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 March 31, 2020
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: 001-38727

PennyMac Financial Services, Inc.
(**formerly known as New PennyMac Financial Services, Inc.**)
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	**83-1098934** (IRS Employer Identification No.)
3043 Townsgate Road, Westlake Village, California (Address of principal executive offices)	**91361** (Zip Code)

(818) 224-7442
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 par value	PFSI	New York Stock Exchange

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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐	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 May 6, 2020
Common Stock, $0.0001 par value	**79,232,448**

PENNYMAC FINANCIAL SERVICES, INC.

FORM 10-Q
March 31, 2020

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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," "could," "project," "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, 2019, filed with the Securities and Exchange Commission ("SEC") on February 28, 2020.

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

- our exposure to risks of loss resulting from adverse weather conditions, man-made or natural disasters, the effect of climate change, pandemics, including Covid-19 coronavirus pandemic, or other events;
- the continually changing federal, state and local laws and regulations applicable to the highly regulated industry in which we operate;
- lawsuits or governmental actions if we do not comply with the laws and regulations applicable to our businesses;
- the mortgage lending and servicing-related regulations promulgated by the Consumer Financial Protection Bureau ("CFPB") and its enforcement of these regulations;
- our dependence on U.S. government-sponsored entities and changes in their current roles or their guarantees or guidelines;
- changes to government mortgage modification programs;
- certain banking regulations that may limit our business activities;
- foreclosure delays and changes in foreclosure practices;
- the licensing and operational requirements of states and other jurisdictions applicable to our businesses, to which our bank competitors are not subject;
- our ability to manage third-party service providers and vendors and their compliance with laws, regulations and investor requirements;

- changes in macroeconomic and U.S. real estate market conditions;
- difficulties inherent in growing loan production volume;
- difficulties inherent in adjusting the size of our operations to reflect changes in business levels;
- any required additional capital and liquidity to support business growth that may not be available on acceptable terms, if at all;
- changes in prevailing interest rates;
- increases in loan delinquencies and defaults;
- our reliance on PennyMac Mortgage Investment Trust ("PMT") as a significant source of financing for, and revenue related to, our mortgage banking business;
- our obligation to indemnify third-party purchasers or repurchase loans if loans that we originate, acquire, service or assist in the fulfillment of, fail to meet certain criteria or characteristics or under other circumstances;
- our exposure to counterparties that are unwilling or unable to honor contractual obligations, including their obligation to indemnify us or repurchase defective mortgage loans;
- our ability to realize the anticipated benefit of potential future acquisitions of mortgage servicing rights ("MSRs");
- our obligation to indemnify PMT if our services fail to meet certain criteria or characteristics or under other circumstances;
- decreases in the returns on the assets that we select and manage for our clients, and our resulting management and incentive fees;
- the extensive amount of regulation applicable to our investment management segment;
- conflicts of interest in allocating our services and investment opportunities among ourselves and PMT;
- the effect of public opinion on our reputation;
- our recent growth;
- our ability to effectively identify, manage, monitor and mitigate financial risks;
- our initiation of new business activities or expansion of existing business activities;
- our ability to detect misconduct and fraud;
- our ability to effectively deploy new information technology applications and infrastructure;
- our ability to mitigate cybersecurity risks and cyber incidents;
- our ability to pay dividends to our stockholders; 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 FINANCIAL SERVICES, INC.
CONSOLIDATED BALANCE SHEETS (UNAUDITED)

	March 31, 2020	December 31, 2019
	(in thousands, except share amounts)	
ASSETS		
Cash (includes $773,361 and $52,599 pledged to creditors)	$ 878,826	$ 188,291
Short-term investments at fair value	1,884	74,611
Loans held for sale at fair value (includes $5,493,332 and $4,846,138 pledged to creditors)	5,541,987	4,912,953
Assets purchased from PennyMac Mortgage Investment Trust under agreements to resell pledged to creditors	99,766	107,512
Derivative assets	433,211	159,686
Servicing advances, net (includes valuation allowance of $80,784 and $82,157; $182,531 and $207,460 pledged to creditors)	299,550	331,169
Mortgage servicing rights at fair value (includes $2,163,928 and $2,920,603 pledged to creditors)	2,193,697	2,926,790
Real estate acquired in settlement of loans	20,197	20,326
Operating lease right-of-use assets	71,639	73,090
Furniture, fixtures, equipment and building improvements, net (includes $7,392 and $20,406 pledged to creditors)	29,177	30,480
Capitalized software, net (includes $10,606 and $12,192 pledged to creditors)	74,183	63,130
Investment in PennyMac Mortgage Investment Trust at fair value	797	1,672
Receivable from PennyMac Mortgage Investment Trust	56,223	48,159
Loans eligible for repurchase	980,618	1,046,527
Other	209,378	219,621
Total assets	$ 10,891,133	$ 10,204,017
LIABILITIES		
Assets sold under agreements to repurchase	$ 4,444,545	$ 4,141,053
Mortgage loan participation purchase and sale agreements	528,750	497,948
Obligations under capital lease	18,145	20,810
Notes payable secured by mortgage servicing assets	1,294,514	1,294,070
Excess servicing spread financing payable to PennyMac Mortgage Investment Trust at fair value	157,109	178,586
Derivative liabilities	43,152	22,330
Operating lease liabilities	89,829	91,320
Accounts payable and accrued expenses	198,897	175,273
Mortgage servicing liabilities at fair value	29,761	29,140
Payable to PennyMac Mortgage Investment Trust	59,281	73,280
Payable to exchanged Private National Mortgage Acceptance Company, LLC unitholders under tax receivable agreement	46,158	46,158
Income taxes payable	613,043	504,569
Liability for loans eligible for repurchase	980,618	1,046,527
Liability for losses under representations and warranties	23,202	21,446
Total liabilities	8,527,004	8,142,510
Commitments and contingencies – Note 14		
STOCKHOLDERS' EQUITY		
Common stock—authorized 200,000,000 shares of $0.0001 par value; issued and outstanding, 79,190,245 and 78,515,047 shares, respectively	8	8
Additional paid-in capital	1,341,219	1,335,107
Retained earnings	1,022,902	726,392
Total stockholders' equity	2,364,129	2,061,507
Total liabilities and stockholders' equity	$ 10,891,133	$ 10,204,017

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

PENNYMAC FINANCIAL SERVICES, INC.
CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

	Quarter ended March 31, 2020	Quarter ended March 31, 2019
	(in thousands, except per share amounts)	
Revenues		
Net gains on loans held for sale at fair value:		
From non-affiliates	$ 266,366	$ 58,753
From PennyMac Mortgage Investment Trust	77,916	26,023
	344,282	84,776
Loan origination fees:		
From non-affiliates	53,591	21,687
From PennyMac Mortgage Investment Trust	3,980	2,243
	57,571	23,930
Fulfillment fees from PennyMac Mortgage Investment Trust	41,940	27,574
Net loan servicing fees:		
Loan servicing fees:		
From non-affiliates	198,653	166,790
From PennyMac Mortgage Investment Trust	14,521	10,570
Other	28,755	22,017
	241,929	199,377
Change in fair value of mortgage servicing rights and mortgage servicing liabilities net of hedging results	1,357	(122,857)
Change in fair value of excess servicing spread financing payable to PennyMac Mortgage Investment Trust	14,522	4,051
	15,879	(118,806)
Net loan servicing fees	257,808	80,571
Net interest income:		
Interest income:		
From non-affiliates	71,346	56,537
From PennyMac Mortgage Investment Trust	1,218	1,796
	72,564	58,333
Interest expense:		
To non-affiliates	59,538	34,477
To PennyMac Mortgage Investment Trust	1,974	3,066
	61,512	37,543
Net interest income	11,052	20,790
Management fees from PennyMac Mortgage Investment Trust	9,055	7,248
Change in fair value of investment in and dividends received from PennyMac Mortgage Investment Trust	(857)	192
Results of real estate acquired in settlement of loans	(707)	274
Other	1,681	2,350
Total net revenues	721,825	247,705
Expenses		
Compensation	168,436	106,600
Loan origination	46,004	14,497
Servicing	42,166	30,293
Technology	19,107	15,966
Professional services	13,404	5,881
Occupancy and equipment	8,038	6,776
Other	9,940	7,401
Total expenses	307,095	187,414
Income before provision for income taxes	414,730	60,291
Provision for income taxes	108,487	14,156
Net income	$ 306,243	$ 46,135
Earnings per share		
Basic	$ 3.89	$ 0.59
Diluted	$ 3.73	$ 0.58
Weighted average shares outstanding		
Basic	78,689	77,653
Diluted	82,008	79,286
Dividend declared per share	$ 0.12	$ —

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

PENNYMAC FINANCIAL SERVICES, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (UNAUDITED)

	Quarter ended March 31, 2020				
	Number of shares	Par value	Additional paid-in capital	Retained earnings	Total stockholders' equity
			(in thousands)		
Balance, December 31, 2019	78,515	$ 8	$ 1,335,107	$ 726,392	$ 2,061,507
Net income	—	—	—	306,243	306,243
Stock-based compensation	912	—	10,185	—	10,185
Issuance of common stock in settlement of directors' fees	1	—	48	—	48
Repurchase of common stock	(238)	—	(4,121)	—	(4,121)
Common stock dividend ($0.12 per share)	—	—	—	(9,733)	(9,733)
Balance, March 31, 2020	79,190	$ 8	$ 1,341,219	$ 1,022,902	$ 2,364,129

	Quarter ended March 31, 2019				
	Number of shares	Par value	Additional paid-in capital	Retained earnings	Total stockholders' equity
			(in thousands)		
Balance, December 31, 2018	77,494	$ 8	$ 1,310,648	$ 343,135	$ 1,653,791
Net income	—	—	—	46,135	46,135
Stock-based compensation	820	—	1,180	—	1,180
Issuance of common stock in settlement of directors' fees	4	—	86	—	86
Balance, March 31, 2019	78,318	$ 8	$ 1,311,914	$ 389,270	$ 1,701,192

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

PENNYMAC FINANCIAL SERVICES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

	Quarter ended March 31, 2020	Quarter ended March 31, 2019
	(in thousands)	
Cash flow from operating activities		
Net income	$ 306,243	$ 46,135
Adjustments to reconcile net income to net cash used in operating activities:		
Net gains on loans held for sale at fair value	(344,282)	(84,776)
Change in fair value of mortgage servicing rights, mortgage servicing liabilities and excess servicing spread	(15,879)	118,806
Capitalization of interest and advance on loans held for sale at fair value	(18,131)	(16,487)
Accrual of interest on excess servicing spread financing payable to PennyMac Mortgage Investment Trust	1,974	3,066
Amortization of net debt issuance costs and (premiums)	2,209	(6,570)
Change in fair value of investment in common shares of PennyMac Mortgage Investment Trust	875	(156)
Results of real estate acquired in settlement in loans	707	(274)
Stock-based compensation expense	12,368	4,531
Provision for servicing advance losses	3,806	4,820
Depreciation and amortization	5,352	3,159
Amortization of right-of-use assets	2,985	2,359
Purchase of loans held for sale from PennyMac Mortgage Investment Trust	(14,509,209)	(6,959,389)
Origination of loans held for sale	(4,954,316)	(1,542,056)
Purchase of loans held for sale from non-affiliates	(620,859)	(177,678)
Purchase of loans from Ginnie Mae securities and early buyout investors for modification and subsequent sale	(2,299,262)	(941,154)
Sale to non-affiliates and principal payments of loans held for sale	19,337,017	8,536,430
Sale of loans held for sale to PennyMac Mortgage Investment Trust	2,246,127	884,510
Repurchase of loans subject to representations and warranties	(16,282)	(4,064)
Settlement of repurchase agreement derivatives	—	11,436
Decrease in servicing advances	18,467	24,087
Sale of real estate acquired in settlement of loans	9,459	2,075
(Increase) decrease in receivable from PennyMac Mortgage Investment Trust	(10,133)	2,775
Decrease (increase) in other assets	628	(38,676)
Decrease in operating lease liabilities	(3,469)	(2,977)
Increase in accounts payable and accrued expenses	21,866	10,483
Decrease in payable to PennyMac Mortgage Investment Trust	(17,019)	(28,752)
Increase in income taxes payable	108,474	14,090
Net cash used in operating activities	(730,284)	(134,247)
Cash flow from investing activities		
Decrease (increase) in short-term investments	72,727	(31,548)
Net change in assets purchased from PMT under agreement to resell	7,746	5,096
Net settlement of derivative financial instruments used for hedging of mortgage servicing rights	942,005	125,695
Purchase of mortgage servicing rights	(24,104)	(211,481)
Purchase of furniture, fixtures, equipment and leasehold improvements	(994)	(2,126)
Acquisition of capitalized software	(14,108)	(6,750)
Decrease in margin deposits	132,953	28,343
Net cash provided by (used in) investing activities	1,116,225	(92,771)
Cash flow from financing activities		
Sale of assets under agreements to repurchase	20,510,531	8,382,013
Repurchase of assets sold under agreements to repurchase	(20,205,416)	(8,164,625)
Issuance of mortgage loan participation purchase and sale certificates	5,273,329	5,555,946
Repayment of mortgage loan participation purchase and sale certificates	(5,242,527)	(5,540,374)
Repayment of obligations under capital lease	(2,665)	(1,514)
Repayment of excess servicing spread financing	(9,308)	(10,552)
Payment of debt issuance costs	(3,388)	(1,536)
Issuance of common stock pursuant to exercise of stock options	3,082	1,283
Repurchase of common stock	(4,121)	—
Payment of withholding taxes relating to stock-based compensation	(5,265)	(4,634)
Payment of dividend to holders of common stock	(9,733)	—
Net cash provided by financing activities	304,519	216,007
Net increase (decrease) in cash and restricted cash	690,460	(11,011)
Cash and restricted cash at beginning of quarter	188,578	155,924
Cash and restricted cash at end of quarter	$ 879,038	$ 144,913
Cash and restricted cash at end of quarter are comprised of the following:		
Cash	$ 878,826	$ 144,266
Restricted cash included in *Other* assets	212	647
	$ 879,038	$ 144,913

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

PENNYMAC FINANCIAL SERVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

Note 1—Organization

PennyMac Financial Services, Inc. (“PFSI” or the “Company”) is a holding corporation and its primary assets are direct and indirect equity interests in Private National Mortgage Acceptance Company, LLC (“PennyMac”). The Company is the managing member of PennyMac, and it operates and controls all of the businesses and affairs of PennyMac, and consolidates the financial results of PennyMac and its subsidiaries.

PennyMac is a Delaware limited liability company which, through its subsidiaries, engages in mortgage banking and investment management activities. PennyMac’s mortgage banking activities consist of residential mortgage and home equity loan production and loan servicing. PennyMac’s investment management activities and a portion of its loan servicing activities are conducted on behalf of PennyMac Mortgage Investment Trust (“PMT”), a real estate mortgage investment trust that invests primarily mortgage-related assets. PennyMac’s primary wholly owned subsidiaries are:

- *PennyMac Loan Services, LLC (“PLS”)* — a Delaware limited liability company that services portfolios of residential mortgage and home equity loans on behalf of non-affiliates and PMT, purchases, originates and sells new prime credit quality residential mortgage and home equity loans and engages in other mortgage banking activities for its own account and the account of PMT.

  PLS is approved as a seller/servicer of mortgage loans by the Federal National Mortgage Association (“Fannie Mae”) and the Federal Home Loan Mortgage Corporation (“Freddie Mac”) and as an issuer of securities guaranteed by the Government National Mortgage Association (“Ginnie Mae”). PLS is a licensed Federal Housing Administration (“FHA”) Nonsupervised Title II Lender with the U.S. Department of Housing and Urban Development (“HUD”) and a lender/servicer with the Veterans Administration (“VA”) and U.S. Department of Agriculture (“USDA”) (each an “Agency” and collectively the “Agencies”).

- *PNMAC Capital Management, LLC (“PCM”)*— a Delaware limited liability company registered with the Securities and Exchange Commission (“SEC”) as an investment adviser under the Investment Advisers Act of 1940, as amended. PCM has an investment management agreement with PMT, which invests in mortgage-related assets and residential mortgage loans.

Note 2—Basis of Presentation and Recently Adopted Accounting Pronouncement

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. This interim consolidated information should be read together with the Company’s Annual Report on Form 10-K for the year ended December 31, 2019.

The accompanying unaudited consolidated financial statements reflect all normal recurring adjustments necessary to present fairly the financial position, income, and cash flows for the interim periods, but are not necessarily indicative of income to be anticipated for the full year ending December 31, 2019. Intercompany accounts and transactions have been eliminated.

Preparation of financial statements in compliance with GAAP requires management to make judgments and estimates 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.

Accounting Change

Effective January 1, 2020, the Company adopted FASB Accounting Standards Update 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, as amended ("ASU 2016-13"), using the modified retrospective approach. The adoption of ASU 2016-13 did not have any effect on the Company's consolidated statements of income, stockholder's equity or cash flows.

Note 3—Concentration of Risk

A substantial portion of the Company's activities relate to PMT. Revenues generated from PMT (generally comprised of gains on loans held for sale, loan origination and fulfillment fees, loan servicing fees, change in fair value of excess servicing spread financing ("ESS"), management fees, net interest, and change in fair value of investment in and dividends received from PMT) totaled 22% and 31% of total net revenue for the quarters ended March 31, 2020 and 2019, respectively.

Note 4—Transactions with Affiliates

Transactions with PMT

Operating Activities

Mortgage Loan Production Activities and MSR Recapture

The Company sells newly originated loans to PMT under a mortgage loan purchase agreement. The Company has typically utilized the mortgage loan purchase agreement for the purpose of selling to PMT conforming balance non-government insured or guaranteed loans, as well as prime jumbo residential mortgage loans.

Pursuant to the terms of an MSR recapture agreement by and between the Company and PMT, which was amended and restated effective September 12, 2016, if the Company refinances mortgage loans for which PMT previously held the MSRs, the Company is generally required to transfer and convey to PMT cash in an amount equal to 30% of the fair market value of the MSRs related to all such mortgage loans. The MSR recapture 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.

Pursuant to a mortgage banking services agreement, which was amended and restated effective September 12, 2016, the Company provides PMT with certain mortgage banking services, including fulfillment and disposition-related services, for which it receives a fulfillment fee. Pursuant to the terms of the mortgage banking services 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 the Company with respect to any mortgage loans underwritten to the Ginnie Mae Mortgage-Backed Securities ("MBS") Guide. PMT does not hold the Ginnie Mae approval required to issue Ginnie Mae MBS and act as a servicer. Accordingly, under the agreement, the Company currently purchases mortgage loans underwritten in accordance with the Ginnie Mae MBS Guide "as is" and without recourse of any kind from PMT at PMT's cost less an administrative fee 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 mortgage loans are held by PMT before being purchased by the Company. The Company purchases these mortgage loans "as is" and without recourse of any kind from PMT; however, where the Company has a claim for repurchase, indemnity or otherwise as against a correspondent seller, the Company is entitled, at its sole expense, to pursue any such claim through or in the name of PMT.

Following is a summary of loan production activities, including MSR recapture between the Company and PMT:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Net gains on loans held for sale at fair value:		
Net gains on loans held for sale to PMT	$ 81,224	$ 27,146
Mortgage servicing rights and excess servicing spread recapture incurred	(3,308)	(1,123)
	$ 77,916	$ 26,023
Sale of loans held for sale to PMT	$ 2,246,127	$ 884,510
Tax service fees earned from PMT included in *Loan origination fees*	$ 3,980	$ 2,243
Fulfillment fee revenue	$ 41,940	$ 27,574
Unpaid principal balance of loans fulfilled for PMT subject to fulfillment fees	$ 16,152,543	$ 8,135,552
Sourcing fees paid to PMT	$ 4,161	$ 1,994
Unpaid principal balance of loans purchased from PMT	$ 13,870,280	$ 6,647,338

Loan Servicing

The Company and PMT have entered into a loan servicing agreement (the "Servicing Agreement"), which was amended and restated effective September 12, 2016 and pursuant to which the Company provides servicing for PMT's portfolio of residential mortgage loans and subservicing for its portfolio of MSRs. The Servicing Agreement provides for servicing fees of per-loan monthly amounts based on the delinquency, bankruptcy and/or foreclosure status of the serviced loan or the real estate acquired in settlement of loans ("REO"). The Company also remains entitled to customary ancillary income and market-based fees and charges relating to loans it services for PMT. These include boarding and deboarding fees, liquidation and disposition fees, assumption, modification and origination fees and a percentage of late charges.

Prime Servicing

- The base servicing fees for non-distressed mortgage loans are calculated through a monthly per-loan dollar amount, with the actual dollar amount for each loan based on whether the loan is a fixed-rate or adjustable-rate loan. The base servicing fee rates are $7.50 per month for fixed-rate loans and $8.50 per month for adjustable-rate loans.

- To the extent that these non-distressed loans become delinquent, the Company is entitled to an additional servicing fee per loan ranging from $10 to $55 per month and based on the delinquency, bankruptcy and foreclosure status of the loan or $75 per month if the underlying mortgaged property becomes REO. The Company 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.

Special Servicing

- The base servicing fee rates for distressed whole loans range from $30 per month for current loans up to $85 per month for loans where the borrower has declared bankruptcy. The base servicing fee rate for REO is $75 per month.

- Because PMT has a small number of employees and limited infrastructure, the Company 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. For these services, the Company receives a supplemental servicing fee of $25 per month for each distressed loan. The Company is entitled to reimbursement for all customary, good faith reasonable and necessary out-of-pocket expenses incurred by the Company in performance of its servicing obligations.

