

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of December 2004

TOWER SEMICONDUCTOR LTD.
(Translation of registrant's name into English)

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 December 8, 2004, the Registrant announced the sale of all of its shares in Saifun Semiconductor Ltd. Attached hereto is a copy of the press release.

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: December 9, 2004

By: /s/ Tamar Cohen

Tamar Cohen
Corporate Secretary

TOWER SEMICONDUCTOR ANNOUNCES SALE OF ALL OF ITS
SHARES IN SAIFUN SEMICONDUCTOR

TOWER TO SELL SAIFUN SHARES FOR \$39 MILLION

TOWER TO RECORD A \$32 MILLION CAPITAL GAIN

MIGDAL HAEMEK - ISRAEL - DECEMBER 8, 2004 - Tower Semiconductor Ltd. (Nasdaq: TSEM; TASE: TSEM), today announced that it has agreed to sell all of its holdings in Saifun Semiconductor to a U.S. based private equity investor for approximately \$39 million in cash. As agreed, Tower may receive additional payments through August 2005 subject to certain future events.

Following the transaction, Tower will record a \$32 million capital gain in the fourth quarter. The 1997 Non Volatile Memory (NVM) technology agreement between Tower and Saifun remains unchanged.

"This transaction and its timing is an important step in our Fab 2 financing plan and, together with the recently announced cost reduction measures, would enable us to focus on growing our businesses," said Carmel Vernia, chairman and chief executive officer of Tower. "We purchased our position in Saifun for \$6 million and it has been an excellent performer for us over the years."

The closing of the transaction is expected within the next few weeks. The transaction is subject to the rights of first refusals held by Saifun's other shareholders and receipt of regulatory approvals.

ABOUT TOWER SEMICONDUCTOR LTD.

Tower Semiconductor LTD. is a pure-play independent wafer foundry established in 1993. The company 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 non-volatile memory solutions, mixed-signal and CMOS image-sensor technologies. To provide world-class customer service, the company maintains two manufacturing facilities: Fab 1 has process technologies from 1.0 to 0.35 micron and can produce up to 16,000 150mm wafers per month. Fab 2 features 0.18-micron and below process technologies, including foundry-standard technology. When fully equipped, Fab 2 is expected to offer full production capacity of 33,000 200mm wafers per month. The Tower Web site is located at www.towersemi.com.

SAFE HARBOR

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. POTENTIAL RISKS AND UNCERTAINTIES INCLUDE, WITHOUT LIMITATION, RISKS AND UNCERTAINTIES ASSOCIATED WITH: (I) THE RIGHTS OF FIRST REFUSALS HELD BY SAIFUN'S OTHER SHAREHOLDERS; (II) OBTAINING THE APPROVAL OF THE ISRAELI REGULATORY AUTHORITIES AND ANY OTHER APPROVALS REQUIRED FOR THE TRANSACTION; (III) THE SATISFACTION OF ANY CONDITIONS TO EFFECTIVENESS CONTAINED IN THE TRANSACTION AGREEMENT. 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 ANNUAL REPORT ON FORM 20-F AND IN OUR FORM F-3, AS AMENDED, AS WERE FILED WITH THE SECURITIES AND EXCHANGE COMMISSION AND THE ISRAEL SECURITIES AUTHORITY.

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