TWO HARBORS INVESTMENT CORP. Form S-4

May 25, 2018

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As filed with the Securities and Exchange Commission on May 25, 2018

Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-4 REGISTRATION STATEMENT **UNDER** THE SECURITIES ACT OF 1933

TWO HARBORS INVESTMENT CORP.

(Exact Name of Registrant as Specified in Its Charter)

Maryland 001-34506 27-0312904 (I.R.S. Employer Identification Number)

(State or Other Jurisdiction of Incorporation or Organization)

(Primary Standard Industrial Classification Code Number)

> 575 Lexington Avenue, Suite 2930 New York, New York 10022 (612) 629-2500

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Rebecca B. Sandberg Vice President, General Counsel and Secretary Two Harbors Investment Corp. 575 Lexington Avenue, Suite 2930 New York, New York 10022 Tel: (612) 629-2500

Fax: (612) 629-2501

(Address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

S. Gregory Cope Stephen M. Gill Vinson & Elkins L.L.P 2200 Pennsylvania Avenue NW Suite 500 West Washington, D.C. 20037-1701 (202) 639-6500 Thomas A. Rosenbloom
Executive Vice President Business
Development, General Counsel, and
Secretary
CYS Investments, Inc.
500 Totten Pond Road, 6th Floor
Waltham, Massachusetts 02451
(617) 639-0440

Scott M. Freeman Gabriel Saltarelli Sidley Austin LLP 787 Seventh Ave New York, New York 10019 (212) 839-5300

Approximate date of commencement of proposed sale of the securities to the public:

As soon as practicable after this Registration Statement is declared effective and upon the satisfaction or waiver of all other conditions to consummation of the merger described herein.

If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ý Accelerated filer o Non-accelerated filer o Smaller reporting company o

(Do not check if a

smaller reporting company) Emerging growth company o

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. o

If applicable, please an X in the box to designate the appropriate rule provision relied upon in conducting this transaction:

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer) o

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| Exchange Act Rule | 14d-1(d) (Cross-Border | Third-Party Tender Offer) | o |
|-------------------|------------------------|---------------------------|---|
| | | | |

CALCULATION OF REGISTRATION FEE

| Title of Each Class of Securities to be Registered | Amount to be Registered | Proposed Maximum Offering Price Per Share | Proposed Maximum Aggregate Offering Price(1) | Amount of Registration Fee(2) |
|--|----------------------------|---|--|----------------------------------|
| Common stock, par value \$0.01 per share | 75,729,550(3) | N/A | \$1,117,368,161(4) | \$139,112.34 |
| Series D cumulative redeemable preferred stock, par value \$0.01 per share | 3,000,000(5) | N/A | \$74,940,000(6) | \$9,330.03(7) |
| Series E cumulative redeemable preferred stock, par value \$0.01 per share | 8,000,000(8) | N/A | \$195,560,000(9) | \$24,347.22(10) |

- (1) Estimated solely for purposes of calculating the registration fee required by Section 6(b) of the Securities Act of 1933, as amended (the "Securities Act"), and calculated pursuant to Rule 457(c) under the Securities Act.
- The registration fee for the securities registered hereby has been calculated pursuant to Section 6(b) of the Securities Act of 1933 at a rate equal to \$124.50 per \$1,000,000 of the proposed maximum aggregate offering price.
- Represents the estimated maximum number of shares of common stock, par value \$0.01 per share ("Two Harbors Common Stock"), of Two Harbors Investment Corp. ("Two Harbors") to be issuable, or subject to options or other equity-based awards that are assumed by Two Harbors, upon the completion of the merger described herein. The number of shares of Two Harbors Common Stock being registered is based on (a) 155,438,320 shares of common stock, par value \$0.01 per share ("CYS Common Stock"), of CYS Investments, Inc. ("CYS"), issued and outstanding as of May 23, 2018, and (b) an assumed exchange ratio of 0.4872 shares of Two Harbors Common Stock for each share of CYS Common Stock.
- Pursuant to Rules 457(c), 457(f)(1) and 457(f)(3) and solely for the purpose of calculating the registration fee, the proposed aggregate maximum offering price is based on (a) the product of (i) \$7.285 (the average of the high and low prices of CYS Common Stock as reported on the New York Stock Exchange ("NYSE") on May 23, 2018) multiplied by (ii) the 155,438,320 shares of CYS Common Stock outstanding as of May 23, 2018, minus (b) \$15,000,000 (the estimated amount of cash that will be paid by Two Harbors to the holders of shares of CYS Common Stock in the merger).
- Represents the maximum number of shares of 7.75% Series D Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of Two Harbors ("Two Harbors Series D Preferred Stock"), to be issued in connection with the transactions described herein, calculated by applying the exchange ratio of one share of Two Harbors Series D Preferred Stock for one share of 7.75% Series A Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of CYS ("CYS Series A Preferred Stock"), as set forth in the merger agreement, based on 3,000,000 shares of CYS Series A Preferred Stock issued and outstanding on May 23, 2018.
- Pursuant to Rules 457(c), 457(f)(1) and 457(f)(3) and solely for the purpose of calculating the registration fee, the proposed maximum offering price is based on the product of (a) \$24.98 (the average of the high and low prices of CYS Series A Preferred Stock as reported by NYSE on May 23, 2018) multiplied by (b) the 3,000,000 shares of CYS Series A Preferred Stock outstanding as of May 23, 2018.

(7)

Pursuant to Rule 457(i), there is no fee associated with the registration of the shares of Two Harbors Common Stock issuable upon conversion of the shares of Two Harbors Series D Preferred Stock (a convertible security) being registered under this Registration Statement because no additional consideration will be received in connection with such conversion.

- Represents the maximum number of shares of 7.50% Series E Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of Two Harbors ("Two Harbors Series E Preferred Stock"), to be issued in connection with the transactions described herein, calculated by applying the exchange ratio of one share of Two Harbors Series E Preferred Stock for one share of 7.50% Series B Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of CYS ("CYS Series B Preferred Stock"), as set forth in the merger agreement, based on 8.000,000 shares of CYS Series B Preferred Stock issued and outstanding on May 23, 2018.
- (9)

 Pursuant to Rules 457(c), 457(f)(1) and 457(f)(3) and solely for the purpose of calculating the registration fee, the proposed maximum offering price is based on the product of (a) \$24.445 (the average of the high and low prices of CYS Series B Preferred Stock as reported by NYSE on May 23, 2018) multiplied by (b) the 8,000,000 shares of CYS Series B Preferred Stock outstanding as of May 23, 2018.
- Pursuant to Rule 457(i), there is no fee associated with the registration of the shares of Two Harbors Common Stock issuable upon conversion of the shares of Two Harbors Series E Preferred Stock (a convertible security) being registered under this Registration Statement because no additional consideration will be received in connection with such conversion.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the U.S. Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this joint proxy statement/prospectus is subject to completion and amendment. A registration statement relating to the securities described in this joint proxy statement/prospectus has been filed with the Securities and Exchange Commission. These securities may not be sold nor may offers to buy these securities be accepted prior to the time the registration statement becomes effective. This joint proxy statement/prospectus shall not constitute an offer to sell or the solicitation of any offer to buy nor shall there be any sale of these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities law of any such jurisdiction.

PRELIMINARY SUBJECT TO COMPLETION

DATED MAY 25, 2018

JOINT PROXY STATEMENT/PROSPECTUS

MERGER PROPOSED YOUR VOTE IS VERY IMPORTANT

•], 2018

To the Stockholders of Two Harbors Investment Corp. and the Stockholders of CYS Investments, Inc.:

The board of directors (the "Two Harbors Board") of Two Harbors Investment Corp. ("Two Harbors") and the board of directors (the "CYS Board") of CYS Investments, Inc. ("CYS"), each a Maryland corporation, each have approved an Agreement and Plan of Merger, dated as of April 25, 2018 (the "Merger Agreement"), by and among Two Harbors, Eiger Merger Subsidiary LLC ("Merger Sub") and CYS, pursuant to which Merger Sub will merge with and into CYS, with CYS continuing as the surviving corporation (the "Merger"). As a result of the Merger, the surviving corporation will become an indirect, wholly owned subsidiary of Two Harbors. The closing of the Merger will occur as promptly as practicable following satisfaction of all closing conditions set forth in the Merger Agreement, and either Two Harbors or CYS may terminate the Merger Agreement if closing has not occurred by October 31, 2018. After the Merger, the combined company of Two Harbors and CYS will retain the name "Two Harbors Investment Corp." and its shares will continue to trade on the New York Stock Exchange under the symbol "TWO".

Pursuant to the terms and subject to the conditions set forth in the Merger Agreement, at the effective time of the Merger, each outstanding share of common stock, par value \$0.01 per share, of CYS ("CYS Common Stock") will be converted into the right to receive from Two Harbors (a) a number of shares of common stock, par value \$0.01 per share, of Two Harbors ("Two Harbors Common Stock") determined (to the nearest one-ten-thousandth) by dividing (i) CYS's adjusted book value per share, multiplied by 96.75%, by (ii) Two Harbors' adjusted book value per share, multiplied by 94.20%, each as calculated at a time and pursuant to certain calculation principles set forth in the Merger Agreement, and (b) \$15,000,000 divided by the sum of the number of shares of CYS Common Stock issued and outstanding immediately prior to the effective time of the Merger (excluding any cancelled shares), including outstanding CYS restricted stock that will vest upon completion of the Merger pursuant to the Merger Agreement (less any shares surrendered for income tax purposes).

Based on the number of shares of CYS Common Stock outstanding on [•], 2018, the record date for the Two Harbors special meeting, and an assumed exchange ratio of 0.4872 based on the adjusted book value per share of Two Harbors Common Stock and CYS Common Stock as of March 31, 2018, calculated in accordance with the Merger Agreement, we expect approximately [•] shares of Two Harbors Common Stock will be issued in connection with the Merger. The actual Exchange Ratio will be publicly announced at least five business days before each of the special meetings of stockholders described below.

In addition, each share of 7.75% Series A Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of CYS (the "CYS Series A Preferred Stock") will be converted into the right to receive one share of newly classified 7.75% Series D Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of Two Harbors (the "Two Harbors Series D Preferred Stock"), and each share of 7.50% Series B Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of CYS (the "CYS Series B Preferred Stock") will be converted into the right to receive one share of newly classified 7.50% Series E Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of Two Harbors (the "Two Harbors Series E Preferred Stock").

In connection with the Merger, PRCM Advisers LLC ("PRCM Advisers"), Two Harbors' external manager and a subsidiary of Pine River Capital Management L.P., has agreed to reduce the base management fee it charges Two Harbors with respect to the additional equity under management resulting from the Merger from 1.5% of stockholders' equity on an annualized basis to 0.75% through the first anniversary of Closing. PRCM Advisers will also make a one-time downward adjustment of \$15,000,000 to the management fees payable by Two Harbors for the quarter in which the Merger closes as well as a downward adjustment to the management fees payable by Two Harbors of up to an additional \$3.3 million to reimburse Two Harbors for certain transaction-related expenses.

Two Harbors and CYS will each hold a special meeting of their respective common stockholders. Two Harbors' special meeting will be held at [•] on [•], 2018, at [•], Eastern Time. CYS's special meeting will be held at [•] on [•], 2018, at [•], [•] Eastern Time. The preferred stockholders of each of CYS and Two Harbors are not entitled to vote on any of the matters to be considered and voted upon at the CYS special meeting or the

Two Harbors special meeting, as applicable.

At the Two Harbors special meeting, the Two Harbors common stockholders will be asked to (i) consider and vote on a proposal to approve the issuance of shares of Two Harbors Common Stock in the Merger and upon any conversion (upon certain future changes of control of Two Harbors, if any) of the Two Harbors Series D Preferred Stock and Two Harbors Series E Preferred Stock to be issued in the Merger (the "Two Harbors Common Stock Issuance Proposal") and (ii) approve the adjournment of the Two Harbors special meeting, if necessary or appropriate, for the purpose of soliciting additional votes for the approval of the Two Harbors Common Stock Issuance Proposal (the "Two Harbors Adjournment Proposal"). The Two Harbors Board has unanimously (i) determined that the Merger Agreement and the other transactions contemplated therein, including the Merger and the issuance of shares of Two Harbors Common Stock (the "Two Harbors Common Stock Issuance"), are in the best interests of Two Harbors and its stockholders, (ii) approved the Merger Agreement and the other transactions contemplated therein, including the Merger and the Two Harbors Common Stock Issuance, (iii) directed that the Two Harbors Common Stock Issuance Proposal be submitted to the holders of Two Harbors Common Stock for consideration at the Two Harbors special meeting and (iv) recommended that the holders of Two Harbors Common Stock Issuance Proposal. The Two Harbors Board unanimously recommends that the Two Harbors common stockholders vote "FOR" the Two Harbors Common Stock Issuance Proposal and "FOR" the Two Harbors Adjournment Proposal. Only those matters included in the Two Harbors Notice of Meeting may be considered and voted upon at the Two Harbors special meeting.

At the CYS special meeting, the CYS common stockholders will be asked to (i) consider and vote on a proposal to approve the Merger (the "Merger Proposal"), (ii) consider and vote on a non-binding advisory proposal to approve the compensation that may be paid or become payable to CYS's named executive officers that is based on or otherwise relates to the Merger (the "CYS Non-Binding Compensation Advisory Proposal"), and (iii) approve the adjournment of the CYS special meeting, if necessary or appropriate, for the purpose of soliciting additional votes for the approval of the Merger Proposal (the "CYS Adjournment Proposal"). The CYS Board, acting upon the unanimous recommendation of a special committee of independent directors of CYS formed for the purpose of, among other things, evaluating and making a recommendation to the CYS Board with respect to the Merger Agreement and the other transactions contemplated therein, has unanimously (i) determined that the Merger Agreement and the other transactions contemplated therein, including the merger of Merger Sub with and into CYS, are in the best interests of CYS and its stockholders, (ii) approved the Merger Agreement and declared that the transactions contemplated therein, including the Merger, are advisable, (iii) directed that the Merger and the other transactions contemplated by the Merger Agreement be submitted to the holders of CYS Common Stock for consideration at the CYS special meeting and (iv) recommended that the CYS common stockholders approve the Merger and the other transactions contemplated by the Merger Agreement.

The CYS Board unanimously recommends that the CYS common stockholders vote "FOR" the Merger Proposal, "FOR" the CYS Non-Binding Compensation Advisory Proposal and "FOR" the CYS Adjournment Proposal. Only those matters included in the CYS Notice of Meeting may be considered and voted upon at the CYS special meeting.

