PennyMac Mortgage Investment Trust

Fourth Quarter 2019 Earnings Report

February 6, 2020

Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, regarding management's beliefs, estimates, projections and assumptions with respect to, among other things, the Company's financial results, future operations, business plans and investment strategies, as well as industry and market conditions, all of which are subject to change. Words like "believe," "expect," "anticipate," "promise," "plan," and other expressions or words of similar meanings, as well as future or conditional verbs such as "will," "would," "should," "could," or "may" are generally intended to identify forward-looking statements. Actual results and operations for any future period may vary materially from those projected herein, from past results discussed herein, or illustrative examples provided herein.

Factors which 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; 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; 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; our ability to foreclose on our investments in a timely manner or at all; increased prepayments of the mortgages and other loans underlying our mortgage-backed securities or relating to our mortgage servicing rights , excess servicing spread 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 income; 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 or government-sponsored entities, or such changes that increase the cost of doing business with such entities; the Dodd-Frank Wall Street Reform and Consumer Protection 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 Consumer Financial Protection Bureau 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 and the ability of certain of our subsidiaries to qualify as REITs or as taxable REIT subsidiaries 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); the effect of public opinion on our reputation; the occurrence of natural disasters or other events or circumstances that could impact our operations; and our organizational structure and certain requirements in our charter documents.

You should not place undue reliance on any forward-looking statement and should consider all of the uncertainties and risks described above, as well as those more fully discussed in reports and other documents filed by the Company with the Securities and Exchange Commission from time to time. The Company undertakes no obligation to publicly update or revise any forward-looking statements or any other information contained herein, and the statements made in this presentation are current as of the date of this presentation only.

Fourth Quarter Highlights

- Net income attributable to common shareholders of $52.4 million; diluted earnings per common share of $0.55
  - Annualized return on average common equity of 10%(1)
  - Dividend of $0.47 per common share declared on December 20, 2019 and paid on January 30, 2020
  - Book value per common share increased to $21.37 from $21.14 at September 30, 2019
- Segment pretax results: Credit Sensitive Strategies: $38.9 million; Interest Rate Sensitive Strategies: $12.3 million; Correspondent Production: $23.0 million; Corporate: $(15.0) million
- Results reflect:
  - Strong performance from government-sponsored enterprise (GSE) credit risk transfer (CRT) investments
  - Increased income contribution from the Correspondent Production segment
  - Improved performance from Interest Rate Sensitive Strategies despite elevated hedge costs driven by continued interest rate volatility
- Record correspondent production volumes drove organic investment growth in CRT and mortgage servicing right (MSR) investments
  - Conventional correspondent loan production totaled $22.7 billion in unpaid principal balance (UPB), up 22% from the prior quarter and 125% from 4Q18(2)
  - CRT deliveries totaled $16.6 billion, resulting in a firm commitment to purchase $655 million of CRT securities
  - Added $303 million of new MSR investments

(1) Annualized return on average common equity is calculated based on annualized quarterly net income attributable to common shareholders as a percentage of monthly average common equity during the period

(2) Consists of delegated and non-delegated conventional conforming and non-Agency loans and includes conventional loans acquired from PennyMac Financial Services, Inc. (NYSE: PFSI)

Fourth Quarter Highlights (continued)

- Expanded the capital structure in support of continued growth with the private placement of $210 million of senior exchangeable notes
- Strong share price performance and increased investment opportunities drove successful capital raises
  - Raised $201 million in net proceeds from an issuance of 9.2 million common shares in an underwritten equity offering
  - Raised $14 million through the “At-The-Market” (ATM) equity offering program, issuing 637,000 shares

Notable activity after quarter end:

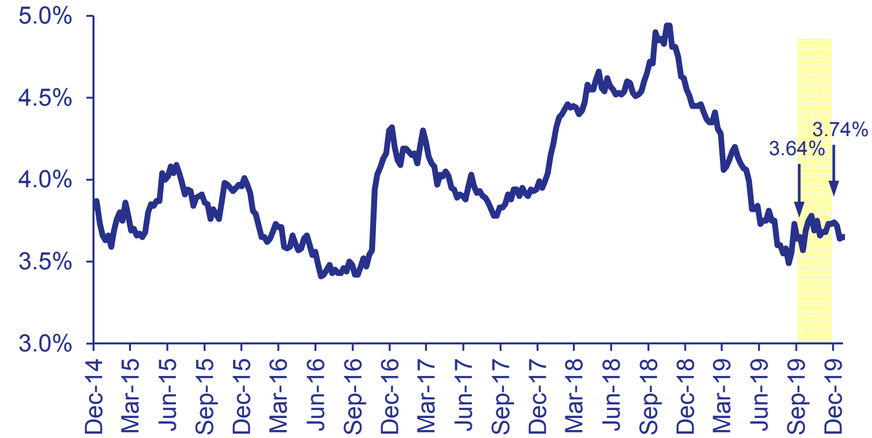
- Committed to issue $350 million of 3-year notes related to the remainder of PMT’s fifth CRT transaction[(1)]

(1) This transaction is subject to continuing due diligence and customary closing conditions. There can be no assurance regarding the size of this transaction or that this transaction will be completed at all.

Current Market Environment

- The Federal Reserve continues to signal that it will maintain the current target Federal Funds rate, as it continues to monitor the balance between its maximum employment and 2% inflation target objectives
- The average 30-year fixed rate mortgage ended the fourth quarter at 3.74%, 0.10% higher than at September 30th(1)
  - The 10-year Treasury bond yield ended the quarter at 1.92%, up 0.24% from September 30th(2)
  - Low interest rates have kept origination volumes high, and have resulted in increases to 2020 origination forecasts
- Home prices continued to appreciate at a steady pace, moving closer in-line with wage growth
  - Tight supply continues to support home prices with most forecasts expecting moderate home price appreciation through 2021
- A healthy U.S. economy driven by low unemployment and a strong consumer continues to support historically low levels of delinquencies
  - The total U.S. mortgage delinquency rate was 3.40% as of December 31, 2019, down from 3.53% at September 30, 2019 and 3.88% at December 31, 2018(4)
- Spreads on seasoned CRT with higher note rates widened in 4Q19 due to accelerated prepayment speeds, while spreads for "on the run" and seasoned CRT with lower note rates were modestly tighter

