As filed with the Securities and Exchange Commission on May 9, 2022

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, 2022

or

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

For the transition period from _____ to _____.

Commission File Number 001-14951

FARMER MAC

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, DC	20006
(Address of principal executive offices)	(Zip code)

(202) 872-7700

(Registrant's telephone number, including area code)

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

Title of each class	Trading symbol	Exchange on which registered
Class A voting common stock	AGM.A	New York Stock Exchange
Class C non-voting common stock	AGM	New York Stock Exchange
6.000% Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series C	AGM.PRC	New York Stock Exchange
5.700% Non-Cumulative Preferred Stock, Series D	AGM.PRD	New York Stock Exchange
5.750% Non-Cumulative Preferred Stock, Series E	AGM.PRE	New York Stock Exchange
5.250% Non-Cumulative Preferred Stock, Series F	AGM.PRF	New York Stock Exchange
4.875% Non-Cumulative Preferred Stock, Series G	AGM.PRG	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: Class B voting common stock

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

As of May 2, 2022, the registrant had outstanding 1,030,780 shares of Class A voting common stock, 500,301 shares of Class B voting common stock, and 9,263,931 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, 2022	December 31, 2021
	(in thousands)	
Assets:		
Cash and cash equivalents	$ 890,046	$ 908,785
Investment securities:		
Available-for-sale, at fair value (amortized cost of $4,258,227 and $3,834,714, respectively)	4,195,314	3,836,391
Held-to-maturity, at amortized cost	44,970	44,970
Other investments	1,504	1,229
Total Investment Securities	4,241,788	3,882,590
Farmer Mac Guaranteed Securities:		
Available-for-sale, at fair value (amortized cost of $6,672,894 and $6,135,807, respectively)	6,600,246	6,328,559
Held-to-maturity, at amortized cost	1,906,218	2,033,239
Total Farmer Mac Guaranteed Securities	8,506,464	8,361,798
USDA Securities:		
Trading, at fair value	3,386	4,401
Held-to-maturity, at amortized cost	2,436,103	2,436,331
Total USDA Securities	2,439,489	2,440,732
Loans:		
Loans held for sale, at lower of cost or fair value	9,000	—
Loans held for investment, at amortized cost	8,481,310	8,314,096
Loans held for investment in consolidated trusts, at amortized cost	888,200	948,623
Allowance for losses	(13,570)	(14,041)
Total loans, net of allowance	9,364,940	9,248,678
Financial derivatives, at fair value	26,329	19,139
Interest receivable (includes $5,679 and $10,418, respectively, related to consolidated trusts)	148,228	177,355
Guarantee and commitment fees receivable	45,021	45,538
Deferred tax asset, net	24,910	15,558
Prepaid expenses and other assets	102,199	45,318
Total Assets	$ 25,789,414	$ 25,145,491
Liabilities and Equity:		
Liabilities:		
Notes payable	$ 23,039,967	$ 22,716,156
Debt securities of consolidated trusts held by third parties	895,145	981,379
Financial derivatives, at fair value	105,574	34,248
Accrued interest payable (includes $4,724 and $9,619, respectively, related to consolidated trusts)	89,761	83,992
Guarantee and commitment obligation	43,285	43,926
Accounts payable and accrued expenses	420,998	79,427
Reserve for losses	1,840	1,950
Total Liabilities	24,596,570	23,941,078
Commitments and Contingencies (Note 6)		
Equity:		
Preferred stock:		
Series C, par value $25 per share, 3,000,000 shares authorized, issued and outstanding	73,382	73,382
Series D, par value $25 per share, 4,000,000 shares authorized, issued and outstanding	96,659	96,659
Series E, par value $25 per share, 3,180,000 shares authorized, issued and outstanding	77,003	77,003
Series F, par value $25 per share, 4,800,000 shares authorized, issued and outstanding	116,160	116,160
Series G, par value $25 per share, 5,000,000 shares authorized, issued and outstanding	121,327	121,327
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, 9,256,596 shares and 9,235,205 shares outstanding, respectively	9,257	9,235
Additional paid-in capital	127,103	125,993
Accumulated other comprehensive (loss)/income, net of tax	(39,665)	3,853
Retained earnings	610,087	579,270
Total Equity	1,192,844	1,204,413
Total Liabilities and Equity	$ 25,789,414	$ 25,145,491

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, 2022	March 31, 2021
	(in thousands, except per share amounts)	
Interest income:		
Investments and cash equivalents	$ 5,716	$ 5,529
Farmer Mac Guaranteed Securities and USDA Securities	39,257	42,404
Loans	67,247	59,494
Total interest income	112,220	107,427
Total interest expense	50,345	54,176
Net interest income	61,875	53,251
Provision for losses	(56)	(913)
Net interest income after provision for losses	61,819	52,338
Non-interest income/(expense):		
Guarantee and commitment fees	3,695	3,030
Gains on financial derivatives	16,074	4,293
Losses on trading securities	(63)	(13)
Release of reserve for losses	110	944
Other income	675	583
Non-interest income	20,491	8,837
Operating expenses:		
Compensation and employee benefits	13,298	11,795
General and administrative	7,278	6,336
Regulatory fees	812	750
Operating expenses	21,388	18,881
Income before income taxes	60,922	42,294
Income tax expense	13,085	9,067
Net income	47,837	33,227
Preferred stock dividends	(6,791)	(5,269)
Net income attributable to common stockholders	$ 41,046	$ 27,958
Earnings per common share:		
Basic earnings per common share	$ 3.81	$ 2.60
Diluted earnings per common share	$ 3.77	$ 2.58

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

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

	For the Three Months Ended	
	March 31, 2022	March 31, 2021
	(in thousands	
Net income	$ 47,837	$ 33,227
Other comprehensive (loss)/incomes:		
Net unrealized (losses)/gains on available-for-sale securities	(86,267)	66,364
Net changes in held-to-maturity securities	(23)	(2,157)
Net unrealized gains on cash flow hedges	31,204	18,916
Other comprehensive (loss)/income before tax	(55,086)	83,123
Income tax benefit/(expense) related to other comprehensive (loss)/income	11,568	(17,456)
Other comprehensive (loss)/income net of tax	(43,518)	65,667
Comprehensive income	$ 4,319	$ 98,894

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	Total
	Shares	Amount	Shares	Amount	Capital	Income/(Loss)	Earnings	Equity
					(in thousands)			
Balance as of December 31, 2021	19,980	$ 484,531	10,766	$ 10,766	$ 125,993	$ 3,853	$ 579,270	$1,204,413
Net Income	—	—	—	—	—	—	47,837	47,837
Other comprehensive loss, net of tax	—	—	—	—	—	(43,518)	—	(43,518)
Cash dividends:								
Preferred stock	—	—	—	—	—	—	(6,791)	(6,791)
Common stock (cash dividend of $0.95 per share)	—	—	—	—	—	—	(10,229)	(10,229)
Issuance of Class C Common Stock	—	—	22	22	46	—	—	68
Stock-based compensation cost	—	—	—	—	2,113			2,113
Other stock-based award activity	—	—	—	—	(1,049)	—	—	(1,049)
Balance as of March 31, 2022	19,980	$ 484,531	10,788	$ 10,788	$ 127,103	$ (39,665)	$ 610,087	$1,192,844
Balance as of December 31, 2020	14,980	$ 363,204	10,737	$ 10,737	$ 122,899	$ (13,923)	$ 509,560	$ 992,477
Net Income	—	—	—	—	—	—	33,227	33,227
Other comprehensive income, net of tax	—	—	—	—	—	65,667	—	65,667
Cash dividends:								
Preferred stock	—	—	—	—	—	—	(5,269)	(5,269)
Common stock (cash dividend of $0.88 per share)	—	—	—	—	—	—	(9,450)	(9,450)
Issuance of Class C Common Stock	—	—	21	21	12	—	—	33
Stock-based compensation cost	—	—	—	—	1,665			1,665
Other stock-based award activity	—	—	—	—	(858)	—	—	(858)
Balance as of March 31, 2021	14,980	$ 363,204	10,758	$ 10,758	$ 123,718	$ 51,744	$ 528,068	$1,077,492

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

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

	For the Three Months Ended	
	March 31, 2022	March 31, 2021
	(in thousands)	
Cash flows from operating activities:		
Net income	$ 47,837	$ 33,227
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	1,913	4,933
Amortization of debt premiums, discounts, and issuance costs	2,018	1,994
Net change in fair value of trading securities, hedged assets, and financial derivatives	231,470	300,424
Total (release of)/provision for allowance for losses	(54)	(31)
Excess tax benefits related to stock-based awards	(137)	190
Deferred income taxes	2,216	1,387
Stock-based compensation expense	2,113	1,665
Proceeds from repayment of loans purchased as held for sale	15,028	25,374
Net change in:		
Interest receivable	29,408	43,601
Guarantee and commitment fees receivable	(124)	103
Other assets	(61,087)	(7,227)
Accrued interest payable	5,769	(7,522)
Custodial deposit liability	(17,027)	—
Other liabilities	9,962	(322)
Net cash provided by operating activities	269,305	397,796
Cash flows from investing activities:		
Purchases of available-for-sale investment securities	(845,114)	(400,701)
Purchases of other investment securities	(275)	(403)
Purchases of Farmer Mac Guaranteed Securities and USDA Securities	(1,720,619)	(599,833)
Purchases of loans held for investment	(718,008)	(728,748)
Purchases of defaulted loans	—	(8,713)
Proceeds from repayment of available-for-sale investment securities	418,414	446,325
Proceeds from repayment of Farmer Mac Guaranteed Securities and USDA Securities	1,659,253	683,090
Proceeds from repayment of loans purchased as held for investment	463,602	624,448
Proceeds from sale of Farmer Mac Guaranteed Securities	25,928	49,133
Net cash (used in)/provided by investing activities	(716,819)	64,598
Cash flows from financing activities:		
Proceeds from issuance of discount notes	13,577,266	16,077,510
Proceeds from issuance of medium-term notes	2,626,165	3,498,544
Payments to redeem discount notes	(13,854,017)	(16,199,154)
Payments to redeem medium-term notes	(1,790,815)	(3,638,000)
Payments to third parties on debt securities of consolidated trusts	(112,731)	(207,861)
Proceeds from common stock issuance	46	12
Tax payments related to share-based awards	(119)	(126)
Dividends paid on common and preferred stock	(17,020)	(14,719)
Net cash provided by/(used in) financing activities	428,775	(483,794)
Net change in cash and cash equivalents	(18,739)	(21,400)
Cash and cash equivalents at beginning of period	908,785	1,033,941
Cash and cash equivalents at end of period	$ 890,046	$ 1,012,541

Non-cash activity:		
Loans acquired and securitized as Farmer Mac Guaranteed Securities	25,928	49,133
Consolidation of Farmer Mac 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	25,928	49,133
Reclassification of defaulted loans from loans held for investment in consolidated trusts to loans held for investment	569	23,463
Reclassification of loans held for investment to loans held for sale	9,000	—
Capitalized interest	9	782
Securities payment not yet received	(1,566)	—
Charge-off from the allowance for losses	84	—
Purchases of securities - traded, not yet settled	348,020	7,502

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

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, 2021 consolidated balance sheet presented in this report has been derived from Farmer Mac's audited 2021 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 2021 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, 2021, as filed with the SEC on February 28, 2022. 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, 2022.

Principles of Consolidation

The consolidated financial statements include the accounts of Farmer Mac and its two subsidiaries: (1) Farmer Mac Mortgage Securities Corporation, whose principal activities are to facilitate the purchase and issuance of Farmer Mac Guaranteed Securities; and (2) Farmer Mac II LLC, whose principal activity is the operation of substantially all of the business related to the USDA Securities included in the Agricultural Finance line of business. The consolidated financial statements also include the accounts of Variable Interest Entities ("VIEs") in which Farmer Mac determined itself to be the primary beneficiary.

Table 1.1

	Consolidation of Variable Interest Entities		
	As of March 31, 2022		
	Agricultural Finance	Treasury	Total
		(in thousands)	
On-Balance Sheet:			
Consolidated VIEs:			
Loans held for investment in consolidated trusts, at amortized cost	$ 888,200	$ —	$ 888,200
Debt securities of consolidated trusts held by third parties [1]	895,145	—	895,145
Unconsolidated VIEs:			
Farmer Mac Guaranteed Securities:			
Carrying value	37,018	—	37,018
Maximum exposure to loss [2]	37,956	—	37,956
Investment securities:			
Carrying value [3]	—	2,430,613	2,430,613
Maximum exposure to loss [2] [3]	—	2,465,989	2,465,989
Off-Balance Sheet:			
Unconsolidated VIEs:			
Farmer Mac Guaranteed Securities:			
Maximum exposure to loss [2] [4]	544,484	—	544,484

(1) Includes borrower remittances of $6.9 million. The borrower remittances had not been passed through to third-party investors as of March 31, 2022.

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

(3) Includes auction-rate certificates, government-sponsored enterprise ("GSE")-guaranteed mortgage-backed securities, and other mission related investments.

(4) The amount under the Agricultural Finance line of business relates to unconsolidated trusts where it was determined that Farmer Mac was either not the primary beneficiary due to shared power with an unrelated party or a subordinate class majority holder has the unilateral right to remove Farmer Mac as Master Servicer without cause.

	Consolidation of Variable Interest Entities		
	As of December 31, 2021		
	Agricultural Finance	Treasury	Total
		(in thousands)	
On-Balance Sheet:			
Consolidated VIEs:			
Loans held for investment in consolidated trusts, at amortized cost	$ 948,623	$ —	$ 948,623
Debt securities of consolidated trusts held by third parties [(1)]	981,379	—	981,379
Unconsolidated VIEs:			
Farmer Mac Guaranteed Securities:			
Carrying value	42,298	—	42,298
Maximum exposure to loss [(2)]	42,155	—	42,155
Investment securities:			
Carrying value [(3)]	—	2,258,219	2,258,219
Maximum exposure to loss [(2)] [(3)]	—	2,246,272	2,246,272
Off-Balance Sheet:			
Unconsolidated VIEs:			
Farmer Mac Guaranteed Securities:			
Maximum exposure to loss [(2)] [(4)]	578,358	—	578,358

(1) Includes borrower remittances of $32.8 million. The borrower remittances had not been passed through to third-party investors as of December 31, 2021.
(2) Farmer Mac uses unpaid principal balance and outstanding face amount of investment securities to represent maximum exposure to loss.
(3) Includes auction-rate certificates, government-sponsored enterprise ("GSE")-guaranteed mortgage-backed securities, and other mission related investments.
(4) The amount under the Agricultural Finance line of business relates to unconsolidated trusts where it was determined that Farmer Mac was either not the primary beneficiary due to shared power with an unrelated party or a subordinate class majority holder has the unilateral right to remove Farmer Mac as Master Servicer without cause.

(a) Earnings Per Common Share

Basic earnings per common share ("EPS") is based on the daily weighted-average number of shares of common stock outstanding. Diluted earnings per common share is based on the daily weighted-average number of shares of common stock outstanding adjusted to include all potentially dilutive stock appreciation rights ("SARs") and unvested restricted stock awards. The following schedule reconciles basic and diluted EPS for the three months ended March 31, 2022 and 2021:

Table 1.2

	For the Three Months Ended					
	March 31, 2022			March 31, 2021		
	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	$ 41,046	10,767	$ 3.81	$ 27,958	10,738	$ 2.60
Effect of dilutive securities[(1)]						
SARs and restricted stock	—	120	(0.04)	—	81	(0.02)
Diluted EPS	$ 41,046	10,887	$ 3.77	$ 27,958	10,819	$ 2.58

(1) For the three months ended March 31, 2022 and 2021, SARs and restricted stock of 50,005 and 99,684, 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, 2022 and 2021 contingent shares of unvested restricted stock of 18,535 and 18,183 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.

(b) 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, 2022 and 2021.

Table 1.3

	As of March 31, 2022				As of March 31, 2021			
	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	$ (6,932)	$ 16,153	$ (5,368)	$ 3,853	$ (13,937)	$ 22,829	$ (22,815)	$ (13,923)
Other comprehensive (loss)/income before reclassifications	(68,148)	—	23,062	(45,086)	53,211	—	13,562	66,773
Amounts reclassified from AOCI	(3)	(19)	1,590	1,568	(783)	(1,704)	1,381	(1,106)
Net comprehensive (loss)/income	(68,151)	(19)	24,652	(43,518)	52,428	(1,704)	14,943	65,667
Ending Balance	$ (75,083)	$ 16,134	$ 19,284	$ (39,665)	$ 38,491	$ 21,125	$ (7,872)	$ 51,744

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, 2022 and 2021:

Table 1.4

	For the Three Months Ended					
	March 31, 2022			March 31, 2021		
	Before Tax	Provision (Benefit)	After Tax	Before Tax	Provision (Benefit)	After Tax
	(in thousands)					
Other comprehensive income:						
Available-for-sale-securities:						
Unrealized holding (losses)/gains on available-for-sale securities	$ (86,263)	$ (18,115)	$ (68,148)	$ 67,356	$ 14,145	$ 53,211
Less reclassification adjustments included in:						
Net interest income(1)	—	—	—	(984)	(207)	(777)
Other income(2)	(4)	(1)	(3)	(8)	(2)	(6)
Total	$ (86,267)	$ (18,116)	$ (68,151)	$ 66,364	$ 13,936	$ 52,428
Held-to-maturity securities:						
Less reclassification adjustments included in:						
Net interest income(3)	(23)	(4)	(19)	(2,157)	(453)	(1,704)
Total	$ (23)	$ (4)	$ (19)	$ (2,157)	$ (453)	$ (1,704)
Cash flow hedges						
Unrealized gains on cash flow hedges	$ 29,193	$ 6,131	$ 23,062	$ 17,170	$ 3,608	$ 13,562
Less reclassification adjustments included in:						
Net interest income(4)	2,011	421	1,590	1,746	365	1,381
Total	$ 31,204	$ 6,552	$ 24,652	$ 18,916	$ 3,973	$ 14,943
Other comprehensive (loss)/income	$ (55,086)	$ (11,568)	$ (43,518)	$ 83,123	$ 17,456	$ 65,667

(1) Relates to the amortization of unrealized gains on hedged items prior to the application of fair value hedge accounting.
(2) Represents amortization of deferred gains related to certain available-for-sale USDA Securities and Farmer Mac Guaranteed USDA Securities.
(3) 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.
(4) Relates to the recognition of unrealized gains and losses on cash flow hedges recorded in AOCI.

(c) New Accounting Standards

Recently Adopted Accounting Guidance

Standard	Description	Date of Adoption	Effect on Consolidated Financial Statements
ASU 2020-04 and 2021-01, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting	The amendments in this Update provide optional guidance for a limited period of time to ease the potential burden in accounting for reference rate reform on financial reporting. They provide optional expedients and exceptions for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met.	January 1, 2020	Farmer Mac adopted optional expedients specific to discounting transition on a retrospective basis, and as a result of this election, the discounting transition did not have a material effect on Farmer Mac's financial position, results of operations, or cash flows.

Recently Issued Accounting Guidance

Standard	Description	Effect on Consolidated Financial Statements
ASU 2022-02, Financial Instruments-Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures	The Update addresses and amends areas identified by the Financial Accounting Standards Board ("FASB") as part of its post-implementation review of the accounting standard that introduced the current expected credit losses ("CECL") model. The amendments eliminate the accounting guidance for troubled debt restructurings by creditors that have adopted the CECL model and enhance the disclosure requirements for loan refinancings and restructurings made with borrowers experiencing financial difficulty. In addition, the amendments require disclosure of current-period gross writeoffs for financing receivables and net investment in leases by year of origination in the vintage disclosures. ASU 2022-02 is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years for entities that have adopted the CECL accounting standard. Early adoption, however, is permitted if an entity has adopted the CECL accounting standard.	Farmer Mac is still assessing the impact of the new accounting standard but 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.

2. INVESTMENT SECURITIES

The following tables set forth information about Farmer Mac's available-for-sale and held-to-maturity investment securities as of March 31, 2022 and December 31, 2021:

Table 2.1

	As of March 31, 2022						
	Amount Outstanding	Unamortized Premium/ (Discount)	Amortized Cost[1]	Allowance for losses[2]	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	$ (49)	$ —	$ (690)	$ 18,961
Floating rate Government/GSE guaranteed mortgage-backed securities	2,261,234	(361)	2,260,873	—	7,314	(3,030)	2,265,157
Fixed rate GSE guaranteed mortgage-backed securities	554,118	15,181	569,299	—	9	(48,688)	520,620
Fixed rate U.S. Treasuries	1,409,787	(1,432)	1,408,355	—	1	(17,780)	1,390,576
Total available-for-sale	4,244,839	13,388	4,258,227	(49)	7,324	(70,188)	4,195,314
Held-to-maturity:							
Floating rate Government/GSE guaranteed mortgage-backed securities[3]	44,970	—	44,970	—	—	(371)	44,599
Total held-to-maturity	$ 44,970	$ —	$ 44,970	$ —	$ —	$ (371)	$ 44,599

(1) Amounts presented exclude $3.9 million of accrued interest receivable on investment securities as of March 31, 2022.

(2) Represents the amount of impairment that has resulted from credit-related factors, and therefore was recognized in the consolidated statement of operations as a provision for losses. Amount excludes unrealized losses relating to non-credit factors.

(3) The held-to-maturity investment securities had a weighted average yield of 1.5% as of March 31, 2022.

	As of December 31, 2021						
	Amount Outstanding	Unamortized Premium/ (Discount)	Amortized Cost(1)	Allowance for losses(2)	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	$ (52)	$ —	$ (394)	$ 19,254
Floating rate Government/GSE guaranteed mortgage-backed securities	2,168,016	90	2,168,106	—	11,821	(1,096)	2,178,831
Fixed rate GSE guaranteed mortgage-backed securities	451,660	12,525	464,185	—	382	(5,730)	458,837
Fixed rate U.S. Treasuries	1,180,000	2,723	1,182,723	—	—	(3,254)	1,179,469
Total available-for-sale	3,819,376	15,338	3,834,714	(52)	12,203	(10,474)	3,836,391
Held-to-maturity:							
Floating rate Government/GSE guaranteed mortgage-backed securities(3)	44,970	—	44,970	—	1,612	—	46,582
Total held-to-maturity	$ 44,970	$ —	$ 44,970	$ —	$ 1,612	$ —	$ 46,582

(1) Amounts presented exclude $4.3 million of accrued interest receivable on investment securities as of December 31, 2021.

(2) Represents the amount of impairment that has resulted from credit-related factors, and therefore was recognized in the consolidated statement of operations as a provision for losses. Amount excludes unrealized losses relating to non-credit factors.

(3) The held-to-maturity investment securities had a weighted average yield of 1.5% as of December 31, 2021.

Farmer Mac did not sell any securities from its available-for-sale investment portfolio during the three months ended March 31, 2022 and 2021.

As of March 31, 2022 and December 31, 2021, unrealized losses on available-for-sale investment securities were as follows:

Table 2.2

	As of March 31, 2022			
	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
	(dollars in thousands)			
Floating rate auction-rate certificates backed by Government guaranteed student loans	$ —	$ —	$ 18,961	$ (690)
Floating rate Government/GSE guaranteed mortgage-backed securities	707,266	(2,751)	29,511	(279)
Fixed rate Government/GSE guaranteed mortgage-backed securities	520,485	(48,688)	—	—
Fixed rate U.S. Treasuries	1,226,248	(15,928)	119,312	(1,852)
Total	$ 2,453,999	$ (67,367)	$ 167,784	$ (2,821)
Number of securities in loss position		98		20

	As of December 31, 2021			
	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
	(dollars in thousands)			
Floating rate auction-rate certificates backed by Government guaranteed student loans	$ —	$ —	$ 19,254	$ (394)
Floating rate Government/GSE guaranteed mortgage-backed securities	459,195	(619)	37,307	(477)
Fixed rate Government/GSE guaranteed mortgage-backed securities	406,805	(5,730)	—	—
Fixed rate U.S. Treasuries	1,123,439	(3,070)	51,031	(184)
Total	$ 1,989,439	$ (9,419)	$ 107,592	$ (1,055)
Number of securities in loss position		69		24

The unrealized losses presented above are principally due to a general widening of market spreads and changes in the levels of interest rates from the dates of acquisition to March 31, 2022 and December 31, 2021, 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 both March 31, 2022 and December 31, 2021, 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+."