This joint proxy statement/prospectus provides detailed information about the special meetings of Two Harbors and CYS, the Merger Agreement, the Merger and other related matters. A copy of the Merger Agreement is included as Annex A to this joint proxy statement/prospectus. We encourage you to read this joint proxy statement/prospectus, the Merger Agreement and the other annexes to this joint proxy statement/prospectus carefully and in their entirety. In

particular, you should carefully consider the discussion in the section of this joint proxy statement/prospectus entitled "Risk Factors" beginning on page

•]. You may also obtain more information about each company from the documents they file with the Securities and Exchange Commission (the "SEC").

Whether or not you plan to attend the Two Harbors special meeting or the CYS special meeting, as applicable, please complete, date, sign and return, as promptly as possible, the enclosed proxy card in the accompanying reply envelope or authorize a proxy to vote your shares through the Internet or by telephone. You may also authorize a proxy to vote your shares over the Internet using the Internet address on the enclosed proxy card or by telephone using the toll-free number on the enclosed proxy card. If you authorize a proxy to vote your shares through the Internet or by telephone, you will be asked to provide the company number and control number from the enclosed proxy card. If you attend a special meeting and vote in person, your vote by ballot will revoke any proxy previously submitted.

Your vote is very important, regardless of the number of shares of stock you own. Whether or not you plan to attend the Two Harbors special meeting or the CYS special meeting, as applicable, please authorize a proxy to vote your shares of stock as promptly as possible to make sure that your shares of stock are represented at the applicable special meeting. Please note that the failure to vote, or authorize a proxy to vote, your shares of stock of CYS is the equivalent of a vote against the Merger Proposal.

Thank you in advance for your continued support.

Sincerely,

Thomas E. Siering Kevin E. Grant
Chief Executive Officer, Chief Executive Officer,

President and Chairman,

Director President, Chief Investment

Officer and

Two Harbors Investment Corp. Founder

CYS Investments, Inc.

Neither the SEC nor any state securities regulatory agency has approved or disapproved of the securities to be issued in connection with the Merger or passed upon the adequacy or accuracy of this joint proxy statement/prospectus. Any representation to the contrary is a criminal offense.

This joint proxy statement/prospectus is dated [•], 2018, and is first being mailed to the stockholders of Two Harbors and the stockholders of CYS on or about [•], 2018.

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575 Lexington Avenue Suite 2930 New York, New York 10022

NOTICE OF SPECIAL MEETING OF TWO HARBORS COMMON STOCKHOLDERS TO BE HELD ON [•], 2018

NOTICE IS HEREBY GIVEN that a special meeting of stockholders of Two Harbors Investment Corp., a Maryland corporation ("Two Harbors"), will be held at [•] on [•], 2018 at [•], Eastern Time, for the following purposes:

- 1.

 to consider and vote on a proposal to approve the issuance of shares of common stock, par value \$0.01 per share, of Two Harbors ("Two Harbors Common Stock") pursuant to the Agreement and Plan of Merger (the "Merger Agreement"), dated as of April 25, 2018, by and among Two Harbors, Eiger Merger Subsidiary LLC, a Maryland limited liability company, and CYS Investments, Inc., a Maryland corporation, as it may be amended from time to time, a copy of which is attached as Annex A to the joint proxy statement/prospectus accompanying this notice (the "Two Harbors Common Stock Issuance Proposal"); and
- 2. to consider and vote on a proposal to adjourn the special meeting, if necessary or appropriate, including to solicit additional proxies if there are not sufficient votes to approve the Two Harbors Common Stock Issuance Proposal (the "Two Harbors Adjournment Proposal").

Two Harbors will transact no other business at the Two Harbors special meeting or any adjournment or postponement thereof. Please refer to the attached joint proxy statement/prospectus for further information with respect to the business to be transacted at the Two Harbors special meeting. The board of directors of Two Harbors (the "Two Harbors Board") has fixed the close of business on [•], 2018 as the record date for the determination of Two Harbors stockholders entitled to notice of, and to vote at, the Two Harbors special meeting or any adjournments or postponements thereof. Accordingly, only common stockholders at the close of business on that date are entitled to notice of, and to vote at, the Two Harbors special meeting and any adjournments or postponements thereof.

The Two Harbors Board has unanimously (i) determined that the Merger Agreement and the other transactions contemplated therein, including the Merger and the issuance of shares of Two Harbors Common Stock (the "Two Harbors Common Stock Issuance"), are in the best interests of Two Harbors and its stockholders, (ii) approved the Merger Agreement and the other transactions contemplated therein, including the Merger and the Two Harbors Common Stock Issuance, (iii) directed that the Two Harbors Common Stock Issuance Proposal be submitted to the holders of Two Harbors Common Stock for consideration at the Two Harbors special meeting and (iv) recommended that the holders of Two Harbors Common Stock approve the Two Harbors Common Stock Issuance Proposal. The Two Harbors Board unanimously recommends that the Two Harbors common stockholders vote "FOR" the Two Harbors Common Stock Issuance Proposal and "FOR" the Two Harbors Adjournment Proposal.

Your vote is very important, regardless of the number of shares of Two Harbors Common Stock you own. Whether or not you plan to attend the Two Harbors special meeting, please authorize a proxy to vote your shares as promptly as possible to make sure that your shares are represented at the Two Harbors special meeting. Properly executed proxy cards with no instructions indicated on the proxy card will be voted "FOR" the Two Harbors Common Stock Issuance Proposal and "FOR" the Two

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Harbors Adjournment Proposal. Even if you plan to attend the Two Harbors special meeting in person, we urge you to authorize a proxy as promptly as possible by (1) accessing the Internet website specified on your proxy card, (2) calling the toll-free number specified on your proxy card or (3) completing, signing, dating and returning the enclosed proxy card in the accompanying postage-paid envelope prior to the Two Harbors special meeting to ensure that your shares will be represented and voted at the Two Harbors special meeting. If you hold your shares of Two Harbors Common Stock in "street name," which means through a bank, broker or other nominee, please follow the instructions on the voting instruction card furnished to you by such record holder.

Please note that if you hold shares of stock in different accounts, it is important that you vote or authorize a proxy to vote the shares of stock represented by each account. If you attend the Two Harbors special meeting, you may revoke your proxy and vote in person, even if you have previously returned your proxy card or authorized a proxy to vote your shares through the Internet or by telephone. If your shares of Two Harbors Common Stock are held by a bank, broker or other nominee, and you plan to attend the Two Harbors special meeting in person, please bring to the special meeting your statement evidencing your beneficial ownership of your shares of Two Harbors Common Stock. Please carefully review the instructions in the enclosed joint proxy statement/prospectus and the enclosed proxy card or the information forwarded by your bank, broker or other nominee regarding each of these options.

This notice and the enclosed proxy statement/prospectus are first being mailed to Two Harbors stockholders on or about [•], 2018.

By Order of the Board of Directors,

Rebecca B. Sandberg

Vice President, General Counsel and Secretary

New York, New York
[•], 2018

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| 500 | Totten | Pond | Road, | 6 th | Floor |
|------------|--------|-------|--------|-----------------|-------|
| Wa | ltham, | Massa | chuset | tts (| 2451 |

NOTICE OF SPECIAL MEETING OF CYS COMMON STOCKHOLDERS TO BE HELD ON [•], 2018

NOTICE IS HEREBY GIVEN that a special meeting of stockholders of CYS Investments, Inc., a Maryland corporation ("CYS") will be held at [•] on [•], 2018 at [•], Eastern Time, for the following purposes:

- to consider and vote on a proposal (the "Merger Proposal") to approve the merger transaction in which CYS merges with and into Eiger Merger Subsidiary LLC, a Maryland limited liability company, ("Merger Sub") related to that certain Agreement and Plan of Merger (the "Merger Agreement"), dated as of April 25, 2018, among Two Harbors Investment Corp., a Maryland corporation, Merger Sub and CYS, as it may be amended from time to time, a copy of which is attached as Annex A to the joint proxy statement/prospectus accompanying this notice;
- to consider and vote on a non-binding advisory proposal to approve the compensation that may be paid or become payable to CYS's named executive officers that is based on or otherwise relates to the Merger (the "CYS Non-Binding Compensation Advisory Proposal"); and
- 3. to consider and vote on a proposal to approve the adjournment of the CYS special meeting, if necessary or appropriate, for the purpose of soliciting additional votes for the approval of the Merger Proposal (the "CYS Adjournment Proposal").

CYS will transact no other business at the special meeting or any adjournment or postponement thereof. These items of business are described in the enclosed joint proxy statement/prospectus. The CYS board of directors (the "CYS Board") has designated the close of business on [•], 2018 as the record date for the purpose of determining the stockholders who are entitled to receive notice of, and to vote at, the CYS special meeting and any adjournments or postponements of the special meeting, unless a new record date is fixed in connection with an adjournment or postponement of the special meeting. Accordingly, only CYS common stockholders at the close of business on the record date are entitled to notice of the CYS special meeting and only CYS common stockholders are entitled to vote at the CYS special meeting and at any adjournment or postponement of the special meeting.

The CYS Board, acting upon the unanimous recommendation of a special committee of independent directors of CYS formed for the purpose of, among other things, evaluating and making a recommendation to the CYS Board with respect to the Merger Agreement and the other transactions contemplated therein, has unanimously (i) determined that the Merger Agreement and the other transactions contemplated therein, including the merger of Merger Sub with and into CYS, are in the best interests of CYS and its stockholders, (ii) approved the Merger Agreement and declared that the transactions contemplated therein, including the Merger, are advisable, (iii) directed that the Merger and the other transactions contemplated by the Merger Agreement be submitted to the holders of CYS Common Stock for consideration at the CYS special meeting and (iv) recommended that the CYS common stockholders approve the Merger and the other transactions contemplated by the Merger Agreement. The CYS Board unanimously recommends that the CYS common stockholders vote "FOR" the Merger Proposal, "FOR" the CYS Non-Binding Compensation Advisory Proposal and "FOR" the CYS Adjournment Proposal.

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Your vote is very important, regardless of the number of shares of CYS you own. Whether or not you plan to attend the CYS special meeting, please authorize a proxy to vote your shares as promptly as possible to make sure that your shares are represented at the special meeting. Properly executed proxy cards with no instructions indicated on the proxy card will be voted "FOR" the Merger Proposal, "FOR" the CYS Non-Binding Compensation Advisory Proposal and "FOR" the CYS Adjournment Proposal. Even if you plan to attend the CYS special meeting in person, we request that you complete, sign, date and return the enclosed proxy card in the accompanying envelope prior to the special meeting to ensure that your shares will be represented and voted at the special meeting if you are unable to attend. If you hold your CYS shares in "street name," which means through a bank, broker or other nominee, you must obtain a legal proxy from this bank, broker or other nominee in order to vote in person at the CYS special meeting.

If you do not vote on the Merger Proposal, this will have the same effect as a vote by you against the approval of the Merger Proposal.

Please note that if you hold shares of stock in different accounts, it is important that you vote or authorize a proxy to vote the shares of stock represented by each account. If you attend the CYS special meeting, you may revoke your proxy and vote in person, even if you have previously returned your proxy card or authorized a proxy to vote your shares through the Internet or by telephone. If your CYS shares are held by a bank, broker or other nominee, and you plan to attend the CYS special meeting in person, please bring to the special meeting your statement evidencing your beneficial ownership of your CYS shares. Please carefully review the instructions in the enclosed joint proxy statement/prospectus and the enclosed proxy card or the information forwarded by your bank, broker or other nominee regarding each of these options.

By Order of the Board of Directors,

Thomas A. Rosenbloom

Executive Vice President of Business Development, General Counsel, and Secretary

Waltham, Massachusetts
[•], 2018

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ADDITIONAL INFORMATION

This joint proxy statement/prospectus incorporates important business and financial information about Two Harbors and CYS from other documents that are not included in or delivered with this joint proxy statement/prospectus. This information is available to you without charge upon your request. To obtain timely delivery, you must request the information no later than five business days before the date of the applicable special meeting. You can obtain the documents incorporated by reference into this joint proxy statement/prospectus by requesting them from Two Harbors' or CYS's investor relations departments:

If you are a Two Harbors stockholder:

If you are a CYS stockholder:

D.F. King & Co., Inc. 48 Wall Street, 22nd floor New York, New York 10005 (866) 530-8623 (toll free) two@dfking.com

Georgeson LLC 1290 Avenue of the Americas, 9th Floor New York, New York 10104 866-300-8594 (toll free)

or

575 Lexington Avenue Suite 2930 New York, New York 10022 (612) 629-2500

Attention: Investor Relations

500 Totten Pond Road 6th Floor Waltham, Massachusetts 02451 (617) 639-0440

or

Attention: Investor Relations Investors may also consult Two Harbors' or CYS's website for more information concerning the Merger and other related transactions described in this joint proxy statement/prospectus. Two Harbors' website is www.twoharborsinvestment.com. CYS's website is

www.cysinv.com. Each company's public filings are also available at www.sec.gov. The information contained on Two Harbors' and CYS's websites is not part of this joint proxy statement/prospectus and is not incorporated herein by reference. The references to Two Harbors' and CYS's websites are intended to be inactive textual references only.

If you would like to request any documents that are incorporated by reference into this joint proxy statement/prospectus, please do so by [•], 2018 in order to receive them before the Two Harbors special meeting and by [•], 2018 in order to receive them before the CYS special meeting.

For more information, see "Where You Can Find More Information and Incorporation by Reference" beginning on page [•].

ABOUT THIS DOCUMENT

This joint proxy statement/prospectus, which forms part of a registration statement on Form S-4 (Registration Statement No. [•]) filed by Two Harbors with the SEC, constitutes a prospectus of Two Harbors for purposes of the Securities Act of 1933, as amended (the "Securities Act"), with respect to (i) the shares of Two Harbors Common Stock to be issued to CYS common stockholders in exchange for shares of CYS Common Stock, (ii) the shares of Two Harbors Series D Preferred Stock to be issued to holders of CYS Series A Preferred Stock in exchange for shares of CYS Series A Preferred Stock and (iii) the shares of Two Harbors Series E Preferred Stock to be issued to holders of CYS Series B Preferred Stock in exchange for shares of CYS Series B Preferred Stock, in each case, pursuant to the Merger Agreement, as such agreement may be amended or modified from time to time. This joint proxy statement/prospectus also constitutes a proxy statement for each of Two Harbors and CYS for purposes of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). In addition, it constitutes a notice of special meeting with respect to the Two Harbors special meeting and a notice of special meeting with respect to the CYS special meeting.