Average 30-year fixed rate mortgage(1)



Macroeconomic Forecasts(3)

	2016	2017	2018	2019	2020E	2021E
New home sales ('000s)	561	616	620	681	730	759
Existing home sales ('000s)	5,440	5,547	5,339	5,340	5,443	5,530
Total originations ($ in billions)	$2,065	$1,810	$1,630	$2,375	$1,986	$1,859
Purchase originations ($ in billions)	$1,037	$1,144	$1,141	$1,281	$1,336	$1,377
U.S. Home Price Appreciation (Y/Y % Change)	5.8%	6.9%	6.3%	4.9%	3.5%	2.3%

Green: denotes improvement since previous earnings report
Red: denotes drop since previous earnings report

(1) Freddie Mac Primary Mortgage Market Survey. 3.51% as of 1/30/20 (2) U.S. Department of the Treasury.1.54% as of 2/3/20
(3) Actual home sales: National Association of Realtors (existing) and the Census Bureau (new). Home sales forecast: Average of Mortgage Bankers Association and Fannie Mae. Actual purchase and total originations: Inside Mortgage Finance. Purchase and total originations forecast: Average of Mortgage Bankers Association, Fannie Mae, Freddie Mac. Actual home price appreciation: FHFA Home Price Index. 2019 Home price appreciation represents Y/Y change from November 2018 to November 2019. Forecasted home price appreciation: Average of Mortgage Bankers Association, Fannie Mae, Freddie Mac.
(4) Black Knight Financial Services. Includes loans that are 30 days or more past due but not in foreclosure

PMT's Investment Activity by Strategy During the Quarter

($ in millions)	Long-term mortgage asset	Asset carrying value at 9/30/19	Net new investments[5]	Fair value changes[6]	Asset carrying value at 12/31/19
Credit Sensitive Strategies	**Credit Risk Transfer[1]**	$ 3,111	**$ 580**	$ 36	$ 3,727
	Distressed Loans & REO[2]	$ 95	**$ (13)**	$ (1)	$ 80
Interest Rate Sensitive Strategies	**MSR & ESS[3]**	$ 1,346	**$ 237**	$ 132	$ 1,714
	Agency MBS[4]	$ 2,325	**$ 515**	$ (0)	$ 2,840
	Total	$ 6,876	**$ 1,319**	$ 166	$ 8,361

(1) The fair value of CRT investments is reflected on the balance sheet as deposits securing CRT arrangements, firm commitment to purchase CRT securities, and derivative and credit risk transfer strip assets, net of the interest-only security payable. Presented on a pro forma basis that reflects the face amount of firm commitment to purchase CRT securities.

(2) REO = Real estate acquired in settlement of loans. Net new investments reflect sales in performing and non-performing loans as a part of PMT's strategy to exit the investments. Includes $65.6 million in carrying value of REO at 12/31/19.

(3) ESS = Excess servicing spread

(4) MBS = Mortgage-backed securities. Net new investments represents rebalancing of the MBS portfolio and runoff.

(5) Net new investments represents new investments net of sales, liquidations, and runoff

(6) Changes in fair value of CRT investments included the accrual of carry on firm commitments reflected in income as well as changes in fair value upon settlement of a CRT transaction

Run-Rate Return Potential from PMT's Investment Strategies

($ in millions, except EPS)	Annualized Return on Equity (ROE)	WA Equity Allocated (%)[1]
Credit sensitive strategies:		
GSE credit risk transfer[2]	16.7%	41%
Other credit sensitive strategies	-16.6%	1%
Net credit sensitive strategies	**15.9%**	**42%**
Interest rate sensitive strategies:		
MSRs (incl. recapture)	12.3%	26%
ESS (incl. recapture)	7.1%	3%
Agency MBS	21.4%	7%
Non-Agency senior MBS (incl. jumbo)	20.4%	0%
Interest rate hedges[3]	-3.6%	0%
Net interest rate sensitive strategies	**10.2%**	**36%**
Correspondent production	**10.5%**	**18%**
Cash, short term investments, and other	3.6%	4%
Management fees & corporate expenses	-2.6%	
Net Corporate[4]	**-2.4%**	
Provision for income tax expense	0.0%	
Net income	**9.8%**	**100%**
Dividends on preferred stock	**8.3%**	**11%**
Net income attributable to common shareholders	**10.0%**	**89%**
Diluted EPS	**$ 0.53**	

Note: This slide presents estimates for illustrative purposes only, using PMT's base case assumptions (e.g., for credit performance, prepayment speeds, financing economics) and does not contemplate significant changes or shocks to current market conditions. Actual results may differ materially. Please refer to slide 2 for important disclosures regarding forward-looking statements.

- New investments in CRT and MSRs are accretive to and drive PMT's overall return potential
  - Driven by PMT's strong correspondent production volumes
- CRT return potential reflects credit spreads that have tightened
- Interest rate sensitive strategies return potential incorporates elevated hedge costs driven by market volatility
- Correspondent production return potential reflects normalization from recent elevated results and the impact of additional equity allocated to the segment pending investment in long-term assets

(1) Management's internal allocation of equity. Equity allocated to MSR, ESS and distressed loan investments reflects an allocation of exchangeable senior notes and associated expenses
(2) Projected CRT income includes fair value recognition upon loan delivery under CRT agreements
(3) ROE calculated as a percentage of segment equity
(4) ROE calculated as a percentage of total equity

