FEDERAL AGRICULTURAL MORTGAGE CORP
Form 10-Q
May 10, 2017

As filed with the Securities and Exchange Commission on May 10, 2017

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

FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended March 31, 2017
Commission File Number 001-14951

FEDERAL AGRICULTURAL MORTGAGE CORPORATION
(Exact name of registrant as specified in its charter)

Federally chartered instrumentality of the United States	52-1578738
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification number)
1999 K Street, N.W., 4th Floor, Washington, D.C.	20006
(Address of principal executive offices)	(Zip code)

(202) 872-7700
(Registrant's telephone number, including area code)

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 x No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files).

Yes x No o

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. (Check one):

Large accelerated filer	o	Accelerated filer	x
Non-accelerated filer	o (Do not check if smaller reporting company)		
		Smaller reporting company	o
		Emerging growth company	o

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 7(a)(2)(B) of the Securities Act. o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes o No x
As of May 1, 2017, the registrant had outstanding 1,030,780 shares of Class A Voting Common Stock, 500,301 shares of Class B Voting Common Stock, and 9,066,370 shares of Class C Non-Voting Common Stock.

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PART I

Item 1. Financial Statements

FEDERAL AGRICULTURAL MORTGAGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(unaudited)

	As of March 31, 2017	December 31, 2016
	(in thousands)	
Assets:		
Cash and cash equivalents	$313,641	$265,229
Investment securities:		
Available-for-sale, at fair value	2,479,244	2,515,851
Farmer Mac Guaranteed Securities:		
Available-for-sale, at fair value	5,243,046	4,853,685
Held-to-maturity, at amortized cost	1,074,686	1,149,231
Total Farmer Mac Guaranteed Securities	6,317,732	6,002,916
USDA Securities:		
Trading, at fair value	18,602	20,388
Held-to-maturity, at amortized cost	2,025,822	2,009,225
Total USDA Securities	2,044,424	2,029,613
Loans:		
Loans held for investment, at amortized cost	3,432,091	3,379,884
Loans held for investment in consolidated trusts, at amortized cost	1,208,950	1,132,966
Allowance for loan losses	(5,811)	(5,415)
Total loans, net of allowance	4,635,230	4,507,435
Real estate owned, at lower of cost or fair value	5,456	1,528
Financial derivatives, at fair value	2,674	23,182
Interest receivable (includes $8,163 and $12,584, respectively, related to consolidated trusts)	85,522	122,782
Guarantee and commitment fees receivable	38,748	38,871
Deferred tax asset, net	5,085	12,291
Prepaid expenses and other assets	4,001	86,322
Total Assets	$15,931,757	$15,606,020
Liabilities and Equity:		
Liabilities:		
Notes payable:		
Due within one year	$7,616,431	$8,440,123
Due after one year	6,300,750	5,222,977
Total notes payable	13,917,181	13,663,100
Debt securities of consolidated trusts held by third parties	1,212,792	1,142,704
Financial derivatives, at fair value	32,054	58,152
Accrued interest payable (includes $6,771 and $10,881, respectively, related to consolidated trusts)	46,845	49,700
Guarantee and commitment obligation	36,802	37,282
Accounts payable and accrued expenses	18,234	9,415
Reserve for losses	1,827	2,020
Total Liabilities	15,265,735	14,962,373
Commitments and Contingencies (Note 6)		

Equity:		
Preferred stock:		
Series A, par value $25 per share, 2,400,000 shares authorized, issued and outstanding	58,333	58,333
Series B, par value $25 per share, 3,000,000 shares authorized, issued and outstanding	73,044	73,044
Series C, par value $25 per share, 3,000,000 shares authorized, issued and outstanding	73,382	73,382
Common stock:		
Class A Voting, $1 par value, no maximum authorization, 1,030,780 shares outstanding	1,031	1,031
Class B Voting, $1 par value, no maximum authorization, 500,301 shares outstanding	500	500
Class C Non-Voting, $1 par value, no maximum authorization, 9,065,194 shares and 9,007,481 shares outstanding, respectively	9,065	9,008
Additional paid-in capital	118,386	118,655
Accumulated other comprehensive income, net of tax	41,544	33,758
Retained earnings	290,530	275,714
Total Stockholders' Equity	665,815	643,425
Non-controlling interest	207	222
Total Equity	666,022	643,647
Total Liabilities and Equity	$15,931,757	$15,606,020

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

FEDERAL AGRICULTURAL MORTGAGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

	For the Three Months Ended	
	March 31, 2017	March 31, 2016
	(in thousands, except per share amounts)	
Interest income:		
Investments and cash equivalents	$7,243	$6,681
Farmer Mac Guaranteed Securities and USDA Securities	42,522	35,510
Loans	36,852	31,700
Total interest income	86,617	73,891
Total interest expense	49,546	40,251
Net interest income	37,071	33,640
Provision for loan losses	(637)	(49)
Net interest income after provision for loan losses	36,434	33,591
Non-interest income/(loss):		
Guarantee and commitment fees	3,844	3,626
Gains/(losses) on financial derivatives and hedging activities	2,486	(6,782)
(Losses)/gains on trading securities	(82)	358
Losses on sale of available-for-sale investment securities	—	(9)
Losses on sale of real estate owned	(5)	—
Other income	553	101
Non-interest income/(loss)	6,796	(2,706)
Non-interest expense:		
Compensation and employee benefits	6,317	5,774
General and administrative	3,800	3,526
Regulatory fees	625	613
Real estate owned operating costs, net	—	39
(Release of)/provision for reserve for losses	(193)	14
Non-interest expense	10,549	9,966
Income before income taxes	32,681	20,919
Income tax expense	10,786	7,335
Net income	21,895	13,584
Less: Net loss attributable to non-controlling interest	15	28
Net income attributable to Farmer Mac	21,910	13,612
Preferred stock dividends	(3,295)	(3,295)
Net income attributable to common stockholders	$18,615	$10,317
Earnings per common share and dividends:		
Basic earnings per common share	$1.76	$0.99
Diluted earnings per common share	$1.73	$0.94
Common stock dividends per common share	$0.36	$0.26

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

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FEDERAL AGRICULTURAL MORTGAGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(unaudited)

	For the Three Months Ended	
	March 31, 2017	March 31, 2016
	(in thousands)	
Net income	$21,895	$13,584
Other comprehensive income/(loss) before taxes:		
Net unrealized gains/(losses) on available-for-sale securities	14,838	(6,377)
Net changes in held-to-maturity securities	(3,487)	(1,011)
Net unrealized gains/(losses) on cash flow hedges	629	(4,763)
Other comprehensive income/(loss) before tax	11,980	(12,151)
Income tax (expense)/benefit related to other comprehensive income	(4,194)	4,253
Other comprehensive income/(loss), net of tax	7,786	(7,898)
Comprehensive income	29,681	5,686
Less: comprehensive loss attributable to non-controlling interest	15	28
Comprehensive income attributable to Farmer Mac	$29,696	$5,714

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

FEDERAL AGRICULTURAL MORTGAGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY
(unaudited)

	Preferred Stock		Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Retained	Non-controlling	Total
	Shares	Amount	Shares	Amount	Capital	Income/(Loss)	Earnings	Interest	Equity
	(in thousands)								
Balance as of December 31, 2015	8,400	$204,759	10,687	$10,687	$117,862	$(11,019)	$231,228	$203	$553,720
Net income/(loss):									
Attributable to Farmer Mac	—	—	—	—	—	—	13,612	—	13,612
Attributable to non-controlling interest	—	—	—	—	—	—	—	(28)	(28)
Other comprehensive loss, net of tax	—	—	—	—	—	(7,898)	—	—	(7,898)
Cash dividends:									
Preferred stock	—	—	—	—	—	—	(3,295)	—	(3,295)
Common stock	—	—	—	—	—	—	(2,702)	—	(2,702)
Issuance of Class C Common Stock	—	—	71	71	98	—	—	—	169
Repurchase of Class C Common Stock	—	—	(307)	(307)	—	—	(8,781)	—	(9,088)
Stock-based compensation cost	—	—	—	—	1,027	—	—	—	1,027
Other stock-based award activity	—	—	—	—	(1,553)	—	—	—	(1,553)
Investment in subsidiary - non-controlling interest	—	—	—	—	—	—	—	52	52
Balance as of March 31, 2016	8,400	$204,759	10,451	$10,451	$117,434	$(18,917)	$230,062	$227	$544,016
Balance as of December 31, 2016	8,400	$204,759	10,539	$10,539	$118,655	$33,758	$275,714	$222	$643,647
Net income/(loss):									
Attributable to Farmer Mac	—	—	—	—	—	—	21,910		21,910
Attributable to non-controlling interest	—	—	—	—	—	—	—	(15)	(15)
Other comprehensive income, net of tax	—	—	—	—	—	7,786	—	—	7,786
Cash dividends:									
Preferred stock	—	—	—	—	—	—	(3,295)	—	(3,295)
Common stock	—	—	—	—	—	—	(3,799)	—	(3,799)

Issuance of Class C Common Stock	—	—	57	57	144	—	—	—	201
Stock-based compensation cost	—	—	—	—	981	—	—	—	981
Other stock-based award activity	—	—	—	—	(1,394)	—	—	—	(1,394)
Investment in subsidiary - non-controlling interest	—	—	—	—	—	—	—	—	—
Balance as of March 31, 2017	8,400	$204,759	10,596	$10,596	$118,386	$ 41,544	$290,530	$ 207	$666,022

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

FEDERAL AGRICULTURAL MORTGAGE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	For the Three Months Ended	
	March 31, 2017	March 31, 2016
	(in thousands)	
Cash flows from operating activities:		
Net income	$21,895	$13,584
Adjustments to reconcile net income to net cash provided by operating activities:		
Net amortization of deferred gains, premiums, and discounts on loans, investments, Farmer Mac Guaranteed Securities, and USDA Securities	181	501
Amortization of debt premiums, discounts and issuance costs	5,656	7,643
Net change in fair value of trading securities, hedged assets, and financial derivatives	525	2,631
Losses on sale of available-for-sale investment securities	—	9
Losses on sale of real estate owned	5	—
Total provision for losses	444	63
Excess tax benefits related to stock-based awards	679	—
Deferred income taxes	1,419	(1,483)
Stock-based compensation expense	981	1,027
Proceeds from repayment of trading investment securities	—	205
Proceeds from repayment of loans purchased as held for sale	25,928	28,794
Net change in:		
Interest receivable	37,292	37,633
Guarantee and commitment fees receivable	(357)	800
Other assets	2,236	(31,021)
Accrued interest payable	(2,855)	(9,469)
Other liabilities	8,605	2,495
Net cash provided by operating activities	102,634	53,412
Cash flows from investing activities:		
Purchases of available-for-sale investment securities	(66,561)	(341,099)
Purchases of Farmer Mac Guaranteed Securities and USDA Securities	(692,245)	(1,026,187)
Purchases of loans held for investment	(341,702)	(208,215)
Purchases of defaulted loans	(311)	(1,415)
Proceeds from repayment of available-for-sale investment securities	183,749	455,315
Proceeds from repayment of Farmer Mac Guaranteed Securities and USDA Securities	338,063	676,858
Proceeds from repayment of loans purchased as held for investment	182,790	132,652
Proceeds from sale of available-for-sale investment securities	—	186,769
Proceeds from sale of Farmer Mac Guaranteed Securities	149,607	139,561
Payments from sale of real estate owned	697	—
Net cash (used)/provided by investing activities	(245,913)	14,239
Cash flows from financing activities:		
Proceeds from issuance of discount notes	13,618,574	23,089,113
Proceeds from issuance of medium-term notes	2,251,535	1,207,092
Payments to redeem discount notes	(14,766,905)	(22,873,972)
Payments to redeem medium-term notes	(856,300)	(921,000)
Excess tax benefits related to stock-based awards	—	234
Payments to third parties on debt securities of consolidated trusts	(46,926)	(33,010)

