



# Subprime Bond Case Study

Two Harbors Investment Corp.  
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Two Harbors Investment Corp. is proud to present: Subprime Bond Case Study. The company believes periodic webinars will provide an opportunity to share more in-depth insights on various topics which may help investors, analysts and the media develop a deeper understanding of the residential mortgage and housing markets and the company.

**Margaret Field**, *Investor Relations, Two Harbors*

## **WELCOMING REMARKS**

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Thank you for joining us today. I'm Maggie Field, Investor Relations Associate for Two Harbors. We are pleased to launch the fourth segment in our webinar series titled, "Subprime Bond Case Study." Through our webinars we intend to share more in-depth insights on various topics and help investors develop a deeper understanding of the mortgage and housing markets as well as our company.

The accompanying presentation is available via download on Two Harbors' Website, under the "Investors" and "Webinars" tabs. Please note that this webinar is pre-recorded. We encourage you to contact Investor Relations if you have additional questions or would like to discuss this topic further. Contact information for the Investor Relations team can be found on Slide 10.

## **SAFE HARBOR STATEMENT**

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Before we begin, I would like to take a moment to remind you that remarks made during this webinar and the accompanying slide presentation may include forward-looking statements. Forward-looking statements reflect our views regarding future events and are typically associated with the use of words such as anticipate, target, expect, estimate, believe, assume, project, and should, or other similar words.

We caution investors not to rely unduly on forward-looking statements. They imply risks and uncertainties, and actual results may differ materially from expectations. We urge you to carefully consider the risks described in our filings with the SEC, which may be obtained on the SEC's website at [www.sec.gov](http://www.sec.gov). We do not undertake any obligation to update or correct any forward-looking statements if later events prove them to be inaccurate.

This presentation is not investment advice and does not constitute an offer or solicitation to buy or sell any security. This presentation is not intended to be, and you should not consider anything in this presentation to be, investment, accounting, tax or legal advice, and you should consult with your own financial advisors, accountants or attorneys regarding your individual circumstances or needs.

## **TWO HARBORS' COMPANY OVERVIEW**

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By way of introduction, Two Harbors is a hybrid mortgage REIT that invests in the residential mortgage and housing sectors. Our common stock is traded on the New York Stock Exchange under the ticker symbol, "TWO," and we have a market capitalization of approximately \$3.8 billion. We utilize a relative value investment approach across the residential mortgage and housing universe to identify the most attractive investment opportunities. This approach enables us to shift our asset allocation with changing market conditions in an effort to maximize stockholder returns.

Our mission is to be recognized as an industry leading mortgage REIT. We will accomplish this by achieving excellence in four areas:

- First, through superior portfolio construction and fluid capital allocation using rigorous asset selection and credit analysis;
- Second, through unparalleled risk management with a strong focus on hedging and book value stability to our portfolio;
- Third, through targeted diversification of our business model;
- And finally, through leading governance and disclosure practices.

Our mission guides us as we strive to deliver value to our stockholders. As the largest hybrid mortgage REIT, we manage an investment portfolio of more than \$14 billion. We are proud that our portfolio performance has enabled us to deliver a stockholder return of 124% since we commenced operations in late 2009.

For additional information about Two Harbors, we encourage you to view a variety of our webinars on topics related to mortgage REITs by accessing the Executive Insights section of the Investor Relations portion of our website.

## **SUBPRIME BOND OVERVIEW**

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Two Harbors' portfolio is comprised of two strategies: a Rates strategy, which includes Agency RMBS, Agency Derivatives, mortgage servicing rights, and associated notional hedges, and a Credit strategy, which consists of non-Agency RMBS, net economic interests in consolidated securitization trusts, prime jumbo residential mortgage loans, credit sensitive loans and associated notional hedges. We will be focusing in this webinar on the Credit strategy, in particular, subprime non-Agency RMBS and the housing markets' recovery since 2009. Specifically, we will be discussing a subprime bond that we previously owned in our portfolio and have referred to frequently in past webinars and presentations. As we go through our case study of this particular subprime bond, it is important to caveat that it is not representative of our entire subprime non-Agency portfolio and there are embedded uncertainties in investing in deeply discounted legacy non-Agency assets. For more information on investing in subprime bonds, please see our webinar entitled *Investing in Subprime*.

As we have said in the past, there are no bad bonds, only bad prices. When Two Harbors began buying subprime non-Agency securities in 2009, they were marked at a discount to par largely as a result of the housing crisis. The riskiness of looser lending standards and over-leverage by borrowers became apparent as subprime delinquencies and defaults soared well above historical averages following the peak of the housing market. Additionally, large institutions shed their exposure to subprime due to regulatory and capital constraints, but buyers remained cautious to invest due to uncertainties around housing market and loan performance. Thus, these bonds were performing very poorly and marked at a deep discount, which we found attractive from a valuation and potential future performance perspective.