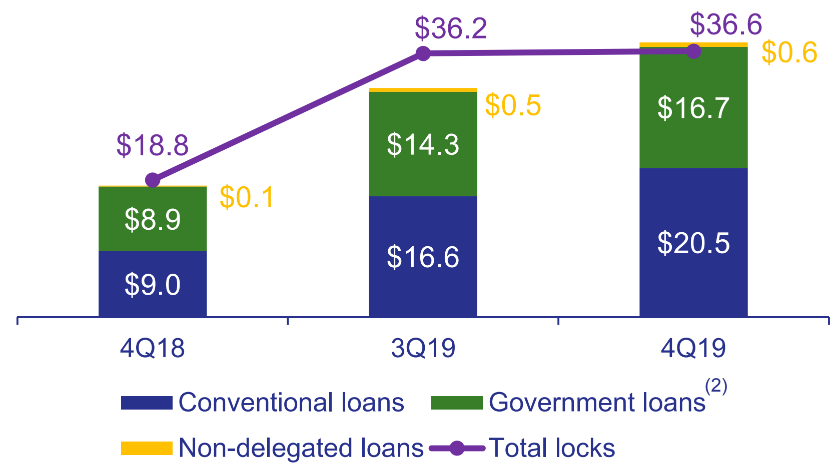
Mortgage Investment Activities

Correspondent Production Highlights

- Correspondent acquisitions of nonaffiliated originations in 4Q19 totaled $37.7 billion in UPB, up 20% Q/Q and 109% Y/Y[(1)]
  - 55% conventional loans; 45% government loans
  - Conventional conforming acquisitions of $20.5 billion in UPB, up 23% Q/Q and 127% Y/Y
  - Government acquisitions of $16.7 billion in UPB, up 16% Q/Q and 87% Y/Y
- Acquired $1.7 billion in UPB of conventional loans originated by PFSI, up 20% Q/Q and 96% Y/Y
- Conventional lock volume of $19.7 billion in UPB, up 1% Q/Q and 105% Y/Y[(3)]
- PennyMac remained the largest correspondent aggregator in the U.S. for the second consecutive quarter[(5)]
- January correspondent acquisitions totaled $11.1 billion in UPB; locks totaled $11.4 billion in UPB

Correspondent Production Volume and Mix

(UPB in billions)



Key Financial Metrics	3Q19	4Q19
Pretax income as a percentage of interest rate lock commitments[(3)]	0.06%	0.06%
Fulfillment fee[(4)]	0.27%	0.28%

Selected Operational Metrics	3Q19	4Q19
Correspondent seller relationships	770	799
Purchase money loans, as a % of total acquisitions	66%	55%

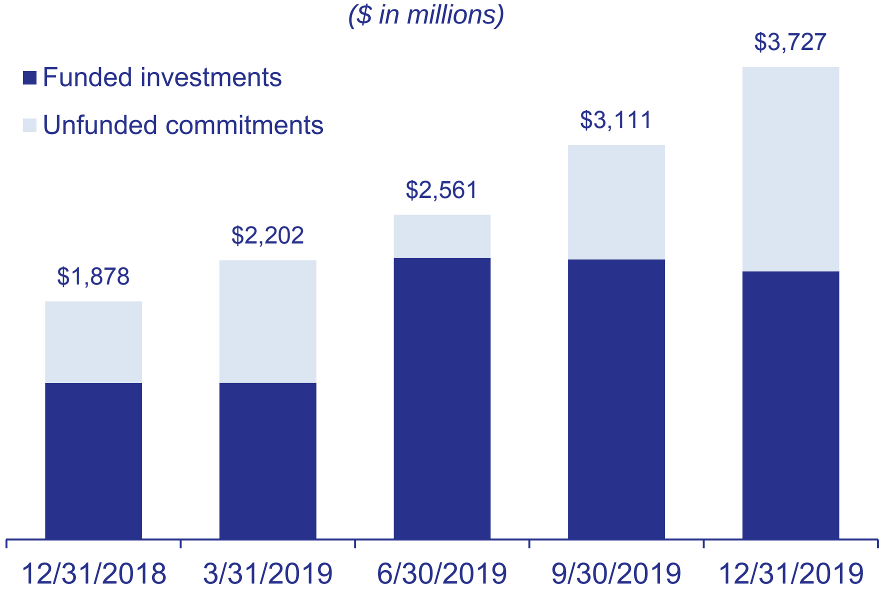
(1) Includes delegated and non-delegated acquisitions
(2) For delegated government loans, PMT earns a sourcing fee and interest income for its holding period and does not pay a fulfillment fee
(3) Conventional conforming and non-Agency interest rate lock commitments
(4) Based on funded loans subject to fulfillment fees
(5) According to Inside Mortgage Finance for 4Q19

GSE CRT Investments Continue Growth Trajectory and Strong Performance

- Delivered $16.6 billion in UPB of loans during the quarter resulting in a firm commitment to purchase $655 million of CRT securities pursuant to our sixth CRT transaction with Fannie Mae
- Credit performance remains strong
  - Losses have developed within expectations driven by low unemployment and continued home price appreciation
  - Modest increase in delinquency rate reflects multiple factors including seasonal trends and a reduction in underlying balances driven by high prepayments

CRT Investments[1]

($ in millions)



Selected metrics for quarter ended[2]:

	12/31/2018	3/31/2019	6/30/2019	9/30/2019	12/31/2019
Underlying UPB of loans ($ in billions)	$46.3	$52.9	$59.6	$69.1	$80.7
WA FICO	746	746	747	748	751
WA LTV	80.6%	82.9%	83.2%	83.4%	83.1%
60+ Days Delinquent as a % of outstanding UPB	0.259%	0.267%	0.267%	0.305%	0.350%
Actual losses ($ in millions)	$0.7	$0.9	$0.9	$1.7	$1.7
Cumulative lifetime losses ($ in millions)	$3.6	$4.5	$5.4	$7.1	$8.8

Note: See slides 11, 14, 16, and 23 - 25 for financial performance and additional details regarding CRT investments

[1] The fair value of CRT investments is reflected on the balance sheet as deposits securing CRT arrangements, firm commitments to purchase CRT securities and derivative and credit risk transfer strip assets, net of the interest-only security payable. Presented on a pro forma basis that reflects the face amount of firm commitment to purchase CRT securities, and the commitment to fund deposits securing CRT agreements, as applicable, for each period shown.

