

PROSPECTUS SUPPLEMENT NO. 5
(To Prospectus dated May 15, 2019)

54,103 Shares

Extra Space Storage Inc.



Common Stock

This prospectus supplement No. 5 supplements and amends the selling stockholder information contained in the prospectus, dated May 15, 2019, as previously supplemented by prospectus supplements dated May 17, 2019, February 26, 2020, September 30, 2020 and October 30, 2020 relating to the possible resale from time to time of up to 7,685,105 shares of our common stock issuable upon exchange of \$575,000,000 aggregate principal amount of 3.125% Exchangeable Senior Notes due 2035 issued by our operating partnership, Extra Space Storage LP, in a private transaction that closed in September 2015. The notes are fully and unconditionally guaranteed by us. Under certain circumstances, we may issue shares of our common stock upon the exchange of the notes. In such circumstances, the recipients of such common stock, whom we refer to herein as the selling stockholders, may use this prospectus supplement to resell from time to time the shares of our common stock that we may issue to them upon the exchange of the notes.

This prospectus supplement names additional selling stockholders who may receive shares of our common stock upon exchange of the notes. Additional selling stockholders may be named by future prospectus supplements.

You should read this prospectus supplement in conjunction with the prospectus, including any amendments or supplements to it. This prospectus supplement is not complete without, and may not be delivered or used except in conjunction with, the prospectus, including any amendments or supplements to it. This prospectus supplement is qualified by reference to the prospectus, except to the extent that the information provided by this prospectus supplement supersedes information contained in the prospectus.

The registration of the shares of our common stock covered by this prospectus supplement does not necessarily mean that any of the selling stockholders will exchange their notes for our common stock, that upon any exchange of the notes we will elect, in our sole and absolute discretion, to exchange some or all of the notes for shares of our common stock rather than cash, or that any shares of our common stock received upon exchange of the notes will be offered or sold by the selling stockholders.

Our common stock is listed on the New York Stock Exchange, or the NYSE, under the symbol "EXR." On December 31, 2020, the last reported sales price of our common stock on the NYSE was \$115.86 per share.

Investing in our common stock involves a high degree of risk. Before buying any of these shares you should carefully read the discussion of material risks of investing in our common stock in “Risk Factors” beginning on page 2 of the prospectus, as well as those described in our most recent Annual Report on Form 10-K and other periodic reports filed with the Securities and Exchange Commission and incorporated herein by reference.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is January 4, 2021.

SELLING STOCKHOLDERS

The 3.125% Exchangeable Senior Notes due 2035, or the notes, were originally issued by Extra Space Storage LP, our operating partnership, and sold by the initial purchasers of the notes in transactions exempt from the registration requirements of the Securities Act of 1933, as amended, or the Securities Act, to persons reasonably believed by the initial purchasers to be qualified institutional buyers as defined by Rule 144A under the Securities Act. Under certain circumstances, we may issue shares of our common stock upon the exchange of the notes. In such circumstances, the selling stockholders may use this prospectus supplement to resell from time to time the shares of our common stock that we may issue to them upon the exchange of the notes.

Information about certain selling stockholders is set forth herein, and information about additional selling stockholders may be set forth in a future prospectus supplement, in a post-effective amendment, or in filings we make with the Securities and Exchange Commission, or the SEC, under the Securities Exchange Act of 1934, as amended, which are incorporated by reference in this prospectus supplement. Selling stockholders, including their transferees, pledgees or donees or their successors, may from time to time offer and sell pursuant to this prospectus supplement and any future prospectus supplement or post-effective amendment any or all of the shares of our common stock which we may issue upon the exchange of the notes.

The following information supplements the information set forth under the caption “Selling Stockholders” in the prospectus. This prospectus supplement includes information with respect to selling stockholders not previously listed in the prospectus. The following table sets forth information, as of December 31, 2020, with respect to the selling stockholders named below and the number of shares of our common stock that would become beneficially owned by each selling stockholder should we issue our common stock to such selling stockholder that may be offered pursuant to this prospectus supplement upon the exchange of the notes. The information is based on information provided by or on behalf of the selling stockholders. The selling stockholders may offer all, some or none of the shares of our common stock which we may issue upon the exchange of the notes. Because the selling stockholders may offer all or some portion of such shares of our common stock, we cannot estimate the number of shares of our common stock that will be held by the selling stockholders upon termination of any of these sales. In addition, the selling stockholders identified below may have sold, transferred or otherwise disposed of all or a portion of their notes or shares of our common stock since the date on which they provided the information regarding their notes in transactions exempt from the registration requirements of the Securities Act.