Securities in unrealized loss positions for 12 months or longer have a fair value as of March 31, 2022 that is, on average, approximately 98.4% 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.

The amortized cost, fair value, and weighted-average yield of available-for-sale investment securities by remaining contractual maturity as of March 31, 2022 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, 2022		
	Available-for-Sale Securities		
	Amortized Cost	Fair Value	Weighted-Average Yield
	(dollars in thousands)		
Due within one year	$ 795,326	$ 790,653	0.79%
Due after one year through five years	940,430	927,942	0.42%
Due after five years through ten years	1,862,354	1,812,438	0.96%
Due after ten years	660,117	664,281	0.71%
Total	$ 4,258,227	$ 4,195,314	0.77%

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, 2022 and December 31, 2021:

Table 3.1

	As of March 31, 2022						
	Unpaid Principal Balance	Unamortized Premium/ (Discount)	Amortized Cost(1)	Allowance for losses(2)	Unrealized Gains	Unrealized Losses	Fair Value
				(in thousands)			
Held-to-maturity:							
AgVantage	$ 1,880,383	$ —	$ 1,880,383	$ (160)	$ 2,895	$ (33,178)	$ 1,849,940
Farmer Mac Guaranteed USDA Securities	26,038	(43)	25,995	—	249	(363)	25,881
Total Farmer Mac Guaranteed Securities	1,906,421	(43)	1,906,378	(160)	3,144	(33,541)	1,875,821
USDA Securities	2,411,399	24,704	2,436,103	—	221	(44,593)	2,391,731
Total held-to-maturity	$ 4,317,820	$ 24,661	$ 4,342,481	$ (160)	$ 3,365	$ (78,134)	$ 4,267,552
Available-for-sale:							
AgVantage	$ 6,659,760	$ 1,216	$ 6,660,976	$ (681)	$ 45,780	$ (116,851)	$ 6,589,224
Farmer Mac Guaranteed Securities(3)	—	11,918	11,918	—	—	(896)	11,022
Total available-for-sale	$ 6,659,760	$ 13,134	$ 6,672,894	$ (681)	$ 45,780	$ (117,747)	$ 6,600,246
Trading:							
USDA Securities(4)	$ 3,370	$ 111	$ 3,481	$ —	$ —	$ (95)	$ 3,386

(1) Amounts presented exclude $35.8 million, $34.5 million, and $0.1 million of accrued interest receivable on available-for-sale, held-to-maturity, and trading securities, respectively, as of March 31, 2022.
(2) Represents the amount of impairment that has resulted from credit-related factors, and therefore was recognized in the statement of financial operations as a provision for losses. Amount excludes unrealized losses relating to non-credit factors.
(3) Fair value includes $11.0 million of an interest-only security with a notional amount of $262.6 million.
(4) The trading USDA securities had a weighted average yield of 5.06% as of March 31, 2022.

	As of December 31, 2021						
	Unpaid Principal Balance	Unamortized Premium/ (Discount)	Amortized Cost(1)	Allowance for losses(2)	Unrealized Gains	Unrealized Losses	Fair Value
				(in thousands)			
Held-to-maturity:							
AgVantage	$ 2,003,486	$ —	$ 2,003,486	$ (132)	$ 10,097	$ (12,764)	$ 2,000,687
Farmer Mac Guaranteed USDA Securities	29,859	26	29,885	—	1,162	—	31,047
Total Farmer Mac Guaranteed Securities	2,033,345	26	2,033,371	(132)	11,259	(12,764)	2,031,734
USDA Securities	2,411,649	24,682	2,436,331	—	95,741	—	2,532,072
Total held-to-maturity	$ 4,444,994	$ 24,708	$ 4,469,702	$ (132)	$ 107,000	$ (12,764)	$ 4,563,806
Available-for-sale:							
AgVantage	$ 6,122,240	$ 1,270	$ 6,123,510	$ (263)	$ 212,908	$ (20,010)	$ 6,316,145
Farmer Mac Guaranteed Securities(3)	—	12,297	12,297	—	117	—	$ 12,414
Total available-for-sale	$ 6,122,240	$ 13,567	$ 6,135,807	$ (263)	$ 213,025	$ (20,010)	$ 6,328,559
Trading:							
USDA Securities(4)	$ 4,299	$ 134	$ 4,433	$ —	$ 1	$ (33)	$ 4,401

(1) Amounts presented exclude $29.8 million, $42.1 million, and $0.1 million of accrued interest receivable on available-for-sale, held-to-maturity, and trading securities, respectively, as of December 31, 2021.

(2) Represents the amount of impairment that has resulted from credit-related factors, and therefore was recognized in the statement of financial operations as a provision for losses. Amount excludes unrealized losses relating to non-credit factors.
(3) Fair value includes $12.4 million of an interest-only security with a notional amount of $275.4 million.
(4) The trading USDA securities had a weighted average yield of 5.05% as of December 31, 2021.

As of March 31, 2022 and December 31, 2021, 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, 2022			
	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	$ 1,287,544	$ (15,861)	$ 207,683	$ (17,317)
Farmer Mac Guaranteed USDA Securities	10,541	(363)	—	—
USDA Securities	2,379,076	(44,593)	—	—
Total held-to-maturity	$ 3,677,161	$ (60,817)	$ 207,683	$ (17,317)
Available-for-sale:				
AgVantage	$ 2,876,180	$ (95,246)	$ 197,060	$ (21,605)
Farmer Mac Guaranteed Securities	11,022	(896)	—	—
Total available-for-sale	$ 2,887,202	$ (96,142)	$ 197,060	$ (21,605)

	As of December 31, 2021			
	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	$ 1,387,236	$ (12,764)	$ —	$ —
USDA Securities	—	—	—	—
Total held-to-maturity	$ 1,387,236	$ (12,764)	$ —	$ —
Available-for-sale:				
AgVantage	$ 1,867,364	$ (17,263)	$ 90,971	$ (2,747)

The unrealized losses presented above are principally due to changes in interest rates from the date of acquisition to March 31, 2022 and December 31, 2021, as applicable. The unrealized losses on the held-to-maturity USDA Securities as of both March 31, 2022 and December 31, 2021 reflect their increased cost basis resulting from their transfer to held-to-maturity as of October 1, 2016.

The credit exposure related to Farmer Mac's USDA Securities in the Agricultural Finance line of business is covered by the full faith and credit guarantee of the United States of America.

The unrealized losses from AgVantage securities were on 31 and 13 available-for-sale securities as of March 31, 2022 and December 31, 2021, respectively. There were 38 and 10 held-to-maturity AgVantage securities with an unrealized loss as of March 31, 2022 and December 31, 2021, respectively. As of March 31, 2022 and December 31, 2021, 4 and 2 available-for-sale AgVantage securities, respectively, had been in a loss position for more than 12 months. As of March 31, 2022, there were 2 held-to-maturity AgVantage securities in a loss position for more than 12 months. As of December 31, 2021, there were no held-to-maturity AgVantage securities in a loss position for more than 12 months.

During the three months ended March 31, 2022 and 2021, Farmer Mac had no sales of Farmer Mac Guaranteed Securities or USDA Securities and, therefore, Farmer Mac realized no gains or losses.

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, 2022 are set forth below. The balances presented are based on their contractual maturities, although the actual maturities may differ due to prepayments of the underlying assets.

Table 3.3

	As of March 31, 2022		
	Available-for-Sale Securities		
	Amortized Cost[1]	Fair Value	Weighted-Average Yield
	(dollars in thousands)		
Due within one year	$ 1,231,599	$ 1,233,753	2.05 %
Due after one year through five years	2,420,343	2,390,586	2.52 %
Due after five years through ten years	1,276,934	1,248,573	2.55 %
Due after ten years	1,744,018	1,727,334	2.63 %
Total	$ 6,672,894	$ 6,600,246	2.46 %

(1) Amounts presented exclude $35.8 million of accrued interest receivable.

	As of March 31, 2022		
	Held-to-Maturity Securities		
	Amortized Cost[1]	Fair Value	Weighted-Average Yield
	(dollars in thousands)		
Due within one year	$ 1,029,330	$ 1,027,276	1.13 %
Due after one year through five years	900,448	870,548	2.09 %
Due after five years through ten years	255,611	250,630	2.79 %
Due after ten years	2,157,092	2,119,098	3.14 %
Total	$ 4,342,481	$ 4,267,552	2.41 %

(1) Amounts presented exclude $34.5 million of accrued interest receivable.

4. FINANCIAL DERIVATIVES

Farmer Mac enters into financial derivative transactions 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. For more information about Farmer Mac's financial derivatives, see Note 6 in Farmer Mac's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, as filed with the SEC on February 28, 2022.

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, 2022 and December 31, 2021:

Table 4.1

	As of March 31, 2022						
		Fair Value					
	Notional Amount	Asset	(Liability)	Weighted-Average Pay Rate	Weighted-Average Receive Rate	Weighted-Average Forward Price	Weighted-Average Remaining Term (in years)
				(dollars in thousands)			
Fair value hedges:							
Interest rate swaps:							
Pay fixed non-callable	$ 7,209,418	$ 8,657	$ (1,589)	1.92%	0.37%		11.00
Receive fixed non-callable	6,565,729	279	(11,149)	0.42%	0.91%		2.16
Receive fixed callable	1,883,577	—	(90,594)	0.25%	1.04%		3.90
Cash flow hedges:							
Interest rate swaps:							
Pay fixed non-callable	617,000	15,900	(70)	1.92%	0.74%		5.64
No hedge designation:							
Interest rate swaps:							
Pay fixed non-callable	227,918	265	(1,638)	3.24%	0.37%		4.72
Receive fixed non-callable	1,038,750	—	—	0.35%	0.40%		0.87
Basis swaps	1,393,911	191	(435)	0.45%	0.48%		3.56
Treasury futures	73,300	1,039	(128)			124.12	
Credit valuation adjustment		(2)	29				
Total financial derivatives	$ 19,009,603	$ 26,329	$ (105,574)				
Collateral (held)/pledged		—	262,394				
Net amount		$ 26,329	$ 156,820				

	As of December 31, 2021						
		Fair Value					
	Notional Amount	Asset	(Liability)	Weighted-Average Pay Rate	Weighted-Average Receive Rate	Weighted-Average Forward Price	Weighted-Average Remaining Term (in years)
	(dollars in thousands)						
Fair value hedges:							
Interest rate swaps:							
Pay fixed non-callable	$ 6,238,438	$ 11,554	$ (583)	2.06%	0.13%		11.64
Receive fixed non-callable	5,884,529	15	(8,383)	0.17%	0.88%		2.27
Receive fixed callable	1,571,577	103	(17,612)	0.01%	0.80%		4.17
Cash flow hedges:							
Interest rate swaps:							
Pay fixed non-callable	570,000	6,905	(2,763)	1.93%	0.49%		5.72
No hedge designation:							
Interest rate swaps:							
Pay fixed non-callable	229,062	—	(4,641)	3.22%	0.16%		4.95
Receive fixed non-callable	1,377,250	—	—	0.13%	0.43%		0.97
Basis swaps	1,608,911	489	(280)	0.17%	0.20%		3.31
Treasury futures	67,600	73	—			130.58	
Credit valuation adjustment		—	14				
Total financial derivatives	$ 17,547,367	$ 19,139	$ (34,248)				
Collateral (held)/pledged		—	194,519				
Net amount		$ 19,139	$ 160,271				

As of March 31, 2022, Farmer Mac expects to reclassify $1.2 million after-tax from accumulated other comprehensive income to earnings over the next twelve months related to cash flow hedges. This amount could differ from amounts actually recognized due to changes in interest rates, hedge de-designations, and the addition of other hedges after March 31, 2022. During the three months ended March 31, 2022 and 2021, there were no gains or losses from interest rate swaps designated as cash flow hedges reclassified to earnings because it was probable that the originally forecasted transactions would occur.

The following tables summarize the net income/(expense) recognized in the consolidated statements of operations related to derivatives for the three months ended March 31, 2022 and 2021:

Table 4.2

	For the Three Months Ended March 31, 2022					
	Net Income/(Expense) Recognized in Consolidated Statement of Operations on Derivatives					
	Net Interest Income				Non-Interest Income	
	Interest Income Investments and Cash Equivalents	Interest Income Farmer Mac Guaranteed Securities and USDA Securities	Interest Income Loans	Total Interest Expense	Gains on financial derivatives	Total
	(in thousands)					
Total amounts presented in the consolidated statement of operations	$ 5,716	$ 39,257	$ 67,247	$ (50,345)	$ 16,074	$ 77,949
Income/(expense) related to interest settlements on fair value hedging relationships:						
Recognized on derivatives	(1,484)	(21,644)	(6,946)	14,200	—	(15,874)
Recognized on hedged items	2,597	31,929	12,619	(18,157)	—	28,988
Premium/discount amortization recognized on hedged items	(414)	—	—	(440)	—	(854)
Income/(expense) related to interest settlements on fair value hedging relationships	$ 699	$ 10,285	$ 5,673	$ (4,397)	$ —	$ 12,260
Gains/(losses) on fair value hedging relationships:						
Recognized on derivatives	$ 33,425	$ 210,188	$ 131,932	$ (237,014)	$ —	$ 138,531
Recognized on hedged items	(32,726)	(210,648)	(129,607)	236,814	—	(136,167)
Gains/(losses) on fair value hedging relationships	$ 699	$ (460)	$ 2,325	$ (200)	$ —	$ 2,364
Expense related to interest settlements on cash flow hedging relationships:						
Interest settlements reclassified from AOCI into net income on derivatives	$ —	$ —	$ —	$ (2,011)	$ —	$ (2,011)
Recognized on hedged items	—	—	—	(787)	—	(787)
Discount amortization recognized on hedged items	—	—	—	(13)	—	(13)
Expense recognized on cash flow hedges	$ —	$ —	$ —	$ (2,811)	$ —	$ (2,811)
Gains on financial derivatives not designated in hedging relationships:						
Gains on interest rate swaps	$ —	$ —	$ —	$ —	$ 703	$ 703
Interest expense on interest rate swaps	—	—	—	—	(927)	(927)
Treasury futures	—	—	—	—	16,298	16,298
Gains on financial derivatives not designated in hedge relationships	$ —	$ —	$ —	$ —	$ 16,074	$ 16,074

	For the Three Months Ended March 31, 2021				
	Net Income/(Expense) Recognized in Consolidated Statement of Operations on Derivatives				
	Net Interest Income			Non-Interest Income	
	Interest Income Farmer Mac Guaranteed Securities and USDA Securities	Interest Income Loans	Total Interest Expense	Gains on financial derivatives	Total
			(in thousands)		
Total amounts presented in the consolidated statement of operations:	$ 42,404	$ 59,494	$ (54,176)	$ 4,293	$ 52,015
Income/(expense) related to interest settlements on fair value hedging relationships:					
Recognized on derivatives	(21,437)	(6,572)	9,481	—	(18,528)
Recognized on hedged items	30,775	11,487	(11,808)	—	30,454
Discount amortization recognized on hedged items	—	—	(221)	—	(221)
Income/(expense) related to interest settlements on fair value hedging relationships	$ 9,338	$ 4,915	$ (2,548)	$ —	$ 11,705
(Losses)/gains on fair value hedging relationships:					
Recognized on derivatives	$ 168,078	$ 145,771	$ (29,455)	$ —	$ 284,394
Recognized on hedged items	(168,801)	(144,749)	29,501	—	(284,049)
(Losses)/gains on fair value hedging relationships	$ (723)	$ 1,022	$ 46	$ —	$ 345
Expense related to interest settlements on cash flow hedging relationships:					
Interest settlements reclassified from AOCI into net income on derivatives	$ —	$ —	$ (1,746)	$ —	$ (1,746)
Recognized on hedged items	—	—	(655)	—	(655)
Discount amortization recognized on hedged items	—	—	(7)	—	(7)
Expense recognized on cash flow hedges	$ —	$ —	$ (2,408)	$ —	$ (2,408)
Gains on financial derivatives not designated in hedge relationships:					
Gains on interest rate swaps	$ —	$ —	$ —	$ 1,470	$ 1,470
Interest expense on interest rate swaps	—	—	—	2,223	2,223
Treasury futures	—	—	—	600	600
Gains on financial derivatives not designated in hedge relationships	$ —	$ —	$ —	$ 4,293	$ 4,293

The following table shows the carrying amount and associated cumulative basis adjustment related to the application of hedge accounting that is included in the carrying amount of hedged assets and liabilities in fair value hedging relationships as of March 31, 2022 and December 31, 2021:

Table 4.3

	Hedged Items in Fair Value Relationship			
	Carrying Amount of Hedged Assets/ (Liabilities)		Cumulative Amount of Fair Value Hedging Adjustments included in the Carrying Amount of the Hedged Assets/(Liabilities)	
	March 31, 2022	December 31, 2021	March 31, 2022	December 31, 2021
	(in thousands)			
Investment securities, Available-for-Sale, at fair value	$ 520,485	$ 458,653	$ (33,944)	$ (1,218)
Farmer Mac Guaranteed Securities, Available-for-Sale, at fair value[(1)]	4,826,536	4,276,002	(4,129)	206,520
Loans held for investment, at amortized cost[(2)]	1,672,092	1,668,142	(115,775)	13,832
Notes Payable[(3)]	(8,024,125)	(7,083,535)	279,191	42,377

(1) Includes $1.2 million and $1.3 million of hedging adjustments on discontinued hedging relationships as of March 31, 2022 and December 31, 2021, respectively.
(2) Includes $1.2 million of hedging adjustments on a discontinued hedging relationship as of both March 31, 2022 and December 31, 2021.
(3) Carrying amount represents amortized cost.

The following table shows Farmer Mac's credit exposure to interest rate swap counterparties as of March 31, 2022 and December 31, 2021:

Table 4.4

	March 31, 2022		
	Gross Amount Recognized[(1)]	Counterparty Netting	Net Amount Presented in the Consolidated Balance Sheet
	(in thousands)		
Assets:			
Derivatives			
Interest rate swap	$ 258,067	$ 232,963	$ 25,104
Liabilities:			
Derivatives			
Interest rate swap	$ 399,497	$ 381,928	$ 17,569

(1) Gross amount excludes netting arrangements and any adjustment for nonperformance risk, but includes accrued interest.

	December 31, 2021		
	Gross Amount Recognized[(1)]	Counterparty Netting	Net Amount Presented in the Consolidated Balance Sheet
	(in thousands)		
Assets:			
Derivatives			
Interest rate swaps	$ 91,130	$ 91,130	$ —
Liabilities:			
Derivatives			
Interest rate swaps	$ 404,063	$ 386,249	$ 17,814

(1) Gross amount excludes netting arrangements and any adjustment for nonperformance risk, but includes accrued interest.

As of both March 31, 2022 and December 31, 2021, Farmer Mac held no cash or investment securities as collateral for its derivatives in net asset positions.

Farmer Mac posted $78.5 million cash and $183.9 million of investment securities as of March 31, 2022 and posted $16.6 million cash and $177.9 million investment securities as of December 31, 2021. 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, 2022 or December 31, 2021, it could have been required to settle its obligations under the agreements, but would not have been required to post additional collateral. As of March 31, 2022 and December 31, 2021, 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.

Of Farmer Mac's $18.9 billion notional amount of interest rate swaps outstanding as of March 31, 2022, $16.0 billion were cleared through the swap clearinghouse, the Chicago Mercantile Exchange ("CME"). Of Farmer Mac's $17.5 billion notional amount of interest rate swaps outstanding as of December 31, 2021, $14.9 billion were cleared through the CME. During first quarter 2022 and throughout 2021, Farmer Mac continued the use of non-cleared basis swaps to prepare for the transition away from the use of LIBOR as a reference rate.

5. 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 basis adjustments. Loans held for sale are reported at the lower of cost or fair value determined on a pooled basis. As of March 31, 2022 and December 31, 2021, Farmer Mac had $9.0 million and no loans held for sale, respectively. Farmer Mac did not record any lower of cost or fair value adjustments during the three months ended March 31, 2022 or 2021.

The following table includes loans held for investment and loans held for sale and displays the composition of the loan balances as of March 31, 2022 and December 31, 2021:

Table 5.1

	As of March 31, 2022			As of December 31, 2021		
	Unsecuritized	In Consolidated Trusts	Total	Unsecuritized	In Consolidated Trusts	Total
			(in thousands)			
Agricultural Finance mortgage loans	$ 6,044,029	$ 888,200	$ 6,932,229	$ 5,898,370	$ 948,623	$ 6,846,993
Rural Infrastructure Finance loans	2,551,851	—	2,551,851	2,389,136	—	2,389,136
Total unpaid principal balance[(1)]	8,595,880	888,200	9,484,080	8,287,506	948,623	9,236,129
Unamortized premiums, discounts, fair value hedge basis adjustment, and other cost basis adjustments	(105,570)	—	(105,570)	26,590	—	26,590
Total loans	8,490,310	888,200	9,378,510	8,314,096	948,623	9,262,719
Allowance for losses	(13,110)	(460)	(13,570)	(13,477)	(564)	(14,041)
Total loans, net of allowance	$ 8,477,200	$ 887,740	$ 9,364,940	$ 8,300,619	$ 948,059	$ 9,248,678

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

Allowance for Losses

The following table is a summary, by asset type, of the allowance for losses as of March 31, 2022 and December 31, 2021:

Table 5.2

	March 31, 2022	December 31, 2021
	Allowance for Losses	Allowance for Losses
	(in thousands)	
Loans:		
Agricultural Finance mortgage loans	$ 3,948	$ 3,442
Rural Infrastructure Finance loans	9,622	10,599
Total	$ 13,570	$ 14,041

The following is a summary of the changes in the allowance for losses for the three month period ended March 31, 2022 and 2021:

Table 5.3

	For the Three Months Ended	
	March 31, 2022	March 31, 2021
	Allowance for Losses	Allowance for Losses
	(in thousands)	
Agricultural Finance mortgage loans		
Beginning Balance	$ 3,442	$ 3,745
Provision for/(release of) losses	590	(27)
Charge-offs	(84)	—
Ending Balance[1]	$ 3,948	$ 3,718
Rural Infrastructure Finance loans		
Beginning Balance	$ 10,599	$ 10,087
(Release of)/provision for losses	(977)	1,002
Charge-offs	—	—
Ending Balance[2]	$ 9,622	$ 11,089

(1) As of both March 31, 2022 and 2021, allowance for losses for Agricultural Finance mortgage loans includes no allowance for collateral dependent assets secured by agricultural real estate.
(2) As of both March 31, 2022 and 2021, allowance for losses for Rural Infrastructure Finance loans includes no allowance for collateral dependent assets.

The net release from the allowance for Rural Infrastructure Finance loan losses of $1.0 million recorded during first quarter 2022 was primarily attributable to a risk rating upgrade on a single loan related to the borrower's successful securitization of a large payable incurred as a result of the arctic freeze that struck Texas in February 2021, and was partially offset by new loan volume. The $0.6 million net provision to the allowance for the Agricultural Finance mortgage loan portfolio during first quarter 2022 was primarily attributable to a risk rating downgrade on a single agricultural storage and processing loan.

The provision to the allowance for Rural Infrastructure Finance loan losses of $1.0 million recorded during first quarter 2021 was primarily attributable to the impact of ratings downgrades on multiple rural utilities that were negatively impacted by the arctic freeze that struck Texas in February 2021. The small release from the allowance for the Farm & Ranch portfolio during first quarter 2021 was primarily attributable to ratings upgrades and updated loss-given-default assumptions, offset by net growth in our loan portfolio.