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You should rely only on the information contained or incorporated by reference in this joint proxy statement/ prospectus. No one has been authorized to provide you with information that is different from that contained in, or incorporated by reference into, this joint proxy statement/prospectus. This joint proxy statement/prospectus is dated [•], 2018, and you should not assume that the information contained in, or incorporated by reference into, this joint proxy statement/prospectus is accurate as of any date other than that date (or, in the case of documents incorporated by reference, their respective dates). Neither the mailing of this joint proxy statement/prospectus to Two Harbors stockholders or CYS stockholders nor the Two Harbors Common Stock Issuance to CYS common stockholders in the Merger pursuant to the Merger Agreement will create any implication to the contrary.

This joint proxy statement/prospectus does not constitute an offer to sell, or a solicitation of an offer to buy, any securities, or the solicitation of a proxy, in any jurisdiction in which or to any person to whom it is unlawful to make any such offer or solicitation in such jurisdiction. Information contained in this joint proxy statement/prospectus regarding Two Harbors has been provided by Two Harbors and information contained in this joint proxy statement/prospectus regarding CYS has been provided by CYS.

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OUESTIONS AND ANSWERS ABOUT THE SPECIAL MEETINGS AND THE MERGER

The following questions and answers are intended to address certain commonly asked questions regarding the Merger Agreement, the Merger and the Two Harbors and CYS special meetings. These questions and answers do not address all questions that may be important to you as a stockholder of Two Harbors or CYS. Please refer to the "Summary" beginning on page [•] and the more detailed information contained elsewhere in this joint proxy statement/prospectus and the annexes to this joint proxy statement/prospectus, which you should read carefully. Unless stated otherwise, all references in this joint proxy statement/prospectus to:

"Alternative Proposal" means any contract, proposal, offer or indication of interest relating to any transaction or series of related transactions involving any merger, amalgamation, share exchange, recapitalization, consolidation, acquisition, business combination of or involving Two Harbors and/or any of its subsidiaries, and any person, in which the consideration paid by Two Harbors or its subsidiaries was cash, voting stock of Two Harbors or other consideration valued at \$500,000,000 or more.

"Barclays" refers to Barclays Capital Inc.

"Closing" refers to the closing of the Merger.

"Code" refers to the Internal Revenue Code of 1986, as amended.

"Combined Company" refers to Two Harbors and its subsidiaries after the closing of the Merger.

"Credit Suisse" refers to Credit Suisse Securities (USA) LLC.

"CYS" refers to CYS Investments, Inc., a Maryland corporation.

"CYS Adjournment Proposal" refers to the proposal to approve the adjournment of the CYS special meeting, if necessary or appropriate, for the purpose of soliciting additional votes for the approval of the Merger Proposal.

"CYS Board" refers to the board of directors of CYS.

"CYS Bylaws" refers to CYS's Amended and Restated Bylaws, as amended from time to time.

"CYS Charter" refers to CYS's Articles of Amendment and Restatement, as amended or supplemented from time to time.

"CYS Common Stock" refers to each outstanding share of common stock, par value \$0.01, per share, of CYS.

"CYS Non-Binding Compensation Advisory Proposal" refers to the non-binding advisory proposal to approve the compensation that may be paid or become payable to CYS's named executive officers that is based on or otherwise relates to the Merger.

"CYS Preferred Stock" refers to each outstanding share of CYS Series A Preferred Stock and CYS Series B Preferred Stock.

"CYS Restricted Stock" means CYS Common Stock that is subject to vesting, repurchase or other lapse restriction.

"CYS Series A Preferred Stock" refers to each outstanding share of 7.75% Series A Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of CYS.

"CYS Series B Preferred Stock" refers to each outstanding share of 7.50% Series B Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of CYS.

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"CYS Stock" refers to the CYS Common Stock, CYS Series A Preferred Stock and CYS Series B Preferred Stock, collectively.

"CYS Stock Plan" refers to the CYS 2013 Equity Incentive Plan.

"Determination Date" means the last day of the month immediately preceding the month in which the conditions to Closing are reasonably expected to be satisfied (other than the obtainment of the Two Harbors common stockholder approval or the CYS common stockholder approval and those conditions that by their nature are to be satisfied or waived at the Closing), or such other date as may be mutually agreed by the parties in their respective sole discretions.

"Exchange Ratio" refers to a quotient (rounded to the nearest one ten-thousandth) determined by dividing (i) (a) CYS adjusted book value per share, multiplied by (b) 96.75% by (ii) (a) Two Harbors adjusted book value per share, multiplied by (b) 94.20%, in each case as determined in accordance with the Merger Agreement.

"Fourth Amendment to the Management Agreement" refers to the Fourth Amendment to the Management Agreement between Two Harbors, Two Harbors Operating Company LLC and PRCM Advisers dated April 25, 2018.

"GAAP" refers to the accounting principles generally accepted in the United States of America.

"Granite Point" means Granite Point Mortgage Trust Inc.

"JMP" means JMP Securities LLC.

"Management Agreement" refers to the Management Agreement between Two Harbors, Two Harbors Operating Company LLC and PRCM Advisers dated October 28, 2009, as amended.

"Merger" refers to the merger of Merger Sub with and into CYS, with CYS continuing as the surviving corporation.

"Merger Agreement" refers to the Agreement and Plan of Merger, dated as of April 25, 2018, by and among Two Harbors, Merger Sub, and CYS, as it may be amended or modified from time to time, a copy of which is attached as Annex A to this joint proxy statement/prospectus.

"Merger Proposal" refers to the proposal to approve the Merger.

"Merger Sub" refers to Eiger Merger Subsidiary LLC, a Maryland limited liability company and an indirect wholly owned subsidiary of Two Harbors.

"NYSE" refers to the New York Stock Exchange.

"Per Share Cash Consideration" means \$15,000,000 divided by the sum of the number of shares of CYS Common Stock issued and outstanding immediately prior to the effective time of the Merger (excluding any cancelled shares), including outstanding CYS Restricted Stock that will vest upon completion of the Merger (less any shares surrendered for income tax

purposes).

"Per Share Stock Consideration" means a number of shares of Two Harbors Common Stock equal to the Exchange Ratio.

"PRCM Advisers" refers to PRCM Advisers LLC, Two Harbors' external manager and a wholly owned subsidiary of Pine River.

"Pine River" refers to Pine River Capital Management L.P.

"REIT" refers to a real estate investment trust as defined in Section 856 of the Code.

"Two Harbors" refers to Two Harbors Investment Corp., a Maryland corporation.

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A:

"Two Harbors Adjournment Proposal" refers to the proposal to approve the adjournment of the Two Harbors special meeting, if necessary or appropriate, for the purpose of soliciting additional votes for the approval of the Two Harbors Common Stock Issuance Proposal.

"Two Harbors Board" refers to the board of directors of Two Harbors.

"Two Harbors Bylaws" refers to Two Harbors' Amended and Restated Bylaws, as amended from time to time.

"Two Harbors Charter" refers to Two Harbors' Articles of Amendment and Restatement, as amended or supplemented from time to time.

"Two Harbors Common Stock" refers to the common stock, par value \$0.01 per share, of Two Harbors.

"Two Harbors Common Stock Issuance" refers to the issuance of shares of Two Harbors Common Stock to holders of CYS Common Stock, as contemplated by the Merger Agreement, and upon any conversion (upon certain future changes of control of Two Harbors, if any) of the Two Harbors Series D Preferred Stock and Two Harbors Series E Preferred Stock to be issued in the Merger.

"Two Harbors Common Stock Issuance Proposal" refers to the proposal to approve the Two Harbors Common Stock Issuance.

"Two Harbors Series A Preferred Stock" refers to each outstanding share of 8.125% Series A Fixed-to-Floating Rate Cumulative Redeemable Preferred Stock, \$0.01 par value per share, of Two Harbors.

"Two Harbors Series B Preferred Stock" refers to each outstanding share of 7.625% Series B Fixed-to-Floating Rate Cumulative Redeemable Preferred Stock, \$0.01 par value per share, of Two Harbors.

"Two Harbors Series C Preferred Stock" refers to each outstanding share of 7.25% Series C Fixed-to-Floating Rate Cumulative Redeemable Preferred Stock, \$0.01 par value per share, of Two Harbors.

"Two Harbors Series D Preferred Stock" refers to the newly classified 7.75% Series D Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of Two Harbors.

"Two Harbors Series E Preferred Stock" refers to the newly classified 7.50% Series E Cumulative Redeemable Preferred Stock, par value \$0.01 per share, of Two Harbors.

Q: What is the proposed transaction for which I am being asked to vote?

The CYS common stockholders are being asked to approve the Merger. The approval of the Merger by the CYS common stockholders is a condition to the effectiveness of the Merger.

The Two Harbors common stockholders are being asked to approve the Two Harbors Common Stock Issuance Proposal in connection with the Merger. The approval of the Two Harbors Common Stock Issuance Proposal by the Two Harbors common stockholders is a condition to the effectiveness of the Merger.

The CYS common stockholders are being asked to approve the CYS Non-Binding Compensation Advisory Proposal, and the CYS common stockholders and the Two Harbors common stockholders are also being asked to approve the CYS Adjournment Proposal and the Two Harbors Adjournment Proposal, respectively, if necessary. The approval of these proposals is not a condition to the effectiveness of the Merger.

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Q:

Q:

Q: Why are Two Harbors and CYS proposing the Merger?

A:

The Two Harbors Board and the CYS Board have determined that the Merger will provide a number of significant strategic opportunities and benefits and will be in the best interests of their respective stockholders. At Closing, the Combined Company will have a larger capital base, which will support continued growth across Two Harbors' target assets and will position Two Harbors to take advantage of market opportunities as they arise. The Combined Company is expected to provide improved scale, liquidity and capital alternatives for Two Harbors stockholders as a result of the increased equity capitalization and the increased stockholder base of the Combined Company. The combination of Two Harbors and CYS is also expected to create cost efficiencies and decrease Two Harbors' other operating expense ratio by 30 to 40 basis points. To review the reasons for the Merger in greater detail, see "The Merger Recommendation of the Two Harbors Board and Its Reasons for the Merger" beginning on page [•] and "The Merger Recommendation of the CYS Board and Its Reasons for the Merger" beginning on page [•].

Q:

Were appraisals or valuations performed on the assets and liabilities of Two Harbors and CYS in connection with the Merger?

A:

Except for the valuation to be performed on an office property owned by CYS (representing less than 1% of CYS's total assets), no third-party appraisals or valuations on the assets and liabilities of Two Harbors and CYS were obtained in connection with the Merger.

What happens if the market price of Two Harbors Common Stock or CYS Common Stock changes before the Closing?

A:

Changes in the market price of Two Harbors Common Stock or the market price of CYS Common Stock at or prior to the effective time of the Merger will not change the number of shares of Two Harbors Common Stock that CYS common stockholders will receive because the Exchange Ratio is linked to Two Harbors' adjusted book value per share and CYS's adjusted book value per share as of the Determination Date, and not to the market price of either stock.

Q:
 What happens if the adjusted book value per share of Two Harbors or the adjusted book value per share of CYS changes before the Determination Date?

A:

The value of the merger consideration received by CYS common stockholders will depend on the Exchange Ratio and the value of a share of Two Harbors Common Stock at the effective time of the Merger. The Exchange Ratio will be based on Two Harbors' adjusted book value per share and CYS's adjusted book value per share as of the Determination Date. These adjusted book value per share amounts may vary from their respective amounts as of March 31, 2018. As a result, the Exchange Ratio may also vary. As of March 31, 2018, the adjusted book values per share for Two Harbors and CYS, on a pro forma basis, would have been \$15.63 and \$7.41, respectively, representing an illustrative Exchange Ratio of 0.4872, with each share of CYS being exchanged for the right to receive 0.4872 shares of Two Harbors (plus the Per Share Cash Consideration). The actual Exchange Ratio for the Merger will be based on each of the parties' adjusted book values per share as of the Determination Date, and such Exchange Ratio will be publicly announced at least five business days prior to the special meetings.

Are there any conditions to completion of the Merger?

A:
Yes. In addition to the approvals of the Two Harbors common stockholders and the CYS common stockholders, as described herein, there are a number of conditions that must be satisfied or waived for the Merger to be consummated. For a description of all the conditions to the Merger, see "The Merger Agreement Conditions to Complete the Merger" beginning on page [•].

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The following questions and answers apply to Two Harbors stockholders only:

- Q: When and where is the Two Harbors special meeting?
- A:

 The special meeting of Two Harbors common stockholders will be held on [], 2018, at [], on [], at [], Eastern Time.
- Q: What matters will be voted on at the Two Harbors special meeting?
- A:

 Two Harbors common stockholders will be asked to consider and vote on the following proposals:

the Two Harbors Common Stock Issuance Proposal; and

the Two Harbors Adjournment Proposal.

Two Harbors will transact no other business at the Two Harbors special meeting or any adjournment or postponement thereof.

- Q:

 How does the Two Harbors Board recommend that I vote on the proposals?
- A:

 The Two Harbors Board has unanimously (i) determined that the Merger Agreement and the other transactions contemplated therein, including the Merger and the Two Harbors Common Stock Issuance, are in the best interests of Two Harbors and its stockholders, (ii) approved the Merger Agreement and the other transactions contemplated therein, including the Merger and the Two Harbors Common Stock Issuance, (iii) directed that the Two Harbors Common Stock Issuance Proposal be submitted to the holders of Two Harbors Common Stock for consideration at the Two Harbors special meeting and (iv) recommended that the holders of Two Harbors Common Stock approve the Two Harbors Common Stock Issuance Proposal. The Two Harbors Board unanimously recommends that the Two Harbors common stockholders vote "FOR" the Two Harbors Common Stock Issuance Proposal and "FOR" the Two Harbors Adjournment Proposal. For a more complete description of the recommendation of the Two Harbors Board, see "The Merger Recommendation of the Two Harbors Board and Its Reasons for the Merger" beginning on page [].
- Q: What constitutes a quorum for the Two Harbors special meeting?
- A:

 The presence, in person or by proxy, of the holders of shares of Two Harbors Common Stock entitled to cast a majority of all the votes entitled to be cast at the Two Harbors special meeting will constitute a quorum at the Two Harbors special meeting. Two Harbors will include abstentions in the calculation of the number of shares considered to be present at the Two Harbors special meeting for purposes of determining the presence of a quorum at the Two Harbors special meeting. As of the close of business on [], 2018, the record date for the Two Harbors special meeting, there were [] shares of Two Harbors Common Stock outstanding.
- Q: What vote is required for Two Harbors common stockholders to approve the Two Harbors Common Stock Issuance Proposal?
- A:

 Approval of the Two Harbors Common Stock Issuance Proposal will require that the number of votes cast for the Two Harbors
 Common Stock Issuance Proposal exceeds the number of votes cast against and abstaining from the Two Harbors Common Stock
 Issuance Proposal, provided a quorum is present.