- The Company is also entitled to certain activity-based fees for distressed whole 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 full modification or liquidation and $500 for a deed-in-lieu of foreclosure. The Company is not entitled to earn more than one liquidation fee, reperformance fee or modification fee per loan in any 18-month period.

- To the extent the Company facilitates rentals of PMT's REO under its REO rental program, the Company collects 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 the Company's 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 the Company provides property management services directly. The Company 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 the Company effects a refinancing of a loan on behalf of PMT and not through a third-party lender and the resulting mortgage loan is readily saleable, or the Company originates a loan to facilitate the disposition of a REO, the Company is entitled to receive from PMT market-based fees and compensation consistent with pricing and terms the Company offers unaffiliated parties on a retail basis.

- 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; provided, however, that with respect to any such incentive payments paid to the Company in connection with a loan modification for which PMT previously paid the Company a modification fee, the Company is required to reimburse PMT an amount equal to the incentive payments.

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 agreement.

Following is a summary of loan servicing and property management fees earned from PMT:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Loan type serviced:		
Loans acquired for sale at fair value	$ 536	$ 239
Loans at fair value	300	463
Mortgage servicing rights	13,685	9,868
	$ 14,521	$ 10,570
Property management fees received from PMT included in *Other* income	$ —	$ 123

Investment Management Activities

The Company has a management agreement with PMT ("Management Agreement"), which was amended and restated effective September 12, 2016. Pursuant to the Management Agreement, the Company oversees PMT's business affairs in conformity with the investment policies that are approved and monitored by its board of trustees, for which it collects a base management fee and may collect a performance incentive fee. The Management Agreement provides that:

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

- The performance incentive fee is calculated quarterly at a defined annualized percentage of the amount by which PMT's "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 PMT's "net income" for the quarter exceeds (i) an 8% return on equity plus the "high watermark," up to (ii) a 12% return on PMT's equity; plus (b) 15% of the amount by which PMT's "net income" for the quarter exceeds (i) a 12% return on PMT's equity plus the "high watermark," up to (ii) a 16% return on PMT's equity; plus (c) 20% of the amount by which PMT's "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 PMT's common shares of beneficial interest computed in accordance with GAAP adjusted for certain other non-cash charges determined after discussions between the Company and PMT's independent trustees and approval by a majority of PMT's independent trustees.

  "Equity" is the weighted average of the issue price per common share of all of PMT'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. 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 the Company 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, and a performance incentive fee is earned.

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

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Base management	$ 9,055	$ 6,109
Performance incentive	—	1,139
	$ 9,055	$ 7,248

Expense Reimbursement

Under the Management Agreement, PMT reimburses the Company for its organizational and operating expenses, including third-party expenses, incurred on PMT's behalf, it being understood that the Company 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 PMT. With respect to the allocation of the Company's and its affiliates' personnel compensation, the Company shall be reimbursed $120,000 per fiscal quarter, such amount to be reviewed annually and not preclude reimbursement for any other services performed by the Company or its affiliates.

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

The Company received reimbursements from PMT for expenses as follows:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Reimbursement of:		
Common overhead incurred by the Company	$ 1,540	$ 1,236
Compensation	120	120
Expenses incurred on PMT's behalf, net	1,271	570
	$ 2,931	$ 1,926
Payments and settlements during the quarter (1)	$ 33,683	$ 15,189

(1) Payments and settlements include payments for management fees and correspondent production activities itemized in the preceding tables and netting settlements made pursuant to master netting agreements between the Company and PMT.

Conditional Reimbursement of Underwriting Fees

In connection with its initial public offering of common shares of beneficial interest on August 4, 2009 ("IPO"), PMT conditionally agreed to reimburse the Company up to $2.9 million for underwriting fees paid to the IPO underwriters by the Company on PMT's behalf. In the event a termination fee is payable to the Company under the Management Agreement, and the Company has not received the full amount of the reimbursements and payments under the reimbursement agreement, such amount will be paid in full. On February 1, 2019, the term of the reimbursement agreement was extended to February 1, 2023. The Company received $211,000 and $75,000 in reimbursement of underwriting fees from PMT during the quarters ended March 31, 2020 and 2019, respectively.

Investing Activities

Master Repurchase Agreement

On December 19, 2016, the Company, through PLS, entered into a master repurchase agreement with one of PMT's wholly-owned subsidiaries, PennyMac Holdings, LLC ("PMH") (the "PMH Repurchase Agreement"), pursuant to which PMH may borrow from the Company for the purpose of financing PMH's participation certificates representing beneficial ownership in ESS. PLS then re-pledges such participation certificates to PNMAC GMSR ISSUER TRUST (the "Issuer Trust") under a master repurchase agreement by and among PLS, the Issuer Trust and PennyMac, as guarantor (the "PC Repurchase Agreement"). The Issuer Trust was formed for the purpose of allowing PLS to finance MSRs and ESS relating to such MSRs (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 MSRs 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) has issued and 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 MSRs and ESS. The maximum principal balance of the VFN is $1,000,000,000.

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.

The Company holds an investment in PMT in the form of 75,000 common shares of beneficial interest.

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

	Quarter ended March 31,	
	2020	**2019**
	(in thousands)	
Interest income relating to *Assets purchased from PennyMac Mortgage Investment Trust under agreements to resell*	$ 1,218	$ 1,796
Common shares of beneficial interest of PennyMac Mortgage Investment Trust:		
Dividends received	$ 18	$ 36
Change in fair value of investment	(875)	156
	$ (857)	$ 192

	March 31, 2020	December 31, 2019
	(in thousands)	
Assets purchased from PennyMac Mortgage Investment Trust under agreements to resell	$ 99,766	$ 107,512
Common shares of beneficial interest of PennyMac Mortgage Investment Trust:		
Fair value	$ 797	$ 1,672
Number of shares	75	75

Financing Activities

Spread Acquisition and MSR Servicing Agreements

The Company has a master spread acquisition and MSR servicing agreement with PMT (the "Spread Acquisition Agreement") which was amended and restated effective December 19, 2016, pursuant to which the Company may sell to PMT, from time to time, the right to receive participation certificates representing beneficial ownership in ESS arising from Ginnie Mae MSRs acquired by the Company, in which case the Company 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 PMT in connection with the parties' participation in the GNMA MSR Facility.

To the extent the Company refinances any of the mortgage loans relating to the ESS it has issued, the Spread Acquisition Agreement also contains recapture provisions requiring that the Company transfer to PMT, 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 equal to at least 90% of the product of the excess servicing fee rate and the unpaid principal balance of the refinanced mortgage loans, the Company 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 equal 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 the Company 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, the Company may, at its option, settle its obligation to PMT in cash in an amount equal to such fair market value in lieu of transferring such ESS.

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

	Quarter ended March 31, 2020	Quarter ended March 31, 2019
	(in thousands)	
Excess servicing spread financing:		
Issuance pursuant to recapture agreement	$ 379	$ 508
Repayment	$ 9,308	$ 10,552
Gain recognized	$ 14,522	$ 4,051
Interest expense	$ 1,974	$ 3,066
Recapture incurred pursuant to refinancings by the Company of mortgage loans subject to excess servicing spread financing included in *Net gains on loans held for sale at fair value*	$ 381	$ 489

	March 31, 2020	December 31, 2019
	(in thousands)	
Excess servicing spread financing at fair value	$ 157,109	$ 178,586

Receivable from and Payable to PMT

Amounts receivable from and payable to PMT are summarized below:

	March 31, 2020	December 31, 2019
	(in thousands)	
Receivable from PMT:		
Fulfillment fees	$ 17,366	$ 18,285
Allocated expenses and expenses incurred on PMT's behalf	16,314	3,724
Management fees	9,055	10,579
Correspondent production fees	8,475	10,606
Servicing fees	4,929	4,659
Interest on assets purchased under agreements to resell	74	85
Conditional reimbursement	10	221
	$ 56,223	$ 48,159
Payable to PMT:		
Amounts advanced by PMT to fund its servicing advances	$ 55,769	$ 70,520
Mortgage servicing rights recapture payable	151	149
Other	3,361	2,611
	$ 59,281	$ 73,280

Exchanged Private National Mortgage Acceptance Company, LLC Unitholders

On May 8, 2013, the Company entered into a tax receivable agreement with certain former owners of PennyMac that provides for the payment from time to time by the Company to PennyMac's exchanged unitholders of an amount equal to 85% of the amount of the net tax benefits, if any, that the Company is deemed to realize as a result of (i) increases in tax basis of PennyMac's assets resulting from exchanges of ownership interests in PennyMac and (ii) certain other tax benefits related to entering into the tax receivable agreement, including tax benefits attributable to payments under the tax receivable agreement.

Although a reorganization in November 2018 eliminated the potential for unitholders to exchange any additional units subject to this tax receivable agreement, the Company continues to be subject to the agreement and will be required to make payments, to the extent any of the tax benefits specified above are deemed to be realized, under the tax receivable agreement to those certain prior owners of PennyMac who effected exchanges of ownership interests in PennyMac for the Company's common stock prior to the closing of the reorganization.

Based on the PennyMac unitholder exchanges to date, the Company has recorded a $46.2 million *Payable to exchanged Private National Mortgage Acceptance Company, LLC unitholders under tax receivable agreement* as of March 31, 2020 and December 31, 2019. The Company did not make any payments under the tax receivable agreement during the quarters ended March 31, 2020 and 2019.

Note 5—Loan Sales and Servicing Activities

The Company originates or purchases and sells loans in the secondary mortgage market without recourse for credit losses. However, the Company maintains continuing involvement with the loans in the form of servicing arrangements and the liability under representations and warranties it makes to purchasers and insurers of the loans.

The following table summarizes cash flows between the Company and transferees as a result of the sale of loans in transactions where the Company maintains continuing involvement with the loans as servicer:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Cash flows:		
Sales proceeds	$ 19,337,017	$ 8,536,430
Servicing fees received (1)	$ 166,556	$ 137,148
Net servicing advance recoveries	$ 15,209	$ 24,176

(1) Net of guarantee fees paid to the Agencies.

The following table summarizes unpaid principal balance (the "UPB") of the loans sold by the Company in which it maintains continuing involvement in the form of owned servicing obligations:

	March 31, 2020	December 31, 2019
	(in thousands)	
Unpaid principal balance of loans outstanding	$ 175,709,882	$ 168,842,011
Delinquencies:		
30-89 days	$ 8,314,858	$ 7,947,560
90 days or more:		
Not in foreclosure	$ 2,837,903	$ 3,237,563
In foreclosure	$ 832,922	$ 888,136
Foreclosed	$ 18,541	$ 15,387
Bankruptcy	$ 1,364,331	$ 1,343,816

The following tables summarize the UPB of the Company's loan servicing portfolio:

	March 31, 2020		
	Servicing rights owned	Contract servicing and subservicing	Total loans serviced
		(in thousands)	
Investor:			
Non-affiliated entities:			
Originated	$ 175,709,882	$ —	$ 175,709,882
Purchased	58,410,013	—	58,410,013
	234,119,895	—	234,119,895
PennyMac Mortgage Investment Trust	—	144,830,043	144,830,043
Loans held for sale	5,276,688	—	5,276,688
	$ 239,396,583	$ 144,830,043	$ 384,226,626
Subserviced for the Company (1)	$ 2,343,828	$ —	$ 2,343,828
Delinquent loans:			
30 days	$ 8,707,825	$ 1,031,940	$ 9,739,765
60 days	2,131,137	157,325	2,288,462
90 days or more:			
Not in foreclosure	3,977,080	302,515	4,279,595
In foreclosure	1,088,058	58,922	1,146,980
Foreclosed	23,023	68,125	91,148
	$ 15,927,123	$ 1,618,827	$ 17,545,950
Bankruptcy	$ 1,943,407	$ 146,205	$ 2,089,612
Custodial funds managed by the Company (2)	$ 7,576,973	$ 3,935,103	$ 11,512,076

(1) Certain of the loans for which the Company has purchased the MSRs are subserviced on the Company's behalf by other loan servicers on an interim basis when servicing of the loans has not yet been transferred to the Company's loan servicing platform.

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

	December 31, 2019		
	Servicing rights owned	Contract servicing and subservicing	Total loans serviced
		(in thousands)	
Investor:			
Non-affiliated entities:			
Originated	$ 168,842,011	$ —	$ 168,842,011
Purchased	59,703,547	—	59,703,547
	228,545,558	—	228,545,558
PennyMac Mortgage Investment Trust	—	135,414,668	135,414,668
Loans held for sale	4,724,006	—	4,724,006
	$ 233,269,564	$ 135,414,668	$ 368,684,232
Delinquent loans:			
30 days	$ 7,987,132	$ 857,660	$ 8,844,792
60 days	2,490,797	172,263	2,663,060
90 days or more:			
Not in foreclosure	4,070,482	274,592	4,345,074
In foreclosure	1,113,806	68,331	1,182,137
Foreclosed	18,315	89,421	107,736
	$ 15,680,532	$ 1,462,267	$ 17,142,799
Bankruptcy	$ 1,898,367	$ 136,818	$ 2,035,185
Custodial funds managed by the Company (1)	$ 6,412,291	$ 2,529,984	$ 8,942,275

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

Following is a summary of the geographical distribution of loans included in the Company's loan servicing portfolio for the top five and all other states as measured by UPB:

State	March 31, 2020	December 31, 2019
	(in thousands)	
California	$ 58,058,528	$ 57,311,867
Florida	31,714,639	28,940,696
Texas	29,709,362	27,909,821
Virginia	22,531,313	22,115,619
Maryland	17,282,260	16,829,320
All other states	224,930,524	215,576,909
	$ 384,226,626	$ 368,684,232

Note 6—Fair Value

Most of the Company's assets and certain of its liabilities are measured at or based on their fair values. 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 an asset or liability and are developed based on market data obtained from sources independent of the Company.

- Level 3— Prices determined using significant unobservable inputs. In situations where 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 an asset or liability, 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 Company 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 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 Company identified its MSRs, its mortgage servicing liabilities ("MSLs") and all of its non-cash financial assets other than *Assets purchased from PennyMac Mortgage Investment Trust under agreements to resell*, to be accounted for at fair value so changes in fair value will be reflected in income as they occur and more timely reflect the results of the Company's performance. The Company has also identified its ESS financing to be accounted for at fair value as a means of hedging the related MSRs' fair value risk.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

Following is a summary of assets and liabilities that are measured at fair value on a recurring basis:

	March 31, 2020			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets:				
Short-term investments	$ 1,884	$ —	$ —	$ 1,884
Loans held for sale at fair value	—	4,735,400	806,587	5,541,987
Derivative assets:				
Interest rate lock commitments	—	—	317,621	317,621
Repurchase agreement derivatives	—	—	8,187	8,187
Forward purchase contracts	—	421,860	—	421,860
Forward sales contracts	—	23,346	—	23,346
MBS put options	—	4,062	—	4,062
Swaptions	—	36,696	—	36,696
Put options on interest rate futures purchase contracts	13,676	—	—	13,676
Call options on interest rate futures purchase contracts	24,434	—	—	24,434
Total derivative assets before netting	38,110	485,964	325,808	849,882
Netting	—	—	—	(416,671)
Total derivative assets	38,110	485,964	325,808	433,211
Mortgage servicing rights at fair value	—	—	2,193,697	2,193,697
Investment in PennyMac Mortgage Investment Trust	797	—	—	797
	$ 40,791	$ 5,221,364	$ 3,326,092	$ 8,171,576
Liabilities:				
Excess servicing spread financing payable to PennyMac Mortgage Investment Trust at fair value	$ —	$ —	$ 157,109	$ 157,109
Derivative liabilities:				
Interest rate lock commitments	—	—	2,427	2,427
Forward purchase contracts	—	12,553	—	12,553
Forward sales contracts	—	334,111	—	334,111
Total derivative liabilities before netting	—	346,664	2,427	349,091
Netting	—	—	—	(305,939)
Total derivative liabilities	—	346,664	2,427	43,152
Mortgage servicing liabilities at fair value	—	—	29,761	29,761
	$ —	$ 346,664	$ 189,297	$ 230,022

	December 31, 2019			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets:				
Short-term investments	$ 74,611	$ —	$ —	$ 74,611
Loans held for sale at fair value	—	4,529,075	383,878	4,912,953
Derivative assets:				
Interest rate lock commitments	—	—	138,511	138,511
Repurchase agreement derivatives	—	—	8,187	8,187
Forward purchase contracts	—	12,364	—	12,364
Forward sales contracts	—	17,097	—	17,097
MBS put options	—	3,415	—	3,415
Swaptions	—	2,409	—	2,409
Put options on interest rate futures purchase contracts	3,945	—	—	3,945
Call options on interest rate futures purchase contracts	1,469	—	—	1,469
Total derivative assets before netting	5,414	35,285	146,698	187,397
Netting	—	—	—	(27,711)
Total derivative assets	5,414	35,285	146,698	159,686
Mortgage servicing rights at fair value	—	—	2,926,790	2,926,790
Investment in PennyMac Mortgage Investment Trust	1,672	—	—	1,672
	$ 81,697	$ 4,564,360	$ 3,457,366	$ 8,075,712
Liabilities:				
Excess servicing spread financing payable to PennyMac Mortgage Investment Trust at fair value	$ —	$ —	$ 178,586	$ 178,586
Derivative liabilities:				
Interest rate lock commitments	—	—	1,861	1,861
Forward purchase contracts	—	19,040	—	19,040
Forward sales contracts	—	18,045	—	18,045
Total derivative liabilities before netting	—	37,085	1,861	38,946
Netting	—	—	—	(16,616)
Total derivative liabilities	—	37,085	1,861	22,330
Mortgage servicing liabilities at fair value	—	—	29,140	29,140
	$ —	$ 37,085	$ 209,587	$ 230,056

As shown above, all or a portion of the Company's loans held for sale, Interest Rate Lock Commitments ("IRLCs"), repurchase agreement derivatives, MSRs, ESS and MSLs are measured using Level 3 fair value inputs. Following are roll forwards of these items for the quarters ended March 31, 2020 and 2019:

Assets	Loans held for sale	Net interest rate lock commitments (1)	Repurchase agreement derivatives	Mortgage servicing rights	Total
	Quarter ended March 31, 2020				
	(in thousands)				
Balance, December 31, 2019	$ 383,878	$ 136,650	$ 8,187	$ 2,926,790	$ 3,455,505
Purchases and issuances, net	1,641,231	341,980	—	25,760	2,008,971
Capitalization of interest and advances	18,027	—	—	—	18,027
Sales and repayments	(738,928)	—	—	—	(738,928)
Mortgage servicing rights resulting from loan sales	—	—	—	282,315	282,315
Changes in fair value included in income arising from:					
Changes in instrument-specific credit risk	(7,523)	—	—	—	(7,523)
Other factors	—	199,918	—	(1,041,168)	(841,250)
	(7,523)	199,918	—	(1,041,168)	(848,773)
Transfers from Level 3 to Level 2	(489,407)	—	—	—	(489,407)
Transfers to real estate acquired in settlement of loans	(691)	—	—	—	(691)
Transfers of interest rate lock commitments to loans held for sale	—	(363,354)	—	—	(363,354)
Balance, March 31, 2020	$ 806,587	$ 315,194	$ 8,187	$ 2,193,697	$ 3,323,665
Changes in fair value recognized during the quarter relating to assets still held at March 31, 2020	$ (11,856)	$ 315,194	$ —	$ (1,041,168)	$ (737,830)

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

Liabilities	Excess servicing spread financing	Mortgage servicing liabilities	Total
	Quarter ended March 31, 2020		
	(in thousands)		
Balance, December 31, 2019	$ 178,586	$ 29,140	$ 207,726
Issuance of excess servicing spread financing pursuant to a recapture agreement with PennyMac Mortgage Investment Trust	379	—	379
Accrual of interest	1,974	—	1,974
Repayments	(9,308)	—	(9,308)
Mortgage servicing liabilities resulting from loan sales	—	6,576	6,576
Changes in fair value included in income	(14,522)	(5,955)	(20,477)
Balance, March 31, 2020	$ 157,109	$ 29,761	$ 186,870
Changes in fair value recognized during the quarter relating to liabilities still outstanding at March 31, 2020	$ (14,522)	$ (5,955)	$ (20,477)

Assets	Quarter ended March 31, 2019 Loans held for sale	Net interest rate lock commitments (1)	Repurchase agreement derivatives (in thousands)	Mortgage servicing rights	Total
Balance, December 31, 2018	$ 260,008	$ 49,338	$ 26,770	$ 2,820,612	$ 3,156,728
Purchases and issuances, net	784,262	56,983	9,855	227,772	1,078,872
Sales and repayments	(176,302)	—	(11,436)	—	(187,738)
Mortgage servicing rights resulting from loan sales	—	—	—	115,751	115,751
Changes in fair value included in income arising from:					
Changes in instrument-specific credit risk	(6,091)	—	—	—	(6,091)
Other factors	—	59,978	(557)	(259,045)	(199,624)
	(6,091)	59,978	(557)	(259,045)	(205,715)
Transfers from Level 3 to Level 2	(405,163)	—	—	—	(405,163)
Transfers to real estate acquired in settlement of loans	(1,181)	—	—	—	(1,181)
Transfers of interest rate lock commitments to loans held for sale	—	(100,234)	—	—	(100,234)
Balance, March 31, 2019	$ 455,533	$ 66,065	$ 24,632	$ 2,905,090	$ 3,451,320
Changes in fair value recognized during the quarter relating to assets still held at March 31, 2019	$ (3,540)	$ 66,065	$ —	$ (259,045)	$ (196,520)

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

Liabilities	Quarter ended March 31, 2019 Excess servicing spread financing	Mortgage servicing liabilities (in thousands)	Total
Balance, December 31, 2018	$ 216,110	$ 8,681	$ 224,791
Issuance of excess servicing spread financing pursuant to a recapture agreement with PennyMac Mortgage Investment Trust	508	—	508
Accrual of interest	3,066	—	3,066
Repayments	(10,552)	—	(10,552)
Mortgage servicing liabilities resulting from loan sales	—	794	794
Changes in fair value included in income	(4,051)	(1,631)	(5,682)
Balance, March 31, 2019	$ 205,081	$ 7,844	$ 212,925
Changes in fair value recognized during the quarter relating to liabilities still outstanding at March 31, 2019	$ (4,051)	$ (1,631)	$ (5,682)

The information used in the preceding roll forwards represents activity for any assets and liabilities measured at fair value on a recurring basis and identified as using “Level 3” significant fair value inputs at either the beginning or the end of the periods presented. The Company had transfers among the fair value levels arising from transfers of IRLCs to loans held for sale at fair value upon purchase or funding of the respective loans and from the return to salability in the active secondary market of certain loans held for sale.