The following table presents the unpaid principal balances by delinquency status of Farmer Mac's loans and non-performing assets as of March 31, 2022 and December 31, 2021:

Table 5.4

	As of March 31, 2022						
	Accruing						
	Current	30-59 Days	60-89 Days	90 Days and Greater[2]	Total Past Due	Nonaccrual loans[3][4]	Total Loans
	(in thousands)						
Loans[1]:							
Agricultural Finance mortgage loans	$ 6,797,744	$ 4,624	$ 639	$ 8,517	$ 13,780	$ 120,705	$ 6,932,229
Rural Infrastructure Finance loans	2,551,851	—	—	—	—	—	2,551,851
Total	$ 9,349,595	$ 4,624	$ 639	$ 8,517	$ 13,780	$ 120,705	$ 9,484,080

(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) Includes loans in consolidated trusts with beneficial interests owned by third parties that are 90 days or more past due.
(3) Includes loans 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.
(4) Includes $34.9 million of nonaccrual loans for which there was no associated allowance. During the three months ended March 31, 2022, Farmer Mac received $1.8 million in interest on nonaccrual loans.

	As of December 31, 2021						
	Accruing						
	Current	30-59 Days	60-89 Days	90 Days and Greater[2]	Total Past Due	Nonaccrual loans[3][4]	Total Loans
	(in thousands)						
Loans[1]:							
Agricultural Finance mortgage loans	$ 6,715,070	$ 4,548	$ 568	$ —	$ 5,116	$ 126,807	$ 6,846,993
Rural Infrastructure Finance loans	2,389,136	—	—	—	—	—	2,389,136
Total	$ 9,104,206	$ 4,548	$ 568	$ —	$ 5,116	$ 126,807	$ 9,236,129

(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) Includes loans in consolidated trusts with beneficial interests owned by third parties that are 90 days or more past due.
(3) Includes loans 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.
(4) Includes $31.0 million of nonaccrual loans for which there was no associated allowance. During the year ended December 31, 2021, Farmer Mac received $5.0 million in interest on nonaccrual loans.

Credit Quality Indicators

The following tables present credit quality indicators related to Agricultural Finance mortgage loans and Rural Infrastructure Finance loans held as of March 31, 2022 and December 31, 2021, by year of origination:

Table 5.5

	As of March 31, 2022							
	Year of Origination:							
	2022	2021	2020	2019	2018	Prior	Revolving Loans - Amortized Cost Basis	Total
	(in thousands)							
Agricultural Finance mortgage loans [(1)]:								
Internally Assigned Risk Rating:								
Acceptable	$ 400,124	$2,080,013	$1,473,300	$ 504,767	$ 306,332	$1,179,889	$ 512,678	$6,457,103
Special mention[(2)]	7,009	123,893	38,473	43,697	45,722	25,750	9,279	293,823
Substandard[(3)]	—	4,052	26,051	22,734	20,432	89,650	18,384	181,303
Total	$ 407,133	$2,207,958	$1,537,824	$ 571,198	$ 372,486	$1,295,289	$ 540,341	$6,932,229
For the Three Months Ended:								
Current period charge-offs	$ —	$ —	$ —	$ —	$ —	$ (84)	$ —	$ (84)
Current period recoveries	—	—	—	—	—	—	—	—
Current period Agricultural Finance net charge-offs	$ —	$ —	$ —	$ —	$ —	$ (84)	$ —	$ (84)

(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 March 31, 2022							
	Year of Origination:							
	2022	2021	2020	2019	2018	Prior	Revolving Loans - Amortized Cost Basis	Total
	(in thousands)							
Rural Infrastructure Finance loans[(1)]:								
Internally Assigned Risk Rating:								
Acceptable	$ 175,976	$ 230,729	$ 643,667	$ 766,559	$ 8,017	$ 695,266	$ 31,637	$2,551,851
Special mention[(2)]	—	—	—	—	—	—	—	—
Substandard[(3)]	—	—	—	—	—	—	—	—
Total	$ 175,976	$ 230,729	$ 643,667	$ 766,559	$ 8,017	$ 695,266	$ 31,637	$2,551,851
For the Three Months Ended:								
Current period charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Current period recoveries	—	—	—	—	—	—	—	—
Current period Rural Infrastructure net charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

(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, 2021							
	Year of Origination:							
	2021	2020	2019	2018	2017	Prior	Revolving Loans - Amortized Cost Basis	Total
	(in thousands)							
Agricultural Finance mortgage loans [1]:								
Internally Assigned Risk Rating:								
Acceptable	$2,138,060	$1,541,509	$ 540,139	$ 324,917	$ 303,852	$1,004,709	$ 545,370	$6,398,556
Special mention[2]	84,795	50,057	51,200	48,078	9,132	14,646	4,771	262,679
Substandard[3]	1,654	4,997	26,237	27,109	38,703	75,780	11,278	185,758
Total	$2,224,509	$1,596,563	$ 617,576	$ 400,104	$ 351,687	$1,095,135	$ 561,419	$6,846,993
For the Three Months Ended March 31, 2021:								
Current period charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Current period recoveries	—	—	—	—	—	—	—	—
Current period Agricultural Finance net charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

(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, 2021							
	Year of Origination:							
	2021	2020	2019	2018	2017	Prior	Revolving Loans - Amortized Cost Basis	Total
	(in thousands)							
Rural Infrastructure Finance loans[1]:								
Internally Assigned Risk Rating:								
Acceptable	$ 242,570	$ 612,366	$ 774,941	$ 8,100	$ 86,878	$ 628,903	$ 12,578	$2,366,336
Special mention[2]	—	—	—	—	—	—	—	—
Substandard[3]	—	22,800	—	—	—	—	—	22,800
Total	$ 242,570	$ 635,166	$ 774,941	$ 8,100	$ 86,878	$ 628,903	$ 12,578	$2,389,136
For the Three Months Ended March 31, 2021:								
Current period charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Current period recoveries	—	—	—	—	—	—	—	—
Current period Rural Infrastructure net charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

(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.

6. GUARANTEES AND COMMITMENTS

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, 2022 and December 31, 2021, 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, 2022	As of December 31, 2021
	(in thousands)	
Agricultural Finance		
Farmer Mac Guaranteed Securities	$ 544,484	$ 578,358
Rural Infrastructure Finance		
Farmer Mac Guaranteed Securities	2,755	2,755
Total off-balance sheet Farmer Mac Guaranteed Securities	$ 547,239	$ 581,113

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, 2022	March 31, 2021
	(in thousands)	
Proceeds from new securitizations	$ 25,928	$ 49,133
Guarantee fees received	577	360

Farmer Mac presents a liability for its obligation to stand ready under its guarantee in "Guarantee and commitment obligation" on the consolidated balance sheets. The following table presents the liability and the weighted-average remaining maturity of all loans underlying off-balance sheet Farmer Mac Guaranteed Securities:

Table 6.3

	As of March 31, 2022	As of December 31, 2021
	(dollars in thousands)	
Guarantee and commitment obligation	$ 6,961	$ 7,355
Weighted average remaining maturity:		
Farmer Mac Guaranteed Securities	21.7 years	21.7 years
AgVantage Securities	2.7 years	3.0 years

Long-Term Standby Purchase Commitments

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. The following table presents the liability, 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, as well as the weighted-average remaining maturity of all loans underlying LTSPCs:

Table 6.4

	As of March 31, 2022	As of December 31, 2021
	(dollars in thousands)	
Guarantee and commitment obligation[1]	$ 36,324	$ 36,571
Maximum principal amount	3,197,933	3,191,061
Weighted-average remaining maturity	15.5 years	15.5 years

[1] Relates to LTSPCs issued or modified on or after January 1, 2003.

Reserve for Losses

The following table is a summary, by asset type, of the reserve for losses as of March 31, 2022 and December 31, 2021:

Table 6.5

	March 31, 2022	December 31, 2021
	Reserve for Losses	Reserve for Losses
	(in thousands)	
Agricultural Finance:		
LTSPCs and Farmer Mac Guaranteed Securities	$ 993	$ 1,068
Rural Infrastructure Finance		
LTSPCs	847	882
Total	$ 1,840	$ 1,950

The following is a summary of the changes in the reserve for losses for the three month period ended March 31, 2022 and 2021:

Table 6.6

	For the Three Months Ended	
	March 31, 2022	March 31, 2021
	Reserve for Losses	Reserve for Losses
	(in thousands)	
Agricultural Finance mortgage loans		
Beginning Balance	$ 1,068	$ 2,097
Release of losses	(75)	(731)
Charge-offs	—	—
Ending Balance	$ 993	$ 1,366
Rural Infrastructure Finance loans		
Beginning Balance	$ 882	$ 1,180
Release of losses	(35)	(213)
Charge-offs	—	—
Ending Balance	$ 847	$ 967

The release from the reserve for losses in both the Agricultural Finance and Rural Infrastructure Finance LTSPC and Farmer Mac Guaranteed portfolios recorded during the three months ended March 31, 2022 was primarily due to decreased net volume in those portfolios.

The release from the reserve for losses in the Rural Infrastructure Finance LTSPC portfolio recorded during first quarter 2021 was primarily due to improving economic factor forecasts and ratings upgrades. The release in the Agricultural Finance LTSPC portfolio was primarily due to ratings upgrades and updated loss-given-default assumptions.

The following table presents the unpaid principal balances by delinquency status of Agricultural Finance and Rural Utilities loans underlying LTSPCs and Farmer Mac Guaranteed Securities as of March 31, 2022 and December 31, 2021:

Table 6.7

	As of March 31, 2022					
	Current	30-59 Days	60-89 Days	90 Days and Greater[(1)]	Total Past Due	Total Loans
	(in thousands)					
Agricultural Finance:						
LTSPCs and Farmer Mac Guaranteed Securities	$ 2,942,666	$ 1,578	$ 1,618	$ 1,887	$ 5,083	$ 2,947,749
Rural Infrastructure:						
LTSPCs	$ 562,568	$ —	$ —	$ —	$ —	$ 562,568

(1) Includes loans underlying off-balance sheet Agricultural Finance Guaranteed Securities and LTSPCs that are 90 days of 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.

	As of December 31, 2021					
	Current	30-59 Days	60-89 Days	90 Days and Greater[(1)]	Total Past Due	Total Loans
	(in thousands)					
Agricultural Finance:						
LTSPCs and Farmer Mac Guaranteed Securities	$ 2,953,091	$ 8,068	$ —	$ 3,597	$ 11,665	$ 2,964,756
Rural Infrastructure:						
LTSPCs	$ 556,837	$ —	$ —	$ —	$ —	$ 556,837

(1) Includes loans underlying off-balance sheet Agricultural Finance Guaranteed Securities and LTSPCs that are 90 days of 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.

Credit Quality Indicators

The following tables present credit quality indicators related to Agricultural Finance and Rural Utilities loans underlying LTSPCs and Farmer Mac Guaranteed Securities as of March 31, 2022 and December 31, 2021, by year of origination:

Table 6.8

	As of March 31, 2022							
	Year of Origination:							
	2022	2021	2020	2019	2018	Prior	Revolving Loans - Amortized Cost Basis	Total
	(in thousands)							
Agricultural Finance LTSPCs and Farmer Mac Guaranteed Securities:								
Internally Assigned Risk Rating:								
Acceptable	$ 39,991	$ 425,698	$ 504,636	$ 245,154	$ 182,019	$1,192,160	$ 264,675	$2,854,333
Special mention[1]	—	—	2,470	—	6,663	47,438	2,329	58,900
Substandard[2]	—	—	198	725	4,877	25,038	3,678	34,516
Total	$ 39,991	$ 425,698	$ 507,304	$ 245,879	$ 193,559	$1,264,636	$ 270,682	$2,947,749
For the Three Months Ended:								
Current period charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Current period recoveries	—	—	—	—	—	—	—	—
Current period Agricultural Finance net charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

(1) Assets in the "Special mention" category generally have potential weaknesses due to performance issues but are currently considered to be adequately secured.
(2) 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 March 31, 2022							
	Year of Origination:							
	2022	2021	2020	2019	2018	Prior	Revolving Loans - Amortized Cost Basis	Total
	(in thousands)							
Rural Infrastructure Finance LTSPCs:								
Internally Assigned Risk Rating:								
Acceptable	$ —	$ —	$ —	$ —	$ —	$ 489,384	$ 73,184	$ 562,568
Special mention[1]	—	—	—	—	—	—	—	—
Substandard[2]	—	—	—	—	—	—	—	—
Total	$ —	$ —	$ —	$ —	$ —	$ 489,384	$ 73,184	$ 562,568
For the Three Months Ended:								
Current period charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Current period recoveries	—	—	—	—	—	—	—	—
Current period Rural Infrastructure net charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

(1) Assets in the "Special mention" category generally have potential weaknesses due to performance issues but are currently considered to be adequately secured.
(2) 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, 2021							
	Year of Origination:							
	2021	2020	2019	2018	2017	Prior	Revolving Loans - Amortized Cost Basis	Total
	(in thousands)							
Agricultural Finance LTSPCs and Farmer Mac Guaranteed Securities:								
Internally Assigned Risk Rating:								
Acceptable	$ 376,027	$ 537,521	$ 244,365	$ 188,452	$ 235,865	$1,013,937	$ 252,039	$2,848,206
Special mention[1]	—	5,270	—	6,808	3,154	38,042	2,354	55,628
Substandard[2]	—	1,307	724	5,038	12,793	37,326	3,734	60,922
Total	$ 376,027	$ 544,098	$ 245,089	$ 200,298	$ 251,812	$1,089,305	$ 258,127	$2,964,756
For the Three Months Ended March 31, 2021:								
Current period charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Current period recoveries	—	—	—	—	—	—	—	—
Current period Agricultural Finance net charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

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

(2) 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, 2021							
	Year of Origination:							
	2021	2020	2019	2018	2017	Prior	Revolving Loans - Amortized Cost Basis	Total
	(in thousands)							
Rural Infrastructure Finance LTSPCs:								
Internally Assigned Risk Rating:								
Acceptable	$ —	$ —	$ —	$ —	$ —	$ 499,594	$ 57,243	$ 556,837
Special mention[1]	—	—	—	—	—	—	—	—
Substandard[2]	—	—	—	—	—	—	—	—
Total	$ —	$ —	$ —	$ —	$ —	$ 499,594	$ 57,243	$ 556,837
For the Three Months Ended March 31, 2021:								
Current period charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Current period recoveries	—	—	—	—	—	—	—	—
Current period Rural Infrastructure net charge-offs	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —

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

(2) 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.

7. NOTES PAYABLE

Farmer Mac's borrowings consist of discount notes and medium-term notes, both of which are unsecured general obligations of Farmer Mac. Discount notes generally have original maturities of 1.0 year or less, whereas medium-term notes generally have maturities of 0.5 years to 25.0 years.

The following tables set forth information related to Farmer Mac's borrowings as of March 31, 2022 and December 31, 2021:

Table 7.1

	March 31, 2022			
	Outstanding as of March 31		Average Outstanding During the Quarter	
	Amount	Weighted-Average Rate	Amount	Weighted-Average Rate
	(dollars in thousands)			
Due within one year:				
Discount notes	$ 1,892,025	0.35 %	$ 1,950,334	0.16 %
Medium-term notes	992,942	0.29 %	898,484	0.16 %
Current portion of medium-term notes	3,684,482	0.81 %		
Total due within one year	$ 6,569,449	0.60 %		
Due after one year:				
Medium-term notes due in:				
Two years	$ 4,183,016	0.89 %		
Three years	3,077,629	0.97 %		
Four years	2,513,545	0.84 %		
Five years	2,769,456	1.30 %		
Thereafter	4,206,063	1.70 %		
Total due after one year	$ 16,749,709	1.17 %		
Total principal net of discounts	$ 23,319,158	1.01 %		
Hedging adjustments	(279,191)			
Total	$ 23,039,967			

	December 31, 2021			
	Outstanding as of December 31		Average Outstanding During the Year	
	Amount	Weighted-Average Rate	Amount	Weighted-Average Rate
	(dollars in thousands)			
Due within one year:				
Discount notes	$ 2,167,979	0.05 %	$ 1,822,714	0.08 %
Medium-term notes	837,580	0.09 %	1,956,870	0.12 %
Current portion of medium-term notes	3,981,240	0.75 %		
Total due within one year	$ 6,986,799	0.45 %		
Due after one year:				
Medium-term notes due in:				
Two years	$ 4,179,985	0.81 %		
Three years	2,554,906	0.87 %		
Four years	2,119,805	0.85 %		
Five years	2,810,894	1.07 %		
Thereafter	4,106,144	1.69 %		
Total due after one year	$ 15,771,734	1.10 %		
Total principal net of discounts	$ 22,758,533	0.90 %		
Hedging adjustments	(42,377)			
Total	$ 22,716,156			

The maximum amount of Farmer Mac's discount notes outstanding at any month end during the three months ended March 31, 2022 and 2021 was $2.2 billion and $1.8 billion, respectively.

Callable medium-term notes give Farmer Mac the option to redeem the debt at par value on a specified call date or at any time on or after a specified call date. The following table summarizes by maturity date the amounts and costs for Farmer Mac debt callable in 2022 as of March 31, 2022:

Table 7.2

Debt Callable in 2022 as of March 31, 2022, by Maturity

	Amount	Weighted-Average Rate
	(dollars in thousands)	
Maturity:		
2023	$ 243,823	0.42 %
2024	318,361	0.40 %
2025	336,576	0.81 %
2026	1,045,650	1.09 %
Thereafter	1,559,225	1.69 %
Total	$ 3,503,635	1.22 %

The following schedule summarizes the earliest interest rate reset date, or debt maturities, of total borrowings outstanding as of March 31, 2022, including callable and non-callable medium-term notes, assuming callable notes are redeemed at the initial call date:

Table 7.3

	Earliest Interest Rate Reset Date, or Debt Maturities, of Borrowings Outstanding	
	Amount	Weighted-Average Rate
	(dollars in thousands)	
Debt with interest rate resets, or debt maturities in:		
2022	$ 7,552,679	0.57 %
2023	3,911,802	0.90 %
2024	2,921,874	0.94 %
2025	2,245,254	1.00 %
2026	2,650,362	1.10 %
Thereafter	4,037,187	1.94 %
Total principal net of discounts	$ 23,319,158	1.01 %

During the three months ended March 31, 2022 and 2021, Farmer Mac called $26.0 million and $1.0 billion of callable medium-term notes, respectively.

Authority to Borrow from the U.S. Treasury

Farmer Mac's statutory charter authorizes it, upon satisfying certain conditions, to borrow up to $1.5 billion from the U.S. Treasury through the issuance of debt obligations to the U.S. Treasury. Any funds borrowed from the U.S. Treasury may be used solely to fulfill Farmer Mac's guarantee obligations. Any debt obligations issued by Farmer Mac under this authority would bear interest at a rate determined by the U.S. Treasury, taking into consideration the average rate on outstanding marketable obligations of the United States as of the last day of the last calendar month ending before the date of the purchase of the obligations from Farmer Mac. The charter requires Farmer Mac to repurchase any of its debt obligations held by the U.S. Treasury within a reasonable time. As of March 31, 2022, Farmer Mac had not used this borrowing authority.

Gains on Repurchase of Outstanding Debt

No outstanding debt repurchases were made in the three months ended March 31, 2022 and 2021.

8. EQUITY

Common Stock

During first quarter 2022, Farmer Mac paid a quarterly dividend of $0.95 per share on all classes of its common stock. For each quarter in 2021, Farmer Mac paid a quarterly dividend of $0.88 per share on all classes of its common stock.

Farmer Mac's board of directors approved a share repurchase program during third quarter 2015 authorizing Farmer Mac to repurchase up to $25.0 million of its outstanding Class C non-voting common stock. The share repurchase program, last modified on March 14, 2019, authorized Farmer Mac to repurchase up to $10.0 million of Farmer Mac's outstanding Class C non-voting common stock. During first quarter 2020, Farmer Mac repurchased approximately 4,000 shares of Class C non-voting common stock at a cost of approximately $0.2 million. Shortly after these repurchases were completed, Farmer Mac indefinitely suspended its share repurchase program in an effort to preserve capital and liquidity in view of market volatility and uncertainty caused by the COVID-19 pandemic. In March 2021, Farmer Mac's board of directors reinstated the share repurchase program on its previous terms (with a remaining authorization of up to $9.8 million in stock repurchases) and extended the expiration date of the program to March 2023. Farmer Mac did not repurchase any shares of its Class C non-voting common stock during the first three months of 2022. As of March 31, 2022, Farmer Mac had repurchased approximately 673,000 shares of Class C non-voting common stock at a cost of approximately $19.8 million under the share repurchase program since 2015.

Capital Requirements

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, 2022 and December 31, 2021, 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, 2022, Farmer Mac's minimum capital requirement was $743.8 million and its core capital level was $1.2 billion, which was $488.7 million above the minimum capital requirement as of that date. As of December 31, 2021, Farmer Mac's minimum capital requirement was $713.8 million and its core capital level was $1.2 billion, which was $486.8 million above the minimum capital requirement as of that date.

In accordance with the Farm Credit Administration'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.

9. FAIR VALUE DISCLOSURES

Fair Value Classification and Transfers

The following tables present information about Farmer Mac's assets and liabilities measured at fair value on a recurring basis as of March 31, 2022 and December 31, 2021, respectively, and indicate the fair value hierarchy of the valuation techniques used by Farmer Mac to determine such fair value:

Table 9.1

Assets and Liabilities Measured at Fair Value as of March 31, 2022

	Level 1	Level 2	Level 3[(1)]	Total
		(in thousands)		
Recurring:				
Assets:				
Investment Securities:				
Available-for-sale:				
Floating rate auction-rate certificates backed by Government guaranteed student loans	$ —	$ —	$ 18,961	$ 18,961
Floating rate Government/GSE guaranteed mortgage-backed securities	—	2,265,157	—	2,265,157
Fixed rate GSE guaranteed mortgage-backed securities	—	520,620	—	520,620
Fixed rate U.S. Treasuries	1,390,576	—	—	1,390,576
Total Available-for-sale Investment Securities	1,390,576	2,785,777	18,961	4,195,314
Farmer Mac Guaranteed Securities:				
Available-for-sale:				
AgVantage	—	—	6,589,224	6,589,224
Farmer Mac Guaranteed Securities	—	—	11,022	11,022
Total Farmer Mac Guaranteed Securities	—	—	6,600,246	6,600,246
USDA Securities:				
Trading	—	—	3,386	3,386
Total USDA Securities	—	—	3,386	3,386
Financial derivatives	1,039	25,290	—	26,329
Guarantee Asset	—	—	6,138	6,138
Total Assets at fair value	$ 1,391,615	$ 2,811,067	$ 6,628,731	$ 10,831,413
Liabilities:				
Financial derivatives	$ 128	$ 105,446	$ —	$ 105,574
Total Liabilities at fair value	$ 128	$ 105,446	$ —	$ 105,574
Non-recurring:				
Assets				
Loans held for sale	$ —	$ —	$ 9,300	$ 9,300
Total non-recurring assets at fair value	$ —	$ —	$ 9,300	$ 9,300

(1) Level 3 assets represent 26% of total assets and 61% of financial instruments measured at fair value.

Assets and Liabilities Measured at Fair Value as of December 31, 2021

	Level 1	Level 2	Level 3[1]	Total
		(in thousands)		
Recurring:				
Assets:				
Investment Securities:				
Available-for-sale:				
Floating rate auction-rate certificates backed by Government guaranteed student loans	$ —	$ —	$ 19,254	$ 19,254
Floating rate Government/GSE guaranteed mortgage-backed securities	—	2,178,831	—	2,178,831
Fixed rate GSE guaranteed mortgage-backed securities	—	458,837	—	458,837
Fixed rate U.S. Treasuries	1,179,469	—	—	1,179,469
Total Available-for-sale Investment Securities	1,179,469	2,637,668	19,254	3,836,391
Farmer Mac Guaranteed Securities:				
Available-for-sale:				
AgVantage	—	—	6,316,145	6,316,145
Farmer Mac Guaranteed Securities	—	—	12,414	12,414
Total Farmer Mac Guaranteed Securities	—	—	6,328,559	6,328,559
USDA Securities:				
Trading	—	—	4,401	4,401
Total USDA Securities	—	—	4,401	4,401
Financial derivatives	73	19,066	—	19,139
Guarantee Asset	—	—	6,237	6,237
Total Assets at fair value	$ 1,179,542	$ 2,656,734	$ 6,358,451	$ 10,194,727
Liabilities:				
Financial derivatives	$ —	$ 34,248	$ —	$ 34,248
Total Liabilities at fair value	$ —	$ 34,248	$ —	$ 34,248
Non-recurring:				
Assets				
Mortgage Servicing Rights	$ —	$ —	$ 2,681	$ 2,681
Total non-recurring assets at fair value	$ —	$ —	$ 2,681	$ 2,681

[1] Level 3 assets represent 25% of total assets and 62% of financial instruments measured at fair value.