[2] FICO and LTV metrics at origination for the population of loans remaining as of the date presented

Term Financing in Place for Substantial Majority of CRT Investments

Transaction	CRT 2015-1 CRT 2015-2 CRT 2016-1	CRT 2016-2	CRT 2018-1	CRT 2019-1(1)
Status	Funded	Funded	Funded	In aggregation
UPB(2) ($ in billions)	$7.1	$17.7	$17.1	$38.7
Face Amount(2) ($ in millions)	$333.5	$756.9	$879.4	$1,605.2
Financing(2)	• $268 million of 3-year term notes	• $630 million of 4-year term notes	• $355 million of 3-year term notes • $350 million of 3-year term notes(3)	• Commitment to acquire CRT securities

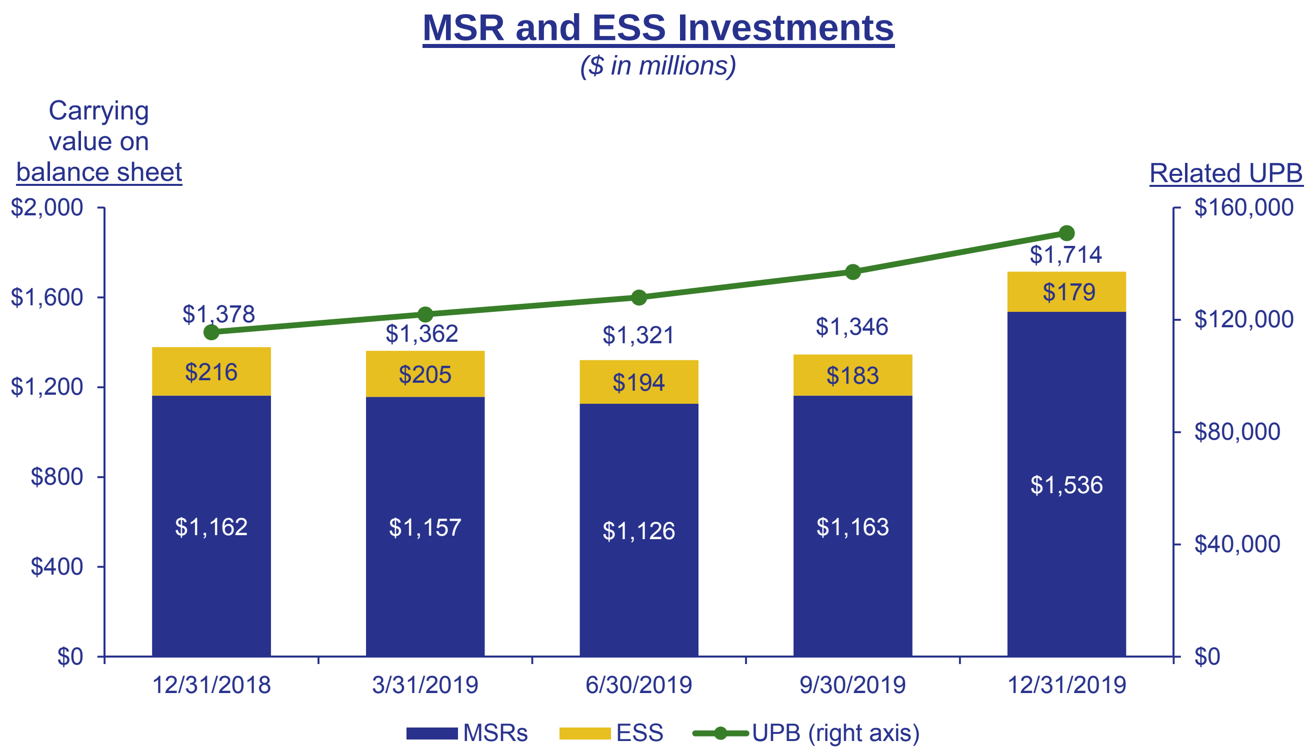
- Outstanding term financing for PMT's CRT investments grew to over $1.6 billion, pro forma as of January 31, 2020
  - Term notes reduce margin call risk and associated internal cash reserves

(1) PMT is currently in the aggregation period delivering loans to Fannie Mae under a commitment for a sixth CRT transaction. UPB represents the volume outstanding as of December 31, 2019.

(2) As of December 31, 2019, except as otherwise noted

(3) Committed to issue $350 million of 3-year term notes after quarter end. This transaction is subject to continuing due diligence and customary closing conditions. There can be no assurance regarding the size of this transaction or that this transaction will be completed at all.

Trends in MSR and ESS Investments



- MSR assets increased to $1.5 billion driven by investment growth from record conventional production volumes and fair value gains resulting from the increase in interest rates during the quarter
  - $303 million in new MSR investments
  - UPB associated with MSR investments increased to $131.0 billion from $116.4 billion at September 30, 2019
- ESS investments relating to bulk, mini-bulk and flow MSR acquisitions by PFSI between 2013 and 2015 decreased to $178.6 million, driven by repayments of the underlying loans
  - UPB associated with ESS investments decreased to $19.9 billion from $20.8 billion at September 30, 2019

Financial Results

Fourth Quarter Income and Return Contributions by Strategy

($ in millions)	Total Income Contribution[(1)]	Market-Driven Value Changes[(2)]	Income Excluding Market-Driven Value Changes[(1)(2)]	WA Equity Allocated[(3)]	Annualized Return on Equity (ROE)[(1)]
Credit sensitive strategies:					
GSE credit risk transfer	$ 43.0	$ 2.5	$ 40.5	$ 587	29%
Distressed loan investments	(3.7)	-	(3.7)	37	-39%
Other credit sensitive strategies	(0.4)	(0.7)	0.2	6	-29%
Net credit sensitive strategies	**$ 38.9**	**$ 1.9**	**$ 37.1**	**$ 630**	**25%**
Interest rate sensitive strategies:					
MSRs (incl. recapture)	$ 152.7	$ 129.3	$ 23.5		
ESS (incl. recapture)	3.6	2.3	1.3		
Agency MBS	6.5	(0.5)	7.0		
Non-Agency senior MBS (incl. jumbo)	0.1	(0.0)	0.1		
Interest rate hedges	(150.6)	(150.6)	-		
Net interest rate sensitive strategies	**$ 12.3**	**$ (19.6)**	**$ 31.9**	**$ 943**	**5%**
Correspondent production	**$ 23.0**		**$ 23.0**	**$ 613**	**15%**
Cash, short term investments, and other	$ 0.9		$ 0.9	$ 109	3%
Management fees & corporate expenses	(15.9)		(15.9)		
Corporate[(4)]	**$ (15.0)**	**n/a**	**$ (15.0)**	**$ 109**	**-3%**
Benefit / (Provision) for income tax expense	$ (0.7)	$ -	$ (0.7)		
Net income	**$ 58.6**	**$ (17.7)**	**$ 76.3**	**$ 2,295**	**10%**
Dividends on preferred stock	**$ 6.2**			**$ 300**	**8%**
Net income attributable to common shareholders	**$ 52.4**			**$ 1,995**	**10%**
Diluted EPS	**$ 0.55**				

