%	69%	28%	25%	22%	26%	20%		19%	24.9%	31.5%
Net Interest	(8.7)	(7.8)	(3.6)	(3.6)	(3.6)	(2.0)	(2.0)	(2.0)	(2.0)	(2.0)	(33.0)	(33.4)	(12.8)	(8.0)
Other income	(0.4)	0.0	(0.0)	(0.0)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.9)	(0.1)	(0.5)	(0.8)
Minority Income	2.5	(3.6)	2.3	(0.4)	(0.5)	(1.0)	(1.0)	(2.0)	(3.0)	(4.0)	0.0	5.6	0.5	(10.0)
Pretax Income	30.9	44.5	50.0	54.6	58.8	68.2	68.2	76.0	87.7	95.6	56.3	126.0	225.9	327.5
	13.7%	18.9%	22.1%	23.2%	24.1%	27.1%	27.1%	28.9%	30.8%	31.9%	11.1%	15.2%	23.6%	29.8%
Taxes	0.0	(1.4)	0.5	0.7	1.2	1.2	0.8	0.8	1.0	1.1	0.2	(1.6)	3.6	3.5
Tax Rate	0.0%	-3.2%	0.9%	1.3%	2.0%	1.8%	1.1%	1.1%	1.1%	1.1%	0.3%	-1.2%	1.6%	1.1%
Net Income	30.9	45.9	49.5	53.9	57.6	67.0	67.4	75.1	86.7	94.5	56.1	127.5	222.3	324.0
Yr-to-yr Gr.	153%	140%	154%	74%	86%	46%	36%	39%	51%	41%	-57%	127%	74%	46%
Adj Non-GAAP EPS-Basic	$0.58	$0.83	$0.78	$0.70	$0.74	$0.85	$0.84	$0.93	$1.08	$1.17	$1.42	$2.46	$3.00	$4.02
Adj Non-GAAP EPS-Fully dil.	**$0.39**	**$0.50**	**$0.52**	**$0.54**	**$0.58**	**$0.67**	**$0.67**	**$0.75**	**$0.86**	**$0.94**	**$0.97**	**$1.60**	**$2.30**	**$3.18**
Yr-to-yr Gr.	86%	69%	75%	30%	46%	34%	29%	39%	49%	40%	-63%	65%	43%	38%
Share Out	53.2	55.6	63.6	76.7	77.4	79.0	80.6	80.6	80.6	80.6	39.6	51.8	74.2	80.6
Fully Diluted As Reported			94.7	96.8	95.9	95.9	97.5	97.5	97.5	97.5	NA	NA	95.8	97.5
Fully diluted shares (w/warrants and	92.4	101.6	102.0	104.1	103.2	103.2	103.2	103.3	103.3	103.3	76.1	91.8	103.1	103.2
Using Treasury stock method	17%	28%												

BALANCE SHEET

$ in thousands	Sept. 30, 2015	June 30, 2015	
CURRENT ASSETS			
Cash and cash equivalents	**$155,348**	**$142,503**	9%
Trade accounts receivable	122,686	112,624	9%
Other receivables	7,263	6,333	15%
Inventories	104,396	91,855	14%
Other current assets	23,731	18,796	26%
Total current assets	**413,424**	**372,111**	11%
LONG-TERM INVESTMENTS	12,050	12,437	-3%
PROPERTY AND EQUIPMENT, NET	430,477	415,092	4%
INTANGIBLE ASSETS, NET	36,718	39,283	-7%
GOODWILL	7,000	7,000	0%
OTHER ASSETS, NET	7,220	7,410	-3%
TOTAL ASSETS	906,889	853,333	6%
CURRENT LIABILITIES			
Current maturities of loans and debentures	**49,224**	**40,558**	21%
Trade accounts payable	111,917	106,677	5%
Deferred revenue	14,752	11,540	28%
Other current liabilities	76,765	72,715	6%
Total current liabilities	**252,658**	**231,490**	9%
LONG-TERM DEBT	**206,801**	**214,357**	-4%
LONG-TERM CUSTOMERS' ADVANCES	21,110	6,178	242%
EMPLOYEE RELATED LIABILITIES	15,786	16,571	-5%
DEFERRED TAX LIABILITY	76,197	74,551	2%
OTHER LONG-TERM LIABILITIES	9,730	9,897	-2%
Total liabilities	582,282	553,044	5%
SHAREHOLDERS' EQUITY	324,607	300,289	8%
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$906,889	$828,496	9%
Current Ratio	1.6	1.6	2%
Quick Ratio	1.2	1.2	1%
Debt Percent of Assets	28%	30%	-5%
Debt to Equity	0.8	0.8	-7%

