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PennyMac Mortgage Investment Trust
Form 10-Q
November 07, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

Form 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2018

Or

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

For the transition period from _____ to _____

Commission file number: 001-34416

PennyMac Mortgage Investment Trust

(Exact name of registrant as specified in its charter)

Maryland
(State or other jurisdiction of

incorporation or organization)

3043 Townsgate Road, Westlake Village, California
(Address of principal executive offices)

27-0186273
(IRS Employer

Identification No.)

91361
(Zip Code)

(818) 224-7442

(Registrant's telephone number, including area code)

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Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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	Accelerated filer
Non-accelerated filer	Smaller reporting company
	Emerging growth company

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 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act): Yes No

Indicate the number of shares outstanding of each of the registrant’s classes of common stock, as of the latest practicable date.

Class	Outstanding at November 6, 2018
Common Shares of Beneficial Interest, \$0.01 par value	60,951,444

PENNYMAC MORTGAGE INVESTMENT TRUST

FORM 10-Q

September 30, 2018

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q (“Report”) contains certain forward-looking statements that are subject to various risks and uncertainties. Forward-looking statements are generally identifiable by use of forward-looking terminology such as “may,” “will,” “should,” “potential,” “intend,” “expect,” “seek,” “anticipate,” “estimate,” “approximately,” “believe,” “predict,” “continue,” “plan” or other similar words or expressions.

Forward-looking statements are based on certain assumptions, discuss future expectations, describe future plans and strategies, contain financial and operating projections or state other forward-looking information. Examples of forward-looking statements include the following:

- projections of our revenues, income, earnings per share, capital structure or other financial items;
- descriptions of our plans or objectives for future operations, products or services;
- forecasts of our future economic performance, interest rates, profit margins and our share of future markets; and
- descriptions of assumptions underlying or relating to any of the foregoing expectations regarding the timing of generating any revenues.

Our ability to predict results or the actual effect of future events, actions, plans or strategies is inherently uncertain. Although we believe that the expectations reflected in such forward-looking statements are based on reasonable assumptions, our actual results and performance could differ materially from those set forth in the forward-looking statements. There are a number of factors, many of which are beyond our control that could cause actual results to differ significantly from management’s expectations. Some of these factors are discussed below.

You should not place undue reliance on any forward-looking statement and should consider the following uncertainties and risks, as well as the risks and uncertainties discussed elsewhere in this Report and the section entitled “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the Securities and Exchange Commission (“SEC”) on March 1, 2018.

Factors that could cause actual results to differ materially from historical results or those anticipated include, but are not limited to:

- changes in our investment objectives or investment or operational strategies, including any new lines of business or new products and services that may subject us to additional risks;
- the occurrence of natural disasters or other events or circumstances that could impact our operations;
- volatility in our industry, the debt or equity markets, the general economy or the real estate finance and real estate markets specifically, whether the result of market events or otherwise;
- events or circumstances which undermine confidence in the financial markets or otherwise have a broad impact on financial markets, such as the sudden instability or collapse of large depository institutions or other significant corporations, terrorist attacks, natural or man-made disasters, or threatened or actual armed conflicts;
- changes in general business, economic, market, employment and political conditions, or in consumer confidence and spending habits from those expected;
 - declines in real estate or significant changes in U.S. housing prices or activity in the U.S. housing market;
- the availability of, and level of competition for, attractive risk-adjusted investment opportunities in mortgage loans and mortgage-related assets that satisfy our investment objectives;
- the inherent difficulty in winning bids to acquire mortgage loans, and our success in doing so;
- the concentration of credit risks to which we are exposed;
- the degree and nature of our competition;
- our dependence on our manager and servicer, potential conflicts of interest with such entities and their affiliates, and the performance of such entities;
- changes in personnel and lack of availability of qualified personnel at our manager, servicer or their affiliates;
- the availability, terms and deployment of short-term and long-term capital;

the adequacy of our cash reserves and working capital;

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our ability to maintain the desired relationship between our financing and the interest rates and maturities of our assets;

the timing and amount of cash flows, if any, from our investments;

unanticipated increases or volatility in financing and other costs, including a rise in interest rates;

the performance, financial condition and liquidity of borrowers;

the ability of our servicer, which also provides us with fulfillment services, to approve and monitor correspondent sellers and underwrite loans to investor standards;

incomplete or inaccurate information or documentation provided by customers or counterparties, or adverse changes in the financial condition of our customers and counterparties;

our indemnification and repurchase obligations in connection with mortgage loans we purchase and later sell or securitize;

the quality and enforceability of the collateral documentation evidencing our ownership and rights in the assets in which we invest;

increased rates of delinquency, default and/or decreased recovery rates on our investments;

the performance of mortgage loans underlying mortgage-backed securities (“MBS”) in which we retain credit risk;

our ability to foreclose on our investments in a timely manner or at all;

increased prepayments of the mortgages and other loans underlying our MBS or relating to our mortgage servicing rights (“MSRs”), excess servicing spread (“ESS”) and other investments;

the degree to which our hedging strategies may or may not protect us from interest rate volatility;

the effect of the accuracy of or changes in the estimates we make about uncertainties, contingencies and asset and liability valuations when measuring and reporting upon our financial condition and results of operations;

our failure to maintain appropriate internal controls over financial reporting;

technologies for loans and our ability to mitigate security risks and cyber intrusions;

our ability to obtain and/or maintain licenses and other approvals in those jurisdictions where required to conduct our business;

- our ability to detect misconduct and fraud;

our ability to comply with various federal, state and local laws and regulations that govern our business;

developments in the secondary markets for our mortgage loan products;

legislative and regulatory changes that impact the mortgage loan industry or housing market;

- changes in regulations or the occurrence of other events that impact the business, operations or prospects of government agencies such as the Government National Mortgage Association (“Ginnie Mae”), the Federal Housing Administration (the “FHA”) or the Veterans Administration (the “VA”), the U.S. Department of Agriculture (“USDA”), or government-sponsored entities such as the Federal National Mortgage Association (“Fannie Mae”) or the Federal Home Loan Mortgage Corporation (“Freddie Mac”) (Fannie Mae, Freddie Mac and Ginnie Mae are each referred to as an “Agency” and, collectively, as the “Agencies”), or such changes that increase the cost of doing business with such entities;

the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”) and its implementing regulations and regulatory agencies, and any other legislative and regulatory changes that impact the business, operations or governance of mortgage lenders and/or publicly-traded companies;

the Bureau of Consumer Financial Protection and its issued and future rules and the enforcement thereof;

changes in government support of homeownership;

changes in government or government-sponsored home affordability programs;

limitations imposed on our business and our ability to satisfy complex rules for us to qualify as a real estate investment trust (“REIT”) for U.S. federal income tax purposes and qualify for an exclusion from the Investment Company Act of 1940 (the “Investment Company Act”) and the ability of certain of our subsidiaries to qualify as REITs or as taxable REIT subsidiaries (“TRSs”) for U.S. federal income tax purposes, as applicable, and our ability and the ability of our subsidiaries to operate effectively within the limitations imposed by these rules;

- changes in governmental regulations, accounting treatment, tax rates and similar matters (including changes to laws governing the taxation of REITs, or the exclusions from registration as an investment company);
- our ability to make distributions to our shareholders in the future;
- our failure to deal appropriately with issues that may give rise to reputational risk; and
- our organizational structure and certain requirements in our charter documents.

Other factors that could also cause results to differ from our expectations may not be described in this Report or any other document. Each of these factors could by itself, or together with one or more other factors, adversely affect our business, results of operations and/or financial condition.

Forward-looking statements speak only as of the date they are made, and we undertake no obligation to update any forward-looking statement to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

PENNYMAC MORTGAGE INVESTMENT TRUST AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS (UNAUDITED)

	September 30, 2018	December 31, 2017
	(in thousands, except share information)	
ASSETS		
Cash	\$88,929	\$ 77,647
Short-term investments at fair value	26,736	18,398
Mortgage-backed securities at fair value pledged to creditors	2,126,507	989,461
Mortgage loans acquired for sale at fair value (includes \$1,930,547 and \$1,249,277 pledged to creditors, respectively)	1,949,432	1,269,515
Mortgage loans at fair value (includes \$624,267 and \$1,081,893 pledged to creditors, respectively)	633,168	1,089,473
Excess servicing spread purchased from PennyMac Financial Services, Inc. at fair value pledged to secure Assets sold to PennyMac Financial Services, Inc. under agreements to repurchase	223,275	236,534
Derivative assets (includes \$27,710 and \$26,058 pledged to creditors, respectively)	143,577	113,881
Firm commitment to purchase credit risk transfer security at fair value	18,749	—
Real estate acquired in settlement of loans (includes \$69,399 and \$124,532 pledged to creditors, respectively)	95,605	162,865
Real estate held for investment (includes \$31,795 and \$31,128 pledged to creditors, respectively)	45,971	44,224
Deposits securing credit risk transfer agreements (includes \$378,090 and \$400,778 pledged to creditors, respectively)	662,624	588,867
Mortgage servicing rights (includes \$1,109,741 and \$91,459 at fair value; \$1,090,406 and \$831,892 pledged to creditors)	1,109,741	844,781
Servicing advances	48,056	77,158
Due from PennyMac Financial Services, Inc.	2,351	4,154
Other	92,857	87,975
Total assets	\$7,267,578	\$ 5,604,933
LIABILITIES		
Assets sold under agreements to repurchase	\$4,394,500	\$ 3,180,886
Mortgage loan participation purchase and sale agreements	31,578	44,488
Exchangeable senior notes	248,053	247,186
Notes payable	445,318	—

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Asset-backed financing of a variable interest entity at fair value	278,113	307,419
Interest-only security payable at fair value	8,821	7,070
Assets sold to PennyMac Financial Services, Inc. under agreements to repurchase	133,128	144,128
Derivative liabilities	11,880	1,306
Accounts payable and accrued liabilities	70,362	64,751
Due to PennyMac Financial Services, Inc.	27,467	27,119
Income taxes payable	52,382	27,317
Liability for losses under representations and warranties	7,413	8,678
Total liabilities	5,709,015	4,060,348

Commitments and contingencies — Note 20

SHAREHOLDERS' EQUITY

Preferred shares of beneficial interest, \$0.01 par value per share, authorized 100,000,000 shares,

issued and outstanding 12,400,000 shares, liquidation preference \$310,000,000	299,707	299,707
Common shares of beneficial interest—authorized, 500,000,000 common shares of \$0.01 par value; issued and outstanding, 60,951,444 and 61,334,087 common shares, respectively	610	613
Additional paid-in capital	1,284,537	1,290,931
Accumulated deficit	(26,291)	(46,666)
Total shareholders' equity	1,558,563	1,544,585
Total liabilities and shareholders' equity	\$7,267,578	\$ 5,604,933

The accompanying notes are an integral part of these consolidated financial statements.

PENNYMAC MORTGAGE INVESTMENT TRUST AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS (UNAUDITED)

Assets and liabilities of consolidated variable interest entities (“VIEs”) included in total assets and liabilities (the assets of each VIE can only be used to settle liabilities of that VIE):

	September 30, 2018	December 31, 2017
	(in thousands)	
ASSETS		
Mortgage loans at fair value	\$ 292,174	\$ 321,040
Derivative assets	126,354	98,640
Deposits securing credit risk transfer agreements	662,624	588,867
Other—interest receivable	855	904
	\$ 1,082,007	\$ 1,009,451
LIABILITIES		
Asset-backed financing at fair value	\$ 278,113	\$ 307,419
Interest-only security payable at fair value	8,821	7,070
Accounts payable and accrued liabilities—interest payable	855	904
	\$ 287,789	\$ 315,393

The accompanying notes are an integral part of these consolidated financial statements.

PENNYMAC MORTGAGE INVESTMENT TRUST AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(in thousands, except per share amounts)			
Net investment income				
Net mortgage loan servicing fees:				
From nonaffiliates	\$43,833	\$21,543	\$126,567	\$48,466
From PennyMac Financial Services, Inc.	561	333	1,568	859
	44,394	21,876	128,135	49,325
Net gain on mortgage loans acquired for sale:				
From nonaffiliates	22,121	14,692	33,358	44,944
From PennyMac Financial Services, Inc.	2,689	3,275	8,221	9,340
	24,810	17,967	41,579	54,284
Mortgage loan origination fees	12,424	11,744	28,311	30,501
Net gain (loss) on investments:				
From nonaffiliates	7,977	17,499	24,233	69,067
From PennyMac Financial Services, Inc.	1,706	(3,665)	10,977	(10,920)
	9,683	13,834	35,210	58,147
Interest income:				
From nonaffiliates	58,584	47,579	144,064	139,052
From PennyMac Financial Services, Inc.	3,740	3,998	11,584	13,011
	62,324	51,577	155,648	152,063
Interest expense:				
To nonaffiliates	44,797	38,161	115,804	109,936
To PennyMac Financial Services, Inc.	1,812	2,116	5,686	5,946
	46,609	40,277	121,490	115,882
Net interest income	15,715	11,300	34,158	36,181
Results of real estate acquired in settlement of loans	(310)	(3,143)	(5,833)	(10,854)
Other	1,785	2,226	5,605	6,653
Net investment income	108,501	75,804	267,165	224,237
Expenses				
Earned by PennyMac Financial Services, Inc.:				
Mortgage loan fulfillment fees	26,256	23,507	52,759	61,184
Mortgage loan servicing fees	10,071	11,402	30,521	31,987
Management fees	6,482	6,038	17,906	16,684
Mortgage loan collection and liquidation	2,747	864	6,899	4,556
Professional services	2,616	1,331	5,692	5,531
Compensation	1,924	1,067	5,412	4,918
Real estate held for investment	1,713	1,898	4,452	4,339
Mortgage loan origination	2,136	2,230	3,980	5,735
Other	2,894	3,301	7,758	10,704
Total expenses	56,839	51,638	135,379	145,638
Income before provision for income taxes	51,662	24,166	131,786	78,599
Provision for income taxes	5,100	4,771	20,613	1,688
Net income	46,562	19,395	111,173	76,911

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Dividends on preferred shares	6,235	6,125	18,703	9,032
Net income attributable to common shareholders	\$40,327	\$13,270	\$92,470	\$67,879
Earnings per common share				
Basic	\$0.66	\$0.20	\$1.51	\$1.01
Diluted	\$0.62	\$0.20	\$1.44	\$0.98
Weighted-average common shares outstanding				
Basic	60,950	66,636	60,880	66,702
Diluted	69,417	66,636	69,347	75,169
Dividends declared per common share	\$0.47	\$0.47	\$1.41	\$1.41

The accompanying notes are an integral part of these consolidated financial statements.

PENNYMAC MORTGAGE INVESTMENT TRUST AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY (UNAUDITED)

	Preferred shares		Common shares		Additional paid-in capital	Accumulated deficit	Total
	Number of shares	Amount	Number of shares	Par value			
	(in thousands, except per share amounts)						
Balance at June 30, 2017	4,600	\$111,172	66,842	\$668	\$1,377,990	\$ (34,998)	\$1,454,832
Net income	—	—	—	—	—	19,395	19,395
Share-based compensation	—	—	—	1	736	—	737
Issuance of preferred shares	7,800	195,000	—	—	—	—	195,000
Issuance costs relating to preferred shares	—	(6,465)	—	—	—	—	(6,465)
Dividends:							
Common shares (\$0.47 per share)	—	—	—	—	—	(31,179)	(31,179)
Preferred shares	—	—	—	—	—	(5,338)	(5,338)
Repurchase of common shares	—	—	(966)	(10)	(16,407)	—	(16,417)
Balance at September 30, 2017	12,400	\$299,707	65,876	\$659	\$1,362,319	\$ (52,120)	\$1,610,565
Balance at June 30, 2018	12,400	\$299,707	60,951	\$610	\$1,282,971	\$ (37,801)	\$1,545,487
Net income	—	—	—	—	—	46,562	46,562
Share-based compensation	—	—	—	—	1,566	—	1,566
Dividends:							
Common shares (\$0.47 per share)	—	—	—	—	—	(28,816)	(28,816)
Preferred shares	—	—	—	—	—	(6,236)	(6,236)
Balance at September 30, 2018	12,400	\$299,707	60,951	\$610	\$1,284,537	\$ (26,291)	\$1,558,563

	Preferred shares		Common shares		Additional paid-in capital	Accumulated deficit	Total
	Number of shares	Amount	Number of shares	Par value			
	(in thousands, except per share amounts)						
Balance at December 31, 2016	—	\$—	66,697	\$667	\$1,377,171	\$ (26,724)	\$1,351,114
Net income	—	—	—	—	—	76,911	76,911
Share-based compensation	—	—	284	3	3,861	—	3,864
Issuance of preferred shares	12,400	310,000	—	—	—	—	310,000
Issuance costs relating to preferred shares	—	(10,293)	—	—	—	—	(10,293)
Dividends:							
Common shares (\$1.41 per share)	—	—	—	—	—	(94,477)	(94,477)
Preferred shares	—	—	—	—	—	(7,830)	(7,830)
Repurchase of common shares	—	—	(1,105)	(11)	(18,713)	—	(18,724)
Balance at September 30, 2017	12,400	\$299,707	65,876	\$659	\$1,362,319	\$ (52,120)	\$1,610,565
Balance at December 31, 2017	12,400	\$299,707	61,334	\$613	\$1,290,931	\$ (46,666)	\$1,544,585
Cumulative effect of a change in accounting	—	—	—	—	—	14,361	14,361

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principle - Adoption of fair value

accounting for mortgage servicing

rights

Balance at January 1, 2018	12,400	299,707	61,334	613	1,290,931	(32,305)	1,558,946
Net income	—	—	—	—	—	111,173	111,173
Share-based compensation	—	—	288	3	4,319	—	4,322
Dividends:							
Common shares (\$1.41 per share)	—	—	—	—	—	(86,451)	(86,451)
Preferred shares	—	—	—	—	—	(18,708)	(18,708)
Repurchase of common shares	—	—	(671)	(6)	(10,713)	—	(10,719)
Balance at September 30, 2018	12,400	\$299,707	60,951	\$610	\$1,284,537	\$ (26,291)	\$1,558,563

The accompanying notes are an integral part of these consolidated financial statements.

PENNYMAC MORTGAGE INVESTMENT TRUST AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

	Nine months ended September 30, 2018 2017 (in thousands)	
Cash flows from operating activities		
Net income	\$111,173	\$76,911
Adjustments to reconcile net income to net cash (used in) provided by operating activities:		
Change in fair value, amortization and impairment of mortgage servicing rights, net		
of hedging results	27,368	75,403
Net gain on mortgage loans acquired for sale at fair value	(41,579)	(54,284)
Net gain on investments	(35,210)	(58,147)
Accrual of interest on excess servicing spread purchased from PennyMac Financial Services, Inc.	(11,584)	(13,011)
Capitalization of interest and fees on mortgage loans at fair value	(6,543)	(27,737)
Amortization of debt issuance (premiums) and costs, net	(3,193)	10,243
Accrual of unearned discounts and amortization of premiums on mortgage-backed securities, mortgage loans at fair value, and asset-backed secured financing of a VIE	2,731	4,625
Results of real estate acquired in settlement of loans	5,833	10,854
Share-based compensation expense	4,322	3,864
Purchase of mortgage loans acquired for sale at fair value from nonaffiliates	(46,127,315)	(49,769,392)
Purchase of mortgage loans acquired for sale at fair value from PennyMac Financial Services, Inc.	(2,336,162)	(373,108)
Repurchase of mortgage loans subject to representation and warranties	(8,243)	(8,706)
Sale and repayment of mortgage loans acquired for sale at fair value to nonaffiliates	18,992,722	17,683,444
Sale of mortgage loans acquired for sale to PennyMac Financial Services, Inc.	28,584,762	32,724,487
Settlement of repurchase agreement derivatives	5,626	—
Decrease in servicing advances	37,506	8,275
Decrease in due from PennyMac Financial Services, Inc.	1,769	2,043
(Increase) decrease in other assets	(31,419)	16,936
Increase (decrease) in accounts payable and accrued liabilities	5,938	(31,155)
Increase (decrease) in due to PennyMac Financial Services, Inc.	348	(454)
Increase in income taxes payable	19,713	1,982
Net cash (used in) provided by operating activities	(801,437)	283,073
Cash flows from investing activities		
Net (increase) decrease in short-term investments	(8,338)	116,442
Purchase of mortgage-backed securities at fair value	(1,316,200)	(251,872)
Sale and repayment of mortgage-backed securities at fair value	126,243	85,144
Sale and repayment of mortgage loans at fair value	398,488	345,824
Repayment of excess servicing spread by PennyMac Financial Services, Inc.	35,852	42,320

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Net settlement of derivative financial instruments	1,300	(423)
Sale of real estate acquired in settlement of loans	84,645	140,862
Purchase of mortgage servicing rights	—	(79)
Sale of mortgage servicing rights	100	—
Contribution to deposits securing credit risk transfer agreements	(96,446)	(102,146)
Distribution from credit risk transfer agreements	87,596	41,823
Decrease (increase) in margin deposits	4,617	(2,350)
Net cash (used in) provided by investing activities	(682,143)	415,545

The accompanying notes are an integral part of these consolidated financial statements.

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PENNYMAC MORTGAGE INVESTMENT TRUST AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

	Nine months ended	
	September 30, 2018	2017
	(in thousands)	
Cash flows from financing activities		
Sale of assets under agreements to repurchase	60,463,168	58,275,935
Repurchase of assets sold under agreements to repurchase	(59,250,379)	(58,856,728)
Issuance of mortgage loan participation certificates	4,603,429	5,473,935
Repayment of mortgage loan participation certificates	(4,616,304)	(5,455,770)
Advance under notes payable	450,000	135,000
Repayment of notes payable	—	(330,000)
Repayment of asset-backed financing of a variable interest entity at fair value	(16,721)	(42,881)
Sale of assets sold to PennyMac Financial Services, Inc. under		
agreements to repurchase	2,208	—
Repurchase of assets sold to PennyMac Financial Services, Inc. under		
agreement to repurchase	(13,208)	(1,928)
Payment of debt issuance costs	(11,125)	(9,342)
Issuance of preferred shares	—	310,000
Payment of issuance costs related to preferred shares	—	(10,293)
Payment of dividends to preferred shareholders	(18,708)	(7,830)
Payment of dividends to common shareholders	(86,779)	(94,953)
Repurchase of common shares	(10,719)	(18,724)
Net cash provided by (used in) financing activities	1,494,862	(633,579)
Net increase in cash and restricted cash	11,282	65,039
Cash and restricted cash at beginning of period	77,647	34,476
Cash and restricted cash at end of period	\$88,929	\$99,515
Cash and restricted cash end of period are comprised of the following:		
Cash	\$88,929	\$99,515
Restricted cash	—	—
	\$88,929	\$99,515

The accompanying notes are an integral part of these consolidated financial statements.

PENNYMAC MORTGAGE INVESTMENT TRUST AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

Note 1—Organization

PennyMac Mortgage Investment Trust (“PMT” or the “Company”) was organized in Maryland on May 18, 2009, and commenced operations on August 4, 2009, when it completed its initial offerings of common shares of beneficial interest (“common shares”). The Company is a specialty finance company, which, through its subsidiaries (all of which are wholly-owned), invests primarily in residential mortgage-related assets.

The Company operates in four segments: correspondent production, credit sensitive strategies, interest rate sensitive strategies and corporate:

•The correspondent production segment represents the Company’s operations aimed at serving as an intermediary between mortgage lenders and the capital markets by purchasing, pooling and reselling newly originated prime credit quality mortgage loans either directly or in the form of mortgage-backed securities (“MBS”), using the services of PNMAC Capital Management, LLC (“PCM” or the “Manager”) and PennyMac Loan Services, LLC (“PLS”), both indirect controlled subsidiaries of PennyMac Financial Services, Inc. (“PFSI”).

•Most of the mortgage loans the Company has acquired in its correspondent production activities have been eligible for sale to government-sponsored entities (“GSEs”) such as the Federal National Mortgage Association (“Fannie Mae”) and the Federal Home Loan Mortgage Corporation (“Freddie Mac”) or through government agencies such as the Government National Mortgage Association (“Ginnie Mae”). Fannie Mae, Freddie Mac and Ginnie Mae are each referred to as an “Agency” and, collectively, as the “Agencies.”

•The credit sensitive strategies segment represents the Company’s investments in credit risk transfer agreements (“CRT Agreements”), distressed mortgage loans, real estate acquired in settlement of mortgage loans (“REO”), real estate held for investment, non-Agency subordinated bonds and small balance commercial real estate mortgage loans.

•The interest rate sensitive strategies segment represents the Company’s investments in mortgage servicing rights (“MSRs”), excess servicing spread purchased from PFSI (“ESS”), Agency and senior non-Agency MBS and the related interest rate hedging activities.

•The corporate segment includes certain interest income, management fee and corporate expense amounts.

The Company conducts substantially all of its operations and makes substantially all of its investments through its subsidiary, PennyMac Operating Partnership, L.P. (the “Operating Partnership”), and the Operating Partnership’s subsidiaries. A wholly-owned subsidiary of the Company is the sole general partner, and the Company is the sole limited partner, of the Operating Partnership.

The Company believes that it qualifies, and has elected to be taxed, as a real estate investment trust (“REIT”) under the Internal Revenue Code of 1986, as amended, beginning with its taxable period ended on December 31, 2009. To maintain its tax status as a REIT, the Company has to distribute at least 90% of its taxable income in the form of qualifying distributions to shareholders.

Note 2—Basis of Presentation

The accompanying consolidated financial statements have been prepared in compliance with accounting principles generally accepted in the United States (“GAAP”) as codified in the Financial Accounting Standards Board’s (“FASB”) Accounting Standards Codification (“ASC”) for interim financial information and with the Securities and Exchange Commission’s instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Accordingly, these financial statements

and notes do not include all of the information required by GAAP for complete financial statements. The interim consolidated information should be read together with the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017 (the "Annual Report").

The accompanying unaudited consolidated financial statements reflect all normal recurring adjustments necessary to present fairly the financial position, results of operations, and cash flows for the interim periods, but are not necessarily indicative of the results of operations that may be anticipated for the full year. Intercompany accounts and transactions have been eliminated.

Preparation of financial statements in compliance with GAAP requires the Manager to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, and revenues and expenses during the reporting period. Actual results will likely differ from those estimates.

Note 3—Accounting Developments

Accounting Changes

Mortgage Servicing Rights

Effective January 1, 2018, the Company has elected to change the accounting for the classes of MSR's it accounted for using the amortization method through December 31, 2017, to the fair value method as allowed in the Transfers and Servicing topic of the ASC. The Manager determined that a single accounting treatment across all MSR's is consistent with lender valuation under its financing arrangements and simplifies hedging activities. As the result of this change, the Company recorded an adjustment to increase its investment in MSR's by \$19.7 million, an increase in its liability for income taxes payable of \$5.3 million and an increase in shareholders' equity of \$14.4 million.

Revenue Recognition

As disclosed in Note 33 – Recently Issued Accounting Pronouncements to the consolidated financial statements included in the Annual Report, the Manager has concluded that the Company's revenues are not subject to ASU 2014-09 as they are financial instruments or other contractual rights and obligations accounted for under the Receivables, Investments and Debt and Equity Securities, Transfers and Servicing, Financial Instruments and Derivatives and Hedging topics of the ASC.

Cash Flows

During the nine months ended September 30, 2018, the Company adopted FASB Accounting Standards Update 2016-18, Statement of Cash Flows (Topic 230) – Restricted Cash (“ASU 2016-18”). ASU 2016-18 requires that a statement of cash flows explain the change during the reporting period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. At present, the Company holds no restricted cash or restricted cash equivalents. The Company retrospectively changed the presentation of its statements of cash flows to conform to the requirements of ASU 2016-18. The adoption of ASU 2016-18 had no effect on previously reported amounts in the statements of cash flows.

Recently Issued Accounting Pronouncement

On June 20, 2018, the FASB issued ASU 2018-07, Compensation—Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting (“ASU 2018-07”). ASU 2018-07 is intended to reduce cost and complexity and improve financial reporting for non-employee share-based payments.

ASU 2018-07 expands the scope of the Compensation—Stock Compensation topic of the ASC, which currently provides accounting guidance relating to share-based payments issued to employees, to include share-based payments issued to non-employees for goods or services. Consequently, under ASU 2018-07, the accounting for share-based payments to non-employees will be substantially aligned with the Company's present accounting for share-based payments to its trustees.

The Company issues share-based compensation to certain employees of the Manager. Presently, the Company accounts for share-based payments to employees of the Manager under the guidance of Equity – Equity-Based Payments to Non-Employees topic of the ASC. Under that topic, the measure of cost relating to such grants is generally established based on the fair value of the shares upon vesting of the share-based awards. Accordingly, the Manager's estimate of compensation costs, and by extension periodic expense amounts, fluctuates with movements in the Company's common share price during the period that expense relating to the grants is being recognized. This

guidance is being replaced by ASU 2018-07. As a result of the adoption of ASU 2018-07, the cost of share-based grants made to employees of the Manager will be fixed at the date of the grant for restricted share units issued to employees of the Manager and variable to the extent of changes in performance attainment expectations for performance share units issued to all grantees.

The amendments in this ASU are effective for the Company for the fiscal year ending December 31, 2019, including interim periods within that fiscal year. Upon adoption, the Manager does not expect to record a cumulative effect adjustment to its accumulated deficit.

Note 4—Concentration of Risks

As discussed in Note 1 — Organization above, PMT’s operations and investing activities are centered in residential mortgage-related assets, including distressed mortgage loans and CRT Agreements.

Distressed Mortgage Loans

Due to the nature of the Company’s investments in distressed mortgage loans, PMT is exposed, to a greater extent than traditional mortgage investors, to the risks associated with loan performance and resolution, including that borrowers may be in economic distress and/or may have become unemployed, bankrupt or otherwise unable or unwilling to make payments when due, and that fluctuations in the residential real estate market may affect the performance of its investments. Factors influencing these risks include, but are not limited to:

- changes in the overall economy, unemployment rates and residential real estate fair values in the markets where the properties securing the Company’s distressed mortgage loans are located;
- PFCM’s ability to identify and PLS’ ability to execute optimal resolutions of distressed mortgage loans;
- the accuracy of valuation information obtained during the Company’s due diligence activities;
- PFCM’s ability to effectively model, and to develop appropriate model inputs that properly anticipate, future outcomes;
- the level of government support for resolution of distressed mortgage loans and the effect of current and future proposed and enacted legislative and regulatory changes on the Company’s ability to effect cures or resolutions to distressed mortgage loans; and
- regulatory, judicial and legislative support of the foreclosure process, and the resulting effect on the Company’s ability to acquire and liquidate the real estate securing its portfolio of distressed mortgage loans in a timely manner or at all.

Due to these uncertainties, there can be no assurance that risk management activities identified and executed on PMT’s behalf will prevent significant losses arising from the Company’s investments in real estate-related assets.

Most of the distressed mortgage loans and REO has been acquired by the Company in prior years from or through one or more subsidiaries of JPMorgan Chase & Co., Citigroup Inc., and Bank of America Corporation, as presented in the following summary:

	September 30, 2018	December 31, 2017
	(in thousands)	
JPMorgan Chase & Co.		
Mortgage loans at fair value	\$ 135,486	\$ 315,437
REO	42,003	66,294
	177,489	381,731
Citigroup Inc.		
Mortgage loans at fair value	133,547	280,488
REO	13,223	26,702
	146,770	307,190
Bank of America Corporation		
Mortgage loans at fair value	60,884	143,969
REO	15,786	27,970
	76,670	171,939
	\$ 400,929	\$ 860,860
Total carrying value of distressed mortgage loans at fair value and REO	\$ 436,599	\$ 931,298

CRT Agreements

As detailed in Note 6 — Loan Sales and Variable Interest Entities, the Company invests in CRT Agreements whereby it sells pools of recently-originated mortgage loans into Fannie Mae-guaranteed securitizations while retaining a portion of the credit risk underlying such mortgage loans either as part of the retention of an interest-only (“IO”) ownership interest in such mortgage loans along with an obligation to absorb credit losses arising from such mortgage loans (“Recourse Obligations”) or, beginning in June 2018, by entering into firm commitments to purchase credit risk transfer securities.

The Company’s retention of credit risk through its investment in CRT Agreements subjects it to risks associated with delinquency and foreclosure similar to the risks associated with owning the related mortgage loans, and exposes the Company to risk of loss greater than the risks associated with selling such mortgage loans to Fannie Mae without the retention of such credit risk. Further, under agreements that include Recourse Obligations, the risks associated with delinquency and foreclosure may in some instances be greater than the risks associated with owning the related mortgage loans because the structure of certain of the CRT Agreements provides that the Company may be required to realize losses in the event of delinquency or foreclosure even where there is ultimately no loss realized with respect to such loans (e.g., as a result of a borrower’s re-performance).

Beginning in June 2018, the Company entered into a new form of CRT Agreement under which PMT sells pools of recently-originated mortgage loans into Fannie Mae-guaranteed securities and purchases related credit transfer securities that are entitled to receive a portion of the mortgage loans’ interest payments in exchange for absorbing certain losses on such mortgage loans. At the commencement of the aggregation period and before the settlement of the credit-subordinated securities, the Company makes a firm commitment to purchase the securities. Accordingly, the Company recognizes the fair value of such commitment as it sells loans subject to the CRT Agreement, and also recognizes changes in fair value of the firm commitment during the time it is outstanding. Unlike the Company’s investment in CRT Agreements before June 2018, the structure of its investment in credit risk transfer securities only requires the Company to realize losses as the reference mortgage loans realize actual losses.

In addition to the risks specific to credit, the Company is exposed to market risk and, as a result of prevailing market conditions or the economy generally, may be required to recognize losses associated with adverse changes to the fair value of the CRT Agreements, the firm commitment to purchase credit risk transfer securities and of the credit risk transfer securities.

Note 5—Transactions with Related Parties

Operating Activities

Correspondent Production Activities

The Company is provided fulfillment and other services by PLS under an amended and restated mortgage banking services agreement.

Pursuant to the terms of the agreement, the monthly fulfillment fee is an amount that shall equal (a) no greater than the product of (i) 0.35% and (ii) the aggregate initial unpaid principal balance (the “Initial UPB”) of all mortgage loans purchased in such month, plus (b) in the case of all mortgage loans other than mortgage loans sold to or securitized through Fannie Mae or Freddie Mac, no greater than the product of (i) 0.50% and (ii) the aggregate Initial UPB of all such mortgage loans sold and securitized in such month; provided however, that no fulfillment fee shall be due or payable to PLS with respect to any mortgage loans underwritten to the Ginnie Mae MBS Guide.

The Company does not hold the Ginnie Mae approval required to issue securities guaranteed by Ginnie Mae MBS and act as a servicer. Accordingly, under the agreement, PLS currently purchases loans saleable in accordance with the Ginnie Mae MBS Guide “as is” and without recourse of any kind from the Company at cost less any administrative fees paid by the correspondent to the Company plus accrued interest and a sourcing fee ranging from two to three and one-half basis points, generally based on the average number of calendar days loans are held by the Company prior to purchase by PLS.

In consideration for the mortgage banking services provided by PLS with respect to the Company’s acquisition of mortgage loans under PLS’s early purchase program, PLS is entitled to fees accruing (i) at a rate equal to \$1,500 per annum per early purchase facility administered by PLS, and (ii) in the amount of \$35 for each mortgage loan that the Company acquires.

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The mortgage banking services agreement expires on September 12, 2020, subject to automatic renewal for additional 18-month periods, unless terminated earlier in accordance with the terms of the agreement.

The Company purchases newly originated loans from PLS under a mortgage loan participation purchase and sale agreement and a flow commercial mortgage loan purchase agreement. Historically, the Company has used the mortgage loan participation purchase and sale agreement for the purpose of purchasing from PLS prime jumbo residential mortgage loans. Beginning in the quarter ended September 30, 2017, the Company also purchases non-government insured or guaranteed mortgage loans from PLS under the mortgage loan participation purchase and sale agreement. The Company uses the flow commercial mortgage loan purchase agreement for the purpose of purchasing from PLS small balance commercial mortgage loans, including multifamily mortgage loans, originated as part of PLS's commercial lending activities.