Note: Amounts may not sum exactly due to rounding

(1) Income contribution and the annualized return on equity calculated net of any direct expenses associated with investments (e.g., loan fulfillment fees and loan servicing fees), but before tax expenses. Some of the income associated with the investment strategies may be subject to taxation.

(2) Market-driven value changes include fair value recognition upon loan delivery under firm commitment to purchase CRT securities attributable to the credit sensitive strategies segment; see slide 16 for details. Categorization of income as market-driven value changes based on management assessment. Income excluding market-driven value changes does not represent REIT taxable income.

(3) Equity allocated represents management's internal allocation. MSR, ESS and distressed loan investments reflect an allocation of exchangeable senior notes and associated expenses.

(4) ROE calculated as a percentage of total equity

Segment Pretax Results

($ in millions)	Total Income Contribution [1]	Market-Driven Value Changes [2]	Income Excluding Market-Driven Value Changes [1][2]
Net credit sensitive strategies	**$ 38.9**	**$ 1.9**	**$ 37.1**
Interest rate sensitive strategies:			
MSRs (incl. recapture)	$ 152.7	$ 129.3	$ 23.5
ESS (incl. recapture)	3.6	2.3	1.3
Agency MBS	6.5	(0.5)	7.0
Non-Agency senior MBS (incl. jumbo)	0.1	(0.0)	0.1
Interest rate hedges	(150.6)	(150.6)	-
Net interest rate sensitive strategies	**$ 12.3**	**$ (19.6)**	**$ 31.9**
Correspondent production	**$ 23.0**		**$ 23.0**

- PMT seeks to manage interest rate risk exposure on a "global" basis, recognizing interest rate sensitivities across its investment strategies
- In a period of increasing interest rates, PMT's MSR and ESS investments typically increase in fair value
- In 4Q19, MSR and ESS fair values increased by $131.6 million due to the increase in interest rates and lower expected prepayment activity in the future
- PMT's MSR portfolio is concentrated in recent vintage loans (2016 - 2018 originations), highly sensitive to prepayments at the current level of interest rates and, as a result, is costly to hedge
- Losses on interest rate hedges, which include elevated hedging costs driven by market volatility, exceeded MSR and ESS fair value gains
- Increased quarterly correspondent production income in 4Q19 more than offset market-driven fair value losses in the interest rate sensitive strategies

Note: Amounts may not sum exactly due to rounding

(1) Income contribution and the annualized return on equity calculated net of any direct expenses associated with investments (e.g., loan fulfillment fees and loan servicing fees), but before tax expenses. Some of the income associated with the investment strategies may be subject to taxation.

(2) Market-driven value changes include fair value recognition upon loan delivery under firm commitment to purchase CRT securities attributable to the credit sensitive strategies segment; see slide 16 for details. Categorization of income as market-driven value changes based on management assessment. Income excluding market-driven value changes does not represent REIT taxable income.

Performance of the GSE Credit Risk Transfer Investments in 4Q19

($ in millions)	Income Contribution	Comments
Market-driven value changes:		
Valuation-related changes included in Net gain (loss) on investment	$ (15.3)	• Reflects impact of accelerated prepayment speeds
Net gain on mortgage loans acquired for sale	17.8	• Fair value recognition upon loan delivery under firm commitment to purchase CRT securities totaled $33.4 million; $15.6 million was attributed to the Correspondent Production segment
	$ 2.5	
Income excluding market-driven value changes:		
Realized gains and carry included in Net gain (loss) on investment	52.5	• Spread income earned on CRT investments
Losses recognized during period	(1.7)	
Interest income	8.4	• Interest income on cash deposits securing CRT investments
Interest expense	(18.8)	• Financing expense related to CRT investments
	$ 40.5	
Total income contribution	**$ 43.0**	

Appendix

PennyMac®
Mortgage Investment Trust

PMT's Business Model Is Unique Among Mortgage REITs

Diversified Investment Strategy

- Organically produced investments in credit risk and interest-sensitive assets driven by production activities
- Demonstrated ability to invest in multiple residential mortgage strategies to capitalize on market trends: newly originated loans, CRT, MSRs, ESS, RMBS[1] and distressed whole loans
- Securitization interests in HELOC and prime non-QM loans

Access to Mortgage Origination and Servicing Assets

- Exclusive rights to the conventional correspondent production business and resulting assets fulfilled by PFSI
- Right of first refusal on other investment opportunities sourced by its manager and service provider, PFSI

PennyMac®
Mortgage Investment Trust

Strong Balance Sheet with Significant Sources of Liquidity

- Strong capital structure with modest leverage and diversified sources of funding
- Securitization structure that allows for issuance of term notes on Fannie Mae MSRs to institutional investors