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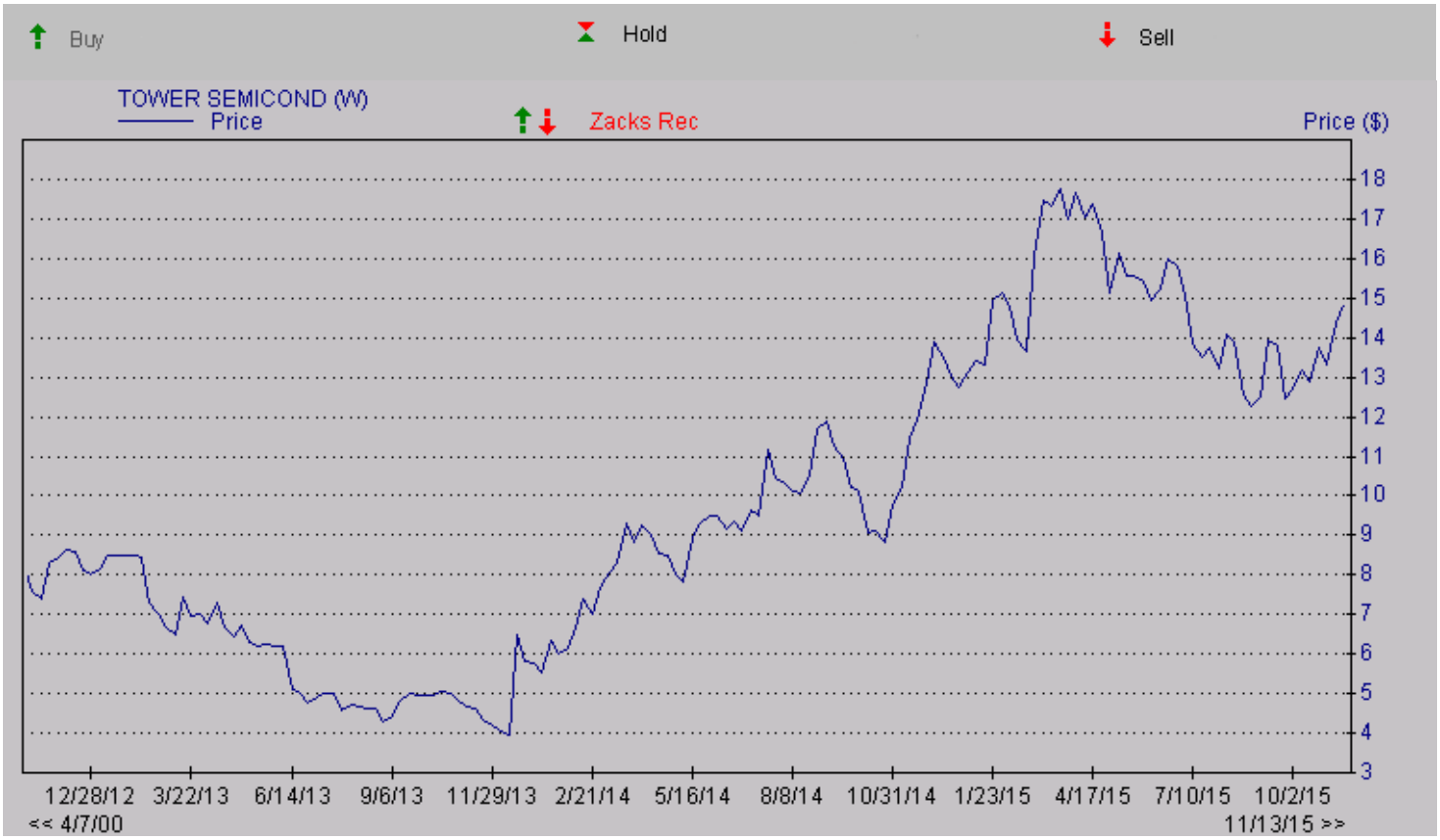

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