Following is a summary of correspondent production activity between the Company and PLS:

	Quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Mortgage loans fulfillment fees earned by PLS	\$26,256	\$23,507	\$52,759	\$61,184
Unpaid principal balance ("UPB") of mortgage loans				
fulfilled by PLS	\$7,517,883	\$6,530,036	\$17,139,884	\$17,079,969
Sourcing fees received from PLS included in				
Net gain on mortgage loans acquired for sale	\$2,689	\$3,275	\$8,221	\$9,340
UPB of mortgage loans sold to PLS	\$8,916,654	\$10,915,194	\$27,404,022	\$31,131,154
Early purchase program fees paid to PLS included				
in Mortgage loan servicing fees	\$—	\$1	\$—	\$7
Purchases of mortgage loans acquired for sale from				
PLS	\$908,525	\$332,886	\$2,336,162	\$373,108
Tax service fee paid to PLS included in Other expense	\$2,119	\$2,108	\$4,869	\$5,377

	September 30, 2018	December 31, 2017
	(in thousands)	
Mortgage loans included in Mortgage loans acquired for sale at fair value pending sale to PLS	\$217,334	\$ 279,571

Mortgage Loan Servicing Activities

The Company, through its Operating Partnership, has an amended and restated mortgage loan servicing agreement with PLS dated as of September 12, 2016. The servicing agreement provides for servicing fees earned by PLS that are based on a percentage of the mortgage loan's unpaid principal balance or fixed per loan monthly amounts based on the delinquency, bankruptcy and/or foreclosure status of the serviced mortgage loan or the REO. PLS is also entitled to market-based fees and charges including boarding and deboarding fees, liquidation and disposition, assumption, modification and origination fees and a percentage of late charges relating to mortgage loans it services for the Company.

•The base servicing fee rates for distressed whole mortgage loans range from \$30 per month for current loans up to \$100 per month for loans where the borrower has declared bankruptcy. The base servicing fee rate for REO is \$75 per month.

•To the extent that the Company rents its REO under an REO rental program, the Company pays PLS an REO rental fee of \$30 per month per REO, an REO property lease renewal fee of \$100 per lease renewal, and a property management fee in an amount equal to PLS' cost if property management services and/or any related software costs are outsourced to a third-party property management firm or 9% of gross rental income if PLS provides property management services directly. PLS is also entitled to retain any tenant paid application fees and late rent fees and seek reimbursement for certain third party vendor fees.

•Except as otherwise provided in the MSR recapture agreement, when PLS effects a refinancing of a mortgage loan on behalf of the Company and not through a third-party lender and the resulting mortgage loan is readily saleable, or PLS originates a loan to facilitate the disposition of an REO, PLS is entitled to receive from the Company market-based fees and compensation consistent with pricing and terms PLS offers unaffiliated parties on a retail basis.

•PLS is required to provide a range of services and activities significantly greater in scope than the services provided in connection with a customary servicing arrangement because the Company has limited employees and infrastructure. For these services, PLS received a supplemental fee of \$25 per month for each distressed whole loan. PLS is entitled to reimbursement for all customary, good faith reasonable and necessary out-of-pocket expenses incurred in the performance of its servicing obligations.

PLS, on behalf of the Company, is entitled to retain any incentive payments made to it and to which it is entitled under the U.S. Department of Treasury’s Home Affordable Modification Plan (“HAMP”); provided, however, that with respect to any such incentive payments paid to PLS under HAMP in connection with a mortgage loan modification for which the Company previously paid PLS a modification fee, PLS shall reimburse the Company an amount equal to the incentive payments.

PLS is also entitled to certain activity-based fees for distressed whole mortgage loans that are charged based on the achievement of certain events. These fees range from \$750 for a streamline modification to \$1,750 for a liquidation and \$500 for a deed-in-lieu of foreclosure. PLS is not entitled to earn more than one liquidation fee, reperformance fee or modification fee per mortgage loan in any 18-month period.

The base servicing fees for non-distressed mortgage loans subserviced by PLS on the Company’s behalf are also calculated through a monthly per-loan dollar amount, with the actual dollar amount for each loan based on whether the mortgage loan is a fixed-rate or adjustable-rate loan. The base servicing fees for loans subserviced on the Company’s behalf are \$7.50 per month for fixed-rate loans and \$8.50 per month for adjustable-rate mortgage loans.

To the extent that these non-distressed mortgage loans become delinquent, PLS is entitled to an additional servicing fee per mortgage loan ranging from \$10 to \$55 per month and based on the delinquency, bankruptcy and foreclosure status of the mortgage loan or \$75 per month if the underlying mortgaged property becomes REO. PLS is also entitled to customary ancillary income and certain market-based fees and charges, including boarding and deboarding fees, liquidation and disposition fees, assumption, modification and origination fees.

The term of the servicing agreement expires on September 12, 2020, subject to automatic renewal for additional 18-month periods, unless terminated earlier in accordance with the terms of the servicing agreement.

Pursuant to the terms of an amended and restated MSR recapture agreement, if PLS refinances mortgage loans for which the Company previously held the MSRs, PLS is generally required to transfer and convey to one of the Company’s wholly-owned subsidiaries cash in an amount equal to 30% of the fair market value of the MSRs related to all the loans so originated. The MSR recapture agreement expires, unless terminated earlier in accordance with the agreement, on September 12, 2020, subject to automatic renewal for additional 18-month periods.

Following is a summary of mortgage loan servicing fees earned by PLS and MSR recapture income earned from PLS:

	Quarter ended September		Nine months ended	
	30,	2017	September 30,	2017
	2018		2018	
	(in thousands)			
Mortgage loans servicing fees:				
Mortgage loans acquired for sale at fair value:				
Base	\$98	\$88	\$250	\$235
Activity-based	218	188	489	507
	316	276	739	742
Mortgage loans at fair value:				
Distressed mortgage loans:				
Base	614	1,571	2,328	5,284
Activity-based	657	2,702	3,200	6,859
	1,271	4,273	5,528	12,143
Mortgage loans held in VIE - Base				
	35	54	103	96

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MSRs:				
Base	8,291	6,648	23,772	18,631
Activity-based	158	151	379	375
	8,449	6,799	24,151	19,006
	\$10,071	\$11,402	\$30,521	\$31,987
Average investment in:				
Mortgage loans acquired for sale at fair value	\$1,833,232	\$1,460,054	\$1,460,547	\$1,271,158
Mortgage loans at fair value:				
Distressed mortgage loans	\$417,487	\$1,104,738	\$537,300	\$1,210,328
Mortgage loans held in a VIE	\$299,415	\$339,464	\$306,856	\$350,607
Average MSR portfolio	\$81,350,980	\$63,584,416	\$77,522,709	\$61,764,228
MSR recapture income recognized included in Net				
mortgage loan servicing fees from PennyMac				
Financial Services, Inc.	\$561	\$333	\$1,568	\$859

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Management Fees

Under a management agreement, the Company pays PCM management fees as follows:

• A base management fee that is calculated quarterly and is equal to the sum of (i) 1.5% per year of average shareholders' equity up to \$2 billion, (ii) 1.375% per year of average shareholders' equity in excess of \$2 billion and up to \$5 billion, and (iii) 1.25% per year of average shareholders' equity in excess of \$5 billion.

• A performance incentive fee that is calculated quarterly at a defined annualized percentage of the amount by which "net income," on a rolling four-quarter basis and before deducting the incentive fee, exceeds certain levels of return on "equity."

The performance incentive fee is equal to the sum of: (a) 10% of the amount by which "net income" for the quarter exceeds (i) an 8% return on equity plus the high watermark, up to (ii) a 12% return on equity; plus (b) 15% of the amount by which "net income" for the quarter exceeds (i) a 12% return on equity plus the high watermark, up to (ii) a 16% return on equity; plus (c) 20% of the amount by which "net income" for the quarter exceeds a 16% return on equity plus the high watermark.

For the purpose of determining the amount of the performance incentive fee:

"Net income" is defined as net income or loss attributable to common shares of beneficial interest computed in accordance with GAAP and certain other non-cash charges determined after discussions between PCM and the Company's independent trustees and after approval by a majority of the Company's independent trustees.

"Equity" is the weighted average of the issue price per common share of all of the Company's public offerings, multiplied by the weighted average number of common shares outstanding (including restricted share units) in the rolling four-quarter period.

The "high watermark" is the quarterly adjustment that reflects the amount by which the "net income" (stated as a percentage of return on equity) in that quarter exceeds or falls short of the lesser of 8% and the average Fannie Mae 30-year MBS yield (the target yield) for the four quarters then ended. The "high watermark" starts at zero and is adjusted quarterly. If the "net income" is lower than the target yield, the high watermark is increased by the difference. If the "net income" is higher than the target yield, the high watermark is reduced by the difference. Each time a performance incentive fee is earned, the high watermark returns to zero. As a result, the threshold amounts required for PCM to earn a performance incentive fee are adjusted cumulatively based on the performance of PMT's "net income" over (or under) the target yield, until the "net income" in excess of the target yield exceeds the then-current cumulative high watermark amount.

The base management fee and the performance incentive fee are both payable quarterly in arrears. The performance incentive fee may be paid in cash or a combination of cash and the Company's common shares (subject to a limit of no more than 50% paid in common shares), at the Company's option.

The management agreement expires on September 12, 2020, subject to automatic renewal for additional 18-month periods, unless terminated earlier in accordance with the terms of the agreement. In the event of termination of the management agreement between the Company and PCM, PCM may be entitled to a termination fee in certain circumstances. The termination fee is equal to three times the sum of (a) the average annual base management fee, and (b) the average annual performance incentive fee earned by PCM, in each case during the 24-month period immediately preceding the date of termination.

Following is a summary of the base management and performance incentive fees payable to PCM recorded by the Company:

	Quarter ended		Nine months	
	September 30,		ended September	
	2018	2017	2018	2017
	(in thousands)			
Base management	\$5,799	\$6,038	\$17,223	\$16,380
Performance incentive	683	—	683	304
	\$6,482	\$6,038	\$17,906	\$16,684

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In the event of termination of the management agreement between the Company and PCM, PCM may be entitled to a termination fee in certain circumstances. The termination fee is equal to three times the sum of (a) the average annual base management fee, and (b) the average annual performance incentive fee earned by PCM, in each case during the 24-month period before termination.

Expense Reimbursement and Amounts Payable to and Receivable from PCM

Under the management agreement, PCM is entitled to reimbursement of its organizational and operating expenses, including third-party expenses, incurred on the Company's behalf, it being understood that PCM and its affiliates shall allocate a portion of their personnel's time to provide certain legal, tax and investor relations services for the direct benefit of the Company. With respect to the allocation of PCM's and its affiliates' compensation expenses, from and after September 12, 2016, PCM shall be reimbursed \$120,000 per fiscal quarter, such amount to be reviewed annually and to not preclude reimbursement for any other services performed by PCM or its affiliates.

The Company is required to pay PCM and its affiliates a portion of rent, telephone, utilities, office furniture, equipment, machinery and other office, internal and overhead expenses of PCM and its affiliates required for the Company's and its subsidiaries' operations. These expenses are allocated based on the ratio of the Company's and its subsidiaries' proportion of gross assets compared to all remaining gross assets managed by PCM as calculated at each fiscal quarter end.

Following is a summary of the Company's reimbursements to PCM and its affiliates for expenses:

	Quarter ended		Nine months	
	September 30,		ended September	
	2018	2017	2018	2017
	(in thousands)			
Reimbursement of:				
Common overhead incurred by PCM and its affiliates	\$1,210	\$1,193	\$3,387	\$4,220
Compensation	120	—	360	—
Expenses incurred on the Company's behalf, net	527	196	586	849
	\$1,857	\$1,389	\$4,333	\$5,069
Payments and settlements during the period (1)	\$21,650	\$22,786	\$45,265	\$63,249

(1) Payments and settlements include payments and netting settlements made pursuant to master netting agreements between the Company and PFSI for the operating, investment and financing activities itemized in this Note.
Investing Activities

Spread Acquisition and MSR Servicing Agreements

On December 19, 2016, the Company, through a wholly-owned subsidiary, PennyMac Holdings, LLC ("PMH"), amended and restated a master spread acquisition and MSR servicing agreement with PLS (the "Spread Acquisition Agreement"), pursuant to which the Company may purchase from PLS, from time to time, the right to receive participation certificates representing beneficial ownership in ESS arising from Ginnie Mae MSRs acquired by PLS, in which case PLS generally would be required to service or subservice the related mortgage loans for Ginnie Mae. The primary purpose of the amendment and restatement was to facilitate the continued financing of the ESS owned by

the Company in connection with the parties' participation in the GNMA MSR Facility (as defined below).

To the extent PLS refinances any of the mortgage loans relating to the ESS the Company has acquired, the Spread Acquisition Agreement also contains recapture provisions requiring that PLS transfer to the Company, at no cost, the ESS relating to a certain percentage of the unpaid principal balance of the newly originated mortgage loans. However, under the Spread Acquisition Agreement, in any month where the transferred ESS relating to newly originated Ginnie Mae mortgage loans is not equivalent to at least 90% of the product of the excess servicing fee rate and the unpaid principal balance of the refinanced mortgage loans, PLS is also required to transfer additional ESS or cash in the amount of such shortfall. Similarly, in any month where the transferred ESS relating to modified Ginnie Mae mortgage loans is not equivalent to at least 90% of the product of the excess servicing fee rate and the unpaid principal balance of the modified mortgage loans, the Spread Acquisition Agreement contains provisions that require PLS to transfer additional ESS or cash in the amount of such shortfall. To the extent the fair market value of the aggregate ESS to be transferred for the applicable month is less than \$200,000, PLS may, at its option, settle its recapture liability to the Company in cash in an amount equal to such fair market value in lieu of transferring such ESS.

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Following is a summary of investing activities between the Company and PFSI:

	Quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
ESS:				
Received pursuant to a recapture agreement	\$499	\$ 1,207	\$1,983	\$4,160
Repayments	\$11,543	\$ 13,410	\$35,852	\$42,320
Interest income	\$3,740	\$ 3,998	\$11,584	\$13,011
Net gain (loss) included in Net gain (loss) on investments:				
Valuation changes	\$1,109	\$ (4,828)	\$9,026	\$(14,757)
Recapture income	597	1,163	1,951	3,837
	\$1,706	\$ (3,665)	\$10,977	\$(10,920)
	September 30, 2018		December 31, 2017	
	(in thousands)			
Excess servicing spread purchased from PennyMac Financial Services, Inc. at fair value				
	\$223,275	\$ 236,534		

Financing Activities

PFSI held 75,000 of the Company's common shares at both September 30, 2018 and December 31, 2017.

Repurchase Agreement with PLS

On December 19, 2016, the Company, through PMH, entered into a master repurchase agreement with PLS (the "PMH Repurchase Agreement"), pursuant to which PMH may borrow from PLS for the purpose of financing PMH's participation certificates representing beneficial ownership in ESS acquired from PLS under the Spread Acquisition Agreement. PLS then re-pledges such participation certificates to PNMACH GMSR ISSUER TRUST (the "Issuer Trust") under a master repurchase agreement by and among PLS, the Issuer Trust and Private National Mortgage Acceptance Company, LLC, as guarantor (the "PC Repurchase Agreement"). The Issuer Trust was formed for the purpose of allowing PLS to finance MSR and ESS relating to such MSR (the "GNMA MSR Facility").

In connection with the GNMA MSR Facility, PLS pledges and/or sells to the Issuer Trust participation certificates representing beneficial interests in MSR and ESS pursuant to the terms of the PC Repurchase Agreement. In return, the Issuer Trust (a) has issued to PLS, pursuant to the terms of an indenture, the Series 2016-MSRVF1 Variable Funding Note, dated December 19, 2016, known as the "PNMAC GMSR ISSUER TRUST MSR Collateralized Notes, Series 2016-MSRVF1" (the "VFN"), and (b) may, from time to time pursuant to the terms of any supplemental indenture, issue to institutional investors additional term notes ("Term Notes"), in each case secured on a pari passu basis by the participation certificates relating to the MSR and ESS. The maximum principal balance of the VFN is \$1 billion.

The principal amount paid by PLS for the participation certificates under the PMH Repurchase Agreement is based upon a percentage of the market value of the underlying ESS. Upon PMH's repurchase of the participation certificates, PMH is required to repay PLS the principal amount relating thereto plus accrued interest (at a rate reflective of the current market and consistent with the weighted average note rate of the VFN and any outstanding Term Notes) to the

date of such repurchase. PLS is then required to repay the Issuer Trust the corresponding amount under the PC Repurchase Agreement.

Conditional Reimbursement of Initial Public Offering (“IPO”) Underwriting Fees

In connection with its IPO, the Company conditionally agreed to reimburse PCM up to \$2.9 million for underwriting fees paid to the IPO underwriters by PCM on the Company’s behalf (the “Conditional Reimbursement”). Also in connection with its IPO, the Company agreed to pay the IPO underwriters up to \$5.9 million in contingent underwriting fees. There were no reimbursements during the quarter and nine months ended September 30, 2018. The Company reimbursed PCM \$30,000 and paid the underwriters \$61,000 for the quarter and nine months ended September 30, 2017. During the quarter ended September 30, 2018, the Company incurred performance incentive fees of \$683,000. Accordingly, the Company will reimburse PCM \$68,000 during the quarter ending December 31, 2018.

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Following is a summary of financing activities between the Company and PFSI:

	Quarter ended		Nine months	
	September 30,		ended	
	2018	2017	2018	2017
	(in thousands)			
Interest expense	\$1,812	\$2,116	\$5,686	\$5,946
Conditional Reimbursements paid to PCM	\$—	\$30	\$—	\$30

	September 30, 2018	December 31, 2017
	(in thousands)	
Assets sold to PFSI under agreement to repurchase	\$133,128	\$144,128
Conditional Reimbursement payable to PFSI included in Accounts payable and accrued liabilities	\$870	\$870
Amounts Receivable from and Payable to PFSI		

Amounts receivable from and payable to PFSI are summarized below:

	September 30, 2018	December 31, 2017
	(in thousands)	
Due from PFSI:		
MSR recapture receivable	\$250	\$282
Other	2,101	3,872
	\$2,351	\$4,154
Due to PFSI:		
Fulfillment fees	\$12,078	\$346
Management fees	6,482	5,901
Mortgage loan servicing fees	3,765	6,583
Allocated expenses and expenses paid by PFSI on PMT's behalf	2,295	11,542
Correspondent production fees	1,864	1,735
Conditional Reimbursement	870	870
Interest on Assets sold to PFSI under agreement to repurchase	113	142
	\$27,467	\$27,119

Note 6—Loan Sales and Variable Interest Entities

The Company is a variable interest holder in various special purpose entities that relate to its mortgage loan transfer and, financing activities and credit risk investment. These entities are classified as VIEs for accounting purposes. The

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Company has distinguished its involvement with VIEs between those VIEs which the Company does not consolidate and those VIEs which the Company consolidates.

Unconsolidated VIEs with Continuing Involvement

The following table summarizes cash flows between the Company and transferees in transfers of mortgage loans that are accounted for as sales where the Company maintains continuing involvement with the mortgage loans:

	Quarter ended September 30, 2018		Nine months ended September 30, 2018	
	2017	2017	2017	2017
	(in thousands)			
Cash flows:				
Proceeds from sales	\$8,435,791	\$7,035,994	\$18,992,722	\$17,683,444
Mortgage loan servicing fees received (1)	\$49,864	\$42,237	\$147,262	\$119,223

(1) Net of guarantee fees

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The following table summarizes collection status information for mortgage loans that are accounted for as sales where the Company maintains continuing involvement for the dates presented:

	September 30, 2018	December 31, 2017
	(in thousands)	
UPB of mortgage loans outstanding	\$83,913,215	\$71,639,351
UPB of delinquent mortgage loans:		
30-89 days delinquent	\$601,114	\$532,673
90 or more days delinquent:		
Not in foreclosure	\$140,122	\$280,786
In foreclosure	\$36,069	\$25,258
UPB of mortgage loans in bankruptcy	\$66,377	\$52,202
Custodial funds managed by the Company (1)	\$1,203,229	\$879,321

(1) Custodial funds include borrower and investor custodial cash accounts relating to mortgage loans serviced under mortgage servicing agreements and are not included on the Company's consolidated balance sheets. The Company earns placement fees on certain of the custodial funds it manages on behalf of the mortgage loans' investors, which are included in Interest income in the Company's consolidated statements of income.

Consolidated VIEs

Credit Risk Transfer Transactions

The Company has entered into mortgage loan sales arrangements pursuant to which it accepts credit risk relating to certain of its mortgage loan sales. These arrangements include CRT Agreements and sales of mortgage loans that include commitments to purchase credit risk transfer securities that absorb credit losses on such mortgage loans.

The Company, through PennyMac Corp. ("PMC"), entered into CRT Agreements with Fannie Mae, pursuant to which PMC, through subsidiary trust entities, sells pools of mortgage loans into Fannie Mae-guaranteed securitizations while retaining the Recourse Obligations as part of the retention of an IO ownership interest in such mortgage loans. Transfers of mortgage loans subject to CRT Agreements received sale accounting treatment. The Deposits securing CRT Agreements represent the Company's maximum contractual exposure to claims under its Recourse Obligations and is the sole source of settlement of losses under the CRT Agreements. Gains and losses on derivatives related to CRT Agreements are included in Net gain (loss) on investments in the consolidated statements of income. The final sales of mortgage loans subject to the CRT Agreements were made during the quarter ended June 30, 2018.

Following is a summary of the CRT Agreements:

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	Quarter ended		Nine months ended	
	September 30, 2018	2017	September 30, 2018	2017
	(in thousands)			
UPB of mortgage loans sold under CRT Agreements	\$—	\$4,126,946	\$5,546,977	\$9,722,067
Deposits securing CRT Agreements	\$18,558	\$44,998	\$96,446	\$102,146
(Decrease) increase in commitments to fund Deposits securing CRT Agreements resulting from sale of mortgage loans under CRT Agreements	\$(18,558)	\$108,051	\$96,037	\$264,165
Interest earned on Deposits securing CRT Agreements	\$3,190	\$1,440	\$8,788	\$2,703
Gains recognized on CRT Agreements included in Net gain (loss) on investments				
Realized	\$23,367	\$10,798	\$64,907	\$27,595
Resulting from valuation changes	7,185	4,162	27,714	41,268
	30,552	14,960	92,621	68,863
Change in fair value of Interest-only security payable at fair value	(3,083)	191	(4,105)	(2,272)
	\$27,469	\$15,151	\$88,516	\$66,591
Payments made to settle losses	\$443	\$539	\$1,452	\$950

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	September 30, 2018	December 31, 2017
	(in thousands)	
UPB of mortgage loans subject to credit guarantee obligations	\$30,648,306	\$26,845,392
Collection status (in UPB):		
Current	\$30,342,833	\$26,540,953
30—89 days delinquent	\$226,447	\$179,144
90—180 days delinquent	\$32,852	\$101,114
180 or more days delinquent	\$15,520	\$5,146
Foreclosure	\$9,339	\$5,463
Bankruptcy	\$21,315	\$13,572
Carrying value of CRT Agreements:		
Derivative assets	\$126,354	\$98,640
Deposits securing CRT agreements	\$662,624	\$588,867
Interest-only security payable at fair value	\$8,821	\$7,070
CRT Agreement assets pledged to secure Assets sold under agreements to repurchase:		
Deposits securing CRT Agreements	\$378,090	\$400,778
Derivative assets	\$27,710	\$26,058
Commitments to fund Deposits securing credit risk transfer agreements	\$578,508	\$482,471

Effective in June 2018, the Company began selling mortgage loans subject to agreements that require the Company to purchase securities that absorb credit losses on such mortgage loans. The Company has elected to account for the firm commitments to purchase such securities at fair value. The Company recognizes these purchase commitments initially as a component of Gain on sale of mortgage loans; subsequent changes in fair value are recognized in Net gain (loss) on investments.

Following is a summary of activity under these purchase commitments during the quarter and nine months ended September 30, 2018:

	Periods ended September 30, 2018	
	Quarter	Nine months
	(in thousands)	
UPB of mortgage loans sold	\$6,773,336	\$8,308,708
Fair value of firm commitment recognized in Gain on sale of mortgage loans	\$12,311	\$16,737
Gains recognized on CRT Agreements included in Net gain (loss) on investments	\$2,012	\$2,012
Increase in face amount of firm commitment to purchase securities backed by mortgage loans sold	\$236,875	\$294,698

September
30, 2018

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	(in thousands)
Firm commitment to purchase CRT securities	\$294,698
Fair value of firm commitment	\$18,749
UPB of mortgage loans sold subject to firm commitment to purchase securities related to such loans	\$8,097,660
Collection status (in UPB):	
Current	\$8,073,018
30—89 days delinquent	\$24,439
90—180 days delinquent	\$203
180 or more days delinquent	\$—
Foreclosure	\$—
Bankruptcy	\$—

Jumbo Mortgage Loan Financing

On September 30, 2013, the Company completed a securitization transaction in which PMT Loan Trust 2013-J1, a VIE, issued \$537.0 million in UPB of certificates backed by fixed-rate prime jumbo mortgage loans, at a 3.9% weighted yield. The fair value of the certificates retained by the Company was \$14.1 million and \$9.7 million as of September 30, 2018 and December 31, 2017, respectively. The Company includes the balance of certificates issued to nonaffiliates in Asset backed financing of a variable interest entity at fair value.

Note 7—Fair Value

The Company's consolidated financial statements include assets and liabilities that are measured based on their fair values. Measurement at fair value may be on a recurring or nonrecurring basis depending on the accounting principles applicable to the specific asset or liability and whether the Manager has elected to carry the item at its fair value as discussed in the following paragraphs.

The Company groups its assets and liabilities at fair value in three levels, based on the markets in which the assets and liabilities are traded and the observability of the inputs used to determine fair value. These levels are:

Level 1—Quoted prices in active markets for identical assets or liabilities.

Level 2—Prices determined or determinable using other significant observable inputs. Observable inputs are inputs that other market participants would use in pricing the asset or liability and are developed based on market data obtained from sources independent of the Company. These may include quoted prices for similar assets or liabilities, interest rates, prepayment speeds, credit risk and other inputs.

Level 3—Prices determined using significant unobservable inputs. In situations where significant observable inputs are unavailable, unobservable inputs may be used. Unobservable inputs reflect the Company's own judgments about the factors that market participants use in pricing assets and liabilities, and are based on the best information available in the circumstances.

As a result of the difficulty in observing certain significant valuation inputs affecting "Level 3" fair value assets and liabilities, the Manager is required to make judgments regarding these items' fair values. Different persons in possession of the same facts may reasonably arrive at different conclusions as to the inputs to be applied in valuing these assets and liabilities and to their fair values. Such differences may result in significantly different fair value measurements. Likewise, due to the general illiquidity of some of these assets and liabilities, subsequent transactions may be at values significantly different from those reported.

Fair Value Accounting Elections

The Manager identified all of the Company's non-cash financial assets, firm commitment to purchase credit risk transfer securities and MSR's to be accounted for at fair value. The Manager has elected to account for these assets at fair value so such changes in fair value will be reflected in income as they occur and more timely reflect the results of the Company's performance. Before January 1, 2018, originated MSR's backed by mortgage loans with initial interest rates of less than or equal to 4.5% were accounted for using the amortization method. Beginning January 1, 2018, the Company elected to account for all MSR's at fair value prospectively. The Manager determined that this change makes the accounting treatment for MSR's consistent with lender valuation under financing arrangements and simplifies hedging activities.

The Manager has also identified the Company's asset-backed financing of a VIE and interest only security payable at fair value to be accounted for at fair value to reflect the generally offsetting changes in fair value of these borrowings to changes in fair value of the assets at fair value collateralizing these financings. For other borrowings, the Manager has determined that historical cost accounting is more appropriate because under this method debt issuance costs are amortized over the term of the debt facility, thereby matching the debt issuance cost to the periods benefiting from the availability of the debt.

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Financial Statement Items Measured at Fair Value on a Recurring Basis

Following is a summary of financial statement items that are measured at fair value on a recurring basis:

	September 30, 2018			Total
	Level 1	Level 2	Level 3	
	(in thousands)			
Assets:				
Short-term investments	\$26,736	\$—	\$—	\$26,736
Mortgage-backed securities at fair value	—	2,126,507	—	2,126,507
Mortgage loans acquired for sale at fair value	—	1,942,335	7,097	1,949,432
Mortgage loans at fair value	—	292,174	340,994	633,168
Excess servicing spread purchased from PFSI	—	—	223,275	223,275
Derivative assets:				
Interest rate lock commitments	—	—	2,317	2,317
CRT Agreements	—	—	126,354	126,354
Repurchase agreement derivatives	—	—	9,415	9,415
Forward purchase contracts	—	1,761	—	1,761
Forward sale contracts	—	19,238	—	19,238
MBS call options	—	7	—	7
MBS put options	—	2,302	—	2,302
Put options on interest rate futures	141	—	—	141
Total derivative assets before netting	141	23,308	138,086	161,535
Netting	—	—	—	(17,958)
Total derivative assets after netting	141	23,308	138,086	143,577
Firm commitment to purchase credit risk transfer security at				
fair value	—	—	18,749	18,749
Mortgage servicing rights at fair value	—	—	1,109,741	1,109,741
	\$26,877	\$4,384,324	\$1,837,942	\$6,231,185
Liabilities:				
Asset-backed financing of a VIE at fair value	\$—	\$278,113	\$—	\$278,113
Interest-only security payable at fair value	—	—	8,821	8,821
Derivative liabilities:				
Interest rate lock commitments	—	—	3,418	3,418
Forward purchase contracts	—	11,964	—	11,964
Forward sales contracts	—	1,719	—	1,719
Total derivative liabilities before netting	—	13,683	3,418	17,101
Netting	—	—	—	(5,221)
Total derivative liabilities after netting	—	13,683	3,418	11,880
	\$—	\$291,796	\$12,239	\$298,814

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	December 31, 2017			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets:				
Short-term investments	\$18,398	\$—	\$—	\$18,398
Mortgage-backed securities at fair value	—	989,461	—	989,461
Mortgage loans acquired for sale at fair value	—	1,261,380	8,135	1,269,515
Mortgage loans at fair value	—	321,040	768,433	1,089,473
Excess servicing spread purchased from PFSI	—	—	236,534	236,534
Derivative assets:				
Interest rate lock commitments	—	—	4,859	4,859
CRT Agreements	—	—	98,640	98,640
Repurchase agreement derivatives	—	—	3,748	3,748
Forward purchase contracts	—	4,343	—	4,343
Forward sale contracts	—	387	—	387
MBS put options	—	3,170	—	3,170
Put options on interest rate futures	656	—	—	656
Total derivative assets before netting	656	7,900	107,247	115,803
Netting	—	—	—	(1,922)
Total derivative assets after netting	656	7,900	107,247	113,881
Mortgage servicing rights at fair value	—	—	91,459	91,459
	\$19,054	\$2,579,781	\$1,211,808	\$3,808,721
Liabilities:				
Asset-backed financing of a VIE at fair value	\$—	\$307,419	\$—	\$307,419
Interest-only security payable at fair value	—	—	7,070	7,070
Derivative liabilities:				
Interest rate lock commitments	—	—	227	227
Forward purchase contracts	—	248	—	248
Forward sales contracts	—	2,830	—	2,830
Total derivative liabilities before netting	—	3,078	227	3,305
Netting	—	—	—	(1,999)
Total derivative liabilities after netting	—	3,078	227	1,306
	\$—	\$310,497	\$7,297	\$315,795

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The following is a summary of changes in items measured at fair value on a recurring basis using Level 3 inputs that are significant to the estimation of the fair values of the assets and liabilities at either the beginning or end of the years presented:

Quarter ended September 30, 2018									
Mortgage									
	loans			Interest		Firm			
	acquired			rate		commitment			
	for sale	Mortgage	Excess	lock		Repurchase	Mortgage		
	at fair	loans at	servicing	commitment	CRT	agreement	purchase	servicing	
	value	fair value	spread	(1)	Agreements	derivatives	CRT securities	rights	Total
	(in thousands)								
Assets:									
Balance, June 30, 2018	\$6,540	\$447,473	\$229,470	\$2,807	\$119,169	\$6,912	\$4,426	\$1,010,507	\$1,827,304
Purchases and issuances	2,640	—	—	(3,699)	—	5,671	—	—	4,612
Repayments and sales	(2,481)	(98,622)	(11,543)	—	(23,367)	(3,131)	—	(100)	(139,244)
Capitalization of interest	—	2,297	3,740	—	—	—	—	—	6,037
Capitalization of advances	—	1,373	—	—	—	—	—	—	1,373
ESS received pursuant to a recapture agreement with PFSI	—	—	499	—	—	—	—	—	499
Amounts received as proceeds from sales of mortgage loans									
	—	—	—	—	—	—	12,311	96,383	108,694
Changes in fair value included in income									

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arising from:									
Changes in instrument-									
specific credit risk	—	4,407	—	—	—	—	—	—	4,407
Other factors	(324)	(7,458)	1,109	(4,001)	30,552	(37)	2,012	2,951	24,804
	(324)	(3,051)	1,109	(4,001)	30,552	(37)	2,012	2,951	29,211
Transfers of mortgage loans									
to REO and real estate									
held for investment	—	(8,476)	—	—	—	—	—	—	(8,476)
Transfers of mortgage loans									
acquired for sale at fair									
value from "Level 2" to									
"Level 3" (2)	722	—	—	—	—	—	—	—	722
Transfers of interest rate									
lock commitments to									
mortgage loans acquired									
for sale	—	—	—	3,792	—	—	—	—	3,792
Balance, September 30,									
2018	\$7,097	\$340,994	\$223,275	\$(1,101)	\$126,354	\$9,415	\$18,749	\$1,109,741	\$1,834,524
Changes in fair value	\$(257)	\$(6,711)	\$1,109	\$(1,101)	\$7,185	\$—	\$2,012	\$2,951	\$5,188
recognized during the									

quarter
relating to
assets

still held at
September 30,

2018

(1) For the purpose of this table, the interest rate lock commitment (“IRLC”) asset and liability positions are shown net.

(2) During the quarter ended September 30, 2018, the Manager identified certain “Level 2” fair value mortgage loans acquired for sale that were not saleable into the prime mortgage market and therefore transferred them to “Level 3”.

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	Quarter ended September 30, 2018 Interest-only security payable (in thousands)
Liabilities:	
Balance, June 30, 2018	\$ 7,652
Changes in fair value included in income arising from:	
Changes in instrument-specific credit risk	—
Other factors	1,169
	1,169
Balance, September 30, 2018	\$ 8,821
Changes in fair value recognized during the quarter relating to liability outstanding at	
September 30, 2018	\$ 1,169

	Quarter ended September 30, 2017						
	Interest						
	Mortgage	Excess	rate lock			Mortgage	
	loans at	servicing	commitments	CRT	Repurchase	servicing	
	fair value	spread	(1)	Agreements	derivatives	rights	Total
	(in thousands)						
Assets:							
Balance, June 30, 2017	\$ 1,184,620	\$ 261,796	\$ 395	\$ 52,716	\$ —	\$ 77,624	\$ 1,577,151
Purchases and issuances	—	—	9,264	—	181	10	9,455
Repayments and sales	(156,821)	(13,410)	—	(10,798)	—	—	(181,029)
Capitalization of interest	7,020	3,998	—	—	—	—	11,018
Capitalization of advances	4,611	—	—	—	—	—	4,611
ESS received pursuant to a recapture agreement							
with PFSI	—	1,207	—	—	—	—	1,207
Amounts received as proceeds from sales of							
mortgage loans	—	—	—	—	—	8,655	8,655
Changes in fair value included in income arising							
from:	6,035	—	—	—	—	—	6,035

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Changes in instrument-specific credit risk							
Other factors	(2,758)	(4,828)	15,430	14,960	—	(3,977)	18,827
	3,277	(4,828)	15,430	14,960	—	(3,977)	24,862
Transfers of mortgage loans to REO and real estate held for investment	(26,705)	—	—	—	—	—	(26,705)
Transfers of interest rate lock commitments to mortgage loans acquired for sale	—	—	(23,814)	—	—	—	(23,814)
Balance, September 30, 2017	\$ 1,016,002	\$ 248,763	\$ 1,275	\$ 56,878	\$ 181	\$ 82,312	\$ 1,405,411
Changes in fair value recognized during the quarter relating to assets still held at							
September 30, 2017	\$(7,302)	\$(4,828)	\$ 1,275	\$ 4,162	\$ —	\$(3,977)	\$(10,670)

(1) For the purpose of this table, the IRLC asset and liability positions are shown net.