Synergistic Partnership with PFSI

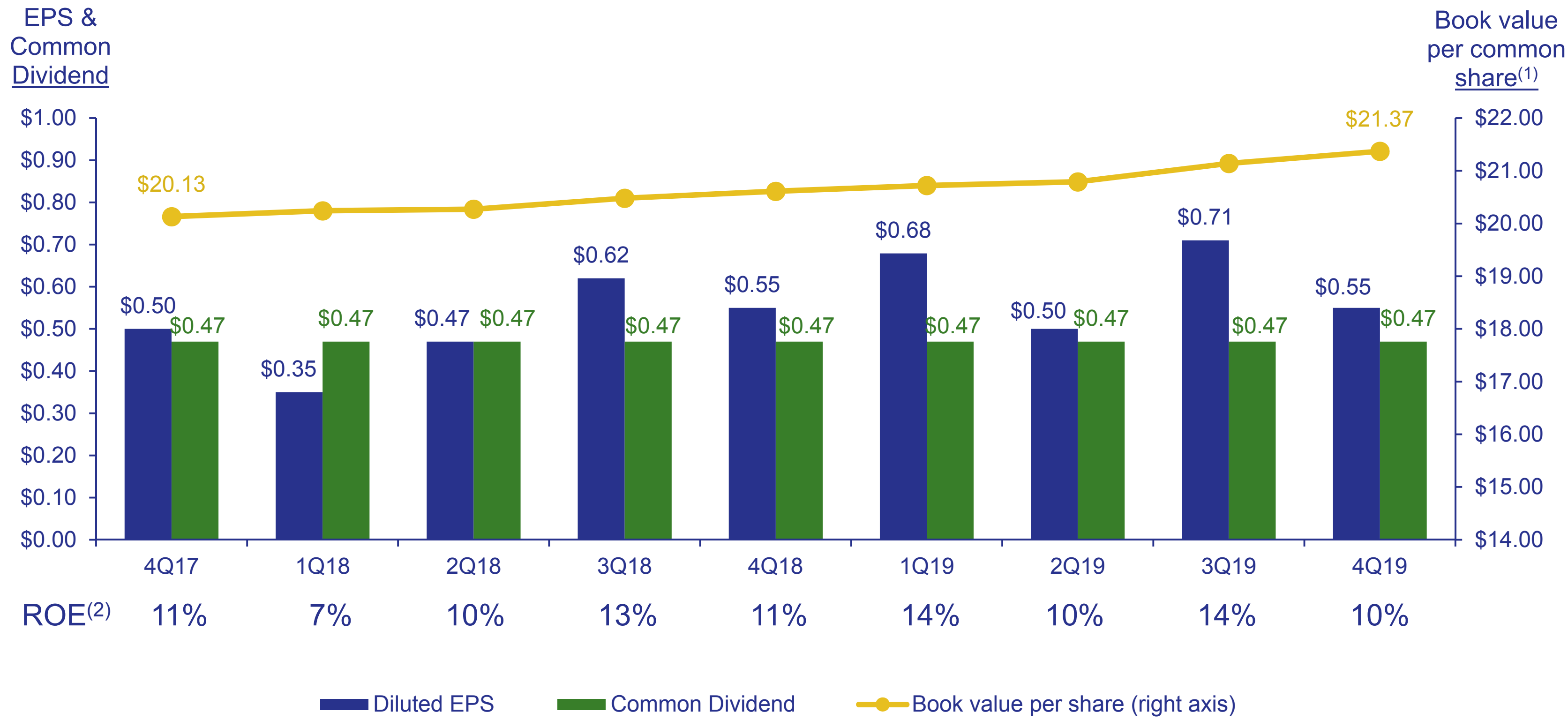
- Access to specialized mortgage capabilities, including origination and servicing operations
- PFSI has expertise across all mortgage functions with over 4,200 employees led by a highly experienced management team
- Enables PMT to aggregate quality investments in residential mortgage products with minimal operational risk
- Established appropriate agreements, controls and oversight to identify and manage potential conflicts

Risk Management and Governance

- Substantial expertise and resources dedicated to risk management
- Sophisticated program to actively manage and hedge interest rate risk
- Governance led by board of trustees which includes seven independent trustees

[1] Residential Mortgage Backed Securities

Track Record of Stable Dividends and Book Value



- Repurchased 14.7 million common shares at a cost of $216 million from 3Q15 through 1Q18
- Issued 39.0 million common shares through underwritten common equity offerings and our ATM program in 2019

(1) At period end

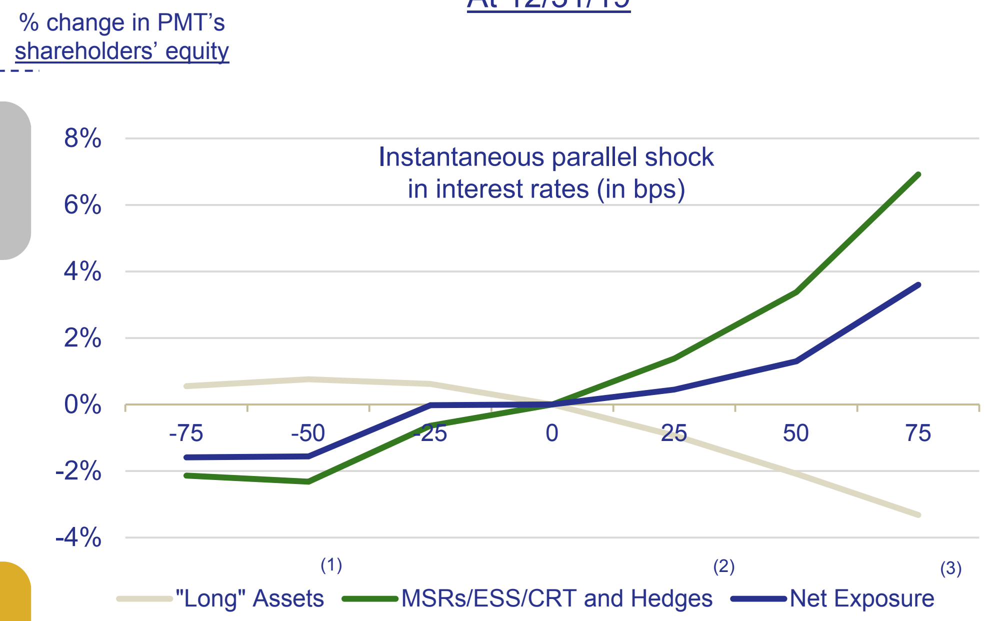
(2) Return on average common equity is calculated based on annualized quarterly net income attributable to common shareholders as a percentage of monthly average common equity during the period

