

PROSPECTUS SUPPLEMENT NO. 3
(To Prospectus dated May 15, 2019)

2,317,346 Shares

Extra Space Storage Inc.



Common Stock

This prospectus supplement No. 3 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 and February 26, 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 September 29, 2020, the last reported sales price of our common stock on the NYSE was \$107.24 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 September 30, 2020.

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 September 30, 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)
4 Ever Life Insurance Company (3)	8,019	*	8,019	—	*
American Public Entity Excess Pool (3)	6,549	*	6,549	—	*
Amerisure Mutual Insurance Company (4)	27,800	*	27,800	—	*
Ameritas Life Insurance Corp (4)	38,358	*	38,358	—	*
Badger Mutual Insurance Company (3)	3,809	*	3,809	—	*
Batchelor Foundation, Inc., The (4)	7,885	*	7,885	—	*
Blue Cross & Blue Shield of Mississippi, A Mutual Insurance Company (3)	14,701	*	14,701	—	*
Bricklayers Union Local No. 6 Indiana Pension Fund (4)	3,742	*	3,742	—	*
Brookdale Global Opportunity Fund (5)	365,369	*	365,369	—	*
Brookdale International Partners, L.P. (5)	606,147	*	606,147	—	*
Brotherhood Mutual Insurance Company (3)	2,405	*	2,405	—	*
Builders Trust of New Mexico (3)	5,346	*	5,346	—	*
Calamos Market Neutral Income Fund (6)	634,856	*	634,856	—	*
Catholic Financial Life Insurance (3)	8,286	*	8,286	—	*
Catholic Mutual Relief Society of America (4)	14,835	*	14,835	—	*
Catholic Mutual Relief Society Retirement Plan and Trust (4)	11,494	*	11,494	—	*
Catholic Relief Insurance Company of America (4)	8,019	*	8,019	—	*
Celina Mutual Insurance Company (3)	3,408	*	3,408	—	*
Clear Path Mutual Insurance Company (3)	5,747	*	5,747	—	*
Columbia Mutual Insurance Company (4)	4,544	*	4,544	—	*
Deseret Healthcare Employee Benefits Trust (4)	1,136	*	1,136	—	*
Deseret Mutual Employee Pension Trust (4)	13,231	*	13,231	—	*
Deseret Mutual Retiree Medical and Life Plan Trust (4)	2,539	*	2,539	—	*
Eastern Alliance Insurance Company (3)	12,429	*	12,429	—	*
Excellus Health Plan (4)	110,117	*	110,117	—	*
Federated Rural Electric Insurance Exchange (4)	26,730	*	26,730	—	*
Germantown Insurance Company (3)	4,544	*	4,544	—	*
Goodville Mutual Casualty Company (3)	8,954	*	8,954	—	*

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Guarantee Trust Life Insurance Company (3)	14,635	*	14,635	—	*
Lebanon Valley Insurance Company (3)	2,338	*	2,338	—	*
LGT Select Convertibles (4)	8,019	*	8,019	—	*
Loudoun Mutual Insurance Company (4)	2,472	*	2,472	—	*
Loudoun Mutual Insurance Company II (4)	1,871	*	1,871	—	*
Marquette Indemnity and Life Insurance Company (3)	735	*	735	—	*
Miami Mutual Insurance Company (3)	3,341	*	3,341	—	*
Michigan Professional Insurance Exchange (3)	6,214	*	6,214	—	*
Middle Cities Risk Management Trust (3)	1,804	*	1,804	—	*
MMIC Insurance Inc. (4)	10,024	*	10,024	—	*
National Mutual Insurance Company (3)	3,341	*	3,341	—	*
New Era Life Insurance Company (3)	12,162	*	12,162	—	*
New Era Life Insurance of the Midwest (3)	7,484	*	7,484	—	*
Pennsylvania Professional Liability Joint Underwriting Association (3)	6,281	*	6,281	—	*
Philadelphia American Life Insurance Company (3)	14,969	*	14,969	—	*
Philadelphia Contributionship Insurance Company (3)	4,210	*	4,210	—	*
Privilege Underwriters Reciprocal Exchange (3)	5,346	*	5,346	—	*
Protective Insurance Company (3)	4,410	*	4,410	—	*
Protective Life and Annuity Insurance Company (3)	8,487	*	8,487	—	*
Protective Life Insurance Company (3)	33,747	*	33,747	—	*
Pure Insurance Company (3)	9,222	*	9,222	—	*
Quincy Mutual Fire Insurance Company (3)	45,976	*	45,976	—	*
Rural Mutual Insurance Company (3)	8,019	*	8,019	—	*
Sagamore Insurance Company (3)	3,541	*	3,541	—	*
Sanlam Global Convertible Securities Fund (4)	5,680	*	5,680	—	*
Texas Hospital Insurance Exchange (3)	1,804	*	1,804	—	*
Tuscarora Wayne Mutual Insurance Company (3)	6,148	*	6,148	—	*
UMIA Insurance Inc. (4)	4,945	*	4,945	—	*

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United National Life Insurance Company of America (3)	868	*	868	—	*
Universal Re Insurance Company Ltd (3)	6,415	*	6,415	—	*
Vermont Mutual Insurance Company (4)	12,296	*	12,296	—	*
Warberg CA Fund LP (7)	66,131	*	66,131	—	*
Wisconsin Lawyers Mutual Insurance Company (3)	3,341	*	3,341	—	*
Wisconsin Mutual Insurance Company (3)	8,420	*	8,420	—	*
Zazove Global Convertible Master Fund, L.P. (4)	3,341	*	3,341	—	*
Zazove Investment Grade Blend Convertible Fund, L.P. (4)	18,310	*	18,310	—	*

* Less than 1%.

1. Based on a total of 129,069,911 shares of our common stock outstanding as of July 31, 2020.
2. Assumes the selling stockholder sells all of its shares of our common stock offered pursuant to this prospectus supplement.
3. Marco Bravo is a natural person that exercises voting and dispositive power over the securities held by this selling stockholder. The selling stockholders' principal address is 30 W. Monroe 3rd Floor, Chicago, IL 60603.
4. Zazove Associates, LLC acts as registered investment advisor to the selling security holder with discretionary authority over the securities offered hereby. Gene T. Pretti, as Chief Executive Officer and Senior Portfolio Manager of Zazove Associates, LLC, may be deemed to have voting and dispositive power over the securities held by this selling stockholder. The selling stockholder's principal address is 1001 Tahoe Blvd., Incline Village, NV 89451.
5. Weiss Asset Management LP ("WAM") serves as investment manager to this selling security holder. WAM GP LLC is the general partner of WAM, and Andrew Weiss is the managing member and control person of WAM GP LLC. The address of the principal place of business of WAM is 222 Berkeley Street, 16th Floor, Boston, MA 02116.
6. Calamos Advisor LLC ("Calamos") serves as investment manager to the Calamos Market Neutral Income Fund, a series of the Calamos Investment Trust, a Massachusetts business trust. Mr. John P. Calamos, Sr. is the Founder and Global CIO and a control person of Calamos. The address of the principal business office of Calamos is 2020 Calamos Court, Naperville, IL 60563.
7. Warberg Asset Management LLC ("Warberg") serves as investment manager to the Warberg CA Fund LP. Mr. Daniel Warsh is a managing member and the control person of Warberg. The address of the principal business office of Warberg is 716 Oak Street, Winnetka, IL 60093.