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	Quarter ended September 30, 2017 Interest-only security payable (in thousands)
Liabilities:	
Balance, June 30, 2017	\$ 6,577
Changes in fair value included in income arising from:	
Changes in instrument-specific credit risk	—
Other factors	(191)
	(191)
Balance, September 30, 2017	\$ 6,386
Changes in fair value recognized during the quarter relating to liability	
outstanding at September 30, 2017	\$ (191)

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Nine months ended September 30, 2018

Mortgage

loans

acquired

Interest rate

Firm

for sale

Mortgage

Excess

lock

Repurchase commitment

Mortgage

at fair

loans at

servicing

commitment

CRT

agreement to purchase

servicing

value
(in thousands)

fair value

spread

(1)

Agreements

derivatives

CRT securities

rights

Total

Assets:

Balance,
December 31,

2017	\$8,135	\$768,433	\$236,534	\$4,632	\$98,640	\$3,748	\$—	\$91,459	\$1,211,581
Cumulative effect of a change in accounting principle — Adoption of fair value accounting for mortgage servicing rights	—	—	—	—	—	—	—	773,035	773,035
Balance, January 1, 2018	8,135	768,433	236,534	4,632	98,640	3,748	—	864,494	1,984,616
Purchases and issuances	8,243	—	—	2,140	—	11,411	—	—	21,794
Repayments and sales	(10,441)	(381,646)	(35,852)	—	(64,907)	(5,626)	—	(100)	(498,572)
Capitalization of interest	—	6,543	11,584	—	—	—	—	—	18,127
Capitalization of advances	—	4,733	—	—	—	—	—	—	4,733
ESS received pursuant to a	—	—	1,983	—	—	—	—	—	1,983

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recapture agreement									
with PFSI									
Amounts received as									
proceeds from sales of									
mortgage loans	—	—	—	—	—	—	16,737	228,337	245,074
Changes in fair value									
included in income									
arising from:									
Changes in instrument-									
specific credit risk	—	6,864	—	—	—	—	—	—	6,864
Other factors	(176)	(24,566)	9,026	(28,571)	92,621	(118)	2,012	17,010	67,238
	(176)	(17,702)	9,026	(28,571)	92,621	(118)	2,012	17,010	74,102
Transfers of mortgage									
loans to REO and real estate held for									
investment	—	(39,367)	—	—	—	—	—	—	(39,367)
Transfers of mortgage									
loans acquired for sale									
at fair value from									
"Level 2" to									
"Level 3"									
(2)	1,336	—	—	—	—	—	—	—	1,336

Transfers of interest rate lock commitments to mortgage loans acquired for sale	—	—	—	20,698	—	—	—	—	20,698
Balance, September 30, 2018	\$7,097	\$340,994	\$223,275	\$(1,101)	\$126,354	\$9,415	\$18,749	\$1,109,741	\$1,834,524
Changes in fair value recognized during the period relating to assets still held at September 30, 2018	\$(330)	\$(18,170)	\$9,026	\$(1,101)	\$27,714	\$77	\$2,012	\$17,010	\$36,238

(1) For the purpose of this table, the IRLC asset and liability positions are shown net.

(2) During the nine months ended September 30, 2018, the Manager identified certain “Level 2” fair value mortgage loans acquired for sale that were not saleable into the prime mortgage market and therefore transferred them to “Level 3”.

	Nine months ended September 30, 2018 Interest-only security payable (in thousands)
Liabilities:	
Balance, December 31, 2017	\$ 7,070
Changes in fair value included in income arising from:	
Changes in instrument- specific credit risk	—
Other factors	1,751
	1,751
Balance, September 30, 2018	\$ 8,821
Changes in fair value recognized during the period relating to liability outstanding at	
September 30, 2018	\$ 1,751

	Nine months ended September 30, 2017						
	Interest rate						
	Mortgage	Excess	lock			Mortgage	
	loans at	servicing	commitments	CRT	Repurchase	servicing	
	fair value	spread	(1)	Agreements	derivatives	rights	Total
	(in thousands)						
Assets:							
Balance, December 31, 2016	\$1,354,572	\$288,669	\$ 3,777	\$ 15,610	\$ —	\$64,136	\$1,726,764
Purchases and issuances	—	—	26,185	—	181	79	26,445
Repayments and sales	(302,829)	(42,320)	—	(27,595)	—	—	(372,744)
Capitalization of interest	27,737	13,011	—	—	—	—	40,748
Capitalization of advances	17,759	—	—	—	—	—	17,759
ESS received pursuant to a recapture agreement							
with PFSI	—	4,160	—	—	—	—	4,160
Amounts received as proceeds from sales of							
mortgage loans	—	—	—	—	—	28,467	28,467
Changes in fair value included in income arising							
from:	23,498	—	—	—	—	—	23,498

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Changes in instrument-specific credit risk							
Other factors	(15,975)	(14,757)	43,946	68,863	—	(10,370)	71,707
	7,523	(14,757)	43,946	68,863	—	(10,370)	95,205
Transfers of mortgage loans to REO and real estate held for investment	(88,760)	—	—	—	—	—	(88,760)
Transfers of interest rate lock commitments to mortgage loans acquired for sale	—	—	(72,633)	—	—	—	(72,633)
Balance, September 30, 2017	\$ 1,016,002	\$ 248,763	\$ 1,275	\$ 56,878	\$ 181	\$ 82,312	\$ 1,405,411
Changes in fair value recognized during the period relating to assets still held at							
September 30, 2017	\$(6,650)	\$(14,757)	\$ 1,275	\$ 41,268	\$ —	\$(10,370)	\$ 10,766

(1) For the purpose of this table, the IRLC asset and liability positions are shown net.

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	Nine months ended September 30, 2017 Interest-only security payable (in thousands)
Liabilities:	
Balance, December 31, 2016	\$ 4,114
Changes in fair value included in income arising from:	
Changes in instrument- specific credit risk	—
Other factors	2,272
	2,272
Balance, September 30, 2017	6,386
Changes in fair value recognized during the period relating to liability	
outstanding at September 30, 2017	\$ 2,272

The Company had transfers among the fair value levels arising from transfers of IRLCs to mortgage loans held for sale at fair value upon purchase of the respective mortgage loans.

Following are the fair values and related principal amounts due upon maturity of mortgage loans accounted for under the fair value option (including mortgage loans acquired for sale, mortgage loans held in a consolidated VIE, and distressed mortgage loans at fair value):

	September 30, 2018			December 31, 2017		
	Principal			Principal		
	amount due			amount due		
	Fair value	upon maturity	Difference	Fair value	upon maturity	Difference
	(in thousands)					
Mortgage loans acquired for sale at fair value:						
Current through 89 days delinquent	\$1,949,285	\$ 1,900,556	\$48,729	\$ 1,268,121	\$ 1,221,125	\$46,996
90 or more days delinquent:						
Not in foreclosure	147	187	(40)	950	1,120	(170)
In foreclosure	—	—	—	444	496	(52)
	147	187	(40)	1,394	1,616	(222)
	\$1,949,432	\$ 1,900,743	\$48,689	\$ 1,269,515	\$ 1,222,741	\$46,774
Mortgage loans at fair value:						
Mortgage loans held in a consolidated VIE:						

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Current through 89 days delinquent	\$292,174	\$ 299,843	\$(7,669)	\$321,040	\$ 316,684	\$4,356
90 or more days delinquent:						
Not in foreclosure	—	—	—	—	—	—
In foreclosure	—	—	—	—	—	—
	—	—	—	—	—	—
	292,174	299,843	(7,669)	321,040	316,684	4,356
Distressed mortgage loans at fair value:						
Current through 89 days delinquent	200,176	261,808	(61,632)	414,785	519,009	(104,224)
90 or more days delinquent:						
Not in foreclosure	66,791	113,308	(46,517)	166,749	257,038	(90,289)
In foreclosure	74,027	113,067	(39,040)	186,899	267,911	(81,012)
	140,818	226,375	(85,557)	353,648	524,949	(171,301)
	340,994	488,183	(147,189)	768,433	1,043,958	(275,525)
	\$633,168	\$ 788,026	\$(154,858)	\$1,089,473	\$ 1,360,642	\$(271,169)

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Following are the changes in fair value included in current period income by consolidated statement of income line item for financial statement items accounted for under the fair value option:

	Quarter ended September 30, 2018				
	Net gain on				
	mortgage				
	Net mortgage		Net gain		
	fees	sale	loan service	investments	Net interest
	fees	sale	acquired for	(loss) on	income
	fees	sale	fees	investments	income
	(in thousands)				
Assets:					
Short-term investments at fair value	\$—	\$ —	\$ —	\$ —	\$—
Mortgage-backed securities at fair value	—	—	(19,030)	(1,229)	(20,259)
Mortgage loans acquired for sale at fair value	—	751	—	—	751
Mortgage loans at fair value	—	—	(6,681)	2,458	(4,223)
ESS at fair value	—	—	1,109	3,740	4,849
Firm commitment to purchase credit risk transfer					
security at fair value	—	12,311	2,012	—	14,323
MSRs at fair value	2,951	—	—	—	2,951
	\$2,951	\$ 13,062	\$ (22,590)	\$ 4,969	\$ (1,608)
Liabilities:					
Interest-only security payable at fair value	\$—	\$ —	\$ (1,169)	\$ —	\$(1,169)
Asset-backed financing of a VIE at fair value	—	—	3,516	(201)	3,315
	\$—	\$ —	\$ 2,347	\$ (201)	\$ 2,146

	Quarter ended September 30, 2017				
	Net gain on				
	mortgage				
	Net mortgage		Net gain		
	fees	sale	loan service	investments	Net interest
	fees	sale	acquired for	(loss) on	income
	fees	sale	fees	investments	income
	(in thousands)				
Assets:					
Short-term investments at fair value	\$—	\$ —	\$ —	\$ —	\$—
Mortgage-backed securities at fair value	—	—	5,001	(1,481)	3,520
Mortgage loans acquired for sale at fair value	—	32,935	—	—	32,935
Mortgage loans at fair value	—	—	5,415	7,617	13,032
ESS at fair value	—	—	(4,828)	3,998	(830)
MSRs at fair value	(3,977)	—	—	—	(3,977)

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	\$(3,977)	\$ 32,935	\$ 5,588	\$ 10,134	\$44,680
Liabilities:					
Interest-only security payable at fair value	\$—	\$ —	\$ 191	\$ —	\$191
Asset-backed financing of a VIE at fair value	—	—	(2,158)	(735)	(2,893)
	\$—	\$ —	\$ (1,967)	\$ (735)	\$ (2,702)

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Nine months ended September 30, 2018

Net gain on

mortgage

Net mortgage loans Net gain

loan servicing acquired for (loss) on Net interest

fees sale investments income Total
(in thousands)

Assets:					
	fees	sale	investments	income	Total
	(in thousands)				
Short-term investments at fair value	\$—	\$—	\$—	\$—	\$—
Mortgage-backed securities at fair value	—	—	(50,288)	(2,623)	(52,911)
Mortgage loans acquired for sale at fair value	—	(27,397)	—	—	(27,397)
Mortgage loans at fair value	—	—	(29,694)	6,509	(23,185)
ESS at fair value	—	—	9,026	11,584	20,610
Firm commitment to purchase credit risk transfer					
security at fair value	—	16,737	2,012	—	18,749
MSRs at fair value	17,010	—	—	—	17,010
	\$17,010	\$ (10,660)	\$ (68,944)	\$ 15,470	\$ (47,124)
Liabilities:					
Interest-only security payable at fair value	\$—	\$—	\$ (1,751)	\$—	\$ (1,751)
Asset-backed financing of a VIE at fair value	—	—	12,658	(74)	12,584
	\$—	\$—	\$ 10,907	\$ (74)	\$ 10,833

Nine months ended September 30, 2017

Net gain on

mortgage

Net mortgage loans Net gain

loan servicing acquired for (loss) on Net interest

fees sale investments income Total
(in thousands)

Assets:					
	fees	sale	investments	income	Total
	(in thousands)				
Short-term investments at fair value	\$—	\$—	\$—	\$—	\$—
Mortgage-backed securities at fair value	—	—	9,168	(4,276)	4,892
Mortgage loans acquired for sale at fair value	—	83,839	—	—	83,839
Mortgage loans at fair value	—	—	13,832	29,195	43,027
ESS at fair value	—	—	(14,757)	13,011	(1,746)
MSRs at fair value	(10,370)	—	—	—	(10,370)
	\$ (10,370)	\$ 83,839	\$ 8,243	\$ 37,930	\$ 119,642
Liabilities:					
Interest-only security payable at fair value	\$—	\$—	\$ (2,272)	\$—	\$ (2,272)

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Asset-backed financing of a VIE at fair value	—	—	(5,581)	(1,807)	(7,388)
	\$—	\$ —	\$ (7,853)	\$ (1,807)	\$ (9,660)

Financial Statement Items Measured at Fair Value on a Nonrecurring Basis

Following is a summary of the carrying value at year end for financial statement items that were re-measured at fair value on a nonrecurring basis during the periods presented:

	September 30, 2018			
	Level			Total
	1	2	Level 3	Total
	(in thousands)			
Real estate acquired in settlement of loans	\$—	\$—	\$37,722	\$37,722
	\$—	\$—	\$37,722	\$37,722

	December 31, 2017			
	Level			Total
	1	2	Level 3	Total
	(in thousands)			
Real estate acquired in settlement of loans	\$—	\$—	\$71,380	\$71,380
MSRs at lower of amortized cost or fair value	—	—	312,995	312,995
	\$—	\$—	\$384,375	\$384,375

The following table summarizes the fair value changes recognized during the period on assets held at period end that were remeasured at fair value on a nonrecurring basis:

	Quarter ended		Nine months ended	
	September 30, 2018	2017	September 30, 2018	2017
	(in thousands)			
Real estate asset acquired in settlement of loans	\$ (2,285)	\$ (5,666)	\$ (6,209)	\$ (7,454)
MSRs at lower of amortized cost or fair value	—	(1,702)	—	(4,287)
	\$ (2,285)	\$ (7,368)	\$ (6,209)	\$ (11,741)

Real Estate Acquired in Settlement of Loans

The Company evaluates its REO for impairment with reference to the respective properties' fair values less cost to sell. The initial carrying value of the REO is measured at cost as indicated by the purchase price in the case of purchased REO or as measured by the fair value of the mortgage loan immediately before REO acquisition in the case of acquisition in settlement of a mortgage loan. REO may be subsequently revalued due to the Company receiving greater access to the property, the property being held for an extended period or receiving indications that the property's fair value may not be supported by developing market conditions. Any subsequent change in fair value to a level that is less than or equal to the property's cost is recognized in Results of real estate acquired in settlement of loans in the Company's consolidated statements of income.

Mortgage Servicing Rights at Lower of Amortized Cost or Fair Value

Before the Company adopted fair value accounting for all of its existing classes of MSR on January 1, 2018, the Manager evaluated the Company's MSR at lower of amortized cost or fair value for impairment with reference to the asset's fair value. For purposes of performing its MSR impairment evaluation, the Company stratified its MSR at lower of amortized cost or fair value based on the interest rates borne by the mortgage loans underlying the MSR. Mortgage loans were grouped into pools with 50 basis point interest rate ranges for fixed-rate mortgage loans with interest rates between 3.0% and 4.5% and a single pool for mortgage loans with interest rates below 3.0%. MSR relating to adjustable rate mortgage loans with initial interest rates of 4.5% or less were evaluated in a single pool. If the fair value of MSR in any of the interest rate pools was below the amortized cost of the MSR, those MSR were impaired.

When MSR were impaired, the change in impairment was recognized in current-period income and the carrying value of the MSR was adjusted using a valuation allowance. If the fair value of the MSR subsequently increased, the increase in fair value was recognized in current period income only to the extent of the valuation allowance for the respective impairment stratum.

The Manager periodically reviewed the various impairment strata to determine whether the fair value of the impaired MSR in a given stratum was likely to recover. When the Manager deemed recovery of fair value to be unlikely in the foreseeable future, a write-down of the cost of the MSR for that stratum to its estimated recoverable value was charged to the valuation allowance.

Fair Value of Financial Instruments Carried at Amortized Cost

Most of the Company's borrowings are carried at amortized cost. The Company's Assets sold under agreements to repurchase, Mortgage loan participation purchase and sale agreements, Exchangeable senior notes, Notes payable and Assets sold to PennyMac Financial Services, Inc. under agreements to repurchase are classified as "Level 3" fair value liabilities due to the Company's reliance on unobservable inputs to estimate these instruments' fair values.

The Manager has concluded that the fair values of Assets sold under agreements to repurchase, Mortgage loan participation purchase and sale agreements, Notes payable, and Assets sold to PennyMac Financial Services, Inc. under agreements to repurchase approximate the agreements' carrying values due to the borrowing agreements' variable interest rates. The fair value of the Exchangeable senior notes at September 30, 2018 and December 31, 2017 was \$248.7 million and \$244.9 million, respectively. The fair value of the Exchangeable senior notes is estimated using a broker indication of fair value.

Valuation Governance

Most of the Company's assets, its Asset-backed financing of a VIE, Interest-only security payable and Derivative liabilities are carried at fair value with changes in fair value recognized in current period income. A substantial portion of these items are "Level 3" fair value assets and liabilities which require the use of unobservable inputs that are significant to the estimation of the fair values of the assets and liabilities. Unobservable inputs reflect the Manager's own judgments about the factors that market participants use in pricing an asset or liability, and are based on the best information available under the circumstances.

Due to the difficulty in estimating the fair values of "Level 3" fair value assets and liabilities, the Manager has assigned responsibility for estimating fair value of these assets and liabilities to specialized staff and subjects the valuation process to significant executive management oversight. The Manager's Financial Analysis and Valuation group (the "FAV group") is responsible for estimating the fair values of "Level 3" fair value assets and liabilities other than IRLCs and maintaining its valuation policies and procedures.

With respect to the non-IRLC "Level 3" valuations, the FAV group reports to the Company's senior management valuation committee, which oversees the valuations. The FAV group monitors the models used for valuation of the Company's "Level 3" fair value assets and liabilities, including the models' performance versus actual results, and reports those results to the Company's senior management valuation committee. The Company's senior management valuation committee includes the Company's executive chairman, chief executive, chief financial, chief risk and deputy chief financial officers.

The FAV group is responsible for reporting to the Manager's valuation committee on the changes in the valuation of the non-IRLC "Level 3" fair value assets and liabilities, including major factors affecting the valuation and any changes in model methods and inputs. To assess the reasonableness of its valuations, the FAV group presents an analysis of the effect on the valuation of changes to the significant inputs to the models.

The fair value of the Company's IRLCs is developed by the Manager's Capital Markets Risk Management staff and is reviewed by the Manager's Capital Markets Operations group.

Valuation Techniques and Inputs

The following is a description of the techniques and inputs used in estimating the fair values of "Level 2" and "Level 3" fair value assets and liabilities:

Mortgage-Backed Securities

The Company categorizes its current holdings of MBS as "Level 2" fair value assets. Fair value of these MBS is established based on quoted market prices for the Company's MBS holdings or similar securities. Changes in the fair value of MBS are included in Net gain (loss) on investments in the consolidated statements of income.

Mortgage Loans

Fair value of mortgage loans is estimated based on whether the mortgage loans are saleable into active markets:

• Mortgage loans that are saleable into active markets, comprised of most of the Company's mortgage loans acquired for sale at fair value and all of the mortgage loans at fair value held in a VIE, are categorized as "Level 2" fair value assets. The fair values of mortgage loans acquired for sale at fair value are established using their quoted market or contracted price or market price equivalent. For the mortgage loans at fair value held in a VIE, the quoted fair values of all of the individual securities issued by the securitization trust are used to derive a fair value for the mortgage loans. The Company obtains indications of fair value from nonaffiliated brokers based on comparable securities and

validates the brokers' indications of fair value using pricing models and inputs the Manager believes are similar to the models and inputs used by other market participants.

• Mortgage loans that are not saleable into active markets, comprised primarily of distressed mortgage loans, are categorized as "Level 3" fair value assets and their fair values are estimated using a discounted cash flow approach. Inputs to the discounted cash flow model include current interest rates, loan amount, payment status, property type, discount rates and forecasts of future interest rates, home prices, prepayment speeds, default speeds, loss severities or contracted selling price when applicable.

The valuation process for "Level 3" fair value mortgage loans includes the computation by stratum of the mortgage loans' fair values and a review for reasonableness of various measures such as weighted average life, projected prepayment and default speeds, and projected default and loss percentages. The FAV group computes the effect on the valuation of changes in inputs such as interest rates, home prices, and delinquency status to assess the reasonableness of changes in the mortgage loan valuation.

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Changes in fair value attributable to changes in instrument-specific credit risk are measured by the effect on fair value of the change in the respective mortgage loan's delinquency status and performance history at period-end from the later of the beginning of the period or acquisition date.

The significant unobservable inputs used in the fair value measurement of the Company's mortgage loans at fair value are discount rate, home price projections, voluntary prepayment speeds and default speeds. Significant changes in any of those inputs in isolation could result in a significant change to the mortgage loans' fair value measurement. Increases in home price projections are generally accompanied by an increase in voluntary prepayment speeds. Changes in the fair value of mortgage loans at fair value are included in Net gain (loss) on investments in the consolidated statements of income.

Following is a quantitative summary of key inputs used in the valuation of the Company's "Level 3" mortgage loans at fair value:

Key inputs (1)	September 30, 2018	December 31, 2017
Discount rate		
Range	2.8% – 16.7%	2.9% – 15.0%
Weighted average	7.3%	6.9%
Twelve-month projected housing price index change		
Range	3.5% – 4.4%	3.6% – 4.6%
Weighted average	4.1%	4.4%
Prepayment speed (2)		
Range	2.5% – 8.1%	3.2% – 11.0%
Weighted average	4.1%	4.2%
Total prepayment speed (3)		
Range	10.4% – 22.3%	10.8% – 23.8%
Weighted average	15.6%	16.5%

(1) Weighted-average inputs are based on fair value amounts of the mortgage loans.

(2) Prepayment speed is measured using Life Voluntary Conditional Prepayment Rate ("CPR").

(3) Total prepayment speed is measured using Life Total CPR.

Excess Servicing Spread Purchased from PFSI

The Company categorizes ESS as a "Level 3" fair value asset. The Company uses a discounted cash flow approach to estimate the fair value of ESS. The key inputs used in the estimation of the fair value of ESS include pricing spread (discount rate) and prepayment speed. Significant changes to those inputs in isolation may result in a significant change in the ESS fair value measurement. Changes in these key inputs are not necessarily directly related. Changes in the fair value of ESS are included in Net gain (loss) on investments in the consolidated statements of income.

Following are the key inputs used in determining the fair value of ESS:

Key inputs (1)	September 30, 2018	December 31, 2017
UPB of underlying mortgage loans (in thousands)	\$24,058,366	\$27,217,199
Average servicing fee rate (in basis points)	34	34
Average ESS rate (in basis points)	19	19
Pricing spread (2)		
Range	3.4% - 3.9%	3.8% - 4.3%
Weighted average	3.7%	4.1%
Annual total prepayment speed (3)		
Range	7.5% - 38.4%	8.4% - 41.4%
Weighted average	9.0%	10.8%
Life (in years)		
Range	1.4 - 8.0	1.4 - 7.7
Weighted average	7.1	6.5

(1) Weighted-average inputs are based on UPB of underlying amounts of mortgage loans.

(2) Pricing spread represents a margin that is applied to a reference interest rate's forward rate curve to develop periodic discount rates. The Company applies a pricing spread to the United States Dollar London Interbank Offered Rate ("LIBOR") curve for purposes of discounting cash flows relating to ESS.

(3) Prepayment speed is measured using Life Total CPR.

Firm commitment to purchase credit risk transfer securities

The Company categorizes its firm commitment to purchase credit risk transfer securities as a “Level 3” fair value asset. The fair value of the firm commitment is estimated using a discounted cash flow approach to estimate the fair value of the credit risk transfer security to be purchased related to the loans subject to the commitment. Key inputs used in the estimation of fair value of the firm commitment are the discount rate and the voluntary and involuntary prepayment speeds of the reference mortgage loans. The firm commitment to purchase credit transfer securities is recognized initially as a component of Gain on sale of mortgage loans acquired for sale. Subsequent changes in fair value are recorded in Net gain (loss) on investments.

Key inputs	September 30, 2018
Discount rate	8.2%
Voluntary prepayment speed (1)	12.0%
Involuntary prepayment speed (2)	0.1%

- (1) Voluntary prepayment speed is measured using Life Voluntary CPR.
- (2) Involuntary prepayment speed is measured using Life Involuntary CPR.

Derivative Financial Instruments

Interest Rate Lock Commitments

The Company categorizes IRLCs as “Level 3” fair value assets and liabilities. The Company estimates the fair value of IRLCs based on quoted Agency MBS prices, its estimate of the fair value of the MSR it expects to receive in the sale of the mortgage loan and the probability that the mortgage loan will be purchased under the commitment (the “pull-through rate”).

The significant unobservable inputs used in the fair value measurement of the Company’s IRLCs are the pull-through rate and the MSR component of the Company’s estimate of the fair value of the mortgage loans it has committed to purchase. Significant changes in the pull-through rate or the MSR component of the IRLCs, in isolation, may result in a significant change in the IRLCs’ fair value. The financial effects of changes in these inputs are generally inversely correlated as increasing interest rates have a positive effect on the fair value of the MSR component of IRLC fair value, but also increase the pull-through rate for the mortgage loan principal and interest payment cash flow component that has decreased in fair value. Changes in fair value of IRLCs are included in Net gain on mortgage loans acquired for sale in the consolidated statements of income.

Following is a quantitative summary of key unobservable inputs used in the valuation of IRLCs:

Key inputs (1)	September 30, 2018	December 31, 2017
Pull-through rate		
Range	43.8% – 100%	58.0% - 100%
Weighted average	92.6%	90.3%

MSR value expressed as

Servicing fee multiple		
Range	2.5 - 5.9	2.1 - 5.8
Weighted average	4.7	4.9
Percentage of UPB		
Range	0.8% -	
	2.8%	0.0% - 2.4%
Weighted average	1.4%	1.3%

(1) Weighted-average inputs are based on notional amounts.

CRT Agreements

The Company categorizes CRT Agreement derivatives as “Level 3” fair value assets. The fair value of CRT Agreements is established based on whether the aggregation period has been completed and the CRT Agreements have been securitized. For securitized CRT Agreements, fair value is based on indications of fair value provided to the Company by nonaffiliated brokers for the certificates representing the beneficial interest in CRT Agreements which include the deposits securing the CRT Agreements, the Recourse Obligations and the IO ownership interest. Together, the Recourse Obligations and the IO ownership comprise the CRT derivative. Fair value of the CRT derivative is derived by deducting the balance of the Deposits securing CRT Agreements from the indication of fair value of the certificates provided by the nonaffiliated brokers. For CRT Agreements that have not been securitized, fair value is estimated by the Manager’s FAV group using a discounted cash flow analysis.

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The significant unobservable inputs into the valuation of CRT derivatives are the discount rate and voluntary and involuntary prepayment rates of the reference mortgage loans. Changes in fair value of CRT Agreements are included in Net gain (loss) on investments.

Following is a quantitative summary of key unobservable inputs used in the valuation of non-securitized CRT Agreements:

Key inputs (1)	September 30, 2018	December 31, 2017
Discount rate		
Range	5.8% –	
	6.7%	5.1% – 6.2%
Weighted average	6.2%	5.6%
Voluntary prepayment speed (2)		
Range	7.5% –	12.1% –
	8.7%	15.0%
Weighted average	8.1%	13.0%
Involuntary prepayment speed (3)		
Range	0.2% –	
	0.3%	0.3% – 0.3%
Weighted average	0.3%	0.3%

(1) Weighted-average inputs are based on fair value amounts of the CRT Agreements.

(2) Voluntary prepayment speed is measured using Life Voluntary CPR.

(3) Involuntary prepayment speed is measured using Life Involuntary CPR.

Repurchase Agreement Derivatives

The Company has a master repurchase agreement that includes incentives for financing mortgage loans approved for satisfying certain consumer relief characteristics. These incentives are classified as embedded derivatives for accounting purposes and are reported separate from the repurchase agreements. The Company classifies repurchase agreement derivatives as “Level 3” fair value assets. The significant unobservable inputs into the valuation of these derivative assets are the discount rate and the expected approval rate of the mortgage loans financed under the master repurchase agreement. The resulting ratio included in the Company’s fair value estimate was 97% at both September 30, 2018, and December 31, 2017. Changes in fair value of repurchase agreement derivatives are included in Interest expense in the consolidated statements of income.

Hedging Derivatives

Fair values of derivative financial instruments based on exchange traded market prices are categorized by the Company as “Level 1” fair value assets and liabilities; fair values of derivative financial instruments based on observable interest rates, volatilities and prices in the MBS market are categorized by the Company as “Level 2” fair value assets and liabilities. Changes in the fair value of hedging derivatives are included in Net gain on mortgage loans acquired for sale, Net gain (loss) on investments, or Net mortgage loan servicing fees, as applicable, in the consolidated statements of income.

Real Estate Acquired in Settlement of Loans

REO is measured based on its fair value on a nonrecurring basis and is categorized as a “Level 3” fair value asset. Fair value of REO is established by using a current estimate of fair value from a broker’s price opinion or a full appraisal, or the price given in a pending contract of sale.

REO fair values are reviewed by the Manager’s staff appraisers when the Company obtains multiple indications of fair value and there is a significant difference between the fair values received. The Manager’s staff appraisers will attempt to resolve the difference between the indications of fair value. In circumstances where the appraisers are not able to generate adequate data to support a fair value conclusion, the staff appraisers will order an additional appraisal to determine fair value. Recognized changes in the fair value of REO are included in Results of real estate acquired in settlement of loans in the consolidated statements of income.

Mortgage Servicing Rights

MSRs are categorized as “Level 3” fair value assets. The Company uses a discounted cash flow approach to estimate the fair value of MSRs. The key inputs used in the estimation of the fair value of MSRs include the applicable pricing spread, the prepayment and default rates of the underlying mortgage loans, and annual per-loan cost to service mortgage loans, all of which are unobservable. Significant changes to any of those inputs in isolation could result in a significant change in the MSR fair value measurement. Changes in these key inputs are not necessarily directly related. Recognized changes in the fair value of MSRs are included in Net mortgage loan servicing fees in the consolidated statements of income.

MSRs are generally subject to loss in fair value when mortgage interest rates decrease. Decreasing mortgage interest rates normally encourage increased mortgage refinancing activity. Increased refinancing activity reduces the expected life of the underlying mortgage loans, thereby reducing the cash flows expected to accrue to the MSR. Reductions in the fair value of MSRs affect income primarily through change in fair value and change in impairment. Through December 31, 2017, the Company accounted for certain of its MSRs using the amortization method. Beginning January 1, 2018 and prospectively, the Company accounts for all MSRs at fair value.

Following are the key inputs used in determining the fair value of MSRs at the time of initial recognition:

	Quarter ended September 30,		
	2018	2017	Amortized
	Fair	Fair	cost
	value	value	cost
	(MSR recognized and UPB of underlying mortgage loan amounts in thousands)		
MSR recognized	\$96,383	\$8,655	\$74,183
Key inputs (1)			
UPB of underlying mortgage loans	\$8,290,310	\$794,770	\$6,050,337
Weighted-average annual servicing fee rate			
(in basis points)	25	25	25
Pricing spread (2)			
Range	7.3% – 12.9%	7.6% – 7.6%	7.6% – 12.6%
Weighted average	7.3%	7.6%	7.6%
Annual total prepayment speed (3)			
Range	3.5% – 34.6%	8.3% – 29.5%	3.5% – 31.1%
Weighted average	10.6%	10.5%	8.1%
Life (in years)			
Range	2.3 - 11.7	2.8 - 8.5	2.6 - 11.2
Weighted average	7.3	7.4	8.4
Annual per-loan cost of servicing			
Range	\$77 - \$79	\$79 - \$79	\$79 - \$79
Weighted average	\$79	\$79	\$79

(1) Weighted-average inputs are based on UPB of the underlying mortgage loans.

(2) The Company applies a pricing spread to the United States Dollar LIBOR curve for purposes of discounting cash flows relating to MSRs.

(3) Prepayment speed is measured using Life Total CPR.

	Nine months ended September 30,		
	2018	2017	Amortized
	Fair	Fair	Amortized
	value	value	cost
	(MSR recognized and UPB of underlying mortgage loan amounts in thousands)		
MSR recognized	\$228,337	\$28,467	\$178,894
Key inputs (1)			
UPB of underlying mortgage loans	\$18,687,615	\$2,613,258	\$14,624,151
Weighted-average annual servicing fee rate			
(in basis points)	26	25	25
Pricing spread (2)			
Range	7.3% – 12.9%	7.6% – 7.6%	7.6% – 12.6%
Weighted average	7.4%	7.6%	7.6%
Annual total prepayment speed (3)			
Range	3.2% – 34.6%	7.9% – 29.5%	3.2% – 31.1%
Weighted average	9.6%	10.7%	8.1%
Life (in years)			
Range	2.3 - 11.9	2.8 - 8.5	2.6 - 11.9
Weighted average	7.7	7.3	8.3
Annual per-loan cost of servicing			
Range	\$77 - \$79	\$79 - \$79	\$79 - \$79
Weighted average	\$79	\$79	\$79

(1) Weighted-average inputs are based on the UPB of the underlying mortgage loans.

(2) The Company applies a pricing spread to the United States Dollar LIBOR curve for purposes of discounting cash flows relating to MSRs.

(3) Prepayment speed is measured using Life Total CPR.

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Following is a quantitative summary of key inputs used in the valuation of MSRs as of the dates presented, and the effect on the fair value from adverse changes in those inputs:

	September 30, 2018 Fair value (Carrying value, UPB of underlying mortgage loans and effect on fair value)	December 31, 2017 Fair value (Carrying value, UPB of underlying mortgage loans and effect on fair value)	Amortized cost (Carrying value, UPB of underlying mortgage loans and effect on fair value)
amounts in thousands)			
Carrying value	\$1,109,741	\$91,459	\$753,322
Key inputs (1):			
UPB of underlying mortgage loans	\$84,351,431	\$8,273,696	\$63,853,606
Weighted-average annual servicing fee rate			
(in basis points)	25	25	25
Weighted-average note interest rate	4.1%	4.7%	3.9%
Pricing spread (2)			
Range	7.3% – 12.9%	7.6% – 12.6%	7.6% – 13.1%
Weighted average	7.3%	7.6%	7.6%
Effect on fair value of (3):			
5% adverse change	\$(16,686)	\$(1,347)	\$(11,848)
10% adverse change	\$(32,897)	\$(2,655)	\$(23,352)
20% adverse change	\$(63,970)	\$(5,162)	\$(45,379)
Prepayment speed (4)			
Range	6.2% – 24.3%	7.3% – 20.9%	7.1% – 27.1%
Weighted average	7.6%	11.1%	8.4%
Life (in years)			
Range	2.9 - 8.5	3.1 - 6.8	2.9 - 8.0
Weighted average	8.1	6.8	7.6
Effect on fair value of (3):			
5% adverse change	\$(15,209)	\$(1,954)	\$(12,267)
10% adverse change	\$(29,926)	\$(3,827)	\$(24,120)
20% adverse change	\$(57,978)	\$(7,352)	\$(46,668)
Annual per-loan cost of servicing			
Range	\$78 - \$79	\$77 – \$79	\$78 – \$79
Weighted average	\$79	\$79	\$79
Effect on fair value of (3):			
5% adverse change	\$(7,834)	\$(744)	\$(5,721)
10% adverse change	\$(15,668)	\$(1,488)	\$(11,441)
20% adverse change	\$(31,337)	\$(2,976)	\$(22,883)

(1) Weighted-average inputs are based on the UPB of underlying mortgage loans.

(2)

The Company applies a pricing spread to the United States Dollar LIBOR curve for purposes of discounting cash flows relating to MSRs.

(3) For MSRs carried at fair value, an adverse change in one of the above-mentioned key inputs is expected to result in a recognized reduction in fair value which would be recorded in income. For MSRs carried at lower of amortized cost or fair value, an adverse change in one of the above-mentioned key inputs may have resulted in recognition of MSR impairment. The extent of the recognized MSR impairment depended on the relationship of fair value to the carrying value of such MSRs.

(4) Prepayment speed is measured using Life Total CPR.

The preceding sensitivity analyses are limited in that they were performed as of a particular date; only account for the estimated effect of the movements in the indicated inputs; do not incorporate changes in the inputs in relation to other inputs; are subject to the accuracy of the models and inputs used; and do not incorporate other factors that would affect the Company's overall financial performance in such events, including operational adjustments made by the Manager to account for changing circumstances. For these reasons, the preceding estimates should not be viewed as earnings forecasts.