Interest Rate Sensitive Strategies Designed to Mitigate Interest Rate Volatility

Gain in value with increasing rates	Gain in value with decreasing rates
MSRs	Agency MBS
ESS	
Interest Rate Hedges	Interest Rate Hedges

Estimated Sensitivity to Changes in Interest Rates

At 12/31/19



- PMT's interest rate risk exposure is managed on a "global" basis
  - Multiple mortgage-related investment strategies with complementary interest rate sensitivities
  - Utilization of financial hedge instruments
  - Contributes to stability of book value

(1) Includes loans acquired for sale and IRLCs, net of associated hedges, Agency and Non-Agency MBS assets
(2) Includes MSRs, ESS, and hedges which include put and call options on MBS, Eurodollar futures, Treasury futures, and Exchange-traded swaps
(3) Net exposure represents the net position of the "Long" Assets and the MSRs/ESS and Hedges

MSRs and ESS Asset Valuation

($ in millions)	Mortgage Servicing Rights	Excess Servicing Spread[1]
At 12/31/19		
Pool UPB	$131,024	$19,905
Pool weighted average coupon	4.20%	4.19%
Weighted-average pool prepayment speed assumption (CPR)	12.1%	11.0%
Weighted average servicing fee/spread	0.28%	0.19%
Fair value	$1,536	$179
As a multiple of servicing fee	4.23	4.80

(1) Pool UPB, weighted average coupon and expected prepayment speed represent the characteristics of the underlying MSR portfolio owned by PFSI. Weighted average servicing spread, fair value and valuation multiple relate to the ESS asset owned by PMT. The fair value assessment of ESS gives consideration to expected servicing fee collections on non-MSR collateral that has been bought out of the underlying MSR pools due to ongoing servicer activity. The balance of the non-MSR collateral is reflected in the pool UPB above in the amount of $420 million.

PMT's Excess Servicing Spread Investments in Partnership with PFSI

- PMT has co-invested in Agency MSRs acquired from third-party sellers by PFSI; presently only related to Ginnie Mae MSRs
- PMT acquires the right to receive the excess servicing spread cash flows over the life of the underlying loans
- PFSI owns the MSRs and services the loans

Acquired by PFSI from Third-Party Seller[1]

MSR Asset
(e.g., 25bp servicing fee)

Acquired by PMT from PFSI[1]

Excess Servicing Spread
(e.g., 12.5bp)

Base MSR
(e.g., 12.5bp)

Example transaction: actual transaction details may vary materially

Excess Servicing Spread[2]

- Interest income from a portion of the contractual servicing fee
  - Realized yield dependent on prepayment speeds and recapture

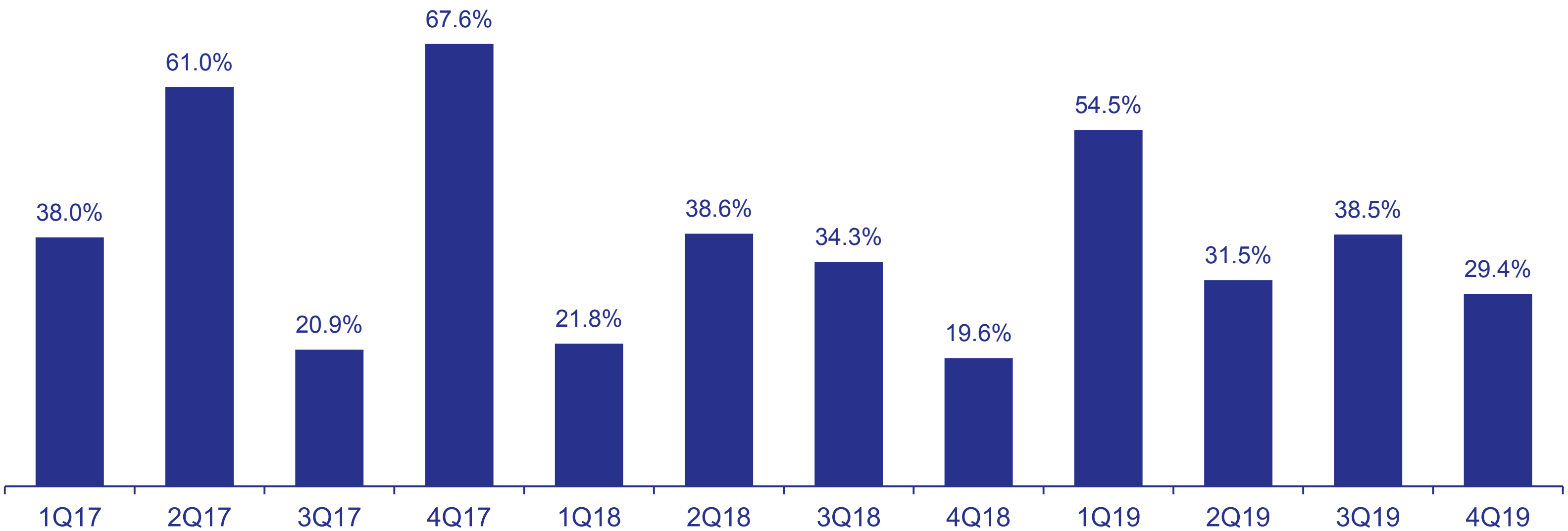
Base MSR

- Income from a portion of the contractual servicing fee
- Also entitled to ancillary income
- Bears expenses of performing loan servicing activities
- Required to advance certain payments largely for delinquent loans

(1) The contractual servicer and MSR owner is PennyMac Loan Services, LLC, a wholly-owned subsidiary of PFSI
(2) Subject and subordinate to Agency rights (under the related servicer guide); does not change the contractual servicing fee paid by the Agency to the servicer.

