
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, DC 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 November 2018

Commission File No.: 000-30668

NOVA MEASURING INSTRUMENTS LTD.

(Translation of registrant's name into English)

**Building 22 Weizmann Science Park, Rehovot
P.O.B 266
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 ☒ Form 40-F ☐

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): ____

Attached hereto and incorporated by way of reference herein is a press release issued by the Registrant and entitled: "Nova Announces \$25 Million Share Repurchase Program".

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.

NOVA MEASURING INSTRUMENTS LTD.
(Registrant)

By: */s/ Dror David*

Dror David
Chief Financial Officer

Date: November 1, 2018

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Nova Announces \$25 Million Share Repurchase Program

Rehovot, Israel – November 1, 2018 – Nova (Nasdaq: NVMI), announced today that its Board of Directors has approved a \$25 million share repurchase program, to commence following the expiration of the current quarterly black-out period.

Share repurchases, if any, will be funded with available cash. Repurchases of the Company's ordinary shares will be made through open market purchases at prevailing market prices. The timing, volume and nature of share repurchases are subject to market prices and conditions, applicable securities laws and other factors, and are at the discretion of the Company's board of directors. Share repurchases may be commenced, suspended or discontinued at any time.

"Following a record revenue quarter, in which we continued to grow our cash reserves and strengthened our expectation for a sixth year of consecutive annual growth, we have decided to establish a share repurchase program to reflect our confidence in the company's long term resiliency and progress," said Eitan Oppenheim, President and CEO of Nova. "Consistent with our profitable expansion, Nova will continue to leverage its strong cash flow and solid balance sheet to invest in disruptive new technologies, pursue merger and acquisition activities and enhance shareholders' value."

About Nova: Nova is a leading innovator and key provider of metrology solutions for advanced process control used in semiconductor manufacturing. Nova delivers continuous innovation by providing state-of-the-art high-performance metrology solutions for effective process control throughout the semiconductor fabrication lifecycle. Nova's product portfolio, which combines high-precision hardware and cutting-edge software, provides its customers with deep insight into the development and production of the most advanced semiconductor devices. Nova's unique capability to deliver innovative X-ray and Optical solutions enable its customers to improve performance, enhance product yields and accelerate time to market. Nova acts as a partner to semiconductor manufacturers from its offices around the world. Additional information may be found at www.novami.com.

Nova is traded on NASDAQ & TASE under the symbol NVMI.

This press release contains forward-looking statements within the meaning of safe harbor provisions of the Private Securities Litigation Reform Act of 1995 relating to future events or our future performance, such as statements regarding, but not limited to, the share repurchase program, anticipated growth opportunities and projections about our business and its future revenues, expenses and profitability. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied in those forward-looking statements. Factors that may affect our results, performance, circumstances or achievements include, but are not limited to, the following: change in our share repurchase program by our board of directors or management, including changes in the value of shares to be repurchased or the timing of such repurchases, and unanticipated material payment obligations incurred by our company that decrease our willingness or ability to repurchase shares at the anticipated level and timing, or at all, our dependency on three product lines; our dependency on a small number of large customers and small number of suppliers; the highly cyclical and competitive nature of the markets we target and operate in; our inability to reduce spending during a slowdown in the semiconductor industry; our ability to respond effectively on a timely basis to rapid technological changes; our ability to recognize the benefits of ReVera acquisition and risks that the acquisition may disrupt current plans and operations and impact relationships with customers, distributors and suppliers; our dependency on PEMS; risks related to exclusivity obligations and non-limited liability that may be included in our commercial agreements and arrangements; our ability to retain our competitive position despite the ongoing consolidation in our industry; risks related to our dependence on our manufacturing facilities; risks related to changes in our order backlog; risks related to efforts to complete and integrate current and/or future acquisitions; risks related to worldwide financial instabilities; risks related to our intellectual property; new product offerings from our competitors; unanticipated manufacturing or supply problems; risks related to government programs in which we participate; risks related to taxation; changes in customer demand for our products; risks related to currency fluctuations, risks related to acquisitions we may pursue and risks related to our operations in Israel. We cannot guarantee future results, levels of activity, performance or achievements. The matters discussed in this press release also involve risks and uncertainties summarized under the heading "Risk Factors" in Nova's Annual Report on Form 20-F for the year ended December 31, 2017 filed with the Securities and Exchange Commission on February 28, 2018. These factors are updated from time to time through the filing of reports and registration statements with the Securities and Exchange Commission. Nova Measuring Instruments Ltd. does not assume any obligation to update the forward-looking information contained in this press release.