Note 8—Mortgage Backed Securities

Following is a summary of MBS:

	September 30, 2018				December 31, 2017			
	Principal balance (in thousands)	Net premiums	Accumulated valuation changes	Fair value	Principal balance	Net premiums	Accumulated valuation changes	Fair value
Agency: (1)								
Fannie Mae	\$1,592,192	\$ 40,413	\$ (46,691)	\$1,585,914	\$774,473	\$ 30,355	\$ (7,975)	\$796,853
Freddie Mac	543,239	6,963	(9,609)	540,593	187,127	3,518	1,963	192,608
	\$2,135,431	\$ 47,376	\$ (56,300)	\$2,126,507	\$961,600	\$ 33,873	\$ (6,012)	\$989,461

(1) All MBS are fixed-rate pass-through securities.

All MBS are pledged to secure Assets sold under agreements to repurchase at both September 30, 2018 and December 31, 2017.

Note 9—Mortgage Loans Acquired for Sale at Fair Value

Mortgage loans acquired for sale at fair value is comprised of recently originated mortgage loans purchased by the Company for resale. Following is a summary of the distribution of the Company's mortgage loans acquired for sale at fair value:

Loan type	September 30, 2018	December 31, 2017
	(in thousands)	
Agency-eligible	\$1,708,928	\$ 971,910
Held for sale to PLS — Government insured or guaranteed	217,334	279,571
Commercial real estate	8,500	9,898
Jumbo	7,573	—
Repurchased pursuant to representations and warranties	7,097	8,136
	\$1,949,432	\$ 1,269,515
Mortgage loans pledged to secure:		
Assets sold under agreements to repurchase	\$1,898,155	\$ 1,201,992
Mortgage loan participation purchase and sale agreements	32,392	47,285
	\$1,930,547	\$ 1,249,277

The Company is not approved by Ginnie Mae as an issuer of Ginnie Mae-guaranteed securities which are backed by government-insured or guaranteed mortgage loans. The Company transfers government-insured or guaranteed mortgage loans that it purchases from correspondent sellers to PLS, which is a Ginnie Mae-approved issuer, and earns a sourcing fee ranging from two to three and one-half basis points, generally based on the average number of calendar days that mortgage loans are held prior to purchase by PLS.

Note 10—Mortgage Loans at Fair Value

Mortgage loans at fair value are comprised of mortgage loans that are not acquired for sale and, to the extent they are not held in a VIE securing an asset-backed financing, may be sold at a later date pursuant to the Manager's determination that such a sale represents the most advantageous disposition strategy for the identified mortgage loan.

Following is a summary of the distribution of the Company's mortgage loans at fair value:

Loan type	September 30, 2018		December 31, 2017	
	Fair value	Unpaid principal balance	Fair value	Unpaid principal balance
	(in thousands)			
Distressed mortgage loans:				
Nonperforming mortgage loans	\$ 140,818	\$ 226,375	\$ 353,648	\$ 524,949
Performing mortgage loans:				
Interest rate step-up	125,063	170,066	189,724	242,335
Fixed interest rate	58,179	73,769	186,929	236,840
Adjustable-rate/hybrid	16,934	17,973	38,132	39,834
	200,176	261,808	414,785	519,009
	340,994	488,183	768,433	1,043,958
Fixed interest rate jumbo mortgage loans held in a VIE	292,174	299,843	321,040	316,684
	\$ 633,168	\$ 788,026	\$ 1,089,473	\$ 1,360,642
Mortgage loans at fair value pledged to secure:				
Assets sold under agreements to repurchase	\$ 332,093		\$ 760,853	
Asset-backed financing of a VIE at fair value	292,174		321,040	
	\$ 624,267		\$ 1,081,893	

Following is a summary of certain concentrations of credit risk in the portfolio of distressed mortgage loans at fair value:

Concentration	September 30, 2018	December 31, 2017
	(percentages are of fair value)	
Portion of mortgage loans originated between 2005 and 2007	71%	73%
Mortgage loans with unpaid-principal balance-to-current		
-property-value in excess of 100%	31%	38%
States contributing 5% or more of mortgage loans	New York	New York
	California	California
	Florida	New Jersey
	New Jersey	Florida

Note 11—Derivative Activities

The Company holds and issues derivative financial instruments in connection with its operating activities. Derivative financial instruments are created as a result of certain of the Company's operations and the Company also enters into derivative transactions as part of its interest rate risk management activities.

Derivative financial instruments created as a result of the Company's operations include:

- IRLCs that are created when the Company commits to purchase mortgage loans acquired for sale;
- CRT Agreements whereby the Company retains a Recourse Obligation relating to certain mortgage loans it sells into Fannie Mae guaranteed securitizations as part of the retention of an IO ownership interest in such mortgage loans;
- and
- Derivatives that are embedded in a master repurchase agreement that provides for the Company to receive interest expense offsets if it finances mortgage loans approved as satisfying certain consumer credit relief characteristics under the master repurchase agreement. The master repurchase agreement is subject to a rolling six-month term through August 18, 2019, unless terminated earlier by the lender. There can be no assurance that the lender will not terminate this agreement before its stated maturity.

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The Company engages in interest rate risk management activities in an effort to reduce the variability of earnings caused by the effects of changes in interest rates on the fair value of certain of its assets and liabilities. The Company is exposed to price risk relative to the IRLCs it issues to correspondent sellers and to the mortgage loans it purchases as a result of issuing the IRLCs. The Company bears price risk from the time an IRLC is issued to a correspondent seller until the time the purchased mortgage loan is sold. The Company is exposed to loss if market mortgage interest rates increase, because market interest rate increases generally cause the fair value of the IRLC or mortgage loan acquired for sale to decrease. The Company is exposed to losses related to its investment in MSRs if market mortgage interest rates decrease, because market mortgage interest rate decreases generally encourage mortgage refinancing activity, which reduces the expected life of the mortgage loans underlying the MSRs, causing the fair value of MSRs to decrease.

To manage the price risk resulting from interest rate risk, the Company uses derivative financial instruments with the intention of moderating the risk that changes in market interest rates will result in unfavorable changes in the fair value of the Company's inventory of mortgage loans acquired for sale, mortgage loans held in a VIE, IRLCs, MSRs and MBS financing.

The Company records all derivative financial instruments at fair value and records changes in fair value in current period income.

Derivative Notional Amounts and Fair Value of Derivatives

The Company had the following derivative assets and liabilities recorded within Derivative assets and Derivative liabilities and related margin deposits recorded in Other assets on the consolidated balance sheets:

Instrument	September 30, 2018			December 31, 2017		
	Notional amount	Fair value Derivative assets	Derivative liabilities	Notional amount	Fair value Derivative assets	Derivative liabilities
(in thousands)						
Derivatives not designated as hedging instruments:						
Not subject to master netting arrangements:						
Interest rate lock commitments	1,682,007	\$2,317	\$ 3,418	1,250,803	\$4,859	\$ 227
CRT Agreements	30,648,306	126,354	—	26,845,392	98,640	—
Repurchase agreement derivatives		9,415	—		3,748	—
Subject to master netting agreements used for hedging purposes:						
Forward purchase contracts	3,350,125	1,761	11,964	1,996,235	4,343	248
Forward sale contracts	5,124,927	19,238	1,719	2,565,271	387	2,830
MBS put options	2,600,000	2,302	—	2,375,000	3,170	—
MBS call options	750,000	7	—	—	—	—
Put options on interest rate futures	100,000	141	—	550,000	656	—
Swap futures	—	—	—	275,000	—	—
Bond futures	815,000	—	—	—	—	—
Eurodollar future sale contracts	30,000	—	—	937,000	—	—
		161,535	17,101		115,803	3,305

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Total derivative instruments before netting			
Netting	(17,958)	(5,221)	(1,922) (1,999)
	\$143,577	\$ 11,880	\$113,881 \$ 1,306
Margin deposits placed with (from) derivatives			
counterparties included in Other assets, net		\$(12,736)	\$76
Derivative assets pledged to secure Assets sold			
under agreements to repurchase		\$27,710	\$26,058

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The following tables summarize the notional amount activity for derivative contracts used to hedge the Company's MBS financing, inventory of mortgage loans acquired for sale, mortgage loans at fair value held in a VIE, IRLCs and MSRs.

Instrument	Quarter ended September 30, 2018			
	Amount, beginning of quarter (in thousands)	Additions	Dispositions/ expirations	Amount, end of quarter
Forward purchase contracts	2,628,934	26,864,290	(26,143,099)	3,350,125
Forward sales contracts	3,793,355	36,205,542	(34,873,970)	5,124,927
MBS put options	1,550,000	1,050,000	—	2,600,000
MBS call options	—	750,000	—	750,000
Call options on interest rate futures	50,000	200,000	(250,000)	—
Put options on interest rate futures	600,000	1,300,000	(1,800,000)	100,000
Bond futures	815,000	2,205,000	(2,205,000)	815,000
Eurodollar future sale contracts	35,000	5,000	(10,000)	30,000

Instrument	Quarter ended September 30, 2017			
	Amount, beginning of quarter (in thousands)	Additions	Dispositions/ expirations	Amount, end of quarter
Forward purchase contracts	1,933,390	20,560,886	(20,895,864)	1,598,412
Forward sales contracts	3,644,636	27,214,513	(28,050,302)	2,808,847
MBS put options	1,475,000	3,200,000	(3,550,000)	1,125,000
MBS call options	200,000	275,000	(400,000)	75,000
Call options on interest rate futures	200,000	450,000	(400,000)	250,000
Put options on interest rate futures	925,000	2,500,000	(2,950,000)	475,000
Swap futures	175,000	100,000	—	275,000
Eurodollar future sale contracts	1,139,000	202,000	(303,000)	1,038,000
Treasury future buy contracts	—	55,000	(55,000)	—
Treasury future sale contracts	—	55,000	(55,000)	—

Instrument	Nine months ended September 30, 2018			
	Amount, beginning of period (in thousands)	Additions	Dispositions/ expirations	Amount, end of period
Forward purchase contracts	1,996,235	67,406,528	(66,052,638)	3,350,125
Forward sales contracts	2,565,271	88,131,417	(85,571,761)	5,124,927
MBS put options	2,375,000	9,625,000	(9,400,000)	2,600,000
MBS call options	—	750,000	—	750,000
Call options on interest rate futures	—	525,000	(525,000)	—
Put options on interest rate futures	550,000	11,700,000	(12,150,000)	100,000
Swap futures	275,000	—	(275,000)	—
Bond futures	—	3,020,000	(2,205,000)	815,000

Eurodollar future sale contracts	937,000	119,597	(1,026,597)	30,000
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Instrument	Nine months ended September 30, 2017			
	Amount, beginning of period (in thousands)	Additions	Dispositions/ expirations	Amount, end of period
Forward purchase contracts	4,840,707	54,953,063	(58,195,358)	1,598,412
Forward sales contracts	6,148,242	73,030,446	(76,369,841)	2,808,847
MBS put options	925,000	5,125,000	(4,925,000)	1,125,000
MBS call option	750,000	475,000	(1,150,000)	75,000
Call options on interest rate futures	200,000	575,000	(525,000)	250,000
Put options on interest rate futures	550,000	5,875,000	(5,950,000)	475,000
Swap futures	150,000	950,000	(825,000)	275,000
Eurodollar future sale contracts	1,351,000	303,000	(616,000)	1,038,000
Treasury future buy contracts	—	110,700	(110,700)	—
Treasury future sale contracts	—	110,700	(110,700)	—

Netting of Financial Instruments

The Company has elected to net derivative asset and liability positions, and cash collateral placed with or received from its counterparties when subject to a legally enforceable master netting arrangement. The derivative financial instruments that are not subject to master netting arrangements are IRLCs, CRT Agreement derivatives and repurchase agreement derivatives. As of September 30, 2018 and December 31, 2017, the Company did not enter into reverse repurchase agreements or securities lending transactions that are required to be disclosed in the following tables.

Offsetting of Derivative Assets

Following is a summary of net derivative assets:

September 30, 2018		Net	December 31, 2017		Net
Gross	Gross		Gross	Gross	
amounts	amounts	amounts	amounts	amounts	amounts
of	offset	of assets	of	offset	of assets
recognized in the		presented	recognized in the		presented
assets	consolidated	in the	assets	consolidated	in the
	balance	consolidated		balance	consolidated
	sheet	balance		sheet	balance

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sheet

sheet

(in thousands)

Derivative assets:						
Not subject to master netting arrangements:						
Interest rate lock commitments	\$2,317	\$ —	\$ 2,317	\$4,859	\$ —	\$ 4,859
CRT Agreement derivatives	126,354	—	126,354	98,640	—	98,640
Repurchase agreement derivatives	9,415	—	9,415	3,748	—	3,748
	138,086	—	138,086	107,247	—	107,247
Subject to master netting arrangements:						
Forward purchase contracts	1,761	—	1,761	4,343	—	4,343
Forward sale contracts	19,238	—	19,238	387	—	387
MBS call options	7	—	7	—	—	—
MBS put options	2,302	—	2,302	3,170	—	3,170
Put options on interest rate futures	141	—	141	656	—	656
Netting	—	(17,958)	(17,958)	—	(1,922)	(1,922)
	23,449	(17,958)	5,491	8,556	(1,922)	6,634
	\$161,535	\$ (17,958)	\$ 143,577	\$115,803	\$ (1,922)	\$ 113,881

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Derivative Assets, Financial Instruments and Collateral Held by Counterparty

The following table summarizes by significant counterparty the amount of derivative asset positions after considering master netting arrangements and financial instruments or cash pledged that do not meet the accounting guidance qualifying for setoff accounting:

	September 30, 2018			December 31, 2017		
	Net amount	Gross amounts	Net amount	Gross amounts	Net amount	Gross amounts
	of assets presented in the consolidated balance sheet	not offset in the consolidated balance sheet Cash	of assets presented in the consolidated balance sheet	not offset in the consolidated balance sheet	of assets presented in the consolidated balance sheet	not offset in the consolidated balance sheet
	balance sheet	Financial instruments received	balance sheet	Financial instruments received	balance sheet	Financial instruments received
	(in thousands)	amount	(in thousands)	amount	(in thousands)	amount
CRT Agreements	\$126,354	\$ —	\$ —	\$126,354	\$98,640	\$ —
Interest rate lock commitments	2,317	—	—	2,317	4,859	—
Deutsche Bank Securities LLC	9,415	—	—	9,415	3,748	—
Citigroup Global Markets Inc.	2,116	—	—	2,116	429	—
Wells Fargo Securities, LLC	950	—	—	950	146	—
J.P. Morgan Securities LLC	637	—	—	637	2,020	—
Bank of America, N.A.	627	—	—	627	—	—
Goldman Sachs	558	—	—	558	—	—
RJ O'Brien & Associates, LLC	141	—	—	141	656	—
Federal National Mortgage Association	9	—	—	9	1,606	—
Credit Suisse Securities (USA) LLC	—	—	—	—	809	—
Morgan Stanley & Co. LLC	—	—	—	—	457	—
Other	453	—	—	453	511	—
	\$143,577	\$ —	\$ —	\$143,577	\$113,881	\$ —

Offsetting of Derivative Liabilities and Financial Liabilities

Following is a summary of net derivative liabilities and assets sold under agreements to repurchase. Assets sold under agreements to repurchase do not qualify for setoff accounting.

September 30, 2018			December 31, 2017		
Gross amounts	Gross amounts	Net amounts	Gross amounts	Gross amounts	Net amounts

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(in thousands)

Derivative liabilities:

Not subject to master netting
 arrangements:

Interest rate lock commitments	\$3,418	\$ —	\$ 3,418	\$227	\$ —	\$ 227
	3,418	—	3,418	227	—	227

Subject to master netting
 arrangements:

Forward purchase contracts	11,964	—	11,964	248	—	248
Forward sales contracts	1,719	—	1,719	2,830	—	2,830
Netting	—	(5,221)	(5,221)	—	(1,999)	(1,999)
	13,683	(5,221)	8,462	3,078	(1,999)	1,079
	17,101	(5,221)	11,880	3,305	(1,999)	1,306

Assets sold under agreements to
 repurchase:

UPB	4,394,597	—	4,394,597	3,182,504	—	3,182,504
Unamortized debt issuance costs	(97)	—	(97)	(1,618)	—	(1,618)
	4,394,500	—	4,394,500	3,180,886	—	3,180,886
	\$4,411,601	\$ (5,221)	\$4,406,380	\$3,184,191	\$ (1,999)	\$3,182,192

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Derivative Liabilities, Financial Liabilities and Collateral Pledged by Counterparty

The following table summarizes by significant counterparty the amount of derivative liabilities and assets sold under agreements to repurchase after considering master netting arrangements and financial instruments or cash pledged that do not meet the accounting guidance qualifying for setoff accounting. All assets sold under agreements to repurchase represent sufficient collateral or exceed the liability amount recorded on the consolidated balance sheet.

	September 30, 2018			December 31, 2017			
	Net amount of liabilities presented in the consolidated balance sheet (in thousands)	Gross amounts not offset in the consolidated balance sheet instruments	Cash collateral pledged	Net amount of liabilities presented in the consolidated balance sheet	Gross amounts not offset in the consolidated balance sheet instruments	Cash collateral pledged	
Interest rate lock commitments	\$3,418	\$—	\$ —	\$3,418	\$227	\$—	\$ —
Bank of America, N.A.	1,424,559	(1,424,559)	—	—	839,057	(838,771)	—
Deutsche Bank Securities LLC	701,294	(701,294)	—	—	374,526	(374,526)	—
Credit Suisse Securities (USA) LLC	683,565	(683,339)	—	226	845,567	(845,567)	—
J.P. Morgan Securities LLC	448,773	(448,773)	—	—	373,186	(373,186)	—
Mizuho Securities	276,791	(276,791)	—	—	—	—	—
Daiwa Capital Markets	262,985	(262,940)	—	45	153,833	(153,730)	—
Morgan Stanley & Co. LLC	224,035	(223,627)	—	408	164,530	(164,530)	—
Citigroup Global Markets Inc.	118,762	(116,091)	—	2,671	235,541	(235,319)	—
RBC Capital Markets, L.P.	95,027	(95,027)	—	—	92,014	(91,805)	—
BNP Paribas	91,062	(91,062)	—	—	45,411	(45,411)	—
Wells Fargo Securities, LLC	71,094	(71,094)	—	—	50,360	(50,360)	—
Federal National Mortgage Association	4,350	—	—	4,350	—	—	—
Barclays Capital Inc.	270	—	—	270	9,374	(9,299)	—
Other	492	—	—	492	184	—	—
Unamortized debt issuance costs	(97)	97	—	—	(1,618)	1,618	—
	\$4,406,380	\$(4,394,500)	\$ —	\$11,880	\$3,182,192	\$(3,180,886)	\$ —

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Following are the net gains (losses) recognized by the Company on derivative financial instruments and the consolidated statements of income line items where such gains and losses are included:

Derivative activity	Income statement line	Quarter ended		Nine months ended	
		September 30, 2018	2017	September 30, 2018	2017
		(in thousands)			
Interest rate lock commitments	Net gain on mortgage loans				
	acquired for sale	\$(7,700)	\$24,694	\$(26,431)	\$70,131
CRT agreements	Net gain (loss) on				
	investments	\$30,552	\$14,960	\$92,621	\$68,863
Repurchase agreement derivatives	Interest expense	\$(37)	\$—	\$(118)	\$—
Hedged item:					
Interest rate lock commitments and	Net gain on mortgage loans				
mortgage loans acquired for sale	acquired for sale	\$15,584	\$(16,943)	\$56,818	\$(32,308)
Mortgage servicing rights	Net mortgage loan				
	servicing fees	\$(12,093)	\$4,576	\$(44,378)	\$(1,731)
Fixed-rate assets and LIBOR-	Net gain (loss) on				
indexed repurchase agreements	investments	\$691	\$(5,910)	\$1,029	\$(14,943)

Note 12—Real Estate Acquired in Settlement of Loans

Following is a summary of financial information relating to REO:

	Quarter ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
	(in thousands)							
Balance at beginning of period	\$109,271	\$207,034	\$162,865	\$274,069				
Transfers:								
From mortgage loans at fair value and advances	7,508	22,951	26,229	76,981				
To real estate held for investment	(559)	(2,555)	(4,123)	(14,300)				
From real estate held for investment	655	—	1,112	—				
Results of REO:								
Valuation adjustments, net	(3,323)	(6,423)	(13,990)	(21,749)				
Gain on sale, net	3,013	3,280	8,157	10,895				
	(310)	(3,143)	(5,833)	(10,854)				
Sales	(20,960)	(39,253)	(84,645)	(140,862)				
Balance at end of period	\$95,605	\$185,034	\$95,605	\$185,034				

	September 30, 2018	December 31, 2017
	(in thousands)	
REO pledged to secure assets sold under agreements		
to repurchase	\$43,970	\$76,037
REO held in a consolidated subsidiary whose stock		
is pledged to secure financings of such properties	25,429	48,495
	\$69,399	\$124,532

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Carried at Lower of Amortized Cost or Fair Value:

Following is a summary of MSR's carried at lower of amortized cost or fair value:

	Quarter ended		
	September 30, 2017	Nine months ended September 30, 2018	September 30, 2017
	(in thousands)		
Amortized Cost:			
Balance at beginning of period	\$673,433	\$772,870	\$606,103
Transfer of mortgage servicing right to mortgage servicing rights carried at fair value pursuant to a change in accounting principle	—	(772,870)	—
Balance after reclassification	673,433	—	606,103
MSR's resulting from mortgage loan sales	74,183	—	178,894
Amortization	(21,634)	—	(59,015)
Balance at end of period	725,982	—	725,982
Valuation Allowance:			
Balance at beginning of period	(16,257)	(19,548)	(13,672)
Reduction resulting from change in accounting principle	—	19,548	—
Balance after reclassification	(16,257)	—	(13,672)
Additions to valuation allowance	(1,702)	—	(4,287)
Balance at end of period	(17,959)	—	(17,959)
MSR's, net	\$708,023	\$—	\$708,023
Fair value at beginning of period	\$682,437		\$626,334
Fair value at end of period	\$728,828		
	December 31, 2017 (in thousands)		
MSR's carried at lower of cost or fair value pledged to secure:			
Assets sold under agreements to repurchase	\$584,762		
Notes payable	156,846		
	\$741,608		

Servicing fees relating to MSR's are recorded in Net mortgage loan servicing fees on the Company's consolidated statements of income and are summarized below:

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	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(in thousands)			
Contractually-specified servicing fees	\$49,864	\$42,237	\$147,262	\$119,223
Ancillary and other fees:				
Late charges	252	173	685	536
Other	2,859	1,870	5,988	4,110
	\$52,975	\$44,280	\$153,935	\$123,869

Note 14—Assets Sold Under Agreements to Repurchase

Following is a summary of financial information relating to assets sold under agreements to repurchase:

	Quarter ended September 30, 2018		Quarter ended September 30, 2017		Nine months ended September 30, 2018		Nine months ended September 30, 2017	
	(dollars in thousands)							
Weighted-average interest rate (1)	3.19	%	2.72	%	3.12	%	2.57	%
Average balance	\$4,072,301		\$3,474,903		\$3,573,805		\$3,388,626	
Total interest expense (2)	\$29,725		\$26,157		\$79,705		\$72,280	
Maximum daily amount outstanding	\$5,091,893		\$3,973,869		\$5,677,797		\$4,083,326	

(1) Excludes the effect of amortization of net debt issuance premiums of \$3.1 million and \$4.8 million for the quarter and nine months ended September 30, 2018, respectively, and net debt issuance costs of \$1.9 million and \$6.1 million for the quarter and nine months ended September 30, 2017, respectively.

(2) The Company's interest expense relating to assets sold under agreements to repurchase for the quarter and nine months ended September 30, 2018 includes recognition of incentives it received for financing certain of its mortgage loans acquired for sale satisfying certain consumer debt relief characteristics under a master repurchase agreement. During the quarter and nine months ended September 30, 2018, the Company recognized \$5.0 million and \$11.0 million, respectively, in such incentives as a reduction of interest expense. The master repurchase agreement is subject to a rolling six-month term through August 18, 2019, unless terminated earlier at the option of the lender. There can be no assurance that the lender will not terminate this agreement before its stated maturity.

	September 30, 2018	December 31, 2017
	(dollars in thousands)	
Carrying value:		
Unpaid principal balance	\$4,394,597	\$3,182,504
Unamortized debt issuance costs and premiums, net	(97)	(1,618)
	\$4,394,500	\$3,180,886
Weighted-average interest rate	3.23	2.77
	%	%
Available borrowing capacity (1):		
Committed	\$564,023	\$749,650
Uncommitted	1,947,494	2,030,607
	\$2,511,517	\$2,780,257
Margin deposits placed with counterparties included in Other assets	\$42,550	\$28,154
Assets securing agreements to repurchase:		
Mortgage-backed securities	\$2,126,507	\$989,461
Mortgage loans acquired for sale at fair value	\$1,898,155	\$1,201,992
Mortgage loans at fair value	\$332,093	\$760,853
CRT Agreements:		
Deposits securing CRT agreements	\$378,090	\$400,778
Derivative assets	\$27,710	\$26,058
Real estate acquired in settlement of loans	\$69,399	\$124,532
Real estate held for investment	\$31,795	\$31,128
MSRs (2)	\$1,090,406	\$651,575

- (1) The amount the Company is able to borrow under asset repurchase agreements is tied to the fair value of unencumbered assets eligible to secure those agreements and the Company's ability to fund the agreements' margin requirements relating to the assets financed.
- (2) During 2018, beneficial interests in Fannie Mae MSR's are pledged as collateral for both Assets sold under agreements to repurchase and Notes payable as discussed in Note 17 – Notes Payable.

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Following is a summary of maturities of outstanding assets sold under agreements to repurchase by facility maturity date:

Remaining maturity at September 30, 2018	Contractual balance (in thousands)
Within 30 days	\$2,462,431
Over 30 to 90 days	—
Over 90 days to 180 days	10,328
Over 180 days to 1 year	1,815,302
Over one year to two years	106,536
	\$4,394,597
Weighted average maturity (in months)	3.9

The Company is subject to margin calls during the period the repurchase agreements are outstanding and therefore may be required to repay a portion of the borrowings before the respective repurchase agreements mature if the fair value (as determined by the applicable lender) of the assets securing those repurchase agreements decreases.

The amount at risk (the fair value of the assets pledged plus the related margin deposit, less the amount advanced by the counterparty and interest payable) and maturity information relating to the Company's assets sold under agreements to repurchase is summarized by pledged asset and counterparty below as of September 30, 2018:

Mortgage loans, REO and MSRs sold under agreements to repurchase

Counterparty	Amount at risk (in thousands)	Weighted-average maturity	Facility maturity
Credit Suisse First Boston Mortgage Capital LLC	\$ 696,567	December 17, 2018	April 26, 2019
JPMorgan Chase & Co.	\$ 4,354	November 17, 2018	October 11, 2019
JPMorgan Chase & Co.	\$ 100,153	March 14, 2019	March 14, 2019
Citibank, N.A.	\$ 118,546	December 13, 2018	June 7, 2019
Bank of America, N.A.	\$ 16,589	October 18, 2018	July 1, 2019
Deutsche Bank	\$ 33,676	December 17, 2018	March 31, 2019
BNP Paribas Corporate & Institutional Banking	\$ 555	December 14, 2018	August 2, 2019
Morgan Stanley	\$ 10,781	December 13, 2018	August 23, 2019
Royal Bank of Canada	\$ 4,454	January 13, 2019	April 16, 2019

Securities sold under agreements to repurchase

Counterparty	Amount at risk	Weighted average maturity
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	(in thousands)	
JPMorgan Chase & Co.	\$ 20,251	October 26, 2018
Bank of America, N.A.	\$ 47,090	October 21, 2018
Daiwa Capital Markets America Inc.	\$ 16,385	October 19, 2018
Mizuho Securities	\$ 8,634	October 10, 2018
Wells Fargo, N.A.	\$ 4,034	October 16, 2018

CRT Agreements sold under agreements to repurchase

Counterparty	Amount at risk (in thousands)	Weighted average maturity
Credit Suisse First Boston Mortgage Capital LLC	\$ 50,793	October 10, 2018
Bank of America, N.A.	\$ 25,475	October 19, 2018
BNP Paribas Corporate & Institutional Banking	\$ 17,009	October 22, 2018

Note 15—Mortgage Loan Participation Purchase and Sale Agreements

Certain borrowing facilities secured by mortgage loans acquired for sale are in the form of mortgage loan participation purchase and sale agreements. Participation certificates, each of which represents an undivided beneficial ownership interest in a pool of mortgage loans that have been pooled with Fannie Mae or Freddie Mac, are sold to a lender pending the securitization of such mortgage loans and the sale of the resulting security. The commitment between the Company and a nonaffiliate to sell such security is also assigned to the lender at the time a participation certificate is sold.

The purchase price paid by the lender for each participation certificate is based on the trade price of the security, plus an amount of interest expected to accrue on the security to its anticipated delivery date, minus a present value adjustment, any related hedging costs and a holdback amount. The holdback amount is based on a percentage of the purchase price and is not required to be paid to the Company until the settlement of the security and its delivery to the lender.

Mortgage loan participation purchase and sale agreements are summarized below:

	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(dollars in thousands)			
Weighted-average interest rate (1)	3.39	% 2.48	% 3.21	% 2.28
Average balance	\$78,806	\$59,701	\$51,687	\$65,290
Total interest expense	\$739	\$409	\$1,396	\$1,225
Maximum daily amount outstanding	\$258,983	\$99,441	\$258,983	\$99,441

(1) Excludes the effect of amortization of debt issuance costs of \$65,000 and \$141,000 for the quarter and nine months ended September 30, 2018, respectively, and \$31,000 and \$94,000 for the quarter and nine months ended September 30, 2017, respectively.

	September 30, 2018	December 31, 2017
	(dollars in thousands)	
Carrying value:		
Amount outstanding	\$ 31,675	\$ 44,550
Unamortized debt issuance costs	(97)	(62)
	\$ 31,578	\$ 44,488
Weighted-average interest rate	3.61 %	2.82 %
Mortgage loans acquired for sale pledged to secure		
mortgage loan participation purchase and sale agreements	\$ 32,392	\$ 47,285

Note 16—Exchangeable Senior Notes

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PMC issued in a private offering \$250 million aggregate principal amount of exchangeable senior notes (“Exchangeable Notes”) due May 1, 2020. The Exchangeable Notes bear interest at a rate of 5.375% per year, payable semiannually. The Exchangeable Notes are exchangeable into common shares of the Company at a rate of 33.8667 common shares per \$1,000 principal amount of the Exchangeable Notes as of September 30, 2018, which is an increase over the initial exchange rate of 33.5149. The increase in the calculated exchange rate was the result of quarterly cash dividends exceeding the quarterly dividend threshold amount of \$0.57 per share in prior reporting periods, as provided in the related indenture.

Following is financial information relating to the Exchangeable Notes:

	Quarter ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
	(in thousands)							
Average balance	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Total interest expense	\$3,652	\$3,636	\$10,945	\$10,895				

	September 30, 2018		December 31, 2017	
	(in thousands)			
Carrying value:				
UPB	\$250,000	\$250,000	\$250,000	\$250,000
Unamortized debt issuance costs	(1,947)	(2,814)	(1,947)	(2,814)
	\$248,053	\$247,186	\$248,053	\$247,186

Note 17—Notes Payable

On April 25, 2018, the Company, through its indirect subsidiary, PMT ISSUER TRUST-FMSR (“FMSR Issuer Trust”), issued an aggregate principal amount of \$450 million in secured term notes (the “2018-FT1 Notes”) to qualified institutional buyers under Rule 144A of the Securities Act of 1933, as amended. The 2018-FT1 Notes bear interest at a rate equal to one-month LIBOR plus 2.35% per annum, payable each month beginning in May 2018, on the 25th day of such month or, if such 25th day is not a business day, the next business day.

The 2018-FT1 Notes mature on April 25, 2023 or, if extended pursuant to the terms of the related term note indenture supplement, April 25, 2025 (unless earlier redeemed in accordance with their terms). The 2018-FT1 Notes rank pari passu with the Series 2017-VF1 Note dated December 20, 2017 (the “FMSR VFN”) pledged to Credit Suisse under an agreement to repurchase. The 2018-FT1 Notes and the FMSR VFN are secured by certain participation certificates relating to Fannie Mae MSR and ESS relating to such MSRs.

On February 1, 2018, the Company, through PMC and PMH, entered into a Loan and Security Agreement with Credit Suisse First Boston Mortgage Capital LLC (“Credit Suisse”), pursuant to which PMC and PMH may finance certain mortgage servicing rights (inclusive of any related excess servicing spread arising therefrom and that may be transferred from PMC to PMH from time to time) relating to mortgage loans pooled into Freddie Mac securities (collectively, the “Freddie MSRs”), in an aggregate loan amount not to exceed \$175 million, all of which is committed. The note matures on February 1, 2020.

On March 24, 2017, the Company, through PMC and PMH, entered into a second Amended and Restated Loan and Security Agreement with Citibank, N.A., pursuant to which PMC and PMH finance certain MSRs (inclusive of any related excess servicing spread and/or junior excess strips arising therefrom and that may be transferred from PMC to PMH from time to time) relating to mortgage loans pooled into Fannie Mae securities (collectively, the “Fannie MSRs”) in an aggregate loan amount not to exceed \$400 million, all of which is committed. The note was redeemed and terminated in December 2017.

On March 24, 2017, the Company, through PMC and PMH, entered into a Loan and Security Agreement with Barclays Bank PLC (“Barclays”), pursuant to which PMC and PMH may finance certain mortgage servicing rights (inclusive of any related excess servicing spread arising therefrom and that may be transferred from PMC to PMH from time to time) relating to mortgage loans pooled into Freddie Mac securities (collectively, the “Freddie MSRs”), in an aggregate loan amount not to exceed \$170 million, all of which is committed. The note matured and was repaid on February 1, 2018.

Following is a summary of financial information relating to the notes payable:

	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(dollars in thousands)			
Weighted-average interest rate (1)	4.53	% 6.30	% 4.58	% 5.57
Average balance	\$445,149	\$79,345	\$251,052	\$152,395
Total interest expense	\$5,351	\$2,320	\$9,032	\$9,719
Maximum daily amount outstanding	\$445,318	\$160,106	\$445,318	\$275,106

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(1) Excludes the effect of amortization of debt issuance costs of \$255,000 and \$426,000 for the quarter and nine months ended September 30, 2018, respectively, and \$1.0 million and \$3.3 million for the quarter and nine months ended September 30, 2017, respectively.

	September 30, 2018	December 31, 2017
	(dollars in thousands)	
Carrying value:		
Amount outstanding	\$450,000	\$ —
Unamortized debt issuance costs	(4,682)	—
	\$445,318	\$ —
Weighted-average interest rate	4.44	% —
MSRs pledged to secure notes payable (1)	\$ 1,090,406	\$ 180,317

(1) During 2018, beneficial interests in Fannie Mae MSRMs are pledged as collateral for both Assets sold under agreements to repurchase and Notes payable as discussed above.

Note 18—Asset-Backed Financing of a Variable Interest Entity at Fair Value

Following is a summary of financial information relating to the asset-backed financing of a VIE:

	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(dollars in thousands)			
Weighted-average fair value	\$285,284	\$325,763	\$292,770	\$337,073
Total interest expense	\$2,740	\$3,515	\$7,836	\$10,520
Weighted-average interest rate	3.52	% 3.34	% 3.51	% 3.41

	September	December 31,
	30, 2018	2017
	(dollars in thousands)	
Fair value	\$278,113	\$ 307,419
UPB	\$287,086	\$ 316,684
Weighted-average interest rate	3.51	% 3.51

The asset-backed financing of a VIE is a non-recourse liability and secured solely by the assets of a consolidated VIE and not by any other assets of the Company. The assets of the VIE are the only source of funds for repayment of the certificates.

Note 19—Liability for Losses Under Representations and Warranties

Following is a summary of the Company's liability for losses under representations and warranties:

	Quarter ended September		Nine months	
	30,		ended September	
	2018	2017	2018	2017
	(in thousands)			
Balance, beginning of period	\$7,625	\$10,697	\$8,678	\$15,350
Provision for losses:				
Pursuant to mortgage loan sales	636	1,075	1,724	2,355
Reduction in liability due to change in estimate	(848	) (1,642	) (3,030)	(7,523
(Losses incurred) recoveries, net	—	(83	) 41	(135
Balance, end of period	\$7,413	\$10,047	\$7,413	\$10,047
UPB of mortgage loans subject to representations and				
warranties at end of period	\$83,370,583	\$67,196,537		

Note 20—Commitments and Contingencies

Litigation

From time to time, the Company may be involved in various proceedings, claims and legal actions arising in the ordinary course of business. As of September 30, 2018, the Company was not involved in any such proceedings, claims or legal actions that in the Manager's view would reasonably be likely to have a material adverse effect on the Company.

