

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of February 2009 (No. 5)

TOWER SEMICONDUCTOR LTD.

(Translation of registrant's name into English)

Ramat Gavriel Industrial Park
P.O. Box 619, Migdal Haemek, Israel 23105
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F Form 40-F

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes No

On February 19, 2009, the Registrant announced its financial results for the fourth quarter and fiscal year ended December 31, 2008. Attached hereto is a copy of the press release.

Exhibit 99.1 Press release dated February 19, 2009

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TOWER SEMICONDUCTOR LTD.

Date: February 19, 2009

By: /s/ Nati Somekh Gilboa

Nati Somekh Gilboa
Corporate Secretary

Tower Semiconductor Reports Fourth Quarter and Fiscal Year 2008 Financial Results

Record Revenue of \$252 Million for the Full Year of 2008

MIGDAL HAEMEK, Israel – February 19, 2009 – Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), an independent specialty foundry, today announced financial results for the fourth quarter and full year ended December 31, 2008.

2008 Highlights

- Record annual revenue of \$251.7 million, representing year-over-year growth of 9 percent
- EBITDA of \$36 million and positive annual cash flow from operations
- Strategic merger with Jazz Technologies in September
- Debt decreased by approximately \$250 million, with favorably adjusted terms on the Company's remaining debt

Fourth Quarter Highlights

- Record revenue of \$77.5 million, up 26 percent as compared to the fourth quarter of 2007
- Recorded positive cash flow from operations (ninth consecutive quarter) and positive EBITDA (thirteenth consecutive quarter)
- Jazz integration has been seamless, including cost reduction that has already exceeded the original \$60 million annual run-rate plan, with additional activities under way.

Revenue for the fourth quarter of 2008 was \$77.5 million, which was within Company's guidance range, and included the full quarter of results from Jazz Technologies following the close of the merger on September 19, 2008. This compares to revenue of \$61.6 million in the fourth quarter of 2007 and \$58.5 million in the third quarter of 2008. Calculated in accordance with GAAP, net loss for the fourth quarter of 2008 was \$24.2 million, or \$0.15 per share, which included approximately \$29 million of depreciation and amortization.

Revenue for the full year 2008 was \$251.7 million, representing an increase of 9 percent when compared to revenue of \$230.9 million for the full year 2007. For the full year of 2008, non-GAAP gross and operating profit, as described and reconciled below, were \$77.4 million and \$36.1 million, respectively, which represent 31 percent gross margin and 14 percent operating margin. Calculated in accordance with GAAP, net loss for the year improved by \$28 million, from \$134 million to \$106 million, which included \$139 million of depreciation and amortization. Such high incremental net margin was achieved due to the previously announced cost reduction plans and lower financing expense.

"This past year was a very successful year for Tower on a number fronts. Our accomplishments and efforts throughout the year have dramatically improved the Company's financials and future growth opportunities as we work towards our goal of becoming the leading specialty foundry in the world," commented Russell Ellwanger, Chief Executive Officer of Tower Semiconductor Ltd. "Most notably, in September we completed the merger with Jazz Technologies, which has resulted in a larger, more competitive company with a broader global presence, double the worldwide customer base with the intrinsic cross-selling opportunities and substantial cost savings synergies."

Amir Elstein, chairman of the board of directors of Tower Semiconductor Ltd, stated, "The merger with Jazz and our now undisputed leadership in multiple foundry segments, as well as several not yet released initiatives, have put us in a position to capitalize on many opportunities presented during this global economic downturn and to exit 2009 as the definitive specialty foundry winner."

Commenting on the fourth quarter, Ellwanger stated, "During the fourth quarter worldwide foundry revenues declined significantly. The strategic Jazz merger was timely in that it allowed us to counter that trend and achieve sequential and year-over-year growth, which places us in a unique position when compared with other foundries that have reported to date. Looking forward, we see a continued weakening in customer demand for the first quarter and, based on our customer's current degree of visibility, for the second quarter as well. The cost synergies associated with the Jazz merger have positioned us to face the decline in revenue during the first half of 2009 in a successful manner, while also giving us the strength to capitalize on the various opportunities presented by the current economic conditions."