Proceeds from common stock issuance	148	101
Tax payments related to share-based awards	(1,341)	(1,499)
Common stock repurchased	—	(9,286)
Investment in subsidiary - non-controlling interest	—	52
Dividends paid on common and preferred stock	(7,094)	(5,997)
Net cash provided by financing activities	191,691	451,828
Net increase in cash and cash equivalents	48,412	519,479
Cash and cash equivalents at beginning of period	265,229	1,210,084
Cash and cash equivalents at end of period	$313,641	$1,729,563

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

FEDERAL AGRICULTURAL MORTGAGE CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The interim unaudited consolidated financial statements of the Federal Agricultural Mortgage Corporation ("Farmer Mac") and subsidiaries have been prepared pursuant to the rules and regulations of the U.S. Securities and Exchange Commission ("SEC"). These interim unaudited consolidated financial statements reflect all normal and recurring adjustments that are, in the opinion of management, necessary to present a fair statement of the financial position and the results of operations and cash flows of Farmer Mac and subsidiaries for the interim periods presented. Certain information and footnote disclosures normally included in the annual consolidated financial statements have been omitted as permitted by SEC rules and regulations. The December 31, 2016 consolidated balance sheet presented in this report has been derived from Farmer Mac's audited 2016 consolidated financial statements. Management believes that the disclosures are adequate to present fairly the consolidated financial statements as of the dates and for the periods presented. These interim unaudited consolidated financial statements should be read in conjunction with the 2016 consolidated financial statements of Farmer Mac and subsidiaries included in Farmer Mac's Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 9, 2017. That Form 10-K describes Farmer Mac's significant accounting policies, which include its policies on Principles of Consolidation; Cash and Cash Equivalents and Statements of Cash Flows; Transfers of Financial Assets and Liabilities; Investment Securities, Farmer Mac Guaranteed Securities, and USDA Securities; Loans; Securitization of Loans; Real Estate Owned; Financial Derivatives; Notes Payable; Allowance for Loan Losses and Reserve for Losses; Earnings Per Common Share; Income Taxes; Stock-Based Compensation; Comprehensive Income; Long-Term Standby Purchase Commitments; Fair Value Measurement; and Consolidation of Variable Interest Entities ("VIEs"). Results for interim periods are not necessarily indicative of those that may be expected for the fiscal year. Presented below are Farmer Mac's significant accounting policies that contain updated information for the three months ended March 31, 2017.

Principles of Consolidation

The consolidated financial statements include the accounts of Farmer Mac and its three subsidiaries: (1) Farmer Mac Mortgage Securities Corporation ("FMMSC"), whose principal activities are to facilitate the purchase and issuance of Farmer Mac Guaranteed Securities; (2) Farmer Mac II LLC, whose principal activity is the operation of substantially all of the business related to the USDA Guarantees line of business – primarily the acquisition of USDA Securities; and (3) Contour Valuation Services, LLC (which began doing business as AgVisory during first quarter 2016), whose principal activity is to appraise agricultural real estate. As of May 1, 2017, Farmer Mac transferred its entire 65% ownership interest in AgVisory back to the limited liability company as a company redemption in exchange for $5,000. Farmer Mac recognized a loss of approximately $0.1 million after-tax upon the transfer, which will be reflected in Farmer Mac's financial results for second quarter 2017. The consolidated financial statements also include the accounts of VIEs in which Farmer Mac determined itself to be the primary beneficiary.

The following tables present, by line of business, details about the consolidation of VIEs:

Table 1.1

	Consolidation of Variable Interest Entities As of March 31, 2017					
	Farm & Ranch	USDA Guarantees	Rural Utilities	Institutional Credit	Corporate	Total
	(in thousands)					
On-Balance Sheet:						
Consolidated VIEs:						
Loans held for investment in consolidated trusts, at amortized cost	$1,208,950	$ —	$ —	$ —	$ —	$1,208,950
Debt securities of consolidated trusts held by third parties [1]	1,212,792	—	—	—	—	1,212,792
Unconsolidated VIEs:						
Farmer Mac Guaranteed Securities:						
Carrying value [2]	—	41,130	—	30,054	—	71,184
Maximum exposure to loss [3]	—	40,734	—	30,000	—	70,734
Investment securities:						
Carrying value [4]	—	—	—	—	809,988	809,988
Maximum exposure to loss [3] [4]	—	—	—	—	808,155	808,155
Off-Balance Sheet:						
Unconsolidated VIEs:						
Farmer Mac Guaranteed Securities:						
Maximum exposure to loss [3] [5]	387,272	135,334	—	970,000	—	1,492,606

(1) Includes borrower remittances of $3.8 million. The borrower remittances had not been passed through to third party investors as of March 31, 2017.

(2) Includes $0.4 million of unamortized premiums and discounts and fair value adjustments related to the USDA Guarantees line of business. Includes fair value adjustments related to the Institutional Credit line of business of $0.1 million.

(3) Farmer Mac uses unpaid principal balance and outstanding face amount of investment securities to represent maximum exposure to loss.

(4) Includes auction-rate certificates, asset-backed securities, and government-sponsored enterprise ("GSE")-guaranteed mortgage-backed securities.

(5) The amount under the Farm & Ranch line of business relates to unconsolidated trusts where Farmer Mac determined it was not the primary beneficiary due to shared power with an unrelated party.

	Consolidation of Variable Interest Entities As of December 31, 2016					
	Farm & Ranch	USDA Guarantees	Rural Utilities	Institutional Credit	Corporate	Total
	(in thousands)					
On-Balance Sheet:						
Consolidated VIEs:						
Loans held for investment in consolidated trusts, at amortized cost	$1,132,966	$ —	$ —	$ —	$ —	$1,132,966
Debt securities of consolidated trusts held by third parties [(1)]	1,142,704	—	—	—	—	1,142,704
Unconsolidated VIEs:						
Farmer Mac Guaranteed Securities:						
Carrying value [(2)]	—	36,042	—	30,347	—	66,389
Maximum exposure to loss [(3)]	—	35,599	—	30,000	—	65,599
Investment securities:						
Carrying value [(4)]	—	—	—	—	827,874	827,874
Maximum exposure to loss [(3)] [(4)]	—	—	—	—	825,909	825,909
Off-Balance Sheet:						
Unconsolidated VIEs:						
Farmer Mac Guaranteed Securities:						
Maximum exposure to loss [(3)] [(5)]	415,441	103,976	—	970,000	—	1,489,417

(1) Includes borrower remittances of $9.7 million, which have not been passed through to third party investors as of December 31, 2016.

(2) Includes $0.4 million of unamortized premiums and discounts and fair value adjustments related to the USDA Guarantees line of business. Includes fair value adjustments related to the Institutional Credit line of business of $0.3 million.

(3) Farmer Mac uses unpaid principal balance and the outstanding face amount of investment securities to represent maximum exposure to loss.

(4) Includes auction-rate certificates, asset-backed securities, and GSE-guaranteed mortgage-backed securities.

(5) The amount under the Farm & Ranch line of business relates to unconsolidated trusts where Farmer Mac determined it was not the primary beneficiary due to shared power with an unrelated party.

(a) Statements of Cash Flows

The following table sets forth information regarding certain cash and non-cash transactions for the three months ended March 31, 2017 and 2016:

Table 1.2

	For the Three Months Ended	
	March 31, 2017	March 31, 2016
	(in thousands)	
Non-cash activity:		
Real estate owned acquired through loan liquidation	4,630	—

Loans acquired and securitized as Farmer Mac Guaranteed Securities	149,607	139,561
Consolidation of Farm & Ranch Guaranteed Securities from off-balance sheet to loans held for investment in consolidated trusts and to debt securities of consolidated trusts held by third parties	117,018	135,913

(b) Earnings Per Common Share

Basic earnings per common share ("EPS") is based on the weighted-average number of shares of common stock outstanding. Diluted earnings per common share is based on the weighted-average number of shares

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of common stock outstanding adjusted to include all potentially dilutive common stock options, stock appreciation rights ("SARs"), and non-vested restricted stock awards. The following schedule reconciles basic and diluted EPS for the three months ended March 31, 2017 and 2016:

Table 1.3

	For the Three Months Ended					
	March 31, 2017[1]			March 31, 2016		
	Net Income	Weighted-Average Shares	$ per Share	Net Income	Weighted-Average Shares	$ per Share
	(in thousands, except per share amounts)					
Basic EPS						
Net income attributable to common stockholders	$18,615	10,551	$1.76	$10,317	10,465	$0.99
Effect of dilutive securities[2]						
Stock options, SARs and restricted stock	—	231	(0.03)	—	538	(0.05)
Diluted EPS	$18,615	10,782	$1.73	$10,317	11,003	$0.94

(1) For the effect of the adoption of the new Accounting Standard Update 2016-09 "Improvements to Employee Share-Based Payment Accounting" on Basic and Diluted EPS, see Note 1(d) "New Accounting Standards."

(2) For the three months ended March 31, 2017 and 2016, stock options and SARs of 50,757 and 201,401, respectively, were outstanding but not included in the computation of diluted earnings per share of common stock because they were anti-dilutive. For the three months ended March 31, 2017 and 2016, contingent shares of non-vested restricted stock of 32,892, and 37,284, respectively, were outstanding but not included in the computation of diluted earnings per share of common stock because performance conditions had not yet been met.

(c) Comprehensive Income

Comprehensive income represents all changes in stockholders' equity except those resulting from investments by or distributions to stockholders, and is comprised of net income and unrealized gains and losses on available-for-sale securities, certain held-to-maturity securities transferred from the available-for-sale classification, and cash flow hedges, net of related taxes.

The following table presents the changes in accumulated other comprehensive income ("AOCI"), net of tax, by component for the three months ended March 31, 2017 and 2016:

Table 1.4

	For the Three Months Ended March 31, 2017				March 31, 2016			
	Available-for-Sale Securities	Held-to-Maturity Securities	Cash Flow Hedges	Total	Available-for-Sale Securities	Held-to-Maturity Securities	Cash Flow Hedges	Total
	(in thousands)							
For the Three Months Ended:								
Beginning Balance	$(14,387)	$ 45,752	$2,393	$33,758	$(10,035)	$ (476)	$(508)	$(11,019)
Other Comprehensive Income Before Reclassifications	12,223	—	76	12,299	(1,769)	—	(3,395)	(5,164)
Amounts reclassified from AOCI	(2,578)	(2,267)	332	(4,513)	(2,376)	(657)	299	(2,734)
Net Comprehensive Income	9,645	(2,267)	408	7,786	(4,145)	(657)	(3,096)	(7,898)
Ending Balance	$(4,742)	$ 43,485	$2,801	$41,544	$(14,180)	$ (1,133)	$(3,604)	$(18,917)

The following table presents other comprehensive income activity, the impact on net income of amounts reclassified from each component of AOCI, and the related tax impact for the three months ended March 31, 2017 and 2016:

Table 1.5

	For the Three Months Ended					
	March 31, 2017			March 31, 2016		
	Before Tax	Provision (Benefit)	After Tax	Before Tax	Provision (Benefit)	After Tax
	(in thousands)					
Other comprehensive income:						
Available-for-sale-securities:						
Unrealized holding gains/(losses) on available-for-sale-securities	$18,804	$6,581	$12,223	$(2,722)	$(953)	$(1,769)
Less reclassification adjustments included in:						
Gains/(losses) on financial derivatives and hedging activities(1)	(3,959)	(1,386)	(2,573)	(3,923)	(1,373)	(2,550)
Losses on sale of available-for-sale investment securities(2)	—	—	—	9	3	6
Other income(3)	(7)	(2)	(5)	259	91	168
Total	$14,838	$5,193	$9,645	$(6,377)	$(2,232)	$(4,145)
Held-to-maturity securities:						
Less reclassification adjustments included in:						
Net interest income(4)	$(3,487)	$(1,220)	$(2,267)	$(1,011)	$(354)	$(657)
Total	$(3,487)	$(1,220)	$(2,267)	$(1,011)	$(354)	$(657)
Cash flow hedges						
Unrealized gains/(losses) on cash flow hedges	$117	$41	$76	$(5,222)	$(1,827)	$(3,395)
Less reclassification adjustments included in:						
Net interest income(5)	512	180	332	459	160	299
Total	$629	$221	$408	$(4,763)	$(1,667)	$(3,096)
Other comprehensive income/(loss)	$11,980	$4,194	$7,786	$(12,151)	$(4,253)	$(7,898)

(1) Relates to the amortization of unrealized gains on hedged items prior to the application of fair value hedge accounting.