Commitments

The following table summarizes the Company's outstanding contractual commitments:

	September 30, 2018 (in thousands)
Commitments to purchase mortgage loans acquired for sale	\$1,682,007
Commitments to fund Deposits securing CRT agreements (1)	\$578,508
Firm commitment to purchase credit risk transfer security	\$294,698

(1) Certain deposits of cash collateral on CRT Agreements are made upon the first to occur of fulfillment of the aggregation obligation or the lapse of the aggregation period.

Note 21—Shareholders' Equity

Preferred Shares of Beneficial Interest

Preferred shares of beneficial interest are summarized below:

Series	Description (1)	Number of shares (in thousands)	Liquidation preference	Issuance discount	Carrying value
A	8.125% fixed-to-floating rate cumulative redeemable preferred, issued March 2017	4,600	\$ 115,000	\$3,828	\$111,172
B	8.00% fixed-to-floating rate cumulative redeemable preferred, issued July 2017	7,800	195,000	6,465	188,535
		12,400	\$ 310,000	\$ 10,293	\$299,707

(1) Par value is \$0.01 per share for both series.

During March 2017, the Company issued 4.6 million of its 8.125% Series A Fixed-to-Floating Rate Cumulative Redeemable Preferred Shares of Beneficial Interest, \$0.01 par value per share (the "Series A Preferred Shares"). From, and including, the date of original issuance to, but not including, March 15, 2024, the Company pays cumulative dividends on the Series A Preferred Shares at a fixed rate of 8.125% per annum based on the \$25.00 per share liquidation preference. From, and including, March 15, 2024 and thereafter, the Company will pay cumulative dividends on the Series A Preferred Shares at a floating rate equal to three-month LIBOR as calculated on each applicable dividend determination date plus a spread of 5.831% per annum based on the \$25.00 per share liquidation preference. The Company paid dividends of \$1.52 per Series A Preferred Share during the nine months ended September 30, 2018.

During July 2017, the Company issued 7.8 million of its 8.00% Series B Fixed-to-Floating Rate Cumulative Redeemable Preferred Shares of Beneficial Interest, \$0.01 par value per share (the "Series B Preferred Shares" and, together with the Series A Preferred Shares, the "Preferred Shares"). From, and including, the date of original issuance to, but not including, June 15, 2024, the Company pays cumulative dividends on the Series B Preferred Shares at a fixed rate of 8.00% per annum based on the \$25.00 per share liquidation preference. From, and including, June 15, 2024 and thereafter, the Company will pay cumulative dividends on the Series B Preferred Shares at a floating rate equal to three-month LIBOR as calculated on each applicable dividend determination date plus a spread of 5.99% per annum based on the \$25.00 per share liquidation preference. The Company paid dividends of \$1.50 per Series B Preferred Share for the nine months ended September 30, 2018.

The Company pays quarterly cumulative dividends on its Preferred Shares on the 15th day of each March, June, September and December, provided that if any dividend payment date is not a business day, then the dividend that would otherwise be payable on that dividend payment date may be paid on the following business day.

The Series A and Series B Preferred Shares will not be redeemable before March 15, 2024 and June 15, 2024, respectively, except in connection with the Company's qualification as a REIT for U.S. federal income tax purposes and upon the occurrence of a change of control. On or after the date the Preferred Shares become redeemable, or 120 days after the first date on which such change of control occurred, the Company may, at its option, redeem any or all of the Preferred Shares at \$25.00 per share plus any accumulated and unpaid dividends thereon to, but not including, the redemption date. The Preferred Shares have no stated maturity, are not subject to any sinking fund or mandatory redemption and will remain outstanding indefinitely unless redeemed or repurchased by the Company or converted into common shares in connection with a change of control by the holders of the Preferred Shares.

Common Share Repurchases

During August 2015, the Company's board of trustees authorized a common share repurchase program. Under the program, as amended, the Company may repurchase up to \$300 million of its outstanding common shares.

The following table summarizes the Company's share repurchase activity:

	Quarter ended September 30, 2017	Nine months ended September 30, 2018	2017	Cumulative total (1)
	(in thousands)			
Common shares repurchased	— 966	671	1,105	14,731
Cost of common shares repurchased	\$—\$16,417	\$10,719	\$18,724	\$216,625

(1) Amounts represent the share repurchase program total from its inception in August 2015 through September 30, 2018.

The repurchased common shares were canceled upon settlement of the repurchase transactions and returned to the authorized but unissued common share pool.

Conditional Reimbursement of IPO Underwriting Costs

As more fully described in Note 5—Transactions with Related Parties, on February 1, 2013, the Company entered into a Reimbursement Agreement, by and among the Company, the Operating Partnership and the Manager. The Reimbursement Agreement provides that, to the extent the Company is required to pay the Manager performance incentive fees under the management agreement, the Company will reimburse the Manager for underwriting costs it paid on the IPO offering date at a rate of \$10 in reimbursement for every \$100 of performance incentive fees earned. The reimbursement is subject to a maximum reimbursement in any particular 12-month period of \$1.0 million, and the maximum amount that may be reimbursed under the agreement is \$2.9 million. No reimbursements were made during the quarter and nine months ended September 30, 2018. The Company paid reimbursements totaling \$30,000 during the quarter and nine months ended September 30, 2017. During the quarter ended September 30, 2018, the Company incurred performance incentive fees of \$683,000. Accordingly, the Company will reimburse PCM \$68,000 during the quarter ending December 31, 2018.

The Reimbursement Agreement also provides for the payment to the IPO underwriters of the amount that the Company agreed to pay to them at the time of the IPO if the Company satisfied certain performance measures over a specified period of time. As the Manager earns performance incentive fees under the management agreement, the IPO underwriters will be paid at a rate of \$20 of payments for every \$100 of performance incentive fees earned by PCM. The payment to the underwriters is subject to a maximum reimbursement in any particular 12-month period of \$2.0 million and the maximum amount that may be paid under the agreement is \$5.9 million. No payments were made during the quarter and nine months ended September 30, 2018. The Company paid reimbursements totaling \$61,000 during the quarter and nine months ended September 30, 2017. During the quarter ended September 30, 2018, the Company incurred performance incentive fees of \$683,000. Accordingly, the Company will reimburse the underwriters \$137,000 during the quarter ending December 31, 2018. The Reimbursement Agreement expires on February 1, 2019.

Note 22—Net Mortgage Loan Servicing Fees

Net mortgage loan servicing fees are summarized below:

	Quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
From non-affiliates:				
Servicing fees (1)	\$49,864	\$42,237	\$147,262	\$119,223
Ancillary and other fees	3,111	2,043	6,673	4,646
Effect of MSR's:				
Carried at fair value—change in fair value				
Realization of cashflows	(30,053)	(2,628)	(84,689)	(6,956)
Other	33,127	(1,349)	101,822	(3,414)
	3,074	(3,977)	17,133	(10,370)
Loss on sale	(123)	—	(123)	—

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Carried at lower of amortized cost or fair value:

Amortization	—	(21,634)	—	(59,015)
Additions to impairment valuation allowance	—	(1,702)	—	(4,287)
(Losses) gains on hedging derivatives	(12,093)	4,576	(44,378)	(1,731)
	(9,142)	(22,737)	(27,368)	(75,403)
	43,833	21,543	126,567	48,466
From PFSI—MSR recapture income	561	333	1,568	859
Net mortgage loan servicing fees	\$44,394	\$21,876	\$128,135	\$49,325
Average servicing portfolio	\$81,350,980	\$63,584,416	\$77,522,709	\$61,764,228

(1) Includes contractually specified servicing fees, net of Agency guarantee fees.

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Note 23—Net Gain on Mortgage Loans Acquired for Sale

Net gain on mortgage loans acquired for sale is summarized below:

	Quarter ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
	(in thousands)							
From non-affiliates:								
Cash loss:								
Mortgage loans	\$	(104,475)	\$	(51,485)	\$	(272,496)	\$	(135,666)
Hedging activities		24,659		(13,468)		63,047		(16,931)
		(79,816)		(64,953)		(209,449)		(152,597)
Non cash gain:								
Recognition of fair value of firm commitment to purchase								
credit risk transfer security		12,311		—		16,737		—
Receipt of MSRs in mortgage loan sale transactions		96,383		82,838		228,337		207,361
Provision for losses relating to representations and warranties								
provided in mortgage loan sales:								
Pursuant to mortgage loans sales		(636)		(1,075)		(1,724)		(2,355)
Reduction in liability due to change in estimate		848		1,642		3,030		7,523
		212		567		1,306		5,168
Change in fair value of financial instruments held at end of								
period:								
IRLCs		(3,907)		880		(5,733)		(2,502)
Mortgage loans		6,013		(1,165)		8,389		2,891
Hedging derivatives		(9,075)		(3,475)		(6,229)		(15,377)
		(6,969)		(3,760)		(3,573)		(14,988)
Total from non-affiliates		22,121		14,692		33,358		44,944
From PFSI—cash gain		2,689		3,275		8,221		9,340
	\$	24,810	\$	17,967	\$	41,579	\$	54,284

Note 24—Net Gain (Loss) on Investments

Net gain (loss) on investments is summarized below:

	Quarter ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
	(in thousands)							
From non-affiliates:								

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Mortgage-backed securities at fair value	\$(19,030)	\$5,001	\$(50,288)	\$9,168
Mortgage loans at fair value:				
Distressed	(3,051)	3,277	(17,702)	7,523
Held in a VIE	(3,630)	2,138	(11,992)	6,309
CRT Agreements	29,481	15,151	90,528	66,591
Asset-backed financing of a VIE at fair value	3,516	(2,158)	12,658	(5,581)
Hedging derivatives	691	(5,910)	1,029	(14,943)
	7,977	17,499	24,233	69,067
From PFSI—ESS	1,706	(3,665)	10,977	(10,920)
	\$9,683	\$13,834	\$35,210	\$58,147

Note 25—Net Interest Income

Net interest income is summarized below:

	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(in thousands)			
Interest income:				
From nonaffiliates:				
Short-term investments	\$385	\$132	\$656	\$516
Mortgage-backed securities	15,903	7,447	37,127	21,954
Mortgage loans acquired for sale at fair value	22,591	16,202	51,874	40,699
Mortgage loans at fair value:				
Distressed	5,245	14,213	18,086	53,456
Held in a VIE	3,066	3,766	8,837	11,370
Deposits securing CRT Agreements	3,190	1,440	8,788	2,703
Placement fees relating to custodial funds	7,979	4,330	18,218	8,212
Other	225	49	478	142
	58,584	47,579	144,064	139,052
From PFSI—ESS	3,740	3,998	11,584	13,011
	62,324	51,577	155,648	152,063
Interest expense:				
To nonaffiliates:				
Assets sold under agreements to repurchase (1)	29,725	26,157	79,705	72,280
Mortgage loan participation purchase and sale agreements	739	409	1,396	1,225
Exchangeable Notes	3,652	3,636	10,945	10,895
Notes payable	5,351	2,320	9,032	9,719
Asset-backed financings of a VIE at fair value	2,740	3,515	7,836	10,520
Interest shortfall on repayments of mortgage loans serviced				
for Agency securitizations	1,897	1,638	5,294	4,068
Interest on mortgage loan impound deposits	693	486	1,596	1,229
	44,797	38,161	115,804	109,936
To PFSI—Assets sold under agreement to repurchase	1,812	2,116	5,686	5,946
	46,609	40,277	121,490	115,882
Net interest income	\$15,715	\$11,300	\$34,158	\$36,181

(1) In 2017, the Company entered into a master repurchase agreement that provides the Company with incentives to finance mortgage loans approved for satisfying certain consumer relief characteristics as provided in the agreement. During the quarter and nine months ended September 30, 2018, the Company included \$5.0 million and \$11.0 million, respectively, of such incentives as a reduction of Interest expense. The master repurchase agreement is subject to a rolling six month term through August 18, 2019, unless terminated earlier at the option of the lender. There can be no assurance that the lender will not terminate this agreement before its stated maturity.

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Note 26—Share-Based Compensation Plans

As of September 30, 2018 and December 31, 2017, the Company had one share-based compensation plan. The following table summarizes the Company's share-based compensation activity:

	Quarter ended		Nine months ended	
	September 30, 2018	2017	September 30, 2018	2017
(in thousands)				
Grants:				
Restricted share units	—	2	129	136
Performance share units	—	—	116	126
Total share units granted	—	2	245	262
Grant date fair value:				
Restricted share units granted	\$—	\$36	\$2,281	\$2,317
Performance share units granted	—	—	1,542	1,675
Total fair value of share units granted	\$—	\$36	\$3,823	\$3,992
Vestings:				
Restricted share units	1	—	261	284
Performance share units	—	—	28	—
Total share units vested	1	—	289	284
Forfeitures:				
Restricted share units	2	—	2	13
Performance share units	—	—	—	—
Total share units forfeited	2	—	2	13
Compensation expense relating to share-based grants	\$1,566	\$737	\$4,322	\$3,864

Note 27—Other Expenses

Other expenses are summarized below:

	Quarter ended		Nine months ended	
	September 30, 2018	2017	September 30, 2018	2017
(in thousands)				
Common overhead allocation from PFSI	\$1,210	\$1,193	\$3,387	\$4,220
Technology	291	374	1,014	1,088
Insurance	274	300	915	968
Other	1,119	1,434	2,442	4,428
	\$2,894	\$3,301	\$7,758	\$10,704

Note 28—Income Taxes

The Company's effective tax rate was 9.9% and 15.6% for the quarter and nine months ended September 30, 2018. The Company's taxable REIT subsidiary ("TRS") recognized a tax expense of \$4.8 million on income of \$17.7 million and a tax expense of \$19.9 million on income of \$73.2 million while the Company's reported consolidated pretax income was \$51.7 million and \$131.8 million for the quarter and nine months ended September 30, 2018, respectively. For the same periods in 2017, the Company's TRS recognized tax expense of \$4.8 million on income of \$12.0 million and tax benefit of \$900,000 on a loss of \$4.5 million, respectively, while the Company's reported consolidated pretax income was \$24.2 million and \$78.6 million, respectively. The relative values between the tax benefit or expense at the TRS and the Company's consolidated pretax income drive the fluctuation in the effective tax rate. The primary difference between the Company's effective tax rate and the statutory tax rate is due to nontaxable REIT income resulting from the dividends paid deduction.

In general, cash dividends declared by the Company will be considered ordinary income to the shareholders for income tax purposes. Some portion of the dividends may be characterized as capital gain distributions or a return of capital. For tax years beginning after December 31, 2017, the 2017 Tax Cuts and Jobs Act (the "Tax Act") (subject to certain limitations) provides a 20% deduction from taxable income for ordinary REIT dividends.

Note 29—Earnings Per Share

The Company grants restricted share units which entitle the recipients to receive dividend equivalents during the vesting period on a basis equivalent to the dividends paid to holders of common shares. Unvested share-based compensation awards containing non-forfeitable rights to receive dividends or dividend equivalents (collectively, “dividends”) are classified as “participating securities” and are included in the basic earnings per share calculation using the two-class method.

Under the two-class method, all earnings (distributed and undistributed) are allocated to common shares and participating securities, based on their respective rights to receive dividends. Basic earnings per share is determined by dividing net income available to common shareholders, reduced by income attributable to the participating securities, by the weighted-average common shares outstanding during the period.

Diluted earnings per share is determined by dividing net income attributable to diluted shareholders, which adds back to net income the interest expense, net of applicable income taxes, on the Company’s Exchangeable Notes, by the weighted-average common shares outstanding, assuming all dilutive securities were issued.

The following table summarizes the basic and diluted earnings per share calculations:

	Quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands except per share amounts)			
Net income	\$46,562	\$19,395	\$111,173	\$76,911
Dividends on preferred shares	(6,235)	(6,125)	(18,703)	(9,032)
Effect of participating securities—share-based compensation awards	(236)	(231)	(541)	(760)
Net income attributable to common shareholders	\$40,091	\$13,039	\$91,929	\$67,119
Net income attributable to common shareholders	\$40,091	\$13,039	\$91,929	\$67,119
Interest on Exchangeable Notes, net of income taxes	2,661	—	7,973	6,564
Diluted net income attributable to common shareholders	\$42,752	\$13,039	\$99,902	\$73,683
Weighted-average basic shares outstanding	60,950	66,636	60,880	66,702
Dilutive securities: Shares issuable pursuant to exchange of the Exchangeable Notes	8,467	—	8,467	8,467
Diluted weighted-average number of shares outstanding	69,417	66,636	69,347	75,169
Basic earnings per share	\$0.66	\$0.20	\$1.51	\$1.01
Diluted earnings per share	\$0.62	\$0.20	\$1.44	\$0.98

Calculation of diluted earnings per share requires certain potentially dilutive shares to be excluded when the inclusion of such shares in the diluted earnings per share calculation would be antidilutive. The following table summarizes the potentially dilutive shares excluded from the diluted earnings per share calculation, as inclusion of such shares would have been antidilutive:

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	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(in thousands)			
Shares issuable under share-based compensation plan	361	643	403	699
Shares issuable pursuant to exchange of the				
Exchangeable Notes	—	8,467	—	—

Note 30—Segments

The Company operates in four segments: correspondent production, credit sensitive strategies, interest rate sensitive strategies and corporate:

- The correspondent production segment represents the Company's operations aimed at serving as an intermediary between mortgage lenders and the capital markets by purchasing, pooling and reselling newly originated prime credit quality mortgage loans either directly or in the form of MBS, using the services of the Manager and PLS.
 - Most of the mortgage loans the Company has acquired in its correspondent production activities have been eligible for sale to GSEs such as Fannie Mae and Freddie Mac or through government agencies such as Ginnie Mae.
 - The credit sensitive strategies segment represents the Company's investments in CRT Agreements, firm commitments to purchase CRT securities, distressed mortgage loans, REO, real estate held for investment, non-Agency subordinated bonds and small balance commercial real estate mortgage loans.
 - The interest rate sensitive strategies segment represents the Company's investments in MSRs, ESS, Agency and senior non-Agency MBS and the related interest rate hedging activities.
 - The corporate segment includes certain interest income, management fee and corporate expense amounts.
- Financial highlights by operating segment are summarized below:

Quarter ended September 30, 2018	Credit		Interest rate	Corporate	Total
	Correspondent production	credit sensitive strategies	sensitive strategies		
	(in thousands)				
Net investment income:					
Net mortgage loan servicing fees	\$—	\$5	\$44,389	\$—	\$44,394
Net gain on mortgage loans acquired for sale	12,496	12,314	—	—	24,810
Net gain (loss) on investments	—	26,293	(16,610)	—	9,683
Net interest income (expense):					
Interest income	22,465	8,675	30,573	611	62,324
Interest expense	(12,708)	(8,792)	(25,109)	—	(46,609)
	9,757	(117)	5,464	611	15,715
Other income	12,442	1,457	—	—	13,899
	34,695	39,952	33,243	611	108,501
Expenses:					
Mortgage loan fulfillment and servicing fees					
payable to PFSI	26,256	1,271	8,800	—	36,327
Management fees	—	—	—	6,482	6,482
Other	2,485	5,619	344	5,582	14,030
	28,741	6,890	9,144	12,064	56,839
Pre-tax income (loss)	\$5,954	\$33,062	\$24,099	\$(11,453)	\$51,662
Total assets at end of quarter	\$1,976,188	\$1,348,750	\$3,822,572	\$120,068	\$7,267,578

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Quarter ended September 30, 2017	Credit		Interest	Corporate	Total
	Correspondent production (in thousands)	sensitive strategies	sensitive		
			strategies		
Net investment income:					
Net mortgage loan servicing fees	\$—	\$47	\$21,829	\$—	\$21,876
Net gain on mortgage loans acquired for sale	17,963	4	—	—	17,967
Net gain (loss) on investments	—	18,562	(4,728)	—	13,834
Net interest income:					
Interest income	16,018	15,951	19,426	182	51,577
Interest expense	(11,351)	(13,096)	(15,830)	—	(40,277)
	4,667	2,855	3,596	182	11,300
Other income (loss)	11,762	(935)	—	—	10,827
	34,392	20,533	20,697	182	75,804
Expenses:					
Mortgage loan fulfillment and servicing fees					
payable to PFSI	23,508	4,273	7,128	—	34,909
Management fees	—	—	—	6,038	6,038
Other	2,574	3,194	265	4,658	10,691
	26,082	7,467	7,393	10,696	51,638
Pre-tax income (loss)	\$8,310	\$13,066	\$13,304	\$(10,514)	\$24,166
Total assets at end of quarter	\$1,304,647	\$1,959,792	\$2,414,477	\$106,127	\$5,785,043

Nine months ended September 30, 2018	Credit		Interest	Corporate	Total
	Correspondent production (in thousands)	sensitive strategies	sensitive		
			strategies		
Net investment income:					
Net mortgage loan servicing fees	\$—	\$29	\$128,106	\$—	\$128,135
Net gain on mortgage loans acquired for sale	24,810	16,769	—	—	41,579
Net gain (loss) on investments	—	72,744	(37,534)	—	35,210
Net interest income (expense):					
Interest income	51,456	27,634	75,423	1,135	155,648
Interest expense	(30,039)	(28,899)	(62,552)	—	(121,490)
	21,417	(1,265)	12,871	1,135	34,158
Other income (loss)	28,410	(351)	—	24	28,083
	74,637	87,926	103,443	1,159	267,165
Expenses:					
Mortgage loan fulfillment and servicing fees					
payable to PFSI	52,759	5,529	24,992	—	83,280

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Management fees	—	—	—	17,906	17,906
Other	4,778	13,077	166	16,172	34,193
	57,537	18,606	25,158	34,078	135,379
Pre-tax income (loss)	\$17,100	\$69,320	\$78,285	\$(32,919)	\$131,786
Total assets at end of period	\$1,976,188	\$1,348,750	\$3,822,572	\$120,068	\$7,267,578

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Nine months ended September 30, 2017	Credit		Interest rate		Total
	Correspondent production (in thousands)	intensive strategies	sensitive strategies	Corporate	
Net investment income:					
Net mortgage loan servicing fees	\$—	\$91	\$49,234	\$—	\$49,325
Net gain on mortgage loans acquired for sale	54,117	167	—	—	54,284
Net gain (loss) on investments	—	74,695	(16,548)	—	58,147
Net interest income:					
Interest income	40,194	57,011	54,200	658	152,063
Interest expense	(28,214)	(41,178)	(46,490)	—	(115,882)
	11,980	15,833	7,710	658	36,181
Other income (loss)	30,576	(4,281)	—	5	26,300
	96,673	86,505	40,396	663	224,237
Expenses:					
Mortgage loan fulfillment and servicing fees					
payable to PFSI	61,191	12,143	19,837	—	93,171
Management fees	—	—	—	16,684	16,684
Other	6,614	11,419	1,094	16,656	35,783
	67,805	23,562	20,931	33,340	145,638
Pre-tax income (loss)	\$28,868	\$62,943	\$19,465	\$(32,677)	\$78,599
Total assets at end of period	\$1,304,647	\$1,959,792	\$2,414,477	\$106,127	\$5,785,043

Note 31—Supplemental Cash Flow Information

	Nine months ended	
	September 30, 2018	2017
	(in thousands)	
Income tax payments, net of refunds	\$900	\$(294)
Interest payments	\$124,332	\$115,108
Cumulative effect on accumulated deficit of conversion to fair value		
accounting	\$14,361	\$—
Non-cash investing activities:		
Transfer of mortgage loans and advances to real estate		
acquired in settlement of loans	\$26,229	\$76,981
Transfer of real estate acquired in settlement of mortgage	\$4,123	\$14,300

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loans to real estate held for investment		
Transfer of real estate acquired in settlement of mortgage		
loans from real estate held for investment	\$1,112	\$—
Receipt of mortgage servicing rights as proceeds from sales of		
mortgage loans	\$228,337	\$207,361
Receipt of excess servicing spread pursuant to recapture agreement		
with PennyMac Financial Services, Inc.	\$1,983	\$4,160
Capitalization of servicing advances pursuant to mortgage loan		
modifications	\$4,734	\$17,759
Non-cash financing activities:		
Recognition of financing premium arising from repurchase		
agreement derivatives	\$11,411	\$—
Dividends declared, not paid	\$28,817	\$31,655

Note 32—Regulatory Capital and Liquidity Requirements

PMC is a seller/servicer for Fannie Mae and Freddie Mac. The Company is required to comply with the following minimum capital and liquidity eligibility requirements to remain in good standing with each Agency:

- A minimum net worth of \$2.5 million plus 25 basis points of UPB for all mortgage loans serviced;
- A tangible net worth/total assets ratio greater than or equal to 6%; and
- Liquidity equal to or exceeding 3.5 basis points multiplied by the aggregate UPB of all mortgages secured by 1-4 unit residential properties serviced for Freddie Mac and Fannie Mae (“Agency Mortgage Servicing”) plus 200 basis points multiplied by the sum of nonperforming (90 or more days delinquent) Agency Mortgage Servicing that exceeds 6% of Agency Mortgage Servicing.

Such Agencies’ capital and liquidity amounts and requirements, the calculations of which are defined by each entity, are summarized below:

Fannie Mae and Freddie Mac	Net Worth (1)		Tangible Net Worth / Total Assets Ratio (1)		Liquidity (1)	
	Actual	Required	Actual	Required	Actual	Required
	(in thousands)				(in thousands)	
September 30, 2018	\$555,214	\$213,379	11 %	6 %	\$100,478	\$28,983
December 31, 2017	\$487,535	\$182,818	12 %	6 %	\$73,252	\$25,245

(1) Calculated in accordance with the Agencies’ requirements.

Noncompliance with the Agencies’ capital and liquidity requirements can result in the Agencies taking various remedial actions up to and including removing the Company’s ability to sell loans to and service loans on behalf of the Agencies.

Note 33—Subsequent Events

Management has evaluated all events and transactions through the date the Company issued these consolidated financial statements. During this period:

- During October of 2018, the Company settled its obligation to fund Deposits securing credit risk transfer agreements. The Company funded this transaction through the sale of assets under agreements to repurchase which included financing of the securities backed by the Deposits securing credit risk transfer agreements of \$578.5 million as of September 30, 2018 and \$200.5 million of deposits made during the agreement’s aggregation period. The Company received \$571.5 million in advances under the asset repurchase agreements.
- During October 2018, the Company entered into four agreements to sell approximately \$300 million in UPB of performing and nonperforming loans from the distressed portfolio. These transactions are subject to continuing due diligence and customary closing conditions and there can be no assurance regarding the size of these transactions or that these transactions will be completed at all.

All agreements to repurchase assets that matured between September 31, 2018 and the date of this Report were extended or renewed.

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Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of financial condition and results of operations should be read with the consolidated financial statements and the related notes of PennyMac Mortgage Investment Trust (“PMT”) included within this Quarterly Report on Form 10-Q.

Statements contained in this Quarterly Report on Form 10-Q may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements involve known and unknown risks, uncertainties and other factors, which may cause actual results to be materially different from those expressed or implied in such statements. You can identify these forward-looking statements by words such as “may,” “will,” “should,” “expect,” “anticipate,” “believe,” “estimate,” “intend,” “plan” and other similar expressions. You should consider our forward-looking statements in light of the risks discussed under the heading “Risk Factors,” as well as our consolidated financial statements, related notes, and the other financial information appearing elsewhere in this Quarterly Report on Form 10-Q and our other filings with the United States Securities and Exchange Commission (“SEC”). The forward-looking statements contained in this Quarterly Report on Form 10-Q are made as of the date hereof and we assume no obligation to update or supplement any forward-looking statements.

The following discussion and analysis provides information that we believe is relevant to an assessment and understanding of our consolidated results of operations and financial condition. Unless the context indicates otherwise, references in this Quarterly Report on Form 10-Q to the words “we,” “us,” “our” and the “Company” refer to PMT.

Our Company

We are a specialty finance company that invests primarily in residential mortgage loans and mortgage-related assets. Our objective is to provide attractive risk-adjusted returns to our investors over the long-term, primarily through dividends and secondarily through capital appreciation. Our investment focus is on mortgage-related assets that we create through our correspondent production activities, including mortgage servicing rights (“MSRs”), credit risk transfer agreements (“CRT Agreements”) and credit risk transfer securities that absorb credit losses on certain of the mortgage loans we sell. We also invest in mortgage-backed securities (“MBS”), and hold excess servicing spread (“ESS”) on MSRs acquired by PennyMac Loan Services, LLC (“PLS”). We have also historically invested in distressed mortgage assets (mortgage loans and real estate acquired in settlement of mortgage loans) as well as other credit sensitive assets, including loans that finance multifamily and other commercial real estate, which are no longer our primary focus for new investments.

We are externally managed by PNMAC Capital Management, LLC (“PCM”), an investment adviser that specializes in and focuses on U.S. mortgage assets. Most of our mortgage loan portfolio is serviced by PLS.

Correspondent Production

Our correspondent production activities involve the acquisition and sale of newly originated prime credit quality residential mortgage loans. Correspondent production serves as the source of our investments in MSRs, CRT Agreements and commitments to purchase credit risk transfer securities, and are summarized below:

	Quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Sales of mortgage loans acquired for sale:				
To nonaffiliates	\$8,435,791	\$7,035,994	\$18,992,722	\$17,683,444

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To PennyMac Financial Services, Inc.	9,317,446	11,480,293	28,584,762	32,724,487
	\$17,753,237	\$18,516,287	\$47,577,484	\$50,407,931
Net gain on mortgage loans acquired for sale	\$24,810	\$17,967	\$41,579	\$54,284
Sourcing fees received from PLS included in Net gain on				
mortgage loans acquired for sale	\$2,689	\$3,275	\$8,221	\$9,340
Investment activities driven by correspondent production:				
Receipt of MSR as proceeds from sales of mortgage loans	\$96,383	\$82,838	\$228,337	\$207,361
Deposits of cash securing CRT Agreements	\$18,558	\$44,998	\$96,446	\$102,146
Change in commitments to fund Deposits securing CRT				
Agreements resulting from sale of mortgage loans under				
CRT Agreements	\$(18,558)	\$108,051	\$96,037	\$264,165
Increase in face amount of firm commitment to purchase				
credit				
risk transfer securities	\$236,875	\$—	\$294,698	\$—

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To the extent that we purchase mortgage loans that are insured by the U.S. Department of Housing and Urban Development (“HUD”) through the Federal Housing Administration (the “FHA”), or insured or guaranteed by the Veterans Administration (the “VA”) or U.S. Department of Agriculture (“USDA”), we and PLS have agreed that PLS will fulfill and purchase such mortgage loans, as PLS is a Ginnie Mae-approved issuer and we are not. This arrangement has enabled us to compete with other correspondent aggregators that purchase both government and conventional mortgage loans. We receive a sourcing fee from PLS ranging from two to three and one-half basis points, generally based on the average number of calendar days that mortgage loans are held by us prior to purchase by PLS, on the unpaid principal balance (“UPB”) of each mortgage loan that we sell to PLS.

We have transferred certain correspondent production loans into a private label securitization, and retained a portion of the securities created in the securitization transaction. Our private label securitization is accounted for as a financing arrangement. Sales of securities included in the securitization are treated as issuances of debt.

Credit Sensitive Investments

CRT Agreements

We believe that CRT Agreements and credit risk transfer securities are long-term investments that can produce attractive risk-adjusted returns through our own mortgage production while aligning with Fannie Mae’s strategic goal to attract private capital investment in credit risk of the government-sponsored entities (“GSEs”). We believe there is significant potential for investment in front-end credit risk transfer and MSR that result from our correspondent production activities as we reinvest capital from the liquidation of distressed mortgage loans. During the quarter and nine months ended September 30, 2018, we made investments in CRT Agreements totaling \$18.6 million and \$96.4 million, respectively, and held CRT-related investments (composed of deposits securing CRT Agreements and derivative assets) totaling \$789.0 million at September 30, 2018.

During the quarter ended June 30, 2018, we fulfilled our commitments to sell mortgage loans into CRT Agreements and we began selling mortgage loans under agreements that include our firm commitment to purchase credit risk transfer securities that absorb credit losses on such mortgage loans. We have recognized \$18.7 million at fair value related to the firm commitment to purchase the credit risk transfer securities during the nine months ended September 30, 2018.

Distressed Mortgage Assets

We have invested in distressed mortgage loans through direct acquisitions of mortgage loan portfolios from institutions such as banks and mortgage companies. We seek to maximize the fair value of the distressed mortgage loans that we acquire using means that are appropriate for the particular loan, including both proprietary and nonproprietary loan modification programs, special servicing and other initiatives focused on avoiding foreclosure, when possible. When we are unable to effect a cure for a mortgage loan delinquency, our objective is timely acquisition and/or liquidation of the property securing the mortgage loan through the use, in part, of short sales and deed-in-lieu-of-foreclosure programs.

We may elect to hold certain real estate acquired in settlement of loans (“REO”) as income-producing properties for extended periods as a means of maximizing our returns on such properties. We seek to maximize our returns on distressed mortgage assets through individual loan and property resolutions, as well as bulk sales. During the quarter and nine months ended September 30, 2018, we received proceeds from liquidations, payoffs, paydowns and sales from our portfolio of distressed mortgage loans and REO totaling \$119.6 million and \$466.5 million, respectively, including loan sales totaling \$89.5 million and \$348.6 million, respectively, in fair value of distressed mortgage loans.

Interest Rate Sensitive Investments

Our interest rate sensitive investments include:

• **Mortgage servicing rights.** During the quarter and nine months ended September 30, 2018, we received \$96.4 million and \$228.3 million, respectively, of MSR as proceeds from sales of mortgage loans acquired for sale. We held \$1.1 billion of MSR at fair value at September 30, 2018.

• **REIT-eligible mortgage-backed or mortgage-related securities.** During the quarter and nine months ended September 30, 2018, we purchased MBS at fair value totaling \$501.4 million and \$1.3 billion, respectively. We held MBS with fair values totaling \$2.1 billion at September 30, 2018.

• **ESS relating to MSR held by PFSI.** During the quarter and nine months ended September 30, 2018, we did not purchase any ESS from PFSI. However, pursuant to a recapture agreement with PLS, we received ESS with fair value totaling \$499,000 and \$2.0 million, respectively, during the quarter and nine months ended September 30, 2018. We held ESS with a fair value totaling \$223.3 million at September 30, 2018.

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Capital Structure

Our board of trustees has authorized a repurchase program under which we may repurchase up to \$300 million of our outstanding common shares. During the nine months ended September 30, 2018, we repurchased approximately 671,000 common shares at a cost of \$10.7 million. All of our repurchases were made during the quarter ended March 31, 2018. We have repurchased a cumulative total of 14.7 million common shares at a cost of \$216.6 million under the program. The repurchased common shares were canceled upon settlement of the repurchase transactions and returned to the authorized but unissued share pool.

Taxation

We believe that we qualify to be taxed as a REIT and as such will not be subject to federal income tax on that portion of our income that is distributed to shareholders as long as we meet applicable REIT asset, income and share ownership tests. If we fail to qualify as a REIT, and do not qualify for certain statutory relief provisions, our profits will be subject to income taxes and we may be precluded from qualifying as a REIT for the four tax years following the year we lose our REIT qualification. A portion of our activities, including our correspondent production business, is conducted in our taxable REIT subsidiary ("TRS"), which is subject to corporate federal and state income taxes. Accordingly, we have made a provision for income taxes with respect to the operations of our TRS. We expect that the effective rate for the provision for income taxes may be volatile in future periods. Our goal is to manage the business to take full advantage of the tax benefits afforded to us as a REIT.

Non-Cash Income

A substantial portion of our net investment income includes non-cash items, including fair value adjustments, recognition of the fair value of assets created and liabilities incurred in mortgage loan sale transactions and the capitalization and amortization of certain assets and liabilities. Because we have elected, or are required by generally accepted accounting principles, to record our financial assets (comprised of MBS, mortgage loans acquired for sale at fair value, mortgage loans at fair value and ESS), our firm commitment to purchase credit risk transfer securities, our derivatives, our MSRs, and our asset-backed financing and interest-only security payable at fair value, a substantial portion of the income or loss we record with respect to such assets and liabilities results from non-cash changes in fair value.