Fourth Quarter and Year End 2008 Financial Results Conference Call and Web Cast

Tower will host a conference call to discuss these results today, February 19, 2009, at 10:00 a.m. Eastern Time (ET) / 5:00 p.m. Israel time. To participate, please call: 1-866-345-5855 (U.S. toll-free number) or 972-3-918-0691 (international) and mention ID code: TOWER. Callers in Israel are invited to call locally by dialing 03-918-0691. The conference call will also be Web cast live at <http://www.earnings.com> and at www.towersemi.com and will be available thereafter on both Web sites for replay for 90 days, starting at approximately 2 p.m. ET on the day of the call.

As previously announced, beginning with the fourth quarter of 2007, the Company presents its financial statements in accordance with U.S. GAAP. All historical amounts presented in this release, including the financial tables below, were recast to reflect the application of U.S. GAAP.

As applied in this release, the term Earnings Before Interest Tax Depreciation and Amortization (EBITDA) consists of loss, according to U.S. GAAP, excluding interest and financing expenses (net), tax, depreciation and amortization, stock based compensation expenses, gain on debt restructuring, loss from impairment of fixed assets, write-off of in process research and development and merger related costs. EBITDA is not a required GAAP financial measure and may not be

comparable to a similarly titled measure employed by other companies. EBITDA should not be considered in isolation or as a substitute for operating income, net income or loss, cash flows provided by operating, investing and financing activities, or other income or cash flow statement data prepared in accordance with GAAP.

This release, including the financial tables below, presents other financial information that may be considered “non-GAAP financial measures” under Regulation G and related reporting requirements promulgated by the Securities and Exchange Commission as they apply to our company. These non-GAAP financial measures exclude (1) depreciation, amortization and impairment expenses related to fixed assets; (2) compensation expenses in respect of options granted to directors, officers and employees; (3) write-off of in process research and development and (4) merger related costs. Non-GAAP financial measures should be evaluated in conjunction with, and are not a substitute for, GAAP financial measures. The tables also present the GAAP financial measures, which are most comparable to the non-GAAP financial measures as well as reconciliation between the non-GAAP financial measures and the most comparable GAAP financial measures. The non-GAAP financial information presented herein should not be considered in isolation from or as a substitute for operating income, net income or loss, cash flows provided by operating, investing and financing activities, or other income or cash flow statement data prepared in accordance with GAAP.

Following the merger with Jazz, the amounts presented in this release, including the financial tables below for the fourth quarter and year of 2008 include Jazz’s results commencing September 19, 2008. The balance sheet as of December 31, 2008 includes Jazz’s balances as of such date.

About Tower Semiconductor Ltd.

Tower Semiconductor Ltd. is a pure-play independent specialty wafer foundry. Tower manufactures integrated circuits with geometries ranging from 1.0 to 0.13-micron; it also provides complementary technical services and design support. In addition to digital CMOS process technology, Tower offers advanced mixed-signal & RF-CMOS, Power Management, CMOS image-sensor and non-volatile memory technologies. Through access to the process portfolio of its wholly owned subsidiary, Jazz Semiconductor, Tower offers RF CMOS, Analog CMOS, Silicon and SiGe BiCMOS, SiGe C-BiCMOS, Power CMOS and High Voltage CMOS. To provide world-class customer service, Tower maintains two manufacturing facilities in Israel with access to Jazz Semiconductor’s fab in the U.S. and manufacturing capacity in China through Jazz’s partnerships with ASMC and HHNEC. For more information, please visit www.towersemi.com and www.jazzsemi.com.

