

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-K

**CURRENT REPORT PURSUANT
TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934**

Date of Report (Date of earliest event reported): **May 10, 2010**

ARMOUR Residential REIT, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Maryland

(State or Other Jurisdiction
of Incorporation)

001-33736

(Commission File Number)

26-1908763

(I.R.S. Employer Identification No.)

**956 Beachland Blvd., Suite 11
Vero Beach, Florida**

(Address of Principal Executive Offices)

32963

(Zip Code)

(772) 617-4340

(Registrant's Telephone Number, Including Area Code)

n/a

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01. Regulation FD Disclosure.

Commencing on May 10, 2010, ARMOUR Residential REIT, Inc. ("ARMOUR") will be making presentations to certain investors. Attached as Exhibit 99.1 to this report is the form of investor presentation to be used by ARMOUR in its presentations.

The investor presentation attached to this report as Exhibit 99.1 is furnished pursuant to this Item 7.01 and shall not be deemed filed in this or any other filing of ARMOUR under the Securities Exchange Act of 1934, as amended, unless expressly incorporated by specific reference in any such filing.

Item 9.01. Financial Statements and Exhibits.

(c) Exhibits

Exhibit No.	Description
99.1	Investor Presentation

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: May 10, 2010

ARMOUR RESIDENTIAL REIT, INC.

By: /s/ Jeffrey J. Zimmer

Name: Jeffrey J. Zimmer

Title: Co-Chief Executive Officer, President and Vice
Chairman

Exhibit Index

Exhibit No.	Description
99.1	Investor Presentation



ARMOUR RESIDENTIAL REIT, Inc.
Company Update
May 10, 2010

PLEASE READ: Important Regulatory and Yield Estimate Risk Disclosures

Certain statements made in this presentation regarding ARMOUR Residential REIT, Inc. (“ARMOUR” or the “Company”), and any other statements regarding ARMOUR’s future expectations, beliefs, goals or prospects constitute forward-looking statements made within the meaning of Section 21E of the Securities Exchange Act of 1934. Any statements that are not statements of historical fact (including statements containing the words “believes,” “plans,” “anticipates,” “expects,” “estimates” and similar expressions) should also be considered forward-looking statements. Forward-looking statements include but are not limited to statements regarding the projections for the ARMOUR business, and plans for future growth and operational improvements. A number of important factors could cause actual results or events to differ materially from those indicated by such forward-looking statements. ARMOUR assumes no obligation to update the information looking statements in this communication, except as otherwise required by law. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof.

This material is for information purposes only and does not constitute an offer to sell, a solicitation of an offer to buy, or a recommendation for any securities, financial instruments, or common or privately issued stock. The statements, information and estimates contained herein are based on information that the presenter believes to be reliable as of today’s date, but cannot be represented that such statements, information or estimates are complete or accurate.

Actual realized yields, durations and net durations described herein will depend on a number of factors that cannot be predicted with certainty. Estimated yields do not reflect any of the costs of operation of ARMOUR.



ARMOUR Residential REIT, Inc. - Investment & Business Strategy

ARMOUR Residential REIT, Inc. (“ARMOUR”) invests solely in Agency Mortgage Securities.

– Only with a shareholder vote may ARMOUR REIT change its Agency only investment asset class.

ARMOUR’s business strategy has been fully implemented.

- 1) Invest in a low duration very diverse set of Agency Mortgage Securities.**
 - ARMOUR REIT owns 127 separate securities (cusips).
- 2) Target a weighted average gross asset duration of 2.5 or less.**
- 3) Target a balance sheet duration of 1.5 or less.**
 - Balance Sheet Duration achieved by the use of swaps and Eurodollar futures.
- 4) Hold 40% of unlevered equity in cash.**
 - Liquidity defends against the unexpected.

ARMOUR’s business strategy is transparent.

- 1) ARMOUR’s portfolio and liability details are released on the ARMOUR website twice a quarter.**
 - Asset details and REPO counter-parties are identified.
- 2) Amortization is expensed as it occurs.**
 - There is no yield ‘smoothing.’
- 3) Hedge portfolio is marked-to-market and the change in value is realized for GAAP.**

ARMOUR is one of only two Agency REITs with a non-executive, Independent Board Chairman.



ARMOUR Portfolio and Balance Sheet Highlights and Dividend and Earnings Update (May 7, 2010 Data)

- **Portfolio and Balance Sheet Highlights**

- ARMOUR was 100% invested as of January 26, 2010.
- ARMOUR has an Agency mortgage portfolio valued at \$188.69 million ⁽¹⁾.
- Gross asset duration is currently estimated at 1.74.
- Net balance sheet duration is currently estimated at 0.89.
- REPO borrowings total \$179.73 million.
- Debt to equity ratio ⁽²⁾ = 8.39x.
- Eurodollar Futures to replicate swaps total \$60.0 million (35.1% of non-true ARMS).
- Cash on hand & short term principal & interest receivables: \$10.83 million.

- **Dividend and Earnings Update**

- ARMOUR paid a \$0.40 per share dividend for Q1 2010 on April 29, 2010.
- The \$0.40 dividend represents estimated REIT Taxable Earnings for Q1 2010.
- The REIT Taxable Earnings represents an annualized return on equity of 17.2% based on an estimated 3/31/2010 book value per share of \$9.30.