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The amounts of non-cash income (loss) items included in net investment income are as follows:

	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(dollars in thousands)			
Net gain on mortgage loans acquired for sale:				
Receipt of MSRs in mortgage loan sale transactions	\$96,383	\$82,838	\$228,337	\$207,361
Fair value of commitment to purchase credit				
risk transfer securities	12,311	—	16,737	—
Provision for losses relating to representations and				
warranties provided in mortgage loan sales:				
Pursuant to mortgage loans sales	(636)	(1,075)	(1,724)	(2,355)
Reduction in liability due to change in estimate	848	1,642	3,030	7,523
Change in fair value during the period of				
financial instruments held at period end:				
IRLCs	(3,907)	880	(5,733)	(2,502)
Mortgage loans acquired for sale	6,013	(1,165)	8,389	2,891
Hedging derivatives	(9,075)	(3,475)	(6,229)	(15,377)
	101,937	79,645	242,807	197,541
Net gain (loss) on investments:				
Mortgage-backed securities	(19,030)	5,001	(50,288)	9,168
Mortgage loans:				
Distressed	(1,141)	2,797	(15,258)	5,314
Held in a variable interest entity	(3,630)	2,138	(11,992)	6,309
ESS	1,706	(3,665)	10,977	(10,920)
CRT Agreements	7,185	4,162	27,714	41,268
Interest-only security payable at fair value	(3,083)	191	(4,105)	(2,272)
Asset-backed financing of a VIE	3,516	(2,158)	12,658	(5,581)
	(14,477)	8,466	(30,294)	43,286
Net mortgage loan servicing fees—MSR valuation adjustments	33,127	(4,330)	101,822	(11,243)
Net interest income—Capitalization of interest				
pursuant to mortgage loan modifications	2,297	7,020	6,543	27,737
	\$122,884	\$90,801	\$320,878	\$257,321
Net investment income	\$108,501	\$75,804	\$267,165	\$224,237
Non-cash items as a percentage of net investment income	113	% 120	% 120	% 115

Cash is generated when mortgage loan investments are paid down, paid off or sold, when payments of principal and interest occur on such mortgage loans or when the property securing the mortgage loan has been sold. We receive proceeds on the sale of mortgage loans acquired for sale that include both cash and our estimate of the fair value of MSRs and firm commitment to purchase CRT securities, and we recognize a liability for potential losses relating to representations and warranties created in the mortgage loan sales transactions. We receive cash related to MSRs in the form of mortgage loan servicing fees and we pay cash relating to our provision for representations and warranties when we repurchase mortgage loans or settle loss claims from investors. Cash flows relating to hedging instruments

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are generally produced when the instruments mature or when we effectively cancel the transactions through an offsetting trade. Cash is generated with respect to CRT Agreements through a portion of both the interest payments collected on mortgage loans in the CRT Agreements' reference pools and the deposits securing the agreements that are released as principal on such mortgage loans is repaid.

The following table illustrates the proceeds received during the period from dispositions and paydowns of distressed mortgage loan and REO investments, net gain in fair value that we accumulated over the period during which we owned such investments liquidated during the period, and additional net gain realized upon liquidation of such assets:

	Quarter ended September 30, 2018				2017	
	Accumulated	Net gain (loss) on	Accumulated	Net gain on	Accumulated	Net gain on
	Proceeds	gains (losses) (1)	liquidation (2)	Proceeds	gains (losses) (1)	liquidation (2)
	(in thousands)					
Mortgage loans	\$9,183	\$ 1,492	\$ 106	\$25,748	\$ 3,520	\$ 255
REO	20,960	(4,384)	2,138	39,276	(3,807)	3,280
	30,143	(2,892)	2,244	65,024	(287)	3,535
Distressed mortgage loan sales	89,454	15,203	(2,017)	131,507	22,995	229
	\$119,597	\$ 12,311	\$ 227	\$196,531	\$ 22,708	\$ 3,764

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	Nine months ended September 30, 2018			2017		
	Accumulated	Net gain (loss) on		Accumulated	Net gain on	
	Proceeds (in thousands)	gains (losses) (1)	liquidation (2)	Proceeds (in thousands)	gains (losses) (1)	liquidation (2)
Mortgage loans	\$33,232	\$ 3,921	\$ 968	\$83,381	\$ 10,332	\$ 2,027
REO	84,645	(13,702)	6,392	140,863	(12,211)	10,895
	117,877	(9,781)	7,360	224,244	(1,879)	12,922
Distressed mortgage loan sales (3)	348,618	29,606	(3,413)	205,535	32,571	202
	\$466,495	\$ 19,825	\$ 3,947	\$429,779	\$ 30,692	\$ 13,124

(1) Represents valuation gains and losses recognized during the period we held the respective asset, including expected gains or losses upon sale of assets subject to contract of sale, but excludes the gain or loss recorded upon sale or repayment of the respective asset.

(2) Represents the gain or loss recognized upon sale or repayment of the respective asset.

(3) Excludes \$14.8 million in proceeds received during the nine months ended September 30, 2017, from the sale of seasoned loans originally acquired in our correspondent production business.

The amounts included in accumulated gains and gains on liquidation do not include the cost of managing the liquidated assets which may be substantial depending on the collection status of the mortgage loan at acquisition and on our success in working with the borrower to resolve the distress in the mortgage loan. Accumulated gains include the amount of accumulated valuation gains and losses recognized throughout the holding period and, in the case of REO, include estimated direct transaction costs to be incurred in the sale of the property. Accordingly, the preceding amounts do not represent periodic earnings on a cash basis and the amount of gain will have accumulated over varying periods depending on the holding periods for individual assets.

The primary expenses incurred at a loan level in managing our portfolio of distressed assets are servicing and activity fees. From the time of acquisition of the distressed assets through their deboarding dates, we incurred servicing and activity fees of \$4.9 million and \$20.0 million for assets liquidated during the quarter and nine months ended September 30, 2018, respectively, as compared to \$8.6 million and \$18.0 million during the same periods in 2017.

Results of Operations

The following is a summary of our key performance measures:

	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(dollars in thousands, except per share amounts)			
Net investment income	\$108,501	\$75,804	\$267,165	\$224,237
Expenses	56,839	51,638	135,379	145,638
Provision for income taxes	5,100	4,771	20,613	1,688
Net income	46,562	19,395	111,173	76,911
Dividends on preferred shares	6,235	6,125	18,703	9,032
Net income attributable to common shareholders	\$40,327	\$13,270	\$92,470	\$67,879
Pre-tax income (loss) by segment:				
Correspondent production	\$5,954	\$8,310	\$17,100	\$28,868
Credit sensitive strategies	33,062	13,066	69,320	62,943
Interest rate sensitive strategies	24,099	13,304	78,285	19,465
Corporate	(11,453)	(10,514)	(32,919)	(32,677)
	\$51,662	\$24,166	\$131,786	\$78,599
Annualized return on average common shareholders' equity	12.8	% 4.0	% 9.8	% 6.9
Earnings per common share:				
Basic	\$0.66	\$0.20	\$1.51	\$1.01
Diluted	\$0.62	\$0.20	\$1.44	\$0.98
Dividends per common share declared & paid	\$0.47	\$0.47	\$1.41	\$1.41
Per common share closing prices:				
During the period:				
High	\$20.35	\$18.45	\$20.35	\$18.45
Low	\$18.56	\$16.54	\$15.57	\$16.37
At period end	\$20.24	\$17.39		

	September 30, 2018	December 31, 2017
Total assets (in thousands)	\$7,267,578	\$5,604,933
Book value per common share	\$20.48	\$20.13

During the quarter and nine months ended September 30, 2018, we recorded net income of \$46.6 million, or \$0.62 per diluted share, and net income of \$111.2 million, or \$1.44 per diluted share, respectively. Our net income for the quarter and nine months ended September 30, 2018 reflects net mortgage loan servicing fees of \$44.4 million and \$128.1 million, respectively, supplemented by net gain on mortgage loans acquired for sale of \$24.8 million and \$41.6 million, respectively, mortgage loan origination fees of \$12.4 million and \$28.3 million, respectively, net gain on investments of \$9.7 million and \$35.2 million, respectively, and net interest income of \$15.7 million and \$34.2 million, respectively.

Our net income for the quarter and nine months ended September 30, 2018 includes recognition of incentives we received for financing certain of our mortgage loans acquired for sale satisfying certain relief characteristics under a master repurchase agreement. During the quarter and nine months ended September 30, 2018, we recognized \$5.0

million and \$11.0 million in such incentives as a reduction of interest expense. The master repurchase agreement is subject to a rolling six month term through August 18, 2019, unless terminated earlier at the option of the lender. We can provide no assurance that the lender will not terminate this agreement before its stated maturity.

During the quarter and nine months ended September 30, 2017, we recorded net income of \$19.4 million, or \$0.20 per diluted share, and net income of \$76.9 million, or \$0.98 per diluted share, respectively. Our net income for the quarter and nine months ended September 30, 2017 reflects net gain on investments of \$13.8 million and \$58.1 million, respectively, net gain on mortgage loans acquired for sale of \$18.0 million and \$54.3 million, respectively, supplemented by net mortgage loan servicing fees of \$21.9 million and \$49.3 million, respectively, and net interest income of \$11.3 million and \$36.2 million, respectively.

Our net income during the quarter and nine months ended September 30, 2018 was higher than the same periods in 2017, however the effect of increasing interest rates shifted the sources of our earnings towards our investment in MSR's and away from correspondent production. Rising interest rates also reflected negatively on our investment in MBS, and the fair value of our portfolio of distressed mortgage loans was negatively affected by increases in investor yield requirements for comparable assets.

Net Investment Income

During the quarter and nine months ended September 30, 2018, we recorded net investment income of \$108.5 million and \$267.2 million, respectively, comprised primarily of \$44.4 million and \$128.1 million, respectively, of net loan servicing fees, \$24.8 million and \$41.6 million, respectively, of net gain on mortgage loans acquired for sale, \$9.6 million and \$35.2 million, respectively, of net gain on investments, \$12.4 million and \$28.3 million, respectively, of mortgage loan origination fees and \$15.7 million and \$34.2 million, respectively, of net interest income, partially offset by \$310,000 and \$5.8 million, respectively, of losses from results of REO.

During the quarter and nine months ended September 30, 2017, we recorded net investment income of \$75.8 million and \$224.2 million, respectively, comprised primarily of \$13.8 million and \$58.1 million, respectively, \$18.0 million and \$54.3 million, respectively, of net gain on mortgage loans acquired for sale, of net gain on investments, \$21.9 million and \$49.3 million, respectively, of net loan servicing fees, \$11.3 million and \$36.2 million, respectively, of net interest income, and \$11.7 million and \$30.5 million of mortgage loan origination fees, partially offset by \$3.1 million and \$10.9 million of losses from results of REO.

Our net investment income is summarized below:

	Quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Net mortgage loan servicing fees	\$44,394	\$21,876	\$128,135	\$49,325
Net gain on mortgage loans held for sale	24,810	17,967	41,579	54,284
Net mortgage loan origination fees	12,424	11,744	28,311	30,501
Net gain on investments	9,683	13,834	35,210	58,147
Net interest income	15,715	11,300	34,158	36,181
Results of real estate acquired in settlement of loans	(310)	(3,143)	(5,833)	(10,854)
Other	1,785	2,226	5,605	6,653
	\$108,501	\$75,804	\$267,165	\$224,237

Our net investment income reflects the effects of rising interest rates on our net mortgage loan servicing fees and our net gains on mortgage loans held for sale, as well as the effect of the growth of our investments in MBS and CRT Agreements.

Net Mortgage Loan Servicing Fees

Our correspondent production activity is the primary source of our mortgage loan servicing portfolio. When we sell mortgage loans, we generally enter into a contract to service those loans and we recognize the fair value of such contracts as MSR's. Under these contracts, we are required to perform mortgage loan servicing functions in exchange for fees and the right to other compensation.

The servicing functions, which are performed on our behalf by PLS, typically include, among other responsibilities, collecting and remitting mortgage loan payments; responding to borrower inquiries; accounting for the mortgage loan; holding and remitting custodial (impound) funds for payment of property taxes and insurance premiums; counseling delinquent mortgagors; and supervising foreclosures and property dispositions.

Net mortgage loan servicing fees are summarized below:

	Quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
From non-affiliates:				
Servicing fees (1)	\$49,864	\$42,237	\$147,262	\$119,223
Ancillary and other fees	3,111	2,043	6,673	4,646
Effect of MSR:				
Carried at fair value:				
Realization of cashflows	(30,053)	(2,628)	(84,689)	(6,956)
Other	33,127	(1,349)	101,822	(3,414)
	3,074	(3,977)	17,133	(10,370)
Loss on sale	(123)	—	(123)	—
Carried at lower of amortized cost or fair value:				
Amortization	—	(21,634)	—	(59,015)
Increase in impairment valuation allowance	—	(1,702)	—	(4,287)
(Losses) gains on hedging derivatives, net	(12,093)	4,576	(44,378)	(1,731)
	(9,142)	(22,737)	(27,368)	(75,403)
	43,833	21,543	126,567	48,466
From PFSI—MSR recapture income	561	333	1,568	859
Net mortgage loan servicing fees	\$44,394	\$21,876	\$128,135	\$49,325
Average servicing portfolio	\$81,350,980	\$63,584,416	\$77,522,709	\$61,764,228

(1) Includes contractually specified servicing fees, net of guarantee fees.

Net mortgage loan servicing fees increased during the quarter ended September 30, 2018, as compared to the comparable period in 2017 by \$22.5 million, and increased during the nine months ended September 30, 2018, as compared to the comparable period in 2017 by \$78.8 million. The increase in net mortgage loan servicing fees during the quarter and nine months ended September 30, 2018, as compared to the quarter and nine months ended September 30, 2017, was attributable to both the positive effects on fair value of our investment in MSRs of generally rising interest rate throughout the periods and increased servicing fees arising from growth in our portfolio of mortgage loans serviced for others.

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We have entered into an MSR recapture agreement that requires PLS to transfer to us cash in an amount equal to 30% of the fair market value of the MSRs related to all the loans so originated. We recognized MSR recapture income during the quarter and nine months ended September 30, 2018 of \$561,000 and \$1.6 million, respectively, as compared to \$333,000 and \$859,000, respectively, for the quarter and nine months ended September 30, 2017.

Net Gain on Mortgage Loans Acquired for Sale

Our net gain on mortgage loans acquired for sale is summarized below:

	Quarter ended September 30, 2018		September 2017		Nine months ended September 30, 2018		2017	
	(in thousands)							
From non-affiliates:								
Cash loss:								
Mortgage loans	\$(104,475	)	\$(51,485	)	\$(272,496	)	\$(135,666)
Hedging activities	24,659		(13,468	)	63,047		(16,931)
	(79,816	)	(64,953	)	(209,449	)	(152,597)
Non-cash gain:								
Receipt of MSRs in mortgage loan sale transactions	96,383		82,838		228,337		207,361	
Provision for losses relating to representations and warranties provided in mortgage loan sales:								
Pursuant to mortgage loan sales	(636	)	(1,075	)	(1,724	)	(2,355)
Reduction in liability due to change in estimate	848		1,642		3,030		7,523	
	212		567		1,306		5,168	
Recognition of fair value of commitment to purchase credit risk transfer security	12,311		—		16,737		—	
Change in fair value during the period of financial instruments held at period end:								
IRLCs	(3,907	)	880		(5,733	)	(2,502)
Mortgage loans	6,013		(1,165	)	8,389		2,891	
Hedging derivatives	(9,075	)	(3,475	)	(6,229	)	(15,377)
	(6,969	)	(3,760	)	(3,573	)	(14,988)
Total from non-affiliates	22,121		14,692		33,358		44,944	
From PFSI cash gain	2,689		3,275		8,221		9,340	
	\$24,810		\$17,967		\$41,579		\$54,284	
Interest rate lock commitments issued:								
Loans acquired for sale to nonaffiliates	\$8,568,216		\$6,356,344		\$19,123,343		\$18,562,276	
Loans acquired for sale to PFSI	9,145,715		10,999,301		28,389,995		31,500,559	
	\$17,713,931		\$17,355,645		\$47,513,338		\$50,062,835	
	September 30, 2018		December 31, 2017					
	(in thousands)							
Fair value of mortgage loans acquired for sale held at period end:								

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For sale to nonaffiliates	\$1,725,001	\$981,808
For sale to PFSI	217,334	279,571
Repurchased pursuant to representations and warranties	7,097	8,136
	\$1,949,432	\$1,269,515

The changes in gain on mortgage loans acquired for sale during the nine months ended September 30, 2018, as compared to the same periods in 2017, reflects the value of our commitment to invest in the credit risk of our mortgage loan production. We included \$12.3 million and \$16.7 million in gain on sale of mortgage loans related to our continued involvement in the credit risk relating to the mortgage loans we sold during the quarter and nine months ended September 30, 2018. This commitment was offset by the negative effect on mortgage loan sale profitability caused by generally rising interest rates in the mortgage market, which has a negative effect on demand for mortgage lending.

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Our net gain on mortgage loans acquired for sale includes both cash and non-cash elements. We receive proceeds on sale that include both cash, our estimate of the fair value of MSR's we receive and of our firm commitment to purchase credit risk transfer securities relating to our mortgage loan production. We also recognize a liability for potential losses relating to representations and warranties created in the mortgage loan sales transactions.

Provision for Losses on Representations and Warranties

We provide for our estimate of the future losses that we may be required to incur as a result of our breach of representations and warranties. Our agreements with the purchasers include representations and warranties related to the mortgage loans we sell. The representations and warranties require adherence to purchaser and insurer origination and underwriting guidelines, including but not limited to the validity of the lien securing the mortgage loan, property eligibility, borrower credit, income and asset requirements, and compliance with applicable federal, state and local law.

In the event of a breach of our representations and warranties, we may be required to either repurchase the mortgage loans with the identified defects or indemnify the investor or insurer. In such cases, we bear any subsequent credit loss on the mortgage loans. Our credit loss may be reduced by any recourse we have to correspondent sellers that, in turn, had sold such mortgage loans to us and breached similar or other representations and warranties. In such event, we have the right to seek a recovery of related repurchase losses from that correspondent seller.

The method we use to estimate the liability for representations and warranties is a function of estimated future defaults, mortgage loan repurchase rates, the potential severity of loss in the event of default and the probability of reimbursement by the correspondent mortgage loan seller. We establish a liability at the time mortgage loans are sold and review our liability estimate on a periodic basis.

Following is a summary of the indemnification and repurchase activity and mortgage loans subject to representations and warranties:

	Quarter ended September 30, 2018		September 30, 2017	
			Nine months ended September 30, 2018	
			2017	
	(UPB-in thousands)			
Indemnification activity:				
Mortgage loans indemnified by PMT at beginning of period	\$5,660	\$6,672	\$5,926	\$4,856
New indemnifications	371	—	893	2,069
Less: Indemnified mortgage loans repaid or refinanced	—	504	788	757
Mortgage loans indemnified by PMT at end of period	\$6,031	\$6,168	\$6,031	\$6,168
Mortgage loans with deposits received from correspondent sellers				
collateralizing prospective indemnification losses at end of period	\$781	\$781		
Repurchase activity:				
Mortgage loans repurchased by PMT	\$2,640	\$2,627	\$8,243	\$8,706
Less:				
Mortgage loans repurchased by correspondent sellers	2,083	1,607	8,215	5,852
Mortgage loans repaid by borrowers	462	1,238	2,036	3,664
Net mortgage loans repurchased (repurchased by				
correspondent sellers or repaid by borrowers), net	\$95	\$(218)	\$(2,008)	\$(810)

Net losses charged (recovery credited) to liability for			
representations and warranties	\$—	\$83	\$(41) \$135
At end of period:			
Mortgage loans subject to representations and warranties	\$83,370,583	\$67,196,537	
Liability for representations and warranties	\$7,413	\$10,047	

During the quarter and nine months ended September 30, 2018, we repurchased mortgage loans with UPBs totaling \$2.6 million and \$8.2 million, respectively, and recognized a net recovery to the liability for representations and warranties totaling \$41,000 during the nine months ended September 30, 2018, as compared to the quarter and nine months ended September 30, 2017, with repurchases of \$2.6 million and \$8.7 million, respectively, and recorded net losses charged to the liability for representations and warranties of \$83,000 and \$135,000, respectively, during the same periods in 2017. The losses we have recorded to date have been moderated by our ability to recover most of the losses inherent in the repurchased mortgage loans from the correspondent sellers. As the outstanding balance of mortgage loans we purchase and sell subject to representations and warranties increases and the mortgage loans sold season, we expect that the level of repurchase activity and associated losses may increase.

The amount of the liability for representations and warranties is difficult to estimate and requires considerable judgment. The level of mortgage loan repurchase losses is dependent on economic factors, investor loss mitigation strategies, our ability to recover any losses inherent in the repurchased mortgage loan from the correspondent seller and other external conditions that may change over the lives of the underlying mortgage loans. We may be required to incur losses related to such representations and warranties for several periods after the mortgage loans are sold or liquidated.

We record adjustments to our recorded liability for losses on representations and warranties as economic fundamentals change, as investor and Agency evaluations of their loss mitigation strategies (including claims under representations and warranties) change and as economic conditions affect our correspondent sellers' ability or willingness to fulfill their recourse obligations to us. Such adjustments may be material to our financial position and income in future periods. Adjustments to our liability for representations and warranties are included as a component of our Net gains on mortgage loans acquired for sale at fair value. We recorded an \$848,000 and a \$3.0 million reduction in liability for representations and warranties during the quarter and nine months ended September 30, 2018, respectively, due to the reductions in the liability relating to previously sold mortgage loans meeting criteria established by the Agencies which exempt them from certain repurchase or indemnification claims.

Mortgage Loan Origination Fees

Mortgage loan origination fees represent fees we charge correspondent sellers relating to our purchase of mortgage loans from those sellers. The changes in the amount of these fees during the quarter and nine months ended September 30, 2018, as compared to the same periods in 2017, is primarily due to changes in the volume of mortgage loans we purchased during the quarter and nine months ended September 30, 2018, as compared to the same periods in 2017.

Net Gain (Loss) on Investments

Net gain (loss) on investments is summarized below:

	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(in thousands)			
From non-affiliates:				
Mortgage-backed securities	\$(19,030)	\$5,001	\$(50,288)	\$9,168
Mortgage loans at fair value:				
Distressed	(3,051)	3,277	(17,702)	7,523
Held in a VIE	(3,630)	2,138	(11,992)	6,309
CRT Agreements	29,481	15,151	90,528	66,591
Asset-backed financings of a VIE at fair value	3,516	(2,158)	12,658	(5,581)
Hedging derivatives	691	(5,910)	1,029	(14,943)
	7,977	17,499	24,233	69,067
From PFSI—ESS	1,706	(3,665)	10,977	(10,920)
	\$9,683	\$13,834	\$35,210	\$58,147

The decrease in net gain (loss) on investments during the quarter and nine months ended September 30, 2018, as compared to the same periods in 2017, reflects the effects of increasing interest rates on our growing investment in MBS and losses on our investment in distressed mortgage loans which was partially offset by the growth in our investment in CRT Agreements.

Mortgage-Backed Securities

During the quarter and nine months ended September 30, 2018, we recognized net valuation losses on MBS of \$19.0 million and \$50.3 million, respectively, as compared to net valuation gains of \$5.0 million and \$9.2 million, respectively, for the quarter and nine months ended September 30, 2017. The losses we recorded for the quarter ended September 30, 2018 reflect the influence of rising interest rates during 2018, as compared to the same period in 2017 and the growth of our investment in MBS. Our average investment in MBS at fair value increased by \$828.9 million or 78% and \$457.7 million or 44% during the quarter and nine months ended September 30, 2018, as compared to the same periods during 2017.

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Mortgage Loans at Fair Value – Distressed

Net (losses) gains on our investment in distressed mortgage loans at fair value are summarized below:

	Quarter ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
	(in thousands)							
Valuation changes:								
Performing loans	\$885	\$8,638	\$(8,357)	\$30,074				
Nonperforming loans	(2,026)	(5,841)	(6,901)	(24,760)				
	(1,141)	2,797	(15,258)	5,314				
Gain on payoffs	107	224	903	1,987				
Gain (loss) on sale	(2,017)	256	(3,347)	222				
	\$(3,051)	\$3,277	\$(17,702)	\$7,523				
Average portfolio balance	\$417,487	\$1,104,738	\$537,300	\$1,210,328				
Interest and fees capitalized	\$2,297	\$7,020	\$6,543	\$27,737				
Number of mortgage loans relating to gain recognized on payoffs	33	91	113	259				
UPB of mortgage loans relating to gain recognized on payoffs	\$8,910	\$27,684	\$32,687	\$83,611				
Number of mortgage loans relating to gain/(loss) recognized on sales	336	175	1,485	515				
UPB of mortgage loans relating to gain/(loss) recognized on sales	\$108,172	\$43,940	\$461,620	\$148,495				

Because we have elected to record our mortgage loans at fair value, a substantial portion of the income we record with respect to such mortgage loans results from changes in fair value. Valuation changes amounted to losses of \$1.1 million and \$15.3 million, respectively, in the quarter and nine months ended September 30, 2018, as compared to gains of \$2.8 million and \$5.3 million for the same periods in 2017. We recognize estimated gain (loss) relating to mortgage loans subject to pending sales contracts in the valuation changes. Gains and losses on sales represent settlement adjustments realized at the date of sale.

We recognized valuation losses on both performing and nonperforming mortgage loans during the nine months ended September 30, 2018 and on nonperforming mortgage loans during the quarter ended September 30, 2018 due to the negative effect of observed increased yield requirements for comparable or related assets and to reduced cash flow expectation from those assets during the quarter and nine months ended September 30, 2018.

During the quarter and nine months ended September 30, 2018 and 2017, we continued to reduce our investment in distressed mortgage assets. During these periods we received proceeds from liquidations, payoffs, paydowns and sales from our portfolio of mortgage loans and REO as shown below:

	Quarter ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
	(in thousands)							
Mortgage loans at fair value	\$98,637	\$157,255	\$381,850	\$288,916				
Real estate acquired in settlement	20,960	39,276	84,645	140,863				
	\$119,597	\$196,531	\$466,495	\$429,779				

Implementing long-term, sustainable loan modification is one means by which we endeavor to increase the fair value of the distressed mortgage loans which we have typically purchased at discounts to their UPB. Loan modifications typically include capitalization of delinquent interest on such mortgage loans.

The valuation changes on performing mortgage loans reflect the effects of capitalization of delinquent interest on loans we modify. When we capitalize interest in a loan modification, we increase the carrying value of the mortgage loan. The interest income we recognize is offset by a valuation loss of corresponding magnitude. Changes in other inputs may result in further valuation changes to the mortgage loan, and subsequent performance of a modified mortgage loan will be reflected in its future fair value. During the quarter and nine months ended September 30, 2018, we capitalized interest totaling \$2.3 million and \$6.5 million, respectively, as compared to \$7.0 million and \$27.7 million, respectively, for the quarter and nine months ended September 30, 2017.

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Following is a summary of interest capitalized in mortgage loan modifications:

	Quarter ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
	(in thousands)							
Amount capitalized	\$2,297	\$7,020	\$6,543	\$27,737				
UPB of mortgage loans before interest capitalization	\$50,543	\$80,521	\$128,071	\$252,229				

Our disposition strategy includes identification of the most financially beneficial resolutions. Such resolutions may include modification or sale of the mortgage loan or acquisition of the property securing the distressed mortgage loan. Absent sale of mortgage loans, and unlike liquidation of a defaulted mortgage loan, we expect that recovery of our investment in a performing modified mortgage loan will take place generally over a period of several years, during which we earn and collect interest income on such mortgage loan. Our current expectation is that we will receive cash on modified mortgage loans through monthly borrower payments, payoffs or acquisition of the property securing the mortgage loans and liquidation of the property in the event the borrower subsequently defaults.

Large-scale refinancing of modified distressed mortgage loans is not expected to occur for an extended period. Borrowers who have recently modified their mortgage loans typically have credit profiles that do not qualify them for refinancing or have mortgage loans on properties whose loan-to-value ratios exceed current underwriting guidelines for new mortgage loans. Further, modified mortgage loans generally require a period of acceptable borrower performance for consideration in most Agency refinance programs.

The following tables present a summary of mortgage loan modifications completed:

Modification type (1)	Quarter ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
	Number of of loans loans (2)	Balance of of loans loans (2)	Number of of loans loans (2)	Balance of of loans loans (2)	Number of of loans loans (2)	Balance of of loans loans (2)	Number of of loans loans (2)	Balance of of loans loans (2)
	(dollars in thousands)							
Rate reduction	135	\$34,511	204	\$59,854	318	\$86,179	604	\$170,217
Term extension	126	\$36,811	222	\$70,837	325	\$98,961	760	\$230,848
Capitalization of interest and fees	187	\$50,543	273	\$80,521	451	\$128,071	861	\$252,229
Principal forbearance	158	\$44,394	176	\$56,076	356	\$105,241	449	\$148,187
Principal reduction	58	\$19,742	82	\$27,201	137	\$44,365	282	\$85,182
Total (1)	187	\$50,453	273	\$80,521	451	\$128,071	861	\$252,229
Defaults of mortgage loans modified in the prior year period		\$6,598		\$5,941		\$22,026		\$32,563
As a percentage of relevant balance of loans before modification	10	%	7	%	20	%	16	%
Defaults during the period of mortgage		\$18,561		\$29,343		\$46,326		\$79,696

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loans modified since acquisitions (3)								
As a percentage of relevant balance of								
loans before modification	8	%	7	%	21	%	19	%
Repayments and sales of mortgage loans								
modified in the prior year period	\$41,686		\$10,311		\$147,894		\$98,731	
As a percentage of relevant balance of								
loans before modification	52	%	10	%	59	%	36	%

(1) Modification type categories are not mutually exclusive and a modification of a single loan may be counted in multiple categories. The total number of modifications noted in the table is therefore lower than the sum of all of the categories.

(2) Before modification.

(3) Represents defaults of mortgage loans during the period that have been modified by us at any point since acquisition.

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The following table summarizes the average effect of the modifications noted above to the terms of the loans modified:

Category	Quarter ended September 30, 2018				Quarter ended September 30, 2017			
	Before modification	After modification	Before modification	After modification	Before modification	After modification	Before modification	After modification
Loan balance	\$270	\$ 285	\$295	\$ 324	\$284	\$ 302	\$293	\$ 324
Remaining term (months)	406	450	390	459	404	451	369	463
Interest rate	3.53%	2.60%	3.97%	2.95%	3.59%	2.65%	4.12%	2.97%
Forbeared principal	\$41	\$ 50	\$27	\$ 42	\$38	\$ 46	\$26	\$ 37

CRT Transactions

The activity in and balances relating to our CRT Agreements and firm commitment to purchase credit risk transfer security are summarized below:

	Quarter ended September 30, 2018		Quarter ended September 30, 2017	
CRT Agreements				
UPB of mortgage loans sold under CRT Agreements	\$—	\$ 4,126,946	\$ 5,546,977	\$ 9,722,067
Deposits of cash securing CRT Agreements	\$18,558	\$44,998	\$96,446	\$102,146
Increase in commitments to fund Deposits securing credit risk transfer agreements resulting from sale of mortgage loans	\$(18,558)	\$108,051	\$96,037	\$264,165
Interest earned on Deposits securing CRT Agreements	\$3,190	\$1,440	\$8,788	\$2,703
Gains recognized on CRT Agreements included in: Net gain (loss) on investment:				
Realized	\$23,367	\$10,798	\$64,907	\$27,595
Resulting from valuation changes	7,185	4,162	27,714	41,268
Change in fair value of Interest-only security payable at fair value	(3,083)	191	(4,105)	(2,272)
Payments made to settle losses	\$27,469	\$15,151	\$88,516	\$66,591
Credit Risk Transfer Security	\$443	\$539	\$1,452	\$950

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UPB of mortgage loans sold subject to Firm commitment			
to purchase credit risk transfer security	\$6,773,336	\$—	\$8,308,708 \$—
	September 30, 2018	December 31, 2017	
	(in thousands)		
UPB of mortgage loans subject to Recourse Obligations	\$30,648,306	\$26,845,392	
Carrying value of investments in CRT Agreements (1)	\$788,978	\$687,507	
Commitments to fund Deposits securing CRT agreements	\$578,508	\$482,471	
Commitment to purchase credit risk transfer security (UPB)	\$294,698	\$—	
Fair value of firm commitment to purchase credit risk transfer security	\$18,749	\$—	

(1) Carrying value of investments in CRT Agreements includes Deposits securing CRT Agreements and CRT derivatives.

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The increase in gains recognized on CRT Agreements is due to the effect of the growth in the portfolio of mortgage loans subject to CRT Agreements during 2018 as compared to the same period in 2017 on the cash income we receive, partially offset by observed credit spread increases during 2018 as compared to credit spread decreases during the same period in 2017. Credit spread changes influence the discount rate applied to our cash flow estimates. Therefore, credit spread increases increase the discount rate we apply to cash flows and have a downward influence on the CRT derivative's fair value.

ESS Purchased from PFSI

We recognized fair value gains relating to our investment in ESS totaling \$1.7 million and \$11.0 million, respectively, for the quarter and nine months ended September 30, 2018, as compared to fair value losses of \$3.7 million and \$10.9 million, respectively, for the quarter and nine months ended September 30, 2017. The gain was driven by the positive influence on expected future cash flows of the generally rising interest rates during 2018 compared to the same period in 2017.

Net Interest Income

Net interest income is summarized below:

	Quarter ended September 30, 2018			Average balance	Annualized interest yield/cost %	
	Interest income/ Coupon	Discount/ fees (1)	Total			
	(dollars in thousands)					
Assets:						
Short-term investments	\$385	\$—	\$385	\$51,677	2.92	%
Mortgage-backed securities	17,131	(1,228)	15,903	1,885,730	3.30	%
Mortgage loans acquired for sale at fair value	22,591	—	22,591	1,833,232	4.82	%
Mortgage loans:						
Distressed	2,971	2,274	5,245	417,487	4.92	%
Held by variable interest entity	2,904	162	3,066	299,415	4.01	%
	5,875	2,436	8,311	716,902	4.54	%
ESS from PFSI	3,740	—	3,740	227,527	6.43	%
Deposits securing CRT Agreements	3,190	—	3,190	655,185	1.91	%
	52,912	1,208	54,120	5,370,253	3.94	%
Placement fees relating to custodial funds	7,979	—	7,979			
Other	225	—	225			
	61,116	1,208	62,324	\$5,370,253	4.54	%
Liabilities:						
Assets sold under agreements to repurchase (2)	32,806	(3,081)	29,725	\$4,072,301	2.86	%
Mortgage loan participation purchase and sale						
agreements	674	65	739	78,506	3.68	%
Exchangeable Notes	3,359	293	3,652	250,000	5.72	%
Notes payable	5,096	255	5,351	445,149	4.70	%
Asset-backed financings of a VIE at fair value	2,539	201	2,740	285,284	3.76	%

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Assets sold to PFSI under agreement to repurchase	1,812	—	1,812	136,622	5.19	%
	46,286	(2,267)	44,019	5,267,862	3.27	%
Interest shortfall on repayments of mortgage loans						
serviced for Agency securitizations	1,897	—	1,897			
Interest on mortgage loan impound deposits	693	—	693			
	48,876	(2,267)	46,609	\$5,267,862	3.46	%
Net interest income	\$12,240	\$3,475	\$15,715			
Net interest margin					1.15	%
Net interest spread					1.08	%

- (1) Amounts in this column represent capitalization of interest on delinquent mortgage loans, amortization of premiums and accrual of unearned discounts for assets and amortization of debt issuance costs and premiums for liabilities.
- (2) In 2017, the Company entered into a master repurchase agreement that provides the Company with incentives to finance mortgage loans approved for satisfying certain consumer relief characteristics as provided in the agreement. During the quarter ended September 30, 2018, the Company included \$5.0 million of such incentives as reductions to Interest expense. The master repurchase agreement is subject to a rolling six-month term through August 18, 2019, unless terminated earlier at the option of the lender. There can be no assurance that the lender will not terminate this agreement before its stated maturity.