Assets and Liabilities Measured at Fair Value under the Fair Value Option

Net changes in fair values included in income for assets and liabilities carried at fair value as a result of management's election of the fair value option by income statement line item are summarized below:

	Quarter ended March 31,					
	2020			2019		
	Net loan servicing fees	Net gains on loans held for sale at fair value	Total	Net loan servicing fees	Net gains on loans held for sale at fair value	Total
	(in thousands)					
Assets:						
Loans held for sale	$ —	$ 398,718	$ 398,718	$ —	$ 101,995	$ 101,995
Mortgage servicing rights	(1,041,168)	—	(1,041,168)	(259,045)	—	(259,045)
	$ (1,041,168)	$ 398,718	$ (642,450)	$ (259,045)	$ 101,995	$ (157,050)
Liabilities:						
Excess servicing spread financing payable to PennyMac Mortgage Investment Trust	$ 14,522	$ —	$ 14,522	$ 4,051	$ —	$ 4,051
Mortgage servicing liabilities	5,955	—	5,955	1,631	—	1,631
	$ 20,477	$ —	$ 20,477	$ 5,682	$ —	$ 5,682

Following are the fair value and related principal amounts due upon maturity of loans held for sale accounted for under the fair value option:

	March 31, 2020			December 31, 2019		
Loans held for sale	Fair value	Principal amount due upon maturity	Difference	Fair value	Principal amount due upon maturity	Difference
	(in thousands)					
Current through 89 days delinquent	$ 4,907,823	$ 4,624,282	$ 283,541	$ 4,628,333	$ 4,431,854	$ 196,479
90 days or more delinquent:						
Not in foreclosure	547,287	560,331	(13,044)	236,650	241,958	(5,308)
In foreclosure	86,877	92,075	(5,198)	47,970	50,194	(2,224)
	$ 5,541,987	$ 5,276,688	$ 265,299	$ 4,912,953	$ 4,724,006	$ 188,947

Assets Measured at Fair Value on a Nonrecurring Basis

Following is a summary of assets that were measured at fair value on a nonrecurring basis:

Real estate acquired in settlement of loans	Level 1	Level 2	Level 3	Total
		(in thousands)		
March 31, 2020	$ —	$ —	$ 11,104	$ 11,104
December 31, 2019	$ —	$ —	$ 9,850	$ 9,850

The following table summarizes the (losses) gains on assets measured at fair value on a nonrecurring basis:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Real estate acquired in settlement of loans	$ (3,980)	$ 21

Fair Value of Financial Instruments Carried at Amortized Cost

The Company's *Assets purchased from PennyMac Mortgage Investment Trust under agreements to resell*, *Assets sold under agreements to repurchase*, *Mortgage loan participation purchase and sale agreements*, *Notes payable secured by mortgage servicing assets* and *Obligations under capital lease* are carried at amortized cost.

These assets and liabilities are classified as "Level 3" fair value items due to the Company's reliance on unobservable inputs to estimate their fair values. The Company has concluded that the fair values of these assets and liabilities other than the Term Notes included in *Notes payable secured by mortgage servicing assets* approximate their carrying values due to their short terms and/or variable interest rates.

The Company estimates the fair value of the Term Notes based on non-affiliate broker indications of fair value. The fair value and carrying value of the Term Notes are summarized below:

Term Notes	**March 31, 2020**	**December 31, 2019**
	(in thousands)	
Fair value	$ 978,250	$ 1,303,047
Carrying value	$ 1,294,514	$ 1,294,070

Valuation Governance

Most of the Company's financial assets, and all of its MSRs, ESS, derivative liabilities and MSLs, are carried at fair value with changes in fair value recognized in current period income. Certain of the Company's financial assets and all of its MSRs, ESS, derivative liabilities and MSLs are "Level 3" fair value assets and liabilities which require use of unobservable inputs that are significant to the estimation of the items' fair values. Unobservable inputs reflect the Company'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 Company has assigned the responsibility for estimating the fair value of these items to specialized staff and subjects the valuation process to significant senior management oversight. The Company's Financial Analysis and Valuation group (the "FAV group") is the Company's specialized staff responsible for estimating the fair values of "Level 3" fair value assets and liabilities other than IRLCs.

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 chief financial, chief risk and deputy chief financial officers.

The FAV group is responsible for reporting to the Company's senior management 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 Company has assigned responsibility for developing the fair values of IRLCs to its Capital Markets Risk Management staff. The fair values developed by the Capital Markets Risk Management staff are reviewed by the Company's Capital Markets Operations group.

Valuation Techniques and Inputs

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:

Loans Held for Sale

Most of the Company’s loans held for sale at fair value are saleable into active markets and are therefore categorized as “Level 2” fair value assets. The fair values of “Level 2” fair value loans are determined using their contracted selling price or quoted market price or market price equivalent.

Certain of the Company’s loans held for sale are not saleable into active markets and are therefore categorized as “Level 3” fair value assets. Loans held for sale categorized as “Level 3” fair value assets include:

- Delinquent government guaranteed or insured loans purchased by the Company from Ginnie Mae guaranteed pools in its loan servicing portfolio. The Company’s right to purchase delinquent government guaranteed or insured loans arises as the result of the loan being at least three months delinquent on the date of repurchase by the Company and provides an alternative to the Company’s obligation to continue advancing principal and interest at the coupon rate of the related Ginnie Mae security. Such repurchased loans may be resold to investors and thereafter may be repurchased to the extent eligible for resale into a new Ginnie Mae guaranteed security. Such eligibility occurs when the repurchased loans become current either through the borrower’s reperformance or through completion of a modification of the loan’s terms.

- The Company’s loans held for sale that are not saleable into active markets due to identification of a defect by the Company or to the repurchase by the Company of a loan with an identified defect.

- Home equity lines of credit held for sale to PMT. At present, an active market with observable inputs that are significant to the estimation of fair value of home equity lines of credit does not exist.

The Company uses a discounted cash flow model to estimate the fair value of its “Level 3” fair value loans held for sale. The significant unobservable inputs used in the fair value measurement of the Company’s “Level 3” fair value loans held for sale are discount rates, home price projections, voluntary prepayment/resale and total prepayment speeds. Significant changes in any of those inputs in isolation could result in a significant change to the loans’ fair value measurement. Increases in home price projections are generally accompanied by an increase in voluntary prepayment speeds.

Following is a quantitative summary of key “Level 3” fair value inputs used in the valuation of loans held for sale:

	March 31, 2020	December 31, 2019
Fair value (in thousands)	$ 806,587	$ 383,878
Key inputs (1):		
Discount rate:		
Range	2.9% – 9.2%	3.0% – 9.2%
Weighted average	2.9%	3.0%
Twelve-month projected housing price index change:		
Range	1.4% – 2.1%	2.6% – 3.2%
Weighted average	1.6%	2.8%
Voluntary prepayment/resale speed (2):		
Range	0.4% – 21.2%	0.4% – 21.4%
Weighted average	18.8%	18.2%
Total prepayment speed (3):		
Range	0.6% – 38.2%	0.5% – 39.2%
Weighted average	37.0%	36.2%

(1) Weighted average inputs are based on the fair value of the “Level 3” loans.

(2) Voluntary prepayment/resale speed is measured using Life Voluntary Conditional Prepayment Rate (“CPR”).

(3) Total prepayment speed is measured using Life Total CPR, which includes both voluntary and involuntary prepayments/resale and defaults.

Changes in fair value of loans held for sale attributable to changes in the loan’s instrument-specific credit risk are measured with reference to the change in the respective loan’s delinquency status and performance history at period end from the later of the prior period or acquisition date. Changes in fair value of loans held for sale are included in *Net gains on loans held for sale at fair value* in the Company's consolidated statements of income.

Derivative Financial Instruments

Interest Rate Lock Commitments

The Company categorizes IRLCs as "Level 3" fair value assets or liabilities. The Company estimates the fair value of IRLCs based on quoted Agency MBS prices, its estimate of the fair value of the MSRs it expects to receive in the sale of the loans and the probability that the loan will be funded or purchased (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, could result in significant changes in the IRLCs' fair value measurement. 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 increase the pull-through rate for the loan principal and interest payment cash flow component, which has decreased in fair value. Changes in fair value of IRLCs are included in *Net gains on loans held for sale at fair value* in the consolidated statements of income.

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

	March 31, 2020	**December 31, 2019**
Fair value (in thousands) (1)	$ 315,194	$ 136,650
Key inputs (2):		
Pull-through rate:		
Range	11.8% – 100%	12.2% – 100%
Weighted average	78.9%	86.5%
Mortgage servicing rights value expressed as:		
Servicing fee multiple:		
Range	0.9 – 5.4	1.4 – 5.7
Weighted average	3.5	4.2
Percentage of unpaid principal balance:		
Range	0.2% – 2.8%	0.3% – 2.8%
Weighted average	1.2%	1.6%

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

(2) Weighted average inputs are based on the committed amounts.

Hedging Derivatives

Fair values of derivative financial instruments actively traded on exchanges 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 or other markets 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 gains on loans held for sale at fair value*, or *Net mortgage loan servicing fees – Change in fair value of mortgage servicing rights and mortgage servicing liabilities*, as applicable, in the consolidated statements of income.

Repurchase Agreement Derivatives

Through August 21, 2019, the Company had a master repurchase agreement that included incentives for financing loans approved for satisfying certain consumer relief characteristics. These incentives are classified for financial reporting purposes as embedded derivatives and are separated for reporting purposes from the master repurchase agreement. The Company classifies repurchase agreement derivatives as "Level 3" fair value assets. The significant unobservable inputs into the valuation of repurchase agreement derivative assets are the discount rate and the Company's expected approval rate of the loans financed under the master repurchase agreement. The resulting ratio included in the Company's fair value estimate was 99.0% at March 31, 2020 and December 31, 2019.

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 (discount rate), prepayment rates of the underlying loans, and annual per-loan cost to service the underlying 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. Changes in the fair value of MSRs are included in *Net loan servicing fees—Change in fair value of mortgage servicing rights and mortgage servicing liabilities* in the consolidated statements of income.

Following are the key inputs used in determining the fair value of MSRs received by the Company when it retains the obligation to service the mortgage loans it sells:

	Quarter ended March 31,	
	2020	**2019**
	(Amount recognized and unpaid principal balance of underlying loans in thousands)	
MSR and pool characteristics:		
Amount recognized	$ 282,315	$ 115,751
Unpaid principal balance of underlying loans	$ 18,330,384	$ 8,145,850
Weighted average servicing fee rate (in basis points)	40	39
Key inputs (1):		
Pricing spread (2)		
Range	6.8% – 15.6%	5.8% – 15.6%
Weighted average	8.2%	8.9%
Annual total prepayment speed (3)		
Range	9.1% – 49.8%	5.8% – 73.0%
Weighted average	14.5%	15.3%
Equivalent average life (in years)		
Range	1.5 – 7.8	0.8 – 10.2
Weighted average	5.9	5.8
Per-loan annual cost of servicing		
Range	\$77 – \$100	\$78 – \$100
Weighted average	\$97	\$95

(1) Weighted average inputs are based on the UPB of the underlying 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")/swap curve for purposes of discounting cash flows relating to MSRs.

(3) Annual total prepayment speed is measured using Life Total CPR, which includes both voluntary and involuntary prepayments. Equivalent average life is included for informational purposes.

Following is a quantitative summary of key inputs used in the valuation of the Company's MSRs and the effect on the fair value from adverse changes in those inputs:

	March 31, 2020	December 31, 2019
	(Fair value, unpaid principal balance of underlying loans and effect on fair value amounts in thousands)	
Fair value	$ 2,193,697	$ 2,926,790
Pool characteristics:		
Unpaid principal balance of underlying loans	$ 231,484,161	$ 225,787,103
Weighted average note interest rate	3.9%	3.9%
Weighted average servicing fee rate (in basis points)	35	35
Key inputs (1):		
Pricing spread (2):		
Range	8.3% – 18.1%	6.8% – 15.8%
Weighted average	10.7%	8.5%
Effect on fair value of:		
5% adverse change	($38,151)	($44,561)
10% adverse change	($74,912)	($87,734)
20% adverse change	($144,545)	($170,155)
Annual total prepayment speed (3):		
Range	9.7% – 27.9%	9.3% – 40.9%
Weighted average	16.5%	12.7%
Equivalent average life (in years)		
Range	1.3 – 7.2	1.4 – 7.4
Weighted average	5.0	6.1
Effect on fair value of:		
5% adverse change	($61,123)	($63,569)
10% adverse change	($119,166)	($124,411)
20% adverse change	($226,812)	($238,549)
Annual per-loan cost of servicing:		
Range	$78 – $112	$77 – $100
Weighted average	$108	$97
Effect on fair value of:		
5% adverse change	($24,995)	($24,516)
10% adverse change	($49,991)	($49,032)
20% adverse change	($99,981)	($98,065)

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

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

(3) Annual total prepayment speed is measured using Life Total CPR, which includes both voluntary and involuntary prepayments. Equivalent average life is included for informational purposes.

The preceding sensitivity analyses are limited in that they were performed as of a particular date; only contemplate the movements in the indicated inputs; do not incorporate changes 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 management to account for changing circumstances. For these reasons, the preceding estimates should not be viewed as earnings forecasts.

Excess Servicing Spread Financing at Fair Value

ESS is categorized as a "Level 3" fair value liability. Because the ESS is a claim to a portion of the cash flows from MSRs, the fair value measurement of the ESS is similar to that of MSRs. The Company uses the same discounted cash flow approach to measuring the ESS as it uses to measure MSRs except that certain inputs relating to the cost to service the mortgage loans underlying the MSRs and certain ancillary income are not included as these cash flows do not accrue to the holder of the ESS.

The key inputs used in the estimation of ESS fair value include pricing spread (discount rate) and prepayment speed. Significant changes to either of those inputs in isolation could result in a significant change in the fair value of ESS. Changes in these key inputs are not necessarily directly related.

ESS is generally subject to fair value increases when mortgage interest rates increase. Increasing mortgage interest rates normally discourage mortgage refinancing activity. Decreased refinancing activity increases the life of the mortgage loans underlying the ESS, thereby increasing its fair value. Changes in the fair value of ESS are included in *Net loan servicing fees—Change in fair value of excess servicing spread payable to PennyMac Mortgage Investment Trust.*

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

	March 31, 2020	**December 31, 2019**
Fair value (in thousands)	$ 157,109	$ 178,586
Pool characteristics:		
Unpaid principal balance of underlying loans (in thousands)	$ 19,153,856	$ 19,904,571
Average servicing fee rate (in basis points)	34	34
Average excess servicing spread (in basis points)	19	19
Key inputs (1):		
Pricing spread (2):		
Range	5.4% – 5.8%	3.0% – 3.3%
Weighted average	5.6%	3.1%
Annual total prepayment speed (3):		
Range	8.7% – 14.9%	8.7% – 16.2%
Weighted average	11.9%	11.0%
Equivalent average life (in years)		
Range	2.7 – 7.1	2.7 – 7.2
Weighted average	5.8	6.1

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

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

(3) Annual total prepayment speed is measured using Life Total CPR, which includes both voluntary and involuntary prepayments. Equivalent average life is included for informational purposes.

Mortgage Servicing Liabilities

MSLs are categorized as "Level 3" fair value liabilities. The Company uses a discounted cash flow approach to estimate the fair value of MSLs. This approach consists of projecting net servicing cash flows discounted at a rate that the Company believes market participants would use in their determinations of fair value. The key inputs used in the estimation of the fair value of MSLs include the applicable pricing spread (discount rate), prepayment rates, and the annual per-loan cost to service the underlying loans. Changes in the fair value of MSLs are included in *Net servicing fees—Change in fair value of mortgage servicing rights and mortgage servicing liabilities* in the consolidated statements of income.

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

	March 31, 2020	December 31, 2019
Fair value (in thousands)	$ 29,761	$ 29,140
Pool characteristics:		
Unpaid principal balance of underlying loans (in thousands)	$ 2,635,734	$ 2,758,454
Servicing fee rate (in basis points)	25	25
Key inputs:		
Pricing spread (1)	8.2%	8.2%
Annual total prepayment speed (2)	31.6%	29.2%
Equivalent average life (in years)	3.3	3.9
Annual per-loan cost of servicing	$ 304	$ 300

(1) The Company applies a pricing spread to the United States Dollar LIBOR/swap curve for purposes of discounting cash flows relating to MSLs.

(2) Annual total prepayment speed is measured using Life Total CPR, which includes both voluntary and involuntary prepayments. Equivalent average life is included for informational purposes.

Note 7—Loans Held for Sale at Fair Value

Loans held for sale at fair value include the following:

Loan type	March 31, 2020	December 31, 2019
	(in thousands)	
Government-insured or guaranteed	$ 3,998,657	$ 4,222,010
Conventional conforming	735,615	307,065
Jumbo	1,128	—
Purchased from Ginnie Mae pools serviced by the Company	788,283	374,121
Repurchased pursuant to representations and warranties	17,961	9,244
Home equity lines of credit	343	513
	$ 5,541,987	$ 4,912,953
Fair value of loans pledged to secure:		
Assets sold under agreements to repurchase	$ 4,937,094	$ 4,322,789
Mortgage loan participation purchase and sale agreements	556,238	523,349
	$ 5,493,332	$ 4,846,138

Note 8—Derivative Financial Instruments

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 when the Company 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 or originate a loan for sale.
- Derivatives that were embedded in a master repurchase agreement that provided for the Company to receive incentives for financing mortgage loans that satisfied certain consumer relief characteristics under the master repurchase agreement.

The Company also engages in interest rate risk management activities in an effort to moderate the effect of changes in market interest rates on the fair value of the Company's assets. To manage this fair value risk resulting from interest rate risk, the Company uses derivative financial instruments acquired with the intention of reducing the risk that changes in market interest rates will result in unfavorable changes in the fair value of the Company's IRLCs, inventory of loans held for sale and the portion of its MSRs not financed with ESS.

The Company does not designate and qualify any of its derivatives for hedge accounting. 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 financial instruments recorded on its consolidated balance sheets:

	March 31, 2020			December 31, 2019		
		Fair value			Fair value	
Instrument	Notional amount	Derivative assets	Derivative liabilities	Notional amount	Derivative assets	Derivative liabilities
			(in thousands)			
Not subject to master netting arrangements:						
Interest rate lock commitments	9,377,614	$ 317,621	$ 2,427	7,122,316	$ 138,511	$ 1,861
Repurchase agreement derivatives		8,187	—		8,187	—
Used for hedging purposes:						
Forward purchase contracts	20,480,331	421,860	12,553	13,618,361	12,364	19,040
Forward sales contracts	20,196,818	23,346	334,111	16,220,526	17,097	18,045
MBS put options	10,700,000	4,062	—	6,100,000	3,415	—
Swaption futures purchase contracts	6,800,000	36,696	—	1,750,000	2,409	—
Put options on interest rate futures purchase contracts	4,925,000	13,676	—	2,250,000	3,945	—
Call options on interest rate futures purchase contracts	1,925,000	24,434	—	750,000	1,469	—
Treasury futures purchase contracts	650,000	—	—	1,276,000	—	—
Treasury futures sale contracts	810,000	—	—	1,010,000	—	—
Interest rate swap futures purchase contracts	2,560,000	—	—	3,210,000	—	—
Total derivatives before netting		849,882	349,091		187,397	38,946
Netting		(416,671)	(305,939)		(27,711)	(16,616)
		$ 433,211	$ 43,152		$ 159,686	$ 22,330
Collateral placed with (received from) derivative counterparties, net		$ (110,732)			$ (11,095)	

The following table summarizes notional amount activity for derivative contracts used in the Company's hedging activities:

	Notional amounts, quarter ended March 31, 2020			
Instrument	Beginning of quarter	Additions	Dispositions/ expirations	End of quarter
		(in thousands)		
Forward purchase contracts	13,618,361	112,859,449	(105,997,479)	20,480,331
Forward sale contracts	16,220,526	130,436,231	(126,459,939)	20,196,818
MBS put options	6,100,000	22,000,000	(17,400,000)	10,700,000
Swaption futures purchase contracts	1,750,000	7,900,000	(2,850,000)	6,800,000
Swaption futures sale contracts	—	2,850,000	(2,850,000)	—
Put options on interest rate futures purchase contracts	2,250,000	7,600,000	(4,925,000)	4,925,000
Call options on interest rate futures purchase contracts	750,000	3,540,000	(2,365,000)	1,925,000
Put options on interest rate futures sale contracts	—	4,925,000	(4,925,000)	—
Call options on interest rate futures sale contracts	—	2,365,000	(2,365,000)	—
Treasury futures purchase contracts	1,276,000	2,035,000	(2,661,000)	650,000
Treasury futures sale contracts	1,010,000	2,461,000	(2,661,000)	810,000
Interest rate swap futures purchase contracts	3,210,000	1,225,000	(1,875,000)	2,560,000
Interest rate swap futures sales contracts	—	1,875,000	(1,875,000)	—

Instrument	Notional amounts, quarter ended March 31, 2019 Beginning of quarter	Additions	Dispositions/ expirations	End of quarter
	(in thousands)			
Forward purchase contracts	6,657,026	52,621,845	(49,965,482)	9,313,389
Forward sale contracts	6,890,046	59,673,487	(58,980,528)	7,583,005
MBS put options	4,635,000	19,160,000	(14,370,000)	9,425,000
MBS call options	1,450,000	4,500,000	(2,600,000)	3,350,000
Put options on interest rate futures purchase contracts	3,085,000	6,675,000	(6,410,000)	3,350,000
Call options on interest rate futures purchase contracts	1,512,500	4,462,800	(3,725,300)	2,250,000
Put options on interest rate futures sale contracts	—	10,135,300	(10,135,300)	—
Treasury futures purchase contracts	835,000	4,111,200	(3,136,200)	1,810,000
Treasury futures sale contracts	1,450,000	2,761,200	(3,136,200)	1,075,000
Interest rate swap futures purchase contracts	625,000	400,000	—	1,025,000

Derivative Balances and Netting of Financial Instruments

The Company has elected to present net derivative asset and liability positions, and cash collateral obtained from (or posted to) its counterparties when subject to a master netting arrangement that is legally enforceable on all counterparties in the event of default. The derivatives that are not subject to a master netting arrangement are IRLCs and repurchase agreement derivatives.