(2) Represents unrealized losses on sales of available-for-sale investment securities.

(3) Represents amortization of deferred gains related to certain available-for-sale USDA Securities and Farmer Mac Guaranteed USDA Securities.

(4) Relates to the amortization of unrealized gains or losses prior to the reclassification of these securities from available-for-sale to held-to-maturity. The amortization of unrealized gains or losses reported in AOCI for held-to-maturity securities will be offset by the amortization of the premium or discount created from the transfer into held-to-maturity securities, which occurred at fair value. These unrealized gains or losses will be recorded over the remaining life of the security with no impact on future net income.

(5) Relates to the recognition of unrealized gains and losses on cash flow hedges recorded in AOCI.

(d) New Accounting Standards

In March 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-09, "Improvements to Employee Share-Based Payment Accounting," which provides new guidance intended to simplify several aspects of accounting and presentation for employee share-based payment transactions. The ASU became effective for Farmer Mac on January 1, 2017. The adoption of the new guidance had the following effect on Farmer Mac's financial position, results of operations, and cash flows:

- Consolidated Statements of Operations - The ASU requires the recognition of all net tax benefits related to share-based compensation awards in the income tax provision. Previously, these amounts were recognized in additional paid-in capital. Net tax benefits related to share-based compensation awards of $0.7 million were recognized as a reduction to income tax expense in the three months ended March 31, 2017 in the consolidated statement of operations. Net tax benefits result from the excess of the tax deduction over the compensation expense recognized under GAAP for share-based compensation awards. That excess arises because the tax deduction is based upon the value of share-based awards upon their exercise (or vesting, in the case of restricted stock units), whereas the compensation expense under GAAP is based upon the value of the share-based awards upon their grant date.

The ASU also changed the calculation of diluted earnings per share. GAAP requires the "treasury stock method" to determine the number of dilutive securities in calculating diluted earnings per share. The ASU changed the calculation of "assumed proceeds" under the treasury stock method to exclude the amount of net tax benefits that would have been recognized in additional paid-in capital under the previous accounting standard. This change in the calculation reduces the amount of shares assumed to have been repurchased under the treasury stock method, thus increasing the number of dilutive shares.

Both of these changes in the guidance were applied prospectively beginning January 1, 2017 and for the three months ended March 31, 2017. The change in the recognition of all net tax benefits related to share-based compensation awards in the income tax provision resulted in an increase of $0.06 in both basic earnings per share and diluted earnings per share for the three months ended March 31, 2017. The change in the guidance for the calculation of diluted earnings per share had an immaterial impact on diluted earnings per share.

Additionally, the ASU allows companies to choose to either include an estimate of forfeitures expected to occur in share-based compensation expense or account for them as they occur. Previously, GAAP required companies to include an estimate of forfeitures expected to occur in their share-based compensations expense. Farmer Mac has elected to account for forfeitures in compensation expense as they occur. The cumulative impact of the change in the treatment of forfeitures was not material for the three months ended March 31, 2017.

- Consolidated Statements of Cash Flows - The ASU requires excess tax benefits from share-based employee awards to be reported within operating activities. Previously, these cash flows were reported within financing activities. Farmer Mac has applied this guidance prospectively, resulting in an increase in net cash provided by operating activities and a corresponding decrease in net cash provided by financing activities of $0.7 million for the three months ended March 31, 2017.

The ASU requires employee taxes paid when an employer withholds shares for tax purposes to be reported within financing activities. Under the previous guidance, these cash flows were included in operating activities. These changes were required to be applied on a retrospective basis. As a result, the consolidated statement of cash flows for prior periods was revised, resulting in an increase in net cash provided by operating activities and a decrease in net cash provided by financing activities of $1.5 million for the three months ended March 31, 2016, compared to previously reported amounts. The amount of employee taxes paid for shares withheld was $1.3 million for the three months ended March 31, 2017.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments—Credit Losses," which will require entities to measure all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. Entities will be required to use forward-looking information to form their credit loss estimates. The ASU will also require enhanced disclosures to help users of financial statements better understand significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of an entity's portfolio. The new standard is effective for fiscal years and interim periods within those fiscal years, beginning after December 15, 2019. Early application will be permitted for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. Farmer Mac is currently evaluating the impact that the new guidance will have on its consolidated financial statements. That impact will primarily be from the new requirement to recognize all expected losses rather than just incurred losses as of the reporting date.

In March 2017, the FASB issued ASU 2017-08, "Receivables - Nonrefundable Fees and Other Costs (Subtopic 310-20): Premium Amortization on Purchased Callable Debt Securities," which shortens the amortization period for certain callable debt securities held at a premium by requiring the premium to be amortized to the earliest call date. The ASU does not require an accounting change for securities held at a discount. The new standard is effective for fiscal years and interim periods within those fiscal years, beginning after December 15, 2019. Farmer Mac does not expect that adoption of the new guidance will have a material effect on Farmer Mac's financial position, results of operations, or cash flows.

(e) Reclassifications

Certain reclassifications of prior period information were made to conform to the current period presentation.

2. INVESTMENT SECURITIES

The following tables set forth information about Farmer Mac's investment securities as of March 31, 2017 and December 31, 2016:

Table 2.1

	As of March 31, 2017					
	Amount Outstanding	Unamortized Premium/(Discount)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)					
Available-for-sale:						
Floating rate auction-rate certificates backed by Government guaranteed student loans	$19,700	$ —	$19,700	$ —	$(1,576)	$18,124
Floating rate asset-backed securities	40,825	(189)	40,636	—	(266)	40,370
Floating rate corporate debt securities	10,000	—	10,000	60	—	10,060
Floating rate Government/GSE guaranteed mortgage-backed securities	1,342,378	2,637	1,345,015	2,494	(2,819)	1,344,690
Fixed rate GSE guaranteed mortgage-backed securities[1]	514	2,469	2,983	2,394	—	5,377
Floating rate GSE subordinated debt	70,000	—	70,000	—	(2,424)	67,576
Fixed rate senior agency debt	187,295	53	187,348	—	(283)	187,065
Fixed rate U.S. Treasuries	806,493	233	806,726	7	(751)	805,982
Total available-for-sale	2,477,205	5,203	2,482,408	4,955	(8,119)	2,479,244
Total investment securities	$2,477,205	$ 5,203	$2,482,408	$ 4,955	$(8,119)	$2,479,244

(1) Fair value includes $4.8 million of an interest-only security with a notional amount of $145.5 million.

	As of December 31, 2016					
	Amount Outstanding	Unamortized Premium/(Discount)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)					
Available-for-sale:						
Floating rate auction-rate certificates backed by Government guaranteed student loans	$19,700	$ —	$19,700	$ —	$(1,970)	$17,730
Floating rate asset-backed securities	44,442	(202)	44,240	1	(390)	43,851
Floating rate corporate debt securities	10,000	—	10,000	41	—	10,041
Floating rate Government/GSE guaranteed mortgage-backed securities	1,359,700	2,827	1,362,527	1,768	(3,266)	1,361,029
Fixed rate GSE guaranteed mortgage-backed securities[1]	538	2,582	3,120	4,505	—	7,625
Floating rate GSE subordinated debt	70,000	—	70,000	—	(3,047)	66,953
Fixed rate senior agency debt	187,295	106	187,401	—	(268)	187,133
Fixed rate U.S. Treasuries	821,619	359	821,978	47	(536)	821,489
Total available-for-sale	2,513,294	5,672	2,518,966	6,362	(9,477)	2,515,851
Total investment securities	$2,513,294	$ 5,672	$2,518,966	$ 6,362	$(9,477)	$2,515,851

(1) Fair value includes $7.0 million of an interest-only security with a notional amount of $146.1 million.

Farmer Mac did not sell any securities from its available-for-sale investment portfolio during the three months ended March 31, 2017. During the three months ended March 31, 2016, Farmer Mac received proceeds of $186.8 million from the sale of securities from its available-for-sale investment portfolio, resulting in gross realized gains of $0.1 million and gross realized losses of $0.1 million.

As of March 31, 2017 and December 31, 2016, unrealized losses on available-for-sale investment securities were as follows:

Table 2.2

	As of March 31, 2017			
	Available-for-Sale Securities			
	Unrealized loss position for less than 12 months		Unrealized loss position for more than 12 months	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
	(in thousands)			
Floating rate auction-rate certificates backed by Government guaranteed student loans	$—	$ —	$ 18,124	$ (1,576)
Floating rate asset-backed securities	—	—	35,514	(266)
Floating rate Government/GSE guaranteed mortgage-backed securities	241,188	(608)	409,002	(2,211)
Floating rate GSE subordinated debt	—	—	67,576	(2,424)
Fixed rate U.S. Treasuries	776,996	(751)	—	—
Fixed rate senior agency debt	187,066	(283)	—	—
Total	$ 1,205,250	$ (1,642)	$ 530,216	$ (6,477)

	As of December 31, 2016			
	Available-for-Sale Securities			
	Unrealized loss position for less than 12 months		Unrealized loss position for more than 12 months	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
	(in thousands)			
Floating rate auction-rate certificates backed by Government guaranteed student loans	$—	$ —	$ 17,730	$ (1,970)
Floating rate asset-backed securities	4,654	(10)	38,077	(380)
Floating rate Government/GSE guaranteed mortgage-backed securities	384,586	(1,030)	442,041	(2,236)
Floating rate GSE subordinated debt	—	—	66,953	(3,047)
Fixed rate U.S. Treasuries	732,371	(536)	—	—
Fixed rate senior agency debt	187,133	(268)	—	—
Total	$ 1,308,744	$ (1,844)	$ 564,801	$ (7,633)

The unrealized losses presented above are principally due to a general widening of market spreads and an increase in the levels of interest rates from the dates of acquisition to March 31, 2017 and December 31, 2016, as applicable. The resulting decrease in fair values reflects an increase in the perceived risk by the financial markets related to those securities. As of March 31, 2017, all of the investment securities in an unrealized loss position either were backed by the full faith and credit of the U.S. government or had credit ratings of at least "AA+," except one that was rated "A-." As of December 31, 2016, all of the investment securities in an unrealized loss position either were backed by the full faith and credit of the U.S. government or had credit ratings of at least "AA+," except one that was rated "A-." The unrealized losses were on 96 and 97 individual investment securities as of March 31, 2017 and December 31, 2016, respectively.

As of March 31, 2017, 40 of the securities in loss positions had been in loss positions for more than 12 months and had a total unrealized loss of $6.5 million. As of December 31, 2016, 36 of the securities in loss positions had been in loss positions for more than 12 months and had a total unrealized loss of $7.6 million. Securities in unrealized loss positions for 12 months or longer have a fair value as of March 31, 2017 that is, on average, approximately 99 percent of their amortized cost basis. Farmer Mac believes that all of these unrealized losses are recoverable within a reasonable period of time by way of maturity or changes in credit spreads. Accordingly, Farmer Mac has concluded that none of the unrealized losses on these available-for-sale investment securities are other-than-temporary impairment as of March 31, 2017 and December 31, 2016.

Farmer Mac did not own any held-to-maturity or trading investment securities as of March 31, 2017 and December 31, 2016.

The amortized cost, fair value, and weighted-average yield of available-for-sale investment securities by remaining contractual maturity as of March 31, 2017 are set forth below. Asset-backed and mortgage-backed securities are included based on their final maturities, although the actual maturities may differ due to prepayments of the underlying assets.