The number of shares of our common stock issuable upon the exchange of the notes shown in the table below assumes exchange of the full amount of notes held by each selling stockholder at the maximum exchange rate of 13.3654 shares of our common stock per \$1,000 principal amount of notes and a cash payment in lieu of any fractional share. This exchange rate is subject to adjustment in certain events, including, but not limited to, the issuance of certain stock dividends on our common stock, the issuance of certain rights, options or warrants, subdivisions, combinations, distributions of capital stock, indebtedness or other assets or property, cash dividends in excess of certain amounts, and certain tender or exchange offers by our company. Accordingly, the number of shares of our common stock issued upon the exchange of the notes may increase or decrease from time to time. The number of shares of our common stock owned by the other selling stockholders or any future transferee from any such holder assumes that they do not beneficially own any shares of common stock other than the common stock that we may issue to them upon the exchange of the notes.

Based upon information provided by the selling stockholders, none of the selling stockholders, including any of the selling stockholders identified below, nor any of their affiliates, officers, directors or principal equity holders has held any positions or office or has had any material relationship with us within the past three years.

To the extent any of the selling stockholders identified below are broker-dealers, they may be deemed to be, under interpretations of the staff of the SEC, “underwriters” within the meaning of the Securities Act. Unless otherwise indicated in the footnotes below, we believe that the persons and entities named in the table have sole voting and investment power with respect to all shares of our common stock beneficially owned.

Name	Number of Shares Beneficially Owned Prior to the Offering	Percentage of Shares Beneficially Owned Prior to the Offering(1)	Number of Shares Offered Hereby	Number of Shares Beneficially Owned After the Offering(2)	Percentage of Shares Beneficially Owned After the Offering(1)(2)
iShares Convertible Bond ETF (3)	5,177	*	5,177	—	*
JP Morgan Securities LLC (4)	175,644	*	47,053	128,591	*
JSS Investmentfonds II – JSS Bond – Global Convertibles (5)	1,481	*	1,481	—	*
Régime De Retraite Du Mouvement Desjardins (6)	392	*	392	—	*

* Less than 1%.

(1) Based on a total of 131,358,132 shares of our common stock outstanding as of December 29, 2020.

(2) Assumes the selling stockholder sells all of its shares of our common stock offered pursuant to this prospectus supplement.

(3) BlackRock Fund Advisors acts as investment adviser for the selling stockholder. On behalf of such investment adviser entity, the applicable portfolio managers, respectively as managing directors of such entity, have voting and investment power over the shares held by the selling stockholder which is the registered holder of the referenced shares. Such applicable portfolio managers expressly disclaim beneficial ownership of all shares held by the selling stockholder. BlackRock Fund Advisors is a subsidiary of BlackRock, Inc., a publicly held entity. The address of such selling stockholder, BlackRock Fund Advisors and such applicable portfolio managers is 400 Howard Street, San Francisco, CA 94105. Shares being registered for resale may not incorporate all shares deemed to be beneficially held by BlackRock, Inc.

(4) JP Morgan Securities LLC is a subsidiary of JP Morgan Chase & Co., a publicly held entity.

(5) The account of the selling stockholder with respect to the securities offered is managed by The Putnam Advisory Company, LLC (“PAC”). Robert Salvin is a Portfolio Manager of PAC and exercises investment and voting discretion over the securities offered. The address of the principal place of business of PAC is 100 Federal Street, Boston, MA 02110.

(6) Fiducie Desjardins (which stands for Desjardins Trust) acts as the Trustee for the selling stockholder, Régime de Retraite du Mouvement Desjardins (which is the Pension Fund of Desjardins, including Desjardins Trust), with discretionary authority over the securities offered hereby. The investment manager is Mackay Shields. The address of the principal place of business of Fiducie Desjardins is C.P. 34, Succursale Desjardins, Montreal, Quebec, H5B 1E4, Canada.