Holders of Two Harbors preferred stock will not be entitled to vote on any matter at the Two Harbors special meeting.

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- Q: What vote is required for Two Harbors common stockholders to approve the Two Harbors Adjournment Proposal?
- A:

 Approval of the Two Harbors Adjournment Proposal will require that the number of votes cast for the Two Harbors Adjournment Proposal exceeds the number of votes cast against the Two Harbors Adjournment Proposal, provided a quorum is present.
- Q: How are votes counted?
- A:

 For the Two Harbors Common Stock Issuance Proposal, you may vote "FOR", "AGAINST" or "ABSTAIN". If you do not return your proxy card or otherwise authorize a proxy to vote your shares or attend the meeting in person, your shares will not be considered present for the purpose of determining the presence of a quorum and will have no effect on the Two Harbors Common Stock Issuance Proposal. Under NYSE rules, abstentions will be considered as votes cast and, accordingly, will have the same effect as votes "AGAINST" the Two Harbors Common Stock Issuance Proposal.

For the Two Harbors Adjournment Proposal, you may vote "FOR", "AGAINST" or "ABSTAIN". Abstentions and other shares not voted (whether by broker non-votes, if any, or otherwise) will not have an effect on the Two Harbors Adjournment Proposal, provided that a quorum is otherwise present.

Properly executed proxy cards with no instructions indicated on the proxy card will be voted "FOR" the Two Harbors Common Stock Issuance Proposal and "FOR" the Two Harbors Adjournment Proposal.

In addition, banks, brokers and other nominees that hold their customers' shares in street name may not vote their customers' shares on "non-routine" matters without instructions from their customers. As each of the proposals to be voted upon at the Two Harbors special meeting is considered "non-routine," such organizations do not have discretion to vote on any of the proposals. As a result, if you fail to provide your broker, bank or other nominee with any instructions regarding how to vote your shares of Two Harbors Common Stock, your shares of Two Harbors Common Stock will not be considered present at the Two Harbors special meeting and will not be voted on any of the proposals.

- Q: Who is entitled to vote at the Two Harbors special meeting?
- A:

 All holders of Two Harbors Common Stock as of the close of business on [], 2018, the record date for the Two Harbors special meeting, are entitled to vote at the Two Harbors special meeting, unless a new record date is fixed for any adjournment or postponement of the Two Harbors special meeting. As of the record date, there were [] issued and outstanding shares of Two Harbors Common Stock. Each holder of Two Harbors Common Stock on the record date is entitled to one vote per share.

Holders of Two Harbors preferred stock will not be entitled to vote on any matter at the Two Harbors special meeting.

- Q:

 How will Two Harbors common stockholders be affected by the Merger and the Two Harbors Common Stock Issuance?
- After the Merger, each Two Harbors common stockholder will continue to own the shares of Two Harbors Common Stock that such stockholder held immediately prior to the Merger. As a result, each Two Harbors common stockholder will continue to own common stock in the Combined Company, which will be a larger company with more assets. However, because Two Harbors will be issuing new shares of Two Harbors Common Stock to CYS common stockholders in the Merger, each outstanding share of Two Harbors Common Stock immediately prior to the Merger will represent a smaller percentage of the aggregate number of shares of Two Harbors Common Stock outstanding after the Merger.

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- Q:
 Do the Two Harbors directors and executive officers and its external manager, PRCM Advisers, have any interests in the Merger?
- A:
 Yes. The Combined Company will continue to be managed by PRCM Advisers under the terms of the Management Agreement. Under the Management Agreement, PRCM Advisers provides the day-to-day management of Two Harbors' business, including providing Two Harbors with its executive officers and all other personnel necessary to support its operations. In exchange for its services, Two Harbors pays PRCM Advisers a management fee and reimburses it for certain expenses incurred by it and its affiliates in rendering management services to Two Harbors. Pine River is the parent of PRCM Advisers. Certain directors and executive officers of Two Harbors are partners and employees of Pine River.

Pursuant to the Management Agreement, Two Harbors pays PRCM Advisers a base management fee equal to 1.5% per annum of its stockholders' equity, which is calculated and payable quarterly in arrears. Following the Merger, Two Harbors stockholders' equity will include the additional equity attributable to the acquisition of CYS, thus the amount of the management fees payable to PRCM Advisers will also increase, which gives PRCM Advisers and its parent, Pine River (and therefore, Two Harbors' management), an incentive, not shared by Two Harbors stockholders, to negotiate and effect the Merger, possibly on terms less favorable to Two Harbors than would otherwise have been achieved. However, in connection with the Merger, PRCM Advisers has agreed to amend the Management Agreement to provide for: (i) a reduction in the base management fee PRCM Advisers charges Two Harbors with respect to the additional equity under management resulting from the Merger from 1.5% of stockholders' equity on an annualized basis to 0.75% through the first anniversary of the Closing; (ii) a one-time downward adjustment of \$15,000,000 to the management fees payable by Two Harbors for the quarter in which the Merger occurs in order to reimburse Two Harbors for certain expenses it incurs in connection with the Merger. In the event the total amount of the management fee payable for the quarter referenced in clauses (ii) and (iii) above is less than the aggregate amount of the referenced downward adjustments (collectively, the "Adjustments"), PRCM Advisers will pay to Two Harbors in immediately available funds the difference between (i) such Adjustments and (ii) the base management fee payable to PRCM Advisers with respect to such quarter.

The Fourth Amendment to the Management Agreement between Two Harbors and PRCM Advisers was negotiated between related parties, and the terms, including fees and other amounts payable, may not be as favorable to Two Harbors as if it had been negotiated with an unaffiliated third party.

The following questions and answers apply to CYS common stockholders only:

- Q: What will I receive for my CYS Stock in the Merger?
- Under the terms of the Merger Agreement, each share of CYS Common Stock will be converted into the right to receive (i) the Per Share Cash Consideration and (ii) a number of shares of Two Harbors Common Stock based on the Exchange Ratio, which will be publicly announced at least five business days prior to the earlier of the CYS special meeting and the Two Harbors special meeting. Each share of CYS Series A Preferred Stock will be converted into the right to receive one share of newly classified Two Harbors Series D Preferred Stock. Each share of CYS Series B Preferred Stock will be converted into the right to receive one share of newly classified Two Harbors Series E Preferred Stock.

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Q:

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Q:

A:

Q:

How will I receive the merger consideration if the Merger is completed?

A:

For CYS stockholders, if you hold physical share certificates of CYS Common Stock or CYS Preferred Stock, you will be sent a letter of transmittal promptly after the Closing describing how you may exchange your shares for the merger consideration, and the exchange agent will forward to you the merger consideration to which you are entitled after receiving the proper documentation from you. If you hold your shares of CYS Common Stock or CYS Preferred Stock in uncertificated book-entry form, you are not required to take any specific actions to exchange your shares. After the consummation of the Merger, uncertificated shares of CYS Common Stock and CYS Preferred Stock will be automatically exchanged for the applicable merger consideration. For more information, see the section entitled "The Merger Agreement Exchange Procedures" beginning on page [•].

Q: When and where is the CYS special meeting?

A:

The special meeting of CYS common stockholders will be held on [•], 2018, at [•], starting at [•], [•] Eastern Time.

What matters will be voted on at the CYS special meeting?

You will be asked to consider and vote on the following proposals:

the Merger Proposal;

the CYS Non-Binding Compensation Advisory Proposal; and

the CYS Adjournment Proposal.

CYS will transact no other business at the CYS special meeting or any adjournment or postponement thereof. Holders of CYS Preferred Stock will not be entitled to vote on any matter at the CYS special meeting.

How does the CYS Board recommend that I vote on the proposals?

The CYS Board, acting upon the unanimous recommendation of a special committee of independent directors of CYS formed for the purpose of, among other things, evaluating and making a recommendation to the CYS Board with respect to the Merger Agreement and the other transactions contemplated therein, has unanimously (i) determined that the Merger Agreement and the other transactions contemplated therein, including the merger of Merger Sub with and into CYS, are in the best interests of CYS and its stockholders, (ii) approved the Merger Agreement and declared that the transactions contemplated therein, including the Merger, are advisable, (iii) directed that the Merger and the other transactions contemplated by the Merger Agreement be submitted to the holders of CYS Common Stock for consideration at the CYS special meeting and (iv) recommended that the CYS common stockholders approve the Merger and the other transactions contemplated by the Merger Agreement.

The CYS Board unanimously recommends that the CYS common stockholders vote "FOR" the Merger Proposal, "FOR" the CYS Non-Binding Compensation Advisory Proposal and "FOR" the CYS Adjournment Proposal. For a more complete description of the recommendation of the CYS Board, see "The Merger" Recommendation of the CYS Board and Its Reasons for the Merger" beginning on page [•].

Q:

Do the CYS directors and executive officers have any interests in the Merger?

A:

Yes. In considering the CYS Board's recommendation for CYS stockholders to approve the Merger Proposal and the CYS Non-Binding Compensation Advisory Proposal, CYS stockholders

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A:

should be aware that directors and executive officers of CYS have interests in the Merger that may be different from, or in addition to, the interests of CYS stockholders generally and that may present actual or potential conflicts of interests. These interests include:

immediately prior to the effective time of the Merger, each outstanding award of CYS Restricted Stock granted pursuant to the CYS Stock Plan will automatically vest in full and any forfeiture restrictions applicable to such shares of CYS Restricted Stock shall immediately lapse. As a result, each share of CYS Restricted Stock (less any shares surrendered for income tax purposes) will be treated as a share of CYS Common Stock for all purposes of the Merger, including the right to receive the merger consideration; and

continued indemnification and insurance coverage for the directors and executive officers of CYS in accordance with the Merger Agreement.

In addition, CYS maintains employment agreements with each of Messrs. Grant, DeCicco, Cleary, and Rosenbloom (the "Employment Agreements"), which provide for payments and other benefits if the individual's employment terminates for a qualifying event or circumstance, such as being terminated without "cause" or leaving employment for "good reason," as these terms are defined in the Employment Agreements. Upon the termination of such individual's employment by CYS or Two Harbors other than for cause, retirement or disability, or by such individual for good reason, the individual would be eligible to receive, among other benefits, (i) a lump sum severance payment equal to 2.5 in the case of Mr. Grant and 1.0 in the case of Messrs. DeCicco, Cleary and Rosenbloom, multiplied by the average of the sum of such individual's base salary and bonus earned during the shorter of (a) the three (3) fiscal years immediately preceding the year in which the termination of employment occurs or (b) the period of time beginning on the date of the individual's employment agreement and ending on the termination date of such individual's employment, (ii) a pro rata bonus for the year of termination, and (iii) certain benefit continuation rights for up to 24 months for Mr. Grant and up to 12 months for Messrs. DeCicco, Cleary, and Rosenbloom, following termination.

In connection with the approval of the execution of the Merger Agreement, the CYS Board approved an amendment to the Employment Agreements to clarify payment mechanics and timing of severance amounts that may become payable pursuant to the Employment Agreements following a qualifying termination of employment with CYS.

Upon Closing, each of James A. Stern and Karen Hammond, independent directors currently sitting on the CYS Board, will be appointed to the Two Harbors Board and each will be entitled to compensation pursuant to Two Harbors' independent director compensation program.

The CYS Board was aware of these interests and considered them, among other matters, when approving the Merger Agreement and the transactions contemplated thereby, including the Merger. For additional information, see "The Merger Interests of CYS's Directors and Executive Officers in the Merger" beginning on page [•].

Q: What constitutes a quorum for the CYS special meeting?

- A:

 The CYS Bylaws provide that the presence in person or by proxy of CYS stockholders entitled to cast a majority of all the votes entitled to be cast at the meeting constitutes a quorum at each meeting of CYS stockholders. Abstentions will be counted for the purpose of determining a quorum.
- Q: What vote is required for CYS common stockholders to approve the Merger Proposal?
- Approval of the Merger Proposal will require the affirmative vote of the holders of at least a majority of all outstanding shares of CYS Common Stock entitled to vote on the Merger Proposal,

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which is the only vote of the holders of any class or series of shares of capital stock of CYS required for such approval, provided a quorum is present.

Holders of CYS Preferred Stock will not be entitled to vote on any matter at the CYS special meeting.

- Q:
 What vote is required for CYS common stockholders to approve the CYS Non-Binding Compensation Advisory Proposal?
- A:

 Approval of the CYS Non-Binding Compensation Advisory Proposal will require the affirmative vote of a majority of the votes cast on the matter by holders of CYS Common Stock, provided a quorum is present, which is the only vote of the holders of any class or series of shares of capital stock of CYS required for such approval.
- Q: What vote is required for CYS common stockholders to approve the CYS Adjournment Proposal?
- A:

 Approval of the CYS Adjournment Proposal will require the affirmative vote of a majority of the votes cast on the matter by holders of shares of CYS Common Stock, provided a quorum is present, which is the only vote of the holders of any class or series of shares of capital stock of CYS required for such approval.
- Q: How are votes counted?
- A:

 For the Merger Proposal, you may vote "FOR", "AGAINST" or "ABSTAIN". If you abstain or fail to return your proxy card, it will have the same effect as a vote "AGAINST" the Merger Proposal.

For the CYS Non-Binding Compensation Advisory Proposal, you may vote "FOR", "AGAINST" or "ABSTAIN". Abstentions and other shares not voted (whether by broker non-votes, if any, or otherwise) will not have an effect on the CYS Non-Binding Compensation Advisory Proposal, provided that a quorum is otherwise present.

For the CYS Adjournment Proposal, you may vote "FOR", "AGAINST" or "ABSTAIN". Abstentions and other shares not voted (whether by broker non-votes, if any, or otherwise) will not have an effect on the CYS Adjournment Proposal, provided that a quorum is otherwise present.

Properly executed proxy cards with no instructions indicated on the proxy card will be voted "FOR" the Merger Proposal, "FOR" the CYS Non-Binding Compensation Advisory Proposal and "FOR" the CYS Adjournment Proposal.

In addition, if your shares are held in the name of a bank, broker or other nominee, your bank, broker or other nominee will not vote your shares in the absence of specific instructions from you on how to vote your shares. These "broker non-votes" (if any) and abstentions will have the same effect as a vote against the Merger Proposal.

- Q: Who is entitled to vote at the CYS special meeting?
- A:

 All holders of CYS Common Stock as of the close of business on [], 2018, the record date for the CYS special meeting, are entitled to vote at the CYS special meeting, unless a new record date is fixed for any adjournment or postponement of the CYS special meeting. As of the record date, there were [] issued and outstanding shares of CYS Common Stock. Each holder of CYS Common Stock on the record date is entitled to one vote per share. Holders of CYS Preferred Stock will not be entitled to vote on any matter at the CYS special meeting.