There were no material assets or liabilities measured at fair value on a non-recurring basis as of March 31, 2022 or December 31, 2021.

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 three months ended March 31, 2022 and 2021, there were no transfers within the fair value hierarchy.

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, 2022 and 2021.

Table 9.2

Level 3 Assets and Liabilities Measured at Fair Value for the Three Months Ended March 31, 2022

	Beginning Balance	Purchases	Sales	Settlements	Allowance for Losses	Realized and unrealized (losses)/gains included in Income	Unrealized gains included in Other Comprehensive Income	Ending Balance
					(in thousands)			
Recurring:								
Assets:								
Investment Securities:								
Available-for-sale:								
Floating rate auction-rate certificates backed by Government guaranteed student loans	$ 19,254	$ —	$ —	$ —	$ 2	$ —	$ (295)	$ 18,961
Total available-for-sale	19,254	—	—	—	2	—	(295)	18,961
Farmer Mac Guaranteed Securities:								
Available-for-sale:								
AgVantage	6,316,145	832,750	—	(295,284)	(418)	(210,587)	(53,382)	6,589,224
Farmer Mac Guaranteed Securities	12,414	—	—	(379)	—	—	(1,013)	11,022
Total available-for-sale	6,328,559	832,750	—	(295,663)	(418)	(210,587)	(54,395)	6,600,246
USDA Securities:								
Trading	4,401	—	—	(952)	—	(63)	—	3,386
Total USDA Securities	4,401	—	—	(952)		(63)	—	3,386
Guarantee and commitment obligations:								
Guarantee Asset	6,237	—	—	(255)	—	156	—	6,138
Total Guarantee and commitment obligations	6,237	—	—	(255)	—	156	—	6,138
Total Assets at fair value	$ 6,358,451	$ 832,750	$ —	$ (296,870)	$ (416)	$ (210,494)	$ (54,690)	$ 6,628,731

Level 3 Assets and Liabilities Measured at Fair Value for the Three Months Ended March 31, 2021

	Beginning Balance	Purchases	Sales	Settlements	Allowance for Losses	Realized and unrealized losses included in Income	Unrealized gains included in Other Comprehensive Income	Ending Balance
					(in thousands)			
Recurring:								
Assets:								
Investment Securities:								
Available-for-sale:								
Floating rate auction-rate certificates backed by Government guaranteed student loans	$ 19,171	$ —	$ —	$ —	$ (25)	$ —	$ —	$ 19,146
Total available-for-sale	19,171	—	—	—	(25)	—	—	19,146
Farmer Mac Guaranteed Securities:								
Available-for-sale:								
AgVantage	6,947,701	160,615	—	(243,832)	182	(168,742)	67,285	6,763,209
Total available-for-sale	6,947,701	160,615	—	(243,832)	182	(168,742)	67,285	6,763,209
USDA Securities:								
Trading	6,695	—	—	(1,103)	—	(14)	—	5,578
Total USDA Securities	6,695	—	—	(1,103)		(14)	—	5,578
Total Assets at fair value	$ 6,973,567	$ 160,615	$ —	$ (244,935)	$ 157	$ (168,756)	$ 67,285	$ 6,787,933

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, 2022 and December 31, 2021:

Table 9.3

	As of March 31, 2022			
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	$ 18,961	Indicative bids	Range of broker quotes	96.5% - 96.5% (96.5%)
Farmer Mac Guaranteed Securities:				
AgVantage	$ 6,589,224	Discounted cash flow	Discount rate	1.7% - 3.2% (2.9%)
Farmer Mac Guaranteed Securities	$ 11,022	Discounted cash flow	Discount rate	3.4% - 3.9% (3.6%)
			CPR	8%
USDA Securities	$ 3,386	Discounted cash flow	Discount rate	3.1% - 4.7% (4.4%)
			CPR	21% - 33% (31%)
Guarantee Asset	$ 6,138	Discounted cash flow	Discount rate	3.9% - 4.4% (4.2%)
			CPR	8%

	As of December 31, 2021			
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	$ 19,254	Indicative bids	Range of broker quotes	98.0% - 98.0% (98.0%)
Farmer Mac Guaranteed Securities:				
AgVantage	$ 6,316,145	Discounted cash flow	Discount rate	0.9% - 2.1% (1.7%)
Farmer Mac Guaranteed Securities	$ 12,414	Discounted cash flow	Discount rate	2.3% - 2.8% (2.6%)
			CPR	8.0%
USDA Securities	$ 4,401	Discounted cash flow	Discount rate	1.4% - 3.1% (2.8%)
			CPR	25% - 42% (39%)
Guarantee Asset	$ 6,237	Discounted cash flow	Discount rate	5.4% - 5.8% (5.6%)
			CPR	7% - 12% (8%)

The significant unobservable input used in the fair value measurements of AgVantage Farmer Mac Guaranteed Securities is the discount rate commensurate with the risks involved. Typically, significant increases (decreases) in this input 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. Conversely, in a declining interest rate environment, Farmer Mac would expect average discount rates to decrease. Prepayment rates are not presented in the table above for AgVantage securities because they generally have fixed maturity dates when the secured general obligations are due and do not prepay.

The significant unobservable inputs used in the fair value measurements of USDA Securities are the prepayment rate and discount rate 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.

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, 2022 and December 31, 2021:

Table 9.4

	As of March 31, 2022		As of December 31, 2021	
	Fair Value	Carrying Amount	Fair Value	Carrying Amount
	(in thousands)			
Financial assets:				
Cash and cash equivalents	$ 890,046	$ 890,046	$ 908,785	$ 908,785
Investment securities	4,241,418	4,241,788	3,884,202	3,882,590
Farmer Mac Guaranteed Securities	8,476,067	8,506,464	8,360,293	8,361,798
USDA Securities	2,395,117	2,439,489	2,536,473	2,440,732
Loans	9,429,186	9,364,940	9,814,642	9,248,678
Financial derivatives	26,329	26,329	19,139	19,139
Guarantee and commitment fees receivable	43,279	45,021	42,533	45,538
Financial liabilities:				
Notes payable	22,596,306	23,039,967	22,716,791	22,716,156
Debt securities of consolidated trusts held by third parties	890,823	895,145	1,005,306	981,379
Financial derivatives	105,574	105,574	34,248	34,248
Guarantee and commitment obligations	41,542	43,285	40,920	43,926

The carrying value of cash and cash equivalents is a reasonable estimate of their approximate fair value and is classified as Level 1. The fair value of investments in U.S. Treasuries are valued based on unadjusted quoted prices in active markets and are classified as Level 1. A significant portion of Farmer Mac's investment portfolio is valued using a reputable nationally recognized third-party pricing service. The prices obtained are non-binding and generally representative of recent market trades and are classified as Level 2. Farmer Mac internally models the fair value of its loan portfolio, including loans held for investment and loans held for investment in consolidated trusts, Farmer Mac Guaranteed Securities, and USDA Securities by discounting the projected cash flows of these instruments at projected interest rates. The fair values are based on the present value of expected cash flows using management's best estimate of certain key assumptions, which include prepayment speeds, forward yield curves and discount rates commensurate with the risks involved. These fair value measurements do not take into consideration the fair value of the underlying property and are classified as Level 3. Financial derivatives primarily are valued using unadjusted counterparty valuations and are classified as Level 2. The fair value of the guarantee fees receivable/obligation and debt securities of consolidated trusts are estimated based on the present value of expected future cash flows of the underlying mortgage assets using management's best estimate of certain key assumptions, which include prepayments speeds, forward yield curves, and discount rates commensurate with the risks involved and are classified as Level 3. Notes payable are valued by discounting the expected cash flows of these instruments using a yield curve derived from market prices observed for similar agency securities and are also classified as Level 3. Because the cash flows of Farmer Mac's financial instruments may be interest rate path dependent, estimated fair values and projected discount rates for Level 3 financial instruments are derived using a Monte Carlo simulation model. Different market assumptions and estimation methodologies could significantly affect estimated fair value amounts.

10. BUSINESS SEGMENT REPORTING

The following table presents the alignment of the Farmer Mac's seven segments:

Agricultural Finance		**Rural Infrastructure Finance**		**Treasury**		
Farm & Ranch	Corporate AgFinance	Rural Utilities	Renewable Energy	Funding	Investments	Corporate

The financial information presented below reflects the accounts of Farmer Mac and its subsidiaries on a consolidated basis. Accordingly, the core earnings for Farmer Mac's segments would differ from any stand-alone financial statements of Farmer Mac's subsidiaries. These differences would be due to various factors, including the exclusion of unrealized gains and losses related to fair value changes of trading assets and financial derivatives, as well as the allocation of certain expenses such as operating expenses, dividends and interest expense related to the issuance of capital and the issuance of indebtedness managed at the corporate level.

The following tables present core earnings for Farmer Mac's segments and a reconciliation to consolidated net income for the three months ended March 31, 2022 and 2021. The amounts for the three months ended March 31, 2021 have been revised to conform to the current year's segment alignment.

Table 10.1

Core Earnings by Business Segment
For the Three Months Ended March 31, 2022

	Agricultural Finance		Rural Infrastructure		Treasury				
	Farm & Ranch	Corporate AgFinance	Rural Utilities	Renewable Energy	Funding	Investments	Corporate	Reconciling Adjustments	Consolidated Net Income
					(in thousands)				
Net interest income	$ 31,354	$ 7,209	$ 3,193	$ 375	$ 19,740	$ 4	$ —	$ —	$ 61,875
Less: reconciling adjustments(1)(2)(3)	(1,000)	—	(34)	—	(3,002)	—	—	4,036	—
Net effective spread	30,354	7,209	3,159	375	16,738	4	—	4,036	—
Guarantee and commitment fees	4,216	19	286	36	—	—	—	(862)	3,695
Other income/(expense)(3)	400	114	—	—	—	—	—	16,172	16,686
Total revenues	34,970	7,342	3,445	411	16,738	4	—	19,346	82,256
(Provision for)/release of losses	(510)	(515)	1,169	(202)	—	2	—	—	(56)
Release of reserve for losses	75	—	35	—	—	—	—	—	110
Operating expenses	—	—	—	—	—	—	(21,388)	—	(21,388)
Total non-interest expense	75	—	35	—	—	—	(21,388)	—	(21,278)
Core earnings before income taxes	34,535	6,827	4,649	209	16,738	6	(21,388)	19,346 (4)	60,922
Income tax (expense)/benefit	(7,252)	(1,434)	(976)	(44)	(3,515)	(1)	4,198	(4,061)	(13,085)
Core earnings before preferred stock dividends	27,283	5,393	3,673	165	13,223	5	(17,190)	15,285 (4)	47,837
Preferred stock dividends	—	—	—	—	—	—	(6,791)	—	(6,791)
Segment core earnings/(losses)	$ 27,283	$ 5,393	$ 3,673	$ 165	$ 13,223	$ 5	$ (23,981)	$ 15,285 (4)	$ 41,046
Total Assets	$13,610,138	$1,491,127	$5,480,668	$ 92,132	$ —	$ 4,995,154	$ 120,195	$ —	25,789,414
Total on- and off-balance sheet program assets at principal balance	$16,575,595	$1,540,760	$6,006,446	$ 120,609	$ —	$ —	$ —	$ —	24,243,410

(1) Includes the amortization of premiums and discounts on assets consolidated at fair value, originally included in interest income, to reflect core earnings amounts.

(2) Includes the reclassification of interest income and interest expense from consolidated trusts owned by third parties to guarantee and commitment fees, to reflect management's view that the net interest income Farmer Mac earns is effectively a guarantee fee.

(3) Includes the reclassification of interest expense related to interest rate swaps not designated as hedges, which are included in "Gains on financial derivatives" on the consolidated financial statements, to determine the effective funding cost for each operating segment.

(4) Net adjustments to reconcile to the corresponding income measures: core earnings before income taxes reconciled to income before income taxes; core earnings before preferred stock dividends reconciled to net income; and segment core earnings reconciled to net income attributable to common stockholders.

Core Earnings by Business Segment

For the Three Months Ended March 31, 2021

	Agricultural Finance		Rural Infrastructure		Treasury				
	Farm & Ranch	Corporate AgFinance	Rural Utilities	Renewable Energy	Funding	Investments	Corporate	Reconciling Adjustments	Consolidated Net Income
	(in thousands)								
Net interest income	$ 27,646	$ 6,921	$ 1,754	$ 248	$ 16,568	$ 114	$ —	$ —	$ 53,251
Less: reconciling adjustments(1)(2)(3)	(1,184)	—	(34)	—	1,826	—	—	(608)	—
Net effective spread	26,462	6,921	1,720	248	18,394	114	—	(608)	—
Guarantee and commitment fees	3,908	8	319	5	—	—	—	(1,210)	3,030
Other income/ (expense)(3)	572	—	1	—	—	—	(122)	4,412	4,863
Total revenues	30,942	6,929	2,040	253	18,394	114	(122)	2,594	61,144
(Provision for)/release of losses	—	(61)	(633)	(195)	—	(24)	—	—	(913)
Provision for reserve for losses	731	—	213	—	—	—	—	—	944
Operating expenses	—	—	—	—	—	—	(18,881)	—	(18,881)
Total non-interest expense	731	—	213	—	—	—	(18,881)	—	(17,937)
Core earnings before income taxes	31,673	6,868	1,620	58	18,394	90	(19,003)	2,594 (4)	42,294
Income tax (expense)/ benefit	(6,650)	(1,441)	(341)	(12)	(3,863)	(19)	3,806	(547)	(9,067)
Core earnings before preferred stock dividends	25,023	5,427	1,279	46	14,531	71	(15,197)	2,047 (4)	33,227
Preferred stock dividends	—	—	—	—	—	—	(5,269)	—	(5,269)
Loss on retirement of preferred stock	—	—	—	—	—	—	—	—	—
Segment core earnings/(losses)	$ 25,023	$ 5,427	$ 1,279	$ 46	$ 14,531	$ 71	$ (20,466)	$ 2,047 (4)	$ 27,958
Total Assets	$12,289,354	$1,644,837	$4,836,306	$ 83,352	$ —	$ 5,128,901	$ 31,161	$ —	$ 24,013,911
Total on- and off-balance sheet program assets at principal balance	$14,738,052	$1,647,796	$5,382,835	$ 93,848	$ —	$ —	$ —	$ —	$ 21,862,531

(1) Includes the amortization of premiums and discounts on assets consolidated at fair value, originally included in interest income, to reflect core earnings amounts.

(2) Includes the reclassification of interest income and interest expense from consolidated trusts owned by third parties to guarantee and commitment fees, to reflect management's view that the net interest income Farmer Mac earns is effectively a guarantee fee.

(3) Includes the reclassification of interest expense related to interest rate swaps not designated as hedges, which are included in "Gains on financial derivatives" on the consolidated financial statements, to determine the effective funding cost for each operating segment.

(4) Net adjustments to reconcile to the corresponding income measures: core earnings before income taxes reconciled to income before income taxes; core earnings before preferred stock dividends reconciled to net income; and segment core earnings reconciled to net income attributable to common stockholders.

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

The objective of this section of the report is to provide a discussion and analysis, from management's perspective, of the material information necessary to assess Farmer Mac's financial condition and results of operations for the quarter ended March 31, 2022. Financial information included in this report is consolidated to include the accounts of Farmer Mac and its two subsidiaries – Farmer Mac Mortgage Securities Corporation and Farmer Mac II LLC. This discussion and analysis of financial condition and results of operations should be read together with: (1) the interim unaudited consolidated financial statements and the related notes that appear elsewhere in this report; and (2) Farmer Mac's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, as filed with the SEC on February 28, 2022 (the "2021 Annual Report").

FORWARD-LOOKING STATEMENTS

In this report, the words "Farmer Mac," "we," "our," and "us" refer to the Federal Agricultural Mortgage Corporation unless otherwise stated or unless the context otherwise requires.

Some statements made in this report, such as in the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section, are "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 about management's current expectations for Farmer Mac's future financial results, business prospects, and business developments. Forward-looking statements include, without limitation, any statement, including statements about the COVID-19 pandemic and its impact on Farmer Mac, that may predict, forecast, indicate, or imply future results, performance, or achievements. These statements typically include terms such as "anticipates," "believes," "continues," "estimates," "expects," "forecasts," "intends," "outlook," "plans," "potential," "project," "target," and similar terms, and future or conditional tense verbs like "could," "may," "might," "should," "will," and "would." This report includes forward-looking statements addressing Farmer Mac's:

- prospects for earnings;
- prospects for growth in business volume;
- assessment of the effect of the COVID-19 pandemic on our business, financial results, financial condition, and business plans and strategies;
- trends in net interest income and net effective spread;
- trends in portfolio credit quality, delinquencies, substandard assets, credit losses, and provisions for losses;
- assessment of economic and market trends;
- trends in expenses;
- trends in investment securities;
- prospects for asset impairments and allowance for losses;
- changes in capital position;
- future dividend payments; and
- other business and financial matters.

Management's expectations for Farmer Mac's future necessarily involve assumptions, estimates, and the evaluation of risks and uncertainties. Various factors or events, both known and unknown, could cause Farmer Mac's actual results to differ materially from the expectations as expressed or implied by the forward-looking statements, including the factors discussed under "Risk Factors" in Part I, Item 1A of Farmer Mac's 2021 Annual Report, as well as uncertainties about:

- the availability to Farmer Mac of debt and equity financing and, if available, the reasonableness of rates and terms;
- legislative or regulatory developments that could affect Farmer Mac, its sources of business, or agricultural or rural infrastructure industries;
- fluctuations in the fair value of assets held by Farmer Mac and its subsidiaries;
- the level of lender interest in Farmer Mac's products and the secondary market provided by Farmer Mac;
- the general rate of growth in agricultural mortgage and rural utilities indebtedness;
- the effect of economic conditions and geopolitics on agricultural mortgage or rural utilities lending, borrower repayment capacity, or collateral values, including fluctuations in interest rates, changes in U.S. trade policies, fluctuations in export demand for U.S. agricultural products, supply chain disruptions, increases in input costs, labor availability, volatility in commodity prices, and the effects of the conflict between Russia and Ukraine;
- the degree to which Farmer Mac is exposed to interest rate risk resulting from fluctuations in Farmer Mac's borrowing costs relative to market indexes;
- developments in the financial markets, including possible investor, analyst, and rating agency reactions to events involving government-sponsored enterprises, including Farmer Mac;
- the effects of the Federal Reserve’s efforts to achieve monetary policy normalization and slow inflation;
- other factors that could hinder agricultural mortgage lending or borrower repayment capacity, including the effects of severe weather, climate change, or fluctuations in agricultural real estate values;
- the duration, spread, and severity of the COVID-19 pandemic and its effects on the business operations of agricultural and rural borrowers, the capital markets, and Farmer Mac's business operations; and
- the public response to the ongoing COVID-19 pandemic, including the possibility of government actions to mitigate the pandemic and its effects, and any social or economic disruption that may be caused by any new COVID-19 variants or any further outbreaks.

Considering these potential risks and uncertainties, no undue reliance should be placed on any forward-looking statements expressed in this report. Farmer Mac undertakes no obligation to release publicly the results of revisions to any forward-looking statements to reflect new information or any future events or circumstances, except as otherwise required by applicable law. The information in this report is not necessarily indicative of future results.

Overview

Farmer Mac is a mission-focused, purpose-driven company determined to improve the economic opportunity in rural America by increasing the availability and affordability of credit. As the nation's secondary market for agricultural and rural infrastructure loans, we provide a broad array of financial solutions to lenders that support flexible low-cost financing to farmers, ranchers, agribusinesses, renewable energy projects, rural utilities, and other related rural businesses and enterprises. Farmer Mac also serves as a critical investment tool for entities such as states, counties, municipalities, pension funds, banks, public trust funds, and credit unions. Farmer Mac offers those entities a variety of investment opportunities that may diversify their investment portfolios and provide the opportunity to earn a competitive return on their investment dollars.

Farmer Mac's performance during first quarter 2022, described in more detail below, reflects the success of our continued focus on pursuing new channels and innovative ways to further our mission to help build a strong and vital rural America. The discussion below of Farmer Mac's financial information includes "non-GAAP measures," which are measures of financial performance not presented in accordance with generally accepted accounting principles in the United States ("GAAP"). For more information about the non-GAAP measures Farmer Mac uses, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Use of Non-GAAP Measures."

Net Income and Core Earnings

The following table shows our net income attributable to common stockholders and core earnings for the periods presented. Core earnings and core earnings per share are non-GAAP measures that differ from net income attributable to common stockholders and earnings per common share, respectively, by excluding the effects of fair value fluctuations and specified infrequent or unusual transactions.

Table 1

	For the Three Months Ended		
	March 31, 2022	December 31, 2021	March 31, 2021
		(in thousands)	
Net income attributable to common stockholders	$ 41,046	$ 29,892	$ 27,958
Core earnings	25,761	30,027	25,911

The $11.2 million sequential increase in net income attributable to common stockholders was due to a $14.5 million after-tax increase in the fair value of undesignated financial derivatives and a $3.5 million after-tax increase in net interest income. These factors were partially offset by the non-recurrence of the fourth quarter 2021 $5.2 million after-tax gain on sale of mortgage loans, a net change in our (release)/ provision for credit losses of $1.1 million after tax, and a $0.7 million after-tax increase in operating expenses.

The $13.1 million year-over-year increase in net income attributable to common stockholders was due to a $9.3 million after-tax increase in the fair value of undesignated financial derivatives and a $6.8 million after-tax increase in net interest income. These factors were partially offset by a $2.0 million after-tax increase in operating expenses and a $1.5 million increase in preferred stock dividends.

The $4.3 million sequential decrease in core earnings was due to the non-recurrence of the fourth quarter 2021 $5.2 million after-tax gain on sale of mortgage loans, a net change in our (release)/provision for credit losses of $1.1 million after tax, and a $0.7 million after-tax increase in operating expenses. These factors were partially offset by a $2.8 million after-tax increase in net effective spread.

The $0.2 million year-over-year decrease in core earnings was due to the $2.0 million after-tax increase in operating expenses and the $1.5 million increase in preferred stock dividends. These factors were partially offset by a $3.1 million after-tax increase in net effective spread.

For more information about net income attributable to common stockholders, the composition of core earnings, and a reconciliation of net income attributable to common stockholders to core earnings, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations." For more information about the non-GAAP measures Farmer Mac uses, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Use of Non-GAAP Measures."

Net Interest Income and Net Effective Spread

The following table shows our net interest income and net effective spread in both dollars and percentage yield or spread for the periods presented. Farmer Mac uses net effective spread, a non-GAAP measure, as an alternative to net interest income because management believes it is a useful metric that reflects the economics of the net spread between all the assets owned by Farmer Mac and all related funding, including any associated derivatives, some of which may not be included in net interest income.

Table 2

	For the Three Months Ended		
	March 31, 2022	December 31, 2021	March 31, 2021
		(in thousands)	
Net interest income	$ 61,875	$ 57,390	$ 53,251
Net interest yield %	1.00 %	0.95 %	0.91 %
Net effective spread	$ 57,839	$ 54,333	$ 53,859
Net effective spread %	0.97 %	0.94 %	0.97 %

The $4.5 million sequential increase in net interest income was primarily due to a $1.9 million increase related to net new business volume, a $1.4 million decrease in funding costs, and a $0.8 million increase in cash-basis interest income. In percentage terms, the sequential 0.05% increase was primarily attributable to a decrease of 0.03% in funding costs, an increase of 0.01% in net new business volume, and an increase of 0.01% in net fair value changes from financial derivatives designated in hedge accounting relationships (designated financial derivatives).

The $8.6 million year-over-year increase in net interest income was primarily due to a $5.0 million increase from net new business volume, a $2.0 million increase in the fair value of designated financial derivatives, a $0.8 million increase in net coupon yields related to our acquisition, in third quarter 2021, of the loan servicing rights on a sizeable portion of our Farm & Ranch loan and USDA Guaranteed Securities portfolios, and a $0.7 million increase in cash-basis interest income. In percentage terms, the year-over-year 0.09% increase was primarily attributable to a decrease of 0.05% in funding costs and an increase of 0.03% in net fair value changes from designated financial derivatives.