Table 2.3

	As of March 31, 2017 Available-for-Sale Securities		
	Amortized Cost	Fair Value	Weighted-Average Yield
	(dollars in thousands)		
Due within one year	$988,363	$987,343	0.77%
Due after one year through five years	227,113	227,471	1.42%
Due after five years through ten years	437,367	438,280	1.54%
Due after ten years	829,565	826,150	1.42%
Total	$2,482,408	$2,479,244	1.18%

3. FARMER MAC GUARANTEED SECURITIES AND USDA SECURITIES

The following tables set forth information about on-balance sheet Farmer Mac Guaranteed Securities and USDA Securities as of March 31, 2017 and December 31, 2016:

Table 3.1

	As of March 31, 2017					
	Unpaid Principal Balance	Unamortized Premium/(Discount)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)					
Held-to-maturity:						
AgVantage	$1,035,587	$ (2,031)	$1,033,556	$ 6,290	$(3,115)	$1,036,731
Farmer Mac Guaranteed USDA Securities	40,734	396	41,130	293	(5)	41,418
Total Farmer Mac Guaranteed Securities	1,076,321	(1,635)	1,074,686	6,583	(3,120)	1,078,149
USDA Securities	1,955,868	69,954	2,025,822	1	(66,210)	1,959,613
Total held-to-maturity	$3,032,189	$ 68,319	$3,100,508	$ 6,584	$(69,330)	$3,037,762
Available-for-sale:						
AgVantage	$5,266,782	$ (258)	$5,266,524	$ 33,450	$(56,928)	$5,243,046
Trading:						
USDA Securities	$17,760	$ 1,274	$19,034	$ 56	$(488)	$18,602

	As of December 31, 2016					
	Unpaid Principal Balance	Unamortized Premium/(Discount)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)					
Held-to-maturity:						
AgVantage	$1,115,465	$ (2,276)	$1,113,189	$ 7,187	$(3,175)	$1,117,201
Farmer Mac Guaranteed USDA Securities	35,599	443	36,042	5	(239)	35,808
Total Farmer Mac Guaranteed Securities	1,151,064	(1,833)	1,149,231	7,192	(3,414)	1,153,009
USDA Securities	1,935,440	73,785	2,009,225	—	(95,590)	1,913,635
Total held-to-maturity	$3,086,504	$ 71,952	$3,158,456	$ 7,192	$(99,004)	$3,066,644
Available-for-sale:						
AgVantage	$4,889,007	$ (103)	$4,888,904	$ 28,715	$(63,934)	$4,853,685
Trading:						
USDA Securities	$19,360	$ 1,377	$20,737	$ 41	$(390)	$20,388

On October 1, 2016, Farmer Mac transferred $2.0 billion of USDA Securities and $32.8 million of Farmer Mac Guaranteed USDA Securities from available-for-sale to held-to-maturity to reflect Farmer Mac's positive intent and ability to hold these securities until maturity or payoff. Farmer Mac transferred these securities at fair value as of the date of the transfer, which included a cost basis adjustment of unrealized appreciation in the amount of $73.1 million for the USDA Securities and $0.7 million for the Farmer Mac Guaranteed USDA Securities. The accumulated unrealized appreciation was retained in accumulated other comprehensive income in the amount of $73.8 million, pre-tax. Farmer Mac accounts for held-to-maturity securities at amortized cost. Both the cost basis adjustment and accumulated unrealized appreciation will be amortized as an adjustment to the yield on the held-to-maturity USDA Securities over the remaining term of the transferred securities.

As of March 31, 2017 and December 31, 2016, unrealized losses on held-to-maturity and available-for-sale on-balance sheet Farmer Mac Guaranteed Securities and USDA Securities were as follows:

Table 3.2

	As of March 31, 2017 Held-to-Maturity and Available-for-Sale Securities			
	Unrealized loss position for less than 12 months		Unrealized loss position for more than 12 months	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
	(in thousands)			
Held-to-maturity:				
AgVantage	$358,636	$(3,115)	$—	$—
Farmer Mac Guaranteed USDA Securities	279	(5)	—	—
USDA Securities	1,865,182	(66,194)	93,978	(16)
Total held-to-maturity	$2,224,097	$(69,314)	$93,978	$(16)
Available-for-sale:				
AgVantage	$1,149,984	$(26,036)	$1,020,572	$(30,892)

	As of December 31, 2016 Available-for-Sale Securities			
	Unrealized loss position for less than 12 months		Unrealized loss position for more than 12 months	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
	(in thousands)			
Held-to-maturity:				
AgVantage	$358,575	$(3,175)	$—	$—
Farmer Mac Guaranteed USDA Securities	30,575	(239)	—	—
USDA Securities	1,816,366	(95,582)	97,270	(8)
Total held-to-maturity	$2,205,516	$(98,996)	$97,270	$(8)
Available-for-sale:				
AgVantage	$982,538	$(18,482)	$1,131,930	$(45,452)

The unrealized losses presented above are principally due to higher interest rates from the date of acquisition to March 31, 2017 and December 31, 2016, as applicable. In addition, the unrealized losses on the held-to-maturity USDA Securities as of December 31, 2016 reflect their increased cost basis resulting from their transfer to held-to-maturity as of October 1, 2016, as described above. The credit exposure related to Farmer Mac's USDA Guarantees line of business is covered by the full faith and credit guarantee of the United States. The unrealized losses from AgVantage securities were on 21 available-for-sale securities as of March 31, 2017. There were 7 held-to-maturity AgVantage securities with an unrealized loss as of March 31, 2017. The unrealized losses from AgVantage securities were on 22 available-for-sale securities as of December 31, 2016. There were 7 unrealized losses from held-to-maturity securities as of December 31, 2016. As of March 31, 2017, 8 available-for-sale

AgVantage securities had been in a loss position for more than 12 months with a total unrealized loss of $30.9 million. As of December 31, 2016,

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10 available-for-sale AgVantage securities had been in a loss position for more than 12 months with a total unrealized loss of $45.5 million. Farmer Mac has concluded that none of the unrealized losses on its held-to-maturity Farmer Mac Guaranteed Securities and USDA Securities and available-for-sale Farmer Mac Guaranteed Securities are other-than-temporary impairment as of either March 31, 2017 or December 31, 2016. Farmer Mac does not intend to sell these securities, and it is not more likely than not that Farmer Mac will be required to sell the securities before recovery of the amortized cost basis.

During the three months ended March 31, 2017 and 2016, Farmer Mac realized no gains or losses from the sale of Farmer Mac Guaranteed Securities and USDA Securities.

The amortized cost, fair value, and weighted-average yield of available-for-sale and held-to-maturity Farmer Mac Guaranteed Securities and USDA Securities by remaining contractual maturity as of March 31, 2017 are set forth below. The balances presented are based on their final maturities, although the actual maturities may differ due to prepayments of the underlying assets.

Table 3.3

	As of March 31, 2017 Available-for-Sale Securities		
	Amortized Cost	Fair Value	Weighted-Average Yield
	(dollars in thousands)		
Due within one year	$541,181	$542,582	1.65 %
Due after one year through five years	2,852,298	2,866,585	1.95 %
Due after five years through ten years	838,374	839,129	2.61 %
Due after ten years	1,034,671	994,750	1.66 %
Total	$5,266,524	$5,243,046	1.97 %

	As of March 31, 2017 Held-to-Maturity Securities		
	Amortized Cost	Fair Value	Weighted-Average Yield
	(dollars in thousands)		
Due within one year	$275,696	$276,572	2.21 %
Due after one year through five years	829,335	829,694	2.16 %
Due after five years through ten years	179,240	174,029	2.97 %
Due after ten years	1,816,237	1,757,467	3.29 %
Total	$3,100,508	$3,037,762	2.86 %

As of March 31, 2017, Farmer Mac owned trading USDA Securities with an amortized cost of $19.0 million, a fair value of $18.6 million, and a weighted-average yield of 5.40 percent. As of December 31, 2016, Farmer Mac owned trading USDA Securities with an amortized cost of $20.7 million, a fair value of $20.4 million, and a weighted-average yield of 5.44 percent.

In April 2017, Farmer Mac purchased and retained $1.0 billion of AgVantage securities that refinanced an AgVantage security of the same amount that matured in April 2017. Previously, Farmer Mac held $30.0 million of the $1.0 billion AgVantage security that matured in April 2017 in its on-balance sheet portfolio. The remaining $970.0 million of the $1.0 billion AgVantage security that matured in April 2017 had

previously been sold to third parties and accounted for as off-balance sheet commitment. Farmer Mac holds the newly purchased $1.0 billion in AgVantage securities entirely within its on-balance sheet portfolio.

4. FINANCIAL DERIVATIVES

Farmer Mac enters into financial derivative transactions principally to protect against risk from the effects of market price or interest rate movements on the value of certain assets, future cash flows, or debt issuance, and not for trading or speculative purposes. Certain financial derivatives are designated as fair value hedges of fixed rate assets, primarily classified as available-for-sale, to protect against fair value changes in the assets related to a benchmark interest rate (i.e., LIBOR). Other financial derivatives are designated as cash flow hedges to mitigate the volatility of future interest rate payments on floating rate debt.

All financial derivatives are recorded on the balance sheet at fair value as a freestanding asset or liability. Changes in the fair values of financial derivatives not designated as cash flow hedges are reported in "Gains/(losses) on financial derivatives and hedging activities" in the consolidated statements of operations. For financial derivatives designated in fair value hedge accounting relationships, changes in the fair values of the hedged items, which are primarily fixed rate AgVantage securities and fixed rate medium-term notes, related to the risk being hedged are also reported in "Gains/(losses) on financial derivatives and hedging activities" in the consolidated statements of operations. Interest accruals on derivatives designated in fair value hedge accounting relationships are recorded in "Net interest income" in the consolidated statements of operations. For the three months ended March 31, 2017 and 2016, the amount of interest expense recognized on those derivatives was $3.2 million and $4.5 million, respectively. For financial derivatives designated in cash flow hedge accounting relationships, the effective portion of the derivative gain/loss is recorded in other comprehensive income and any ineffective portion is recognized immediately in "Gains/(losses) on financial derivatives and hedging activities" in the consolidated statements of operations. Because the hedging instrument is an interest rate swap and the hedged forecasted transactions are future interest payments on variable-rate debt, amounts recorded in accumulated other comprehensive income are reclassified to "Total interest expense" in conjunction with the recognition of interest expense on the debt. For both the three months ended March 31, 2017 and 2016, $0.5 million was reclassified out of accumulated other comprehensive income into interest expense. As of March 31, 2017, Farmer Mac expects to reclassify $1.2 million pretax, or $0.8 million after-tax, from accumulated other comprehensive income, net of tax, to earnings over the next twelve months. This amount could differ from amounts actually recognized due to changes in interest rates, hedge de-designations, and the addition of other hedges subsequent to March 31, 2017. During the three months ended March 31, 2017 and 2016, there were no gains or losses from interest rate swaps designated as cash flow hedges reclassified to earnings because it became probable the original forecasted transaction would not occur.