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A:

Q:

How will CYS stockholders be affected by the Merger?

Under the terms of the Merger Agreement, holders of CYS Common Stock will receive (i) the Per Share Cash Consideration and (ii) a number of shares of Two Harbors Common Stock for each share of CYS Common Stock owned by them immediately prior to the completion of the Merger based on the Exchange Ratio, which will be publicly announced at least five business days prior to the special meeting of CYS stockholders. As such, after the Merger is completed, CYS Common Stock will no longer be listed on the NYSE and will be deregistered under the Exchange Act, and former CYS common stockholders are expected to own in the aggregate approximately 30% of the Combined Company's fully diluted equity. Also as a result of the Merger, each share of CYS Series A Preferred Stock will be converted into the right to receive one share of newly classified Two Harbors Series D Preferred Stock, and each share of CYS Series B Preferred Stock will be converted into the right to receive one share of newly classified Two Harbors Series E Preferred Stock.

The following questions and answers apply to Two Harbors stockholders and CYS stockholders:

- Q: Have any Two Harbors common stockholders or CYS common stockholders already agreed to vote in favor of the proposals?
- A:

 To either Two Harbors' or CYS's knowledge, no Two Harbors common stockholder has entered into any agreement to vote any of their shares of Two Harbors Common Stock either in favor or against any proposal at the Two Harbors special meeting, and no CYS common stockholder has entered into any agreement to vote any of their shares of CYS Common Stock either in favor or against any proposal at the CYS special meeting.
- Q: What happens if I sell my stock before the special meetings?
- A:

 The record date for each company's special meeting is earlier than the date of each company's special meeting and the date that the Merger is expected to be completed. If you sell your stock after your company's record date but before the date of your company's special meeting, you will retain any right to vote at your company's special meeting, but, for CYS stockholders, you will have transferred your right to receive the merger consideration. For CYS stockholders, in order to receive the merger consideration, you must hold your stock through completion of the Merger.
- Q: What is the difference between a stockholder of record and a beneficial owner?
- A:

 If your shares of Two Harbors Common Stock or CYS Common Stock are registered directly in your name with Two Harbors' or CYS's transfer agent, respectively, you are considered the stockholder of record with respect to those shares.

If your shares of Two Harbors Common Stock or CYS Common Stock are held in a stock brokerage account, or by a bank, trustee or other nominee, you are considered the beneficial owner of shares held in "street name." As the beneficial owner, you have the right to direct your broker, bank, trustee or nominee on how to vote the shares that you beneficially own and you are also invited to attend the applicable special meeting. However, beneficial owners generally cannot vote their shares directly because they are not the stockholder of record; instead, beneficial owners must instruct the broker, bank, trustee or other nominee how to vote their shares.

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Q:

How do I vote?

A:

Stockholders of Record. If you are a stockholder of record of Two Harbors or CYS, you may have your shares of Two Harbors Common Stock or CYS Common Stock voted on the matters to be presented at the applicable special meeting in any of the following ways:

To authorize a proxy through the Internet, visit the website set forth on the proxy card you received. You will be asked to provide the control number from the enclosed proxy card. Proxies authorized through the Internet must be received by 11:59 p.m., Eastern Time, on [•], 2018.

To authorize a proxy by telephone, dial the toll free telephone number set forth on the proxy card you received using a touch tone phone and follow the recorded instructions. You will be asked to provide the control number from the enclosed proxy card. Proxies authorized by telephone or through the Internet must be received by 11:59 p.m., Eastern Time, on [•], 2018.

To authorize a your proxy by mail, complete, date and sign each proxy card you receive and return it as promptly as practicable in the enclosed prepaid envelope. If you sign and return your proxy card, but do not mark the boxes showing how you wish to vote, your shares of common stock will be voted "FOR" the Two Harbors Common Stock Issuance Proposal, the Two Harbors Adjournment Proposal, the Merger Proposal, the CYS Non-Binding Compensation Advisory Proposal and the CYS Adjournment Proposal, as applicable.

If you intend to vote in person, please bring proper identification, together with proof that you are a record owner of shares of the applicable company.

Beneficial Owners. If your shares of Two Harbors or CYS are held in "street name," please refer to the instructions provided by your broker, bank, trustee or other nominee to see which of the above choices are available to you. Please note that if you are a holder in "street name" and wish to vote in person at the special meeting, you must obtain a legal proxy from broker, bank, trustee or other nominee. Please also see the question and answer referencing "street name" shares below.

Q:

What happens if I am both a Two Harbors common stockholder and a CYS common stockholder?

A:

If you are both a Two Harbors common stockholder and a CYS common stockholder, you are entitled to vote at the special meeting of each company. You will receive separate proxy cards for each company and must complete, sign and date each proxy card and return each proxy card in the appropriate preaddressed postage-paid envelope or, if available, by authorizing a proxy to vote your shares by one of the other methods specified in your proxy card or voting instruction card for each company.

Q:

If I am a beneficial owner of Two Harbors or CYS shares, will my broker, bank or other nominee vote my shares for me?

A:

No. If you hold your shares in a stock brokerage account or if your shares are held by a bank or other nominee (that is, in "street name"), you must provide your broker, bank or other nominee with instructions on how to vote your shares. Unless you instruct your broker, bank or other nominee to vote your shares held in street name, your shares will **NOT** be voted. You should follow the procedures provided by your bank, broker or nominee regarding the voting of your shares.

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Q: How can I revoke or change my vote?

A:
You may revoke your proxy at any time before the vote is taken at the special meeting of the company of which you are a stockholder in any of the following ways:

authorizing a later proxy by telephone or through the Internet prior to 11:59 p.m., Eastern Time, on [•], 2018;

filing with the Secretary of the applicable company, before the taking of the vote at the applicable company's special meeting, a written notice of revocation bearing a later date than the proxy card;

duly executing a later dated proxy card relating to the same shares and delivering it to the Secretary of the applicable company before the taking of the vote at the applicable company's special meeting; or

voting in person at the applicable company's special meeting.

Your attendance at the applicable company's special meeting does not automatically revoke your previously submitted proxy. If you have instructed your bank, broker or other nominee to vote your shares, the options described above for revoking your proxy do not apply. Instead, you must follow the directions provided by your bank, broker or other nominee to change your vote.

Q: When is the Merger expected to be consummated?

A:

The Merger is expected to be consummated by the end of the third quarter of 2018, although Two Harbors and CYS cannot assure completion by any particular date, if at all. Because the Merger is subject to a number of conditions, including the approval of the Two Harbors Common Stock Issuance Proposal by the requisite vote of the Two Harbors common stockholders and the Merger Proposal by the requisite vote of the CYS common stockholders, the exact timing of the Merger cannot be determined at this time and Two Harbors and CYS cannot guarantee that the Merger will be completed at all.

Q: Following the Merger, what percentage of Two Harbors Common Stock will current Two Harbors common stockholders and CYS common stockholders own?

Following the completion of the Merger:

A:

A:

the shares of Two Harbors Common Stock held by the current Two Harbors common stockholders are expected to represent in the aggregate approximately 70% of the Combined Company's fully diluted equity; and

former CYS common stockholders are expected to own in the aggregate the remaining approximately 30% of the Combined Company's fully diluted equity.

${\it Q}$: What happens if the Merger is not completed?

If the Two Harbors Common Stock Issuance Proposal or the Merger Proposal is not approved by Two Harbors common stockholders or CYS common stockholders, respectively, or if the Merger is not completed for any other reason, CYS common stockholders will not have their CYS Common Stock exchanged for Two Harbors Common Stock and cash in connection with the Merger. Instead, CYS and Two Harbors would remain separate companies. Under certain circumstances, Two Harbors may be required to pay CYS a termination fee or an expense amount, or CYS may be required to pay Two Harbors a termination fee or expense amount, as described

under "The Merger Agreement Termination Fees and Expenses" beginning on page [•].

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- Q:
 Am I entitled to exercise appraisal rights?
- A:

 No. Neither holders of Two Harbors Common Stock nor holders of CYS Common Stock will be entitled to appraisal rights.
- Q:
 Will Two Harbors have the same business strategy as CYS following the Merger?
- A:

 No. The Combined Company will follow Two Harbors' current business strategy of investing in, financing and managing Agency residential mortgage-backed securities, non-Agency securities, MSR and other financial assets. See "Description of Policies of Two Harbors" on page [].
- Q: Will my dividend payments continue after the Merger?
- A:

 Following completion of the Merger, holders of Two Harbors Common Stock will be entitled to receive dividend or other distributions when, as and if declared by the Two Harbors Board out of funds legally available therefor.
- Q:

 Are there risks associated with the Merger that I should consider in deciding how to vote?
- A:
 Yes. There are a number of risks related to the Merger that are discussed in this joint proxy statement/ prospectus described in the section entitled "Risk Factors" beginning on page [].
- Q:
 What are the material U.S. federal income tax consequences of the Merger to CYS common stockholders and Two Harbors common stockholders?
- A:Assuming that the Merger is completed as currently contemplated, Two Harbors and CYS expect that the receipt of (i) cash and Two Harbors Common Stock in exchange for CYS Common Stock, (ii) Two Harbors Series D Preferred Stock in exchange for CYS Series A Preferred Stock, or (iii) Two Harbors Series E Preferred Stock in exchange for CYS Series B Preferred Stock, as applicable, by U.S. stockholders pursuant to the Merger will be a taxable transaction for U.S. federal income tax purposes. Generally, for U.S. federal income tax purposes, U.S. stockholders of CYS Common Stock will recognize gain or loss as a result of the Merger measured by the difference, if any, between (i) the sum of the fair market value of the Two Harbors Common Stock received and the amount of any cash received, and (ii) the stockholder's adjusted tax basis in its CYS Common Stock. In addition, generally, for U.S. federal income tax purposes, U.S. stockholders of CYS Series A Preferred Stock or CYS Series B Preferred Stock will recognize gain or loss as a result of the Merger measured by the difference, if any, between (i) the fair market value of the Two Harbors Series D Preferred Stock or Two Harbors Series E Preferred Stock received, as applicable, and (ii) the stockholder's adjusted tax basis in its CYS Series A Preferred Stock or CYS Series B Preferred Stock, as applicable. Because the consideration to be given to stockholders of (i) CYS Common Stock consists primarily of Two Harbors Common Stock and (ii) CYS Series A Preferred Stock and CYS Series B Preferred Stock consists solely of Two Harbors Series D Preferred Stock and Two Harbors Series E Preferred Stock, respectively, U.S. stockholders of CYS Stock, may need to sell their Two Harbors stock received in the Merger, or raise cash from other sources, to pay any tax obligations resulting from the Merger. Generally, non-U.S. stockholders are not expected to be subject to U.S. federal income tax or U.S. federal withholding tax on any gain recognized from the Merger. See "Material U.S. Federal Income Tax Consequences Consequences of the Merger to Non-U.S. Stockholders of CYS Stock." Two Harbors and CYS anticipate that the Merger will have no material U.S. federal income tax consequences to Two Harbors stockholders who do not own any CYS Stock.

The tax consequences to you of the Merger will depend on your own situation. You should consult your tax advisor for a full understanding of the tax consequences to you of the Merger. For more

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Q:

information regarding the tax consequences of the Merger to CYS stockholders, please see "Material U.S. Federal Income Tax Consequences" beginning on page [•].

Q: How can I obtain additional information about Two Harbors and CYS?

A:

Two Harbors and CYS each file annual, quarterly and current reports, proxy statements and other information with the SEC. Each company's filings with the SEC may be accessed on the Internet at http://www.sec.gov. Copies of the documents filed by Two Harbors with the SEC will be available free of charge on Two Harbors' website at https://www.twoharborsinvestment.com/ or by contacting Two Harbors Investor Relations at investors@twoharborsinvestment.com or at 612-629-2500. Copies of the documents filed by CYS with the SEC will be available free of charge on CYS's website at http://www.cysinv.com/home or by contacting CYS Investor Relations at ir@cysinv.com or at 617-639-0440. The information provided on each company's website is not part of this joint proxy statement/ prospectus and is not incorporated by reference into this joint proxy statement/prospectus. For a more detailed description of the information available and information incorporated by reference, please see "Where You Can Find More Information and Incorporation by Reference" on page [•].

What else do I need to do now?

You are urged to read this joint proxy statement/prospectus carefully and in its entirety, including its annexes and the information incorporated by reference herein, and to consider how the Merger affects you. Even if you plan to attend your company's special meeting, please authorize a proxy to vote your shares by voting via the Internet, telephone or by completing, signing, dating and returning the enclosed proxy card. You can also attend your company's special meeting and vote, or change your prior proxy authorization, in person. If you hold your shares in "street name" through a bank, broker or other nominee, then you should have received this joint proxy statement/prospectus from that nominee, along with that nominee's proxy card which includes voting instructions and instructions on how to change your vote. Please see the question "How do I vote?" on page [•].

Q: Will a proxy solicitor be used?

A:

Yes. Two Harbors has engaged D.F. King & Co., Inc. ("D.F. King"), to assist in the solicitation of proxies for the Two Harbors special meeting, and Two Harbors estimates it will pay D.F. King a fee of approximately \$12,500. Two Harbors has also agreed to reimburse D.F. King for reasonable out-of-pocket expenses and disbursements incurred in connection with the proxy solicitation and to indemnify D.F. King against certain losses, costs and expenses. In addition to mailing proxy solicitation materials, Two Harbors' directors, officers and employees may also solicit proxies in person, by telephone or by any other electronic means of communication deemed appropriate. No additional compensation will be paid to Two Harbors' directors, officers or employees for such services.

CYS has engaged Georgeson LLC ("Georgeson") to assist in the solicitation of proxies for the CYS special meeting, and CYS estimates it will pay Georgeson a fee of approximately \$12,500. CYS has also agreed to reimburse Georgeson for reasonable out-of-pocket expenses and disbursements incurred in connection with the proxy solicitation and to indemnify Georgeson against certain losses, costs and expenses. In addition to mailing proxy solicitation material, CYS's directors, officers and employees may also solicit proxies in person, by telephone or by any other electronic means of communication deemed appropriate. No additional compensation will be paid to CYS's directors, officers or employees for such services.

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Q:

Who can answer my questions?