The $3.5 million sequential increase in net effective spread in dollars was primarily due to an increase of $1.9 million from net new business volume, a $1.2 million decrease in non-GAAP funding costs, and a $0.8 million increase in cash-basis interest income. In percentage terms, the sequential increase of 0.03% was primarily attributable to an increase of 0.01% in net new business volume and an increase of 0.01% in cash-basis interest income.

The $4.0 million year-over-year increase in net effective spread in dollars was primarily due to a $4.4 million increase from net new business volume, a $0.8 million increase in net coupon yields related to the acquisition of loan servicing rights referenced above, and a $0.7 million increase in cash-basis interest income. These factors were partially offset by a $1.7 million increase in non-GAAP funding costs. In percentage terms, net effective spread remained constant on a year-over-year basis.

For more information about Farmer Mac's use of net effective spread as a financial measure, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Use of Non-GAAP Measures." For a reconciliation of net interest income to net effective spread, see Table 11 in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations—Net Interest Income."

Business Volume

Our outstanding business volume was $24.2 billion as of March 31, 2022, a net increase of $0.6 billion from December 31, 2021 after taking into account all new business, maturities, sales, and paydowns on existing assets. The net increase was primarily attributable to net increases of $0.5 billion in the Agricultural Finance line of business and $0.1 billion in the Rural Infrastructure Finance line of business.

For more information about Farmer Mac's business volume, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations—Business Volume."

Capital

Table 3

	As of	
	March 31, 2022	December 31, 2021
	(in thousands)	
Core capital	$ 1,232,509	$ 1,200,560
Capital in excess of minimum capital level required	488,730	486,810

The increase in capital in excess of the minimum capital level required was primarily due to an increase in retained earnings.

Credit Quality

The following table presents Agricultural Finance on-balance sheet loan purchase and off-balance sheet LTSPCs and Farmer Mac Guaranteed Securities substandard assets, in dollars and as a percentage of the respective portfolio as of March 31, 2022 and December 31, 2021:

Table 4

	On-Balance Sheet		Off-Balance Sheet	
	Substandard Assets	% of Portfolio	Substandard Assets	% of Portfolio
	(dollars in thousands)			
March 31, 2022	$ 181,303	2.6 %	$ 34,516	1.2 %
December 31, 2021	185,758	2.7 %	60,922	2.1 %
Increase/(decrease) from prior year-ending	$ (4,455)	(0.1)%	$ (26,406)	(0.9)%

The decrease of $4.5 million in on-balance sheet substandard assets during first quarter was primarily driven by credit upgrades during the quarter in crops, permanent plantings, livestock, and part-time farms, partially offset by credit downgrades in storage and processing. The on-balance sheet Agricultural Finance mortgage loan portfolio grew by $85.2 million, which, when coupled with credit upgrades, caused the percentage of substandard assets to decrease. The $26.4 million decrease in substandard assets in our off-balance sheet LTSPC and Farmer Mac Guaranteed Securities portfolios during first quarter was primarily due to credit upgrades across the portfolios, particularly crops and livestock.

There were no substandard assets in the Rural Infrastructure Finance loan purchase portfolio as of March 31, 2022 and one loan classified as substandard in that portfolio as of December 31, 2021.

For an analysis of current loan-to-value ratios across substandard and other internally assigned risk ratings, see Table 27 in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Risk Management—Credit Risk—Loans and Guarantees."

The following table presents 90-day delinquencies for on-balance sheet Agricultural Finance mortgage loan purchases and off-balance sheet LTSPCs and Farmer Mac Guaranteed Securities, in dollars and as a percentage of the respective balance sheet category as of March 31, 2022 and December 31, 2021:

Table 5

	On-Balance Sheet		Off-Balance Sheet	
	90-Day Delinquencies	% of Portfolio	90-Day Delinquencies	% of Portfolio
	(dollars in thousands)			
March 31, 2022	$ 53,960	0.78 %	$ 1,887	0.06 %
December 31, 2021	43,710	0.64 %	3,597	0.12 %
Increase/(decrease) from prior year-ending	$ 10,250	0.14 %	$ (1,710)	(0.06)%

On-balance sheet Agricultural Finance loans 90 or more days delinquent increased in all commodity groups, except crops. Off-balance sheet Agricultural Finance LTSPCs and Farmer Mac Guaranteed Securities 90 days or more delinquent decreased in livestock and permanent plantings, while all other commodity groups remained constant. The top ten borrower exposures over 90 days delinquent in either the on- or off-balance sheet Agricultural Finance portfolio represented over half of the aggregate 90-day delinquencies as of March 31, 2022.

As of both March 31, 2022 and December 31, 2021, there were no 90-day delinquencies in Farmer Mac's portfolio of Rural Infrastructure Finance loan purchases and loans underlying LTSPCs.

For more information about Farmer Mac's credit metrics, including 90-day delinquencies, the total allowance for losses, and substandard assets, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Risk Management—Credit Risk—Loans and Guarantees."

COVID-19 Pandemic

Farmer Mac has operated successfully throughout the COVID-19 pandemic with most employees still working remotely. Farmer Mac has maintained uninterrupted access to the debt capital markets during that time and remains a source of capital and liquidity to rural borrowers facing economic or market volatility stemming from the ongoing pandemic. For more information on the effects of the COVID-19 pandemic on Farmer Mac's business, see "Business—Human Capital" in the 2021 Annual Report and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Outlook" in the 2021 Annual Report and in this report.

Use of Non-GAAP Measures

In the accompanying analysis of its financial information, Farmer Mac uses "non-GAAP measures," which are measures of financial performance that are not presented in accordance with GAAP. Specifically, Farmer Mac uses the following non-GAAP measures: "core earnings," "core earnings per share," and "net effective spread." Farmer Mac uses these non-GAAP measures to measure corporate economic performance and develop financial plans because, in management's view, they are useful alternative measures in understanding Farmer Mac's economic performance, transaction economics, and business trends.

The non-GAAP financial measures that Farmer Mac uses may not be comparable to similarly labeled non-GAAP financial measures disclosed by other companies. Farmer Mac's disclosure of these non-GAAP measures is intended to be supplemental in nature and is not meant to be considered in isolation from, as a substitute for, or as more important than, the related financial information prepared in accordance with GAAP.

Core Earnings and Core Earnings Per Share

The main difference between core earnings and core earnings per share (non-GAAP measures) and net income attributable to common stockholders and earnings per common share (GAAP measures) is that those non-GAAP measures exclude the effects of fair value fluctuations. These fluctuations are not expected to have a cumulative net impact on Farmer Mac's financial condition or results of operations reported in accordance with GAAP if the related financial instruments are held to maturity, as is expected. Another difference is that these two non-GAAP measures exclude specified infrequent or unusual transactions that we believe are not indicative of future operating results and that may not reflect the trends and economic financial performance of Farmer Mac's core business. For example, we have excluded from core earnings and core earnings per share any losses on retirement of preferred stock. For a reconciliation of Farmer Mac's net income attributable to common stockholders to core earnings and of earnings per common share to core earnings per share, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations."

Net Effective Spread

Farmer Mac uses net effective spread to measure the net spread Farmer Mac earns between its interest-earning assets and the related net funding costs of these assets. As further explained below, net effective spread differs from net interest income and net interest yield by excluding certain items from net interest income and net interest yield and including certain other items that net interest income and net interest yield do not contain.

Farmer Mac excludes from net effective spread the premiums and discounts on assets consolidated at fair value because they either do not reflect actual cash premiums paid for the assets at acquisition or are not expected to have an economic effect on Farmer Mac's financial performance if the assets are held to maturity, as is expected. Farmer Mac also excludes from net effective spread the interest income and interest expense associated with the consolidated trusts and the average balance of the loans underlying these trusts to reflect management's view that the net interest income Farmer Mac earns on the related Farmer Mac Guaranteed Securities owned by third parties is effectively a guarantee fee. Accordingly, the excluded interest income and interest expense associated with consolidated trusts is reclassified to guarantee and commitment fees in determining Farmer Mac's core earnings. Farmer Mac also excludes from net effective spread the fair value changes of financial derivatives and the corresponding assets or liabilities designated in fair value hedge accounting relationships because they are not expected to have an economic effect on Farmer Mac's financial performance, as we expect to hold the financial derivatives and corresponding hedged items to maturity.

Net effective spread also differs from net interest income and net interest yield because it includes the accrual of income and expense related to the contractual amounts due on financial derivatives that are not designated in hedge accounting relationships ("undesignated financial derivatives"). Farmer Mac uses interest rate swaps to manage its interest rate risk exposure by synthetically modifying the interest rate reset or maturity characteristics of certain assets and liabilities. The accrual of the contractual amounts due on interest rate swaps designated in hedge accounting relationships is included as an adjustment to the yield or cost of the hedged item and is included in net interest income. For undesignated financial derivatives, Farmer Mac records the income or expense related to the accrual of the contractual amounts due in "Gains on financial derivatives" on the consolidated statements of operations. However, the accrual of the contractual amounts due for undesignated financial derivatives are included in Farmer Mac's calculation of net effective spread.

Net effective spread also differs from net interest income and net interest yield because it includes the net effects of terminations or net settlements on financial derivatives, which consist of: (1) the net effects of cash settlements on agency forward contracts on the debt of other GSEs and U.S. Treasury security futures that we use as short-term economic hedges on the issuance of debt; and (2) the net effects of initial cash payments that Farmer Mac receives upon the inception of certain swaps. The inclusion of these items in net effective spread is intended to reflect our view of the complete net spread between an asset and all of its related funding, including any associated derivatives, whether or not they are designated in a hedge accounting relationship.

For a reconciliation of net interest income and net interest yield to net effective spread, see Table 11 in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations—Net Interest Income."

Results of Operations

Reconciliations of Farmer Mac's net income attributable to common stockholders to core earnings and core earnings per share are presented in the following tables along with information about the composition of core earnings:

Table 6

Reconciliation of Net Income Attributable to Common Stockholders to Core Earnings

	For the Three Months Ended	
	March 31, 2022	March 31, 2021
	(in thousands, except per share amounts)	
Net income attributable to common stockholders	$ 41,046	$ 27,958
Less reconciling items:		
Gains on undesignated financial derivatives due to fair value changes (see Table 14)	1,698	1,695
Gains/(losses) on hedging activities due to fair value changes	2,024	(271)
Unrealized gains/(losses) on trading securities	94	(14)
Net effects of amortization of premiums/discounts and deferred gains on assets consolidated at fair value	20	16
Net effects of terminations or net settlements on financial derivatives	15,512	1,165
Income tax effect related to reconciling items	(4,063)	(544)
Sub-total	15,285	2,047
Core earnings	$ 25,761	$ 25,911
Composition of Core Earnings:		
Revenues:		
Net effective spread[(1)]	$ 57,839	$ 53,859
Guarantee and commitment fees[(2)]	4,557	4,240
Other[(3)]	514	451
Total revenues	62,910	58,550
Credit related expense (GAAP):		
Release of losses	(54)	(31)
Total credit related expense	(54)	(31)
Operating expenses (GAAP):		
Compensation and employee benefits	13,298	11,795
General and administrative	7,278	6,336
Regulatory fees	812	750
Total operating expenses	21,388	18,881
Net earnings	41,576	39,700
Income tax expense[(4)]	9,024	8,520
Preferred stock dividends (GAAP)	6,791	5,269
Core earnings	$ 25,761	$ 25,911
Core earnings per share:		
Basic	$ 2.39	$ 2.41
Diluted	2.37	2.39
Weighted-average shares:		
Basic	10,767	10,738
Diluted	10,887	10,819

(1) Net effective spread is a non-GAAP measure. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Use of Non-GAAP Measures—Net Effective Spread" for an explanation of net effective spread. See Table 11 for a reconciliation of net interest income to net effective spread.

(2) Includes interest income and interest expense related to consolidated trusts owned by third parties reclassified from net interest income to guarantee and commitment fees to reflect management's view that the net interest income Farmer Mac earns is effectively a guarantee fee on the consolidated Farmer Mac Guaranteed Securities.

(3) Reflects reconciling adjustments for the reclassification to exclude expenses related to interest rate swaps not designated as hedges and terminations or net settlements on financial derivatives, and reconciling adjustments to exclude fair value adjustments on financial derivatives and trading assets and the recognition of deferred gains over the estimated lives of certain Farmer Mac Guaranteed Securities and USDA Securities.

(4) Includes the tax impact of non-GAAP reconciling items between net income attributable to common stockholders and core earnings.

Table 7

Reconciliation of GAAP Basic Earnings Per Share to Core Earnings - Basic Earnings Per Share

	For the Three Months Ended	
	March 31, 2022	March 31, 2021
	(in thousands, except per share amounts)	
GAAP - Basic EPS	$ 3.81	$ 2.60
Less reconciling items:		
Gains on undesignated financial derivatives due to fair value changes (see Table 14)	0.16	0.16
Gains/(losses) on hedging activities due to fair value changes	0.19	(0.03)
Unrealized gains on trading securities	0.01	—
Net effects of amortization of premiums/discounts and deferred gains on assets consolidated at fair value	—	—
Net effects of terminations or net settlements on financial derivatives	1.44	0.11
Income tax effect related to reconciling items	(0.38)	(0.05)
Sub-total	1.42	0.19
Core Earnings - Basic EPS	$ 2.39	$ 2.41
Shares used in per share calculation (GAAP and Core Earnings)	10,767	10,738

Reconciliation of GAAP Diluted Earnings Per Share to Core Earnings - Diluted Earnings Per Share

	For the Three Months Ended	
	March 31, 2022	March 31, 2021
	(in thousands, except per share amounts)	
GAAP - Diluted EPS	$ 3.77	$ 2.58
Less reconciling items:		
Gains on undesignated financial derivatives due to fair value changes (see Table 14)	0.16	0.16
Gains/(losses) on hedging activities due to fair value changes	0.19	(0.03)
Unrealized gains on trading securities	0.01	—
Net effects of amortization of premiums/discounts and deferred gains on assets consolidated at fair value	—	—
Net effects of terminations or net settlements on financial derivatives	1.42	0.11
Income tax effect related to reconciling items	(0.38)	(0.05)
Sub-total	1.40	0.19
Core Earnings - Diluted EPS	$ 2.37	$ 2.39
Shares used in per share calculation (GAAP and Core Earnings)	10,887	10,819

The non-GAAP reconciling items between net income attributable to common stockholders and core earnings are:

1. Losses on financial derivatives due to fair value changes are presented by two reconciling items in Table 6 above: (a) Gains on undesignated financial derivatives due to fair value changes; and (b) Gains/(losses) on hedging activities due to fair value changes. The table below calculates the non-GAAP reconciling item for losses on hedging activities due to fair value changes:

Table 8

Non-GAAP Reconciling Items for (Losses)/Gains on Hedging Activities due to Fair Value Changes

	For the Three Months Ended	
	March 31, 2022	March 31, 2021
	(in thousands)	
Gains due to fair value changes (see Table 4.2)	$ 2,364	$ 345
Initial cash payment (received) at inception of swap	(340)	(616)
Gains/(losses) on hedging activities due to fair value changes	$ 2,024	$ (271)

2. Unrealized gains/(losses) on trading securities. The unrealized gains/(losses) on trading securities are reported on Farmer Mac's consolidated statements of operations, which represent changes during the period in fair values for trading assets remaining on Farmer Mac's balance sheet as of the end of the reporting period.

3. The net effects of amortization of premiums/discounts and deferred gains on assets consolidated at fair value. The amount of this non-GAAP reconciling item is the recorded amount of premium, discount, or deferred gain amortization during the reporting period on those assets for which the premium, discount, or deferred gain was based on the application of an accounting principle (e.g., consolidation of variable interest entities) rather than on a cash transaction (e.g., a purchase price premium or discount).

4. The net effects of terminations or net settlements on financial derivatives. These terminations or net settlements relate to:

- Forward contracts on the debt of other GSEs and futures contracts on U.S. Treasury securities. These contracts are used as a short-term economic hedge of the issuance of debt. For GAAP purposes, realized gains or losses on settlements of these contracts are reported in the consolidated statements of operations in the period in which they occur. For core earnings purposes, these realized gains or losses are deferred and amortized as net yield adjustments over the term of the related debt, which generally ranges from 3 to 15 years.
- Initial cash payments received by Farmer Mac upon the inception of certain swaps. When there is no direct payment arrangement between a swap dealer counterparty and a debt dealer issuing Farmer Mac's medium-term notes for a particular transaction, Farmer Mac may receive an initial cash payment from the swap dealer at the inception of the swap to offset dollar-for-dollar the amount of the discount on the associated hedged debt. For GAAP purposes, changes in fair value of the swaps are recognized in "Gains on financial derivatives," while the economically offsetting discount on the associated hedged debt is amortized over the term of the debt as an adjustment to its yield. For purposes of core earnings, these initial cash payments are deferred and amortized as net yield adjustments over the term of the related debt, which generally ranges from 3 to 25 years.

The following sections provide more detail about specific components of Farmer Mac's results of operations.

Net Interest Income. The following table provides information about interest-earning assets and funding for the quarters ended March 31, 2022 and 2021. The average balance of non-accruing loans is included in the average balance of loans, Farmer Mac Guaranteed Securities, and USDA Securities presented, though the related income is accounted for on a cash basis. Therefore, as the average balance of non-accruing loans and the income received increases or decreases, the net interest income and yield will fluctuate accordingly. The average balance of loans in consolidated trusts with beneficial interests owned by third parties is disclosed in the net effect of consolidated trusts and is not included in the average balances of interest-earning assets and interest-bearing liabilities. The interest income and expense associated with these trusts are shown in the net effect of consolidated trusts.

Table 9

	For the Three Months Ended					
	March 31, 2022			March 31, 2021		
	Average Balance	Income/ Expense	Average Rate	Average Balance	Income/ Expense	Average Rate
			(dollars in thousands)			
Interest-earning assets:						
Cash and investments	$ 4,949,656	$ 5,716	0.46 %	$ 4,840,870	$ 5,529	0.46 %
Loans, Farmer Mac Guaranteed Securities and USDA Securities(1)	18,930,349	98,447	2.08 %	17,354,400	91,281	2.10 %
Total interest-earning assets	23,880,005	104,163	1.74 %	22,195,270	96,810	1.74 %
Funding:						
Notes payable due within one year	2,849,575	1,148	0.16 %	4,350,474	1,583	0.15 %
Notes payable due after one year(2)	20,065,027	42,158	0.84 %	17,215,386	43,186	1.00 %
Total interest-bearing liabilities(3)	22,914,602	43,306	0.76 %	21,565,860	44,769	0.83 %
Net non-interest-bearing funding	965,403	—		629,410	—	
Total funding	23,880,005	43,306	0.73 %	22,195,270	44,769	0.81 %
Net interest income/yield prior to consolidation of certain trusts	23,880,005	60,857	1.02 %	22,195,270	52,041	0.94 %
Net effect of consolidated trusts(4)	881,756	1,018	0.46 %	1,152,098	1,210	0.42 %
Net interest income/yield	$ 24,761,761	$ 61,875	1.00 %	$ 23,347,368	$ 53,251	0.91 %

(1) Excludes interest income of $8.1 million and $10.6 million in first quarter 2022 and 2021, respectively, related to consolidated trusts with beneficial interests owned by third parties.
(2) Includes current portion of long-term notes.
(3) Excludes interest expense of $7.0 million and $9.4 million in first quarter 2022 and 2021, respectively, related to consolidated trusts with beneficial interests owned by third parties.
(4) Includes the effect of consolidated trusts with beneficial interests owned by third parties.

The $8.6 million year-over-year increase in net interest income was primarily due to a $5.0 million increase from net new business volume, a $2.0 million increase in the fair value of derivatives designated in fair value hedge accounting relationships (designated financial derivatives), a $0.8 million increase in net coupon yields related to the acquisition, in third quarter 2021, of the loan servicing rights on a sizeable portion of our Farm & Ranch loan and USDA Guaranteed Securities portfolios, and a $0.7 million increase in cash-basis interest income. In percentage terms, the year-over-year 0.09% increase was primarily attributable to a decrease of 0.05% in funding costs and an increase of 0.03% in net fair value changes from designated financial derivatives.

The following table sets forth information about changes in the components of Farmer Mac's net interest income prior to consolidation of certain trusts for the periods indicated. For each category, information is provided on changes attributable to changes in volume (change in volume multiplied by old rate), and changes in rate (change in rate multiplied by old volume), and then allocated based on the relative size of rate and volume changes from the prior period.

Table 10

	For the Three Months Ended March 31, 2022 Compared to Same Period in 2021		
	Increase/(Decrease) Due to		
	Rate	Volume	Total
		(in thousands)	
Income from interest-earning assets:			
Cash and investments	$ 62	$ 125	$ 187
Loans, Farmer Mac Guaranteed Securities and USDA Securities	(1,040)	8,206	7,166
Total	(978)	8,331	7,353
Expense from other interest-bearing liabilities	(4,160)	2,697	(1,463)
Change in net interest income prior to consolidation of certain trusts[1]	$ 3,182	$ 5,634	$ 8,816

(1) Excludes the effect of debt in consolidated trusts with beneficial interests owned by third parties.

The following table presents a reconciliation of net interest income and net interest yield to net effective spread. Net effective spread is measured by: including (1) expenses related to undesignated financial derivatives, which consists of income or expense related to contractual amounts due on financial derivatives not designated in hedge relationships (the income or expense related to financial derivatives designated in hedge accounting relationships is already included in net interest income), and (2) the amortization of losses due to terminations or net settlements of financial derivatives; and excluding (3) the amortization of premiums and discounts on assets consolidated at fair value, (4) the net effects of consolidated trusts with beneficial interests owned by third parties, and (5) the fair value changes of financial derivatives and corresponding financial assets or liabilities in fair value hedge relationships. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Use of Non-GAAP Measures—Net Effective Spread" for more information about net effective spread.

Table 11

	For the Three Months Ended			
	March 31, 2022		March 31, 2021	
	Dollars	Yield	Dollars	Yield
		(dollars in thousands)		
Net interest income/yield	$ 61,875	1.00 %	$ 53,251	0.91 %
Net effects of consolidated trusts	(1,018)	0.02 %	(1,210)	0.03 %
Expense related to undesignated financial derivatives	(994)	(0.02)%	2,068	0.04 %
Amortization of premiums/discounts on assets consolidated at fair value	(16)	— %	(8)	— %
Amortization of losses due to terminations or net settlements on financial derivatives	356	0.01 %	103	— %
Fair value changes on fair value hedge relationships	(2,364)	(0.04)%	(345)	(0.01)%
Net effective spread	$ 57,839	0.97 %	$ 53,859	0.97 %

The $4.0 million year-over-year increase in net effective spread in dollars was primarily due to an increase of $4.4 million increase from net new business volume, a $0.8 million increase in net coupon yields related to our acquisition, in third quarter 2021, of the loan servicing rights of a sizeable portion of our

Farm & Ranch loan and USDA Guaranteed Securities portfolios, and a $0.7 million increase in cash-basis interest income. These factors were partially offset by a $1.7 million increase in non-GAAP funding costs. In percentage terms, net effective spread remained constant on a year-over-year basis.

See Note 10 to the consolidated financial statements for more information about net interest income and net effective spread from Farmer Mac's individual business segments. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Supplemental Information" for quarterly net effective spread by line of business.