Offsetting of Derivative Assets

Following are summaries of derivative assets and related netting amounts:

	March 31, 2020			December 31, 2019		
	Gross amount of recognized assets	Gross amount offset in the consolidated balance sheet	Net amount of assets in the consolidated balance sheet	Gross amount of recognized assets	Gross amount offset in the consolidated balance sheet	Net amount of assets in the consolidated balance sheet
	(in thousands)					
Derivatives not subject to master netting arrangements:						
Interest rate lock commitments	$ 317,621	$ —	$ 317,621	$ 138,511	$ —	$ 138,511
Repurchase agreement derivatives	8,187	—	8,187	8,187	—	8,187
	325,808	—	325,808	146,698	—	146,698
Derivatives subject to master netting arrangements:						
Forward purchase contracts	421,860	—	421,860	12,364	—	12,364
Forward sale contracts	23,346	—	23,346	17,097	—	17,097
MBS put options	4,062	—	4,062	3,415	—	3,415
Swaptions	36,696	—	36,696	2,409	—	2,409
Put options on interest rate futures purchase contracts	13,676	—	13,676	3,945	—	3,945
Call options on interest rate futures purchase contracts	24,434	—	24,434	1,469	—	1,469
Netting	—	(416,671)	(416,671)	—	(27,711)	(27,711)
	524,074	(416,671)	107,403	40,699	(27,711)	12,988
	$ 849,882	$ (416,671)	$ 433,211	$ 187,397	$ (27,711)	$ 159,686

Derivative Assets, Financial Instruments, and Cash 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 netting.

	March 31, 2020				December 31, 2019			
		Gross amount not offset in the consolidated balance sheet				Gross amount not offset in the consolidated balance sheet		
	Net amount of assets in the consolidated balance sheet	Financial instruments	Cash collateral received	Net amount	Net amount of assets in the consolidated balance sheet	Financial instruments	Cash collateral received	Net amount
	(in thousands)							
Interest rate lock commitments	$ 317,621	$ —	$ —	$ 317,621	$ 138,511	$ —	$ —	$ 138,511
RJ O'Brien	38,109	—	—	38,109	5,414	—	—	5,414
JPMorgan Chase Bank, N.A.	27,313	—	—	27,313	2,196	—	—	2,196
Goldman Sachs	14,537	—	—	14,537	2,548	—	—	2,548
Citibank, N.A.	9,995	—	—	9,995	—	—	—	—
Deutsche Bank	7,894	—	—	7,894	9,138	—	—	9,138
Wells Fargo Bank, N.A.	5,848	—	—	5,848	—	—	—	—
Daiwa Capital Markets	3,084	—	—	3,084	—	—	—	—
Mizuho Securities	2,989	—	—	2,989	1,597	—	—	1,597
Federal National Mortgage Association	1,980	—	—	1,980	—	—	—	—
Others	3,841	—	—	3,841	282	—	—	282
	$ 433,211	$ —	$ —	$ 433,211	$ 159,686	$ —	$ —	$ 159,686

Offsetting of Derivative Liabilities and Financial Liabilities

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

	March 31, 2020			December 31, 2019		
	Gross amount of recognized liabilities	Gross amount offset in the consolidated balance sheet	Net amount of liabilities in the consolidated balance sheet	Gross amount of recognized liabilities	Gross amount offset in the consolidated balance sheet	Net amount of liabilities in the consolidated balance sheet
	(in thousands)					
Derivatives not subject to master netting arrangements – Interest rate lock commitments	$ 2,427	$ —	$ 2,427	$ 1,861	$ —	$ 1,861
Derivatives subject to a master netting arrangement:						
Forward purchase contracts	12,553	—	12,553	19,040	—	19,040
Forward sale contracts	334,111	—	334,111	18,045	—	18,045
Netting	—	(305,939)	(305,939)	—	(16,616)	(16,616)
	346,664	(305,939)	40,725	37,085	(16,616)	20,469
Total derivatives	349,091	(305,939)	43,152	38,946	(16,616)	22,330
Assets sold under agreements to repurchase:						
Amount outstanding	4,446,795	—	4,446,795	4,141,680	—	4,141,680
Unamortized debt issuance cost, net	(2,250)	—	(2,250)	(627)	—	(627)
	4,444,545	—	4,444,545	4,141,053	—	4,141,053
	$ 4,793,636	$ (305,939)	$ 4,487,697	$ 4,179,999	$ (16,616)	$ 4,163,383

Derivative Liabilities, Financial Instruments, and Collateral Held 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 qualify under the accounting guidance for netting. All assets sold under agreements to repurchase are secured by sufficient collateral or have fair value that exceeds the liability amount recorded on the consolidated balance sheets.

	March 31, 2020				December 31, 2019			
		Gross amounts not offset in the consolidated balance sheet				Gross amounts not offset in the consolidated balance sheet		
	Net amount of liabilities in the consolidated balance sheet	Financial instruments	Cash collateral pledged	Net amount	Net amount of liabilities in the consolidated balance sheet	Financial instruments	Cash collateral pledged	Net amount
	(in thousands)							
Interest rate lock commitments	$ 2,427	$ —	$ —	$ 2,427	$ 1,861	$ —	$ —	$ 1,861
Credit Suisse First Boston Mortgage Capital LLC	1,552,669	(1,533,516)	—	19,153	1,235,430	(1,235,430)	—	—
JPMorgan Chase Bank, N.A.	870,965	(870,965)	—	—	936,172	(936,172)	—	—
Citibank, N.A.	657,315	(657,315)	—	—	655,831	(653,170)	—	2,661
Bank of America, N.A.	654,788	(643,834)	—	10,954	379,400	(374,190)	—	5,210
Morgan Stanley Bank, N.A.	296,497	(293,813)	—	2,684	582,941	(582,941)	—	—
Royal Bank of Canada	250,919	(250,919)	—	—	175,897	(175,897)	—	—
BNP Paribas	196,791	(196,433)	—	358	183,880	(183,880)	—	—
Federal National Mortgage Association	5,674	—	—	5,674	—	—	—	—
Mitsubishi UFJ Securities	1,396	—	—	1,396	—	—	—	—
Wells Fargo Bank, N.A.	—	—	—	—	11,212	—	—	11,212
Others	506	—	—	506	1,386	—	—	1,386
	$ 4,489,947	$ (4,446,795)	$ —	$ 43,152	$ 4,164,010	$ (4,141,680)	$ —	$ 22,330

Following are the gains (losses) recognized by the Company on derivative financial instruments and the income statement lines where such gains and losses are included:

Derivative activity	Income statement line	Quarter ended March 31, 2020	2019
		(in thousands)	
Interest rate lock commitments	Net gains on loans held for sale at fair value	$ 178,543	$ 16,727
Repurchase agreement derivatives	Interest expense	$ —	$ (557)
Hedged item:			
Interest rate lock commitments and loans held for sale	Net gains on loans held for sale at fair value	$ (225,557)	$ (34,668)
Mortgage servicing rights	Net loan servicing fees–Change in fair value of mortgage servicing rights and mortgage servicing liabilities	$ 1,036,570	$ 134,557

Note 9—Mortgage Servicing Rights and Mortgage Servicing Liabilities

Mortgage Servicing Rights at Fair Value

The activity in MSRs is as follows:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Balance at beginning of quarter	$ 2,926,790	$ 2,820,612
Additions:		
Resulting from loan sales	282,315	115,751
Purchases	25,760	227,772
	308,075	343,523
Change in fair value due to:		
Changes in valuation inputs used in valuation model (1)	(915,862)	(161,638)
Other changes in fair value (2)	(125,306)	(97,407)
Total change in fair value	(1,041,168)	(259,045)
Balance at end of quarter	$ 2,193,697	$ 2,905,090

	March 31, 2020	December 31, 2019
	(in thousands)	
Fair value of mortgage servicing rights pledged to secure *Assets sold under agreements to repurchase* and *Notes payable secured by mortgage servicing assets*	$ 2,163,928	$ 2,920,603

(1) Principally reflects changes in discount rate and prepayment speed inputs, primarily due to changes in market interest rates, and servicing costs.

(2) Represents changes due to realization of cash flows.

Mortgage Servicing Liabilities at Fair Value

The activity in MSLs is summarized below:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Balance at beginning of quarter	$ 29,140	$ 8,681
Mortgage servicing liabilities resulting from loan sales	6,576	794
Changes in fair value due to:		
Changes in valuation inputs used in valuation model (1)	4,432	3,301
Other changes in fair value (2)	(10,387)	(4,932)
Total change in fair value	(5,955)	(1,631)
Balance at end of quarter	$ 29,761	$ 7,844

(1) Principally reflects changes in expected borrower performance and servicer losses given default.

(2) Represents changes due to realization of cash flows.

Contractual servicing fees relating to MSRs and MSLs are recorded in *Net loan servicing fees—Loan servicing fees—From non-affiliates* on the consolidated statements of income; other fees relating to MSRs and MSLs are recorded in *Net loan servicing fees—Loan servicing fees—Other* on the Company's consolidated statements of income. Such amounts are summarized below:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Contractual servicing fees	$ 198,653	$ 166,790
Other fees:		
Late charges	12,613	9,812
Other	4,850	1,661
	$ 216,116	$ 178,263

Note 10—Leases

The Company has operating lease agreements relating to its facilities. The Company's operating lease agreements have remaining terms ranging from less than one year to ten years; some of these operating lease agreements include options to extend the term for up to five years. None of the Company's operating lease agreements require the Company to make variable lease payments.

The Company's lease agreements are summarized below:

	Quarter ended March 31,	
	2020	2019
	(dollars in thousands)	
Lease expense:		
Operating leases	$ 3,932	$ 3,229
Short-term leases	256	217
Sublease income	—	(32)
Net lease expense included in *Occupancy and equipment*	$ 4,188	$ 3,414
Other information:		
Cash payments for operating leases	$ 4,440	$ 3,846
Operating lease right-of-use assets recognized:		
Upon adoption Accounting Standards Update 2016-02, *Leases (Topic 842)*	$ —	$ 58,598
New leases	1,534	—
	$ 1,534	$ 58,598
Period end weighted averages:		
Remaining lease term (in years)	6.9	6.3
Discount rate	4.3%	4.6%

The maturities of the Company's operating lease liabilities are summarized below:

Twelve months ended March 31,	Operating leases
	(in thousands)
2021	$ 17,111
2022	15,795
2023	14,509
2024	13,755
2025	11,643
Thereafter	32,758
Total lease payments	105,571
Less imputed interest	(15,742)
Total	$ 89,829

As of March 31, 2020, the Company had one operating lease that has not yet commenced with an undiscounted minimum payment commitment totaling $1.5 million. The lease is expected to commence in May 2020.

Note 11—Borrowings

The borrowing facilities described throughout this Note 11 contain various covenants, including financial covenants governing the Company's net worth, debt-to-equity ratio, profitability and liquidity. Management believes that the Company was in compliance with these covenants as of March 31, 2020.

Assets Sold Under Agreements to Repurchase

The Company has multiple borrowing facilities in the form of asset sales under agreements to repurchase. These borrowing facilities are secured by loans held for sale at fair value or participation certificates backed by MSRs. Eligible loans and participation certificates backed by MSRs are sold at advance rates based on the fair value (as determined by the lender) of the assets sold. Interest is charged at a rate based on the lender's overnight cost of funds rate or on LIBOR depending on the terms of the respective agreements. Loans and MSRs financed under these agreements may be re-pledged by the lenders.

Assets sold under agreements to repurchase are summarized below:

	Quarter ended March 31,	
	2020	**2019**
	(dollars in thousands)	
Average balance of assets sold under agreements to repurchase	$ 3,139,328	$ 1,437,957
Weighted average interest rate (1)	3.07 %	4.47 %
Total interest expense (2)	$ 25,684	$ 8,635
Maximum daily amount outstanding	$ 4,446,795	$ 2,152,588

	March 31, 2020	**December 31, 2019**
	(dollars in thousands)	
Carrying value:		
Unpaid principal balance	$ 4,446,795	$ 4,141,680
Unamortized debt issuance costs	(2,250)	(627)
	$ 4,444,545	$ 4,141,053
Weighted average interest rate	2.54 %	3.29 %
Available borrowing capacity (3):		
Committed	$ —	$ 125,810
Uncommitted	1,403,205	782,510
	$ 1,403,205	$ 908,320
Fair value of assets securing repurchase agreements:		
Loans held for sale	$ 4,937,094	$ 4,322,789
Assets purchased from PennyMac Mortgage Investment Trust under agreements to resell	$ 99,766	$ 107,512
Servicing advances (4)	$ 182,531	$ 207,460
Mortgage servicing rights (4)	$ 2,151,501	$ 2,902,721
Margin deposits placed with counterparties (5)	$ 5,000	$ 5,000

(1) Excludes the effect of amortization of net issuance costs of $1.6 million and premiums of $7.4 million for the quarters ended March 31, 2020 and 2019, respectively.

(2) In 2017, PFSI 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. The Company included $9.3 million of such incentives as reductions in *Interest expense* during the quarter ended March 31, 2019. The master repurchase agreement expired on August 21, 2019.

(3) 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.

(4) Beneficial interests in the Ginnie Mae MSRs and servicing advances are pledged to the Issuer Trust and together serve as the collateral backing the VFN, 2018-GT1 Notes and 2018-GT2 Notes described in *Notes payable secured by mortgage servicing assets*. The VFN financing is included in *Assets sold under agreements to repurchase* and 2018-GT1 Notes and 2018-GT2 Notes are included in *Notes payable secured by mortgage servicing assets* on the Company's consolidated balance sheets.

(5) Margin deposits are included in *Other* assets on the Company's consolidated balance sheets.

Following is a summary of maturities of outstanding advances under repurchase agreements by maturity date:

Remaining maturity at March 31, 2020	Unpaid principal balance (dollars in thousands)
Within 30 days	$ 1,585,379
Over 30 to 90 days	2,614,849
Over 90 to 180 days	246,567
Total assets sold under agreements to repurchase	$ 4,446,795
Weighted average maturity (in months)	1.2

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) relating to the Company's assets sold under agreements to repurchase is summarized by counterparty below as of March 31, 2020:

Counterparty	Amount at risk (in thousands)	Weighted average maturity of advances under repurchase agreement	Facility maturity
Credit Suisse First Boston Mortgage Capital LLC (1)	$ 983,098	April 26, 2020	April 26, 2020
Credit Suisse First Boston Mortgage Capital LLC	$ 245,618	April 24, 2020	April 24, 2020
JP Morgan Chase Bank, N.A.	$ 97,688	June 1, 2020	October 9, 2020
Citibank, N.A.	$ 67,788	April 10, 2020	August 4, 2020
Bank of America, N.A.	$ 61,809	May 4, 2020	March 11, 2021
Morgan Stanley Bank, N.A.	$ 26,408	June 12, 2020	August 21, 2020
Royal Bank of Canada	$ 24,012	April 30, 2020	April 30, 2020
BNP Paribas	$ 15,575	June 16, 2020	July 31, 2020

(1) The calculation of the amount at risk includes the VFN and the Term Notes because beneficial interests in the Ginnie Mae MSRs and servicing advances are pledged to the Issuer Trust and together serve as the collateral backing the VFN, 2018-GT1 Notes and 2018-GT2 Notes described in *Notes payable secured by mortgage servicing assets* below. The VFN financing is included in *Assets sold under agreements to repurchase* and 2018-GT1 Notes and 2018-GT2 Notes are included in *Notes payable secured by mortgage servicing assets* on the Company's consolidated balance sheets.

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 agreements mature if the fair value (as determined by the applicable lender) of the assets securing those agreements decreases.

Mortgage Loan Participation Purchase and Sale Agreements

Certain of the borrowing facilities secured by loans held 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 mortgage loans that have been pooled with Fannie Mae, Freddie Mac or Ginnie Mae, are sold to a lender pending the securitization of the mortgage loans and sale of the resulting securities. A commitment to sell the securities resulting from the pending securitization between the Company and a non-affiliate 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 that is based on a percentage of the purchase price. The holdback amount is not required to be paid to the Company until the settlement of the security and its delivery to the lender.

The mortgage loan participation purchase and sale agreements are summarized below:

	Quarter ended March 31, 2020	Quarter ended March 31, 2019
	(dollars in thousands)	
Average balance	$ 247,811	$ 236,667
Weighted average interest rate (1)	2.64 %	3.68 %
Total interest expense	$ 1,810	$ 2,311
Maximum daily amount outstanding	$ 530,220	$ 548,038

(1) Excludes the effect of amortization of facility fees totaling $173,000 and $135,000 for the quarters ended March 31, 2020 and 2019, respectively.

	March 31, 2020	December 31, 2019
	(dollars in thousands)	
Carrying value:		
Unpaid principal balance	$ 528,750	$ 497,948
Unamortized debt issuance costs	—	—
	$ 528,750	$ 497,948
Weighted average interest rate	2.18 %	3.05 %
Fair value of loans pledged to secure mortgage loan participation purchase and sale agreements	$ 556,238	$ 523,349

Obligations Under Capital Lease

The Company has a capital lease transaction secured by certain fixed assets and capitalized software. The capital lease matures on June 13, 2022 and bears interest at a spread over one-month LIBOR.

Obligations under capital lease are summarized below:

	Quarter ended March 31, 2020	Quarter ended March 31, 2019
	(dollars in thousands)	
Average balance	$ 19,406	$ 5,848
Weighted average interest rate	3.36 %	4.50 %
Total interest expense	$ 167	$ 66
Maximum daily amount outstanding	$ 20,810	$ 6,605

	March 31, 2020	December 31, 2019
	(dollars in thousands)	
Unpaid principal balance	$ 18,145	$ 20,810
Weighted average interest rate	3.18 %	3.74 %
Assets pledged to secure obligations under capital lease:		
Furniture, fixtures and equipment	$ 7,392	$ 20,406
Capitalized software	$ 10,606	$ 12,192

Notes Payable Secured by Mortgage Servicing Assets

Term Notes

On February 28, 2018, the Company, through PNMAC GMSR ISSUER TRUST (the "Issuer Trust"), issued an aggregate principal amount of $650 million in Term Notes (the "2018-GT1 Notes") to qualified institutional buyers under Rule 144A of the Securities Act of 1933, as amended (the "Securities Act"). The 2018-GT1 Notes bear interest at a rate equal to one-month LIBOR plus 2.85% per annum. The 2018-GT1 Notes will mature on February 25, 2023 or, if extended pursuant to the terms of the related indenture supplement, February 25, 2025 (unless earlier redeemed in accordance with their terms). Concurrent with issuance of the 2018-GT1 Notes, the Company also redeemed certain notes previously issued by the Issuer Trust.

On August 10, 2018, the Company, through the Issuer Trust, issued an aggregate principal amount of $650 million in Term Notes (the "2018-GT2 Notes") to qualified institutional buyers under Rule 144A of the Securities Act. The 2018-GT2 Notes bear interest at a rate equal to one-month LIBOR plus 2.65% per annum. The 2018-GT2 Notes will mature on August 25, 2023 or, if extended pursuant to the terms of the related indenture supplement, August 25, 2025 (unless earlier redeemed in accordance with their terms). Concurrent with the issuance of the 2018-GT2 Notes, the Company also redeemed certain notes previously issued by the Issuer Trust.

All of the Term Notes rank pari passu with each other and with the VFN issued by the Issuer Trust to PLS and are secured by certain participation certificates relating to Ginnie Mae MSRs and ESS that are financed pursuant to the GNMA MSR Facility.

MSR Note Payable

On February 1, 2018, the Company issued a note payable that is secured by Freddie Mac MSRs. Interest is charged at a rate based on LIBOR plus the applicable contract margin. The facility expires on April 24, 2020. The maximum amount that the Company may borrow under the note payable is $400 million, less any amount outstanding under the agreement to repurchase pursuant to which the Company finances the VFN. The Company did not borrow under this note payable during the quarters ended March 31, 2020 or 2019.

Notes payable are summarized below:

	Quarter ended March 31,	
	2020	**2019**
	(dollars in thousands)	
Average balance	$ 1,300,000	$ 1,300,000
Weighted average interest rate (1)	4.43 %	5.25 %
Total interest expense	$ 14,846	$ 17,510
Maximum daily amount outstanding	$ 1,300,000	$ 1,300,000

(1) Excludes the effect of amortization of debt issuance costs totaling $445,000 and $734,000 for the quarters ended March 31, 2020 and 2019, respectively.

