
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of August 2010 No. 3

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 S

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 S

On August 17, 2010, the registrant announces Closing of a Definitive Agreement with its Lender Banks to Refinance and Reduce Its Debt to Improve Its Balance Sheet and Cash Flows.

This Form 6-K is being incorporated by reference into all effective registration statements filed by us under the Securities Act of 1933.

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: August 17, 2010

By: /s/ Nati Somekh Gilboa

Name: Nati Somekh Gilboa

Title: Corporate Secretary

TowerJazz Announces Closing of a Definitive Agreement with its Lender Banks to Refinance and Reduce Its Debt to Improve Its Balance Sheet and Cash Flows

Under the Agreement, \$210 Million Bank Loans Have Been Paid Down to \$160 million and Extended to 2013 through 2015 at Libor plus 2.75%

MIGDAL HAEMEK, Israel – August 17, 2010 – TowerJazz, the global specialty foundry leader, today announced that it has signed and closed a definitive agreement with its lender banks, strengthening its balance sheet and debt structure, as well as enabling its business plan forecasted growth.

According to the agreement, approximately \$160 million of principal amount were extended and scheduled to be paid in 10 quarterly installments commencing the third quarter of 2013 and ending in the fourth quarter of 2015. The loans will bear an annual interest rate of Libor plus 2.75 percent. As part of the agreement, the company will prepay \$30 million, on top of \$20 million previously announced, both originally due next year. This is funded by its improved operating margins, which have outperformed street expectations.

Oren Shirazi, TowerJazz's CFO, said: "Following the previous announced \$80 million bonds to notes exchange, the extension of the \$45 million Wells Fargo credit lines, with due dates of 2015 and 2014 respectively, a conversion of approximately \$30 million of Israeli bonds, and with this additional banks agreement, we have now refinanced/ restructured more than \$350 million of debt. Considering our greater than \$160 million 2010 EBITDA target, this restructure has improved our debt to EBITDA ratio to less than 2.5X, being a servable ratio and much lower than in the past."

Russell Ellwanger, TowerJazz's chief executive officer, added, "This new debt balance and schedule is critical to sustaining a significant cash balance enabling quick execution of material growth opportunities. The signing of this definitive agreement with our Israeli lender banks was the most significant step towards the execution of our comprehensive debt restructuring plan. Servicing the reduced remaining principle with the associated due dates of all banks and bonds debt, falls easily within the operating models of the company, for a wide range of scenarios."

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: [TSEM](#), TASE: TSEM), the global specialty foundry leader and its fully owned U.S. subsidiary Jazz Semiconductor, operate collectively under the brand name TowerJazz, manufacturing integrated circuits with geometries ranging from 1.0 to 0.13-micron. TowerJazz provides industry leading design enablement tools to allow complex designs to be achieved quickly and more accurately and offers a broad range of customizable process technologies including SiGe, BiCMOS, Mixed-Signal and RFCMOS, CMOS Image Sensor, Power Management (BCD), and Non-Volatile Memory (NVM) as well as MEMS capabilities. To provide world-class customer service, TowerJazz maintains two manufacturing facilities in Israel and one in the U.S. with additional capacity available in China through manufacturing partnerships. For more information, please visit www.towerjazz.com.

Forward Looking Statements

This press release includes forward-looking statements, which are subject to risks and uncertainties. Actual results 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. The success of the Company's debt restructuring efforts is subject to many factors, including the following: (i) negotiation of mutually acceptable arrangements with the Company's institutional and other debt and debenture holders; (ii) market interest in any new debt securities the Company may propose to issue; (iii) the overall global economy conditions as well as the situation of the credit and financial markets; and (iv) the Company's operating results, cash flow, financial position and future prospects.

A 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 Tower's most recent filing on Form 20-F. The Company does not intend to update, and expressly disclaims any obligation to update, the information contained in this release.

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 and stock based compensation expenses. 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.

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