Provision for and Release of Allowance for Losses and Reserve for Losses. The following table summarizes the components of Farmer Mac's total allowance for losses for the three months ended March 31, 2022 and 2021:

Table 12

	For the Three Months Ended					
	March 31, 2022			March 31, 2021		
	Allowance for Losses	Reserve for Losses	Total Allowance for Losses	Allowance for Losses	Reserve for Losses	Total Allowance for Losses
	(in thousands)					
Beginning balance	$ 14,492	$ 1,950	$ 16,442	$ 14,298	$ 3,277	$ 17,575
Provision for/(release of) losses	56	(110)	(54)	913	(944)	(31)
Charge-offs	(84)	—	(84)	—	—	—
Ending balance	$ 14,464	$ 1,840	$ 16,304	$ 15,211	$ 2,333	$ 17,544

See Notes 5 and 6 to the consolidated financial statements and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Risk Management—Credit Risk—Loans and Guarantees." During first quarter 2022, we recorded a $2.4 million release from the allowance for losses related to a Rural Utilities loan as a result of the upgrade of that loan under our internal ratings system after the borrower successfully securitized a large payable incurred during the arctic freeze that struck Texas in February 2021. This securitization transaction received an investment grade credit rating and exhibited the inherent strength of rural electric cooperatives and the legislative support that these providers of essential energy services typically receive. The release from the allowance for losses attributable to this one loan was offset by provisions to the allowance for losses attributable to new loan volume added during first quarter 2022 and other risk rating downgrades, resulting in an overall provision to the allowance for losses of $56,000 during first quarter 2022.

Guarantee and Commitment Fees. The following table presents guarantee and commitment fees, which compensate Farmer Mac for assuming the credit risk on loans underlying off-balance sheet Farmer Mac Guaranteed Securities and LTSPCs, for the three months ended March 31, 2022 and 2021:

Table 13

	For the Three Months Ended			
			Change	
	March 31, 2022	March 31, 2021	$	%
	(in thousands)			
Contractual guarantee fees	$ 3,502	$ 3,030	$ 472	16 %
Guarantee obligation amortization	2,195	2,709	(514)	(19)%
Guarantee asset fair value changes	(2,002)	(2,709)	707	(26)%
Guarantee fee income	$ 3,695	$ 3,030	$ 665	22 %

Guarantee and commitment fees increased for the quarter ended March 31, 2022 compared to 2021, which was due to increases in the average outstanding balance of LTSPCs and off-balance sheet Farmer Mac Guaranteed Securities during first quarter 2022. As adjusted for the core earnings presentation, guarantee and commitment fees were $4.6 million for the three months ended March 31, 2022 compared to $4.2 million for first quarter 2021.

In Farmer Mac's presentation of core earnings, guarantee and commitment fees include interest income and interest expense related to consolidated trusts owned by third parties to reflect management's view that the net interest income Farmer Mac earns is effectively a guarantee fee on those consolidated Farmer Mac Guaranteed Securities. Additionally, Farmer Mac has excluded guarantee asset fair value changes, because these fluctuations are not expected to have a cumulative net impact on Farmer Mac's financial condition or results of operations if Farmer Mac fulfills its guarantee obligation throughout the term of the guaranteed securities, as is expected.

For more information about net income attributable to common stockholders, the composition of core earnings, and a reconciliation of net income attributable to common stockholders to core earnings, see Table 6 in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations." For more information about the non-GAAP measures Farmer Mac uses, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Use of Non-GAAP Measures."

Gains on financial derivatives. The components of gains and losses on financial derivatives for the three months ended March 31, 2022 and 2021 are summarized in the following table:

Table 14

	For the Three Months Ended			
			Change	
	March 31, 2022	March 31, 2021	$	%
	(in thousands)			
Gains due to fair value changes	$ 1,698	$ 1,695	$ 3	— %
Accrual of contractual payments	(994)	2,068	(3,062)	(148)%
Gains due to terminations or net settlements	15,370	530	14,840	2800 %
Gains on financial derivatives	$ 16,074	$ 4,293	$ 11,781	274 %

These changes in fair value are primarily the result of fluctuations in long-term interest rates. The accrual of periodic cash settlements for interest paid or received from Farmer Mac's interest rate swaps that are undesignated financial derivatives is shown as expense related to financial derivatives. Payments or receipts to terminate undesignated derivative positions or net cash settled forward sales contracts on the debt of other GSEs and undesignated U.S. Treasury security futures and initial cash payments received upon the inception of certain undesignated swaps are included in "Gains due to terminations or net settlements" in the table above. For undesignated swaps, when there is no direct payment arrangement between a swap dealer counterparty and a debt dealer issuing Farmer Mac's medium-term notes for a particular transaction, Farmer Mac may receive an initial cash payment from the swap dealer at the inception of the swap to offset dollar-for-dollar the amount of the discount on the associated hedged debt. Changes in the fair value of these swaps are recognized immediately in "Gains on financial derivatives," while the offsetting discount on the hedged debt is amortized over the term of the debt as an adjustment to its yield. The amounts of initial cash payments received by Farmer Mac vary depending on the number of the aforementioned type of swaps it executes during a quarter.

Other Income. The following table presents other income for the three months ended March 31, 2022 and 2021:

Table 15

	For the Three Months Ended			
			Change	
	March 31, 2022	March 31, 2021	$	%
	(in thousands)			
Late fees	$ 354	$ 287	$ 67	23 %
Servicing fees	280	—	280	N/A
Mortgage servicing rights amortization	(131)	—	(131)	N/A
Other	172	296	(124)	(42)%
Total other income	$ 675	$ 583	$ 92	16 %

The increase in other income for the three months ended March 31, 2022 compared to 2021 is primarily due to an increase in servicing fees, partially offset by a decrease in loan rate modification fees.

Operating Expenses. The components of operating expenses for the three months ended March 31, 2022 and 2021 are summarized in the following table:

Table 16

	For the Three Months Ended			
			Change	
	March 31, 2022	March 31, 2021	$	%
	(in thousands)			
Compensation and employee benefits	$ 13,298	$ 11,795	$ 1,503	13 %
General and administrative	7,278	6,336	942	15 %
Regulatory fees	812	750	62	8 %
Total Operating Expenses	$ 21,388	$ 18,881	$ 2,507	13 %

Compensation and Employee Benefits. The increase in compensation and employee benefits expenses for first quarter 2022 compared to 2021 was due to increased headcount and increased stock compensation.

General and Administrative Expenses (G&A). The increase in G&A expenses for first quarter 2022 compared to 2021 was primarily due to increased spending on software licenses and information technology and other consultants to support growth and strategic initiatives. We entered into a transition services agreement in connection with the strategic acquisition of loan servicing rights in third quarter 2021. Under that agreement, we have agreed to pay $1.25 million to the seller of the servicing rights in installments through December 31, 2022 for continuing transition assistance.

Income Tax Expense. The following table presents income tax expense and the effective income tax rate for the three months ended March 31, 2022 and 2021:

Table 17

	For the Three Months Ended			
			Change	
	March 31, 2022	March 31, 2021	$	%
	(dollars in thousands)			
Income tax expense	$ 13,085	$ 9,067	$ 4,018	44 %
Effective tax rate	21.5 %	21.4 %		0.1 %

Business Volume.

The following table sets forth the net growth or decrease in Farmer Mac's lines of business for the three months ended March 31, 2022 and 2021:

Table 18

Net New Business Volume

	On or Off Balance Sheet	For the Three Months Ended March 31, 2022 Net Growth/ (Decrease)	March 31, 2021 Net Growth/ (Decrease)
		(in thousands)	
Agricultural Finance:			
Farm & Ranch:			
Loans	On-balance sheet	$ 160,496	$ 255,228
Loans held in consolidated trusts:			
Beneficial interests owned by third-party investors	On-balance sheet	(60,423)	(112,520)
IO-FMGS[1]	On-balance sheet	(378)	—
USDA Securities	On-balance sheet	(4,999)	14,777
AgVantage Securities	On-balance sheet	430,000	(200,000)
LTSPCs and unfunded commitments	Off-balance sheet	(8,824)	(70,788)
Farmer Mac Guaranteed Securities	Off-balance sheet	(33,874)	(21,539)
Loans serviced for others	Off-balance sheet	(1,042)	—
Total Farm & Ranch		**$ 480,956**	**$ (134,842)**
Corporate AgFinance:			
Loans	On-balance sheet	$ (14,837)	$ (16,179)
AgVantage Securities	On-balance sheet	7,798	322
Unfunded Loan Commitments	Off-balance sheet	9,965	(462)
Total Corporate AgFinance		**$ 2,926**	**$ (16,319)**
Total Agricultural Finance		**$ 483,882**	**$ (151,161)**
Rural Infrastructure Finance:			
Rural Utilities:			
Loans	On-balance sheet	$ 157,232	$ (23,173)
AgVantage Securities	On-balance sheet	(23,381)	101,997
LTSPCs and Unfunded Loan Commitments	Off-balance sheet	(22,632)	(10,040)
Farmer Mac Guaranteed Securities	Off-balance sheet	—	—
Total Rural Utilities		**$ 111,219**	**$ 68,784**
Renewable Energy:			
Loans	On-balance sheet	$ 5,483	$ 9,864
Unfunded Loan Commitments	Off-balance sheet	28,363	10,949
Total Renewable Energy		**$ 33,846**	**$ 20,813**
Total Rural Infrastructure Finance		**$ 145,065**	**$ 89,597**
Total		**$ 628,947**	**$ (61,564)**

(1) An interest-only Farmer Mac Guaranteed Security retained as part of a structured securitization.

Farmer Mac's outstanding business volume was $24.2 billion as of March 31, 2022, a net increase of $0.6 billion from December 31, 2021 after taking into account all new business, maturities, sales, and paydowns on existing assets.

The $0.5 billion net increase in Farm & Ranch during first quarter 2022 resulted from $2.5 billion of new purchases, commitments, and guarantees, partially offset by $2.0 billion of scheduled maturities and repayments. Farmer Mac purchased a total of $416.2 million in loans, which was primarily driven by farm real estate acquisitions due to improved borrower economics as well as a competitive, albeit an increasing interest rate environment resulting in demand for intermediate and long-term financing solutions. The $416.2 million in gross Farm & Ranch loan purchases was partially offset by $255.7 million in scheduled maturities and repayments.

Farmer Mac also purchased a total of $1.8 billion in Farm & Ranch AgVantage Securities during first quarter 2022, which primarily reflected the refinancing of maturing securities as well as financial counterparties seeking to add longer term AgVantage securities to manage their asset-liability maturity profile given recent increases in credit spreads and interest rates. The $1.8 billion in gross purchases was partially offset by $1.3 billion in scheduled maturities. Approximately $1.1 billion of the total $1.8 billion in gross purchases reflected purchases that refinanced maturing AgVantage securities and were issued at short-term tenors, which may create volatility in AgVantage volumes throughout the year. However, Farmer Mac does not anticipate a material impact to its net effective spread given the low spread related to these securities due to the short maturities and the credit strength of the counterparties.

The $2.9 million net increase in Corporate AgFinance during first quarter 2022 resulted from $103.4 million of new loan and AgVantage security purchases, which was offset by $100.4 million of scheduled maturities and repayments. Farmer Mac purchased a total of $61.7 million in loans, which was offset by $76.5 million in scheduled maturities and repayments. This net decrease in loans was primarily due to scheduled amortization and prepayments due to strong land values and agricultural incomes.

The $111.2 million net increase in Rural Utilities during first quarter 2022 resulted from $378.0 million of new purchases, commitments, and guarantees, which was partially offset by $266.7 million of scheduled maturities and repayments. Farmer Mac purchased a total of $208.0 million in Rural Utilities loans, which was fueled by a competitive but increasing interest rate environment resulting in demand for long-term financing solutions for planned maintenance and capital expenditures. The $208.0 million in loan purchases was partially offset by $50.7 million in scheduled maturities and repayments.

The $33.8 million net increase in Renewable Energy during first quarter 2022 primarily reflects a $35.0 million commitment to a large solar project being constructed in the southeast United States, consisting of $6.6 million of funded loan purchases (which was partially offset by $1.2 million of other loan repayments) and $28.4 million in unfunded loan commitments expected to be drawn throughout 2022.

Farmer Mac's outstanding business volume was $21.9 billion as of March 31, 2021, a net decrease of $61.6 million from December 31, 2020 after taking into account all new business, scheduled maturities, and paydowns on existing assets.

The $134.8 million net decrease in Farm & Ranch during first quarter 2021 resulted from $1.2 billion of scheduled maturities and repayments, partially offset by $1.1 billion of new purchases and guarantees,

The $16.3 million net decrease in Corporate AgFinance during first quarter 2021 resulted from $202.7 million of scheduled maturities and repayments, partially offset by $186.4 million of new purchases.

The $68.8 million net increase in Rural Utilities during first quarter 2021 resulted from $171.5 million of new purchases and guarantees, which was partially offset by $102.8 million of scheduled maturities and repayments.

The $20.8 million net increase in Renewable Energy during first quarter 2021 resulted from $23.5 million of new purchases, which was partially offset by $2.7 million of repayments.

The level and composition of Farmer Mac's outstanding business volume is based on the relationship between new business, loan sales, scheduled maturities, and repayments on existing assets from year to year. This relationship in turn depends on a variety of factors both internal and external to Farmer Mac. The external factors include general market forces, competition, and our counterparties' liquidity needs, access to alternative funding, desired products, and assessment of strategic factors. The internal factors include our assessment of profitability, mission fulfillment, credit risk, and customer relationships. For more information about potential growth opportunities in Farmer Mac's lines of business, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Outlook" in this report.

The following table sets forth information about the Farmer Mac Guaranteed Securities issued during the periods indicated:

Table 19

	For the Three Months Ended	
	March 31, 2022	March 31, 2021
	(in thousands)	
AgVantage securities	$ 1,941,360	$ 442,912
Loans securitized and held in consolidated trusts with beneficial interests owned by third parties	25,928	49,133
Total Farmer Mac Guaranteed Securities Issuances	$ 1,967,288	$ 492,045

Farmer Mac either retains the loans it purchases or securitizes them and retains or sells Farmer Mac Guaranteed Securities backed by those loans.

During the three months ended March 31, 2022 and 2021, Farmer Mac realized no gains or losses from the securitization of loans that it holds in consolidated trusts. Farmer Mac consolidates these loans and presents them as "Loans held for investment in consolidated trusts, at amortized cost" on the consolidated balance sheets.

During the three months ended March 31, 2022 and 2021, Farmer Mac realized no gains or losses from the issuance of Farmer Mac Guaranteed USDA Securities or AgVantage Securities.

The following table sets forth information about outstanding volume in each of Farmer Mac's lines of business as of the dates indicated:

Table 20

Outstanding Business Volume

	On or Off Balance Sheet	As of March 31, 2022	As of December 31, 2021
		(in thousands)	
Agricultural Finance:			
Farm & Ranch:			
Loans	On-balance sheet	$ 4,935,566	$ 4,775,070
Loans held in consolidated trusts:			
Beneficial interests owned by third-party investors	On-balance sheet	888,200	948,623
IO-FMGS[1]	On-balance sheet	11,919	12,297
USDA Securities	On-balance sheet	2,440,807	2,445,806
AgVantage Securities	On-balance sheet	5,155,000	4,725,000
LTSPCs and unfunded commitments	Off-balance sheet	2,578,330	2,587,154
Farmer Mac Guaranteed Securities	Off-balance sheet	544,484	578,358
Loans serviced for others	Off-balance sheet	21,289	22,331
Total Farm & Ranch		**$ 16,575,595**	**$ 16,094,639**
Corporate AgFinance:			
Loans	On-balance sheet	$ 1,108,463	$ 1,123,300
AgVantage Securities	On-balance sheet	375,262	367,464
Unfunded Loan Commitments	Off-balance sheet	57,035	47,070
Total Corporate AgFinance		**$ 1,540,760**	**$ 1,537,834**
Total Agricultural Finance		**$ 18,116,355**	**$ 17,632,473**
Rural Infrastructure Finance:			
Rural Utilities:			
Loans	On-balance sheet	$ 2,459,605	$ 2,302,373
AgVantage Securities	On-balance sheet	3,009,881	3,033,262
LTSPCs and Unfunded Loan Commitments	Off-balance sheet	534,205	556,837
Farmer Mac Guaranteed Securities	Off-balance sheet	2,755	2,755
Total Rural Utilities		**$ 6,006,446**	**$ 5,895,227**
Renewable Energy:			
Loans	On-balance sheet	$ 92,246	$ 86,763
Unfunded Loan Commitments	Off-balance sheet	28,363	—
Total Renewable Energy		**$ 120,609**	**$ 86,763**
Total Rural Infrastructure Finance		**$ 6,127,055**	**$ 5,981,990**
Total		**$ 24,243,410**	**$ 23,614,463**

(1) An interest-only Farmer Mac Guaranteed Security retained as part of a structured securitization.

The following table summarizes by maturity date the scheduled principal amortization of loans held, loans underlying off-balance sheet Farmer Mac Guaranteed Securities (excluding AgVantage securities) and LTSPCs, USDA Securities, and Farmer Mac Guaranteed USDA Securities as of March 31, 2022:

Table 21

Schedule of Principal Amortization as of March 31, 2022

	Loans	Loans Underlying Off-Balance Sheet Farmer Mac Guaranteed Securities and LTSPCs	USDA Securities and Farmer Mac Guaranteed USDA Securities	Total
		(in thousands)		
2022	$ 257,849	$ 181,425	$ 84,266	$ 523,540
2023	363,987	272,249	116,695	752,931
2024	386,374	200,123	115,421	701,918
2025	411,234	210,914	118,940	741,088
2026	476,678	231,629	121,814	830,121
Thereafter	7,587,958	2,413,977	2,115,771	12,117,706
Total	$ 9,484,080	$ 3,510,317	$ 2,672,907	$ 15,667,304

Of Farmer Mac's $24.2 billion outstanding principal balance of business volume as of March 31, 2022, $8.5 billion were AgVantage securities included in the Agricultural Finance and Rural Infrastructure Finance lines of business. Unlike business volume in the form of purchased loans, USDA Securities, and loans underlying LTSPCs and non-AgVantage Farmer Mac Guaranteed Securities, most AgVantage securities do not require periodic payments of principal based on amortization schedules and instead have fixed maturity dates when the secured general obligation is due. The following table summarizes by maturity date the outstanding principal amount of both on- and off-balance sheet AgVantage securities as of March 31, 2022:

Table 22

AgVantage Balances by Year of Maturity

	As of March 31, 2022
	(in thousands)
2022	$ 2,188,842
2023	1,129,586
2024	800,216
2025	561,025
2026	975,660
Thereafter[(1)]	2,887,569
Total	$ 8,542,898

(1) Includes various maturities ranging from 2026 to 2044.

The weighted-average remaining maturity of the outstanding AgVantage securities shown in the table above was 4.9 years as of March 31, 2022.

Outlook

Farmer Mac continues to provide a stable source of liquidity, capital, and risk management tools as a secondary market that helps meet the financing needs of rural America. The pace and trajectory of Farmer Mac's growth will depend on the capital and liquidity needs of the lending institutions in the agriculture and rural utilities business and the overall financial health of borrowers in the sectors we serve. Farmer Mac foresees opportunities for profitable growth across our lines of business driven by several key factors:

- As agricultural and rural infrastructure lenders seek to manage equity capital and return on equity capital requirements or reduce exposure due to lending or concentration limits, Farmer Mac can provide relief for those institutions through loan and portfolio purchases, participations, guarantees, LTSPCs, or wholesale funding.

- As a result of business and product development efforts and continued interest in the agricultural asset class from institutional investors and nontraditional agricultural real estate lenders, Farmer Mac's customer base and product set continue to expand and diversify, which may generate more demand for Farmer Mac's products from new sources.

- Farmer Mac's growing relationships with larger regional and national lenders, as well as consolidation within the agricultural lending industry, continue to provide opportunities that could influence Farmer Mac's loan demand and increase the average transaction size within Farmer Mac's lines of business.

- Future growth opportunities in Farmer Mac's Rural Infrastructure Finance line of business may evolve by deepening business relationships with eligible counterparties, financing broadband-related capital expenditures and rural telecommunications facilities, growing opportunities for renewable energy project finance, and exploring new types of loan products. These opportunities may be limited by sector growth, credit quality, and the competitiveness of Farmer Mac's products.

- Expansion and acquisition opportunities for agricultural producers resulting from high agricultural incomes and rising costs have increased financing requirements for mergers and acquisitions, consolidation, and vertical integration across many sectors of the agricultural industry, which may also generate demand for Farmer Mac's loan products.

- While market rates have increased dramatically since the lows experienced in 2021, rates are near Farmer Mac's 15-year historical averages. However, future changes to monetary policy and the overall level and pace of increases in interest rates could impact the pace and timing of Agricultural Finance mortgage loan purchase demand.

Russia's invasion of Ukraine has increased volatility for commodity prices and agricultural production costs for farmers and ranchers, who were already challenged by a strong inflationary environment. While high commodity prices have thus far outpaced the significant increase in input costs, the impact on global commodity markets from the Ukraine conflict creates further uncertainty for farmers and ranchers in terms of global production, prices, and costs. According to data from the USDA, Ukraine accounts for 10% of global wheat trade and 15% of global corn trade, so any disruption to production in 2022 could increase demand for U.S. production and keep commodity prices elevated. However, sanctions and trade restrictions have elevated oil and fertilizer prices, which influence U.S. farmers' planting decisions, particularly for acreage planted to corn, soybeans, and wheat. Volatility is likely to persist until there is more certainty around the timing, pace, and conclusion of the conflict in Ukraine.

In addition to continued uncertainty from supply-side disruptions, market interest rates increased rapidly in first quarter 2022, driven by the Federal Reserve's accelerated efforts to achieve monetary policy normalization and decelerate inflation. A higher interest rate environment could slow the pace of farm mortgage refinancing. While lower refinances could result in lower levels of new loan purchases in Farm & Ranch and USDA Guarantees products, it could also result in lower portfolio prepayment speeds, as was Farmer Mac's experience between 2014 and 2018. Farmer Mac offers a range of interest rates, tenors, and resetting options for loan products, allowing flexibility for originators and borrowers in all interest rate environments.

Operating Expense. Farmer Mac continues to expand its investments in human capital, technology, and business infrastructure to increase capacity and efficiency as it seeks to accommodate its growth opportunities and achieve its long-term strategic objectives. Farmer Mac expects continued increases in its operating expenses over the next several years corresponding to business and revenue growth. We expect these efforts to continue and increase over the next 12 - 18 months as we innovate and grow our business while monitoring the growth in operating expenses commensurate with the growth in our revenue.

During 2021, we closed on a strategic acquisition that enhanced our operations by expanding our internal loan servicing function and acquiring the loan servicing rights for a sizeable portion of our Farm & Ranch loan and USDA Securities portfolios. This acquisition should increase our interest income on our Farm & Ranch loans and USDA Securities that we service because there will not be any third-party central servicer retaining a central servicer fee on those assets. That increased interest income is expected to be partially offset by the increase in our operating expenses relating to our enhanced internal loan servicing operations. In the short term, we do not expect the effect on core earnings to be significant. In the medium to long term, the effect will depend on the size of our portfolio that we service and the long-run costs of our servicing operations.

Agricultural Industry. The agricultural economy experienced generally favorable conditions in first quarter 2022, with higher commodity prices partially offset by higher input prices. In response to Russia's invasion of Ukraine, grain commodity prices rose rapidly in February and March 2022. Higher commodity prices for grains and many animal proteins are likely to substantially increase gross cash receipts for the 2022 and 2023 marketing years. Farm expenses also rose in first quarter 2022, driven by rising feed, energy, interest, and labor costs. However, growth in income outpaced growth in expense, and net cash farm income increased nearly 15% in 2021 to $134.2 billion, the highest level since 2013. Consumers have continued their return to restaurants and food service establishments in 2022, with a 19% annual increase in retail spending at food service and drinking places, according to advance retail sales data from the U.S. Census Bureau. Combined with an annual 8.4% increase in retail spending at food and drinking stores (e.g., grocery), consumers have demonstrated the ability to absorb increasing commodity prices in their food budgets in 2022.

The increase in farm profitability combined with low interest rates in 2020 and 2021 drove a rapid rise in land values and a decrease in farm delinquencies and bankruptcies. Land value survey data from the USDA show a 7.0% increase in average farm real estate values from June 2020 to June 2021. Annual farm real estate value gains were highest in the Northern Plains (9.4%) and the Southern Plains (9.0%) but also strong in Pacific states (8.6%) and the Corn Belt (7.7%). The Federal Reserve Bank of Chicago AgLetter reported a 22% gain in farmland values in the Seventh District (primarily Iowa, Indiana, Illinois, and

Wisconsin) between January 2021 and January 2022. Data from the Federal Reserve Bank of Kansas City show a similar rise in land values in the Tenth District (primarily Kansas, Missouri, Nebraska, and Oklahoma). Historically, rising farm real estate values have paired with an increase in real estate secured debt. While regional averages for farmland values provide a good barometer for the overall movement in U.S. farmland values, economic forces affecting land markets are highly localized, and some markets may experience greater volatility than state or national averages indicate.

