
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of July 2010 (No. 1)

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

The Exchange Agreement

On July 9, 2010, our wholly-owned subsidiary, Jazz Technologies, Inc. (“Jazz”), together with its United States subsidiaries and our company, Tower Semiconductor Ltd. (“Tower”), entered into an exchange agreement (the “Exchange Agreement”) with certain holders (the “Participating Holders”) holding approximately \$79.6 million principal amount of Jazz’s outstanding 8% senior convertible notes due 2011 (the “Old Notes”). Under the Exchange Agreement, the Participating Holders will exchange their Old Notes for approximately \$93.6 million in aggregate principal amount of newly-issued 8% senior notes of Jazz due 2015 (the “New Notes”) and warrants to purchase approximately 25.3 million ordinary shares of Tower (the “Tower Warrants”). Consummation of the transactions contemplated by the Exchange Agreement, which is subject to routine closing conditions, is anticipated to occur on or before July 27, 2010. Upon consummation of the transactions, approximately \$43.7 million in aggregate principal amount of Old Notes will continue to remain outstanding. The Old Notes are convertible into our ordinary shares at a price of \$4.07 per share, subject to adjustment as set forth in the indenture for the Old Notes.

On July 11, 2010, we issued a press release announcing the exchange. A copy of the press release is attached hereto as Exhibit 99.1

The Indenture and the New Notes

The New Notes will be issued at closing and will be governed by an indenture (the “Indenture”) among Jazz, its domestic subsidiaries as guarantors and U.S. Bank National Association, a national banking association, as trustee.

Interest on the unpaid principal amount of the New Notes will accrue from the closing date at a rate of 8.0 percent per annum. Interest is payable semiannually on June 30 and December 31 of each year commencing on December 31, 2010. The New Notes will mature on June 30, 2015, at which time principal and any accrued and unpaid interest will become due and payable.

The New Notes will be senior unsecured obligations of Jazz, rank on parity in right of payment with all other senior indebtedness of Jazz including the Old Notes, and rank senior in right of payment to all subordinated indebtedness of Jazz. The New Notes will be effectively subordinated to all secured indebtedness of Jazz to the extent of the value of the collateral securing such indebtedness. The New Notes will be jointly and severally guaranteed on a senior unsecured basis by the domestic subsidiaries of Jazz. Tower will not guarantee the New Notes.

Beginning July 1, 2013, Jazz may redeem some or all of the New Notes for cash at a redemption price equal to par plus accrued and unpaid interest plus a redemption premium equal to 4% if redemption occurs prior to July 1, 2014 and 2% if redemption occurs between July 1, 2014 and prior to maturity.

Holders of the New Notes will be entitled, subject to certain conditions and restrictions, to require Jazz to repurchase the New Notes at par plus accrued interest and a 1% redemption premium in the event of certain change of control transactions.

The Indenture contains certain covenants including covenants restricting Jazz’s ability and the ability of its subsidiaries to, among other things, incur additional debt, incur additional liens, make specified payments and make certain asset sales.

If there is an event of default on the New Notes, all of the New Notes may become immediately due and payable, subject to certain conditions set forth in the indenture. An event of default under the Indenture will occur if Jazz (or in some cases certain of its subsidiaries) (i) is delinquent in making certain payments under the New Notes, (ii) engages in a merger, consolidation or sale of substantially all of the Jazz's assets, except as permitted by the Indenture, (iii) fails to deliver certain required notices under the New Notes, (iv) fails, following notice, to cure a breach of any other default under the New Notes or Indenture, (v) incurs certain events of default with respect to other indebtedness, (vi) is subject to certain bankruptcy proceedings or orders or (vii) fails to pay certain judgments. An event of default will also occur upon the occurrence of certain events relating to the guarantees of the New Notes.

If certain governmental approvals required for the issuance of shares issuable upon exercise of the the Tower Warrants are not obtained within 60 days after closing, the New Notes will accrue additional interest at an annual rate of 2% for the next 120 days and 4.5% thereafter, until such approvals are obtained or an opinion of counsel that such approvals are not required is provided to the trustee. If such approvals or opinion of counsel are not obtained by the one-year anniversary of the issue date, the additional interest will continue to accrue on the New Notes through maturity.

The Warrants

The Tower Warrants will be issued at closing and will be governed by a Warrant Agreement (the "Warrant Agreement") between Tower and American Stock Transfer & Trust Company, LLC, as warrant agent. The Tower Warrants, which will be designated as Series J Warrants, will be exercisable until the fifth anniversary of the issue date at an exercise price of \$1.70 per share, which represents an approximate 20% premium over the average of the volume weighted average prices for the ordinary shares for the 15 trading days preceding execution of the Exchange Agreement.

