Supplement dated June 3, 2022 To prospectus supplement dated August 3, 2021 (To prospectus dated August 3, 2021)



Dynex Capital, Inc.

Common stock

We have entered into amendment no. 3 to the distribution agreement, dated June 29, 2018, as amended May 31, 2019, August 3, 2021 and June 3, 2022 (collectively, the "Distribution Agreement"), with J.P. Morgan Securities LLC, JMP Securities LLC, JonesTrading Institutional Services LLC and BTIG, LLC (collectively the "Sales Agents" and each individually a "Sales Agent"), relating to shares of our common stock, par value \$0.01 per share, of Dynex Capital, Inc. (the "Company"), offered from time to time through the Sales Agents, acting as Sales Agents or principals under this prospectus supplement (the "Supplement") and accompanying base prospectus (together, the "prospectus"), which supplements the prospectus supplement, dated August 3, 2021 (the "Prospectus Supplement"), Sales of our common stock, if any, pursuant to this Supplement and the Prospectus Supplement will be made in sales deemed to be "at the market offerings" as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended, by means of ordinary brokers' transactions on the New York Stock Exchange or otherwise at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices. This Supplement should be read in conjunction with the Prospectus Supplement. Capitalized terms used and not defined herein shall have the meanings ascribed to such terms in the Prospectus Supplement.

This Supplement is being filed to reflect the amendment of the Distribution Agreement to increase the offer and sale of shares of the Company's common stock by 15,000,000. Accordingly, each reference to "8,117,622 shares" in the Prospectus Supplement is hereby amended to be "23,117,622 shares." As of the date of this Supplement, we have issued 6,289,892 shares of common stock through the Distribution Agreement.

If we offer and sell all of the remaining shares available for issuance under the Distribution Agreement, the number of shares of our common stock outstanding after this offering will be 57,753,207 shares. This number of outstanding shares is based on 40,925,477 shares of our common stock outstanding as of June 2, 2022 and assumes the offer and sale of all 16,827,730 remaining shares. Under the terms of the Distribution Agreement, we are not obligated to offer or sell any shares of our common stock.

The validity of the shares offered pursuant to this Supplement will be passed upon for us by Mayer Brown LLP, New York, New York. The Sales Agents are being represented in this offering by Cooley LLP, New York, New York.



JMP Securities A CITIZENS COMPANY

JonesTrading

BTIG

The date of this prospectus supplement is June 3, 2022.