	March 31, 2020	December 31, 2019
	(dollars in thousands)	
Carrying value:		
Unpaid principal balance	$ 1,300,000	$ 1,300,000
Unamortized debt issuance costs	(5,486)	(5,930)
	$ 1,294,514	$ 1,294,070
Weighted average interest rate	4.38 %	4.46 %
Assets pledged to secure notes payable:		
Servicing advances (1)	$ 182,531	$ 207,460
Mortgage servicing rights (1)	$ 2,117,619	$ 2,861,442

(1) Beneficial interests in the Ginnie Mae MSRs and servicing advances are pledged to the Issuer Trust and together serve as the collateral backing the VFN, 2018-GT1 Notes and 2018-GT2 Notes. The VFN financing is included in *Assets sold under agreements to repurchase* and 2018-GT1 Notes and 2018-GT2 Notes are included in *Notes payable secured by mortgage servicing assets* on the Company's consolidated balance sheet.

Corporate Revolving Line of Credit

On November 1, 2018, the Company, through its subsidiary, PennyMac (the “Borrower”), entered into amendments (the "Amendments") to that certain (i) amended and restated credit agreement, dated as of November 18, 2016, by and among the Borrower, the lenders that are parties thereto and Credit Suisse AG, as administrative agent and collateral agent, and Credit Suisse Securities (USA) LLC, as sole bookrunner and sole lead arranger (the “Credit Agreement”); and (ii) amended and restated collateral and guaranty agreement, dated as of November 18, 2016, by and among the Borrower, as grantor, Credit Suisse AG, Cayman Islands Branch (“CS Cayman”), as collateral agent, and PNMAC Holdings, Inc. (formerly known as PennyMac Financial Services, Inc.) and certain of its subsidiaries, PCM, PLS and PNMAC Opportunity Fund Associates, LLC (“Associates”), as guarantors and grantors (“the “Guaranty”).

Pursuant to the Credit Agreement, the lenders have agreed to make revolving loans to the Borrower in an amount not to exceed $150 million. Interest on the loans shall accrue at a per annum rate of interest equal to, at the election of the Borrower, either LIBOR plus the applicable margin or an alternate base rate (as defined in the Credit Agreement). During the existence of certain events of default, interest shall accrue at a higher default rate. The proceeds of the loans are to be used solely for working capital and general corporate purposes of the Borrower and its subsidiaries.

The primary purposes of the Amendments were to (i) extend the maturity date of the Credit Agreement to October 31, 2019; (ii) name the Company as an additional guarantor under the Credit Agreement; and (iii) release Associates from its obligations as a guarantor under the Credit Agreement. Accordingly, the obligations of the Borrower under the Credit Agreement are now guaranteed by PFSI, PNMAC Holdings, Inc., PCM and PLS, and secured by a grant by each of the referenced grantors of its respective right, title and interest in and to limited and otherwise unencumbered (other than specified permitted encumbrances) specified contract rights, specified deposit accounts, all documents and instruments related to such specified contract rights and specified deposit accounts, and any and all proceeds and products thereof. All other terms and conditions of the Credit Agreement and Guaranty remain the same in all material respects. The Company did not borrow under this facility during the quarter ended March 31, 2020 or the year ended December 31, 2019.

Corporate revolving line of credit is summarized below:

	Quarter ended March 31, 2020	2019
	(dollars in thousands)	
Interest expense (1)	$ 503	$ 485

	March 31, 2020	December 31, 2019
	(dollars in thousands)	
Carrying value	$ —	$ —
Unused amount	$ 150,000	$ 150,000
Cash pledged to secure corporate revolving line of credit	$ 773,361	$ 52,599

(1) Interest expenses represent debt issuance costs and non-utilization fees.

Excess Servicing Spread Financing at Fair Value

In conjunction with the Company's purchase from non-affiliates of certain MSRs on pools of Agency-backed residential mortgage loans, the Company has entered into sale and assignment agreements with PMT. Under these agreements, the Company sold to PMT the right to receive ESS cash flows relating to certain MSRs. The Company retained a fixed base servicing fee and all ancillary income associated with servicing the loans. The Company continues to be the servicer of the mortgage loans and retains all servicing obligations, including responsibility to make servicing advances.

Following is a summary of ESS:

	Quarter ended March 31, 2020	2019
	(in thousands)	
Balance at beginning of quarter	$ 178,586	$ 216,110
Issuances of excess servicing spread to PennyMac Mortgage Investment Trust pursuant to recapture agreement	379	508
Accrual of interest	1,974	3,066
Repayment	(9,308)	(10,552)
Change in fair value	(14,522)	(4,051)
Balance at end of quarter	$ 157,109	$ 205,081

Note 12—Liability for Losses Under Representations and Warranties

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

	Quarter ended March 31, 2020	2019
	(in thousands)	
Balance at beginning of quarter	$ 21,446	$ 21,155
Provision for losses on loans sold:		
Resulting from sales of loans	3,712	1,067
Reduction in liability due to change in estimate	(1,676)	(4,210)
Losses incurred, net	(280)	(30)
Balance at end of quarter	$ 23,202	$ 17,982
Unpaid principal balance of loans subject to representations and warranties at end of quarter	$ 186,517,598	$ 133,698,782

Note 13—Income Taxes

The Company's effective income tax rates were 26.2% and 23.5% for the quarters ended March 31, 2020 and 2019, respectively. The increase in effective tax rate in the quarter ended March 31, 2020 compared to the same period in 2019 was due to reduced impact of the permanent and favorable tax adjustment for equity compensation in the quarter ended March 31, 2020 compared to the same period in 2019. The equity compensation deduction for tax purposes was lower by $0.4 million while the pretax income increased by $354.4 million, thereby reducing the effect of the tax adjustment on the effective tax rate.

The Coronavirus Aid, Relief, and Economic Security Act ("CARES Act"), passed in March, 2020, introduced a number of tax law changes which are generally taxpayer favorable. Based on a preliminary analysis, the Company does not anticipate the recording of any material permanent differences resulting from the CARES Act.

Note 14—Commitments and Contingencies

Litigation

From time to time, the Company may be a party to legal proceedings, lawsuits and other claims arising in the ordinary course of its business. The amount, if any, of ultimate liability with respect to such matters cannot be determined, but despite the inherent uncertainties of litigation, management believes that the ultimate disposition of any such proceedings and exposure will not have, individually or taken together, a material adverse effect on the financial condition, results of operations, or cash flows of the Company.

On December 20, 2018, a purported shareholder of the Company filed a complaint in a putative class and derivative action in the Court of Chancery of the State of Delaware (the "Delaware Court"), captioned *Robert Garfield v. BlackRock Mortgage Ventures, LLC et al*., Case No. 2018-0917-KSJM (the "Garfield Action"). The Garfield Action alleges, among other things, that certain current directors and officers of the Company breached their fiduciary duties to the Company and its shareholders by, among other things, agreeing to and entering into a corporate reorganization (the "Reorganization"), which the Company formed as a Delaware corporation on July 2, 2018, and became the top-level parent holding company for the consolidated PennyMac business on November 1, 2018, without ensuring that the Reorganization was entirely fair to the Company or public shareholders. The Reorganization was approved by 99.8% of voting shareholders on October 24, 2018. On December 19, 2019, the Delaware Court denied a motion to dismiss filed by the Company and certain of its directors and officers. While no assurance can be provided as to the ultimate outcome of this claim or the account of any losses to the Company, the Company believes the Garfield Action is without merit and plans to vigorously defend the matter, which remains pending.

On November 5, 2019, Black Knight Servicing Technologies, LLC, a wholly-owned indirect subsidiary of Black Knight, Inc. ("BKI"), filed a Complaint and Demand for Jury Trial in the Circuit Court for the Fourth Judicial Circuit in and for Duval County, Florida (the "Florida State Court"), captioned *Black Knight Servicing Technologies, LLC v. PennyMac Loan Services, LLC,* Case No. 2019-CA-007908 (the "BKI Complaint"). Allegations contained within the BKI Complaint include breach of contract and misappropriation of MSP® System trade secrets in order to develop an imitation mortgage-processing system intended to replace the MSP® System. The BKI Complaint seeks damages for breach of contract and misappropriation of trade secrets, injunctive relief under the Florida Uniform Trade Secrets Act and declaratory judgment of ownership of all intellectual property and software developed by or on behalf of PLS as a result of its wrongful use of and access to the MSP® System and related trade secret and confidential information. On April 6, 2020, the Florida State Court entered an order granting a motion to compel arbitration filed by the Company. On April 21, 2020, BKI filed a motion for reconsideration of the order compelling arbitration. On May 6, 2020, the Florida State Court entered an order denying BKI's motion for reconsideration. Also on May 6, 2020, BKI filed a notice of appeal with respect to both orders. While no assurance can be provided as to the ultimate outcome of BKI Complaint or the account of any losses to the Company, the Company believes the BKI Complaint is without merit and plans to vigorously defend the matter, which remains pending.

Regulatory Matters

The Company and/or its subsidiaries are subject to various state and federal regulations related to its loan production and servicing operations by the various states it operates in as well as federal agencies such as the Consumer Financial Protection Bureau, HUD, and the FHA and is subject to the requirements of the Agencies to which it sells loans and for which it performs loan servicing activities. As a result, the Company may become involved in information-gathering requests, reviews, investigations and proceedings (both formal and informal) by such various federal, state and local regulatory bodies.

Commitments to Purchase and Fund Mortgage Loans

The Company's commitments to purchase and fund loans totaled $9.4 billion as of March 31, 2020.

Note 15—Stockholders' Equity

In June 2017, the Company's board of directors authorized a stock repurchase program under which the Company may repurchase up to $50 million of its outstanding common stock. Following is a summary of activity under the stock repurchase program:

	Quarter ended March 31, 2020	Quarter ended March 31, 2019	Cumulative total (1)
		(in thousands)	
Shares of common stock repurchased	238	—	1,054
Cost of shares of common stock repurchased	$ 4,121	$ —	$ 19,069

(1) Amounts represent the total shares of common stock repurchased under the stock repurchase program through March 31, 2020.

Note 16—Net Gains on Loans Held for Sale

Net gains on loans held for sale at fair value is summarized below:

	Quarter ended March 31, 2020	Quarter ended March 31, 2019
	(in thousands)	
From non-affiliates:		
Cash loss:		
Loans	$ 111,757	$ (41,242)
Hedging activities	(122,666)	(8,927)
	(10,909)	(50,169)
Non-cash gain:		
Mortgage servicing rights and mortgage servicing liabilities resulting from loan sales	275,739	114,957
Provision for losses relating to representations and warranties:		
Pursuant to loan sales	(3,712)	(1,067)
Reduction in liability due to change in estimate	1,676	4,210
Change in fair value of loans and derivatives held at quarter end:		
Interest rate lock commitments	178,543	16,727
Loans	(72,080)	(164)
Hedging derivatives	(102,891)	(25,741)
	266,366	58,753
From PennyMac Mortgage Investment Trust	77,916	26,023
	$ 344,282	$ 84,776

Note 17—Net Interest Income

Net interest income is summarized below:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Interest income:		
From non-affiliates:		
Cash and short-term investments	$ 1,711	$ 1,933
Loans held for sale at fair value	46,426	31,343
Placement fees relating to custodial funds	23,209	23,261
	71,346	56,537
From PennyMac Mortgage Investment Trust—Assets purchased from PennyMac Mortgage Investment Trust under agreements to resell	1,218	1,796
	72,564	58,333
Interest expense:		
To non-affiliates:		
Assets sold under agreements to repurchase (1)	25,684	8,635
Mortgage loan participation purchase and sale agreements	1,810	2,311
Obligations under capital lease	167	66
Notes payable	15,349	17,995
Interest shortfall on repayments of mortgage loans serviced for Agency securitizations	14,871	4,311
Interest on mortgage loan impound deposits	1,657	1,159
	59,538	34,477
To PennyMac Mortgage Investment Trust—Excess servicing spread financing at fair value	1,974	3,066
	61,512	37,543
	$ 11,052	$ 20,790

(1) In 2017, the Company entered into a master repurchase agreement that provided the Company with incentives to finance mortgage loans approved for satisfying certain consumer relief characteristics as provided in the agreement. The Company included $9.3 million of such incentives as reductions of *Interest expense* during the quarter ended March 31, 2019. The master repurchase agreement expired on August 21, 2019.

Note 18—Stock-based Compensation

As of March 31, 2020, the Company had one stock-based compensation plan. Following is a summary of the stock-based compensation activity:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Grants:		
Units:		
Performance-based RSUs	422	665
Stock options	273	344
Time-based RSUs	304	330
Grant date fair value:		
Performance-based RSUs	$ 14,768	$ 15,253
Stock options	2,770	2,965
Time-based RSUs	10,662	7,545
Total	$ 28,200	$ 25,763
Vestings and exercises:		
Performance-based RSUs vested	603	648
Stock options exercised	180	89
Time-based RSUs vested	348	291
Compensation expense	$ 12,368	$ 4,531

Note 19—Earnings Per Share of Common Stock

Basic earnings per share of common stock is determined using net income attributable to the Company's common stockholders divided by the weighted average number of shares of common stock outstanding during the period. Diluted earnings per share of common stock is determined by dividing net income attributable to the Company's common stockholders by the weighted average number of shares of common stock outstanding, assuming all dilutive shares of common stock were issued.

Potentially dilutive shares of common stock include non-vested stock-based compensation awards. The Company applies the treasury stock method to determine the diluted weighted average shares of common stock outstanding based on the outstanding stock-based compensation awards.

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

	Quarter ended March 31,	
	2020	2019
	(in thousands, except per share amounts)	
Net income	$ 306,243	$ 46,135
Weighted average basic shares of common stock outstanding	78,689	77,653
Effect of dilutive shares:		
Common shares issuable under stock-based compensation plan	3,319	1,633
Weighted average shares of common stock applicable to diluted earnings per share	82,008	79,286
Basic earnings per share of common stock	$ 3.89	$ 0.59
Diluted earnings per share of common stock	$ 3.73	$ 0.58

Calculations of diluted earnings per share require certain potentially dilutive shares to be excluded when their inclusion in the diluted earnings per share calculation would be anti-dilutive. The following table summarizes the anti-dilutive weighted-average number of outstanding performance-based restricted share units ("RSUs"), time-based RSUs, and stock options excluded from the calculation of diluted earnings per share:

	Quarter ended March 31,	
	2020	2019
	(in thousands except for weighted-average exercise price)	
Performance-based RSUs (1)	162	1,279
Time-based RSUs	117	61
Stock options (2)	105	706
Total anti-dilutive shares and units	384	2,046
Weighted average exercise price of anti-dilutive stock options (2)	$ 35.03	$ 24.26

(1) Certain performance-based RSUs were outstanding but not included in the computation of earnings per share because the performance thresholds included in such RSUs have not been achieved.

(2) Certain stock options were outstanding but not included in the computation of diluted earnings per share because the weighted-average exercise prices were above the average stock prices for the period.

Note 20—Supplemental Cash Flow Information

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Cash paid for interest	$ 64,527	$ 33,952
Cash paid for income taxes, net	$ 13	$ 66
Non-cash investing activity:		
Mortgage servicing rights resulting from loan sales	$ 282,315	$ 115,751
Mortgage servicing liabilities resulting from loan sales	$ 6,576	$ 794
Unsettled portion of MSR acquisitions	$ 1,656	$ 16,291
Operating right-of-use assets recognized	$ 1,534	$ 58,598
Non-cash financing activity:		
Issuance of *Excess servicing spread payable to PennyMac Mortgage Investment Trust* pursuant to a recapture agreement	$ 379	$ 508
Issuance of common stock in settlement of director fees	$ 48	$ 86

Note 21—Regulatory Capital and Liquidity Requirements

The Company, through PLS and PennyMac, is required to maintain specified levels of capital and liquidity to remain a seller/servicer in good standing with the Agencies. Such capital and liquid asset requirements generally are tied to the size of the Company's loan servicing portfolio or loan origination volume.

The Company is subject to financial eligibility requirements established by the Federal Housing Finance Agency ("FHFA") for sellers/servicers eligible to sell or service mortgage loans with Fannie Mae and Freddie Mac. The eligibility requirements include tangible net worth of $2.5 million plus 25 basis points of the UPB of the Company's total 1-4 unit servicing portfolio, excluding mortgage loans subserviced for others, and a liquidity requirement equal to 3.5 basis points of the aggregate UPB serviced for the Agencies plus 200 basis points of total nonperforming Agency servicing UPB (including nonperforming Agency loans that are in payment forbearance) in excess of 600 basis points.

On January 31, 2020, FHFA proposed changes to the eligibility requirements, which would increase the tangible net worth requirement to $2.5 million plus 35 basis points of the UPB of loans serviced for Ginnie Mae and 25 basis points of the UPB of all other 1-4 unit loans serviced, and increase the liquidity requirement to 4 basis points of the aggregate UPB serviced for Fannie Mae and Freddie Mac and 10 basis points of the UPB serviced for Ginnie Mae plus 300 basis points of total nonperforming Agency servicing UPB (including nonperforming Agency loans that are in payment forbearance) in excess of 400 basis points.

The Company is also subject to financial eligibility requirements for Ginnie Mae single-family issuers. The eligibility requirements include net worth of $2.5 million plus 35 basis points of PLS' outstanding Ginnie Mae single-family obligations and a liquidity requirement equal to the greater of $1.0 million or 10 basis points of PLS' outstanding Ginnie Mae single-family securities.

The Agencies' capital and liquidity requirements, the calculations of which are specified by each Agency, are summarized below:

	March 31, 2020		December 31, 2019	
Agency–company subject to requirement	**Actual (1)**	**Requirement (1)**	**Actual (1)**	**Requirement (1)**
	(dollars in thousands)			
Capital				
Fannie Mae & Freddie Mac – PLS	$ 2,648,008	$ 600,991	$ 2,247,751	$ 585,674
Ginnie Mae – PLS	$ 2,324,574	$ 931,240	$ 1,907,398	$ 910,456
HUD – PLS	$ 2,324,574	$ 2,500	$ 1,907,398	$ 2,500
Liquidity				
Fannie Mae & Freddie Mac – PLS	$ 875,336	$ 81,942	$ 257,794	$ 79,991
Ginnie Mae – PLS	$ 875,336	$ 222,121	$ 257,794	$ 216,119
Adjusted net worth / Total assets ratio				
Ginnie Mae – PLS	22 %	6 %	19 %	6 %
Tangible net worth / Total assets ratio				
Fannie Mae & Freddie Mac – PLS	25 %	6 %	22 %	6 %

(1) Calculated in compliance with the respective Agency's requirements.

Noncompliance with an Agency's requirements can result in such Agency taking various remedial actions up to and including terminating PennyMac's ability to sell loans to and service loans on behalf of the respective Agency.

Note 22—Segments

The Company operates in three segments: production, servicing and investment management.

Two of the segments are in the mortgage banking business: production and servicing. The production segment performs loan origination, acquisition and sale activities. The servicing segment performs servicing of loans, execution and management of early buyout loan transactions and servicing of loans sourced and managed by the investment management segment for PMT, including executing the loan resolution strategy identified by the investment management segment relating to distressed mortgage loans.

The investment management segment represents the activities of the Company's investment manager, which include sourcing, performing diligence, bidding and closing investment asset acquisitions and managing the acquired assets and correspondent production activities for PMT.

Financial performance and results by segment are as follows:

	Quarter ended March 31, 2020				
	Mortgage Banking			Investment	
	Production	Servicing	Total	Management	Total
	(in thousands)				
Revenue: (1)					
Net gains on loans held for sale at fair value	$ 316,635	$ 27,647	$ 344,282	$ —	$ 344,282
Loan origination fees	57,571	—	57,571	—	57,571
Fulfillment fees from PennyMac Mortgage Investment Trust	41,940	—	41,940	—	41,940
Net loan servicing fees	—	257,808	257,808	—	257,808
Net interest income:					
Interest income	26,585	45,979	72,564	—	72,564
Interest expense	20,157	41,346	61,503	9	61,512
	6,428	4,633	11,061	(9)	11,052
Management fees	—	—	—	9,055	9,055
Other	(10)	(680)	(690)	807	117
Total net revenue	422,564	289,408	711,972	9,853	721,825
Expenses	182,433	118,566	300,999	6,096	307,095
Income before provision for income taxes	$ 240,131	$ 170,842	$ 410,973	$ 3,757	$ 414,730
Segment assets at quarter end	$ 5,686,878	$ 5,186,188	$ 10,873,066	$ 18,067	$ 10,891,133

(1) All revenues are from external customers.

	Quarter ended March 31, 2019				
	Mortgage Banking			Investment	
	Production	Servicing	Total	Management	Total
	(in thousands)				
Revenue: (1)					
Net gains on loans held for sale at fair value	$ 66,721	$ 18,055	$ 84,776	$ —	$ 84,776
Loan origination fees	23,930	—	23,930	—	23,930
Fulfillment fees from PennyMac Mortgage Investment Trust	27,574	—	27,574	—	27,574
Net loan servicing fees	—	80,571	80,571	—	80,571
Net interest income (expense):					
Interest income	14,369	43,964	58,333	—	58,333
Interest expense	3,915	33,621	37,536	7	37,543
	10,454	10,343	20,797	(7)	20,790
Management fees	—	—	—	7,248	7,248
Other	488	765	1,253	1,563	2,816
Total net revenue	129,167	109,734	238,901	8,804	247,705
Expenses	82,161	98,571	180,732	6,682	187,414
Income before provision for income taxes	$ 47,006	$ 11,163	$ 58,169	$ 2,122	$ 60,291
Segment assets at quarter end	$ 2,501,468	$ 5,299,813	$ 7,801,281	$ 17,719	$ 7,819,000

(1) All revenues are from external customers.