The following tables summarize information related to Farmer Mac's financial derivatives on a gross basis without giving consideration to master netting arrangements as of March 31, 2017 and and December 31, 2016 and the effects of financial derivatives on the consolidated statements of operations for the three months ended March 31, 2017 and 2016:

Table 4.1

	As of March 31, 2017						
		Fair Value					
	Notional Amount	Asset	(Liability)	Weighted-Average Pay Rate	Weighted-Average Receive Rate	Weighted-Average Forward Price	Weighted-Average Remaining Life (in years)
	(dollars in thousands)						
Fair value hedges:							
Interest rate swaps:							
Pay fixed non-callable	$1,808,581	$1,292	$(9,133)	1.77%	1.04%		4.75
Receive fixed non-callable	860,200	11	(1,815)	0.98%	1.39%		3.27
Cash flow hedges:							
Interest rate swaps:							
Pay fixed non-callable	221,000	843	(290)	2.28%	1.34%		7.13
No hedge designation:							
Interest rate swaps:							
Pay fixed non-callable	433,406	400	(20,912)	4.06%	1.04%		5.69
Receive fixed non-callable	4,262,401	69	—	0.82%	0.87%		0.79
Receive fixed callable	30,000	—	(10)	0.97%	0.58%		0.08
Basis swaps	865,000	51	(15)	0.93%	0.99%		0.93
Treasury futures	12,800	8	—			124.62	
Credit valuation adjustment		—	121				
Total financial derivatives	$8,493,388	$2,674	$(32,054)				
Collateral pledged		—	25,075				
Net amount		$2,674	$(6,979)				

	As of December 31, 2016						
		Fair Value					
	Notional Amount	Asset	(Liability)	Weighted-Average Pay Rate	Weighted-Average Receive Rate	Weighted-Average Forward Price	Weighted-Average Remaining Life (in years)
	(dollars in thousands)						
Fair value hedges:							
Interest rate swaps:							
Pay fixed non-callable	$1,642,609	$18,508	$(18,909)	1.73%	0.90%		4.70
Cash flow hedges:							
Interest rate swaps:							
Pay fixed non-callable	207,000	3,706	(955)	2.18%	1.11%		7.28
No hedge designation:							
Interest rate swaps:							
Pay fixed non-callable	435,827	339	(32,951)	4.06%	0.89%		5.90
Receive fixed non-callable	4,991,821	607	(5,064)	0.74%	0.75%		0.60
Receive fixed callable	30,000	—	(33)	0.82%	0.58%		0.33
Basis swaps	765,000	36	(243)	0.78%	0.78%		0.87
Treasury futures	28,000	—	(155)			123.73	
Credit valuation adjustment		(14)	158				
Total financial derivatives	$8,100,257	$23,182	$(58,152)				
Collateral pledged		—	25,643				
Net amount		$23,182	$(32,509)				

Table 4.2

	Gains/(losses) on financial derivatives and hedging activities For the Three Months Ended	
	March 31, 2017	March 31, 2016
	(in thousands)	
Fair value hedges:		
Interest rate swaps[(1)]	$1,526	$(26,898)
Hedged items	(5,404)	29,787
Gains on fair value hedges	(3,878)	2,889
Cash flow hedges:		
Loss recognized (ineffective portion)	(29)	(149)
Losses on cash flow hedges	(29)	(149)
No hedge designation:		
Interest rate swaps	6,684	(8,142)

Agency forwards	(399)	(877)
Treasury futures	108	(503)
Gains/(losses) on financial derivatives not designated in hedging relationships	6,393	(9,522)
Gains/(losses) on financial derivatives and hedging activities	$2,486	$(6,782)

(1) Included in the assessment of hedge effectiveness as of March 31, 2017, but excluded from the amounts in the table, were gains of $3.6 million for the three months ended March 31, 2017, attributable to the fair value of the swaps at the inception of the hedging relationship. Accordingly, the amounts recognized as hedge ineffectiveness for three months ended March 31, 2017 were losses of $0.3 million. The comparable amounts as of March 31, 2016 were losses of $1.5 million for the three months ended March 31, 2016, attributable to the fair value of the swaps at the inception of the hedging relationship and, accordingly, gains of $1.4 million for the three months ended March 31, 2016, attributable to hedge ineffectiveness.

As of March 31, 2017 and December 31, 2016, Farmer Mac's credit exposure to interest rate swap counterparties, excluding netting arrangements and any adjustment for nonperformance risk, but including accrued interest, was $27.2 million and $24.5 million, respectively; however, including netting arrangements and accrued interest, Farmer Mac's credit exposure was $0.3 million and $0.2 million as of March 31, 2017 and December 31, 2016, respectively. As of March 31, 2017, Farmer Mac held no cash as collateral for its derivatives in net asset positions resulting in uncollateralized net asset positions of $0.3 million. As of December 31, 2016, Farmer Mac held no cash collateral for its derivatives in net asset positions, resulting in uncollateralized net asset positions of $0.2 million.

As of March 31, 2017 and December 31, 2016, the fair value of Farmer Mac's derivatives in a net liability position including accrued interest but excluding netting arrangements and any adjustment for nonperformance risk, was $58.2 million and $65.7 million, respectively; however, including netting arrangements and accrued interest, the fair value of Farmer Mac's derivatives in a net liability position at the counterparty level was $34.2 million and $41.4 million as of March 31, 2017 and December 31, 2016, respectively. Farmer Mac posted cash of $0.1 million and $25.0 million of investment securities as of March 31, 2017 and posted cash of $1.0 million and $24.6 million investment securities as of December 31, 2016. Farmer Mac records posted cash as a reduction in the outstanding balance of cash and cash equivalents and an increase in the balance of prepaid expenses and other assets. Any investment securities posted as collateral are included in the investment securities balances on the consolidated balance sheets. If Farmer Mac had breached certain provisions of the derivative contracts as of March 31, 2017 and December 31, 2016, it could have been required to settle its obligations under the agreements or post additional collateral of $9.1 million and $15.8 million, respectively. As of March 31, 2017 and December 31, 2016, there were no financial derivatives in a net payable position where Farmer Mac was required to pledge collateral which the counterparty had the right to sell or repledge.

For certain derivatives, Farmer Mac clears interest rate swaps through a clearinghouse, the Chicago Mercantile Exchange ("CME"). Farmer Mac posts initial and variation margin to this clearinghouse through which centrally-cleared derivatives and futures contracts are traded. These collateral postings expose Farmer Mac to institutional credit risk in the event that either the clearinghouse or the futures commission merchant that Farmer Mac uses to post collateral to the clearinghouse fails to meet its obligations. Conversely, the use of centrally-cleared derivatives mitigates Farmer Mac's credit risk to individual counterparties because clearinghouses assume the credit risk among counterparties in centrally-cleared derivatives transactions. Of Farmer Mac's $8.5 billion notional amount of interest rate swaps outstanding as of March 31, 2017, $7.3 billion were cleared through swap clearinghouses. Of Farmer Mac's $8.1 billion notional amount of interest rate swaps outstanding as of December 31, 2016, $6.9 billion were cleared through swap clearinghouses.

Effective January 3, 2017, the CME implemented a change in its rules related to the exchange of variation margin. Specifically, the exchange of variation margin between derivatives counterparties is now deemed by CME to be a partial settlement of each respective derivative contract rather than as collateral pledged by a counterparty. Accordingly, beginning in first quarter 2017, Farmer Mac presented its cleared derivatives portfolio net of variation margin payments on its consolidated balance sheets and recognized realized gains or losses as a result of these payments within "Gains/(losses) on financial derivatives and hedging activities" on its consolidated statements of operations. Prior to first quarter 2017, Farmer Mac accounted for variation margin as collateral and associated unrealized gains or losses on those centrally cleared derivative contracts. Farmer Mac included those unrealized gains or losses within "Gains/(losses) on financial derivatives and hedging activities" in its consolidated statements of operations prior to first quarter 2017. See Note 9 for information about the effect of this rule change on the calculation of core earnings beginning in 2017.

5. LOANS AND ALLOWANCE FOR LOSSES

Loans

Farmer Mac classifies loans as either held for investment or held for sale. Loans held for investment are recorded at the unpaid principal balance, net of unamortized premium or discount and other cost adjustments. Loans held for sale are reported at the lower of cost or fair value determined on a pooled basis. As of March 31, 2017 and December 31, 2016, Farmer Mac had no loans held for sale. The following table displays the composition of the loan balances as of March 31, 2017 and December 31, 2016:

Table 5.1

	As of March 31, 2017			As of December 31, 2016		
	Unsecuritized	In Consolidated Trusts	Total	Unsecuritized	In Consolidated Trusts	Total
	(in thousands)					
Farm & Ranch	$2,434,436	$1,208,950	$3,643,386	$2,381,488	$1,132,966	$3,514,454
Rural Utilities	999,130	—	999,130	999,512	—	999,512
Total unpaid principal balance[1]	3,433,566	1,208,950	4,642,516	3,381,000	1,132,966	4,513,966
Unamortized premiums, discounts and other cost basis adjustments	(1,475)	—	(1,475)	(1,116)	—	(1,116)
Total loans	3,432,091	1,208,950	4,641,041	3,379,884	1,132,966	4,512,850
Allowance for loan losses	(4,710)	(1,101)	(5,811)	(4,437)	(978)	(5,415)
Total loans, net of allowance	$3,427,381	$1,207,849	$4,635,230	$3,375,447	$1,131,988	$4,507,435

(1) Unpaid principal balance is the basis of presentation in disclosures of outstanding balances for Farmer Mac's lines of business.

Allowance for Losses

Farmer Mac maintains an allowance for losses presented in two components on its consolidated balance sheets: (1) an allowance for loan losses to account for estimated probable losses on loans held, and (2) a reserve for losses to account for estimated probable losses on loans underlying LTSPCs and off-balance sheet Farmer Mac Guaranteed Securities (excluding AgVantage securities). Farmer Mac's total allowance for losses was $7.6 million as of March 31, 2017 and $7.4 million as of December 31, 2016. See Note 6 for more information about off-balance sheet Farmer Mac Guaranteed Securities and LTSPCs.

The following is a summary of the changes in the total allowance for losses for the three months ended March 31, 2017 and 2016:

Table 5.2

	For the Three Months Ended					
	March 31, 2017			March 31, 2016		
	Allowance for Loan Losses	Reserve for Losses	Total Allowance for Losses	Allowance for Loan Losses	Reserve for Losses	Total Allowance for Losses
	(in thousands)					
Beginning Balance	$5,415	$ 2,020	$ 7,435	$4,480	$ 2,083	$ 6,563
Provision for/(release of) losses	637	(193)	444	49	14	63
Charge-offs	(241)	—	(241)	—	—	—
Ending Balance	$5,811	$ 1,827	$ 7,638	$4,529	$ 2,097	$ 6,626

During first quarter 2017, Farmer Mac recorded provisions to its allowance for loan losses of $0.6 million and releases to its reserve for losses of $0.2 million. The provisions to the allowance for loan losses recorded during first quarter 2017 were primarily attributable to an increase in the specific allowance for certain impaired on-balance sheet crop and permanent planting loans resulting from both an increase in the volume of such loans and downgrades in risk ratings on certain loans. The releases to the reserve for losses recorded during the three months ended March 31, 2017 were primarily attributable to (1) a decrease in the general reserve due to improvement in credit quality of certain Agricultural Storage and Processing loans and (2) a net decrease in the balance of loans underlying off-balance sheet Farmer Mac Guaranteed Securities. Farmer Mac recorded $0.2 million of charge-offs to its allowance for loan losses during first quarter 2017. The charge-offs recorded during the first quarter 2017 were primarily related to two impaired crop loans, with one borrower, that were foreclosed and transitioned to REO during first quarter 2017. Farmer Mac had previously recorded a specific allowance of $0.2 million on these impaired crop loans as of December 31, 2016. Subsequent to March 31, 2017, Farmer Mac sold the related properties for $5.7 million and recognized $0.5 million gain on sale of REO.

During first quarter 2016, Farmer Mac recorded provisions to its allowance for loan losses of $49,000 and releases to its reserve for losses of $14,000. The provisions to the allowance for loan losses recorded during first quarter 2016 were attributable to an increase in the specific allowance for on-balance sheet impaired loans due to a modest increase in the balance of such loans. The provisions were partially offset by releases from the general allowance due to repayments of on-balance sheet Agricultural Storage and Processing loans. Farmer Mac recorded no charge-offs to its allowance for loan losses during first quarter 2016.