A:

If you have any questions about the Merger or the other matters to be voted on at the Two Harbors special meeting or the CYS special meeting, how to submit your proxy, or need additional copies of this joint proxy statement/prospectus, the enclosed proxy card or voting instructions, you should contact:

If you are a Two Harbors stockholder:

If you are a CYS stockholder:

D.F. King & Co., Inc. 48 Wall Street, 22nd floor New York, New York 10005 (866) 530-8623 (toll free) two@dfking.com

Georgeson LLC 1290 Avenue of the Americas, 9th Floor New York, New York 10104 866-300-8594 (toll free)

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SUMMARY

The following summary highlights selected information in this joint proxy statement/prospectus and may not contain all the information that may be important to you with respect to the Merger Agreement, the Merger or the special meetings. Accordingly, you are encouraged to read this joint proxy statement/prospectus, including its annexes and the information incorporated by reference herein, carefully and in its entirety. Each item in this summary includes a page reference directing you to a more complete description of that topic. See also "Where You Can Find More Information and Incorporation by Reference" on page [•].

The Companies

Two Harbors Investment Corp. (Page [•])

Two Harbors Investment Corp. 575 Lexington Avenue Suite 2930 New York, New York 10022 (612) 629-2500

Two Harbors is a Maryland corporation focused on investing in, financing and managing Agency residential mortgage-backed securities, or Agency RMBS, non-Agency securities, mortgage servicing rights, or MSR, and other financial assets, which Two Harbors collectively refers to as its target assets. Two Harbors operates as a REIT and is externally managed by PRCM Advisers.

Two Harbors Common Stock is listed on the NYSE, trading under the symbol "TWO".

Two Harbors' principal executive offices are located at 575 Lexington Avenue, Suite 2930, New York, New York 10022, and its telephone number is (612) 629-2500.

Eiger Merger Subsidiary LLC (Page [•])

Eiger Merger Subsidiary LLC 575 Lexington Avenue Suite 2930 New York, New York 10022 (612) 629-2500

Merger Sub is a Maryland limited liability company that was formed on April 24, 2018 solely for the purpose of effecting the Merger. Upon Closing, the Merger will be consummated whereby Merger Sub will be merged with and into CYS, with CYS continuing as the surviving corporation. Merger Sub has not conducted any activities to date, except for activities incidental to its formation and activities undertaken in connection with the transactions contemplated by the Merger Agreement.

CYS Investments, Inc. (Page [•])

CYS Investments, Inc. 500 Totten Pond Road, 6th Floor Waltham, Massachusetts 02451 (617) 639-0440

CYS is a specialty finance company created with the objective of achieving consistent risk-adjusted investment income. CYS seeks to achieve this objective by investing, on a leveraged basis, in residential mortgage pass-through securities for which the principal and interest payments are guaranteed by the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation or the Government National Mortgage Association, and collateralized by single-family residential mortgage

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loans ("Agency RMBS"). In addition, CYS's investment guidelines permit investments in collateralized mortgage obligations issued by a government agency or a government-sponsored entity that are collateralized by Agency RMBS, or CMOs, debt securities issued by the U.S. Department of the Treasury or a government-sponsored entity that are not backed by collateral but, in the case of government agencies, are backed by the full faith and credit of the U.S. government, or U.S. Treasury Securities, and, in the case of government sponsored entities, are backed by the integrity and creditworthiness of the issuer, or U.S. Agency Debentures and credit risk transfer securities, such as Structured Agency Credit Risk ("STACR") debt securities issued by Freddie Mac, Connecticut Avenue Securities ("CAS") issued by Fannie Mae and similar securities issued by a GSE where their cash flows track the credit risk performance of a notional reference pool of mortage loans.

CYS was formed as a Maryland corporation on January 3, 2006. CYS has elected to be taxed as a REIT for U.S. federal income tax purposes. The CYS Common Stock, CYS Series A Preferred Stock and CYS Series B Preferred Stock trade on the NYSE under the symbols "CYS", "CYS PrA" and "CYS PrB", respectively.

The Combined Company (Page [•])

The Combined Company will retain the name "Two Harbors Investment Corp." and will continue to be a Maryland corporation, which has elected to be taxed as a REIT under the Code. The Combined Company will be a publicly traded corporation, focused on investing in, financing and managing Agency RMBS, non-Agency securities, MSR, and other financial assets. The Combined Company is expected to have a pro forma equity market capitalization of approximately \$3.9 billion and a total capitalization of approximately \$4.9 billion based on the \$15.55 per share closing price of Two Harbors Common Stock on May 23, 2018. Following the completion of the Merger, the Combined Company will continue to be externally managed by PRCM Advisers.

The business of the Combined Company will be operated through Two Harbors and its subsidiaries, which will include CYS and its subsidiaries. Upon completion of the Merger, the continuing Two Harbors common stockholders are expected to own in the aggregate approximately 70% of the Combined Company's fully diluted equity, and the former CYS common stockholders are expected to own in the aggregate the remaining approximately 30%. CYS preferred stockholders will continue to hold shares of preferred stock of Two Harbors with substantially similar terms following the Merger.

The common stock of the Combined Company will continue to be listed on the NYSE, trading under the symbol "TWO". The newly issued shares of Two Harbors Series D Preferred Stock will trade under the symbol "TWO PRD", and the newly issued shares of Two Harbors Series E Preferred Stock will trade under the symbol "TWO PRE".

The Combined Company's principal executive offices will be located at 575 Lexington Avenue, Suite 2930, New York, New York 10022, and its telephone number will be (612) 629-2500.

The Merger

The Merger Agreement (Page [•])

Two Harbors, Merger Sub and CYS have entered into the Merger Agreement attached as Annex A to this joint proxy statement/prospectus, which is incorporated herein by reference. Two Harbors and CYS encourage you to carefully read the Merger Agreement in its entirety because it is the principal document governing the Merger and the other transactions contemplated by the Merger Agreement.

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The Merger (Page [•])

Subject to the terms and conditions of the Merger Agreement, the Merger will be consummated whereby Merger Sub will merge with and into CYS, with CYS continuing as the surviving corporation. As a result of the Merger, CYS will be an indirect, wholly owned subsidiary of Two Harbors.

Upon completion of the Merger, the continuing Two Harbors common stockholders are expected to own in the aggregate approximately 70% of the Combined Company's fully diluted equity, and the former CYS common stockholders are expected to own in the aggregate the remaining approximately 30%. Once the Merger is consummated, the Combined Company will retain the name "Two Harbors Investment Corp.", will continue to be listed on the NYSE, and its shares will trade under the symbol "TWO".

Consideration for the Merger (Page [•])

Pursuant to the terms and subject to the conditions set forth in the Merger Agreement, at the effective time of the Merger, each outstanding share of CYS Common Stock will be converted into the right to receive from Two Harbors (a) a number of shares of Two Harbors Common Stock equal to the "Exchange Ratio," determined by dividing (i) (a) CYS adjusted book value per share, multiplied by (b) 96.75% by (ii) (a) Two Harbors adjusted book value per share, multiplied by (b) 94.20%, in each case as determined in accordance with the Merger Agreement (the "Per Share Stock Consideration") and (b) \$15,000,000 divided by the sum of the number of shares of CYS Common Stock issued and outstanding immediately prior to the effective time of the Merger (excluding any cancelled shares), including outstanding CYS Restricted Stock that will vest upon completion of the Merger (less any shares surrendered for income tax purposes) (the "Per Share Cash Consideration") pursuant to the Merger Agreement.

Based on the number of shares of CYS Common Stock outstanding on March 31, 2018 and an assumed Exchange Ratio of 0.4872 based on the adjusted book value per share of Two Harbors Common Stock and CYS Common Stock as of March 31, 2018, calculated in accordance with the Merger Agreement, it is expected that approximately 75.7 million shares of Two Harbors Common Stock will be issued in connection with the Merger. The actual Exchange Ratio will be publicly announced at least five business days before the earlier of the special meetings of stockholders described below.

Also at the effective time of the Merger, each outstanding share of CYS Series A Preferred Stock will be converted into the right to receive one share of newly classified Two Harbors Series D Preferred Stock, and each outstanding share of CYS Series B Preferred Stock will be converted into the right to receive one share of newly classified Two Harbors Series E Preferred Stock.

No fractional shares of Two Harbors Common Stock will be issued in the Merger, and the value of any fractional interests to which a holder would otherwise be entitled will be paid in cash.

Recommendation of the Two Harbors Board and Its Reasons for the Merger (Page [•])

On April 25, 2018, following careful consideration, the Two Harbors Board unanimously (i) determined that the Merger Agreement and the other transactions contemplated therein, including the Merger and the Two Harbors Common Stock Issuance, are in the best interests of Two Harbors and its stockholders, (ii) approved the Merger Agreement and the other transactions contemplated therein, including the Merger and the Two Harbors Common Stock Issuance, (iii) directed that the Two Harbors Common Stock Issuance Proposal be submitted to the holders of Two Harbors Common Stock for consideration at the Two Harbors special meeting and (iv) recommended that the holders of Two Harbors Common Stock approve the Two Harbors Common Stock Issuance Proposal. Certain factors considered by the Two Harbors Board in reaching its decision to authorize, approve and adopt the

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Merger Agreement, the Merger and the other transactions contemplated by the Merger Agreement can be found in the section entitled "The Merger Recommendation of the Two Harbors Board and Its Reasons for the Merger" beginning on page [•].

The Two Harbors Board unanimously recommends that Two Harbors common stockholders vote "FOR" the Two Harbors Common Stock Issuance Proposal and "FOR" the Two Harbors Adjournment Proposal.

Recommendation of the CYS Board and Its Reasons for the Merger (Page [•])

On April 25, 2018, after careful consideration, the CYS Board, acting upon the unanimous recommendation of a special committee of independent directors of CYS formed for the purpose of, among other things, evaluating and making a recommendation to the CYS Board with respect to the Merger Agreement and the other transactions contemplated therein, unanimously (i) determined that the Merger Agreement and the other transactions contemplated therein, including the merger of Merger Sub with and into CYS, are in the best interests of CYS and its stockholders, (ii) approved the Merger Agreement and declared that the transactions contemplated therein, including the Merger, are advisable, (iii) directed that the Merger and the other transactions contemplated by the Merger Agreement be submitted to the holders of CYS Common Stock for consideration at the CYS special meeting and (iv) recommended that the CYS common stockholders approve the Merger and the other transactions contemplated by the Merger Agreement. Certain factors considered by the CYS Board in reaching its decision to approve the Merger Agreement, the Merger and the other transactions contemplated by the Merger Agreement can be found in the section entitled "The Merger Recommendation of the CYS Board and Its Reasons for the Merger" beginning on page [•].

The CYS Board unanimously recommends that CYS stockholders vote "FOR" the Merger Proposal, "FOR" the CYS Non-Binding Compensation Advisory Proposal and "FOR" the CYS Adjournment Proposal.

Summary of Risk Factors Related to the Merger (Page [•])

You should carefully consider the following important risks, together with all of the other information included in this joint proxy statement/prospectus and the risks related to the Merger and the related transactions described under the section "Risk Factors" beginning on page [•], before deciding how to vote:

The Merger is subject to a number of conditions which, if not satisfied or waived in a timely manner, would delay the Merger or adversely impact Two Harbors' and CYS's ability to complete the transaction.

Failure to consummate the Merger as currently contemplated or at all could adversely affect the price of Two Harbors Common Stock or CYS Common Stock and the future business and financial results of Two Harbors and CYS.

The Merger Agreement contains provisions that could discourage a potential competing acquirer of either Two Harbors or CYS or could result in any competing acquisition proposal being at a lower price than it might otherwise be.

The pendency of the Merger could adversely affect Two Harbors' and CYS's business and operations.

Following the Merger, the Combined Company may be unable to integrate Two Harbors' business and CYS's business successfully and realize the anticipated synergies or other expected benefits of the Merger on the anticipated timeframe or at all.

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Because the number of shares of Two Harbors Common Stock exchanged per share of CYS Common Stock is not fixed, any change in Two Harbors' adjusted book value per share or CYS's adjusted book value per share prior to setting the Exchange Ratio will affect the number of shares of Two Harbors Common Stock issued by Two Harbors and received by CYS common stockholders at the Closing.

The Merger and related transactions are subject to Two Harbors common stockholder approval and CYS common stockholder approval.

Two Harbors common stockholders and CYS common stockholders will be diluted by the Merger.

If the Merger is not consummated by October 31, 2018, either Two Harbors or CYS may terminate the Merger Agreement.

The market price of Two Harbors Common Stock may decline as a result of the Merger and the market price of Two Harbors Common Stock after the consummation of the Merger may be affected by factors different from those affecting the price of Two Harbors Common Stock or the price of CYS Common Stock before the Merger.

An adverse judgment in any litigation challenging the Merger may prevent the Merger from becoming effective or from becoming effective within the expected timeframe.

Following the Merger, the Combined Company may not pay dividends at or above the rate currently paid by Two Harbors or CYS.

The Combined Company will have a significant amount of indebtedness and may need to incur more in the future.

The Combined Company is expected to incur substantial expenses related and unrelated to the Merger.

The historical and unaudited pro forma condensed combined financial information included elsewhere in this joint proxy statement/prospectus may not be representative of the Combined Company's results after the Merger, and accordingly, you have limited financial information on which to evaluate the Combined Company following the Merger.

The Merger is expected to be taxable to U.S. stockholders of CYS Stock; however, the cash received by CYS stockholders in the Merger might not be sufficient to pay such tax.

Two Harbors would incur adverse tax consequences if it or CYS failed to qualify as a REIT for U.S. federal income tax purposes.

The Two Harbors Special Meeting (Page [•])

Date, Time and Place. The special meeting of Two Harbors common stockholders will be held at [•] on [•], at [•], Eastern Time.

Purpose. At the Two Harbors special meeting, Two Harbors common stockholders will be asked to consider and vote upon the Two Harbors Common Stock Issuance Proposal and the Two Harbors Adjournment Proposal.

Record Date; Voting Rights. Two Harbors common stockholders at the close of business on [•], 2018 are entitled to vote at the Two Harbors special meeting and any adjournments or postponements thereof. Each holder of Two Harbors Common Stock on the record date is entitled to one vote per share.

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Quorum. The presence, in person or by proxy, of the holders of shares of Two Harbors Common Stock entitled to cast a majority of all votes entitled to be cast at the Two Harbors special meeting, will constitute a quorum at the Two Harbors special meeting. Abstentions will be counted for the purpose of determining a quorum.

Required Vote. Approval of the Two Harbors Common Stock Issuance Proposal requires that the number of votes cast for the Two Harbors Common Stock Issuance Proposal exceeds the number of votes cast against and abstaining from the Two Harbors Common Stock Issuance Proposal, assuming a quorum is present. Approval of the Two Harbors Adjournment Proposal also requires that the number of votes cast for the Two Harbors Adjournment Proposal exceeds the number of votes cast against the Two Harbors Adjournment Proposal. Holders of Two Harbors preferred stock will not be entitled to vote on any matter at the Two Harbors special meeting.