Registration Rights Agreement

On or prior to closing, Jazz will enter into a Registration Rights Agreement with the Participating Holders pursuant to which Jazz will agree to use commercially reasonable efforts to file and cause to be declared effective a registration statement under the Securities Act of 1933 (as amended, the "Securities Act") covering an offer to the holders of the New Notes to exchange the New Notes for newly-issued notes of Jazz on terms identical to the New Notes (except that such newly-issued notes will not be subject to restrictions on transfer). If the offer is not completed within 180 days of the closing date, the annual interest rate applicable to the New Notes will increase by 1% for so long as the failure continues or until such earlier date as the New Notes become freely tradable under the Securities Act.

On or prior to closing, Tower will enter into a separate Registration Rights Agreement with the Participating Holders pursuant to which Tower will agree to use commercially reasonable efforts to file and cause to be declared effective a registration statement under the Securities Act covering resale of the Tower Warrants and underlying shares.

The exchange transaction has not been registered and will not be registered under the Securities Act of 1933, as amended, and the securities offered in the exchange may not be offered or sold in the United States absent registration or an applicable exemption from registration. The exchange transaction is being entered into with the exchanging bondholders party to the exchange agreement in reliance upon applicable exemptions from the registration requirements of the Securities Act of 1933, as amended. This disclosure is not an offer to exchange or a solicitation of an offer to exchange any securities.

Exhibits

Exhibit 99.1

TowerJazz press release dated July 11, 2010

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: July 11, 2010

By: /s/ Nati Somekh Gilboa

Nati Somekh Gilboa
Corporate Secretary

**TowerJazz Signs Definitive Agreement with Institutional
Bondholders Exchanging \$80 Million of Its Outstanding Bonds Due
2011 for New Bonds Due 2015**

Continues to execute on its debt restructuring plan

Newport Beach, California and Migdal Haemek, Israel – July 11, 2010 – TowerJazz, the global specialty foundry leader, today announced that it has signed a definitive agreement with certain institutional bondholders, according to which Jazz Technologies, Inc. will exchange approximately \$80 million in aggregate principal amount of its outstanding \$123 million of 8% convertible senior bonds due 2011 for new non-convertible senior bonds due 2015. The new non-convertible bonds will rank equally with the outstanding bonds and will have an 8% annual coupon.

In addition to the new bonds, the exchanging bondholders will receive warrants for the purchase of approximately 25 million Tower ordinary shares at an exercise price of \$1.70 per share. The outstanding 8% convertible senior bonds being exchanged, which are convertible into approximately 20 million Tower ordinary shares, will be cancelled and retired upon consummation of this exchange transaction. The consummation of the transaction contemplated by the exchange agreement is subject to certain routine regulatory consents and satisfaction of customary closing conditions. The new bonds and warrants will be issued at the closing of the exchange transaction, which is expected to occur on or before July 30, 2010.

Additional information regarding the terms of the exchange and the new securities to be issued will be included in an Immediate Report filed with Tel Aviv Stock Exchange and a Report on Form 6-K to be filed by Tower with the United States Securities and Exchange Commission.

Oren Shirazi, Tower's chief financial officer, commented: "Our restructuring plan is well underway with this agreement, the Wells Fargo credit line extension and the agreement with our Israeli banks which were signed and announced in June. These agreements are instrumental in enabling TowerJazz to execute its strategic growth plan and further improve our balance sheet and financial condition."

Russell Ellwanger, Tower's chief executive officer, said, "Signing the exchange agreement with our bondholders demonstrates the confidence the investment community has in our company and long-term strategy. Once completed, our debt restructuring plan will reduce and reschedule our debt, enabling a new and exciting corporate investment perspective."

The exchange transaction has not been registered and will not be registered under the Securities Act of 1933, as amended, and the securities offered in the exchange may not be offered or sold in the United States absent registration or an applicable exemption from registration. The exchange transaction is being entered into with the exchanging bondholders party to the exchange agreement in reliance upon applicable exemptions from the registration requirements of the Securities Act of 1933, as amended. This press release is not an offer to exchange or a solicitation of an offer to exchange any securities.

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. Successful implementation of TowerJazz's debt restructuring plans is subject to (i) negotiation of mutually acceptable arrangements with lenders and other creditors and consummation of such arrangements in a timely manner; (ii) market interest in any new debt securities Tower and Jazz may propose to issue; (iii) global economic conditions generally and conditions in the credit and financial markets in particular, and (iv) TowerJazz 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 filings on Forms 20-F and 6-K and Jazz's most recent filings on Form 10-K and Form 10-Q. Tower does not intend to update, and expressly disclaims any obligation to update, the information contained in this release.

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