The following tables present the changes in the total allowance for losses for the three months ended March 31, 2017 and 2016 by commodity type:

Table 5.3

	March 31, 2017						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(in thousands)						
For the Three Months Ended:							
Beginning Balance	$3,365	$ 1,723	$ 1,375	$ 405	$ 533	$ 34	$7,435
Provision for/(release of) losses	425	147	17	(81)	(61)	(3)	444
Charge-offs	(228)	—	(13)	—	—	—	(241)
Ending Balance	$3,562	$ 1,870	$ 1,379	$ 324	$ 472	$ 31	$7,638

	March 31, 2016						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(in thousands)						
For the Three Months Ended:							
Beginning Balance	$2,791	$ 931	$ 1,781	$ 408	$ 649	$ 3	$6,563
Provision for/(release of) losses	101	6	(18)	36	(62)	—	63
Ending Balance	$2,892	$ 937	$ 1,763	$ 444	$ 587	$ 3	$6,626

The following tables present the unpaid principal balances of loans held and loans underlying LTSPCs and off-balance sheet Farmer Mac Guaranteed Securities (excluding AgVantage securities) and the related total allowance for losses by impairment method and commodity type as of March 31, 2017 and December 31, 2016:

Table 5.4

	As of March 31, 2017						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(in thousands)						
Ending Balance:							
Collectively evaluated for impairment:							
On-balance sheet	$2,144,328	$594,950	$573,922	$208,401	$ 13,640	$8,901	$3,544,142
Off-balance sheet	1,253,209	428,436	712,498	142,997	37,841	4,381	2,579,362
Total	$3,397,537	$1,023,386	$1,286,420	$351,398	$ 51,481	$13,282	$6,123,504
Individually evaluated for impairment:							
On-balance sheet	$53,568	$30,980	$7,396	$7,300	$ —	$—	$99,244
Off-balance sheet	10,078	2,268	4,666	707	—	—	17,719
Total	$63,646	$33,248	$12,062	$8,007	$ —	$—	$116,963
Total Farm & Ranch loans:							
On-balance sheet	$2,197,896	$625,930	$581,318	$215,701	$ 13,640	$8,901	$3,643,386
Off-balance sheet	1,263,287	430,704	717,164	143,704	37,841	4,381	2,597,081
Total	$3,461,183	$1,056,634	$1,298,482	$359,405	$ 51,481	$13,282	$6,240,467
Allowance for Losses:							
Collectively evaluated for impairment:							
On-balance sheet	$1,876	$667	$765	$155	$ 21	$26	$3,510
Off-balance sheet	446	260	217	33	451	5	1,412
Total	$2,322	$927	$982	$188	$ 472	$31	$4,922
Individually evaluated for impairment:							
On-balance sheet	$962	$936	$275	$128	$ —	$—	$2,301
Off-balance sheet	278	7	122	8	—	—	415
Total	$1,240	$943	$397	$136	$ —	$—	$2,716
Total Farm & Ranch loans:							
On-balance sheet	$2,838	$1,603	$1,040	$283	$ 21	$26	$5,811
Off-balance sheet	724	267	339	41	451	5	1,827
Total	$3,562	$1,870	$1,379	$324	$ 472	$31	$7,638

	As of December 31, 2016						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(in thousands)						
Ending Balance:							
Collectively evaluated for impairment:							
On-balance sheet	$2,115,450	$569,360	$537,859	$183,660	$ 11,545	$8,894	$3,426,768
Off-balance sheet	1,241,851	437,575	752,473	131,889	36,506	4,503	2,604,797
Total	$3,357,301	$1,006,935	$1,290,332	$315,549	$ 48,051	$13,397	$6,031,565
Individually evaluated for impairment:							
On-balance sheet	$41,648	$27,770	$10,658	$7,610	$ —	$—	$87,686
Off-balance sheet	11,549	2,735	4,854	915	—	—	20,053
Total	$53,197	$30,505	$15,512	$8,525	$ —	$—	$107,739
Total Farm & Ranch loans:							
On-balance sheet	$2,157,098	$597,130	$548,517	$191,270	$ 11,545	$8,894	$3,514,454
Off-balance sheet	1,253,400	440,310	757,327	132,804	36,506	4,503	2,624,850
Total	$3,410,498	$1,037,440	$1,305,844	$324,074	$ 48,051	$13,397	$6,139,304
Allowance for Losses:							
Collectively evaluated for impairment:							
On-balance sheet	$2,000	$652	$735	$193	$ 22	$28	$3,630
Off-balance sheet	420	281	241	54	511	6	1,513
Total	$2,420	$933	$976	$247	$ 533	$34	$5,143
Individually evaluated for impairment:							
On-balance sheet	$613	$770	$270	$132	$ —	$—	$1,785
Off-balance sheet	332	20	129	26	—	—	507
Total	$945	$790	$399	$158	$ —	$—	$2,292
Total Farm & Ranch loans:							
On-balance sheet	$2,613	$1,422	$1,005	$325	$ 22	$28	$5,415
Off-balance sheet	752	301	370	80	511	6	2,020
Total	$3,365	$1,723	$1,375	$405	$ 533	$34	$7,435

The following tables present by commodity type the unpaid principal balances, recorded investment, and specific allowance for losses related to impaired loans and the recorded investment in loans on nonaccrual status as of March 31, 2017 and December 31, 2016:

Table 5.5

	As of March 31, 2017						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(in thousands)						
Impaired Loans:							
With no specific allowance:							
Recorded investment	$7,603	$ 3,665	$ 791	$ 1,965	$ —	$ —	$14,024
Unpaid principal balance	7,619	3,669	791	1,970	—	—	14,049
With a specific allowance:							
Recorded investment(1)	55,927	29,515	11,149	6,026	—	—	102,617
Unpaid principal balance	56,027	29,579	11,271	6,037	—	—	102,914
Associated allowance	1,240	943	397	136	—	—	2,716
Total:							
Recorded investment	63,530	33,180	11,940	7,991	—	—	116,641
Unpaid principal balance	63,646	33,248	12,062	8,007	—	—	116,963
Associated allowance	1,240	943	397	136	—	—	2,716
Recorded investment of loans on nonaccrual status(2)	$17,801	$ 25,974	$ 1,941	$ 4,797	$ —	$ —	$50,513

(1) Impairment analysis was performed in the aggregate in consideration of similar risk characteristics of the assets and historical statistics on $101.0 million (87 percent) of impaired loans as of March 31, 2017, which resulted in a specific allowance of $2.3 million.

(2) Includes $1.0 million of loans that are less than 90 days delinquent but which have not met Farmer Mac's performance criteria for returning to accrual status.

	As of December 31, 2016						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(in thousands)						
Impaired Loans:							
With no specific allowance:							
Recorded investment	$20,761	$ 3,683	$ 1,054	$ 1,970	$ —	$ —	$27,468
Unpaid principal balance	20,816	3,688	1,055	1,975	—	—	27,534
With a specific allowance:							
Recorded investment(1)	32,326	26,748	14,322	6,535	—	—	79,931
Unpaid principal balance	32,381	26,817	14,457	6,550	—	—	80,205
Associated allowance	945	790	399	158	—	—	2,292
Total:							
Recorded investment	53,087	30,431	15,376	8,505	—	—	107,399
Unpaid principal balance	53,197	30,505	15,512	8,525	—	—	107,739
Associated allowance	945	790	399	158	—	—	2,292
	$13,405	$ 10,785	$ 2,696	$ 5,256	$ —	$ —	$32,142

Recorded investment of loans on nonaccrual status[2]

(1) Impairment analysis was performed in the aggregate in consideration of similar risk characteristics of the assets and historical statistics on $76.5 million (71 percent) of impaired loans as of December 31, 2016, which resulted in a specific allowance of $1.6 million.

(2) Includes $12.4 million of loans that are less than 90 days delinquent but which have not met Farmer Mac's performance criteria for returning to accrual status.

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The following table presents by commodity type the average recorded investment and interest income recognized on impaired loans for the three months ended March 31, 2017 and 2016:

Table 5.6

	March 31, 2017						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(in thousands)						
For the Three Months Ended:							
Average recorded investment in impaired loans	$58,309	$ 31,806	$ 13,658	$ 8,248	$ —	$ —	$112,021
Income recognized on impaired loans	302	152	177	103	—	—	734

	March 31, 2016						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(in thousands)						
For the Three Months Ended:							
Average recorded investment in impaired loans	$23,555	$ 23,648	$ 16,318	$ 8,567	$ 4,919	$ —	$77,007
Income recognized on impaired loans	2	44	15	72	—	—	133

For the three months ended March 31, 2017 and 2016, there were no troubled debt restructurings ("TDRs"). As of March 31, 2017 and 2016, there were no TDRs identified during the previous 12 months that were in default under the modified terms. The impact of TDRs on Farmer Mac's allowance for loan losses was immaterial for the three months ended March 31, 2017 and 2016.

When particular criteria are met, such as the default of the borrower, Farmer Mac becomes entitled to purchase the defaulted loans underlying Farmer Mac Guaranteed Securities (commonly referred to as "removal-of-account" provisions). Farmer Mac records all such defaulted loans at their unpaid principal balance during the period in which Farmer Mac becomes entitled to purchase the loans and therefore regains effective control over the transferred loans. In accordance with the terms of all LTSPCs, Farmer Mac acquires loans that are either 90 days or 120 days delinquent (depending on the provisions of the applicable agreement) upon the request of the counterparty. Subsequent to the purchase, these defaulted loans are treated as nonaccrual loans and, therefore, interest is accounted for on the cash basis. Any decreases in expected cash flows are recognized as impairment.

During first quarter 2017, Farmer Mac purchased three defaulted loans having an aggregate unpaid principal balance of $0.3 million from pools underlying LTSPCs. During first quarter 2016, Farmer Mac purchased five defaulted loans having an aggregate unpaid principal balance of $1.4 million from pools underlying Farm & Ranch Guaranteed Securities and LTSPCs.

The following tables present information related to Farmer Mac's acquisition of defaulted loans for the three months ended March 31, 2017 and 2016 and the outstanding balances and carrying amounts of all such loans as of March 31, 2017 and December 31, 2016:

Table 5.7

	For the Three Months Ended	
	March 31, 2017	March 31, 2016
	(in thousands)	
Unpaid principal balance at acquisition date:		
Loans underlying LTSPCs	$311	$ 1,267
Loans underlying off-balance sheet Farmer Mac Guaranteed Securities (excluding AgVantage securities)	—	148
Total unpaid principal balance at acquisition date	311	1,415
Contractually required payments receivable	311	1,435
Impairment recognized subsequent to acquisition	—	—
Recovery/release of allowance for all outstanding acquired defaulted loans	14	4

	As of	
	March 31, 2017	December 31, 2016
	(in thousands)	
Outstanding balance	$14,083	$ 14,669
Carrying amount	12,765	13,069

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Net credit losses and 90-day delinquencies as of and for the periods indicated for loans held and loans underlying off-balance sheet Farm & Ranch Guaranteed Securities and LTSPCs are presented in the table below. As of March 31, 2017, there were no delinquencies and no probable losses inherent in Farmer Mac's Rural Utilities loan portfolio and Farmer Mac had not experienced credit losses on any Rural Utilities loans.

Table 5.8

	90-Day Delinquencies[(1)]		Net Credit Losses	
	As of		For the Three Months Ended	
	March 31, 2017	December 31, 2016	March 31, 2017	March 31, 2016
	(in thousands)			
On-balance sheet assets:				
Farm & Ranch:				
Loans	$49,534	$ 19,757	$246	$ 39
Total on-balance sheet	$49,534	$ 19,757	$246	$ 39
Off-balance sheet assets:				
Farm & Ranch:				
LTSPCs	$1,273	$ 1,281	$—	$ —
Total off-balance sheet	$1,273	$ 1,281	$—	$ —
Total	$50,807	$ 21,038	$246	$ 39

(1) Includes loans and loans underlying off-balance sheet Farm & Ranch Guaranteed Securities and LTSPCs that are 90 days or more past due, in foreclosure, or in bankruptcy with at least one missed payment, excluding loans performing under either their original loan terms or a court-approved bankruptcy plan.

Of the $49.5 million of on-balance sheet loans reported as 90-day delinquencies as of March 31, 2017, $0.2 million were loans subject to "removal-of-account" provisions. Of the $19.8 million of on-balance sheet loans reported as 90-day delinquencies as of December 31, 2016, $0.1 million were loans subject to "removal-of-account" provisions.