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	Quarter ended September 30, 2017				Annualized interest yield/cost %	
	Interest income/expense		Total	Average balance		
	Discount/ Coupon	fees (1)				
Assets:						
Short-term investments	\$ 132	\$ —	\$ 132	\$ 19,558	2.64	%
Mortgage-backed securities	8,928	(1,481)	7,447	1,056,815	2.76	%
Mortgage loans acquired for sale at fair value	16,202	—	16,202	1,460,054	4.34	%
Mortgage loans:						
Distressed	7,191	7,022	14,213	1,104,738	5.03	%
Held by variable interest entity	3,169	597	3,766	339,464	4.34	%
	10,360	7,619	17,979	1,444,202	4.87	%
ESS from PFSI	3,998	—	3,998	257,243	6.08	%
Deposits securing CRT Agreements	1,440	—	1,440	517,772	1.09	%
	41,060	6,138	47,198	4,755,644	3.88	%
Placement fees relating to custodial funds	4,330	—	4,330			
Other	49	—	49			
	45,439	6,138	51,577	\$ 4,755,644	4.24	%
Liabilities:						
Assets sold under agreements to repurchase	24,137	2,020	26,157	\$ 3,474,903	2.95	%
Mortgage loan participation purchase and sale						
agreements	378	31	409	59,701	2.68	%
Exchangeable Notes	3,360	276	3,636	250,000	5.69	%
Notes payable	1,277	1,043	2,320	79,345	11.44	%
Asset-backed financings of a VIE at fair value	2,780	735	3,515	325,763	4.22	%
Assets sold to PFSI under agreement to repurchase	2,116	—	2,116	149,874	5.52	%
	34,048	4,105	38,153	4,339,586	3.44	%
Interest shortfall on repayments of mortgage loans						
serviced for Agency securitizations	1,638	—	1,638			
Interest on mortgage loan impound deposits	486	—	486			
	36,172	4,105	40,277	\$ 4,339,586	3.63	%
Net interest income	\$ 9,267	\$ 2,033	\$ 11,300			
Net interest margin					0.93	%
Net interest spread					0.61	%

(1) Amounts in this column represent capitalization of interest on delinquent mortgage loans, amortization of premiums and accrual of unearned discounts for assets and amortization of debt issuance costs and premiums for liabilities.

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	Nine months ended September 30, 2018				Annualized interest yield/cost %	
	Interest income/expense			Average balance		
	Coupon	Discount/ fees (1)	Total			
(dollars in thousands)						
Assets:						
Short-term investments	\$656	\$—	\$656	\$37,247	2.32	%
Mortgage-backed securities	39,750	(2,623)	37,127	1,490,406	3.28	%
Mortgage loans acquired for sale at fair value	51,874	—	51,874	1,460,547	4.68	%
Mortgage loans:						
Distressed	11,319	6,767	18,086	537,300	4.44	%
Held by variable interest entity	8,870	(33)	8,837	306,856	3.80	%
	20,189	6,734	26,923	844,156	4.21	%
ESS from PFSI	11,584	—	11,584	234,502	6.51	%
Deposits securing CRT Agreements	8,788	—	8,788	631,581	1.83	%
	132,841	4,111	136,952	4,698,439	3.84	%
Placement fees relating to custodial funds	18,218	—	18,218			
Other	478	—	478			
	151,537	4,111	155,648	\$4,698,439	4.37	%
Liabilities:						
Assets sold under agreements to repurchase (2)	84,239	(4,534)	79,705	\$3,573,805	2.94	%
Mortgage loan participation purchase and sale						
agreements	1,255	141	1,396	51,687	3.56	%
Exchangeable Notes	10,078	867	10,945	250,000	5.77	%
Notes payable	8,691	341	9,032	251,052	4.74	%
Asset-backed financings of a VIE at fair value	7,762	74	7,836	292,770	3.53	%
Assets sold to PFSI under agreement to repurchase	5,686	—	5,686	139,940	5.36	%
	117,711	(3,111)	114,600	4,559,254	3.31	%
Interest shortfall on repayments of mortgage loans						
serviced for Agency securitizations	5,294	—	5,294			
Interest on mortgage loan impound deposits	1,596	—	1,596			
	124,601	(3,111)	121,490	\$4,559,254	3.51	%
Net interest income	\$26,936	\$7,222	\$34,158			
Net interest margin					0.96	%
Net interest spread					0.85	%

(1) Amounts in this column represent capitalization of interest on delinquent mortgage loans, amortization of premiums and accrual of unearned discounts for assets and amortization of debt issuance costs and premiums for liabilities.

(2) In 2017, the Company entered into a master repurchase agreement that provides the Company with incentives to finance mortgage loans approved for satisfying certain consumer relief characteristics as provided in the agreement. During the nine months ended September 30, 2018, the Company included \$11.0 million of such incentives as reductions to Interest expense. The master repurchase agreement is subject to rolling terms of six-months through August 18, 2019, unless terminated earlier at the option of the lender. There can be no assurance that the lender will not terminate this agreement before its stated maturity.

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	Nine months ended September 30, 2017				Annualized interest yield/cost %	
	Interest income/expense			Average balance		
	Coupon	Discount/ fees (1)	Total			
(dollars in thousands)						
Assets:						
Short-term investments	\$ 516	\$ —	\$ 516	\$ 39,724	1.71	%
Mortgage-backed securities	26,230	(4,276)	21,954	1,032,683	2.80	%
Mortgage loans acquired for sale at fair value	40,699	—	40,699	1,271,158	4.22	%
Mortgage loans:						
Distressed	26,096	27,360	53,456	1,210,328	5.82	%
Held by variable interest entity	9,912	1,458	11,370	350,607	4.28	%
	36,008	28,818	64,826	1,560,935	5.48	%
ESS from PFSI	13,011	—	13,011	271,024	6.33	%
Deposits securing CRT Agreements	2,703	—	2,703	482,790	0.74	%
	119,167	24,542	143,709	4,658,314	4.07	%
Placement fees relating to custodial funds	8,212	—	8,212			
Other	142	—	142			
	127,521	24,542	152,063	\$ 4,658,314	4.30	%
Liabilities:						
Assets sold under agreements to repurchase	66,080	6,200	72,280	\$ 3,388,626	2.81	%
Mortgage loan participation purchase and sale						
agreements	1,131	94	1,225	65,290	2.47	%
Exchangeable Notes	10,078	817	10,895	250,000	5.75	%
Notes payable	6,441	3,278	9,719	152,395	8.41	%
Asset-backed financings of VIEs at fair value	8,713	1,807	10,520	337,073	4.12	%
Assets sold to PFSI under agreement to repurchase	5,992	(46)	5,946	149,958	5.23	%
	98,435	12,150	110,585	4,343,342	3.36	%
Interest shortfall on repayments of mortgage loans						
serviced for Agency securitizations	4,068	—	4,068			
Interest on mortgage loan impound deposits	1,229	—	1,229			
	103,732	12,150	115,882	\$ 4,343,342	3.52	%
Net interest income	\$ 23,789	\$ 12,392	\$ 36,181			
Net interest margin					1.02	%
Net interest spread					0.79	%

(1) Amounts in this column represent capitalization of interest on delinquent mortgage loans, amortization of premiums and accrual of unearned discounts for assets and amortization of debt issuance costs and premiums for liabilities.

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The effects of changes in the yields and costs and composition of our investments on our interest income are summarized below:

	Quarter ended September 30, 2018			Nine months ended September 30, 2018		
	vs. Quarter ended September 30, 2017			vs. Nine months ended September 30, 2017		
	Increase (decrease)			Increase (decrease)		
	due to changes in			due to changes in		
	Rate	Volume	Total change	Rate	Volume	Total change
	(in thousands)					
Assets:						
Short-term investments	\$15	\$238	\$253	\$174	\$(34)	\$140
Mortgage-backed securities	1,696	6,760	8,456	4,238	10,935	15,173
Mortgage loans acquired for sale at fair value	1,928	4,461	6,389	4,729	6,446	11,175
Mortgage loans at fair value:						
Distressed	(326)	(8,642)	(8,968)	(10,597)	(24,773)	(35,370)
Held by variable interest entity	(276)	(424)	(700)	(1,198)	(1,335)	(2,533)
Total mortgage loans	(602)	(9,066)	(9,668)	(11,795)	(26,108)	(37,903)
ESS from PFSI	222	(480)	(258)	368	(1,795)	(1,427)
Interest earned on Deposits securing CRT						
Agreements	1,293	457	1,750	5,039	1,046	6,085
Placement fees relating to custodial funds	—	3,649	3,649	—	10,006	10,006
Other	—	176	176	—	336	336
	4,552	6,195	10,747	2,753	832	3,585
Liabilities:						
Assets sold under agreements to repurchase	(813)	4,381	3,568	3,377	4,048	7,425
Mortgage loan participation purchase and sale						
agreement	179	151	330	462	(291)	171
Exchangeable Notes	16	—	16	50	—	50
Notes payable	(2,080)	5,111	3,031	(5,340)	4,653	(687)
Asset backed financing of VIEs at fair						
value	(364)	(411)	(775)	(1,396)	(1,288)	(2,684)
Assets sold to PFSI under agreement to						
repurchase	(124)	(180)	(304)	144	(404)	(260)
	(3,186)	9,052	5,866	(2,703)	6,718	4,015
Interest shortfall on repayments of mortgage loans						
serviced for Agency securitizations	—	259	259	—	1,226	1,226
Interest on mortgage loan impound deposits	—	207	207	—	367	367
	(3,186)	9,518	6,332	(2,703)	8,311	5,608
Net interest income	\$7,738	\$(3,323)	\$4,415	\$5,456	\$(7,479)	\$(2,023)

The increase in net interest income during the quarter ended September 30, 2018, as compared to the quarter ended September 30, 2017, reflects increased earnings from the placement fees we received relating to the custodial funds we manage on behalf of borrowers and investors, along with an increase in our average interest-earning assets – primarily MBS and mortgage loans acquired for sale. These increases were partially offset by a shift in our earning assets from our highest yielding assets – distressed mortgage loans – to lower-yielding MBS and mortgage loans acquired for sale.

Net interest income for the nine months ended September 30, 2018 decreased from the nine months ended September 30, 2017 due to the previously noted shift in the composition of our earning assets along with an increase in the portion of our earning assets that were financed with borrowings during 2018 as compared to 2017.

Included in net interest income for the quarter and nine month periods ended September 30, 2018 are \$5.0 million and \$11.0 million of incentives we recognized relating to a master repurchase agreement during the quarter and nine months ended September 30, 2018. The master repurchase agreement is subject to a rolling six month term through August 18, 2019, unless terminated earlier at the option of the lender. There can be no assurance that the lender will not terminate this agreement before its stated maturity.

During the quarter and nine months ended September 30, 2018, we recognized interest income on distressed mortgage loans and mortgage loans held by VIEs totaling \$8.3 million and \$26.9 million, respectively, including \$2.3 million and \$6.5 million, respectively, of interest capitalized pursuant to loan modifications, which compares to \$18.0 million and \$64.8 million, respectively, including \$7.0 million and \$27.7 million, respectively, of interest capitalized pursuant to loan modifications, in the quarter and nine months ended September 30, 2017. The decrease in interest income was due to continuing sales and liquidations of our distressed mortgage loans and a reduction in yield on our portfolio caused by reduced capitalization of delinquent interest pursuant to mortgage loan modifications.

At September 30, 2018, approximately 41% of the fair value of our distressed mortgage loan portfolio was nonperforming, as compared to 46% at December 31, 2017. We do not accrue interest on nonperforming mortgage loans and generally do not recognize revenues during the period we hold REO. We calculate the yield on our mortgage loan portfolio based on the portfolio's average fair value, which most closely reflects our investment in the mortgage loans. Accordingly, the yield we realize is substantially higher than would be recorded based on the mortgage loans' UPBs as the fair values of our distressed mortgage loans are generally at substantial discounts to their UPB.

Nonperforming mortgage loans and REO generally take longer than performing mortgage loans to generate cash flow due to the time required to work with borrowers to resolve payment issues through our modification programs, and to acquire and liquidate the property securing the mortgage loans. The value and returns we realize from these assets are determined by our ability to assist borrowers in curing defaults, or when curing of borrower defaults is not a viable solution, by our ability to effectively manage the liquidation process. At September 30, 2018, we held \$140.8 million in fair value of nonperforming mortgage loans and \$95.6 million in carrying value of REO, as compared to \$353.6 million in fair value of nonperforming mortgage loans and \$162.9 million in carrying value of REO at December 31, 2017.

During the quarter and nine months ended September 30, 2018, we incurred interest expense totaling \$46.6 million and \$121.5 million, respectively, as compared to \$40.3 million and \$115.9 million, respectively, during the quarter and nine months ended September 30, 2017. Our interest cost on interest bearing liabilities was 3.27% and 3.31%, respectively, for the quarter and nine months ended September 30, 2018 and 3.44% and 3.36%, respectively, for the quarter and nine months ended September 30, 2017. The increase in interest expense reflects the increased financing of MSR's during 2018 as compared to 2017, and the effect of rising interest rates on our interest costs, during 2018 as compared to the same period in 2017, partially offset by recognition of \$5.0 million and \$11.0 million in incentives relating to our financing of mortgage loans that satisfy certain consumer relief characteristics under a master repurchase agreement during the quarter and nine months ended September 30, 2018. The master repurchase agreement is subject to a rolling six month term through August 18, 2019, unless terminated earlier at the option of the lender. There can be no assurance that the lender will not terminate this agreement before its stated maturity.

Results of Real Estate Acquired in Settlement of Loans

Results of REO includes the gains or losses we record upon sale of the properties as well as valuation adjustments we record during the period we hold those properties. During the quarter and nine months ended September 30, 2018, we recorded net losses of \$310,000 and \$5.8 million, respectively, as compared to \$3.1 million and \$10.9 million, respectively, for the same periods in 2017, in Results of real estate acquired in settlement of loans.

Results of REO are summarized below:

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	Quarter ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
	(dollars in thousands)			
Proceeds from sales of REO	\$20,960	\$39,253	\$84,645	\$140,862
Results of real estate acquired in settlement of loans:				
Valuation adjustments, net	(3,323)	(6,423)	(13,990)	(21,749)
Gain on sale, net	3,013	3,280	8,157	10,895
	\$(310)	\$(3,143)	\$(5,833)	\$(10,854)
Number of properties sold	123	70	473	590
Average carrying value of REO	\$102,176	\$195,412	\$127,255	\$224,223
At period end:				
Carrying value	\$95,605	\$185,034		
Number of properties	295	752		

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Losses from REOs during the quarter and nine months ended September 30, 2018 decreased from the same periods in 2017. The decrease in losses from REOs during the quarter and nine months ended September 30, 2018, as compared to the same periods in 2017, was due primarily to the smaller overall REO portfolio during 2018 as compared to the same periods in 2017.

Expenses

Our expenses are summarized below:

	Quarter ended September 30, 2018		September 30, 2017	
	(in thousands)			
Earned by PennyMac Financial Services, Inc.:				
Mortgage loan fulfillment fees	\$26,256	\$23,507	\$52,759	\$61,184
Mortgage loan servicing fees	10,071	11,402	30,521	31,987
Management fees	6,482	6,038	17,906	16,684
Mortgage loan collection and liquidation	2,747	864	6,899	4,556
Professional services	2,616	1,331	5,692	5,531
Compensation	1,924	1,067	5,412	4,918
Real estate held for investment	1,713	1,898	4,452	4,339
Mortgage loan origination	2,136	2,230	3,980	5,735
Other	2,894	3,301	7,758	10,704
	\$56,839	\$51,638	\$135,379	\$145,638

Expenses increased \$5.2 million, or 10%, and decreased \$10.3 million, or 7%, during the nine months ended September 30, 2018, as compared to the same periods in 2017, primarily due to fulfillment fee fluctuations between the periods.

Mortgage Loan Fulfillment Fees

Mortgage loan fulfillment fees represent fees we pay to PLS for the services it performs on our behalf in connection with our acquisition, packaging and sale of mortgage loans. The fee is calculated as a percentage of the UPB of the mortgage loans purchased. Mortgage loan fulfillment fees and related fulfillment volume are summarized below:

	Quarter ended September 30, 2018		September 30, 2017	
	(dollars in thousands)			
Fulfillment fee expense	\$26,256	\$23,507	\$52,759	\$61,184
UPB of mortgage loans fulfilled by PLS	\$7,517,883	\$6,530,036	\$17,139,884	\$17,079,969
Average fulfillment fee rate (in basis points)	35	36	31	36

The increase in loan fulfillment fees of \$2.7 million and decrease of \$8.4 million during the quarter and nine months ended September 30, 2018, respectively, as compared to the same periods in 2017, is primarily due to increased

mortgage loan production volume between the quarters, and to a decrease in the average fulfillment fee rate charged by PFSI during the nine months ended September 30, 2018. The decrease is also due to discretionary reductions made to facilitate certain loan sale transactions by the Company in a competitive market environment.

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Mortgage Loan Servicing Fees

Mortgage loan servicing fees payable to PLS are summarized below:

	Quarter ended September 30, 2018		Nine months ended September 30, 2018	
	2017		2017	
	(in thousands)			
Mortgage loan servicing fees				
Mortgage loans acquired for sale at fair value:				
Base	\$98	\$88	\$250	\$235
Activity-based	218	188	489	507
	316	276	739	742
Mortgage loans at fair value:				
Distressed mortgage loans:				
Base	614	1,571	2,328	5,284
Activity-based	657	2,702	3,200	6,859
	1,271	4,273	5,528	12,143
Mortgage loans held in VIE - Base				
	35	54	103	96
MSRs:				
Base	8,291	6,648	23,772	18,631
Activity-based	158	151	379	375
	8,449	6,799	24,151	19,006
	\$10,071	\$11,402	\$30,521	\$31,987
Average investment in:				
Mortgage loans acquired for sale at fair value	\$1,833,232	\$1,460,054	\$1,460,547	\$1,271,158
Mortgage loans at fair value:				
Distressed mortgage loans	\$417,487	\$1,104,738	\$537,300	\$1,210,328
Mortgage loans held in a VIE	\$299,415	\$339,464	\$306,856	\$350,607
Average mortgage loan servicing portfolio	\$81,350,980	\$63,584,416	\$77,522,709	\$61,764,228

Mortgage loan servicing fees decreased by \$1.3 million and \$1.5 million during the quarter and nine months ended September 30, 2018, respectively, as compared to the same periods in 2017. The decrease in mortgage loan servicing fees was primarily due to reductions in the distressed mortgage loan portfolio resulting from continuing loan sales and liquidations through the first nine months of 2018. This decrease was partially offset by the increase in servicing fees resulting from the ongoing growth of our MSR portfolio. Servicing fee rates relating to distressed mortgage loans are significantly higher than those relating to MSRs due to the higher cost of servicing such loans. Therefore, reductions in the balance of distressed mortgage loans had a much more significant effect on mortgage loan servicing fees than the additions of new MSRs.

Management Fees

The components of our management fee payable to PCM are summarized below:

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	Quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Base	\$5,799	\$6,038	\$17,223	\$16,380
Performance incentive	683	—	683	304
	\$6,482	\$6,038	\$17,906	\$16,684
Average shareholders' equity amounts used to calculate				
management fee expense	\$1,533,861	\$1,596,921		

Management fees increased by \$444,000 and \$1.2 million during the quarter and nine months ended September 30, 2018, respectively, as compared to the same periods in 2017, primarily due to modestly higher shareholders' equity during 2018 as compared to 2017. The increases were also due to recognition of a performance incentive fee, which is based on our profitability in relation to our common shareholders' equity, which reflects improvements in our return on common shareholders' equity during 2018 as compared to 2017.

Mortgage loan collection and liquidation

Mortgage loan collection and liquidation expenses increased \$1.9 million and \$2.3 million during the quarter and nine months ended September 30, 2018, respectively, as compared to the same periods in 2017. The increase of collection and liquidation expenses during the quarter and nine months ended September 30, 2018, as compared to the quarter and nine months ended September 30, 2017, reflects the non-recurrence in 2018 of certain recoveries realized during 2017.

Compensation

Compensation expense increased \$857,000 and \$494,000 during the quarter and nine months ended September 30, 2018, respectively, as compared to the same periods in 2017. The changes primarily reflect changing performance expectations relating to the performance-based restricted share unit awards outstanding during the quarter and nine months ended September 30, 2018.

Other Expenses

Other expenses are summarized below:

	Quarter ended		Nine months	
	September 30,		ended September	
	2018	2017	2018	2017
	(in thousands)			
Common overhead allocation from PFSI	\$1,210	\$1,193	\$3,387	\$4,220
Technology	291	374	1,014	1,088
Insurance	274	300	915	968
Other	1,119	1,434	2,442	4,428
	\$2,894	\$3,301	\$7,758	\$10,704

Income Taxes

We have elected to treat PMC as a TRS. Income from a TRS is only included as a component of REIT taxable income to the extent that the TRS makes dividend distributions of income to us. A TRS is subject to corporate federal and state income tax. Accordingly, a provision for income taxes for PMC is included in the accompanying consolidated statements of operations.

Our effective tax rate was 9.9% and 15.6% for the quarter and nine months ended September 30, 2018. The relative values between the tax benefit or expense at the TRS and our consolidated pretax income drive the fluctuation in the effective tax rate. The primary difference between our effective tax rate and the statutory tax rate is due to nontaxable REIT income resulting from the dividends paid deduction.

Our TRS recognized a tax expense of \$4.8 million on income of \$17.7 million and a tax expense of \$19.9 million on income of \$73.2 million while the Company's reported consolidated pretax income was \$51.7 million and \$131.8 million for the quarter and nine months ended September 30, 2018. For the same periods in 2017, the TRS recognized tax expense of \$4.8 million on income of \$12.0 million and tax benefit of \$900,000 on a loss of \$4.5 million while the Company's reported consolidated pretax income was \$24.2 million and \$78.6 million, respectively.

In general, cash dividends declared by the Company will be considered ordinary income to the shareholders for income tax purposes. Some portion of the dividends may be characterized as capital gain distributions or a return of

capital. For tax years beginning after December 31, 2017, the 2017 Tax Cuts and Jobs Act (the “Tax Act”) (subject to certain limitations) provides a 20% deduction from taxable income for ordinary REIT dividends.

Balance Sheet Analysis

Following is a summary of key balance sheet items as of the dates presented:

	September 30, 2018	December 31, 2017
	(in thousands)	
Assets		
Cash	\$88,929	\$77,647
Investments:		
Short-term investments	26,736	18,398
Mortgage-backed securities	2,126,507	989,461
Mortgage loans acquired for sale at fair value	1,949,432	1,269,515
Mortgage loans at fair value	633,168	1,089,473
ESS	223,275	236,534
Derivative assets	143,577	113,881
Real estate acquired in settlement of loans	95,605	162,865
Real estate held for investment	45,971	44,224
MSRs	1,109,741	844,781
Deposits securing CRT Agreements	662,624	588,867
	7,016,636	5,357,999
Other	162,013	169,287
Total assets	\$7,267,578	\$5,604,933
Liabilities		
Borrowings:		
Short-term debt	\$4,559,206	\$3,369,502
Long-term debt	980,305	561,675
	5,539,511	3,931,177
Other	169,504	129,171
Total liabilities	5,709,015	4,060,348
Shareholders' equity	1,558,563	1,544,585
Total liabilities and shareholders' equity	\$7,267,578	\$5,604,933

Total assets increased by approximately \$1.7 billion, or 30%, during the period from December 31, 2017 through September 30, 2018, primarily due to a \$1.1 billion increase in MBS, a \$679.9 million increase in mortgage loans acquired for sale, a \$265.0 million increase in MSR's and a \$73.8 million increase in deposits securing CRT Agreements. These increases were partially offset by a \$456.3 million decrease in mortgage loans at fair value and a \$67.3 million reduction in REO. These changes primarily reflect the transition in our investment focus from distressed mortgage assets to assets generated through our correspondent production activities.

Asset Acquisitions

Our asset acquisitions are summarized below.

Correspondent Production

Following is a summary of our correspondent production acquisitions at fair value:

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	Quarter ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Correspondent mortgage loan purchases:				
Government-insured or guaranteed-for sale to PLS	\$9,369,758	\$11,433,092	\$28,514,836	\$32,113,071
Agency-eligible	8,639,687	6,762,941	19,941,366	17,656,318
Commercial mortgage loans	—	25,385	7,263	65,182
	\$18,009,445	\$18,221,418	\$48,463,465	\$49,834,571

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During the quarter and nine months ended September 30, 2018, we purchased for sale \$18.0 billion and \$48.5 billion, respectively, in fair value of correspondent production loans as compared to \$18.2 billion and \$49.8 billion, respectively, in fair value of correspondent production loans during the quarter and nine months ended September 30, 2017. Our ability to maintain the level of correspondent production in an increasing interest rate environment reflects the continuing expansion of our correspondent seller network along with the efforts aimed at maximizing the share of our correspondent sellers' production that is sold to us.

Our ability to continue the expansion of our correspondent production business is subject to, among other factors, our ability to source additional mortgage loan volume, our ability to obtain additional inventory financing and our ability to fund the portion of the mortgage loans not financed, either through cash flows from business activities or the raising of additional equity capital. There can be no assurance that we will be successful in increasing our borrowing capacity or in obtaining the additional equity capital necessary or that we will be able to identify additional sources of mortgage loans.

Other Investment Activities

Following is a summary of our acquisitions of mortgage-related investments held in our interest rate sensitive strategies and credit-sensitive strategies segments:

	Quarter ended September 30, 2018		September 30, 2017	
	2018		2017	
	(in thousands)			
Interest rate sensitive assets:				
MBS	\$501,408	\$—	\$1,316,200	\$251,872
ESS received pursuant to a recapture agreement	499	1,207	1,983	4,160
MSRs received in mortgage loan sales and purchases of MSRs	96,383	82,838	228,337	207,361
	598,290	84,045	1,546,520	463,393
Credit sensitive assets:				
Deposits relating to CRT Agreements	18,558	44,998	96,446	102,146
Commitments to fund deposits securing CRT Agreements	(18,558)	108,051	96,037	264,165
Firm commitments to purchase credit risk transfer securities				
Fair value	12,311	—	16,737	—
UPB	236,875	—	294,698	—
	249,186	153,049	503,918	366,311
	\$847,476	\$237,094	\$2,050,438	\$829,704

Our acquisitions during the quarter and nine months ended September 30, 2018 and 2017 were financed through the use of a combination of proceeds from borrowings, liquidations of existing investments and proceeds from equity issuances. We continue to identify additional means of increasing our investment portfolio through cash flow from our business activities, existing investments, borrowings, and transactions that minimize current cash outlays. However, we expect that, over time, our ability to continue our investment portfolio growth will depend on our ability to raise additional equity capital.

Investment Portfolio Composition

Mortgage-Backed Securities

Following is a summary of our MBS holdings:

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	September 30, 2018				December 31, 2017					
	Fair value (dollars in thousands)	Principal	Average Life (in years)	Coupon (%)	Market yield	Fair value	Principal	Average Life (in years)	Coupon (%)	Market yield
Agency:										
Fannie Mae	\$1,585,914	\$1,592,192	8.6	3.7 %	3.7 %	\$796,853	\$774,473	7.0	3.5 %	3.0 %
Freddie Mac	540,593	543,239	8.9	3.7 %	3.8 %	192,608	187,127	7.7	3.5 %	3.0 %
	\$2,126,507	\$2,135,431				\$989,461	\$961,600			

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Mortgage Loans at Fair Value – Distressed

The relationship of the fair value of our distressed mortgage loans at fair value to the fair value of the underlying real estate collateral is summarized below:

	September 30, 2018		December 31, 2017	
	Loan	Collateral	Loan	Collateral
	(in thousands)			
Fair values:				
Performing loans	\$200,176	\$353,945	\$414,785	\$617,050
Nonperforming loans	140,818	269,441	353,648	597,227
	\$340,994	\$623,386	\$768,433	\$1,214,277

The collateral values presented above do not represent our assessment of the amount of future cash flows to be realized from the mortgage loans and/or underlying collateral. Future cash flows will be influenced by, among other considerations, our asset disposition strategies with respect to individual loans and the timing of such dispositions, the costs and expenses we incur in the disposition process, changes in borrower performance and the underlying collateral values. Ultimate realization in a disposition of these assets will be net of any servicing advances carried on the balance sheet in relation to these investments.

The collateral values summarized above are estimated and may change over time due to various factors including our level of access to the properties securing the mortgage loans, changes in the real estate market or the condition of individual properties. The collateral values presented do not include any costs that would typically be incurred in obtaining the property in settlement of the mortgage loan, readying the property for sale, holding the property while it is being marketed or in the sale of a property.

We believe that our current fair value estimates are representative of fair value at the reporting date. However, the market for distressed mortgage assets is illiquid with a limited number of participants. Furthermore, our business strategy is to enhance fair value during the period in which the loans are held. Therefore, any resulting appreciation or depreciation in the fair value of the loans is recorded during such holding period and ultimately realized at the end of the holding period.

Following is a summary of the distribution of our portfolio of distressed mortgage loans at fair value:

Loan type	September 30, 2018						December 31, 2017					
	Performing loans			Nonperforming loans			Performing loans			Nonperforming loans		
	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate
	(dollars in thousands)											
Interest rate												
step-up	\$125,063	63 %	2.26 %	\$29,233	21 %	2.02 %	\$189,724	46 %	2.32 %	\$51,112	14 %	2.19 %
Fixed	58,179	29 %	3.93 %	51,026	36 %	4.81 %	186,929	45 %	3.61 %	130,860	37 %	4.96 %
ARM/Hybrid	16,934	8 %	4.51 %	60,559	43 %	5.40 %	38,132	9 %	4.05 %	171,676	49 %	5.26 %
	\$200,176	100 %	2.89 %	\$140,818	100 %	4.27 %	\$414,785	100 %	3.04 %	\$353,648	100 %	4.62 %

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Lien position	September 30, 2018						December 31, 2017					
	Performing loans			Nonperforming loans			Performing loans			Nonperforming loans		
	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate
	(dollars in thousands)											
1st lien	\$199,282	100%	2.88%	\$140,696	100%	4.27%	\$413,928	100%	3.04%	\$353,431	100%	4.62%
2nd lien	894	0%	3.87%	122	0%	8.24%	857	0%	3.90%	217	0%	7.49%
	\$200,176	100%	2.89%	\$140,818	100%	4.27%	\$414,785	100%	3.04%	\$353,648	100%	4.62%

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Occupancy	September 30, 2018						December 31, 2017					
	Performing loans			Nonperforming loans			Performing loans			Nonperforming loans		
	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate
(dollars in thousands)												
Owner												
occupied	\$145,860	73 %	2.93%	\$75,953	54 %	4.22%	\$298,468	72 %	3.14%	\$190,815	54 %	4.50%
Investment												
property	53,632	27 %	2.77%	64,843	46 %	4.34%	115,163	28 %	2.80%	162,697	46 %	4.76%
Other	684	0 %	4.38%	22	0 %	3.13%	1,154	0 %	3.33%	136	0 %	3.00%
	\$200,176	100%	2.89%	\$140,818	100%	4.27%	\$414,785	100%	3.04%	\$353,648	100%	4.62%

Loan age	September 30, 2018						December 31, 2017					
	Performing loans			Nonperforming loans			Performing loans			Nonperforming loans		
	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate
(dollars in thousands)												
12 - 35 months	\$52	0 %	2.23%	\$—	0 %	—	\$138	0 %	2.71%	\$—	0 %	—
36 - 59 months	416	0 %	4.39%	59	0 %	4.93%	528	0 %	4.70%	118	0 %	2.02%
60 months or more	199,708	100%	2.88%	140,759	100%	4.27%	414,119	100%	3.04%	353,530	100%	4.62%
	\$200,176	100%	2.89%	\$140,818	100%	4.27%	\$414,785	100%	3.04%	\$353,648	100%	4.62%

Origination FICO score	September 30, 2018						December 31, 2017					
	Performing loans			Nonperforming loans			Performing loans			Nonperforming loans		
	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate
(dollars in thousands)												
Less than 600	\$59,772	30 %	2.98%	\$28,277	20 %	3.77%	\$108,762	26 %	3.29%	\$70,228	20 %	4.20%
600-649	46,077	23 %	2.80%	26,250	19 %	3.86%	99,428	24 %	3.00%	63,524	18 %	4.13%
650-699	50,439	25 %	2.88%	46,116	33 %	4.43%	106,196	26 %	2.93%	114,280	32 %	4.69%
700-749	28,997	15 %	2.77%	30,272	21 %	4.79%	77,324	19 %	2.85%	80,411	23 %	5.24%
750 or greater	14,891	7 %	3.05%	9,903	7 %	4.64%	23,075	5 %	3.14%	25,205	7 %	4.93%
	\$200,176	100%	2.89%	\$140,818	100%	4.27%	\$414,785	100%	3.04%	\$353,648	100%	4.62%

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	September 30, 2018						December 31, 2017					
	Performing loans			Nonperforming loans			Performing loans			Nonperforming loans		
	Average			Average			Average			Average		
Current loan-to-value	Fair	%	note	Fair	%	note	Fair	%	note	Fair	%	note
(1)	value	total	rate	value	total	rate	value	total	rate	value	total	rate
	(dollars in thousands)											
Less than 80%	\$86,109	43 %	3.50%	\$61,855	44 %	5.00%	\$139,408	33 %	3.80%	\$136,994	39 %	5.08%
80% - 99.99%	51,878	26 %	2.94%	33,827	24 %	4.55%	107,121	26 %	3.12%	94,538	27 %	4.90%
100% - 119.99%	28,371	14 %	2.40%	22,757	16 %	4.23%	74,182	18 %	2.86%	58,330	16 %	4.45%
120% or greater	33,818	17 %	2.19%	22,379	16 %	3.21%	94,074	23 %	2.35%	63,786	18 %	4.01%
	\$200,176	100%	2.89%	\$140,818	100%	4.27%	\$414,785	100%	3.04%	\$353,648	100%	4.62%

(1) Current loan-to-value is calculated based on the unpaid principal balance of the mortgage loan and our estimate of the value of the mortgaged property.

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Geographic distribution	September 30, 2018						December 31, 2017					
	Performing loans			Nonperforming loans			Performing loans			Nonperforming loans		
	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate
	(dollars in thousands)											
New York	\$28,897	15 %	2.58 %	\$43,983	31 %	5.04 %	\$69,401	17 %	2.61 %	\$104,667	30 %	5.25 %
California	42,596	21 %	3.00 %	15,809	11 %	3.70 %	92,435	22 %	3.06 %	44,856	13 %	3.91 %
Florida	15,077	8 %	2.42 %	16,760	12 %	4.71 %	20,273	5 %	2.71 %	40,518	11 %	4.76 %
New Jersey	20,243	10 %	2.44 %	8,917	7 %	3.67 %	38,689	9 %	2.55 %	33,857	10 %	4.36 %
Massachusetts	8,722	4 %	2.55 %	7,343	5 %	4.09 %	19,355	5 %	2.75 %	23,039	6 %	4.20 %
Other	84,641	42 %	3.41 %	48,006	34 %	3.74 %	174,632	42 %	3.59 %	106,711	30 %	4.19 %
	\$200,176	100 %	2.89 %	\$140,818	100 %	4.27 %	\$414,785	100 %	3.04 %	\$353,648	100 %	4.62 %

Payment status	September 30, 2018						December 31, 2017					
	Performing loans			Nonperforming loans			Performing loans			Nonperforming loans		
	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate	Fair value	% total	Average note rate
	(dollars in thousands)											
Current	\$119,996	60 %	2.87 %	\$—	0 %	—	\$267,507	65 %	2.99 %	\$—	0 %	—
30 days delinquent	60,373	30 %	2.97 %	—	0 %	—	105,101	25 %	3.22 %	—	0 %	—
60 days delinquent	19,807	10 %	2.79 %	—	0 %	—	42,177	10 %	2.91 %	—	0 %	—
90 days or more delinquent	—	0 %	—	66,791	47 %	3.59 %	—	0 %	—	166,749	47 %	3.97 %
In foreclosure	—	0 %	—	74,027	53 %	4.95 %	—	0 %	—	186,899	53 %	5.24 %
	\$200,176	100 %	2.89 %	\$140,818	100 %	4.27 %	\$414,785	100 %	3.04 %	\$353,648	100 %	4.62 %

Following is a comparison of the key inputs we use in the valuation of our mortgage loans at fair value using “Level 3” fair value inputs:

Key inputs (1)	September 30, 2018	December 31, 2017
Discount rate		
Range	2.8% – 16.7%	2.9% – 15.0%
Weighted average	7.3%	6.9%
Twelve-month projected housing price index change		

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Range	3.5% –	
	4.4%	3.6% – 4.6%
Weighted average	4.1%	4.4%
Prepayment speed (2)		
Range	2.5% –	
	8.1%	3.2% – 11.0%
Weighted average	4.1%	4.2%
Total prepayment speed (3)		
Range	10.4% –	10.8% –
	22.3%	23.8%
Weighted average	15.6%	16.5%

(1) Prepayment speed is measured using Life Voluntary Conditional Prepayment Rates (“CPR”).

(2) Total prepayment speed is measured using Life Total CPR.

We monitor and value our investments in pools of distressed mortgage loans by payment status of the loans. Most of the measures we use to value and monitor the loan portfolio, such as projected prepayment and default speeds and discount rates, are applied or output at the pool level. The characteristics of the individual loans, such as loan size, loan-to-value ratio and current delinquency status, can vary widely within a pool.

