SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER

Pursuant to Rule 13a-16 or 15d-16 of the

Securities Exchange Act of 1934

For the month of: May

Commission File No.: 000-51581

Saifun Semiconductors Ltd.

(Exact name of registrant as specified in charter)

ELROD Building, 45 Hamelacha Street,

Sappir Industrial Park, Netanya 42504, Israel

(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 x Form 40-F o

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ____

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

Yes O No X

If Yes_ is marked, indicate below the File Number assigned to the registrant in connection with Rule 12g3-2(b): ____

EXPLANATORY NOTE

On or about May 22, 2006, Saifun Semiconductors Ltd. will mail to its shareholders of record copies of its 2005 Annual Report together with a proxy statement and proxy card for an Annual General Meeting of Shareholders to be held on June 8, 2006, in Israel. A copy of the proxy statement and proxy card and the 2005 Annual Report are also available on the company s website www.saifun.com.

A copy of the documents are attached to this Form 6-K as Exhibits 99.1 and 99.2.

2

SIGNATURE

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.

SAIFUN SEMICONDUCTORS LTD.

Date: May 15, 2006

BY: /s/ Igal Shany

Igal Shany Chief Financial Officer

3

EXHIBIT INDEX

The following exhibit is filed as part of this Form 6-K:

- Exhibit Description
- 99.1 Proxy Statement and Proxy Card

99.2 2005 Annual Report