Economic conditions are likely to bring mixed effects to credit demand throughout 2022. Strong asset appreciation and rising interest rates could signal a credit cycle expansion as financial decision-makers look to lock in long-term economics for their appreciating farm and agribusiness assets. Farm profitability generally increases asset values and demand for the asset class, which also contributes to increasing credit demand. The low interest rate environment in 2021 increased farmland mortgage refinancing and loan prepayment speeds throughout the year. A reduction in loan refinancing is likely in 2022, as fewer borrowers will economically benefit from refinancing or restructuring their farm debt. This could have mixed effects on mortgage portfolios, potentially lowering new sales and originations but also slowing portfolio prepayments and exits. Finally, a rising yield curve coupled with widening market credit spreads could increase opportunities for corporate and institutional lending, as Farmer Mac's programs become more attractive at higher costs of capital. Combined, these factors are expected to be generally supportive of continued net portfolio growth for Farmer Mac in 2022.

Positive economic conditions improved Farmer Mac's portfolio performance in early 2022, and they could continue to positively influence loan delinquencies and losses throughout the year. Farmer Mac's 90-day delinquencies and substandard assets levels improved in first quarter 2022 relative to first quarter 2021. One-quarter of the loan volume past due 90-days or more in fourth quarter 2021 cured or paid off by March 31, 2022. The overall delinquency rate fell from 0.84% of the Farm & Ranch operating segment as of March 31, 2021 to 0.57% of the Farm & Ranch portfolio by March 31, 2022, a significant improvement. The percentage of the portfolio rated substandard also continued to improve in first quarter 2022 to the lowest levels since 2016. However, supply chain disruptions, rising input costs, and the potential for continued economic and weather-related stress increase the level of uncertainty inherent in the agricultural credit sector could alter the trajectory of the current agricultural cycle. Farmer Mac believes that its portfolio continues to be highly diversified, both geographically and by commodity and that its portfolio has been underwritten to high credit quality standards. Therefore, Farmer Mac believes that its portfolio is well-positioned to endure reasonably foreseeable volatility from cyclical and external factors. For more information about the loan balances, loan-to-value ratios, 90-day delinquencies, and substandard asset rate for the Agricultural Finance mortgage loans in Farmer Mac's portfolio as of March 31, 2022, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Risk Management—Credit Risk—Loans and Guarantees."

Exogenous factors facing farm and food producers can create uncertainty and market instability within the sector. External market conditions that could adversely impact the farm and food sectors in 2022 include supply chain disruptions, foreign trade and trade policy, and environmental conditions. The logistics of growing, harvesting, processing, packaging, shipping, storing, and retailing food are complex and intertwined. Labor shortages and transportation disruptions created supply chain stoppages in 2020 and 2021, and they could continue to challenge producers throughout 2022. The U.S. agricultural sector has become increasingly dependent on foreign markets as a source of demand, making trade policy increasingly important to farms and food. The USDA reports U.S. agricultural exports in the fiscal year 2021 at $177 billion, 35% of the total estimated gross farm income in 2021. The USDA's initial forecast for 2022 is a modest increase in export value, and through February 2022, agricultural exports are up 8%

in 2022 compared to 2021. Disruptions to global grain supplies in Ukraine and Russia could boost demand for U.S. agricultural products in 2022. However, slower global growth could be a headwind for consumer-oriented products like animal proteins, dairy, fruits, and nuts. However, because Farmer Mac has significant exposure to crop commodities like corn, soybeans, hay, wheat, and cotton, a sustained rally in agricultural commodities is likely to benefit Farmer Mac's overall portfolio credit quality more than degradation from downward pressure on livestock and consumer product profitability.

Severe weather conditions and long-term environmental change continue to shape agricultural sectors. The U.S. experienced 20 separate billion-dollar weather disasters in 2021, the second-highest level in the 40 years tracked by the National Oceanic and Atmospheric Administration behind 2020. Many of those events affected agriculture, including a midwestern derecho, western wildfires, and western drought. Federal crop insurance provides a strong mitigator against this risk, but farmers and ranchers face increasingly-severe weather incidents. Long and persistent drought conditions impacted western agriculture during much of 2021. Although drought conditions improved in fourth quarter 2021 and early weeks of 2022, 20% of the continental U.S. remained in exceptional or extreme drought as of April 19, 2022, according to data from the National Drought Mitigation Center. Extended periods of drought and dryness can reduce agricultural productivity, cause lasting damage to permanent crops like fruit and tree nuts, and result in producers leaving some fields fallow due to lack of water. States also regulate water use, and state laws like California's Sustainable Groundwater Management Act (SGMA) will continue to shape state-led efforts to manage water infrastructure and use. Agricultural production in California, Oregon, Washington, Arizona, and Utah is likely to experience the greatest impact from the 2021 and 2022 droughts. For loans in areas that commonly experience exceptional drought (primarily in California), Farmer Mac's underwriting process includes an assessment of anticipated long-term water availability for the related property and how that impacts the collateral value and borrower's cash flow position to mitigate that risk. For more information about Farmer Mac's environmental risk mitigation requirements, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Risk Management—Credit Risk—Loans and Guarantees—Environmental Considerations" in Farmer Mac's 2021 Annual Report.

Rural Infrastructure Industry. Economic conditions affecting the rural infrastructure industry tend to follow those in the general economy. According to data from the U.S. Energy Information Administration, sales and the revenue from the sale of electricity to customers increased by 2.3% and 8.8%, respectively, in the last 12 months through January 2022 compared to January 2021. This increase was driven by a sharp recovery in sales to the commercial and industrial sectors and an increase in the retail price of electricity. Several economic indicators remained positive in first quarter 2022, with improved employment, credit, and retail sales activity, but COVID-19 variants, trade disruptions, and higher inflation continue to impact economic activity. Higher energy input prices such as natural gas and coal are a potential headwind for the industry in 2022. Natural gas prices have risen consistently in late 2021 and early 2022 as a result of reduced supply and additional demand for U.S. liquified natural gas from European countries. Coal prices also trended higher in first quarter 2022, driven by higher natural gas prices and additional overseas demand to offset Russian coal exports. Despite higher input costs, power producers are generally able to pass cost increases through higher retail electricity prices. Through March 31, 2022, Farmer Mac had not observed material degradation in the financial performance of its rural infrastructure portfolio, and that portfolio has never experienced a serious delinquency or default since inception.

Prospects for loan growth within the rural infrastructure industry overall appear to be moderate in the near term, as ongoing normal-course capital expenditures related to maintaining and upgrading utility infrastructure continue at typical levels. Farmer Mac's future growth opportunities for financing the electric cooperative industry may be affected by the demand for electric power in rural areas, capital expenditures by electric cooperatives driven by regulatory or technological changes, the continuation of a low interest rate environment compared to historical rates, and competitive dynamics within the rural utilities cooperative finance industry. In December 2020, the Federal Communications Commission's Rural Digital Opportunity Fund (RDOF) auction awarded $9.2 billion in broadband-related operating cost subsidies to winning bidders. As RDOF auction winners submit plans to the FCC and begin development, Farmer Mac could see increased lending activity for rural utilities providers. In addition to RDOF broadband, Farmer Mac could see an increase in financing opportunities for other telecommunications providers in rural areas with wireless broadband increasingly important to economic opportunity and precision agriculture.

The growth in renewable energy generation and deployment of energy storage technologies may help deepen Farmer Mac's relationships with existing customers through new business opportunities. According to data from the U.S. Energy Information Administration, renewable electricity capacity is expected to grow by 48% in the next five years, compared to total electric capacity growth of 10%. The rising cost of fossil fuel-based inputs combined with the falling costs of renewable power generation may hasten this increase in capacity. This growth may broaden Farmer Mac's customer base with cooperative lenders focused on lending to renewable energy customers. In response to this growth, Farmer Mac has deployed new financing products tailored to the renewable energy sector, which represents a new market opportunity for Farmer Mac. Under this new initiative, Farmer Mac's total outstanding loan purchase balance of renewable energy financing transactions was $92.2 million as of March 31, 2022.

Weather is an ongoing source of uncertainty for the utilities sector. Adverse weather can drive demand, outages, and damage to power and telecommunications facilities. In February 2022, a Texas electric cooperative issued the first securitization financing to recover extraordinary costs arising from extreme weather events, showing a potential outlet for smoothing unpredictable and impactful weather events over future periods. Farmer Mac believes that the current risk ratings applied to the Rural Infrastructure portfolio reflect any remaining financial stress resulting from recent weather events and elevated energy costs. However, an increase in the frequency and severity of extreme weather events could elevate the probability of disruptions and credit stress in the future.

Legislative and Regulatory Outlook. Farmer Mac continues to monitor potential legislative and regulatory changes that could affect Farmer Mac or its stakeholders, including:

- Farmer Mac is authorized to purchase certain U.S. Department of Agriculture (USDA) loan guarantees, including those issued by the Farm Service Agency (FSA). Section 1005 of the American Rescue Plan Act of 2021 allows the USDA to provide debt relief to socially disadvantaged producers who had outstanding principal balances on FSA direct and guaranteed loans as of January 1, 2021. Multiple lawsuits have been filed challenging the constitutionality of the debt relief and delaying its implementation. If ultimately implemented, this provision could lead to a short-term acceleration in the prepayment of the FSA guaranteed loans in Farmer Mac’s USDA Securities portfolio.

- Farmer Mac continues to monitor legislative developments that could lead to changes in the tax code that could affect Farmer Mac’s business. Changes to the corporate tax rate (currently at 21%) have been proposed in recent years as a possible offset to increased federal spending. Changes to the corporate tax rate may impact corporate earnings.

- The current farm bill is set to expire in 2023. The farm bill is an omnibus piece of legislation that may impact several programs impacting farm profitability, the vitality of rural communities, and Farmer Mac’s charter. The House and Senate Agriculture Committees began consideration of a new farm bill earlier this year. Farmer Mac will continue to monitor this legislation for any impact it may have on Farmer Mac and farm profitability.

- Agricultural exports from the United States were valued at more than $177 billion in the 2021 fiscal year. In 2021, Congress passed a $550 billion bipartisan infrastructure bill that provides for key investments to improve roads, bridges, freight rail, electric, broadband, ports, and waterways that are expected to support farmers and ranchers' profitability, competitiveness, and access to global markets. The ability to produce food and fiber and transport it efficiently across the globe is critical for the U.S. food and agricultural sectors' competitiveness internationally.

- The prudential regulator of Farmer Mac is expected to undergo significant changes to its board this year. The three-member board of the Farm Credit Administration (FCA) currently has one vacant seat, a member whose term expired in 2018, and a third member whose term expires in May 2022. The two current board members continue to serve until any proposed replacements for them are nominated by the President and confirmed by the U.S. Senate. The Biden Administration recently announced a nominee to the vacant seat on the FCA board. That nominee will need to be confirmed by the U.S. Senate before officially joining the FCA board. Farmer Mac will continue to monitor changes to the composition of the FCA board, as it may affect Farmer Mac's regulatory environment.

COVID-19 Pandemic. While disruptions caused by COVID-19 have significantly moderated, recent and rapid increases in cases of COVID-19 resulting from variants of coronavirus demonstrates the volatility and uncertainty stemming from the pandemic. Future variants and outbreaks may result in increased market volatility and supply chain disruptions similar to the market dislocations experienced in 2020 and 2021. Farmer Mac's mission is to support rural America, and the disruptions caused by COVID-19 may continue to present new and expanded opportunities for Farmer Mac to help meet the financing needs of rural America while also presenting uncertainties and risks. See "Risk Factors" in Part I, Item 1A of Farmer Mac's 2021 Annual Report for more information about the uncertainties and risks associated with the COVID-19 pandemic on Farmer Mac and its business.

Balance Sheet Review

The following table summarizes Farmer Mac's balance sheet as of the periods indicated:

Table 23

	As of		Change	
	March 31, 2022	December 31, 2021	$	%
		(in thousands)		
Assets				
Cash and cash equivalents	$ 890,046	$ 908,785	$ (18,739)	(2)%
Investment securities, net of allowance	4,241,788	3,882,590	359,198	9 %
Farmer Mac Guaranteed Securities, net of allowance	8,506,464	8,361,798	144,666	2 %
USDA Securities	2,439,489	2,440,732	(1,243)	— %
Loans, net of allowance	8,477,200	8,300,619	176,581	2 %
Loans held in trusts, net of allowance	887,740	948,059	(60,319)	(6)%
Other	346,687	302,908	43,779	14 %
Total assets	$ 25,789,414	$ 25,145,491	$ 643,923	3 %
Liabilities				
Notes Payable	23,039,967	22,716,156	323,811	1 %
Debt securities of consolidated trusts held by third parties	895,145	981,379	(86,234)	(9)%
Other	661,458	243,543	417,915	172 %
Total liabilities	$ 24,596,570	$ 23,941,078	$ 655,492	3 %
Total equity	1,192,844	1,204,413	(11,569)	(1)%
Total liabilities and equity	$ 25,789,414	$ 25,145,491	$ 643,923	3 %

Assets. The increase in total assets was primarily attributable to a larger investment portfolio, new loan volume, and new Farmer Mac Guaranteed Securities loan volume.

Liabilities. The increase in total liabilities was primarily due to an increase in other liabilities related to a $350 million AgVantage security that was traded, but did not yet settle, during first quarter 2022 and an increase in total notes payable to fund the acquisition of loan and Farmer Mac Guaranteed Securities volume.

Equity. The decrease in total equity was primarily due to a decrease in accumulated other comprehensive income, partially offset by an increase in retained earnings.

Risk Management

Credit Risk – Loans and Guarantees.

Agricultural Finance - Direct Credit Exposure

Farmer Mac's direct credit exposure to Agricultural Finance mortgage loans as of March 31, 2022 was $9.9 billion across 48 states. Farmer Mac applies credit underwriting standards and methodologies to help assess exposures to loan purchases, which may include collateral valuation, financial metrics, and other appropriate borrower financial and credit information. For Corporate AgFinance loans, which are often larger loan exposures to agriculture production and agribusinesses that support agriculture production, food and fiber processing, and other supply chain production, and which may have risk profiles that differ from smaller agricultural mortgage loans, Farmer Mac has implemented methodologies and parameters that help assess credit risk based on the appropriate sector, borrower construct, and transaction complexity. For more information about Farmer Mac's underwriting and collateral valuation standards for Agricultural Finance mortgage loans, see "Business—Farmer Mac's Lines of Business—Agricultural Finance—Underwriting and Collateral Standards—Farm & Ranch" and "Business—Farmer Mac's Lines of Business—Agricultural Finance—Underwriting and Collateral Standards—Corporate AgFinance" in Farmer Mac's 2021 Annual Report.

Farmer Mac's 90-day delinquency measure includes loans 90 days or more past due, as well as loans in foreclosure and non-performing loans where the borrower is in bankruptcy. For Agricultural Finance mortgage loans to which Farmer Mac has direct credit exposure, Farmer Mac's 90-day delinquencies as of March 31, 2022, were $55.8 million (0.57% of the Agricultural Finance mortgage loan portfolio to which Farmer Mac has direct credit exposure), compared to $47.3 million (0.48% of the Agricultural Finance mortgage loan portfolio) as of December 31, 2021. Those 90-day delinquencies were comprised of 40 and 32 delinquent loans as of March 31, 2022 and December 31, 2021, respectively. The increase in 90-day delinquencies was primarily driven by increased delinquencies in permanent plantings, storage and processing, and part-time farms, partially offset by decreased delinquencies in crops and livestock. The top ten borrower exposures over 90 days delinquent represented over half of the 90-day delinquencies as of March 31, 2022. Farmer Mac believes that it remains adequately collateralized on its delinquent loans.

Farmer Mac's 90-day delinquency rate as of March 31, 2022 was below Farmer Mac's historical average. In the near-term, our delinquency rate may exceed our historical average due to the impact of adverse weather events and/or supply chain disruptions on the agricultural economy. Farmer Mac's average 90-day delinquency rate as a percentage of its Agricultural Finance mortgage loan portfolio over the last 15 years is approximately 1%. The highest 90-day delinquency rate observed during that period occurred in 2009 at approximately 2%, which coincided with increased delinquencies in loans within Farmer Mac's ethanol loan portfolio.

The following table presents historical information about Farmer Mac's 90-day delinquencies in the Agricultural Finance mortgage loan portfolio compared to the unpaid principal balance of all Agricultural Finance mortgage loans to which Farmer Mac has direct credit exposure:

Table 24

	Agricultural Finance Mortgage Loans	90-Day Delinquencies	Percentage
	(dollars in thousands)		
As of:			
March 31, 2022	$ 9,879,978	$ 55,847	0.57 %
December 31, 2021	9,811,749	47,307	0.48 %
September 30, 2021	9,445,359	54,792	0.58 %
June 30, 2021	9,056,152	63,076	0.70 %
March 31, 2021	8,629,352	72,346	0.84 %
December 31, 2020	8,581,181	46,232	0.54 %
September 30, 2020	8,249,349	88,041	1.07 %
June 30, 2020	8,017,850	68,682	0.86 %
March 31, 2020	7,811,594	79,722	1.02 %

Across all of Farmer Mac's lines of business, 90-day delinquencies represented 0.23% of total outstanding business volume as of March 31, 2022, compared to 0.20% as of December 31, 2021 and 0.33% as of March 31, 2021.

The following table presents outstanding Agricultural Finance mortgage loans and 90-day delinquencies as of March 31, 2022 by year of origination, geographic region, commodity/collateral type, original loan-to-value ratio, and range in the size of borrower exposure:

Table 25

Agricultural Finance Mortgage Loans 90-Day Delinquencies as of March 31, 2022

	Distribution of Agricultural Loans	Agricultural Loans	90-Day Delinquencies[1]	Percentage
		(dollars in thousands)		
By year of origination:				
2012 and prior	8 %	$ 704,753	$ 3,461	0.49 %
2013	3 %	303,729	720	0.24 %
2014	3 %	252,732	600	0.24 %
2015	4 %	398,258	9,641	2.42 %
2016	6 %	605,151	12,801	2.12 %
2017	6 %	623,790	9,783	1.57 %
2018	6 %	634,907	2,987	0.47 %
2019	9 %	914,814	10,224	1.12 %
2020	22 %	2,187,911	2,927	0.13 %
2021	28 %	2,777,347	2,703	0.10 %
2022	5 %	476,586	—	0.10 %
Total	100 %	$ 9,879,978	$ 55,847	0.57 %
By geographic region[2]:				
Northwest	13 %	$ 1,264,381	$ 7,823	0.62 %
Southwest	31 %	3,126,826	15,660	0.50 %
Mid-North	27 %	2,661,472	5,780	0.22 %
Mid-South	16 %	1,551,729	10,329	0.67 %
Northeast	4 %	407,543	4,811	1.18 %
Southeast	9 %	868,027	11,444	1.32 %
Total	100 %	$ 9,879,978	$ 55,847	0.57 %
By commodity/collateral type:				
Crops	50 %	$ 4,921,323	$ 31,532	0.64 %
Permanent plantings	22 %	2,180,481	11,947	0.55 %
Livestock	19 %	1,847,887	10,101	0.55 %
Part-time farm	5 %	482,995	1,082	0.22 %
Ag. Storage and Processing	4 %	429,987	1,185	0.28 %
Other	—	17,305	—	— %
Total	100 %	$ 9,879,978	$ 55,847	0.57 %
By original loan-to-value ratio:				
0.00% to 40.00%	18 %	$ 1,733,753	$ 2,753	0.16 %
40.01% to 50.00%	23 %	2,300,260	21,565	0.94 %
50.01% to 60.00%	35 %	3,503,214	26,562	0.76 %
60.01% to 70.00%	21 %	2,050,820	4,398	0.21 %
70.01% to 80.00%[3]	3 %	263,520	569	0.22 %
80.01% to 90.00%[3]	— %	28,411	—	— %
Total	100 %	$ 9,879,978	$ 55,847	0.57 %
By size of borrower exposure[4]:				
Less than $1,000,000	26 %	$ 2,540,533	$ 7,403	0.29 %
$1,000,000 to $4,999,999	36 %	3,552,154	30,090	0.85 %
$5,000,000 to $9,999,999	16 %	1,542,733	8,713	0.56 %
$10,000,000 to $24,999,999	13 %	1,339,556	9,641	0.72 %
$25,000,000 and greater	9 %	905,002	—	— %
Total	100 %	$ 9,879,978	$ 55,847	0.57 %

(1) Includes loans held and loans underlying off-balance sheet Agricultural Finance 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.

(2) 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).

(3) Primarily part-time farm loans. Loans with an original loan-to-value ratio of greater than 80% are required to have private mortgage insurance.

(4) Includes aggregated loans to single borrowers or borrower-related entities.

Another indicator that Farmer Mac considers in analyzing the credit quality of its Agricultural Finance mortgage loans is the level of internally-rated "substandard" assets, both in dollars and as a percentage of the outstanding portfolio. Assets categorized as "substandard" 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 March 31, 2022, Farmer Mac's Agricultural Finance mortgage loans (to which it has direct credit exposure) comprising substandard assets were $215.8 million (2.2% of the portfolio), compared to $246.7 million (2.5% of the portfolio) as of December 31, 2021. Those substandard assets comprised 254 loans as of March 31, 2022 and 274 loans as of December 31, 2021.

The decrease of $30.9 million in substandard assets during first quarter 2022 was driven by credit upgrades in both our on- and off-balance sheet portfolios. Substandard assets decreased as a percentage of the total on- and off-balance sheet portfolios due to a combination of credit upgrades in both portfolios and growth in the on-balance sheet portfolio.

The percentage of substandard assets within the portfolio as of March 31, 2022 was below the historical average. Farmer Mac's average substandard assets as a percentage of its Agricultural Finance mortgage loans over the last 15 years is approximately 4%. The highest substandard asset rate observed during the last 15 years occurred in 2010 at approximately 8%, which coincided with an increase in substandard loans within Farmer Mac's ethanol portfolio. If Farmer Mac's substandard asset rate increases from current levels, it is likely that Farmer Mac's provision to the allowance for loan losses and the reserve for losses will also increase.

Although some credit losses are inherent to the business of agricultural lending, Farmer Mac believes that losses associated with the current agricultural credit cycle will be moderated by the strength and diversity of its portfolio, which Farmer Mac believes is adequately collateralized.

Farmer Mac considers a loan's original loan-to-value ratio as one of many factors in evaluating loss severity. Loan-to-value ratios depend on the market value of a property, as determined in accordance with Farmer Mac's collateral valuation standards. As of March 31, 2022 and December 31, 2021, the average unpaid principal balances for Agricultural Finance mortgage loans outstanding and to which Farmer Mac has direct credit exposure was $786,000 and $790,000, respectively. Farmer Mac calculates the "original loan-to-value" ratio of a loan by dividing the original loan principal balance by the original appraised property value. This calculation does not reflect any amortization of the original loan balance or any adjustment to the original appraised value to provide a current market value. The original loan-to-value ratio of any cross-collateralized loans is calculated on a combined basis rather than on a loan-by-loan basis. The weighted-average original loan-to-value ratio for Agricultural Finance mortgage loans purchased during first quarter 2022 was 46%, compared to 53% for loans purchased during first quarter 2021. The weighted-average original loan-to-value ratio for Agricultural Finance mortgage loans and loans underlying off-balance sheet Agricultural Finance Guaranteed Securities and LTSPCs was 52% as of both March 31, 2022 and December 31, 2021. The weighted-average original loan-to-value ratio for all 90-day delinquencies was 51% as of both March 31, 2022 and December 31, 2021.

The weighted-average current loan-to-value ratio (the loan to-value ratio based on original appraised value and current outstanding loan amount adjusted to reflect amortization) for Agricultural Finance mortgage loans and loans underlying off-balance sheet Agricultural Finance Guaranteed Securities and LTSPCs was 47% as of both March 31, 2022 and December 31, 2021.