Note 23—Subsequent Events

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

On April 1, 2020, the Company issued a series of variable funding notes, the Series 2020-SPIADVF1 Notes ("GMSR Servicing Advance Notes"), to be sold under agreement to repurchase pursuant to a Master Repurchase Agreement, dated as of April 1, 2020, with Credit Suisse First Boston Mortgage Capital LLC ("CSFB"), acting as administrative agent on behalf of Credit Suisse AG, Cayman Islands Branch ("CSCIB"), as buyer (the "GMSR Servicing Advances Repurchase Agreement").

The GMSR Servicing Advance Notes leverage an existing MSR financing facility to support a separately defined servicing advance facility within the existing structure and provide the Company enhanced ability to finance its servicing advance obligations to Ginnie Mae and its security holders as necessary and afford borrowers critical relief as required under the recently enacted CARES Act. Specifically, the GMSR Servicing Advances Repurchase Agreement provides the Company with financing secured by its servicing advances to pay, in accordance with the Ginnie Mae requirements, in the event borrowers are delinquent: (i) regularly scheduled monthly principal and bond interest to mortgage-backed securities holders; (ii) taxes, homeowner's insurance, and other escrowed items; and (iii) other expenses related to servicing delinquent loans as specified by (A) state and federal laws and (B) government agencies, including the FHA, the VA, and the USDA.

On April 24, 2020, PLS amended and renewed its credit facilities with Credit Suisse First Boston Mortgage Capital LLC to (i) increase the borrowing capacity under the GMSR Servicing Advances Repurchase Agreement from $400 million to $600 million, all of which is committed and may be used to finance the servicing advances related to delinquent FHA, VA, and USDA loans, including delinquencies caused by forbearance in accordance with the CARES Act, and (ii) increase the maximum combined purchase price available to PLS under the Credit Suisse Credit Facilities from $2.0 billion to $2.25 billion, $1.5 billion of which is now available to finance Ginnie Mae EBO Loans. The maximum combined purchase price of the GMSR Servicing Spread Agreement, the Fannie Mae Servicing Spread Agreement and the Freddie Mac Servicing Spread Agreement may not exceed $400 million. After renewal, the maturity dates for the Credit Suisse Credit Facilities are April 23, 2021 or later, other than the Freddie Mac Servicing Spread Agreement, which matures on October 21, 2020.

- On May 7, the Company announced that the board of directors declared a cash dividend of $0.12 per common share. The dividend will be paid on May 28, 2020 to common shareholders of record as of May 18, 2020.

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

Cautionary Statement Regarding Forward-Looking Statements

The following discussion and analysis of financial condition and results of operations should be read with the consolidated financial statements including the related notes of PennyMac Financial Services, Inc. ("PFSI") 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.

Overview

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 PFSI.

Our Company

We are a specialty financial services firm with a comprehensive mortgage platform and integrated business primarily focused on the production and servicing of U.S. residential mortgage and home equity loans (activities which we refer to as mortgage banking) and the management of investments related to the U.S. mortgage market. We believe that our operating capabilities, specialized expertise, access to long-term investment capital, and our management's experience across all aspects of the mortgage business will allow us to profitably grow these activities and capitalize on other related opportunities as they arise in the future.

We operate and control all of the business and affairs and consolidate the financial results of Private National Mortgage Acceptance Company, LLC ("PennyMac"). PennyMac was founded in 2008 by members of our executive leadership team and two strategic partners, BlackRock Mortgage Ventures, LLC and HC Partners, LLC, formerly known as Highfields Capital Investments, LLC, together with its affiliates.

We were formed as a Delaware corporation on July 2, 2018. We became the top-level parent holding company for the consolidated PennyMac business pursuant to a corporate reorganization (the "Reorganization") that was consummated on November 1, 2018. Before the Reorganization, PNMAC Holdings, Inc. (formerly known as PennyMac Financial Services, Inc.) ("PNMAC Holdings") was our top-level parent holding company and our public company registrant.

One result of the consummation of the Reorganization was that our equity structure was changed to create a single class of publicly-held common stock as opposed to the two classes that were in place before the Reorganization. For tax purposes, the Reorganization was to be treated as an integrated transaction that qualifies as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code and/or a transfer described in Section 351(a) of the Internal Revenue Code. PNMAC Holdings' financial statements remain our historical financial statements.

We conduct our business in three segments: production, servicing (together, production and servicing comprise our mortgage banking activities) and investment management.

- The production segment performs loan origination, acquisition and sale activities.
- The servicing segment performs loan servicing for both newly originated loans we are holding for sale and loans we service for others, including for PMT.
- The investment management segment represents our investment management activities, which include the activities associated with investment asset acquisitions and dispositions such as sourcing, due diligence, negotiation and settlement.

Our principal mortgage banking subsidiary, PennyMac Loan Services, LLC ("PLS"), is a non-bank producer and servicer of mortgage and home equity loans in the United States. PLS is a seller/servicer for the Federal National Mortgage Association ("Fannie Mae") and the Federal Home Loan Mortgage Corporation ("Freddie Mac"), each of which is a government-sponsored entity ("GSE"). PLS is also an approved issuer of securities guaranteed by the Government National Mortgage Association ("Ginnie Mae"), a lender of the Federal Housing Administration ("FHA"), and a lender/servicer of the Veterans Administration ("VA") and the U.S. Department of Agriculture ("USDA"). We refer to each of Fannie Mae, Freddie Mac, Ginnie Mae, FHA, VA and USDA as an "Agency" and collectively as the "Agencies." PLS is able to service loans in all 50 states, the District of Columbia, Guam and the U.S. Virgin Islands, and originate loans in 49 states and the District of Columbia, either because PLS is properly licensed in a particular jurisdiction or exempt or otherwise not required to be licensed in that jurisdiction.

Our investment management subsidiary is PNMAC Capital Management, LLC ("PCM"), a Delaware limited liability company registered with the Securities and Exchange Commission ("SEC") as an investment adviser under the Investment Advisers Act of 1940, as amended. PCM manages PennyMac Mortgage Investment Trust ("PMT"), a mortgage real estate investment trust listed on the New York Stock Exchange under the ticker symbol PMT.

Results of Operations

Our results of operations are summarized below:

	Quarter ended March 31, 2020	Quarter ended March 31, 2019
	(dollars in thousands, except per share amounts)	
Revenues:		
Net gains on loans held for sale at fair value	$ 344,282	$ 84,776
Loan origination fees	57,571	23,930
Fulfillment fees from PennyMac Mortgage Investment Trust	41,940	27,574
Net loan servicing fees	257,808	80,571
Net interest income	11,052	20,790
Management fees	9,055	7,248
Other	117	2,816
Total net revenue	721,825	247,705
Expenses	307,095	187,414
Income before provision for income taxes	414,730	60,291
Provision for income taxes	108,487	14,156
Net income	$ 306,243	$ 46,135
Earnings per share		
Basic	$ 3.89	$ 0.59
Diluted	$ 3.73	$ 0.58
Return on average common stockholders' equity	56.0 %	11.0 %
Income before provision for income taxes by segment:		
Mortgage banking:		
Production	$ 240,131	$ 47,006
Servicing	170,842	11,163
Total mortgage banking	410,973	58,169
Investment management	3,757	2,122
	$ 414,730	$ 60,291
During the quarter:		
Interest rate lock commitments issued	$ 24,804,994	$ 10,134,199
Unpaid principal balance of loans fulfilled for PMT subject to fulfillment fees	$ 16,152,543	$ 8,135,552
At end of quarter:		
Interest rate lock commitments outstanding	$ 9,377,614	$ 3,821,942
Unpaid principal balance of loan servicing portfolio:		
Owned:		
Mortgage servicing rights	$ 231,484,161	$ 219,834,361
Mortgage servicing liabilities	2,635,734	1,000,403
Loans held for sale	5,276,688	2,573,121
	239,396,583	223,407,885
Subserviced for PMT	144,830,043	101,287,428
	$ 384,226,626	$ 324,695,313
Net assets of PennyMac Mortgage Investment Trust	$ 1,823,368	$ 1,727,589
Book value per share	$ 29.85	$ 21.72

During the quarter ended March 31, 2020, the United States was significantly impacted by the effects of the COVID-19 pandemic (the "Pandemic" or "COVID-19") and the effects of market and government responses to the pandemic. These developments have triggered an economic recession in the United States. Initial unemployment claims totaled 26 million for the five weeks ended April 18 as compared to one million for the preceding five weeks.

This sudden and significant increase in unemployment has created financial hardships for many existing borrowers. As part of its response to the Pandemic, the federal government included requirements in the Coronavirus Aid, Relief, and Economic Security ("CARES") Act that we provide borrowers with substantial payment forbearance on loans we service subject to Agency securitizations. As a result of this requirement, we have seen and expect to further see a large increases in delinquencies in our servicing portfolio which will increase our cost to service those loans and require us to finance substantial amounts of advances of principal and interest payments to the holders of the securities holding those loans.

In the near term, or in subsequent quarters, we expect this development to have a negative effect on the earnings of our servicing segment before taking into account the effect of future developments on the valuation of our MSRs by, among other things, reducing servicing fee income, reducing our ability to earn gains on early buyout loans and reducing the amount of placement fees we earn on custodial deposits related to these loans, increasing our cost to service due to higher delinquency and default rates, as well as increased financing costs due to the need to advance funds on behalf of delinquent borrowers. These effects may be offset by growth in our loan servicing portfolio, increases in the servicing fees we earn from PMT for servicing the delinquent loans in its loan servicing portfolio and gains on early buyout loans as those borrowers reperform.

Before the onset of the Pandemic, the mortgage origination market was experiencing healthy demand owing to historically low interest rates in the United States. The government's response to the onset of the Pandemic, including fiscal stimulus and infusions of additional liquidity by the Federal Reserve into financial markets acted to further lower market mortgage interest rates. These developments have acted to sustain heightened demand for new mortgage loans despite the slowdown in overall economic activity. The mortgage origination market for 2019 was estimated at $2.3 trillion; current forecasts estimate the origination market to approximate $2.4 trillion for 2020 and $2.2 trillion for 2021. However, the uncertainties and strains on many organizations introduced by the Pandemic have caused some market participants to scale back or exit mortgage loan production activities which, combined with constraints on mortgage industry origination capacity that existed before the Pandemic, has allowed us to realize higher gain-on sale margins in our production segment.

The Pandemic had a substantial negative effect on the investments of PMT. As a result, PMT recognized a net loss of $595 million. Because the effects of the Pandemic began to be realized during March of 2020, its effects on the base management fees were we earn from PMT were not significant. However, we expect base management fees to be significantly reduced in future periods and we do not expect to recognize performance incentive fees for the foreseeable future because of the losses PMT incurred during the quarter ended March 31, 2020.

The current environment caused by the Pandemic in the United States is historically unprecedented and the source of much uncertainty surrounding future economic and market prospects and the ongoing effects of this developing situation on our future prospects are difficult to anticipate, for further discussion of the potential impacts of the Pandemic please also see "Risk Factors" in Part II, Item 1A.

For the quarter ended March 31, 2020, income before provision for income taxes increased $354.4 million compared to the same period in 2019. The increase was primarily due to:

- increases in production income (*Net gains on loans held for sale at fair value*, *Loan origination fees* and *Fulfillment fees from PennyMac Mortgage Investment Trust*); and

- increases in *Net loan servicing fees*, partially offset by;

- increases in total expenses.

The increases in production income reflect higher production volume and improved profit margins. The increase in *Net loan servicing fees* was due to a combination of increased loan servicing fees resulting from growth in our loan servicing portfolio and changes in the fair value of our MSRs, MSLs and ESS, net of hedging results, compared to the same period in 2019. The increases in total expenses were mainly due to increases in loan origination and compensation expenses, reflecting the continuing growth of our mortgage banking activities.

Net Gains on Loans Held for Sale at Fair Value

During the quarter ended March 31, 2020, we recognized *Net gains on loans held for sale at fair value* totaling $344.3 million, an increase of $259.5 million, compared to the same period in 2019. The increase was primarily due to the combined effects of decreasing interest rates on demand for loans and of reduced industry capacity on profit margins during 2020 as compared to 2019 as discussed above.

Our net gains on loans held for sale are summarized below:

	Quarter ended March 31,	
	2020	**2019**
	(in thousands)	
From non-affiliates:		
Cash loss:		
Loans	$ 111,757	$ (41,242)
Hedging activities	(122,666)	(8,927)
Total cash loss	(10,909)	(50,169)
Non-cash gain:		
Change in fair value of loans and derivative financial instruments outstanding at year end:		
Interest rate lock commitments	178,543	16,727
Loans	(72,080)	(164)
Hedging derivatives	(102,891)	(25,741)
	3,572	(9,178)
Mortgage servicing rights and mortgage servicing liabilities resulting from loan sales	275,739	114,957
Provision for losses relating to representations and warranties:		
Pursuant to loan sales	(3,712)	(1,067)
Reduction in liability due to change in estimate	1,676	4,210
Total non-cash gain	277,275	108,922
Total gains on sale from non-affiliates	266,366	58,753
From PennyMac Mortgage Investment Trust	77,916	26,023
	$ 344,282	$ 84,776
During the quarter:		
Interest rate lock commitments issued:		
Government-insured or guaranteed mortgage loans	$ 19,029,138	$ 8,831,495
Conventional mortgage loans	5,765,876	1,301,243
Jumbo mortgage loans	8,304	—
Home equity lines of credit	1,676	1,461
	$ 24,804,994	$ 10,134,199
At end of quarter:		
Loans held for sale at fair value	$ 5,541,987	$ 2,668,929
Commitments to fund and purchase loans	$ 9,377,614	$ 3,821,942

Our gain on sale of loans held for sale includes both cash and non-cash elements. We receive proceeds on sale that include our estimate of the fair value of MSRs and we incur liabilities for mortgage servicing liabilities (which represents the fair value of the costs we expect to incur in excess of the fees we receive for early buyout of delinquent loans ("EBO loans") we have resold) and for the fair value of our estimate of the losses we expect to incur relating to the representation and warranties we provide in our loan sale transactions.

Non-cash elements of gain on sale of loans

The MSRs, MSLs, and liability for representations and warranties we recognize represent our estimate of the fair value of future benefits and costs we will realize for years in the future. These estimates represented approximately 79% of our gain on sale of loans at fair value for the quarters ended March 31, 2020, as compared to 128% for the quarter ended March 31, 2019. How we measure and update our measurements of MSRs and MSLs is detailed in Note 6 – *Fair value – Valuation Techniques and Inputs* to the consolidated financial statements included in this Quarterly Report.

Our agreements with the purchasers and insurers include representations and warranties related to the 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 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 loans with the identified defects or indemnify the purchaser or insurer. In such cases, we bear any subsequent credit loss on the loans. Our credit loss may be reduced by any recourse we have to correspondent originators that sold such 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 used to estimate our losses on representations and warranties is a function of our estimate of future defaults, loan repurchase rates, the severity of loss in the event of default, if applicable, and the probability of reimbursement by the correspondent loan seller. We establish a liability at the time loans are sold and review our liability estimate on a periodic basis.

We recorded provisions for losses under representations and warranties relating to current loan sales as a component of *Net gains on loans held for sale at fair value* totaling \$3.7 million for the quarter ended March 31, 2020, compared to \$1.1 million for the quarter ended March 31, 2019. We also recorded a reduction in the liability of \$1.7 million during the quarter ended March 31, 2020, compared to \$4.2 million during the quarter ended March 31, 2019. The reductions in the liability resulted from previously sold loans meeting performance criteria established by the Agencies which significantly limits the likelihood of certain repurchase or indemnification claims.

Following is a summary of loan repurchase activity and the UPB of loans subject to representations and warranties:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
During the quarter:		
Indemnification activity:		
Loans indemnified by PFSI at beginning of quarter	$ 15,366	$ 8,899
New indemnifications	879	682
Less indemnified loans sold, repaid or refinanced	—	117
Loans indemnified by PFSI at end of quarter	$ 16,245	$ 9,464
Repurchase activity:		
Total loans repurchased by PFSI	$ 16,282	$ 4,064
Less:		
Loans repurchased by correspondent lenders	6,153	2,920
Loans repaid by borrowers or resold with defects resolved	1,446	907
Net loans repurchased with losses chargeable to liability for representations and warranties	$ 8,683	$ 237
Net losses charged to liability for representations and warranties	$ 280	$ 30
At end of quarter:		
Unpaid principal balance of loans subject to representations and warranties	$ 186,517,598	$ 133,698,782
Liability for representations and warranties	$ 23,202	$ 17,982

During the quarter ended March 31, 2020, we repurchased loans totaling $16.3 million and we recorded losses of $280,000 net of recoveries. If the outstanding balance of loans we purchase and sell subject to representations and warranties increases, the loans sold continue to season, economic conditions change or investor and insurer loss mitigation strategies are adjusted, the level of repurchase and loss activity may increase.

The level of the liability for losses under representations and warranties is difficult to estimate and requires considerable judgment. The level of loan repurchase losses is dependent on economic factors, purchaser or insurer loss mitigation strategies, and other external conditions that may change over the lives of the underlying loans. Our estimate of the liability for representations and warranties is developed by our credit administration staff and approved by our senior management credit committee which includes our senior executives and senior management in our loan production, loan servicing and credit risk management areas.

Our representations and warranties are generally not subject to stated limits of exposure. However, we believe that the current UPB of mortgage loans sold by us and subject to representation and warranty liability to date represents the maximum exposure to repurchases related to representations and warranties.

Loan origination fees

Loan origination fees increased $33.6 million during the quarter ended March 31, 2020, compared to the same period in 2019. The increase was primarily due to an increase in volume of loans we produced.

Fulfillment fees from PennyMac Mortgage Investment Trust

Fulfillment fees from PMT represent fees we collect for services we perform on behalf of PMT in connection with the acquisition, packaging and sale of loans. The fulfillment fees are calculated as a percentage of the UPB of the loans we fulfill for PMT.

Following is a summary of our fulfillment fees:

	Quarter ended March 31,	
	2020	**2019**
	(in thousands)	
Fulfillment fee revenue	$ 41,940	$ 27,574
Unpaid principal balance of loans fulfilled subject to fulfillment fees	$ 16,152,543	$ 8,135,552
Average fulfillment fee rate (in basis points)	26	34

Fulfillment fees increased $14.4 million during the quarter ended March 31, 2020, compared to the same period in 2019. The increase was primarily due to an increase in PMT's loan production volume, partially offset by an increase in discretionary reductions in the fulfillment fee rate during the quarter ended March 31, 2020, compared to the same period in 2019.

Net Loan Servicing Fees

Following is a summary of our net loan servicing fees:

	Quarter ended March 31,	
	2020	**2019**
	(in thousands)	
Net loan servicing fees:		
Loan servicing fees:		
From non-affiliates	$ 198,653	$ 166,790
From PennyMac Mortgage Investment Trust	14,521	10,570
Other	28,755	22,017
	241,929	199,377
Change in fair value of mortgage servicing rights, mortgage servicing liabilities and excess servicing spread financing net of hedging results	15,879	(118,806)
Net loan servicing fees	$ 257,808	$ 80,571
Average loan servicing portfolio	$ 377,294,965	$ 308,212,285

Change in fair value of mortgage servicing rights and excess servicing spread are summarized below:

	Quarter ended March 31, 2020	Quarter ended March 31, 2019
	(in thousands)	
Realization of cash flows	$ (114,919)	$ (92,475)
Other changes in fair value of mortgage servicing rights and mortgage servicing liabilities	(920,294)	(164,939)
Change in fair value of excess servicing spread	14,522	4,051
Hedging results	1,036,570	134,557
Total change in fair value of mortgage servicing rights, mortgage servicing liabilities and excess servicing spread financing net of hedging results	$ 15,879	$ (118,806)
Average balances:		
Mortgage servicing rights	$ 2,562,205	$ 2,843,028
Mortgage servicing liabilities	$ 29,384	$ 8,188
Excess servicing spread financing	$ 169,195	$ 211,661
At quarter end:		
Mortgage servicing rights	$ 2,193,697	$ 2,905,090
Mortgage servicing liabilities	$ 29,761	$ 7,844
Excess servicing spread financing	$ 157,109	$ 205,081

Following is a summary of our loan servicing portfolio:

	March 31, 2020	December 31, 2019
	(in thousands)	
Loans serviced		
Prime servicing:		
Owned:		
Mortgage servicing rights		
Originated	$ 173,171,678	$ 166,188,825
Acquired	58,312,483	59,598,279
	231,484,161	225,787,104
Mortgage servicing liabilities	2,635,734	2,758,454
Loans held for sale	5,276,688	4,724,006
	239,396,583	233,269,564
Subserviced for PMT	144,734,874	135,288,944
Total prime servicing	384,131,457	368,558,508
Special servicing for PMT	95,169	125,724
Total loans serviced	$ 384,226,626	$ 368,684,232

Net loan servicing fees increased $177.2 million during the quarter ended March 31, 2020, compared to the same period in 2019. The increase was due to an increase of $134.7 million in changes in fair value of MSRs and mortgage servicing liabilities ("MSLs"), net of hedging results and ESS fair value changes, and an increase of $42.6 million in loan servicing fees for the quarter ended March 31, 2020, resulting from an increase in our average servicing portfolio of 22% for the quarter ended March 31, 2020, compared to the same period in 2019.