Credit Quality Indicators

The following tables present credit quality indicators related to Farm & Ranch loans held and loans underlying LTSPCs and off-balance sheet Farm & Ranch Guaranteed Securities as of March 31, 2017 and December 31, 2016:

Table 5.9

	As of March 31, 2017						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(in thousands)						
Credit risk profile by internally assigned grade[(1)]							
On-balance sheet:							
Acceptable	$2,104,716	$593,926	$542,790	$206,233	$ 13,640	$8,901	$3,470,206
Special mention[(2)]	39,725	1,024	31,132	2,168	—	—	74,049
Substandard[(3)]	53,455	30,980	7,396	7,300	—	—	99,131
Total on-balance sheet	$2,197,896	$625,930	$581,318	$215,701	$ 13,640	$8,901	$3,643,386
Off-Balance Sheet:							
Acceptable	$1,204,807	$395,331	$687,070	$138,332	$ 35,950	$3,805	$2,465,295
Special mention[(2)]	26,201	16,475	12,702	4,000	—	14	59,392
Substandard[(3)]	32,279	18,898	17,392	1,372	1,891	562	72,394
Total off-balance sheet	$1,263,287	$430,704	$717,164	$143,704	$ 37,841	$4,381	$2,597,081
Total Ending Balance:							
Acceptable	$3,309,523	$989,257	$1,229,860	$344,565	$ 49,590	$12,706	$5,935,501
Special mention[(2)]	65,926	17,499	43,834	6,168	—	14	133,441
Substandard[(3)]	85,734	49,878	24,788	8,672	1,891	562	171,525
Total	$3,461,183	$1,056,634	$1,298,482	$359,405	$ 51,481	$13,282	$6,240,467
Commodity analysis of past due loans[(1)]							
On-balance sheet	$23,484	$20,690	$2,612	$2,748	$ —	$—	$49,534
Off-balance sheet	880	—	—	393	—	—	1,273
90 days or more past due	$24,364	$20,690	$2,612	$3,141	$ —	$—	$50,807

(1) Amounts represent unpaid principal balance of risk-rated loans, which is the basis Farmer Mac uses to analyze its portfolio, and recorded investment of past due loans.

(2) Assets in the "Special mention" category generally have potential weaknesses due to performance issues but are currently considered to be adequately secured.

(3) Substandard assets have a well-defined weakness or weaknesses and there is a distinct possibility that some loss will be sustained if deficiencies are not corrected.

	As of December 31, 2016						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(in thousands)						
Credit risk profile by internally assigned grade[1]							
On-balance sheet:							
Acceptable	$2,080,227	$568,221	$504,784	$179,288	$ 11,545	$8,894	$3,352,959
Special mention[2]	35,223	1,139	33,075	4,372	—	—	73,809
Substandard[3]	41,648	27,770	10,658	7,610	—	—	87,686
Total on-balance sheet	$2,157,098	$597,130	$548,517	$191,270	$ 11,545	$8,894	$3,514,454
Off-Balance Sheet							
Acceptable	$1,201,144	$403,256	$724,056	$125,440	$ 34,537	$3,916	$2,492,349
Special mention[2]	20,422	16,881	15,341	2,344	—	6	54,994
Substandard[3]	31,834	20,173	17,930	5,020	1,969	581	77,507
Total off-balance sheet	$1,253,400	$440,310	$757,327	$132,804	$ 36,506	$4,503	$2,624,850
Total Ending Balance:							
Acceptable	$3,281,371	$971,477	$1,228,840	$304,728	$ 46,082	$12,810	$5,845,308
Special mention[2]	55,645	18,020	48,416	6,716	—	6	128,803
Substandard[3]	73,482	47,943	28,588	12,630	1,969	581	165,193
Total	$3,410,498	$1,037,440	$1,305,844	$324,074	$ 48,051	$13,397	$6,139,304
Commodity analysis of past due loans[1]							
On-balance sheet	$13,449	$3,245	$669	$2,394	$ —	$—	$19,757
Off-balance sheet	373	407	38	463	—	—	1,281
90 days or more past due	$13,822	$3,652	$707	$2,857	$ —	$—	$21,038

(1) Amounts represent unpaid principal balance of risk-rated loans, which is the basis Farmer Mac uses to analyze its portfolio, and recorded investment of past due loans.

(2) Assets in the "Special mention" category generally have potential weaknesses due to performance issues but are currently considered to be adequately secured.

(3) Substandard assets have a well-defined weakness or weaknesses and there is a distinct possibility that some loss will be sustained if deficiencies are not corrected.

Concentrations of Credit Risk

The following table sets forth the geographic and commodity/collateral diversification, as well as the range of original loan-to-value ratios, for all Farm & Ranch loans held and loans underlying off-balance sheet Farm & Ranch Guaranteed Securities and LTSPCs as of March 31, 2017 and December 31 2016:

Table 5.10

	As of March 31, 2017	December 31, 2016
	(in thousands)	
By commodity/collateral type:		
Crops	$3,461,183	$3,410,498
Permanent plantings	1,056,634	1,037,440
Livestock	1,298,482	1,305,844
Part-time farm	359,405	324,074
Ag. Storage and Processing	51,481	48,051
Other	13,282	13,397
Total	$6,240,467	$6,139,304
By geographic region[1]:		
Northwest	$688,304	$657,403
Southwest	1,796,177	1,791,745
Mid-North	2,151,503	2,104,867
Mid-South	858,319	837,121
Northeast	237,968	229,679
Southeast	508,196	518,489
Total	$6,240,467	$6,139,304
By original loan-to-value ratio:		
0.00% to 40.00%	$1,783,420	$1,740,792
40.01% to 50.00%	1,431,980	1,401,630
50.01% to 60.00%	1,719,971	1,706,099
60.01% to 70.00%	1,064,391	1,086,295
70.01% to 80.00%	204,639	180,142
80.01% to 90.00%	36,066	24,346
Total	$6,240,467	$6,139,304

(1) Geographic regions: Northwest (AK, ID, MT, OR, WA, WY); Southwest (AZ, CA, CO, HI, NM, NV, UT); Mid-North (IA, IL, IN, MI, MN, NE, ND, SD, WI); Mid-South (AR, KS, LA, MO, OK, TX); Northeast (CT, DE, KY, MA, MD, ME, NH, NJ, NY, OH, PA, RI, VA, VT, WV); Southeast (AL, FL, GA, MS, NC, SC, TN).

The original loan-to-value ratio is calculated by dividing the loan principal balance at the time of guarantee, purchase, or commitment by the appraised value at the date of loan origination or, when available, the updated appraised value at the time of guarantee, purchase, or commitment. Current loan-to-value ratios may be higher or lower than the original loan-to-value ratios.

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6. GUARANTEES AND LONG-TERM STANDBY PURCHASE COMMITMENTS

Farmer Mac offers two credit enhancement alternatives to direct loan purchases that allow approved lenders the ability to retain the cash flow benefits of their loans and increase their liquidity and lending capacity: (1) Farmer Mac Guaranteed Securities, which are available through each of the Farm & Ranch, USDA Guarantees, Rural Utilities, and Institutional Credit lines of business, and (2) LTSPCs, which are available through the Farm & Ranch or the Rural Utilities lines of business.

The following table presents the maximum principal amount of potential undiscounted future payments that Farmer Mac could be required to make under all off-balance sheet Farmer Mac Guaranteed Securities as of March 31, 2017 and December 31, 2016, not including offsets provided by any recourse provisions, recoveries from third parties, or collateral for the underlying loans:

Table 6.1
Outstanding Balance of Off-Balance Sheet Farmer Mac Guaranteed Securities

	As of March 31, 2017	As of December 31, 2016
	(in thousands)	
Farm & Ranch:		
Guaranteed Securities	$387,272	$415,441
USDA Guarantees:		
Farmer Mac Guaranteed USDA Securities	135,334	103,976
Institutional Credit:		
AgVantage Securities	983,214	983,214
Revolving floating rate AgVantage facility(1)	300,000	300,000
Total off-balance sheet Farmer Mac Guaranteed Securities	$1,805,820	$1,802,631

(1) Relates to a revolving floating rate AgVantage facility subject to specified contractual terms. Farmer Mac receives a fixed fee based on the full dollar amount of the facility.

Eligible loans and other eligible assets may be placed into trusts that are used as vehicles for the securitization of the transferred assets and the Farmer Mac-guaranteed beneficial interests in the trusts are sold to investors. The following table summarizes the significant cash flows received from and paid to trusts used for Farmer Mac securitizations:

Table 6.2

	For the Three Months Ended	
	March 31, 2017	March 31, 2016
	(in thousands)	
Proceeds from new securitizations	$149,607	$139,561
Guarantee fees received	488	561
Purchases of assets from the trusts	—	(1,267)

Farmer Mac has recorded a liability for its obligation to stand ready under the guarantee in the guarantee and commitment obligation on the consolidated balance sheets. This liability approximated $4.7 million as of March 31, 2017 and $5.5 million as of December 31, 2016. As of March 31, 2017 and December 31, 2016, the weighted-average remaining maturity of all loans underlying off-balance sheet Farmer Mac Guaranteed Securities, excluding AgVantage securities, was 10.6 years and 10.7 years, respectively. As of March 31, 2017 and December 31, 2016, the weighted-average remaining maturity of the off-balance sheet AgVantage securities was 0.4 years and 0.7 years, respectively.

Long-Term Standby Purchase Commitments

An LTSPC is a commitment by Farmer Mac to purchase eligible loans from an identified pool of loans under specified circumstances set forth in the applicable agreement, either for cash or in exchange for Farmer Mac Guaranteed Securities, on one or more undetermined future dates. As consideration for its assumption of the credit risk on loans underlying an LTSPC, Farmer Mac receives a commitment fee payable monthly in arrears in an amount approximating what would have been the guarantee fee if the transaction were structured as a swap for Farmer Mac Guaranteed Securities.

The maximum principal amount of potential undiscounted future payments that Farmer Mac could be requested to make under all LTSPCs, not including offsets provided by any recourse provisions, recoveries from third parties, or collateral for the underlying loans, was $3.1 billion as of both March 31, 2017 and December 31, 2016.

As of March 31, 2017 and December 31, 2016, the weighted-average remaining maturity of all loans underlying LTSPCs was 15.2 years and 15.1 years, respectively. For those LTSPCs issued or modified on or after January 1, 2003, Farmer Mac has recorded a liability for its obligation to stand ready under the commitment in the guarantee and commitment obligation on the consolidated balance sheets. This liability approximated $32.1 million as of March 31, 2017 and $31.8 million as of December 31, 2016.

7. EQUITY

Common Stock

On September 8, 2015, Farmer Mac's board of directors approved a share repurchase program authorizing Farmer Mac to repurchase up to $25 million of its outstanding Class C non-voting common stock through September 8, 2017. As of March 31, 2017, Farmer Mac had repurchased approximately 668,000 shares of Class C non-voting common stock at a cost of approximately $19.6 million pursuant to the share repurchase program.

Capital Requirements

Farmer Mac is subject to the following capital requirements:

- Statutory minimum capital requirement – Farmer Mac's statutory minimum capital level is an amount of core capital (stockholders' equity less accumulated other comprehensive income) equal to the sum of 2.75 percent of Farmer Mac's aggregate on-balance sheet assets, as calculated for regulatory purposes, plus 0.75 percent of the aggregate off-balance sheet obligations of Farmer Mac, specifically including:
  - the unpaid principal balance of outstanding Farmer Mac Guaranteed Securities;
  - instruments issued or guaranteed by Farmer Mac that are substantially equivalent to Farmer Mac Guaranteed Securities, including LTSPCs; and
  - other off-balance sheet obligations of Farmer Mac.
- Statutory critical capital requirement – Farmer Mac's critical capital level is an amount of core capital equal to 50 percent of the total minimum capital requirement at that time.

- Risk-based capital requirement – Farmer Mac's charter directs FCA to establish a risk-based capital stress test for Farmer Mac, using specified stress-test parameters.

Farmer Mac is required to comply with the higher of the minimum capital requirement and the risk-based capital requirement. As of both March 31, 2017 and December 31, 2016, the minimum capital requirement was greater than the risk-based capital requirement. Farmer Mac's ability to declare and pay dividends could be restricted if it fails to comply with applicable capital requirements.

As of March 31, 2017, Farmer Mac's minimum capital requirement was $475.6 million and its core capital level was $624.3 million, which was $148.7 million above the minimum capital requirement as of that date. As of December 31, 2016, Farmer Mac's minimum capital requirement was $466.5 million and its core capital level was $609.7 million, which was $143.2 million above the minimum capital requirement as of that date.

In accordance with FCA's rule on Farmer Mac's capital planning, and as part of Farmer Mac's capital plan, Farmer Mac has adopted a policy for maintaining a sufficient level of Tier 1 capital (consisting of retained earnings, paid-in-capital, common stock, and qualifying preferred stock) and imposing restrictions on Tier 1-eligible dividends and any discretionary bonus payments in the event that this capital falls below specified thresholds.