As of the close of business on the record date for the Two Harbors special meeting, the directors and executive officers of Two Harbors owned approximately [•]% of the outstanding shares of Two Harbors Common Stock entitled to vote at the Two Harbors special meeting. Two Harbors currently expects that Two Harbors' directors and executive officers will vote their shares of Two Harbors Common Stock in favor of the Two Harbors Common Stock Issuance Proposal as well as the other proposals to be considered at the Two Harbors special meeting, although none of them are obligated to do so.

Your vote as a Two Harbors common stockholder is very important. Accordingly, please sign and return the enclosed proxy card whether or not you plan to attend the Two Harbors special meeting in person.

The CYS Special Meeting (Page [•])

Date, Time and Place. The special meeting of CYS stockholders will be held at [•], on [•], 2018 at [•], [•] Eastern Time.

Purpose. At the CYS special meeting, the CYS common stockholders will be asked to approve the Merger Proposal, the CYS Non-Binding Compensation Advisory Proposal and the CYS Adjournment Proposal.

Record Date; Voting Rights. CYS stockholders at the close of business on [•], 2018 are entitled to receive this notice and CYS common stockholders are entitled to vote at the CYS special meeting and any adjournments or postponements thereof. Each holder of record of CYS Common Stock on the record date is entitled to one vote per share.

Quorum. The presence, in person or by proxy of the holders of shares of CYS Common Stock entitled to cast a majority of all the votes entitled to be cast at the CYS special meeting, will constitute a quorum at the CYS special meeting. Abstentions will be counted for the purpose of determining a quorum.

Required Vote. Approval of the Merger Proposal requires the affirmative vote of the holders of a majority of the outstanding shares of CYS Common Stock entitled to vote on the Merger Proposal. Approval of the CYS Non-Binding Compensation Advisory Proposal requires, provided a quorum is present, the affirmative vote of a majority of the votes cast on the matter by holders of shares of CYS Common Stock at the CYS special meeting. Approval of the CYS Adjournment Proposal requires, provided a quorum is present, the affirmative vote of a majority of the votes cast on the matter by holders of shares of CYS Common Stock at the meeting.

As of the close of business on the record date for the CYS special meeting, the directors and executive officers of CYS owned approximately [•]% of the outstanding CYS Common Stock

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entitled to vote at the CYS special meeting. CYS currently expects that the CYS directors and officers will vote their shares of CYS Common Stock in favor of the Merger Proposal, although none of them are obligated to do so.

Opinion of Two Harbors' Financial Advisor (Page [•])

In connection with the Merger, the Two Harbors Board received a written opinion, dated April 25, 2018, from JMP, as to the fairness, from a financial point of view and as of the date of the opinion, to Two Harbors of the Per Share Stock Consideration (as defined in the Merger Agreement) to be paid by Two Harbors as part of the merger consideration. The full text of JMP's written opinion, which is attached to this joint proxy statement/prospectus as Annex B sets forth the assumptions made, procedures followed, matters considered and limitations on the review undertaken. JMP's opinion was directed and addressed to the Two Harbors Board (in its capacity as such) in connection with its consideration of the Merger. JMP's opinion did not address the underlying decision of the Two Harbors Board to proceed with or effect the Merger or the relative merits of the Merger as compared to any alternative strategy or transaction that might exist for Two Harbors. JMP's opinion does not constitute a recommendation as to how the Two Harbors Board or any Two Harbors common stockholder should act or vote with respect to the Merger or any other matter.

Opinion of CYS's Financial Advisor, Barclays Capital Inc. (Page [•])

Barclays was engaged to act as a financial advisor to the CYS board in connection with a potential transaction involving CYS. At the CYS board meeting on April 25, 2018, Barclays rendered its oral opinion (which was subsequently confirmed in writing) to the CYS board that, as of such date and based upon and subject to the qualifications, limitations and assumptions set forth in the written opinion, the merger consideration to be offered to the holders of CYS common stock in the merger was fair, from a financial point of view, to such holders.

The full text of Barclays' written opinion, dated as of April 25, 2018, is attached to this joint proxy statement/prospectus as Annex C and incorporated by reference herein. Barclays' written opinion sets forth, among other things, the assumptions made, procedures followed, factors considered and limitations upon the review undertaken by Barclays in rendering its opinion. You are encouraged to read the opinion carefully in its entirety. The summary of Barclays' opinion set forth in this joint proxy statement/prospectus is qualified in its entirety by reference to the full text of the opinion. Barclays' opinion is addressed to the CYS board, addresses only the fairness, from a financial point of view, of the merger consideration to be offered to the holders of CYS common stock and does not constitute a recommendation to any stockholder of CYS as to how such stockholder should vote with respect to the merger or any other matter.

For more information, see "The Merger Opinion of CYS's Financial Advisor, Barclays Capital Inc." beginning on page [•] and Annex C.

Opinion of CYS's Financial Advisor, Credit Suisse Securities (USA) LLC (Page [•])

CYS has engaged Credit Suisse to act as a financial advisor to CYS in connection with the proposed merger. In connection with this engagement, Credit Suisse delivered an opinion, dated April 25, 2018, to the CYS board as to the fairness, from a financial point of view and as of the date of such opinion, of the merger consideration to be received by holders of CYS common stock (other than excluded holders (as defined below)) pursuant to the merger agreement. For purposes of Credit Suisse's analyses and opinion, the term "excluded holders" refers to, collectively, CYS, Two Harbors, Merger Sub and any of their respective wholly owned subsidiaries.

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The full text of Credit Suisse's written opinion, dated April 25, 2018, is attached to this joint proxy statement/prospectus as Annex D and sets forth, among other things, the assumptions made, procedures followed, matters considered and limitations and qualifications on the review undertaken by Credit Suisse in connection with such opinion. The description of Credit Suisse's opinion set forth in this joint proxy statement/prospectus is qualified in its entirety by reference to the full text of Credit Suisse's opinion. Credit Suisse's opinion was provided to the CYS board (in its capacity as such) for its information in connection with its evaluation of the merger consideration from a financial point of view and did not address any other terms, aspects or implications of the proposed merger, the relative merits of the proposed merger or related transactions as compared to alternative transactions or strategies that might be available to CYS or the underlying business decision of the CYS board or CYS to proceed with the proposed merger or related transactions. Credit Suisse's opinion does not constitute advice or a recommendation to any stockholder as to how such stockholder should vote or act on any matter relating to the proposed merger or otherwise.

For more information, see "The Merger Opinion of CYS's Financial Advisor, Credit Suisse Securities (USA) LLC" beginning on page [•] and Annex D.

Directors and Management of Two Harbors After the Merger (Page [•])

Following the consummation of the Merger, the number of directors on the Two Harbors Board will be increased to eleven, and will include all of the current nine directors of the Two Harbors Board and two additional independent directors from the CYS Board: James A. Stern and Karen Hammond. Each of the executive officers of Two Harbors immediately prior to the effective time of the Merger will continue as an executive officer of the Combined Company following the effective time of the Merger.

Interests of Two Harbors Directors and Executive Officers in the Merger (Page [•])

In considering the recommendation of the Two Harbors Board to approve the Two Harbors Common Stock Issuance, Two Harbors common stockholders should be aware that directors and executive officers of Two Harbors have certain interests in the Merger that may be different from, or in addition to, the interests of Two Harbors common stockholders generally and that may present actual or potential conflicts of interests. The Two Harbors Board was aware of these interests and considered them, among other matters, in reaching its decision to approve the Merger Agreement and the transactions contemplated thereby.

The Combined Company will continue to be managed by PRCM Advisers under the terms of the Management Agreement. Under the Management Agreement, PRCM Advisers provides the day-to-day management of Two Harbors' business, including providing Two Harbors with its executive officers and all other personnel necessary to support its operations. In exchange for its services, Two Harbors pays PRCM Advisers a management fee as well as reimburses it for certain expenses incurred by it and its affiliates in rendering management services to Two Harbors. Pine River is the parent of PRCM Advisers. Certain directors and executive officers of Two Harbors are partners and employees of Pine River.

Pursuant to the Management Agreement, Two Harbors pays PRCM Advisers a base management fee equal to 1.5% per annum of its stockholders' equity, which is calculated and payable quarterly in arrears. Following the Merger, Two Harbors stockholders' equity will include the additional equity attributable to the acquisition of CYS, thus the amount of the management fees payable to PRCM Advisers will also increase, which gives PRCM Advisers and its parent, Pine River (and therefore, Two Harbors' management), an incentive, not shared by Two Harbors stockholders, to negotiate and effect the Merger, possibly on terms less favorable to Two Harbors than would otherwise have been achieved. However, in connection with the Merger, PRCM Advisers has agreed to amend the Management

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Agreement to provide for: (i) a reduction in the base management fee PRCM Advisers charges Two Harbors with respect to the additional equity under management resulting from the Merger from 1.5% of stockholders' equity on an annualized basis to 0.75% through the first anniversary of the Closing; (ii) a one-time downward adjustment of \$15,000,000 to the management fees payable by Two Harbors for the quarter in which the Merger closes; and (iii) a one-time downward adjustment of up to \$3.3 million in the management fees payable by Two Harbors for the quarter in which the Merger occurs in order to reimburse Two Harbors for certain expenses it incurs in connection with the Merger. In the event the total amount of the management fee payable for the quarter referenced in clauses (ii) and (iii) above is less than the aggregate amount of the Adjustments, PRCM Advisers will pay to Two Harbors in immediately available funds the difference between (i) such Adjustments and (ii) the base management fee payable to PRCM Advisers with respect to such quarter.

The Fourth Amendment to the Management Agreement between Two Harbors and PRCM Advisers was negotiated between related parties, and the terms, including fees and other amounts payable, may not be as favorable to Two Harbors as if it had been negotiated with an unaffiliated third party.

For additional information, see "The Merger Interests of Two Harbors' Directors and Executive Officers in the Merger" beginning on page [•].

Interests of CYS's Directors and Executive Officers in the Merger (Page [•])

In considering the CYS Board's recommendation for CYS stockholders to approve the Merger Proposal and the CYS Non-Binding Compensation Advisory Proposal, CYS stockholders should be aware that directors and executive officers of CYS have interests in the Merger that may be different from, or in addition to, the interests of CYS stockholders generally and that may present actual or potential conflicts of interests. These interests include:

immediately prior to the effective time of the Merger, each outstanding award of CYS Restricted Stock granted pursuant to the CYS Stock Plan will automatically vest in full and any forfeiture restrictions applicable to such shares of CYS Restricted Stock shall immediately lapse. As a result, each share of CYS Restricted Stock (less any shares surrendered for income tax purposes) will be treated as a share of CYS Common Stock for all purposes of the Merger, including the right to receive the merger consideration; and

continued indemnification and insurance coverage for the directors and executive officers of CYS in accordance with the Merger Agreement.

In addition, CYS maintains Employment Agreements with each of Messrs. Grant, DeCicco, Cleary, and Rosenbloom, which provide for payments and other benefits if the individual's employment terminates for a qualifying event or circumstance, such as being terminated without "cause" or leaving employment for "good reason," as these terms are defined in the Employment Agreements. Upon the termination of such individual's employment by CYS or Two Harbors other than for cause, or by such individual for good reason, the individual would be eligible to receive, among other benefits, (i) a lump sum severance payment equal to 2.5 in the case of Mr. Grant and 1.0 in the case of Messrs. DeCicco, Cleary, and Rosenbloom, multiplied by the average of the sum of such individual's base salary and bonus earned during the shorter of (a) the three (3) fiscal years immediately preceding the year in which the termination of employment occurs or (b) the period of time beginning on the date of the individual's employment agreement and ending on the termination date of such individual's employment, (ii) a pro rata bonus for the year of termination, and (iii) certain benefit continuation rights for up to 24 months for Mr. Grant and up to 12 months for Messrs. DeCicco, Cleary, and Rosenbloom, following termination. In addition, under the agreement, such individuals are eligible to receive a "gross-up" payment, if applicable, related to any excise taxes imposed under Section 4999 of the Code.

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Upon Closing, each of James A. Stern and Karen Hammond, independent directors from the CYS Board, will be appointed to the Two Harbors Board and will be entitled to compensation pursuant to Two Harbors' independent director compensation program.

In connection with the approval of the execution of the Merger Agreement, the CYS Board approved an amendment to the Employment Agreements to clarify payment mechanics and timing of severance amounts that may become payable pursuant to the Employment Agreements following a qualifying termination of employment with CYS.

Treatment of CYS Restricted Stock (Page [•])

Pursuant to the Merger Agreement, immediately prior to the effective time of the Merger, each outstanding award of shares of CYS Restricted Stock granted pursuant to the CYS Stock Plan will automatically vest in full and any forfeiture restrictions applicable to such shares of CYS Restricted Stock shall immediately lapse. As a result, each share of CYS Restricted Stock (less any shares surrendered for income tax purposes) will be treated as a share of CYS Common Stock for all purposes of the Merger, including the right to receive the merger consideration.

Fourth Amendment to the Management Agreement (Page [•])

In connection with the Merger Agreement, the Management Agreement was amended pursuant to the Fourth Amendment to the Management Agreement so as to (a) reduce PRCM Advisers' base management fee with respect to the additional equity under management resulting from the Merger and the transactions contemplated by the Merger Agreement to 0.75% from the effective time of the Merger through the first anniversary of such effective time and (b) for the fiscal quarter in which the Closing occurs, make a one-time downward adjustment of \$15 million to the management fees payable by Two Harbors for such quarter to offset the Per Share Cash Consideration payable to stockholders of CYS, plus up to an additional \$3.3 million downward adjustment for certain transaction-related expenses.

Conditions to Complete the Merger (Page [•])

A number of conditions must be satisfied or, to the extent permitted by law, waived before the Merger can be consummated. These include, among others:

the approval of the Merger Proposal by CYS common stockholders;

the approval of the Two Harbors Common Stock Issuance Proposal by Two Harbors common stockholders;

effectiveness of the registration statement on Form S-4, of which this joint proxy statement/prospectus constitutes a part, and no stop order suspending the effectiveness of the Form S-4 having been initiated or threatened by the SEC;

no injunction or law prohibiting the Merger;

approval for listing on the NYSE of the shares of Two Harbors Common Stock, Two Harbors Series D Preferred Stock and Two Harbors Series E Preferred Stock to be issued in the Merger or reserved therefor, subject to official notice of issuance;

accuracy of each party's representations, subject in most cases to materiality or material adverse effect qualifications;

the absence of a material adverse effect on either Two Harbors or CYS:

material performance and compliance with each party's covenants; and

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the receipt of tax opinions relating to the REIT status of each of Two Harbors and CYS.