Forward Looking Statements

This press release includes forward-looking statements, which are subject to risks and uncertainties. Actual results, including any expected benefits and anticipated cost savings, may vary from those projected or implied by such forward-looking statements and you should not place any undue reliance on such forward-looking statements. Potential risks and uncertainties include, without limitation, risks and uncertainties associated with: (i) maintaining existing customers and attracting additional customers, (ii) not receiving orders from our wafer partners and customers, which can result in unutilized capacity, (iii) the cyclical nature of the semiconductor industry and the resulting periodic overcapacity, fluctuations in operating results, future average selling price erosion, (iv) having sufficient funds to fulfill our short-term and long-term debt obligations and other liabilities, (v) operating our facilities at high utilization rates which is critical in order to defray the high level of fixed costs associated with operating a foundry and reduce our losses, (vi) our ability to satisfy the revised covenants stipulated in our amended credit facility agreement, (vii) our ability to capitalize on increases in demand for foundry services, (viii) meeting the conditions to receive Israeli government grants and tax benefits approved for Fab2, the possibility of the government requiring us to repay all or a portion of the grants already received and obtaining the approval of the Israeli Investment Center for an expansion program, (ix) our ability to accurately forecast financial performance, which is affected by limited order backlog and lengthy sales cycles, (x) our merger with Jazz, including possible delays in the integration process, diversion of management’s attention, retention of key employees and not realizing anticipated benefits, (xi) the completion of the equipment installation, technology transfer and ramp-up of production in Fab 2 and raising the funds therefor, (xii) our dependence on a relatively small number of products for a significant portion of our revenue, (xiii) a substantial portion of our revenues being accounted for by a small number of customers, (xiv) the concentration of our business in the semiconductor industry, (xv) product returns, (xvi) our ability to maintain and develop our technology processes and services to keep pace with new technology, evolving standards, changing customer and end-user requirements, new product introductions and short product life cycles, (xvii) competing effectively, (xviii) the large amount of debt and liabilities and the ability to repay our short-term and long-term debt and liabilities on a timely basis, (xix) achieving acceptable device yields, product performance and delivery times, (xx) our ability to manufacture products on a timely basis, (xxi) our dependence on intellectual property rights of others and our ability to operate our business without infringing others’ intellectual property rights, (xxii) exposure to inflation, currency exchange and interest rate fluctuations and risks associated with doing business internationally and in Israel, (xxiii) current global economic downturn, the prevailing market conditions in the semiconductor industry (including global decreased demand, downward price pressure, excess inventory and unutilized capacity) and the lack of availability of funding sources in light of the prevailing financial market situation, which may adversely affect the future financial results and position of the Company, including its ability to continue to support its ongoing activities and operations, (xxiv) pending resolution of patent infringement claim against us, and (xxv) business interruption due to fire, the security situation in Israel and other events beyond our control.

A more complete discussion of risks and uncertainties that may affect the accuracy of forward-looking statements included in this press release or which may otherwise affect our business is included under the heading “Risk Factors” in our most recent filings on Forms 20-F, F-3, F-4 and 6-K, as were filed with the Securities and Exchange Commission (the “SEC”) and the Israel Securities Authority and Jazz’s most recent filings on Forms 10-K and 10-Q, as were filed with the SEC. Future results may differ materially from those previously reported. The Company does not intend to update, and expressly disclaims any obligation to update, the information contained in this release.

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TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(dollars in thousands)

	December 31,	December 31,
	2008	2007
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 34,905	\$ 44,536
Trade accounts receivable	45,860	44,977
Other receivables	2,320	4,748
Inventories	38,729	27,806
Other current assets	7,657	1,580
Total current assets	129,471	123,647
LONG-TERM INVESTMENTS	29,499	15,093
PROPERTY AND EQUIPMENT, NET	449,697	502,287
INTANGIBLE ASSETS, NET	81,034	34,711
GOODWILL	7,000	--
OTHER ASSETS, NET	8,802	11,044
TOTAL ASSETS	\$ 705,503	\$ 686,782
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES		
Current maturities of convertible debenture	\$ 8,330	\$ 7,887
Short term debt	7,000	--
Trade accounts payable	49,462	49,025
Deferred revenue and short -term customers' advances	6,634	1,915
Other current liabilities	35,202	18,109
Total current liabilities	106,628	76,936
LONG-TERM DEBT FROM BANKS	222,989	379,314
DEBENTURES	208,512	117,460
LONG-TERM CUSTOMERS' ADVANCES	11,138	27,983
OTHER LONG-TERM LIABILITIES	45,959	40,380
Total liabilities	595,226	642,073
SHAREHOLDERS' EQUITY	110,277	44,709
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$ 705,503	\$ 686,782

TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(dollars in thousands, except share data and per share data)

Year ended December 31,			Three months ended December 31,		
2008	2007	2006	2008	2007	2006
GAAP	GAAP	GAAP	GAAP	GAAP	GAAP
(unaudited)					

REVENUES	\$ 251,659	\$ 230,853	\$ 187,438	\$ 77,453	\$ 61,618	\$ 55,505
COST OF SALES	298,683	284,771	267,520	88,240	73,563	72,756
GROSS LOSS	(47,024)	(53,918)	(80,082)	(10,787)	(11,945)	(17,251)
OPERATING COSTS AND EXPENSES						
Research and development	14,969	13,790	15,048	5,279	3,499	3,893
Marketing, general and administrative	33,223	31,604	25,831	10,538	7,884	6,732
Write-off of in-process research and development	1,800	--	--	(500)	--	--
Merger related costs	520	--	--	--	--	--
Fixed assets impairment	120,538	--	--	--	--	--
	171,050	45,394	40,879	15,317	11,383	10,625
OPERATING LOSS	(218,074)	(99,312)	(120,961)	(26,104)	(23,328)	(27,876)
FINANCING INCOME (EXPENSE), NET	(17,566)	(34,976)	(47,563)	2,808	(1,942)	(8,450)
GAIN ON DEBT RESTRUCTURING	130,698	--	--	--	--	--
OTHER INCOME (EXPENSE), NET	(918)	92	597	(280)	19	--
LOSS BEFORE TAX PROVISION	(105,860)	(134,196)	(167,927)	(23,576)	(25,251)	(36,326)
TAX PROVISION RELATED TO JAZZ	(575)	--	--	(575)	--	--
LOSS FOR THE PERIOD	\$ (106,435)	\$ (134,196)	\$ (167,927)	\$ (24,151)	\$ (25,251)	\$ (36,326)
BASIC LOSS PER ORDINARY SHARE						
Loss per share	\$ (0.79)	\$ (1.13)	\$ (2.03)	\$ (0.15)	\$ (0.20)	\$ (0.38)
Weighted average number of ordinary shares outstanding - in thousands	134,749	118,857	82,581	159,747	124,120	94,373

TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES
RECONCILIATION OF REPORTED GAAP TO NON-GAAP CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)
(dollars in thousands)

	Year ended December 31, 2008		
	Non-GAAP	Adjustments (see a, b, c below)	GAAP
REVENUES	\$ 251,659	\$ --	\$ 251,659
COST OF SALES	174,222	124,461(a)	298,683
GROSS PROFIT (LOSS)	77,437	124,461	(47,024)
OPERATING COSTS AND EXPENSES			
Research and development	13,212	1,757(b)	14,969
Marketing, general and administrative	28,148	5,075(c)	33,223
Write-off of in-process research and development	--	1,800	1,800
Merger related costs	--	520	520
Fixed assets impairment	--	120,538	120,538
	41,360	129,690	171,050

OPERATING PROFIT (LOSS)	\$	36,077	\$	254,151	\$	(218,074)
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NON-GAAP GROSS MARGINS

31%

NON-GAAP OPERATING MARGINS

14%

- (a) Includes depreciation and amortization expenses in the amount of \$123,632 and stock based compensation expenses in the amount of \$829.
 - (b) Includes depreciation and amortization expenses in the amount of \$1,157 and stock based compensation expenses in the amount of \$600.
 - (c) Includes depreciation and amortization expenses in the amount of \$377 and stock based compensation expenses in the amount of \$4,698.
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