Let's take a look at some of the characteristics of subprime bonds, as listed on slide 3. Typically, borrowers of the loans that populate these bonds have a low credit score, impaired or limited credit history, a high income-to-debt ratio, undisclosed income and/or a high loan-to-value, or "LTV," ratio. Understanding borrower characteristics is important to the performance of the underlying collateral,

which is a driver of realized yield on the asset. Given that one of Two Harbors' core competencies is credit risk analysis, these securities were an excellent fit for our portfolio.

## **TWO HARBORS' SUBPRIME BOND PORTFOLIO**

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On slide 4 we have listed some of our subprime portfolio characteristics today. As of June 30, 2014, approximately 80% of our non-Agency portfolio was dedicated to legacy subprime bonds; "legacy" meaning that they were originated before the housing crisis. These bonds have a carrying value of \$2.4 billion, representing a face value of \$3.5 billion. The weighted average purchase price is \$47.50, with a weighted average coupon of 1.3%. Of the aggregate subprime portfolio, 60+ day delinquencies are 31.2% and the constant prepayment rate – what we will refer to as "CPR" – is 3.2%. The average credit enhancement is 11.1%, which does not include excess interest spread that offsets credit losses.

## **HOME EQUITY ASSET TRUST (HEAT) 2006-3 AT ISSUANCE**

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As outlined on slide 5, let's begin with the subprime bond that we will study today: the HEAT 2006-3 2A4, which we will call the HEAT bond. HEAT is an acronym for "Home Equity Asset Trust." This bond was issued in 2006 and is backed by loans with vintages from 2005 to 2006. A total of five senior bonds were issued, originally rated AAA, under the HEAT 2006-3 deal. Senior bond 1A1, the largest, was backed by the first group of collateral. Senior bonds 2A1, 2A2, 2A3 and 2A4 are supported by the second group and are structured to pay sequentially, starting with 2A1 and ending with the 2A4. Subordinate bonds, which totaled 19.2% of the deal at issuance, protect all senior bonds regardless of which collateral group they are backed by. Furthermore, excess interest spread, the difference between the loan interest rate and the bond interest rate, provided additional credit support. For the purposes of our example today, we will be looking at the group 2 securities, which include the 2A4 bond we owned, and henceforth will refer to the bonds as "A1, A2, A3, A4." The subordinate bonds were structured to receive principal only after the senior bonds were paid off, unless collateral performance was particularly good, in which case they might receive principal sooner. Over 83% were single-family properties and over 89% had a 30-year amortization period. 29% of the loans were located in California, with Florida and Georgia coming in as the second - and third - highest concentrations. Finally, 45% of the loans had a LTV of 71-80% and 31% of the loans had an LTV of 81-90%.

## **HEAT 2006-3 AT TWO HARBORS ACQUISITION IN 2011**

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Now, let's take a look at the deal when we bought the A4 bond in April 2011. The A1 and A2 had already been paid off in 2008 and 2009, respectively, and the A3 was currently getting paid its principal back. The A4 was expected to start receiving principal in 2014, depending on how the deal performed going forward. Meanwhile, the A4 had been downgraded to a "C" rating and the delinquencies in the loan pool were 32%. Additionally, the 6-month average loss severity was 71%. Despite this poor collateral performance, as shown on this slide, the credit protection to the A4 from the subordinate bonds was over 37% at that time, not including expected ongoing excess interest of about 4%. We purchased this bond, which paid a coupon of 1-month LIBOR +31, in April 2011 at a price of \$62.41. The expected returns at this price were 10% plus or minus.

Shortly, we will show a video on housing price appreciation, or HPA, of some of the MSAs of the loans that populate this particular bond. HPA is an important metric in respect to deriving probability of default and expected recovery for any given loan. We will look at how they have performed from their peak in the mid-2000's, through the trough in 2009, and then through their recovery today. As background, in May 2014 the national average HPA on a rolling 12-month basis was about 9%, but in predominantly subprime areas HPA was much higher. We believe there is still room for appreciation in our subprime portfolio. Let's take a look at why we think this and delve into some specifics from this HEAT bond.

## SUBPRIME BOND VIDEO

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Let's begin with California. In the Fresno area, from the peak in 2006 through the trough in 2012, home prices were down just over 50%. From the trough in 2012 through today, home prices were up 33%. However, the average price is still about 36% lower than it was at the peak.

In the Los Angeles-Long Beach-Santa Ana area, from the peak to the trough, HPA was negative 39%. From the trough through today, HPA is positive about 42%. But despite this recovery, home prices are still nearly 14% below the peak.

In the Riverside-San Bernadino area, from the peak in 2006 through the trough in 2009, HPA was negative 53%. From the trough through today, HPA is positive about 47%. But despite this recovery, home prices are still nearly 32% below the peak.

In the San Diego area, from the peak in '06 through the trough in 2012, HPA was negative 37%. From the trough through today, home prices are up nearly 37%. This is still about 14% below the peak. As you can see, there is a trend emerging.