As discussed above, the decreasing interest rate environment, along with expectations of higher costs to service loans in the coming months and increased returns demanded by market participants in response to the uncertainties created by the Pandemic, resulted in a 36% reduction in fair value (as measured by the December 31, 2019 fair value) of our investment in MSRs. This reduction in fair value was offset by our hedging results and change in fair value of ESS.

There can be no assurance that our hedging activities will continue to perform in a like manner in the future. As discussed above, we expect the effects of the Pandemic and the requirements of the CARES Act to reduce our servicing income and to increase our servicing expenses due to the increased number of delinquent loans, and significant levels of forbearance that we have and continue to grant, as well as the resolution of loans that we expect to ultimately default as the result of the Pandemic.

Net Interest Income

Net interest income decreased $9.7 million during the quarter ended March 31, 2020, compared to the same period in 2019. The decrease was primarily due to:

- increases in interest expense on repurchase agreements, reflecting the expiration of a master repurchase agreement in August 2019 that provided us with incentives to finance mortgage loans approved for satisfying certain consumer relief characteristics as provided in the agreement. We recorded $9.3 million of such incentives as reductions in *Interest expense* during the quarter ended March 31, 2019. An increase in average borrowing balances during the quarter ended March 31, 2020 to fund a higher volume of loan inventory compared to the same period in 2019 also contributed to the increase in the interest expense; and

- increases in interest shortfall on repayments of loans serviced for Agency securitizations, reflecting increased loan payoffs as a result of the lower interest rates in 2020 as compared to 2019, partially offset by;

- increases in interest income on loans held for sale due to larger average loan inventory balances during the quarter ended March 31, 2020 as compared to 2019.

Management fees and Carried Interest

Management fees and Carried Interest are summarized below:

	Quarter ended March 31,	
	2020	**2019**
	(in thousands)	
Management fees:		
PennyMac Mortgage Investment Trust:		
Base management	$ 9,055	$ 6,109
Performance incentive	—	1,139
	$ 9,055	$ 7,248
Net assets of PMT at end of quarter	$ 1,823,368	$ 1,727,589

Management fees increased $1.8 million during the quarter ended March 31, 2020, compared to the same period in 2019. The increase was due to an increase of $2.9 million in base management fees, reflecting the increase in PMT's average shareholders' equity upon which its base management fees are based, partially offset by a decrease of $1.1 million in incentive fees due to the loss PMT incurred during the quarter ended March 31, 2020 compared to the same period in 2019. As discussed above, because the effects of the Pandemic began to be realized during March of 2020, its effects on the base management fees we earn from PMT were not significant. However, in future periods we expect base management fees to be significantly reduced and we do not expect to recognize performance incentive fees for the foreseeable future because of the losses PMT incurred during the quarter ended March 31, 2020.

Expenses

Compensation

Our compensation expense is summarized below:

	Quarter ended March 31, 2020	2019
	(in thousands)	
Salaries and wages	$ 89,315	$ 67,058
Incentive compensation	45,981	19,175
Taxes and benefits	20,772	15,836
Stock and unit-based compensation	12,368	4,531
	$ 168,436	$ 106,600
Head count:		
Average	4,289	3,461
Quarter end	4,458	3,459

Compensation expense increased $61.8 million during the quarter ended March 31 2020, compared to the same period in 2019. The increase was primarily due to increases in incentive compensation resulting from performance-based incentives in our mortgage banking business and higher than expected attainment of profitability targets along with increases in salaries and wages due to increased average headcounts resulting from the growth in our mortgage banking activities.

Loan origination

Loan origination expense increased $31.5 million during the quarter ended March 31, 2020, compared to the same period in 2019. The increase was primarily due to increases in wholesale brokerage fees and loan file compilation expenses, resulting from increased consumer and broker direct lending activities, as well as an increase in discounts offered to generate sufficient incentives for borrowers to refinance during the quarter ended March 31, 2020 compared to the same period during 2019.

Servicing

Servicing expenses increased $11.9 million during the quarter ended March 31, 2020, compared to the same period in 2019. The increases were primarily due to increased purchases of EBO loans from Ginnie Mae guaranteed pools for the quarter ended March 31, 2020, compared to the same period in 2019. During the quarter ended March 31, 2020, we purchased $920.6 million in UPB of EBO loans, compared to $351.7 million during the same period in 2019.

The EBO program reduces the ongoing cost of servicing defaulted loans that have been sold into Ginnie Mae MBS when we purchase and either sell the defaulted loans or finance them with debt at interest rates below the Ginnie Mae MBS pass-through rates. While the EBO program reduces the ultimate cost of servicing such loan pools, it results in loss recognition when the loans are purchased. We recognize the loss because purchasing the mortgage loans from their Ginnie Mae pools causes us to write off accumulated non-reimbursable interest advances, net of interest receivable from the loans' insurer or guarantor at the debenture rate of interest we receive from the insurer or guarantor while the loan is in default.

Provision for Income Taxes

Our effective income tax rate was 26.2% during the quarter ended March 31, 2020, compared to 23.5% during the quarter ended March 31, 2019. The increase in effective tax rate in the quarter ended March 31, 2020 compared to the same period in 2019 was primarily due to the lower impact of the permanent and favorable tax adjustment for equity compensation in the quarter ended March 31, 2020 compared to the same period in 2019.

Balance Sheet Analysis

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

	March 31, 2020	December 31, 2019
	(in thousands)	
ASSETS		
Cash and short-term investments	$ 880,710	$ 262,902
Loans held for sale at fair value	5,541,987	4,912,953
Servicing advances, net	299,550	331,169
Investments in and advances to affiliates	156,786	157,343
Mortgage servicing rights	2,193,697	2,926,790
Loans eligible for repurchase	980,618	1,046,527
Other	837,785	566,333
Total assets	$ 10,891,133	$ 10,204,017
LIABILITIES AND STOCKHOLDERS' EQUITY		
Short-term debt	$ 4,973,295	$ 4,639,001
Long-term debt	1,469,768	1,493,466
Liability for loans eligible for repurchase	980,618	1,046,527
Income taxes payable	613,043	504,569
Other	490,280	458,947
Total liabilities	8,527,004	8,142,510
Stockholders' equity	2,364,129	2,061,507
Total liabilities and stockholders' equity	$ 10,891,133	$ 10,204,017

Total assets increased $687.1 million from $10.2 billion at December 31, 2019 to $10.9 billion at March 31, 2020. The increase was primarily due to increases of $629.0 million in loans held for sale at fair value resulting from an increase in loan production volume, $ 690.5 million in cash, and $273.5 million in derivative assets, partially offset by a decrease of $733.1 million in MSRs. We increased our holding of cash during the quarter ended March 31, 2020 due to cash collected from our hedging activities combined with an increase in our short-term borrowings. Historically, we used excess cash to pay down borrowings, but in response to the uncertainties surrounding the Pandemic, we determined to maintain greater cash liquidity.

Total liabilities increased $384.5 million from $8.1 billion at December 31, 2019 to $8.5 billion at March 31, 2020. The increase was primarily attributable to an increase in borrowings required to finance a larger inventory of loans held for sale.

Cash Flows

Our cash flows for the nine months ended March 31, 2020 and 2019 are summarized below:

	Quarter ended March 31, 2020	2019	Change
		(in thousands)	
Operating	$ (730,284)	$ (134,247)	$ (596,037)
Investing	1,116,225	(92,771)	1,208,996
Financing	304,519	216,007	88,512
Net increase (decrease) in cash and restricted cash	$ 690,460	$ (11,011)	$ 701,471

Our cash flows resulted in a net increase in cash and restricted cash of $690.5 million during the quarter ended March 31, 2020 as discussed below.

Operating activities

Net cash used in operating activities totaled $730.3 million during the quarter ended March 31, 2020 compared with $134.2 million during the same period in 2019. Our cash flows from operating activities are primarily influenced by changes in the levels of our inventory of mortgage loans as shown below:

	Quarter ended March 31,	
	2020	2019
	(in thousands)	
Cash flows from:		
Loans held for sale	$ (816,784)	$ (203,401)
Other operating sources	86,500	69,154
	$ (730,284)	$ (134,247)

Investing activities

Net cash provided by investing activities during the quarter ended March 31, 2020 totaled $1.1 billion primarily due to $942.0 million in net settlement of derivative financial instruments used to hedge our investment in MSRs, and a decrease in margin deposits of $133.0 million. Net cash used in investing activities during the quarter ended March 31, 2019 totaled $92.8 million primarily due to the purchase of MSRs totaling $211.5 million, partially offset by a $125.7 million net settlement of derivative financial instruments used to hedge our investment in MSRs.

Financing activities

Net cash provided by financing activities totaled $304.5 million during the quarter ended March 31, 2020, primarily to finance the growth in our inventory of mortgage loans held for sale. Net cash provided by financing activities totaled $216.0 million during the quarter ended March 31, 2019, primarily to finance the growth in our inventory of mortgage loans held for sale.

Liquidity and Capital Resources

Our liquidity reflects our ability to meet our current obligations (including our operating expenses and, when applicable, the retirement of, and margin calls relating to, our debt, and margin calls relating to hedges on our commitments to purchase or originate mortgage loans and on our MSR investments), fund new originations and purchases, and make investments as we identify them. We expect our primary sources of liquidity to be through cash flows from business activities, proceeds from bank borrowings, proceeds from and issuance of ESS and/or equity or debt offerings. We believe that our liquidity is sufficient to meet our current liquidity needs.

The impact of the Pandemic on our operations, liquidity and capital resources remain uncertain and difficult to predict, for further discussion of the potential impacts of the Pandemic please also see “Risk Factors” in Part II, Item 1A.

Our current borrowing strategy is to finance our assets where we believe such borrowing is prudent, appropriate and available. Our borrowing activities are in the form of sales of assets under agreements to repurchase, sales of mortgage loan participation purchase and sale certificates, ESS financing, notes payable (including a revolving credit agreement) and a capital lease. Most of our borrowings have short-term maturities and provide for terms of approximately one year. 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.

Our repurchase agreements represent the sales of assets together with agreements for us to buy back the respective assets at a later date. The table below presents the average, maximum daily and ending balances:

	Quarter ended March 31,	
	2020	2019
Average balance	$ 3,139,328	$ 1,437,957
Maximum daily balance	$ 4,446,795	$ 2,152,588
Balance at year end	$ 4,446,795	$ 2,152,588

The differences between the average and maximum daily balances on our repurchase agreements reflect the fluctuations throughout the month of our inventory as we fund and pool mortgage loans for sale in guaranteed mortgage securitizations.

Our secured financing agreements at PLS require us to comply with various financial covenants. The most significant financial covenants currently include the following:

- positive net income during one of the two most recent calendar quarters;
- a minimum in unrestricted cash and cash equivalents of $40 million;
- a minimum tangible net worth of $1.25 billion;
- a maximum ratio of total liabilities to tangible net worth of 10:1; and
- at least one other warehouse or repurchase facility that finances amounts and assets that are similar to those being financed under certain of our existing secured financing agreements.

With respect to servicing performed for PMT, PLS is also subject to certain covenants under PMT's debt agreements. Covenants in PMT's debt agreements are equally, or sometimes less, restrictive than the covenants described above.

In addition to the covenants noted above, PennyMac's revolving credit agreement and capital lease contain additional financial covenants including, but not limited to,

- a minimum of cash equal to the amount borrowed under the revolving credit agreement;
- a minimum of unrestricted cash and cash equivalents equal to $40 million;
- a minimum of tangible net worth of $1.25 billion;
- a minimum asset coverage ratio (the ratio of the total asset amount to the total commitment) of 2.5; and
- a maximum ratio of total indebtedness to tangible net worth ratio of 5:1.

Although these financial covenants limit the amount of indebtedness that we may incur and affect 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.

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. 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.

We are also subject to liquidity and net worth requirements established by the Federal Housing Finance Agency ("FHFA") for Agency seller/servicers and Ginnie Mae for single-family issuers. FHFA and Ginnie Mae have established minimum liquidity and net worth requirements for their approved non-depository single-family sellers/servicers in the case of Fannie Mae, Freddie Mac, and Ginnie Mae for its approved single-family issuers, as summarized below:

- FHFA liquidity requirement is equal to 0.035% (3.5 basis points) of total Agency servicing UPB plus an incremental 200 basis points of the amount by which total nonperforming Agency servicing UPB (including nonperforming Agency loans that are in payment forbearance) exceeds 6% of the applicable Agency servicing UPB; allowable assets to satisfy liquidity requirement include cash and cash equivalents (unrestricted), certain investment-grade securities that are available for sale or held for trading including Agency mortgage-backed securities, obligations of Fannie Mae or Freddie Mac, and U.S. Treasury obligations, and unused and available portions of committed servicing advance lines;

- FHFA net worth requirement is a minimum net worth of $2.5 million plus 0.25% (25 basis points) of UPB for total 1-4 unit residential mortgage loans serviced and a tangible net worth/total assets ratio greater than or equal to 6%;

- Ginnie Mae single-family issuer minimum liquidity requirement is equal to the greater of $1.0 million or 0.10% (10 basis points) of the issuer's outstanding Ginnie Mae single-family securities, which must be met with cash and cash equivalents; and

- Ginnie Mae net worth requirement is equal to $2.5 million plus 0.35% (35 basis points) of the issuer's outstanding Ginnie Mae single-family obligations.

On January 31, 2020, FHFA proposed changes to the eligibility requirements, which would increase the tangible net worth requirement to $2.5 million plus 35 basis points of the UPB of loans serviced for Ginnie Mae and 25 basis points of the UPB of all other 1-4 unit loans serviced, and increase the liquidity requirement to 4 basis points of the aggregate UPB serviced for Fannie Mae and Freddie Mac and 10 basis points of the UPB serviced for Ginnie Mae plus 300 basis points of total nonperforming Agency servicing UPB (including nonperforming Agency loans that are in payment forbearance) in excess of 4% of total Agency servicing UPB.

We believe that we are currently in compliance with the applicable Agency requirements.

We have purchased portfolios of MSRs and have financed them in part through the sale to PMT of the right to receive ESS. The outstanding amount of the ESS is based on the current fair value of such ESS and amounts received on the underlying mortgage loans.

In June 2017, our board of directors approved a stock repurchase program that allows us to repurchase up to $50 million of our common stock using open market stock purchases or privately negotiated transactions in accordance with applicable rules and regulations. The stock repurchase program does not have an expiration date and the authorization does not obligate us to acquire any particular amount of common stock. We intend to finance the stock repurchase program through cash on hand. From inception through March 31, 2020, we have repurchased $19.1 million of shares under our stock repurchase program.

We continue to explore a variety of means of financing our continued growth, including debt financing through bank warehouse lines of credit, bank loans, repurchase agreements, securitization transactions and corporate debt. However, there can be no assurance as to how much additional financing capacity such efforts will produce, what form the financing will take or whether such efforts will be successful.

Off-Balance Sheet Arrangements and Aggregate Contractual Obligations

Off-Balance Sheet Arrangements and Guarantees

As of March 31, 2020, we have not entered into any off-balance sheet arrangements.

Contractual Obligations

As of March 31, 2020, we had contractual obligations aggregating $16.2 billion, comprised of borrowings, commitments to purchase and originate mortgage loans and a payable to exchanged Private National Mortgage Acceptance Company, LLC unitholders under a tax receivable agreement. We also lease our office facilities.

Payment obligations under these agreements are summarized below:

	Payments due by year				
Contractual obligations	**Total**	**Less than 1 year**	**1-3 years**	**3-5 years**	**More than 5 years**
	(in thousands)				
Commitments to purchase and originate loans	$ 9,377,614	$ 9,377,614	$ —	$ —	$ —
Short-term debt	4,975,545	4,975,545	—	—	—
Long-term debt	1,475,254	7,677	660,468	650,000	157,109
Interest on long-term debt	233,173	66,321	126,480	21,156	19,216
Office leases	107,070	17,739	30,798	25,649	32,884
Payable to exchanged Private National Mortgage Acceptance Company, LLC unitholders under tax receivable agreement	46,158	12,192	—	—	33,966
Total	$ 16,214,814	$ 14,457,088	$ 817,746	$ 696,805	$ 243,175

Debt Obligations

As described further above in “Liquidity and Capital Resources,” we currently finance certain of our assets through borrowings with major financial institution counterparties in the form of sales of assets under agreements to repurchase, mortgage loan participation purchase and sale agreements, notes payable (including a revolving credit agreement), ESS and a capital lease. The borrower under each of these facilities is PLS or the Issuer Trust with the exception of the revolving credit agreement and the capital lease, in each case where the borrower is PennyMac. All PLS obligations as previously noted are guaranteed by PennyMac.

Under the terms of these agreements, PLS is required to comply with certain financial covenants, as described further above in “Liquidity and Capital Resources,” and various non-financial covenants customary for transactions of this nature. As of March 31, 2020, we believe we were in compliance in all material respects with these covenants.

The agreements also contain margin call provisions that, upon notice from the applicable lender, require us to transfer cash or, in some instances, additional assets in an amount sufficient to eliminate any margin deficit. 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.

In addition, the agreements contain events of default (subject to certain materiality thresholds and grace periods), including payment defaults, breaches of covenants and/or certain representations and warranties, cross-defaults, guarantor defaults, servicer termination events and defaults, material adverse changes, bankruptcy or insolvency proceedings and other events of default customary for these types of transactions. The remedies for such events of default are also customary for these types of transactions and include the acceleration of the principal amount outstanding under the agreements and the liquidation by our lenders of the mortgage loans or other collateral then subject to the agreements.

The borrowings have maturities as follows:

Lender	Outstanding indebtedness (1)	Total facility size (2)	Committed facility (2)	Maturity date (2)
	(dollar amounts in thousands)			
Assets sold under agreements to repurchase				
Credit Suisse First Boston Mortgage Capital LLC (3)	$ 1,483,516	$ 1,650,000	$ 300,000	April 23, 2021
Credit Suisse First Boston Mortgage Capital LLC (3)	$ 50,000	$ 600,000	$ 600,000	April 23, 2021
JPMorgan Chase Bank, N.A.	$ 870,965	$ 750,000	$ 50,000	October 9, 2020
Citibank, N.A.	$ 657,315	$ 700,000	$ 300,000	August 4, 2020
Bank of America, N.A.	$ 643,834	$ 800,000	$ 500,000	March 11, 2021
Morgan Stanley Bank, N.A.	$ 293,813	$ 800,000	$ 100,000	August 21, 2020
Royal Bank of Canada	$ 250,919	$ 350,000	$ 20,000	July 31, 2020
BNP Paribas	$ 196,433	$ 200,000	$ 100,000	July 31, 2020
Mortgage loan participation purchase and sale agreements				
Bank of America, N.A.	$ 528,750	$ 550,000	$ —	March 11, 2021
Notes payable				
GMSR 2018-GT1 Term Note	$ 650,000	$ 650,000		February 25, 2023
GMSR 2018-GT2 Term Note	$ 650,000	$ 650,000		August 25, 2023
Credit Suisse AG	$ —	$ 150,000	$ —	October 30, 2020
Credit Suisse AG (3)	$ —	$ —	$ —	October 21, 2020
Obligations under capital lease				
Banc of America Leasing and Capital LLC	$ 18,145	$ 25,000	$ —	June 13, 2022

(1) Outstanding indebtedness as of March 31, 2020.

(2) Total facility size, committed facility and maturity date include contractual changes through the date of this Report.

(3) The borrowing of $50 million with Credit Suisse First Boston Mortgage Capital LLC is in the form of a sale of a variable funding note under an agreement to repurchase up to a maximum of $600 million, less any amount utilized under the Credit Suisse AG note payable and an agreement to repurchase relating to the financing of Fannie Mae MSRs.

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 March 31, 2020:

Counterparty	Amount at risk	Weighted average maturity of advances under repurchase agreement	Facility maturity
	(in thousands)		
Credit Suisse First Boston Mortgage Capital LLC (1)	$ 983,098	April 26, 2020	April 26, 2020
Credit Suisse First Boston Mortgage Capital LLC (2)	$ 245,618	April 24, 2020	April 24, 2020
JP Morgan Chase Bank, N.A.	$ 97,688	June 1, 2020	October 9, 2020
Citibank, N.A.	$ 67,788	April 10, 2020	August 4, 2020
Bank of America, N.A.	$ 61,809	May 4, 2020	March 11, 2021
Morgan Stanley Bank, N.A.	$ 26,408	June 12, 2020	August 21, 2020
Royal Bank of Canada	$ 24,012	April 30, 2020	April 30, 2020
BNP Paribas	$ 15,575	June 16, 2020	July 31, 2020

(1) The borrowing facility with Credit Suisse First Boston Mortgage Capital LLC is in the form of a sale of a variable funding note under an agreement to repurchase.

(2) The borrowing facility with Credit Suisse First Boston Mortgage Capital LLC is in the form of an asset sale under agreement to repurchase.

All debt financing arrangements that matured between March 31, 2020 and the date of this Report have been renewed or extended and are described in Note 11—*Borrowings* to the accompanying consolidated financial statements.

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 credit risk, interest rate risk, prepayment risk, inflation risk and fair value risk.