8. FAIR VALUE DISCLOSURES

As of March 31, 2017, Farmer Mac's assets and liabilities recorded at fair value included financial instruments valued at $5.3 billion whose fair values were estimated by management in the absence of readily determinable fair values (i.e., level 3). These financial instruments measured as level 3 represented 33 percent of total assets and 68 percent of financial instruments measured at fair value as of March 31, 2017. As of December 31, 2016, Farmer Mac's assets and liabilities recorded at fair value included financial instruments valued at $4.9 billion whose fair values were estimated by management in the absence of readily determinable fair values. These financial instruments measured as level 3 represented 31 percent of total assets and 65 percent of financial instruments measured at fair value as of December 31, 2016.

Net transfers in and/or out of the different levels within the fair value hierarchy are based on the fair values of the assets and liabilities as of the beginning of the reporting period. During the first three months of 2017 there was one transfer within fair value hierarchy from Level 2 to Level 3 for the fair value measurement of a fixed-rate GSE guaranteed mortgage-backed security (interest only strip). The transfer to Level 3 was because unobservable inputs became significant to the overall estimate of the fair value of the security as of March 31, 2017. There were no transfers within the fair value hierarchy for fair value measurements of Farmer Mac's investment securities, Farmer Mac Guaranteed Securities, USDA Securities, and financial derivatives during the first three months of 2016. See Note 3 for information about the transfer of available-for-sale USDA and Farmer Mac Guaranteed USDA securities to held-to-maturity as of October 1, 2016.

The following tables present information about Farmer Mac's assets and liabilities measured at fair value on a recurring and non-recurring basis as of March 31, 2017 and December 31, 2016, respectively, and indicate the fair value hierarchy of the valuation techniques used by Farmer Mac to determine such fair value:

Table 8.1
Assets and Liabilities Measured at Fair Value as of March 31, 2017

	Level 1	Level 2	Level 3	Total
	(in thousands)			
Recurring:				
Assets:				
Investment Securities:				
Available-for-sale:				
Floating rate auction-rate certificates backed by Government guaranteed student loans	$—	$—	$18,124	$18,124
Floating rate asset-backed securities	—	40,370	—	40,370
Floating rate corporate debt securities	—	10,060	—	10,060
Floating rate Government/GSE guaranteed mortgage-backed securities	—	1,344,690	—	1,344,690
Fixed rate GSE guaranteed mortgage-backed securities	—	558	4,819	5,377
Floating rate GSE subordinated debt	—	67,576	—	67,576
Fixed rate senior agency debt	—	187,065	—	187,065
Fixed rate U.S. Treasuries	805,982	—	—	805,982
Total Investment Securities	805,982	1,650,319	22,943	2,479,244
Farmer Mac Guaranteed Securities:				
Available-for-sale:				
AgVantage	—	—	5,243,046	5,243,046
Total Farmer Mac Guaranteed Securities	—	—	5,243,046	5,243,046
USDA Securities:				
Trading	—	—	18,602	18,602
Total USDA Securities	—	—	18,602	18,602
Financial derivatives	8	2,666	—	2,674
Total Assets at fair value	$805,990	$1,652,985	$5,284,591	$7,743,566
Liabilities:				
Financial derivatives	$—	$32,054	$—	$32,054
Total Liabilities at fair value	$—	$32,054	$—	$32,054
Non-recurring:				
Assets:				
Loans held for investment	$—	$—	$1,260	$1,260
REO	—	—	4,978	4,978
Total Non-recurring Assets at fair value	$—	$—	$6,238	$6,238

Assets and Liabilities Measured at Fair Value as of December 31, 2016

	Level 1	Level 2	Level 3	Total
	(in thousands)			
Recurring:				
Assets:				
Investment Securities:				
Available-for-sale:				
Floating rate auction-rate certificates backed by Government guaranteed student loans	$—	$—	$17,730	$17,730
Floating rate asset-backed securities	—	43,851	—	43,851
Floating rate corporate debt securities	—	10,041	—	10,041
Floating rate Government/GSE guaranteed mortgage-backed securities	—	1,361,029	—	1,361,029
Fixed rate GSE guaranteed mortgage-backed securities	—	7,625	—	7,625
Floating rate GSE subordinated debt	—	66,953	—	66,953
Fixed rate senior agency debt	—	187,133	—	187,133
Fixed rate U.S. Treasuries	821,489	—	—	821,489
Total Investment Securities	821,489	1,676,632	17,730	2,515,851
Farmer Mac Guaranteed Securities:				
Available-for-sale:				
AgVantage	—	—	4,853,685	4,853,685
Total Farmer Mac Guaranteed Securities	—	—	4,853,685	4,853,685
USDA Securities:				
Trading	—	—	20,388	20,388
Total USDA Securities	—	—	20,388	20,388
Financial derivatives	—	23,182	—	23,182
Total Assets at fair value	$821,489	$1,699,814	$4,891,803	$7,413,106
Liabilities:				
Financial derivatives	$155	$57,997	$—	$58,152
Total Liabilities at fair value	$155	$57,997	$—	$58,152
Non-recurring:				
Assets:				
Loans held for investment	$—	$—	$2,799	$2,799
REO	$—	$—	$349	$349
Total Non-recurring Assets at fair value	$—	$—	$3,148	$3,148

The following tables present additional information about assets and liabilities measured at fair value on a recurring basis for which Farmer Mac has used significant unobservable inputs to determine fair value. Net transfers in and/or out of level 3 are based on the fair values of the assets and liabilities as of the beginning of the reporting period. There were no liabilities measured at fair value using significant unobservable inputs during the three months ended March 31, 2017 and 2016.

Table 8.2

Level 3 Assets and Liabilities Measured at Fair Value for the Three Months Ended March 31, 2017

	Beginning Balance	Transfers in	Purchases	Sales	Settlements	Realized and Unrealized Gains/(Losses) included in Income	Unrealized Gains/(Losses) included in Other Comprehe-nsive Income	Ending Balance
	(in thousands)							
Recurring:								
Assets:								
Investment Securities:								
Available-for-sale:								
Floating rate auction-rate certificates backed by Government guaranteed student loans	$17,730	—	$—	$—	$—	$ —	$ 394	$18,124
Fixed rate GSE guaranteed mortgage-backed securities	—	7,041	—	—	(112)	—	(2,110)	4,819
Total available-for-sale	17,730	7,041	—	—	(112)	—	(1,716)	22,943
Farmer Mac Guaranteed Securities:								
Available-for-sale:								
AgVantage	4,853,685	—	539,527	—	(161,907)	(3,215)	14,956	5,243,046
Total available-for-sale	4,853,685	—	539,527	—	(161,907)	(3,215)	14,956	5,243,046
USDA Securities:								
Available-for-sale	—	—	32,589	(32,589)	—	—	—	—
Trading(1)	20,388	—	—	—	(1,704)	(82)	—	18,602
Total USDA Securities	20,388	—	32,589	(32,589)	(1,704)	(82)	—	18,602
Total Assets at fair value	$4,891,803	$7,041	$572,116	$(32,589)	$(163,723)	$ (3,297)	$ 13,240	$5,284,591

(1) Includes unrealized losses of $44,000 attributable to assets still held as of March 31, 2017 that are recorded in "(Losses)/gains on trading securities."

Level 3 Assets and Liabilities Measured at Fair Value for the Three Months Ended March 31, 2016

	Beginning Balance	Purchases	Sales	Settlements	Realized and Unrealized (Losses)/Gains included in Income	Unrealized Gains/(Losses) included in Other Comprehen-sive Income	Ending Balance
	(in thousands)						
Recurring:							
Assets:							
Investment Securities:							
Available-for-sale:							
Floating rate auction-rate certificates backed by Government guaranteed student loans	$44,924	$—	$(26,806)	$—	$ 6	$ (394)	$17,730
Total available-for-sale	44,924	—	(26,806)	—	6	(394)	17,730
Trading:							
Floating rate asset-backed securities(1)	491	—	—	(206)	98	—	383
Total trading	491	—	—	(206)	98	—	383
Total Investment Securities	45,415	—	(26,806)	(206)	104	(394)	18,113
Farmer Mac Guaranteed Securities:							
Available-for-sale:							
AgVantage	4,121,244	915,531	—	(512,530)	24,298	(13,733)	4,534,810
Farmer Mac Guaranteed USDA Securities	31,361	—	—	(498)	—	(169)	30,694
Total Farmer Mac Guaranteed Securities	4,152,605	915,531	—	(513,028)	24,298	(13,902)	4,565,504
USDA Securities:							
Available-for-sale	1,888,344	98,974	(3,648)	(84,193)	—	8,537	1,908,014
Trading(2)	28,975	—	—	(2,365)	259	—	26,869
Total USDA Securities	1,917,319	98,974	(3,648)	(86,558)	259	8,537	1,934,883
Total Assets at fair value	$6,115,339	$1,014,505	$(30,454)	$(599,792)	$ 24,661	$ (5,759)	$6,518,500

(1) Unrealized gains are attributable to assets still held as of March 31, 2016 and are recorded in "(Losses)/gains on trading securities."

(2) Includes unrealized gains of $0.2 million attributable to assets still held as of March 31, 2016 that are recorded in "(Losses)/gains on trading securities."

The following tables present additional information about the significant unobservable inputs, such as discount rates and constant prepayment rates ("CPR"), used in the fair value measurements categorized in level 3 of the fair value hierarchy as of March 31, 2017 and December 31, 2016.

Table 8.3

	As of March 31, 2017			
Financial Instruments	Fair Value	Valuation Technique	Unobservable Input	Range (Weighted-Average)
	(in thousands)			
Assets:				
Investment securities:				
Floating rate auction-rate certificates backed by Government guaranteed student loans	$18,124	Indicative bids	Range of broker quotes	92.0% - 92.0% (92.0%)
Fixed rate GSE guaranteed mortgage-backed securities	$4,819	Discounted cash flow	Discount rate	3.4%
			CPR	0 %
Farmer Mac Guaranteed Securities:				
AgVantage	$5,243,046	Discounted cash flow	Discount rate	1.7% - 3.3% (2.0%)
USDA Securities	$18,602	Discounted cash flow	Discount rate	3.7% - 5.3% (5.0%)
			CPR	9% - 19% (17%)

	As of December 31, 2016			
Financial Instruments	Fair Value	Valuation Technique	Unobservable Input	Range (Weighted-Average)
	(in thousands)			
Assets:				
Investment securities:				
Floating rate auction-rate certificates backed by Government guaranteed student loans	$17,730	Indicative bids	Range of broker quotes	90.0% - 90.0% (90.0%)
Farmer Mac Guaranteed Securities:				
AgVantage	$4,853,685	Discounted cash flow	Discount rate	1.5% - 3.3% (1.9%)
USDA Securities	$20,388	Discounted cash flow	Discount rate	4.0% - 5.3% (5.0%)
			CPR	13% - 18% (17%)

The significant unobservable inputs used in the fair value measurements of Farmer Mac Guaranteed Securities and USDA Securities are prepayment rates and discount rates commensurate with the risks involved. Typically, significant increases (decreases) in any of these inputs in isolation may result in materially lower (higher) fair value measurements. Generally, in a rising interest rate environment, Farmer Mac would expect average discount rates to increase and would likely expect a corresponding decrease in forecasted prepayment rates. Conversely, in a declining interest rate environment, Farmer Mac would expect average discount rates to decrease and would likely expect a corresponding increase in forecasted prepayment rates. Prepayment rates are not presented in the table above for AgVantage securities because they generally do not pay down principal based on amortization schedules but instead typically have fixed maturity dates when the secured general obligations are due.

Disclosures on Fair Value of Financial Instruments

The following table sets forth the estimated fair values and carrying values for financial assets, liabilities, and guarantees and commitments as of March 31, 2017 and December 31, 2016:

Table 8.4

	As of March 31, 2017		As of December 31, 2016	
	Fair Value	Carrying Amount	Fair Value	Carrying Amount
	(in thousands)			
Financial assets:				
Cash and cash equivalents	$313,641	$313,641	$	