Now let's move to Texas, which presents a slightly different recovery story. In the Dallas-Fort Worth-Arlington area, from the peak in 2007 to the trough in 2009, home prices were down about 13%. From the trough through today, home prices have gained about 21%. This area is 6% above the peak and has recovered nicely.

Similarly, in the Houston area, from the peak in 2007 through the trough in 2009, HPA was negative 13%. From 2009 through today, home prices are up just about 30%. That is nearly 14% above the peak.

Now let's move to Florida and examine how the market has done there. In the Tampa-St. Petersburg-Clearwater area, home prices were down nearly 50% from the peak in 2006 through the trough in 2011. From the trough through today the market has recovered 26%. However, that is still 35% below the peak.

In the Orlando area, from 2006 to 2011, HPA was negative 55%. From the trough through today, HPA is positive 41%. This leaves homes is still 37% below the peak.

In the Miami metro area, from 2006 to 2011, HPA was negative 53%. From the trough through today, HPA is positive 49%. This leaves homes still 30% below the peak.

Finally, let's move to the Northeast and take a look at New Jersey and New York. In the Newark-Union area, from the peak in 2006 to the trough in 2012, HPA was negative 31%. From the trough through today, home prices are up nearly 11%. This is still 24% off the peak.

Finally, in the Nassau-Suffolk County area from 2006 through 2012, home prices were down 26%. It has recovered nearly 11% but that is still 18% off the peak.

While we have had impressive home price appreciation in different housing markets over the past two years, many markets remain well below their 2006 levels. With affordability being about 27% better than the historical mean, homes are still quite affordable and therefore we expect that there could be continued HPA performance over the next several years. Although HPA performance will likely continue at a lesser pace, we believe that it will help drive our subprime non-Agency bond portfolio performance going forward.

#### **HEAT 2006-3 2A4 PRICE PATH – 4/1/2-11 TO 6/30/2014**

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Turning to Slide 7, let's take a look at the price path of this particular HEAT bond from its purchase date in April of 2011 until we sold it in June 2014.

As we discussed earlier, the bond was purchased at \$62.41 in April 2011. You can see that at the end of 2011, the bond was actually marked below \$60, but at the end of 2013, the bond was marked at \$87, up 27 points or roughly 50% in less than two years. Furthermore, at that price, the yield at 6% was still reasonably attractive, based on the expected future performance at that time. At the end of 2013, there was very little chance that this bond would not receive par as delinquencies had dropped meaningfully, severities had improved and credit enhancement was high. In March 2014, as deal performance continued to improve and the housing market showed signs of recovery, the A3 bond got paid off and the A4 bond started to get its first principal payments at par.

#### **HEAT 2006-3 AT TWO HARBORS SALE IN 2014**

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On slide 8, we show some of the characteristics of the HEAT bond when we sold it. The bond had been upgraded to a "B" rating. Loan performance, while still not great, had improved, as the 60+ day delinquencies were 26% and the 6-month average severity was 59%. More importantly, credit enhancement was now 44%, once again, not including roughly 1% ongoing excess spread to help cover losses. In June of 2014, we sold the HEAT bond at \$97 ½, or just under par; up just over 56% in two years. At this price, keeping in mind it's a LIBOR floater with a coupon of about 0.5%, the yield was low and there was virtually no upside left in the bond; the most we could get back was par.

#### **OUTLOOK FOR SUBPRIME BOND PORTFOLIO**

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Moving to slide 9, let's discuss our outlook for subprime bonds. We believe that significant upside potential remains for bonds that are still priced at deep discounts. As we have discussed in the past, one of our core competencies is understanding and managing credit risk. Our analysis is typically conservative; for instance, we model our discount non-Agencies with fairly draconian prepayment assumptions of 1 to 2 CPR for life. On these deeply discounted bonds, increasing prepays, such as we have been experiencing in the recent past, greatly enhance our performance metrics. We list some drivers of prepayments on this page, including HPA - which we have just discussed - better economic growth, housing turnover from better mobility as employment improves and refinancings due to low interest rates. While higher prepayment behavior and potential servicing actions provide value in the

future, we consider other plausible scenarios when reviewing the expected fundamental performance of these bonds. Going forward, some considerations include a possible downturn in housing prices and potential variability in cashflows due to servicer actions that involve helping borrowers.

Our subprime bond portfolio consists of legacy non-Agencies that were purchased at a significant discount to par due to the credit sensitivities of the security, and the average current market price of this portfolio is still deeply discounted, around \$68. In conclusion, as HPA continues - albeit likely at a slower pace than the past 5 years – and as borrower performance and home equity position improves, we believe that there remains significant potential upside on deeply discounted bonds, as exemplified by our experience on the HEAT bond.

## **CONTACT INFORMATION**

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Thank you for joining us for today's webinar. If you have any questions, please do not hesitate to reach out to the Investor Relations contacts listed on this page.

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