(1) Based on third party pricing.

(2) Based on 3/31/2010 book value of \$21,417,723 (or \$9.30 per share).



ARMOUR REIT Current Portfolio and Liability Information (May 7, 2010)

- (1) ARMOUR REIT Portfolio Composition
- (2) ARMOUR REIT Portfolio Constant Prepayment History
- (3) ARMOUR REIT Interest Rate Hedges and REPO Composition



ARMOUR REIT Agency Only Portfolio Composition

Agency Asset Class	Current Value	Percentage of Total Portfolio
ARMS (0-18 Months to Reset) ⁽¹⁾	\$ 17,610,494	9.3%
Hybrids (19 Months and Longer to Reset) ⁽²⁾	\$ 117,724,055	62.4%
Seasoned 15 & 20 Year Pass-Throughs ⁽³⁾	\$ 17,975,945	9.5%
Low Loan Balance 15 Year Pass-Throughs ⁽⁴⁾	\$ 35,382,612	18.8%
Total	\$ 188,693,107	100.0%

(1) Weighted Average Months to Reset = 6.

(2) Weighted Average Months to Reset = 51.

(3) Longest Final Maturity of December 2025.

(4) Maximum Original Loan Balance of \$85,000.

Agency Type	Current Value	Percentage of Total Portfolio
Fannie Mae	\$ 102,749,459	54.5%
Freddie Mac	\$ 72,202,049	38.3%
Ginnie Mae	\$ 13,741,599	7.3%
Total	\$ 188,693,107	100.0%



ARMOUR REIT Agency Only Portfolio Asset Class Detail

Agency Asset Class	Weighted Average Purchase Price	Weighted Average Current Market Price	Weighted Average Coupon May 2010	Estimated Effective Duration Using Current Values
ARMS	103.7%	103.9%	4.13	0.34
Hybrids	103.8%	104.6%	4.44	1.60
Seasoned 15 & 20 Year Pass-Throughs	103.9%	105.7%	4.71	1.93
Low Loan Balance 15 Year Pass-Throughs	105.4%	105.6%	4.58	2.78
Totals	104.1%	104.8%	4.46	1.74

NOTE: Duration estimates are derived from functions available from Bloomberg Finance L.P. ARMOUR uses estimates for GNMA collateral. Actual realized yields, durations and net durations described herein will depend on a number of factors that cannot be predicted with certainty. Market prices for our securities are obtained from independent third party sources.

Estimated Balance Sheet Duration	Amount	Estimated Duration	Duration Effect on Balance Sheet
Agency Assets	\$ 188,693,107	1.74	1.74
Eurodollar Futures	\$ 60,000,000	2.67	-2.67
Estimated Balance Sheet Duration			0.89

NOTE: As rates go down the value of our Eurodollar Futures (which are 'shorts') will typically decline. Inversely, as rates go up, the value of the Eurodollar Futures will typically increase.



ARMOUR REIT Portfolio Constant Prepayment Rates (CPR)

Portfolio Prepayment Information (1)

Month	Weighted Average Annualized Constant Prepayment Rate
December 2009	8.6
January 2010	12.9
February 2010	10.0
March 2010	20.7
April 2010	18.8
May 2010	16.0

Asset Class Prepayment Detail (1)

Agency Asset Class	Weighted Average May 2010 Constant Prepayment Rate
True ARMs (0-18 Months to Reset)	27.8
Hybrids (19 Months and Longer to Reset)	16.1
Seasoned 15 & 20 Year Pass-Throughs	17.5
Low Loan Balance 15 Year Pass-Throughs	8.9

NOTE: ARMOUR expenses amortization as it occurs.

(1) Constant Prepayment Rate (CPR) is the annualized equivalent of single monthly mortality (SMM). CPR attempts to predict the percentage of principal that will prepay over the next twelve months based on historical principal pay downs.



ARMOUR REIT Eurodollar Futures Positions ARMOUR REIT REPO

Eurodollar Futures to Replicate Swaps (Maturity Dates)	Notional Amount	Weighted Average Rate	Duration	Longest Maturity in Months (as of 5/7/10)
March 2012	\$ 20,000,000	1.181%	1.75	24
March 2013	\$ 21,000,000	1.809%	2.70	34
March 2014	\$ 19,000,000	2.439%	3.60	46
Total or Weighted Average	\$ 60,000,000	1.799%	2.67	33.8

REPO Counter-Party	Principal Borrowed	Percentage of REPO Positions with ARMOUR	Weighted Average Rate	Haircut	Longest Maturity in Days
MF Global	\$ 75,833,000	42.2%	0.280%	5%	46
Goldman Sachs	\$ 46,430,000	25.8%	0.254%	5%	21
South Street Securities	\$ 29,358,994	16.3%	0.300%	5%	35
Nomura	\$ 28,112,000	15.6%	0.270%	5%	19
Total or Weighted Average	\$ 179,733,994	100.0%	0.275%	5.00%	34

ARMOUR currently has nine signed Master Repurchase Agreements, As equity capital grows, ARMOUR will increase the number of REPO counter-parties.



