



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

February 20, 2013

Via E-mail
Ori Hadomi
Chief Executive Officer
Mazor Robotics Ltd.
7 Haeshel Street
Caesarea Industrial Park South
38900 Israel

**Re: Mazor Robotics Ltd.
Confidential Draft Registration Statement on Form 20-F
Submitted January 24, 2013
CIK No. 0001566844**

Dear Mr. Hadomi:

We have reviewed your confidential draft registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by providing the requested information and either submitting an amended confidential draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your amended confidential draft registration statement or filed registration statement, we may have additional comments.

General

1. Please provide us copies of the sources of all third-party data, such as the industry data on page 32, included in the filing. Please mark the materials so that they are keyed to the disclosure.
2. Throughout your disclosure please revise to remove or identify as management's belief qualitative statements about your product or company. Alternatively, please provide objective third party support for such statements. For example, you state on page 5 that your products provide a "safer surgical environment for patients, surgeons and operating room staff" and on page 31 that your products have been used "successfully."

Information on the Company, page 30

3. Please provide additional detail about your expectation, disclosed on page 31, that your capital expenditures will be \$350,000. In this regard, please address the fact that your capital expenditures have been significantly higher in previous periods.
4. Revise to more clearly describe the state of development of your brain surgery products. Have they achieved FDA and CE clearances? Are they in use? Also, describe your basis for any expected commercialization timeline.
5. Please explain your reference on page 34 to a “body of clinical evidence.”
6. Refer to the image on page 40. If this image represents a product in development, please remove it.

Intellectual Property, page 41

7. Explain any intellectual property terms that might not be readily understood by an average reader, such as “notice of allowance,” and “national phase.”

Overview, page 51

8. Please revise your disclosure in the first bullet point on page 52 to disclose the “certain conditions.”

Directors and Senior Management, page 67

9. Please revise your disclosure on pages 68-70 regarding the individuals' backgrounds to clearly indicate the name of employers, titles and dates of positions held during the past five years.

Major Shareholders and Related Party Transactions, page 86

10. Please revise footnote 5 on page 87 to disclose the natural person or persons who have voting and/or investment power for the shares held by Oracle Associates, LLC.

Dividends, page 90

11. You note in this section that “pursuant to the terms of financing agreements” you are restricted from paying dividends to your shareholders. Please identify these financing agreements and any other credit agreements to which you are a party, providing the date of the agreement, the lender(s), the amount currently outstanding thereunder, and the maturity date for each such contract.

Offer and Listing Details, page 91

12. In addition to the information in the table on page 91 listing the highest and lowest closing sale prices for your ordinary shares on the TASE in NIS and U.S. dollars over the past several years, quarters, and months, please also provide the average daily trading volume for your shares on the TASE for each of the periods listed.

Documents on Display, page 106

13. We note your acknowledgement of the Exchange Act reporting requirements applicable to you upon effectiveness of the Form 20-F, and your direction to the reader to find the resulting reports and other information “at the locations described above.” Please either provide more specific descriptions of those locations so the reader may find them without difficulty or give the information on where to find the reports and other information here.

Financial Statements, page 116

14. Consideration should be given on an ongoing basis to the updating requirements of Item 8 of Form 20-F.

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division’s October 11, 2012 announcement on the SEC website at <http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm>.

Please keep in mind that we may publicly post filing review correspondence in accordance with our December 1, 2011 policy (<http://www.sec.gov/divisions/corpfin/cfannouncements/edgarcorrespondence.htm>). If you intend to use Rule 83 (17 CFR 200.83) to request confidential treatment of information in the correspondence you submit on EDGAR, please properly mark that information in each of your confidential submissions to us so we do not repeat or refer to that information in our comment letters to you.

Ori Hadomi
Mazor Robotics Ltd.
February 20, 2013
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You may contact Dennis Hult, Staff Accountant, at (202) 551-3618 or Jay Webb, Accounting Reviewer, at (202) 551-3603 if you have questions regarding comments on the financial statements and related matters. Please contact Tom Jones at (202) 551-3602 or me at (202) 551-3528 with any other questions.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz
Assistant Director

cc (via e-mail): Jonathan Achiron