Regulatory Approvals Required for the Merger (Page [•])

Two Harbors and CYS are not aware of any material federal or state regulatory requirements that must be complied with, or approvals that must be obtained, in connection with the Merger or the other transactions contemplated by the Merger Agreement.

Listing of Two Harbors Common Stock and Deregistration of CYS Common Stock (Page [•])

It is a condition to the completion of the Merger that the shares of Two Harbors Common Stock issuable in connection with the Merger be approved for listing on the NYSE, subject to official notice of issuance. After the Merger is completed, the CYS Common Stock will no longer be listed on the NYSE and will be deregistered under the Exchange Act.

Accounting Treatment (Page [•])

Each of Two Harbors and CYS prepare their financial statements in accordance with GAAP. The Merger will be accounted for as an asset acquisition, with Two Harbors treated as the acquirer. For more information, see "Accounting Treatment" beginning on page [•].

Comparison of Rights of Two Harbors Common Stockholders and CYS Common Stockholders (Page [•])

Holders of CYS Common Stock will have different rights following the effective time of the Merger because they will hold shares of Two Harbors Common Stock instead of shares of CYS Common Stock, and there are differences between the governing documents of Two Harbors and CYS. For more information regarding the differences in rights of Two Harbors common stockholders and CYS common stockholders, see "Comparison of Rights of Two Harbors Common Stockholders and CYS Common Stockholders" beginning on page [•].

Appraisal Rights (Page [•])

Neither holders of Two Harbors Common Stock nor holders of CYS Common Stock will be entitled to appraisal rights.

No Solicitation; Change in Recommendations (Page [•])

From and after the date of the Merger Agreement until the effective time of the Merger or if earlier, the termination of the Merger Agreement, each of Two Harbors and CYS will not, and will cause its subsidiaries and will instruct its representatives not to, among other things, directly or indirectly:

initiate, solicit or knowingly encourage the making of a Competing Proposal (as defined in "The Merger Agreement Competing Proposals" beginning on page [•]);

engage in any discussions or negotiations with any person with respect to a Competing Proposal or furnish any non-public information regarding Two Harbors or CYS or any of their subsidiaries, as applicable, or access to the properties, assets or employees of Two Harbors or CYS or any of their subsidiaries, as applicable, to any person in connection with or in response to any Competing Proposal;

enter into any binding or nonbinding letter of intent or agreement in principle, or other agreement providing for a Competing Proposal (other than certain confidentiality agreements);

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withdraw, modify or qualify, or propose publicly to withdraw, modify or qualify, in a manner adverse to the other party, the Two Harbors board recommendation or the CYS board recommendation, as applicable, or publicly recommend the approval or adoption of, or publicly approve or adopt, any Competing Proposal;

fail to include the Two Harbors board recommendation or the CYS board recommendation, as applicable, in this joint proxy statement or any amendment or supplement thereto; or

fail publicly to reaffirm without qualification the Two Harbors board recommendation or the CYS board recommendation, as applicable, within five business days after the written request of the other party following a Competing Proposal that has been publicly announced (or such fewer number of days as remain prior to the Two Harbors special meeting or CYS special meeting, as applicable, as it may be adjourned or postponed).

Notwithstanding the restrictions set forth above, at any time prior to obtaining the applicable approval of their stockholders at their respective stockholder meetings, each of Two Harbors and CYS may, directly or indirectly through one or more of its representatives, engage in discussions or negotiations with any person with respect to a Competing Proposal or furnish non-public information regarding Two Harbors or CYS or any of their subsidiaries, or access to the properties, assets or employees of Two Harbors or CYS or any of their subsidiaries, to any person in connection with or in response to a Competing Proposal, in either case, if certain conditions are met and such proposal is reasonably expected to lead to a Superior Proposal.

At any time prior to obtaining the applicable approval of their stockholders at their respective stockholder meetings, each of Two Harbors and CYS may effect a change in its board recommendation (i) in response to a *bona fide* written Competing Proposal from a third party that was not solicited at any time following the execution of the Merger Agreement and did not arise from a material breach of the obligations set forth in certain provisions of the Merger Agreement, if the Two Harbors Board or the CYS Board, as applicable, so chooses, and (ii) if the Two Harbors Board or the CYS Board, as applicable, determines in good faith, after consultation with outside legal counsel, that the failure to take such action would be inconsistent with its legal duties under applicable law and Two Harbors or CYS, as applicable, have given notice to the other party that it intends to effect a change in its board recommendation. Additionally, CYS may terminate the Merger Agreement, if prior to taking such action, among other things, the CYS Board determines in good faith after consultation with its financial advisors and outside legal counsel that such CYS Competing Proposal is a CYS Superior Proposal and the CYS Board has approved, and concurrently with the termination thereunder, CYS enters into, a definitive agreement providing for the implementation of such CYS Superior Proposal.

For more information regarding what constitutes a "Competing Proposal" and what constitutes a "CYS Superior Proposal," see "The Merger Agreement Competing Proposals" beginning on page [•].

Termination of the Merger Agreement (Page [•])

The Merger Agreement may be terminated at any time before the effective time of the Merger by the mutual written consent of Two Harbors and CYS.

The Merger Agreement may also be terminated prior to the effective time of the Merger by either Two Harbors or CYS if:

any governmental entity of competent jurisdiction has issued a final and non-appealable order, decree, ruling or injunction or taken any other action permanently restraining, enjoining or otherwise prohibiting the consummation of the Merger, or if there shall have been adopted prior to the effective time of the Merger any law that permanently makes the consummation of the Merger illegal or otherwise permanently prohibited;

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the Merger has not been consummated on or before 5:00 p.m. New York, New York time, on October 31, 2018 (the "End Date") (provided that this termination right will not be available to any party whose breach of any representation, warranty, covenant or agreement contained in this Agreement has been the cause of or resulted in the failure of the Merger to occur on or before such date);

the other party breaches any of its representations, warranties, covenants or other agreements (other than a breach of its non-solicitation covenant), if such breach resulted in a failure of a closing condition, and such breach cannot be or has not been cured within 30 days (or, if earlier, the End Date), provided that the other party may not terminate if such other party is similarly in breach;

the other party commits a willful and material breach of its non-solicitation covenant;

Two Harbors common stockholders have failed to approve the issuance of shares of Two Harbors Common Stock in connection with the Merger, or CYS common stockholders have failed to approve Merger and the other transactions contemplated by the Merger Agreement, as applicable; or

the other party's board of directors has effected a change in its board recommendation prior to the time that such party has obtained the applicable approval of its stockholders at its respective stockholder meeting.

In addition to the termination rights set forth above, CYS may also terminate the Merger Agreement upon entering into a definitive agreement providing for the implementation of a CYS Superior Proposal.

For more information regarding termination of the Merger Agreement, see "The Merger Agreement Termination of the Merger Agreement" beginning on page [•].

Termination Fees and Expenses (Page [•])

Generally, all fees and expenses incurred in connection with the Merger and the other transactions contemplated by the Merger Agreement will be paid by the party incurring those fees and expenses; provided that, in certain circumstances, Two Harbors may be obligated to pay to CYS a termination fee of \$51.8 million or an expense amount equal to \$20.6 million, or CYS may be obligated to pay to Two Harbors a termination fee of \$43.2 million or an expense amount equal to \$8.6 million.

For further discussion of the termination fees, see "The Merger Agreement Termination Fees and Expenses" beginning on page [•].

Material U.S. Federal Income Tax Consequences (Page [•])

Assuming that the Merger is completed as currently contemplated, CYS and Two Harbors expect that the receipt of (i) cash and Two Harbors Common Stock in exchange for CYS Common Stock, (ii) Two Harbors Series D Preferred Stock in exchange for CYS Series A Preferred Stock, or (iii) Two Harbors Series E Preferred Stock in exchange for CYS Series B Preferred Stock, as applicable, by U.S. stockholders pursuant to the Merger will be a taxable transaction for U.S. federal income tax purposes. Generally, for U.S. federal income tax purposes, U.S. stockholders of CYS Common Stock will recognize gain or loss as a result of the Merger measured by the difference, if any, between (i) the sum of the fair market value of the Two Harbors Common Stock received and the amount of any cash received, and (ii) the stockholder's adjusted tax basis in its CYS Common Stock. In addition, generally, for U.S. federal income tax purposes, U.S. stockholders of CYS Series A Preferred Stock or CYS Series B Preferred Stock will recognize gain or loss as a result of the Merger measured by the difference, if any, between (i) the fair market value of the Two Harbors Series D Preferred Stock or

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Two Harbors Series E Preferred Stock received, as applicable, and (ii) the stockholder's adjusted tax basis in its CYS Series A Preferred Stock or CYS Series B Preferred Stock, as applicable. Because the consideration to be given to stockholders of (i) CYS Common Stock consists primarily of Two Harbors Common Stock and (ii) CYS Series A Preferred Stock and CYS Series B Preferred Stock consists solely of Two Harbors Series D Preferred Stock and Two Harbors Series E Preferred Stock, respectively, U.S. stockholders of CYS Stock may need to sell their Two Harbors stock received in the Merger, or raise cash from other sources, to pay any tax obligations resulting from the Merger. Generally, non-U.S. stockholders are not expected be subject to U.S. federal income tax or U.S. federal withholding tax on any gain recognized from the Merger. See "Material U.S. Federal Income Tax Consequences Consequences of the Merger to Non-U.S. Stockholders of CYS Stock." CYS and Two Harbors anticipate that the Merger will have no material U.S. federal income tax consequences to Two Harbors stockholders who do not own any CYS stock.

The tax consequences to you of the Merger will depend on your own situation. You should consult your tax advisor for a full understanding of the tax consequences to you of the Merger. For more information regarding the U.S. federal income tax consequences of the Merger to CYS stockholders, please see "Material U.S. Federal Income Tax Consequences of the Merger" beginning on page [•].

Description of Two Harbors Common Stock (Page [•])

As of May 23, 2018, 175,467,421 shares of Two Harbors Common Stock were issued and outstanding and 5,750,000 shares of Two Harbors Series A Preferred Stock, 11,500,000 shares of Two Harbors Series B Preferred Stock, and 11,800,000 shares of Two Harbors Series C Preferred Stock, were issued and outstanding. Based on an assumed exchange ratio of 0.4872 based on book values as of March 31, 2018, upon consummation of the Merger, the Combined Company would be expected to have approximately 251.1 million shares of Two Harbors Common Stock, 5,750,000 shares of Two Harbors Series A Preferred Stock, 11,500,000 shares of Two Harbors Series B Preferred Stock, 11,800,000 shares of Two Harbors Series C Preferred Stock, [•]shares of Two Harbors Series D Preferred Stock and [•] shares of Two Harbors Series E Preferred Stock issued and outstanding.

Voting rights are generally vested in the holders of the Two Harbors Common Stock, and such holders are entitled to receive dividends on such Two Harbors Common Stock if, as and when authorized by the Two Harbors Board, and declared by Two Harbors out of assets legally available therefor.

Selected Historical Financial Information of Two Harbors (Page [•])

The following selected historical financial information for each of the years during the five-year period ended December 31, 2017 and the selected balance sheet data as of December 31 for each of the years in the five-year period ended December 31, 2017, have been derived from Two Harbors' audited consolidated financial statements.

The selected historical financial information as of March 31, 2018 and for the three months ended March 31, 2018 and 2017 have been derived from Two Harbors' unaudited interim consolidated financial statements included in Two Harbors' Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, which is incorporated herein by reference. The following selected historical financial information as of March 31, 2017 has been derived from Two Harbors' unaudited interim consolidated financial statements not included or incorporated herein by reference.

You should read the selected historical financial information presented below together with the consolidated financial statements and the related notes thereto and management's discussion and analysis of financial condition and results of operations of Two Harbors included in Two Harbors' Annual Report on Form 10-K for the year ended December 31, 2017 and its Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, which are incorporated herein by reference. See also "Where You Can Find More Information and Incorporation by Reference" on page [•].

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TWO HARBORS SELECTED FINANCIAL DATA

| | For the three months ended March 31, | | | For the year ended December 31, | | | |
|--|--------------------------------------|---|------------|---------------------------------|------------|---------------|---------|
| (in thousands, except per share data) | 2018 | 2017 | 2017 | 2016 | 2015 | 2014 | 2013 |
| | unaudited | unaudited | | | | | |
| Statement of comprehensive income data: Interest income: | | | | | | | |
| Available-for-sale securities | \$ 190.716 | \$ 135,327 | \$ 631,853 | \$ 414,050 | \$ 458,515 | \$ 506,268 \$ | 507,180 |
| Trading securities | + -,,,,, | , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 7 001,000 | 7 121,000 | 8,676 | 12,913 | 5,963 |
| Residential mortgage loans | | | | | ĺ | | , |
| held-for-investment in securitization trusts | | 31,628 | 102,886 | 133,993 | 95,740 | 41,220 | 19,220 |
| Residential mortgage loans held-for-sale | 307 | 398 | 1,704 | 23,037 | 28,966 | 16,089 | 22,185 |
| Other | 2,996 | 1,801 | 8,646 | 4,000 | 982 | 717 | 1,043 |
| | | | | | | | |
| Total interest income | 194,019 | 169,154 | 745,089 | 575,080 | 592,879 | 577,207 | 555,591 |
| Interest expense: | · | Í | | ŕ | ĺ | | , |
| Repurchase agreements | 86,580 | 32,256 | 210,430 | 88,850 | 72,653 | 76,177 | 89,470 |
| Collateralized borrowings in securitization | | | | | | | |
| trusts | | 25,386 | 82,573 | 97,729 | 57,216 | 26,760 | 10,937 |
| Federal Home Loan Bank advances | 4,458 | 8,793 | 36,911 | 26,101 | 11,921 | 4,513 | |
| Revolving credit facilities | 804 | 429 | 2,341 | 604 | | | |
| Convertible senior notes | 4,718 | 3,821 | 17,933 | | | | |
| | | | | | | | |
| Total interest expense | 96,560 | 70,685 | 350,188 | 213,284 | 141,790 | 107,450 | 100,407 |
| 1 | , | · · | ĺ | Í | ŕ | , | , |
| Net interest income | 97,459 | 98,469 | 394,901 | 361,796 | 451,089 | 469,757 | 455,184 |
| Other-than-temporary impairments: | 71,437 | 70,407 | 374,701 | 301,770 | 431,007 | 402,737 | 433,104 |
| Total other-than-temporary impairment | | | | | | | |
| losses | (94) | | (789) | (1,822) | (535) | (392) | (1,662) |
| Other income (loss): | , | | (, ,, | ()- / | () | (3.2.) | ,,,,, |
| (Loss) gain on investment securities | (20,671) | (52,352) | (34,695) | (107,374) | 363,379 | | |