Return on Equity Contribution of the GSE Credit Risk Transfer Investments

Annualized Return on Average CRT Equity



	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19
Average CRT equity[1] ($ in millions)	$178	$207	$271	$333	$403	$452	$490	$446	$452	$476	$574	$586

[1] Equity allocated represents management's internal allocation across segments and investment strategies

Credit Risk Transfer – Balance Sheet Treatment

($ in thousands)	At December 31, 2019	
UPB of loans subject to guarantee obligation	$ 80,682,513	Current outstanding UPB of loans delivered to the CRT SPVs and sold to Fannie Mae or delivered subject to agreements to purchase REMIC CRT securities
Carrying value of CRT agreements		
Deposits securing CRT arrangements	$ 1,969,784	Current cash collateralizing guarantee included in "Deposits securing credit risk transfer arrangements"
Derivative and credit risk transfer strip assets	$ 170,793	Represents the fair value of expected future cash inflows related to assumption of credit risk net of expected future losses
Interest-only stripped security payable at fair value	$ (25,709)	Fair value of non-recourse liability issued by CRT trusts; represents value of interest-only payment after the maturity of PMT's investments
Firm commitment to purchase CRT security	$ 109,513	Fair value of firm commitment to purchase REMIC CRT securities based on loans delivered to date
Face amount of firm commitment to purchase CRT securities[1]	$ 1,502,203	Face amount of firm commitment to purchase REMIC CRT securities related to loans delivered

[1] Does not appear on the balance sheet

PMT's Investments in GSE Credit Risk Transfer

(UPB in billions)

CRT 2015 -1 (May 2015 - July 2015)	At inception	12/31/2019
UPB	$ 1.2	$ 0.6
Loan Count	4,113	2,389
% Purchase	67.6%	69.9%
WA FICO(1)	742	744
WA LTV(1)	81.3%	81.3%
60+ Days Delinquent Loan Count		25
60+ Days Delinquent % o/s UPB		1.012%
180+ Days Delinquent Loan Count		5
Actual Losses ($k)		$ 463

CRT 2015 -2 (August 2015 - February 2016)	At inception	12/31/2019
UPB	$ 4.2	$ 2.2
Loan Count	15,146	9,017
% Purchase	71.4%	73.9%
WA FICO(1)	742	744
WA LTV(1)	81.8%	82.1%
60+ Days Delinquent Loan Count		76
60+ Days Delinquent % o/s UPB		0.882%
180+ Days Delinquent Loan Count		23
Actual Losses ($k)		$ 2,082

CRT 2016 -1 (February 2016 - August 2016)	At inception	12/31/2019
UPB	$ 6.5	$ 4.4
Loan Count	21,467	15,796
% Purchase	68.6%	70.5%
WA FICO(1)	749	750
WA LTV(1)	81.4%	81.5%
60+ Days Delinquent Loan Count		115
60+ Days Delinquent % o/s UPB		0.701%
180+ Days Delinquent Loan Count		25
Actual Losses ($k)		$ 1,836

CRT 2016 -2 (August 2016 - May 2018)	At inception	12/31/2019
UPB	$ 22.8	$ 17.7
Loan Count	82,087	68,458
% Purchase	73.6%	74.4%
WA FICO(1)	746	747
WA LTV(1)	82.5%	82.6%
60+ Days Delinquent Loan Count		428
60+ Days Delinquent % o/s UPB		0.653%
180+ Days Delinquent Loan Count		88
Actual Losses ($k)		$ 4,381

CRT 2018 -1 (June 2018 - March 2019)	At inception	12/31/2019
UPB	$ 23.6	$ 17.1
Loan Count	84,521	65,993
% Purchase	81.7%	81.7%
WA FICO(1)	746	744
WA LTV(1)	83.8%	84.1%
60+ Days Delinquent Loan Count		306
60+ Days Delinquent % o/s UPB		0.495%
180+ Days Delinquent Loan Count		53
Principal Losses ($k)(2)		23
Interest Reduction ($k)(3)		$ 3

CRT 2019 -1 (April 2019 - Current)	At inception	12/31/2019
UPB	$ 40.2	$ 38.7
Loan Count	137,036	133,880
% Purchase	65.6%	65.4%
WA FICO(1)	756	756
WA LTV(1)	83.1%	83.1%
60+ Days Delinquent Loan Count		100
60+ Days Delinquent % o/s UPB		0.068%
180+ Days Delinquent Loan Count		5
Principal Losses ($k)(2)		-
Interest Reduction ($k)(3)		$ -

Total	At inception	12/31/2019
UPB	$ 98.4	$ 80.7
Loan Count	344,370	295,533
% Purchase	71.9%	71.7%
WA FICO(1)	750	751
WA LTV(1)	82.9%	83.1%
60+ Days Delinquent Loan Count		1,050
60+ Days Delinquent % o/s UPB		0.350%
180+ Days Delinquent Loan Count		199
Principal Losses ($k)(2)		8,784
Interest Reduction ($k)(3)		$ 3

(1) FICO and LTV metrics at origination

Correspondent Production Acquisitions and Locks by Product

(UPB in millions)	4Q18	1Q19	2Q19	3Q19	4Q19
Acquisitions					
Delegated Conventional Conforming	$ 9,052	$ 8,130	$ 10,737	$ 16,644	$ 20,510
Delegated Government	8,885	6,752	10,574	14,346	16,653
Delegated Non-Agency[1]	5	5	4	3	-
Non-Delegated	120	174	402	531	580
Total Correspondent Acquisitions	**$ 18,061**	**$ 15,061**	**$ 21,718**	**$ 31,524**	**$ 37,742**
PFSI's Direct Lending Loans Acquired by PMT	879	730	1,127	1,439	1,724
Total Acquisitions	**$ 18,940**	**$ 15,791**	**$ 22,845**	**$ 32,963**	**$ 39,466**
Locks					
Delegated Conventional Conforming	$ 9,639	$ 8,974	$ 12,628	$ 19,461	$ 19,736
Delegated Government	8,962	7,385	12,028	15,933	16,225
Delegated Non-Agency[1]	11	13	14	1	-
Non-Delegated	227	360	636	853	647
Total Locks	**$ 18,839**	**$ 16,732**	**$ 25,307**	**$ 36,248**	**$ 36,608**

Note: Delegated volumes exclude PennyMac Financial's direct lending loans acquired by PMT. Amounts may not sum exactly due to rounding.

[1] Consists of prime jumbo and non-QM loans