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 Servicing Rights

The following tables summarize the estimated change in fair value of MSRs as of March 31, 2020, 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%**
			(dollar amounts in thousands)			
Fair value	$ 2,361,847	$ 2,274,488	$ 2,233,317	$ 2,155,546	$ 2,118,785	$ 2,049,152
Change in fair value:						
$	$ 168,150	$ 80,791	$ 39,620	$ (38,151)	$ (74,912)	$ (144,545)
%	7.7 %	3.7 %	1.8 %	(1.7)%	(3.4)%	(6.6)%

Prepayment speed shift in %	**-20%**	**-10%**	**-5%**	**+5%**	**+10%**	**+20%**
			(dollar amounts in thousands)			
Fair value	$ 2,473,758	$ 2,326,093	$ 2,258,122	$ 2,132,574	$ 2,074,531	$ 1,966,885
Change in fair value:						
$	$ 280,061	$ 132,396	$ 64,425	$ (61,123)	$ (119,166)	$ (226,812)
%	12.8 %	6.0 %	2.9 %	(2.8)%	(5.4)%	(10.3)%

Per-loan servicing cost shift in %	**-20%**	**-10%**	**-5%**	**+5%**	**+10%**	**+20%**
			(dollar amounts in thousands)			
Fair value	$ 2,293,679	$ 2,243,688	$ 2,218,692	$ 2,168,702	$ 2,143,706	$ 2,093,716
Change in fair value:						
$	$ 99,981	$ 49,991	$ 24,995	$ (24,995)	$ (49,991)	$ (99,981)
%	4.6 %	2.3 %	1.1 %	(1.1)%	(2.3)%	(4.6)%

Excess Servicing Spread Financing

The following tables summarize the estimated change in fair value of our ESS accounted for using the fair value method as of March 31, 2020, given several shifts in pricing spreads and prepayment speed (decrease in the liabilities' values increases net income):

Pricing spread shift in %	**-20%**	**-10%**	**-5%**	**+5%**	**+10%**	**+20%**
			(dollar amounts in thousands)			
Fair value	$ 164,444	$ 160,695	$ 158,882	$ 155,375	$ 153,677	$ 150,390
Change in fair value:						
$	$ 7,335	$ 3,586	$ 1,773	$ (1,735)	$ (3,432)	$ (6,719)
%	4.7 %	2.3 %	1.1 %	(1.1)%	(2.2)%	(4.3)%

Prepayment speed shift in %	**-20%**	**-10%**	**-5%**	**+5%**	**+10%**	**+20%**
			(dollar amounts in thousands)			
Fair value	$ 173,255	$ 164,819	$ 160,879	$ 153,500	$ 150,043	$ 143,549
Change in fair value:						
$	$ 16,146	$ 7,709	$ 3,769	$ (3,609)	$ (7,066)	$ (13,561)
%	10.3 %	4.9 %	2.4 %	(2.3)%	(4.5)%	(8.6)%

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, as amended (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 Rule 13a-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.

Changes in Internal Control over Financial Reporting

In the ordinary course of business, we review our system of internal control over financial reporting and make changes that we believe will improve the efficiency and effectiveness of controls, ensure sufficient precision of controls, and appropriately mitigate the risk of material misstatement in the financial statements.

Management has evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, whether any changes in our internal control over financial reporting that occurred during our last fiscal quarter have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. There have been no changes in our internal control over financial reporting since December 31, 2019 that have materially affected, or are reasonably likely to material affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. *Legal Proceedings*

From time to time, the Company may be involved in various legal and regulatory proceedings, lawsuits and other claims arising in the ordinary course of its business. The amount, if any, of ultimate liability with respect to such matters cannot be determined, but despite the inherent uncertainties of litigation, management believes that the ultimate disposition of any such proceedings and exposure will not have, individually or taken together, a material adverse effect on the financial condition, results of operations, or cash flows of the Company. Set forth below are material updates to legal proceedings of the Company.

On December 20, 2018, a purported shareholder of the Company filed a complaint in a putative class and derivative action in the Court of Chancery of the State of Delaware, captioned *Robert Garfield v. BlackRock Mortgage Ventures, LLC et al*., Case No. 2018-0917-KSJM (the “Garfield Action”). The Garfield Action alleges, among other things, that certain current directors and officers of the Company breached their fiduciary duties to the Company and its shareholders by, among other things, agreeing to and entering into the Reorganization without ensuring that the Reorganization was entirely fair to the Company or public shareholders. The Reorganization was approved by 99.8% of voting shareholders on October 24, 2018. On December 19, 2019, the Delaware Court denied a motion to dismiss filed by the Company and certain of its directors and officers. While no assurance can be provided as to the ultimate outcome of this claim or the account of any losses to the Company, the Company believes the Garfield Action is without merit and plans to vigorously defend the matter, which remains pending.

On November 5, 2019, Black Knight Servicing Technologies, LLC, a wholly-owned indirect subsidiary of Black Knight, Inc. (“BKI”), filed a Complaint and Demand for Jury Trial in the Circuit Court for the Fourth Judicial Circuit in and for Duval County, Florida (the “Florida State Court”), captioned Black Knight Servicing Technologies, LLC v. PennyMac Loan Services, LLC, Case No. 2019-CA-007908 (the “BKI Complaint”). Allegations contained within the BKI Complaint include breach of contract and misappropriation of MSP® System trade secrets in order to develop an imitation mortgage-processing system intended to replace the MSP® System. The BKI Complaint seeks damages for breach of contract and misappropriation of trade secrets, injunctive relief under the Florida Uniform Trade Secrets Act and declaratory judgment of ownership of all intellectual property and software developed by or on behalf of PLS as a result of its wrongful use of and access to the MSP® System and related trade secret and confidential information. On April 6, 2020, the Florida State Court entered an order granting a motion to compel arbitration filed by the Company. On April 21, 2020, BKI filed a motion for reconsideration of the order compelling arbitration. On May 6, 2020, the Florida State Court entered an order denying BKI's motion for reconsideration. Also on May 6, 2020, BKI filed a notice of appeal with respect to both orders. While no assurance can be provided as to the ultimate outcome of the BKI Complaint or the account of any losses to the Company, the Company believes the BKI Complaint is without merit and plans to vigorously defend the matter, which remains pending.

Item 1A. *Risk Factors*

There have been 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, 2019, filed with the SEC on February 28, 2020, except for the following:

Our business, financial condition and results of operations have been, and will likely continue to be, adversely affected by the emergence of the COVID-19 pandemic.

The COVID-19 pandemic has created unprecedented economic, financial and public health disruptions that have adversely affected, and are likely to continue to adversely affect, our business, financial condition and results of operations. The extent to which COVID-19 continues to negatively affect our business, financial condition and results of operations will depend on future developments, which are highly uncertain and cannot be predicted, including the scope and duration of the pandemic and actions taken by governmental authorities and other third parties in response to COVID-19.

The federal government enacted the CARES Act, which allows borrowers with federally-backed loans to request temporary payment forbearance in response to the increased borrower hardships resulting from COVID-19. As a result of the CARES Act forbearance requirements, we expect to record additional increases in delinquencies in our servicing portfolio that may require us to finance substantial amounts of advances of principal and interest payments to the holders of the securities holding those loans, as well as advances of property taxes, insurance premiums and other expenses to protect investors' interests in the properties securing the loans.. We also expect the effects of the CARES Act forbearance requirements to reduce our servicing income and increase our servicing expenses due to the increased number of delinquent loans, significant levels of forbearance that we have granted and continue to grant, as well as the resolution of loans that we expect to ultimately default as the result of COVID-19.

Financial markets have experienced substantial volatility and reduced liquidity, resulting in unprecedented federal government intervention to lower the federal funds rate to near zero and support market liquidity by purchasing assets in many financial markets, including the mortgage-backed securities market. The CARES Act forbearance requirements and the decline in financial markets have negatively impacted the fair value of our servicing assets. In addition, the CARES Act forbearance requirements and the decline in financial markets have materially and negatively impacted the book value of PMT and, as a result, our net assets under management. Consequently, we expect PMT base management fees to be significantly reduced, and we do not expect to earn performance incentive fees from PMT for the foreseeable future. Further market volatility may result in additional declines in the value of our servicing assets, lower base management fees and make it increasingly difficult to optimize our hedging activities. Also, our liquidity and/or regulatory capital could be adversely impacted by volatility and disruptions in the capital and credit markets. In addition, if we fail to meet or satisfy any of the covenants in our repurchase agreements or other financing arrangements as a result of the impact of the COVID-19 pandemic, we would be in default under these agreements, which could result in a cross-default or cross-acceleration under other financing arrangements, and our lenders could elect to declare outstanding amounts due and payable (or such amounts may automatically become due and payable), terminate their commitments, require the posting of additional collateral and enforce their respective interests against existing collateral.

We may also have difficulty accessing debt and equity capital on attractive terms, or at all, as a result of the impact of the COVID-19 pandemic, which may adversely affect our access to capital necessary to fund our operations or address maturing liabilities on a timely basis. This includes renewals of our existing credit facilities with our lenders who are also adversely impacted by the volatility and dislocations in the financial markets and may not be willing to continue to extend us credit on the same terms, or on favorable terms, or at all.

In addition, our business could be disrupted if we are unable to operate due to changing governmental restrictions such as travel bans and quarantines placed on our employees or operations, including, successfully operating our business from remote locations, ensuring the protection of our employees' health and maintaining our information technology infrastructure.

Governmental authorities have taken additional measures to stabilize the financial markets and support the economy. The success of these measures are unknown and they may not be sufficient to address the current market dislocations or avert severe and prolonged reductions in economic activity. We may also face increased risks of disputes with our business partners, litigation and governmental and regulatory scrutiny as a result of the effects of COVID-19. The scope and duration of COVID-19 and the efficacy of the extraordinary measures put in place to address it are currently unknown. Even after COVID-19 subsides, the economy may not fully recover for some time and we may be materially and adversely affected by a prolonged recession or economic downturn.

To the extent the COVID-19 pandemic adversely affects our business, financial condition and results of operations, it may also have the effect of heightening many of the other risks described in our Annual Report on Form 10-K for the year ended December 31, 2019 under the heading "Risk Factors."

If forbearances resulting from the COVID-19 pandemic and the CARES Act are determined to be delinquent by the FHFA and the Agencies, it will significantly impact our liquidity and financial condition.

As described in *Liquidity and Capital Resources*, the FHFA establishes certain liquidity requirements for Agency and Ginnie Mae loan servicers that are generally tied to the UPB of loans serviced by such loan servicer for the Agencies. To the extent that the percentage of seriously delinquent loans ("SDQ"), i.e., loans that are 90 days or more delinquent, exceeds defined thresholds, the liquidity requirements for loan servicers increase materially. If the FHFA and the Agencies determine that forbearances resulting from COVID-19 are delinquent for the purposes of the SDQ thresholds and the associated liquidity requirements, we expect that the significant number of such forbearances will result in delinquencies that exceed the SDQ thresholds. Exceeding such SDQ thresholds would result in substantially higher liquidity requirements, as well as a reduction in the advance rates applicable to our MSR financing structure that are tied to such SDQ thresholds, all of which may materially impact our results of operations and financial condition, and the market value of our common shares.

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

There were no sales of unregistered equity securities during the quarter ended March 31, 2020.

The following table summarizes information about our stock repurchases during the quarter ended March 31, 2020:

	Total number of shares purchased		Average price paid per share	Total number of shares purchased as part of publicly announced plans or program (1)		Approximate dollar value of shares that may yet be purchased under the plans or program (1)
January 1, 2020 – January 31, 2020	—	$	—	—	$	35,051,668
February 1, 2020 – February 29, 2020	—	$	—	—	$	35,051,668
March 1, 2020 – March 31, 2020	238,133	$	17.31	238,133	$	30,930,481
Total	283,133	$	17.31	283,133	$	30,930,481

(1) As disclosed in our current report on Form 8-K filed on June 21, 2017, our Board of Directors approved a stock repurchase program authorizing us to repurchase up to $50.0 million of our outstanding Class A common stock. The stock repurchase program does not require us to purchase a specific number of shares, and the timing and amount of any shares repurchased are based on market conditions and other factors, including price, regulatory requirements and capital availability. Stock repurchases may be effected through negotiated transactions or open market purchases, including pursuant to a trading plan implemented pursuant to Rule 10b5-1 of the Securities Exchange Act of 1934, as amended. The stock repurchase program does not have an expiration date but may be suspended, modified or discontinued at any time without prior notice.

Item 3. *Defaults Upon Senior Securities*

None.

Item 4. *Mine Safety Disclosures*

Not applicable.

Item 5. *Other Information*

None

Item 6. *Exhibits*

Exhibit No.	Exhibit Description	Incorporated by Reference from the Below-Listed Form (Each Filed under SEC File Number 15-68669 or 001-38727) Form	Filing Date
2.1	Contribution Agreement and Plan of Merger, dated as of August 2, 2018, by and among PennyMac Financial Services, Inc., New PennyMac Financial Services, Inc., New PennyMac Merger Sub, LLC, Private National Mortgage Acceptance Company, LLC, and the Contributors.	8-K12B	November 1, 2018
3.1	Amended and Restated Certificate of Incorporation of New PennyMac Financial Services, Inc.	8-K12B	November 1, 2018
3.1.1	Certificate of Amendment to Amended and Restated Certificate of Incorporation of New PennyMac Financial Services, Inc.	8-K12B	November 1, 2018
3.2	Amended and Restated Bylaws of New PennyMac Financial Services, Inc.	8-K12B	November 1, 2018
3.2.1	Amendment to Amended and Restated Bylaws of PennyMac Financial Services, Inc. (formerly known as New PennyMac Financial Services, Inc.).	10-Q	November 4, 2019
10.1#	Tax Receivable Agreement, dated as of May 8, 2013, between PennyMac Financial Services, Inc., Private National Mortgage Acceptance Company, LLC and each of the Members.	8-K	May 14, 2013
10.2#	Master Repurchase Agreement, dated as of December 19, 2016, by and among PNMAC GMSR ISSUER TRUST, PennyMac Loan Services, LLC, and Private National Mortgage Acceptance Company, LLC.	8-K	December 21, 2016
10.3#	Master Repurchase Agreement, dated as of December 19, 2016, by and among, Credit Suisse First Boston Mortgage Capital LLC, Credit Suisse AG, Cayman Islands Branch, and PennyMac Loan Services, LLC.	8-K	December 21, 2016
10.4#	Guaranty, dated as of December 19, 2016, by Private National Mortgage Acceptance Company, LLC in favor of Credit Suisse First Boston Mortgage Capital LLC.	10-Q	November 7, 2017
10.5	Amended and Restated Stockholder Agreement, dated as of November 1, 2018, among PennyMac Financial Services, Inc., New PennyMac Financial Services, Inc. and HC Partners, LLC.	8-K12B	November 1, 2018
10.6	Second Amended and Restated Stockholder Agreement, dated February 12, 2020, by and among PennyMac Financial Services, Inc. (formerly known as New PennyMac Financial Services, Inc.) and BlackRock Mortgage Ventures, LLC.	8-K	February 13, 2020
10.7	Amendment No. 8 to the Third Amended and Restated Master Repurchase Agreement, dated as of March 6, 2020, among Credit	8-K	March 11, 2020

	Suisse First Boston Mortgage Capital LLC, Credit Suisse AG, Cayman Islands Branch, Alpine Securitization LTD, PennyMac Loan Services, LLC and Private National Mortgage Acceptance Company, LLC.		
10.8	Amendment No. 9 to the Third Amended and Restated Master Repurchase Agreement, dated as of April 1, 2020, among Credit Suisse First Boston Mortgage Capital LLC, Credit Suisse AG, Cayman Islands Branch, Alpine Securitization LTD, PennyMac Loan Services, LLC and Private National Mortgage Acceptance Company, LLC.	8-K	April 7, 2020
10.9	Amendment No. 10 to Third Amended and Restated Master Repurchase Agreement, dated as of April 24, 2020, among Credit Suisse First Boston Mortgage Capital LLC, Credit Suisse AG, Cayman Islands Branch, Alpine Securitization LTD, PennyMac Loan Services, LLC and Private National Mortgage Acceptance Company, LLC.	*	
10.10	Master Repurchase Agreement, dated as of April 1, 2020, by and among Credit Suisse First Boston Mortgage Capital LLC, Credit Suisse AG, Cayman Islands Branch and PennyMac Loan Services, LLC.	8-K	April 7, 2020
10.11	Amended and Restated Guaranty, dated April 1, 2020, made by Private National Mortgage Acceptance Company, LLC in favor of Credit Suisse First Boston Mortgage Capital LLC.	8-K	April 7, 2020
10.12	Series 2020-SPIADVF1 Indenture Supplement, dated as of April 1, 2020, to Third Amended and Restated Base Indenture, dated as of April 1, 2020, by and among PNMAC GMSR ISSUER TRUST, Citibank, N.A., PennyMac Loan Services, LLC and Credit Suisse First Boston Mortgage Capital LLC.	8-K	April 7, 2020
10.13	Third Amended and Restated Base Indenture, dated as of April 1, 2020, by and among PNMAC GMSR ISSUER TRUST, Citibank, N.A., PennyMac Loan Services, LLC, Credit Suisse First Boston Mortgage Capital LLC and Pentalpha Surveillance LLC.	8-K	April 7, 2020
10.14	Amended and Restated Master Repurchase Agreement, dated as of April 1, 2020, by and among PNMAC GMSR ISSUER TRUST, PennyMac Loan Services, LLC and Private National Mortgage Acceptance Company, LLC.	8-K	April 7, 2020
10.15	Amendment No. 2 to Master Repurchase Agreement, dated as of April 1, 2020, by and among Credit Suisse First Boston Mortgage Capital LLC, Credit Suisse AG, Cayman Islands Branch and PennyMac Loan Services, LLC.	*	
10.16	Joint Amendment No. 2 to Loan and Security Agreement and Amendment No. 1 to Pricing Side Letter, dated as of April 1, 2020, by and among Credit Suisse First Boston Mortgage Capital LLC, Credit Suisse AG, Cayman Islands Branch, Private National Mortgage Acceptance Company, LLC and PennyMac Loan Services, LLC.	*	

10.17^	Joint Amendment No. 1 to the Series 2020-SPIADVF1 Repurchase Agreement and Amendment No. 1 to the Pricing Side Letter, dated as of April 24, 2020, among Credit Suisse First Boston Mortgage Capital LLC, Credit Suisse Ag, Cayman Islands Branch and PennyMac Loan Services, LLC.	*
10.18^	Joint Amendment No. 3 to the Series 2016-MSRVF1 Repurchase Agreement and Amendment No. 2 to the Pricing Side Letter, dated as of April 24, 2020, among Credit Suisse First Boston Mortgage Capital LLC, Credit Suisse AG, Cayman Islands Branch and PennyMac Loan Services, LLC.	*
10.19^	Joint Amendment No. 1 to the MSR PC Repo Agreement and Amendment No. 2 to the Pricing Side Letter, dated as of April 24, 2020, among Credit Suisse First Boston Mortgage Capital LLC, Credit Suisse AG, Cayman Islands Branch, PennyMac Loan Services, LLC and Private National Mortgage Acceptance Company, LLC.	*
10.20	Consent Letter regarding Series 2020-SPIADVF1 Indenture Supplement, dated as of April 24, 2020, by and among PennyMacLoan Services, LLC and Credit Suisse First Boston Mortgage Capital LLC.	*
10.21^	Amendment No. 2 to the Amended and Restated Series 2016-MSRVF1 Indenture Supplement, dated as of April 24, 2020, by and among PNMAC GMSR ISSUER TRUST, Citibank, N.A., PennyMac Loan Services, LLC, and Credit Suisse First Boston Mortgage Capital LLC.	*
10.22^	Joint Amendment No. 3 to Loan and Security Agreement and Amendment No. 2 to Pricing Side Letter, dated as of April 24, 2020, by and among Credit Suisse First Boston Mortgage Capital LLC, Credit Suisse AG, Cayman Islands Branch, Private National Mortgage Acceptance Company, LLC and PennyMac Loan Services, LLC.	*
10.23†	PennyMac Financial Services, Inc. 2013 Equity Incentive Plan Form of Stock Option Award Agreement (2020).	*
10.24†	PennyMac Financial Services, Inc. 2013 Equity Incentive Plan Form of Restricted Stock Unit Subject to Continued Service Award Agreement (Net Share Withholding) (2020).	*
10.25†	PennyMac Financial Services, Inc. 2013 Equity Incentive Plan Form of Restricted Stock Unit Subject to Continued Service Award Agreement for Non Employee Directors (2020).	*
10.26†	PennyMac Financial Services, Inc. 2013 Equity Incentive Plan Form of Restricted Stock Unit Subject to Performance Components Award Agreement (Sale to Cover) (2020).	*
10.27†	PennyMac Financial Services, Inc. 2013 Equity Incentive Plan Form of Restricted Stock Unit Subject to Continued Service Award Agreement (Sale to Cover) (2020).	*

10.28†	PennyMac Financial Services, Inc. 2013 Equity Incentive Plan Form of Restricted Stock Unit Subject to Performance Components Award Agreement (Net Share Withholding) (2020).	*
31.1	Certification of David A. Spector pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	*
31.2	Certification of Andrew S. Chang pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	*
32.1	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.	**
32.2	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.	**
101	Interactive data files pursuant to Rule 405 of Regulation S-T: (i) the Consolidated Balance Sheets as of March 31, 2020 and December 31, 2019 (ii) the Consolidated Statements of Income for the quarters ended March 31, 2020 and March 31, 2019, (iii) the Consolidated Statements of Changes in Stockholders' Equity for the quarters ended March 31, 2020 and March 31, 2019, (iv) the Consolidated Statements of Cash Flows for the quarters ended March 31, 2020 and March 31, 2019 and (v) the Notes to the Consolidated Financial Statements.	

\# Refiled herewith to provide an updated hyperlink to the appropriate prior filing.
^ Portions of the exhibit have been redacted.
* 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.
† Indicates management contract or compensatory plan or arrangement.

SIGNATURES

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

PENNYMAC FINANCIAL SERVICES, INC.
(Registrant)

Dated: May 7, 2020	By:	/s/ DAVID A. SPECTOR David A. Spector *President and Chief Executive Officer*
Dated: May 7, 2020	By:	/s/ ANDREW S. CHANG Andrew S. Chang *Senior Managing Director and* *Chief Financial Officer*