FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of May 2012 No. 07

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 May 29, 2012, the registrant announces TowerJazz Provides Clarity on Notes Discussions.

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: May 29, 2012 By: /s/ Nati Somekh

Name: Nati Somekh Title: Corporate

Secretary

TowerJazz Provides Clarity on Notes Discussions

Migdal-Haemek, Israel, May 29, 2012 – TowerJazz, the global specialty foundry leader, today clarified reports appearing in the local Israeli press regarding the expected conversion of capital notes into shares of Tower. TowerJazz retained a large third party international financial institution with which it had been engaged over the past several months in a variety of discussions with all of TowerJazz's three holders of capital notes towards scenarios of notes buy back in a model and at a price that the company believed would create value for all its stakeholders and the company. The banks requested a price which could not be justified by the company and hence an arrangement was not reached to date.

TowerJazz has not been provided with notice by any of its capital note holders that they intend to convert capital notes into shares. Bank Hapoalim and Bank Leumi have asked the company to file a registration statement with the SEC in order to register ordinary shares underlying 40 million and 45 million capital notes, respectively, which would be issued if either or both banks wish to convert said capital notes or a portion thereof into shares. In this regard, the Israel Corporation has informed the company of its intent to convert all of its holding of capital notes into shares, but as a long term strategic shareholder did not ask to register its shares. Israel Corporation has informed TowerJazz that it does not intend to sell or trade its shares at the present time and has expressed its belief in the company's strategy and growth plans.

Description of Notes

- In 2006 and 2008, the banks converted debt into a vehicle of capital notes and as part of this restructuring of bank debt; the Israel Corporation invested new money into the company. In all, the three capital note holders invested \$550 million in cash and debt conversion and received 399 million notes (comprised of 206 million being held by Israel Corporation and 96.4 million being held by each of the banks) representing \$1.38 per capital note.
 - The capital notes are solely an equity vehicle, with each note being convertible into one share.
- Under Israeli banking law, each bank is restricted to hold not more than 5% ordinary shares in a company of which it is a debt holder.
- The registration request received by TowerJazz was pursuant to a customary registration rights agreement entered into when the capital notes were initially issued. There can be no assurance that any registration statement filed pursuant to a request of a capital note holder will be declared effective by the SEC.

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), its fully owned U.S. subsidiary Jazz Semiconductor Ltd., and its fully owned Japanese subsidiary TowerJazz Japan, Ltd., operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures integrated circuits with geometries ranging from 1.0 to 0.13-micron, offering 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 CMOS and MEMS capabilities. TowerJazz also offers a world-class design enablement platform that complements its sophisticated technology and enables a quick and accurate design cycle. In addition, TowerJazz provides (TOPS) Technology Optimization Process Services to IDMs as well as fabless companies that need to expand capacity, or progress from an R&D line to a production line. To provide multi-fab sourcing, TowerJazz maintains two manufacturing facilities in Israel, one in the U.S., and one in Japan with additional capacity available in China through manufacturing partnerships. For more information, please visit www.towerjazz.com.

Safe Harbor Regarding 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. 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 TowerJazz's business is included under the heading "Risk Factors" in Tower's 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, respectively. Tower and Jazz do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

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