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The weighted average discount rate used in the valuation of mortgage loans at fair value increased from 6.9% at December 31, 2017 to 7.3% at September 30, 2018 due to shifting characteristics of the portfolio given liquidations and loan sales in the period.

The weighted average twelve-month projected housing price index change used in the valuation of our portfolio of mortgage loans at fair value decreased from 4.4% at December 31, 2017 to 4.1% at September 30, 2018, due to lower near-term forecasts for real estate price appreciation in the geographic areas in which our portfolio of mortgage loans is concentrated.

The weighted average total prepayment speed used in the valuation of our portfolio of mortgage loans at fair value decreased from 16.5% at December 31, 2017 to 15.6% at September 30, 2018 due to our projections of longer liquidation periods for certain of our mortgage loans.

Credit Risk Transfer Agreements

Following is a summary of our CRT Agreements:

	September 30, 2018	December 31, 2017
	(in thousands)	
Carrying value of CRT Agreements:		
Derivative assets	\$ 126,354	\$ 98,640
Deposits securing CRT agreements	662,624	588,867
Interest-only security payable at fair value	(8,821)	(7,070)
	\$ 780,157	\$ 680,437
UPB of mortgage loans subject to credit guarantee obligations	\$ 30,648,306	\$ 26,845,392
Collection status (in UPB):		
Current	\$ 30,342,833	\$ 26,540,953
30—89 days delinquent	\$ 226,447	\$ 179,144
90—180 days delinquent	\$ 32,852	\$ 101,114
180 or more days delinquent	\$ 15,520	\$ 5,146
Foreclosure	\$ 9,339	\$ 5,463
Bankruptcy	\$ 21,315	\$ 13,572

Following is a summary of our firm commitment to purchase CRT security:

	Periods ended September 30, 2018	
	Quarter	Nine months
	(in thousands)	
UPB of mortgage loans sold	\$ 6,773,336	\$ 8,308,708
Fair value of firm commitment recognized in Gain on sale of mortgage loans	\$ 12,311	\$ 16,737
Gains recognized on CRT Agreements included in Net gain (loss) on investments	\$ 2,012	\$ 2,012
Increase in face amount of firm commitment to purchase securities		
backed by mortgage loans sold	\$ 236,875	\$ 294,698

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September
30, 2018
(in
thousands)

Firm commitment to purchase CRT securities	\$294,698
Fair value of firm commitment	\$18,749
UPB of mortgage loans sold subject to firm commitment to purchase securities	
backed by such loans	\$8,097,660
Collection status (in UPB):	
Current	\$8,073,018
30—89 days delinquent	\$24,439
90—180 days delinquent	\$203
180 or more days delinquent	\$—
Foreclosure	\$—
Bankruptcy	\$—

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Real Estate Acquired in Settlement of Loans

Following is a summary of our REO by property type:

Property type	September 30, 2018			December 31, 2017		
	Carrying value	% of total		Carrying value	% of total	
(dollars in thousands)						
1 - 4 dwelling units	\$78,127	82	%	\$131,576	81	%
Planned unit development	9,366	10	%	14,311	9	%
Condominium/Townhome/Co-op	8,112	8	%	16,771	10	%
5+ dwelling units	—	0	%	207	0	%
	\$95,605	100	%	\$162,865	100	%

Geographic distribution	September 30, 2018			December 31, 2017		
	Carrying value	% of total		Carrying value	% of total	
(dollars in thousands)						
New York	\$22,618	24	%	\$34,107	21	%
New Jersey	19,705	21	%	42,795	26	%
California	14,443	15	%	17,777	11	%
Massachusetts	7,125	7	%	6,838	4	%
Florida	6,229	7	%	15,740	10	%
Illinois	4,973	5	%	8,539	5	%
Hawaii	4,685	5	%	3,162	2	%
Other	15,827	16	%	33,907	21	%
	\$95,605	100	%	\$162,865	100	%

Following is a summary of the status of our portfolio of acquisitions by quarter acquired for the periods in which we made acquisitions:

	Acquisitions for the quarter ended							
	March 31, 2015		December 31, 2014		June 30, 2014		March 31, 2014	
	At purchase	September 30, 2018	At purchase	September 30, 2018	At purchase	September 30, 2018	At purchase	September 30, 2018
(dollars in millions)								
UPB	\$310.2	\$ 66.3	\$330.8	\$ 53.9	\$37.9	\$ 7.7	\$439.0	\$ 99.9
Pool factor (1)	1.00	0.21	1.00	0.16	1.00	0.20	1.00	0.23
Collection status:								
Delinquency								
Current	1.8	% 24.7	1.6	% 23.2	0.7	% 39.4	6.2	% 12.1
30 days	0.3	% 9.8	1.6	% 9.3	0.6	% 18.4	0.7	% 7.2
60 days	0.1	% 3.3	7.1	% 6.8	1.4	% 13.6	0.7	% 2.0
over 90 days	66.7	% 17.0	52.7	% 14.1	59.0	% 8.9	37.5	% 23.7

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In foreclosure	31.1 %	19.4 %	36.9 %	22.4 %	38.2 %	6.7 %	53.8 %	18.8 %
REO	—	25.8 %	—	24.2 %	—	12.9 %	1.1 %	36.1 %

(1) Ratio of UPB remaining to UPB at acquisition.

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	Acquisitions for the quarter ended							
	December 31, 2013		September 30, 2013		June 30, 2013		March 31, 2013	
	September		September		September		September	
	At	September	At	September	At	September	At	September
	purchase	purchase	purchase	purchase	purchase	purchase	purchase	purchase
	2018	2018	2018	2018	2018	2018	2018	2018
	(dollars in millions)							
UPB	\$507.3	\$ 94.9	\$929.5	\$ 123.4	\$397.3	\$ 53.4	\$366.2	\$ 32.2
Pool factor (1)	1.00	0.19	1.00	0.13	1.00	0.13	1.00	0.09
Collection status:								
Delinquency								
Current	1.4 %	12.6 %	0.8 %	21.5 %	4.8 %	32.1 %	1.6 %	38.9 %
30 days	0.2 %	5.7 %	0.3 %	8.9 %	7.4 %	16.7 %	1.5 %	19.9 %
60 days	—	5.8 %	0.7 %	3.3 %	7.6 %	4.6 %	3.5 %	4.2 %
over 90 days	38.3 %	21.1 %	58.6 %	16.6 %	45.3 %	13.7 %	82.2 %	13.2 %
In foreclosure	60.0 %	25.3 %	39.6 %	15.0 %	34.9 %	7.2 %	11.2 %	6.1 %
REO	—	29.4 %	—	34.8 %	—	25.7 %	—	17.7 %

(1)Ratio of UPB remaining to UPB at acquisition.

	Acquisitions for the quarter ended							
	December 31, 2012		September 30, 2012		June 30, 2012		December 31, 2011	
	September		September		September		September	
	At	September	At	September	At	September	At	September
	purchase	purchase	purchase	purchase	purchase	purchase	purchase	purchase
	2018	2018	2018	2018	2018	2018	2018	2018
	(dollars in millions)							
UPB	\$290.3	\$ 26.9	\$357.2	\$ 18.8	\$402.5	\$ 21.9	\$49.0	\$ 4.7
Pool factor (1)	1.00	0.09	1.00	0.05	1.00	0.05	1.00	0.10
Collection status:								
Delinquency								
Current	3.1 %	32.5 %	—	21.5 %	45.0 %	40.2 %	0.2 %	11.8 %
30 days	1.3 %	20.4 %	—	6.0 %	4.0 %	18.8 %	0.1 %	23.3 %
60 days	5.4 %	9.7 %	0.1 %	3.0 %	4.3 %	3.5 %	0.2 %	18.0 %
over 90 days	57.8 %	7.4 %	49.1 %	12.2 %	31.3 %	10.4 %	70.4 %	15.2 %
In foreclosure	32.4 %	8.7 %	50.8 %	22.8 %	15.3 %	11.6 %	29.0 %	—
REO	—	21.2 %	—	34.5 %	0.1 %	15.4 %	—	31.7 %

(1)Ratio of UPB remaining to UPB at acquisition.

	Acquisitions for the quarter ended							
	September 30, 2011		June 30, 2011		March 31, 2011		December 31, 2010	
	September		September		September		September	
	At	September	At	September	At	September	At	September
	purchase	purchase	purchase	purchase	purchase	purchase	purchase	purchase
	2018	2018	2018	2018	2018	2018	2018	2018
	(dollars in millions)							
UPB	\$542.6	\$ 17.6	\$259.8	\$ 12.5	\$515.1	\$ 20.6	\$277.8	\$ 9.5

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Pool factor (1)	1.00	0.03	1.00	0.05	1.00	0.04	1.00	0.03
Collection status:								
Delinquency								
Current	0.6 %	27.0 %	11.5 %	26.6 %	2.0 %	10.7 %	5.0 %	30.6 %
30 days	1.3 %	19.5 %	6.5 %	24.5 %	1.9 %	15.7 %	4.0 %	16.8 %
60 days	2.0 %	0.9 %	5.2 %	6.9 %	3.9 %	7.4 %	5.1 %	3.9 %
over 90 days	22.6 %	15.1 %	31.2 %	13.9 %	25.9 %	13.3 %	26.8 %	18.1 %
In foreclosure	73.0 %	11.6 %	43.9 %	5.5 %	66.3 %	24.5 %	59.1 %	14.6 %
REO	0.4 %	25.9 %	1.7 %	22.5 %	—	28.5 %	—	16.0 %

(1) Ratio of UPB remaining to UPB at acquisition.

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	Acquisitions for the quarter ended					
	September 30, 2010		June 30, 2010		March 31, 2010	
	At purchase	September 30, 2018	At purchase	September 30, 2018	At purchase	September 30, 2018
	(dollars in millions)					
UPB	\$146.2	\$ 2.6	\$195.5	\$ 4.4	\$182.7	\$ 8.2
Pool factor (1)	1.00	0.02	1.00	0.02	1.00	0.04
Collection status:						
Delinquency						
Current	1.2 %	40.3 %	5.1 %	41.2 %	6.2 %	38.7 %
30 days	0.4 %	22.1 %	2.0 %	7.8 %	1.6 %	7.0 %
60 days	1.3 %	—	4.1 %	5.9 %	5.8 %	8.9 %
over 90 days	38.2 %	10.2 %	42.8 %	7.8 %	37.8 %	6.1 %
In foreclosure	58.9 %	4.6 %	45.9 %	25.7 %	46.4 %	10.4 %
REO	—	22.8 %	—	11.5 %	2.3 %	28.9 %

(1) Ratio of UPB remaining to UPB at acquisition.

Cash Flows

Our cash flows for the nine months ended September 30, 2018 and 2017 are summarized below:

	Nine months ended		
	September 30, 2018	September 30, 2017	Change
	(in thousands)		
Operating activities	\$(801,437)	\$283,073	\$(1,084,510)
Investing activities	(682,143)	415,545	(1,097,688)
Financing activities	1,494,862	(633,579)	2,128,441
Net cash flows	\$11,282	\$65,039	\$(53,757)

Our cash flows resulted in a net increase in cash of \$11.3 million during the nine months ended September 30, 2018, as discussed below.

Operating activities

Cash used in operating activities totaled \$801.4 million during the nine months ended September 30, 2018, as compared to cash provided by operating activities of \$283.1 million during the nine months ended September 30, 2017. Cash flows from operating activities primarily reflect cash flows from mortgage loans acquired for sale as shown below:

Nine months ended
September 30,

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	2018	2017
	(in thousands)	
Operating cash flows from:		
Mortgage loans acquired for sale	\$(894,236)	\$256,725
Other	92,799	26,348
	\$(801,437)	\$283,073

Cash flows from mortgage loans acquired for sale primarily reflect changes in the level of inventory from the beginning to end of the periods presented.

Investing activities

Net cash used by our investing activities was \$682.1 million for the nine months ended September 30, 2018, as compared to cash provided by investing activities of \$415.5 million for the nine months ended September 30, 2017. The decrease in cash flows from investing activities reflects the increase in the level of purchases of MBS during 2018 as compared to the same period in 2017.

Our investing activities have included the purchase of long-term assets which are not presently cash flowing or are at risk of interruption of cash flows in the near future. Furthermore, much of the investment income we recognize has been in the form of valuation adjustments we record recognizing our estimates of the net appreciation in value of the assets as we work with borrowers to either modify their loans or acquire the property securing their loans in settlement thereof and MSR's we receive in the sale of mortgage loans. Accordingly, the cash associated with a substantial portion of our revenues is often realized as part of the proceeds of the liquidation of the assets, either through payoff or sale of the mortgage loan or through acquisition and subsequent sale of the property securing the mortgage loans and through the servicing of mortgage loans underlying our investments in MSR's, many months or years after we record the revenues.

Financing activities

Net cash provided by financing activities was \$1.5 billion for the nine months ended September 30, 2018, as compared to net cash used in financing activities of \$633.6 million for the nine months ended September 30, 2017. This change reflects the financing obtained to finance growth in our balance sheet during the nine months ended September 30, 2018, as compared to cash used to repay borrowings due to decreasing balance sheet size during the nine months ended September 30, 2017.

As discussed below in Liquidity and Capital Resources, our Manager continues to evaluate and pursue additional sources of financing to provide us with future investing capacity. We do not raise equity or enter into borrowings for the purpose of financing the payment of dividends. We believe that our cash flows from the liquidation of our investments, which include accumulated gains recorded during the periods we hold those investments, along with our cash earnings, are adequate to fund our operating expenses and dividend payment requirements. However, we manage our liquidity in the aggregate and are reinvesting our cash flows in new investments as well as using such cash to fund our dividend requirements.

Liquidity and Capital Resources

Our liquidity reflects our ability to meet our current obligations (including the purchase of loans from correspondent sellers, our operating expenses and, when applicable, retirement of, and margin calls relating to, our debt and derivatives positions), make investments as our Manager identifies them, pursue our share repurchase program and make distributions to our shareholders. We generally need to distribute at least 90% of our taxable income each year (subject to certain adjustments) to our shareholders to qualify as a REIT under the Internal Revenue Code. This distribution requirement limits our ability to retain earnings and thereby replenish or increase capital to support our activities.

We expect our primary sources of liquidity to be proceeds from liquidations from our investment portfolio, including distressed assets, cash earnings on our investments, cash flows from business activities, and proceeds from borrowings and/or additional equity offerings. When we finance a particular asset, the amount borrowed is less than the asset's fair value and we must provide the cash in the amount of such difference. Our ability to continue making investments is dependent on our ability to invest the cash representing such difference. Further, certain of our CRT Agreements may allow us, at the time we sell a mortgage loan, to deposit less than the full amount of cash we would otherwise be required to deposit with respect to such loan until the end of the aggregation period relating to the applicable CRT Agreement. At the end of such aggregation period, we will be required to deposit all remaining cash necessary to fully secure the related CRT Agreement, and our ability to fully invest in such CRT Agreement is dependent on our ability to deposit the required cash. We believe that our liquidity is sufficient to meet our current liquidity needs.

We do not expect repayments from contractual cash flows from our investments in distressed mortgage loans to be a primary source of liquidity as a substantial portion of such investments are distressed assets that are nonperforming. Our portfolio of distressed mortgage loans was acquired with the expectation that the majority of the cash flows associated with these investments would result from liquidation of the mortgage loan or the property securing the loan, rather than from scheduled principal and interest payments. Our mortgage loans acquired for sale are generally held for fifteen days or less and, therefore, are not expected to generate significant cash flows from principal repayments.

Our current leverage strategy is to finance our assets where we believe such borrowing is prudent, appropriate and available. We have made collateralized borrowings in the form of sales of assets under agreements to repurchase, mortgage loan participation purchase and sale agreements and notes payable. To the extent available to us, we expect in the future to expand the use of long-term financing for assets with estimated future lives of more than one year; this may include term financing and securitization of MSR, performing, nonperforming and/or reperforming mortgage loans.

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We will continue to finance most of our assets on a short-term basis until more long-term financing becomes available. Our short-term financings will be primarily in the form of agreements to repurchase and other secured lending and structured finance facilities, pending the ultimate disposition of the assets, whether through sale, securitization or liquidation. Because a significant portion of our current debt facilities consists of short-term borrowings, we expect to renew these facilities in advance of maturity in order to ensure our ongoing liquidity and access to capital or otherwise allow ourselves sufficient time to replace any necessary financing.

As of September 30, 2018 and December 31, 2017, we financed our investments in MBS, mortgage loans acquired for sale at fair value, mortgage loans at fair value, mortgage loans at fair value held by a VIE, MSRs, ESS, REO and CRT Agreement assets with sales under agreements to repurchase, mortgage loan participation purchase and sale agreements, notes payable, asset sold to PFSI under agreement to repurchase and asset-backed financing. Our leverage ratio, defined as all borrowings divided by shareholders' equity at date presented, was 3.56 and 2.55 at September 30, 2018 and December 31, 2017, respectively.

Our repurchase agreements represent the sales of assets together with agreements for us to buy back the assets at a later date. Following is a summary of the activities in our repurchase agreements financing:

	Quarter ended		Nine months ended	
	September 30,		September 30,	
Assets sold under agreements to repurchase	2018	2017	2018	2017
	(in thousands)			
Average balance outstanding	\$4,072,301	\$3,474,903	\$3,573,805	\$3,388,626
Maximum daily balance outstanding	\$5,091,893	\$3,973,869	\$5,677,797	\$4,083,326
Ending balance	\$4,394,597	\$3,204,054		

The difference between the maximum and average daily amounts outstanding is primarily due to timing of loan purchases and sales in our correspondent acquisition business. The total facility size of our assets sold under agreements to repurchase was approximately \$6.9 billion at September 30, 2018.

As discussed above, all of our repurchase agreements, notes payable, and mortgage loan participation purchase and sale agreements have short-term maturities:

- The transactions relating to mortgage loans and REO under agreements to repurchase generally provide for terms of approximately one year.
- The transactions relating to mortgage loans under mortgage loan participation purchase and sale agreements provide for terms of approximately one year.
- The transactions relating to assets under notes payable provide for terms of approximately two year.

Our debt financing agreements require us and certain of our subsidiaries to comply with various financial covenants. As of the filing of this Report, these financial covenants include the following:

- profitability at the Company for at least one (1) of the previous two consecutive fiscal quarters, and at the Company and our Operating Partnership over the prior three (3) calendar quarters;
- a minimum of \$40 million in unrestricted cash and cash equivalents among the Company and/or our subsidiaries; a minimum of \$40 million in unrestricted cash and cash equivalents among our Operating Partnership and its consolidated subsidiaries; a minimum of \$25 million in unrestricted cash and cash equivalents between PMC and PMH; and a minimum of \$10 million in unrestricted cash and cash equivalents at each of PMC and PMH;
- a minimum tangible net worth for the Company of \$860 million; a minimum tangible net worth for our Operating Partnership of \$860 million; a minimum tangible net worth for PMH of \$250 million; and a minimum tangible net

worth for PMC of \$150 million;

• a maximum ratio of total liabilities to tangible net worth of less than 10:1 for PMC and PMH and 5:1 for the Company and our Operating Partnership; and

• at least two warehouse or repurchase facilities that finance amounts and assets similar to those being financed under our existing debt financing agreements.

Although these financial covenants limit the amount of indebtedness we may incur and impact our liquidity through minimum cash reserve requirements, we believe that these covenants currently provide us with sufficient flexibility to successfully operate our business and obtain the financing necessary to achieve that purpose.

PLS is also subject to various financial covenants, both as a borrower under its own financing arrangements and as our servicer under certain of our debt financing agreements. The most significant of these financial covenants currently include the following:

- positive net income for at least one (1) of the previous two consecutive fiscal quarters, measured quarterly and as of the end of each fiscal quarter;
- a minimum in unrestricted cash and cash equivalents of \$40 million;
- a minimum tangible net worth of \$500 million; and
- a maximum ratio of total liabilities to tangible net worth of 10:1.

In addition to the financial covenants imposed upon us and PLS under our debt financing agreements, we and/or PLS, as applicable, are also subject to liquidity and net worth requirements established by FHFA for Agency sellers/servicers and Ginnie Mae for single-family issuers. FHFA and Ginnie Mae have established minimum liquidity and net worth requirements for approved non-depository single-family sellers/servicers in the case of FHFA, and for approved single-family issuers in the case of Ginnie Mae, as summarized below:

- A minimum net worth of a base of \$2.5 million plus 25 basis points of UPB for total 1-4 unit residential mortgage loans serviced.
- A tangible net worth/total assets ratio greater than or equal to 6%.
- Liquidity equal to or exceeding 3.5 basis points multiplied by the aggregate UPB of all mortgages secured by 1-4 unit residential properties serviced for Freddie Mac, Fannie Mae and Ginnie Mae (“Agency Mortgage Servicing”) plus 200 basis points multiplied by the sum of nonperforming (90 or more days delinquent) Agency Mortgage Servicing that exceed 6% of Agency Mortgage Servicing.
- In the case of PLS, liquidity equal to the greater of \$1.0 million or 0.10% (10 basis points) of its outstanding Ginnie Mae single-family securities, which must be met with cash and cash equivalents.
- In the case of PLS, net worth equal to \$2.5 million plus 0.35% (35 basis points) of its outstanding Ginnie Mae single-family obligations.

We and/or PLS, as applicable, are obligated to maintain these financial covenants pursuant to our MSR financing agreements.

Our debt financing agreements also contain margin call provisions that, upon notice from the applicable lender at its option, require us to transfer cash or, in some instances, additional assets in an amount sufficient to eliminate any margin deficit. A margin deficit will generally result from any decline in the market value (as determined by the applicable lender) of the assets subject to the related financing agreement, although in some instances we may agree with the lender upon certain thresholds (in dollar amounts or percentages based on the market value of the assets) that must be exceeded before a margin deficit will arise. Upon notice from the applicable lender, we will generally be required to satisfy the margin call on the day of such notice or within one business day thereafter, depending on the timing of the notice.

Our Manager continues to explore a variety of additional means of financing our growth, including debt financing through bank warehouse lines of credit, repurchase agreements, term financing, securitization transactions and additional equity offerings. However, there can be no assurance as to how much additional financing capacity such efforts will produce, what form the financing will take or that such efforts will be successful.

Off-Balance Sheet Arrangements and Aggregate Contractual Obligations

Off-Balance Sheet Arrangements

As of September 30, 2018, we have not entered into any off-balance sheet arrangements.

Contractual Obligations

As of September 30, 2018, we had contractual obligations aggregating to \$8.3 billion comprised of borrowings, interest expense on long term debt from our Exchangeable Notes and asset-backed financing of a VIE, and commitments to purchase mortgage loans from correspondent sellers. Payment obligations under these agreements, including expected interest payments on long-term debt, are summarized below:

	Payments due by period				More than
	Less than	1 - 3	3 - 5	5 years	
Contractual obligations	Total	1 year	years	years	5 years
(in thousands)					
Commitments to purchase mortgage loans from					
correspondent sellers	\$1,682,007	\$1,682,007	\$—	\$—	\$—
Commitments to fund Deposits securing credit risk					
transfer agreements	578,508	578,508	—	—	—
Firm commitment to purchase CRT securities	294,698	294,698	—	—	—
Short term debt	4,527,628	4,421,092	106,536	—	—
Long term debt	986,934	—	250,000	450,000	286,934
Interest expense on long term debt (1)	267,444	44,490	74,787	51,405	96,762
Total	\$8,337,219	\$7,020,795	\$431,323	\$501,405	\$383,696

(1) Interest expense on long term debt includes interest for the Asset-backed financing of a VIE, the Exchangeable Notes and the Term Notes.

All debt financing arrangements that matured between September 30, 2018 and the date of this Report have been renewed, extended or replaced.

The amount at risk (the fair value of the assets pledged plus the related margin deposit, less the amount advanced by the counterparty and accrued interest) relating to our assets sold under agreements to repurchase is summarized by counterparty below as of September 30, 2018:

Counterparty	Amount at risk (in thousands)
Credit Suisse First Boston Mortgage Capital LLC	\$747,360
JPMorgan Chase & Co.	124,758
Citibank, N.A.	118,546
Bank of America, N.A.	89,154
Deutsche Bank	33,676

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BNP Paribas Corporate & Institutional Banking	17,564
Daiwa Capital Markets America Inc.	16,385
Morgan Stanley Bank, N.A.	10,781
Mizuho Securities	8,634
Royal Bank of Canada	4,454
Wells Fargo, N.A.	4,034
	\$ 1,175,346

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Market risk is the exposure to loss resulting from changes in interest rates, foreign currency exchange rates, commodity prices, equity prices, real estate values and other market-based risks. The primary market risks that we are exposed to are real estate risk, credit risk, interest rate risk, prepayment risk, inflation risk and market value risk. Our primary trading asset is our inventory of mortgage loans acquired for sale. We believe that such assets' fair values respond primarily to changes in the market interest rates for comparable recently-originated mortgage loans. Our other market-risk assets are a substantial portion of our investments and are primarily comprised of distressed mortgage loans, MSRs, CRT Agreements and MBS. We believe that the fair values of MSRs also respond primarily to changes in the market interest rates for comparable mortgage loans. We believe that the fair values of our investment in distressed mortgage loans respond primarily to changes in the fair value of the real estate securing such loans.

The following sensitivity analyses are limited in that they were performed at a particular point in time; only contemplate the movements in the indicated variables; do not incorporate changes to other variables; are subject to the accuracy of various models and assumptions used; and do not incorporate other factors that would affect our overall financial performance in such scenarios, including operational adjustments made by management to account for changing circumstances. For these reasons, the following estimates should not be viewed as earnings forecasts.

Mortgage-backed securities at fair value

The following table summarizes the estimated change in fair value of our mortgage-backed securities as of September 30, 2018, given several hypothetical (instantaneous) changes in interest rates and parallel shifts in the yield curve:

Interest rate shift in basis points	-200	-75	-50	50	75	200
	(dollar in thousands)					
Fair value	\$2,288,853	\$2,206,714	\$2,181,767	\$2,066,905	\$2,035,775	\$1,877,745
Change in fair value:						
\$	\$162,346	\$80,207	\$55,260	\$(59,602)	\$(90,732)	\$(248,762)
%	7.6	% 3.8	% 2.6	% (2.8)	% (4.3)	% (11.7)

Mortgage Loans at Fair Value

The following table summarizes the estimated change in fair value of our portfolio of distressed mortgage loans (comprised of mortgage loans at fair value, excluding mortgage loans at fair value held by VIE) as of September 30, 2018, given several hypothetical (instantaneous) changes in home values from those used in estimating fair value:

Property value shift in %	-15%	-10%	-5%	+5%	+10%	+15%
	(dollars in thousands)					
Fair value	\$311,134	\$322,064	\$331,987	\$349,167	\$356,527	\$363,139
Change in fair value:						
\$	\$(29,861)	\$(18,931)	\$(9,008)	\$8,172	\$15,533	\$22,144
%	(8.8)	% (5.6)	% (2.6)	% 2.4	% 4.6	% 6.5

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The following table summarizes the estimated change in fair value of our mortgage loans at fair value held by VIE as of September 30, 2018, net of the effect of changes in fair value of the related asset-backed financing of the VIE at fair value, given several hypothetical (instantaneous) changes in interest rates and parallel shifts in the yield curve:

Interest rate shift in basis points	-200	-75	-50	50	75	200
	(dollar in thousands)					
Fair value	\$293,201	\$292,701	\$292,536	\$291,790	\$291,592	\$290,616
Change in fair value:						
\$	\$1,027	\$527	\$362	\$(384)	\$(582)	\$(1,558)
%	0.4	% 0.2	% 0.1	% (0.1)%	(0.2)%	(0.5)%

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Mortgage Servicing Rights

The following tables summarize the estimated change in fair value of MSR as of September 30, 2018, given several shifts in pricing spreads, prepayment speed and annual per-loan cost of servicing:

Pricing spread shift in %	-20%	-10%	-5%	+5%	+10%	+20%
	(dollars in thousands)					
Fair value	\$1,181,629	\$1,144,614	\$1,126,921	\$1,093,055	\$1,076,844	\$1,045,771
Change in fair value:						
\$	\$71,887	\$34,873	\$17,179	\$(16,686)	\$(32,897)	\$(63,970)
%	6.5	% 3.1	% 1.6	% (1.5)%	(3.0)%	(5.8)%

Prepayment speed shift in %	-20%	-10%	-5%	+5%	+10%	+20%
	(dollars in thousands)					
Fair value	\$1,176,089	\$1,141,750	\$1,125,471	\$1,094,532	\$1,079,816	\$1,051,764
Change in fair value:						
\$	\$66,348	\$32,009	\$15,730	\$(15,209)	\$(29,926)	\$(57,978)
%	6.0	% 2.9	% 1.4	% (1.4)%	(2.7)%	(5.2)%

Per-loan servicing cost shift in %	-20%	-10%	-5%	+5%	+10%	+20%
	(dollars in thousands)					
Fair value	\$1,141,078	\$1,125,410	\$1,117,575	\$1,101,907	\$1,094,073	\$1,078,405
Change in fair value:						
\$	\$31,337	\$15,668	\$7,834	\$(7,834)	\$(15,668)	\$(31,337)
%	2.8	% 1.4	% 0.7	% (0.7)%	(1.4)%	(2.8)%

Excess servicing spread

The following tables summarize the estimated change in fair value of our ESS as of September 30, 2018, given several shifts in pricing spreads and prepayment speed:

Pricing spread shift in %	-20%	-10%	-5%	+5%	+10%	+20%
	(dollars in thousands)					
Fair value	\$230,651	\$226,906	\$225,076	\$221,500	\$219,752	\$216,335
Change in fair value:						
\$	\$7,377	\$3,631	\$1,802	\$(1,775)	\$(3,522)	\$(6,940)
%	3.3	% 1.6	% 0.8	% (0.8)%	(1.6)%	(3.1)%

Prepayment speed shift in %	-20%	-10%	-5%	+5%	+10%	+20%
	(dollars in thousands)					
Fair value	\$242,108	\$232,328	\$227,715	\$218,996	\$214,872	\$207,053

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Change in fair value:

\$	\$18,834	\$9,053	\$4,441	\$(4,278)	\$(8,403)	\$(16,221)
%	8.4	% 4.1	% 2.0	% (1.9)%	(3.8)%	(7.3)%

CRT Agreements

Following is a summary of the effect on fair value of various changes to the pricing spread input used to estimate the fair value of our CRT Agreements given several shifts:

Pricing spread shift in basis points	-100	-50	-25	25	50	100
	(dollars in thousands)					
Fair value	\$757,695	\$724,755	\$708,732	\$677,542	\$662,367	\$632,823
Change in fair value:						
\$	\$64,699	\$31,759	\$15,736	\$(15,455)	\$(30,630)	\$(60,173)
%	9.3	% 4.6	% 2.3	% (2.2)%	(4.4)%	(8.7)%

Item 4. Controls and Procedures

Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed under the Securities Exchange Act of 1934 (the “Exchange Act”) is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. However, no matter how well a control system is designed and operated, it can provide only reasonable, not absolute, assurance that it will detect or uncover failures within the Company to disclose material information otherwise required to be set forth in our periodic reports.

Our management has conducted an evaluation, with the participation of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Report as required by paragraph (b) of Rules 13a-15 and 15d-15 under the Exchange Act. Based on our evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective, as of the end of the period covered by this Report, to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the applicable rules and forms, and that it is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting during the quarter and nine months ended September 30, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we may be involved in various legal actions, claims and proceedings arising in the ordinary course of business. As of September 30, 2018, we were not involved in any material legal actions, claims or proceedings.

Item 1A. Risk Factors

There are no material changes from the risk factors set forth under Item 1A. "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on March 1, 2018.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

There were no sales of unregistered equity securities during the nine months ended September 30, 2018.

The following table provides information about our common share repurchases during the quarter ended September 30, 2018:

Period	Total number of shares purchased	Average price paid per Share	Total number of shares purchased as part of publicly announced plans or programs (a)	Amount
				available for future share repurchases under the plans or programs (a) (in thousands)
January 1, 2018– January 31, 2018	671,484	\$ 15.96	671,484	\$ 83,375
July 1, 2018 – July 31, 2018	—	\$ —	—	\$ 83,375
August 1, 2018 – August 31, 2018	—	\$ —	—	\$ 83,375
September 1, 2018 – September 30, 2018	—	\$ —	—	\$ 83,375
	671,484	\$ 15.96	671,484	\$ 83,375

(a) During 2015, our board of trustees authorized a share repurchase program. Under the repurchase program, as amended, we may repurchase up to \$300 million of our outstanding common shares. Under the repurchase program, we have discretion to determine the dollar amount of common shares to be repurchased and the timing of any repurchases in compliance with applicable law and regulation. The repurchase program does not have an expiration date. Amounts presented reflect balances as of the end of the applicable period.

Item 3. Defaults Upon Senior Securities

None

Item 4. Mine Safety Disclosures

Not applicable

Item 5. Other Information

None

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Item 6. Exhibits

Exhibit No.	Exhibit Description	Form	Filing Date	Incorporated by Reference from the Below-Listed Form (Each Filed under SEC File Number 14-64423)
3.1	<u>Declaration of Trust of PennyMac Mortgage Investment Trust, as amended and restated.</u>	10-Q	November 6, 2009	
3.2	<u>Second Amended and Restated Bylaws of PennyMac Mortgage Investment Trust</u>	8-K	March 16, 2018	
3.3	<u>Articles Supplementary classifying and designating the 8.125% Series A Fixed-to-Floating Rate Cumulative Redeemable Preferred Shares of Beneficial Interest.</u>	8-A	March 7, 2017	
3.4	<u>Articles Supplementary classifying and designating the 8.00% Series B Fixed-to-Floating Rate Cumulative Redeemable Preferred Shares of Beneficial Interest.</u>	8-A	June 30, 2017	
10.1	<u>Fourth Amendment to Master Repurchase Agreement, dated as of July 26, 2018, among PennyMac Corp., PennyMac Operating Partnership, L.P. and JPMorgan Chase Bank, N.A.</u>	*		
10.2	<u>Fifth Amendment to Master Repurchase Agreement, dated as of October 12, 2018, among PennyMac Corp., PennyMac Operating Partnership, L.P. and JPMorgan Chase Bank, N.A.</u>	*		
10.3	<u>Master Repurchase Agreement, dated as of August 3, 2018, by and among BNP Paribas, PennyMac Operating Partnership, L.P. and PennyMac Mortgage Investment Trust.</u>	8-K	August 8, 2018	
10.4	<u>Guaranty, dated as of August 3, 2018, by PennyMac Mortgage Investment Trust in favor of BNP Paribas.</u>	8-K	August 8, 2018	
10.5	<u>Amendment Number Twelve to the Master Repurchase Agreement, dated as of August 24, 2018, among PennyMac Corp., PennyMac Operating Partnership, L.P., Morgan Stanley Bank, N.A. and Morgan Stanley Mortgage Capital Holdings LLC.</u>	*		
10.6	<u>Amendment No. 2 to the Master Repurchase Agreement, dated as of September 27, 2018, by and between Deutsche Bank AG, Cayman Islands Branch and PennyMac Corp.</u>	*		

- | | | |
|------|---|----|
| 31.1 | <u>Certification of David A. Spector pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u> | * |
| 31.2 | <u>Certification of Andrew S. Chang pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u> | * |
| 32.1 | <u>Certification of David A. Spector pursuant to Rule 13a-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u> | ** |
| 32.2 | <u>Certification of Andrew S. Chang pursuant to Rule 13a-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u> | ** |

101 Interactive data files pursuant to Rule 405 of Regulation S-T: (i) the Consolidated Balance Sheets as of September 30, 2018 and December 31, 2017 (ii) the Consolidated Statements of Income for the quarters ended September 30, 2018 and 2017, (iii) the Consolidated Statements of Changes in Shareholders' Equity for the quarters ended September 30, 2018 and 2017, (iv) the Consolidated Statements of Cash Flows for the quarters ended September 30, 2018 and 2017 and (v) the Notes to the Consolidated Financial Statements.

*Filed herewith.

**The certifications attached hereto as Exhibits 32.1 and 32.2 are furnished to the SEC pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, except as shall be expressly set forth by specific reference in such filing.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Pennymac Mortgage Investment Trust

(Registrant)

Dated: November 7, 2018 By: /s/ David A. Spector
David A. Spector
President and Chief Executive Officer

(Principal Executive Officer)

Dated: November 7, 2018 By: /s/ Andrew S. Chang
Andrew S. Chang
Chief Financial Officer

(Principal Financial Officer)