The following table presents the current loan-to-value ratios for the Agricultural Finance mortgage loans to which Farmer Mac has direct credit exposure, as disaggregated by internally assigned risk ratings:

Table 26

Agricultural Finance Mortgage Loans current loan-to-value ratio by internally assigned risk rating as of March 31, 2022

	Acceptable	Special Mention	Substandard	Total
		(in thousands)		
Current loan-to-value ratio[1]:				
0.00% to 40.00%	$ 2,821,548	$ 60,157	$ 81,764	$ 2,963,469
40.01% to 50.00%	2,368,142	142,226	58,306	2,568,674
50.01% to 60.00%	2,541,555	92,391	45,215	2,679,161
60.01% to 70.00%	1,388,636	37,259	13,961	1,439,856
70.01% to 80.00%	163,926	15,266	3,281	182,473
80.01% and greater	27,629	5,424	13,292	46,345
Total	$ 9,311,436	$ 352,723	$ 215,819	$ 9,879,978

(1) The current loan-to-value ratio is based on original appraised value (or most recently obtained valuation, if available) and current outstanding loan amount adjusted to reflect loan amortization.

The following table presents Farmer Mac's cumulative net credit losses relative to the cumulative original balance for all Agricultural Finance mortgage loans as of March 31, 2022 by year of origination, geographic region, and commodity/collateral type. The purpose of this information is to present information about realized losses relative to original Farm & Ranch purchases, guarantees, and commitments.

Table 27

Agricultural Finance Mortgage Loans Credit Losses Relative to Cumulative Original Loans, Guarantees, and LTSPCs as of March 31, 2022

	Cumulative Original Loans, Guarantees and LTSPCs	Cumulative Net Credit Losses/ (Recoveries)	Cumulative Loss Rate
	(dollars in thousands)		
By year of origination:			
2012 and prior	$ 17,245,088	$ 33,785	0.20 %
2013	1,470,293	—	— %
2014	1,059,486	—	— %
2015	1,227,120	(516)	(0.04)%
2016	1,547,772	84	0.01 %
2017	1,645,188	4,311	0.26 %
2018	1,334,083	—	— %
2019	1,553,984	—	— %
2020	2,831,852	—	— %
2021	3,138,282	—	— %
2022	486,834		— %
Total	$ 33,539,982	$ 37,664	0.11 %
By geographic region[1]:			
Northwest	$ 4,373,153	$ 11,275	0.26 %
Southwest	11,407,600	8,542	0.07 %
Mid-North	8,445,257	17,165	0.20 %
Mid-South	4,576,159	(613)	(0.01)%
Northeast	1,770,035	323	0.02 %
Southeast	2,967,778	972	0.03 %
Total	$ 33,539,982	$ 37,664	0.11 %
By commodity/collateral type:			
Crops	$ 15,535,113	$ 2,971	0.02 %
Permanent plantings	7,271,627	9,783	0.13 %
Livestock	7,436,349	3,836	0.05 %
Part-time farm	1,855,183	1,090	0.06 %
Ag. Storage and Processing	1,275,050	19,984	1.57 %
Other	166,660	—	— %
Total	$ 33,539,982	$ 37,664	0.11 %

(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).

Analysis of portfolio performance indicates that commodity type is the primary determinant of Farmer Mac's exposure to loss on a given loan. The following tables present concentrations of Agricultural Finance mortgage loans by commodity type within geographic region and cumulative credit losses by origination year and commodity type:

Table 28

	As of March 31, 2022						
	Agricultural Finance Mortgage Loans Concentrations by Commodity Type within Geographic Region						
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Other	Total
	(dollars in thousands)						
By geographic region[1]:							
Northwest	$ 633,036	$ 187,593	$ 297,052	$103,752	$ 42,868	$ 80	$1,264,381
	6.4 %	1.9 %	3.0 %	1.1 %	0.4 %	— %	12.8 %
Southwest	654,197	1,651,798	549,638	102,115	153,980	15,098	3,126,826
	6.5 %	16.7 %	5.6 %	1.0 %	1.6 %	0.2 %	31.6 %
Mid-North	2,241,193	10,634	215,754	95,647	96,317	1,927	2,661,472
	22.7 %	0.1 %	2.2 %	1.0 %	1.0 %	— %	27.0 %
Mid-South	866,070	70,736	504,209	64,437	46,261	16	1,551,729
	8.8 %	0.7 %	5.1 %	0.6 %	0.5 %	— %	15.7 %
Northeast	194,108	42,505	78,269	52,820	39,841	—	407,543
	2.0 %	0.4 %	0.8 %	0.5 %	0.4 %	— %	4.1 %
Southeast	332,719	217,215	202,965	64,224	50,720	184	868,027
	3.4 %	2.2 %	2.0 %	0.7 %	0.5 %	— %	8.8 %
Total	$4,921,323	$2,180,481	$1,847,887	$482,995	$429,987	$17,305	$9,879,978
	49.8 %	22.0 %	18.7 %	4.9 %	4.4 %	0.2 %	100.0 %

(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).

Table 29

	As of March 31, 2022					
	Agricultural Loans Cumulative Credit Losses by Origination Year and Commodity Type					
	Crops	Permanent Plantings	Livestock	Part-time Farm	Ag. Storage and Processing	Total
	(in thousands)					
By year of origination:						
2012 and prior	$ 3,427	$ 9,783	$ 3,836	$ 1,066	$ 15,673	$ 33,785
2013	—	—	—	—	—	—
2014	—	—	—	—	—	—
2015	(540)	—	—	24	—	(516)
2016	84	—	—	—	—	84
2017	—	—	—	—	4,311	4,311
2018	—	—	—	—	—	—
2019	—	—	—	—	—	—
2020	—	—	—	—	—	—
2021	—	—	—	—	—	—
2022	—	—	—	—	—	—
Total	$ 2,971	$ 9,783	$ 3,836	$ 1,090	$ 19,984	$ 37,664

For more information about the credit quality of Farmer Mac's Agricultural Finance mortgage loans and the associated allowance for losses please refer to Note 5 and Note 6 to the consolidated financial statements. Activity affecting the allowance for loan losses and reserve for losses is discussed in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations—Provision for and Release of Allowance for Loan Losses and Reserve for Losses."

Rural Infrastructure Finance - Direct Credit Exposure

Farmer Mac's direct credit exposure to Rural Infrastructure Finance loans held and loans underlying LTSPCs as of March 31, 2022 was $3.1 billion across 45 states. For more information about Farmer Mac's underwriting and collateral valuation standards for Rural Infrastructure Finance loans, see "Business—Farmer Mac's Lines of Business—Rural Infrastructure Finance—Underwriting and Collateral Standards" in Farmer Mac’s 2021 Annual Report. As of March 31, 2022, there were no delinquencies in Farmer Mac's portfolio of Rural Infrastructure Finance loans.

Farmer Mac evaluates credit risk for these assets by reviewing a variety of borrower credit risk characteristics. These characteristics can include (but is not limited to) financial metrics, internal risk ratings, ratings assigned by ratings agencies, types of customers served, sources of power supply, and the regulatory environment.

The following table presents Farmer Mac’s portfolio of generation and transmission ("G&T") and distribution cooperative borrowers, as well as renewable energy loans, disaggregated by internally assigned risk ratings.

Table 30

	Rural Infrastructure Finance portfolio by internally assigned risk rating as of March 31, 2022			
	Acceptable	Special Mention	Substandard	Total
	(in thousands)			
Distribution Cooperative	$ 2,222,468	$ —	$ —	$ 2,222,468
G&T Cooperative	771,343	—	—	771,343
Renewable Energy	120,608	—	—	120,608
Rural Utilities Total	$ 3,114,419	$ —	$ —	$ 3,114,419

For more information about the credit quality of Farmer Mac's Rural Infrastructure Finance portfolio and the associated allowance for losses please refer to Notes 5 and 6 of the consolidated financial statements.

Other Considerations Regarding Credit Risk Related to Loans and Guarantees

The credit exposure on USDA Securities, including those underlying Farmer Mac Guaranteed USDA Securities, is guaranteed by the full faith and credit of the United States. Therefore, Farmer Mac believes that we have little or no credit risk exposure to the USDA Securities in the Agricultural Finance line of business because of the USDA guarantee. As of March 31, 2022, Farmer Mac had not experienced any credit losses on any USDA Securities or Farmer Mac Guaranteed USDA Securities and does not expect to incur any such losses in the future. Because we do not expect credit losses on this portfolio, Farmer Mac does not provide an allowance for losses on its portfolio of USDA Securities.

Farmer Mac requires many lenders to make representations and warranties about the conformity of Agricultural Finance mortgage loans and Rural Infrastructure Finance loans to Farmer Mac's standards, the accuracy of loan data provided to Farmer Mac, and other requirements related to the loans. Sellers who make these representations and warranties are responsible to Farmer Mac for breaches of those representations and warranties. Farmer Mac has the ability to require a seller to cure, replace, or repurchase a loan sold or transferred to Farmer Mac if any breach of a representation or warranty is discovered that was material to Farmer Mac's decision to purchase the loan or that directly or indirectly causes a default or potential loss on a loan sold or transferred by the seller to Farmer Mac. During the previous three years ended March 31, 2022, there have been no breaches of representations and warranties by sellers that resulted in Farmer Mac requiring a seller to cure, replace, or repurchase a loan. In addition to relying on the representations and warranties of sellers, Farmer Mac also underwrites the Agricultural Finance mortgage loans (other than rural housing and part-time farm mortgage loans) and Rural Infrastructure Finance loans on which it has direct credit exposure. For rural housing and part-time farm mortgage loans, Farmer Mac relies on representations and warranties from the seller that those loans conform to Farmer Mac's specified underwriting criteria. For more information about Farmer Mac's loan eligibility requirements and underwriting standards, see "Business—Farmer Mac's Lines of Business—Agricultural Finance—Loan Eligibility," "Business—Farmer Mac's Lines of Business—Agricultural Finance—Underwriting and Collateral Standards—Farm & Ranch," "Business—Farmer Mac's Lines of Business—Agricultural Finance—Underwriting and Collateral Standards—Corporate AgFinance," and "Business—Farmer Mac's Lines of Business—Rural Infrastructure Finance—Underwriting and Collateral Standards" in Farmer Mac's 2021 Annual Report.

Under contracts with Farmer Mac and in consideration for servicing fees, Farmer Mac-approved servicers service loans in accordance with Farmer Mac's requirements. Servicers are responsible to Farmer Mac for serious errors in the servicing of those loans. If a servicer materially breaches the terms of its servicing agreement with Farmer Mac, such as failing to forward payments received or releasing collateral without

Farmer Mac's consent, or experiences insolvency or bankruptcy, the servicer is responsible for any corresponding damages to Farmer Mac and, in most cases, Farmer Mac has the right to terminate the servicing relationship for a particular loan or the entire portfolio serviced by the servicer. Farmer Mac also can proceed against the servicer in arbitration or exercise any remedies available to it under law. During the previous three years ended March 31, 2022, Farmer Mac had not exercised any remedies or taken any formal action against any servicers. For more information about Farmer Mac's servicing requirements, see "Business—Farmer Mac's Lines of Business—Agricultural Finance—Loan Servicing" and "Business—Farmer Mac's Lines of Business—Rural Infrastructure Finance—Lenders and Loan Servicing" in Farmer Mac's 2021 Annual Report.

Credit Risk – Counterparty Risk. Farmer Mac is exposed to credit risk arising from its business relationships with other institutions, which include:

- issuers of AgVantage securities;
- approved lenders and servicers; and
- interest rate swap counterparties.

Farmer Mac approves AgVantage counterparties and manages institutional credit risk related to those AgVantage counterparties by requiring them to meet Farmer Mac's standards for creditworthiness for the particular counterparty type and transaction. The required collateralization level is established when the AgVantage facility is entered into with the counterparty and does not change during the life of the AgVantage securities issued under the facility without Farmer Mac's consent. In AgVantage transactions, the corporate obligor is typically required to remove from the pool of pledged collateral loans that become and remain (within specified parameters) delinquent in the payment of principal or interest and to substitute eligible loans that are current in payment or pay down the AgVantage securities to maintain the minimum required collateralization level.

In the event of a default on an AgVantage security, Farmer Mac would have recourse to the pledged collateral and have rights to the ongoing borrower payments of principal and interest. As a result, Farmer Mac has indirect credit exposure to the Agricultural Finance mortgage loans and Rural Utilities loans that secure AgVantage securities. For AgVantage counterparties that are institutional real estate investors or financial funds and other similar entities, Farmer Mac also typically requires that the counterparty (1) maintain a higher collateralization level, through either a higher overcollateralization percentage or lower loan-to-value ratio thresholds and (2) comply with specified financial covenants for the life of the related AgVantage security to avoid default. As of March 31, 2022, Farmer Mac had not experienced any credit losses on any AgVantage securities. For a more detailed description of AgVantage securities, see "Business—Farmer Mac's Lines of Business—Agricultural Finance—Other Products – Agricultural Finance—AgVantage Securities" and "Business—Farmer Mac's Lines of Business—Rural Infrastructure Finance—Other Products – Rural Infrastructure Finance—AgVantage Securities" in Farmer Mac's 2021 Annual Report.

The unpaid principal balance of outstanding on-balance sheet AgVantage securities secured by loans eligible for the Agricultural Finance line of business totaled $5.5 billion as of March 31, 2022 and $5.1 billion as of December 31, 2021. The unpaid principal balance of on-balance sheet AgVantage securities secured by loans eligible for the Rural Infrastructure Finance line of business totaled $3.0 billion as of both March 31, 2022 and December 31, 2021. The unpaid principal balance of outstanding off-balance sheet AgVantage securities totaled $2.8 million as of both March 31, 2022 and December 31, 2021.

The following table provides information about the issuers of AgVantage securities and the required collateralization levels for those transactions as of March 31, 2022 and December 31, 2021:

Table 31

	As of March 31, 2022		As of December 31, 2021	
Counterparty	Balance	Required Collateralization	Balance	Required Collateralization
		(dollars in thousands)		
AgVantage:				
CFC	$ 3,012,636	100%	$ 3,036,017	100%
MetLife	2,400,000	103%	2,050,000	103%
Rabo AgriFinance	2,330,000	110%	2,550,000	110%
Other[1]	800,262	106% to 125%	492,464	106% to 125%
Total outstanding	$ 8,542,898		$ 8,128,481	

(1) Consists of AgVantage securities issued by 13 different issuers as of both March 31, 2022 and December 31, 2021.

Farmer Mac manages institutional credit risk related to lenders and servicers by requiring those institutions to meet Farmer Mac's standards for creditworthiness. Farmer Mac monitors the financial condition of those institutions by evaluating financial statements and credit rating agency reports. For more information about Farmer Mac's lender eligibility requirements, see "Business—Farmer Mac's Lines of Business—Agricultural Finance—Lenders" and "Business—Farmer Mac's Lines of Business—Rural Infrastructure Finance—Lenders and Loan Servicing" in Farmer Mac’s 2021 Annual Report.

Farmer Mac manages institutional credit risk related to its interest rate swap counterparties through collateralization provisions contained in each of its swap agreements that vary based on the market value of its swap portfolio with each counterparty. Farmer Mac and its interest rate swap counterparties are required to fully collateralize their derivatives positions without any minimum threshold for cleared swap transactions, as well as for non-cleared swap transactions entered into after March 1, 2017. Farmer Mac transacts interest rate swaps with multiple counterparties to reduce counterparty credit exposure concentration. Farmer Mac's usage of cleared derivatives has increased over time as has its exposure to clearinghouses. The usage of cleared swap transactions reduces Farmer Mac's exposure to individual counterparties with the central clearinghouse acting to settle the change in value of contracts on a daily basis. Credit risk related to interest rate swap contracts is discussed in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Risk Management—Interest Rate Risk" and Note 4 to the consolidated financial statements.

Credit Risk – Other Investments. As of March 31, 2022, Farmer Mac had $0.9 billion of cash and cash equivalents and $4.2 billion of investment securities. The management of the credit risk inherent in these investments is governed by Farmer Mac's internal policies as well as FCA regulations found at 12 C.F.R. §§ 652.1-652.45 (the "Liquidity and Investment Regulations"). In addition to establishing a portfolio of highly liquid investments as an available source of cash, the goals of Farmer Mac's investment policies are designed to minimize Farmer Mac's exposure to financial market volatility, preserve capital, and support Farmer Mac's access to the debt markets.

The Liquidity and Investment Regulations and Farmer Mac's internal policies require that investments held in Farmer Mac's investment portfolio meet the following creditworthiness standards: (1) at a minimum, at least one obligor of the investment must have a very strong capacity to meet financial commitments for the life of the investment, even under severely adverse or stressful conditions, and generally present a very low risk of default; (2) if the obligor whose capacity to meet financial commitments is being relied upon to meet the standard set forth in subparagraph (1) is located outside of the United States, the investment must also be fully guaranteed by a U.S. government agency; and (3) the investment must exhibit low credit risk and other risk characteristics consistent with the purpose or purposes for which it is held.

The Liquidity and Investment Regulations and Farmer Mac's internal policies also establish concentration limits, which are intended to limit exposure to any single entity, issuer, or obligor. The Liquidity and Investment Regulations limit Farmer Mac's total credit exposure to any single entity, issuer, or obligor of securities to 10% of Farmer Mac's regulatory capital ($124.9 million as of March 31, 2022). However, Farmer Mac's current policy limits this total credit exposure to 5% of its regulatory capital ($62.4 million as of March 31, 2022). These exposure limits do not apply to obligations of U.S. government agencies or GSEs, although Farmer Mac's current policy restricts investing more than 100% of regulatory capital in the senior non-convertible debt securities of any one GSE.

Although the Liquidity and Investments Regulations do not establish limits on the maximum amount, expressed as a percentage of Farmer Mac's investment portfolio, that can be invested in each eligible asset class, Farmer Mac's internal policies set forth asset class limits as part of Farmer Mac's overall risk management framework.

Interest Rate Risk. Farmer Mac is subject to interest rate risk on all interest-earning assets on its balance sheet because of timing differences in the cash flows due to maturity, paydown, or repricing of the assets and debt together with financial derivatives. Cash flow mismatches due to changing interest rates can reduce the earnings of Farmer Mac if assets prepay sooner than expected and the resulting cash flows must be reinvested in lower-yielding investments when Farmer Mac's funding costs cannot be correspondingly reduced. Alternatively, Farmer Mac could realize a decline in income if assets repay more slowly than originally forecasted and the associated maturing debt must be replaced by debt issuances at higher interest rates.

Interest Rate Risk Management

The goal of interest rate risk management at Farmer Mac is to manage the balance sheet in a manner that generates stable earnings and value across a variety of interest rate environments. Recognizing that interest rate sensitivities may change with the passage of time and as interest rates change, Farmer Mac regularly assesses this exposure and, if necessary, adjusts its portfolio of interest-earning assets, debt, and financial derivatives.

Farmer Mac's objective is to maintain its exposure to interest rate risk within appropriate limits, as approved by Farmer Mac's board of directors. Farmer Mac's management-level Asset and Liability Committee ("ALCO") provides oversight, establishes guidelines, and approves strategies to maintain interest rate risk within the board-established limits.

Farmer Mac's primary strategy for managing interest rate risk is to fund asset purchases with debt that together with financial derivatives have similar duration and convexity characteristics and help mitigate impacts from interest rate changes across the yield curve. As part of this debt issuance strategy, Farmer Mac seeks to issue debt securities across a variety of maturities that together with financial derivatives closely align the forecasted debt and financial derivative cash flows with forecasted asset cash flows.

Farmer Mac issues discount notes and both callable and non-callable medium-term notes across a spectrum of maturities to execute its debt issuance strategy. Callable debt is issued to mitigate prepayment risk associated with certain interest-earning assets held on balance sheet. In general, as interest rates decline, prepayments typically increase, and Farmer Mac is able to economically extinguish certain callable debt issuances. In addition, Farmer Mac enters into financial derivatives, primarily interest rate swaps, to better match the durations of Farmer Mac's assets and liabilities, thereby reducing overall sensitivity to changing interest rates.

Taking into consideration the prepayment provisions and the default probabilities associated with its portfolio of interest-earning assets, Farmer Mac incorporates behavioral prepayment models when projecting and valuing cash flows associated with these assets. In recognition that borrowers' behaviors in various interest rate environments may change over time, Farmer Mac periodically evaluates the effectiveness of these models compared to actual prepayment experience and adjusts and refines the models as necessary to improve the precision of future prepayment forecasts.

Changes in interest rates may affect the timing of asset prepayments which may, in turn, impact durations and values of the assets. Declining interest rates generally results in increased prepayments, which shortens the duration of these assets, while rising interest rates generally results in lower prepayments, thereby extending the duration of the assets.

Farmer Mac is subject to interest rate risk on loans and securities it has committed to acquire but not yet purchased (other than delinquent loans purchased through LTSPCs or loans designated for securitization under a forward purchase agreement). When Farmer Mac commits to purchase these assets, it is exposed to interest rate risk between the time it commits to purchase the loans and the time it issues debt to fund the purchase of these loans. Farmer Mac manages the interest rate risk exposure related to these loans by entering into exchange-traded futures contracts involving U.S. Treasury securities and other financial derivatives. Similarly, when Farmer Mac commits to sell certain assets, the associated interest rate exposure is primarily managed with exchange-traded futures contracts involving U.S. Treasury securities and other financial derivatives.

Farmer Mac's $0.9 billion of cash and cash equivalents held as of March 31, 2022 mature within three months. As of March 31, 2022, $3.1 billion of the $4.2 billion of investment securities (74%) were floating rate securities with rates that adjust within one year or fixed rate securities with original maturities between three months and one year. Farmer Mac's floating rate investment securities are funded with floating rate debt. The fixed rate investment securities are generally funded in a manner consistent with Farmer Mac's overall funding strategy that approximates a duration and convexity match.

Interest Rate Risk Metrics

Farmer Mac regularly evaluates and conducts interest rate shock simulations on its portfolio of financial assets, debt, and financial derivatives and examines a variety of metrics to quantify and manage its exposure to interest rate risk. These metrics include sensitivity to interest rate movements on the market value of equity ("MVE") and forecasted net effective spread ("NES") as well as a duration gap analysis.

MVE represents management's estimate of the present value of all future cash flows from its current portfolio of on- and off-balance sheet assets, liabilities, and financial derivatives, discounted at current interest rates and appropriate spreads. However, MVE is not indicative of the market value of Farmer Mac as a going concern because these market values are theoretical and do not reflect future business activities. The MVE sensitivity analysis measures the degree to which the market values of Farmer Mac's assets, liabilities, and financial derivatives are estimated to change for a given change in interest rates.

Farmer Mac's NES simulation represents the difference between projected income over the next twelve months from the current portfolio of interest-earning assets and interest expense produced by the related funding, including associated financial derivatives. Farmer Mac's NES simulation may be impacted by changes in market interest rates resulting from timing differences between maturities and re-pricing characteristics of funded assets and debt together with the associated financial derivatives. The direction and magnitude of any such effect depends on the direction and magnitude of the change in interest rates across the yield curve as well as the composition of Farmer Mac's portfolio. The NES simulation represents an estimate of the net effective spread income that Farmer Mac's current portfolio is expected to produce over a twelve-month horizon. As a result, the NES simulation sensitivity statistics provide a short-term view of Farmer Mac's NES income sensitivity to interest rate shocks.

Duration is a measure of a financial instrument's fair value sensitivity to small changes in interest rates. Duration gap is calculated using the net estimated durations of Farmer Mac's interest-earning assets, debt, and financial derivatives. Duration gap quantifies the extent to which estimated fair value sensitivities are matched for interest-earning assets, debt and financial derivatives. Duration gap provides a relatively concise measure of the interest rate risk inherent in Farmer Mac's outstanding portfolio.

A positive duration gap denotes that the duration of Farmer Mac's interest-earning assets is greater than the duration of its debt and financial derivatives. A positive duration gap indicates that with small changes in interest rate movements the fair value change of Farmer Mac's interest-earning assets is more sensitive than the fair value change of its debt and financial derivatives. Conversely, a negative duration gap indicates that with small changes in interest rate movements the fair value change of Farmer Mac's interest-earning assets are less sensitive than the fair value change of its debt and financial derivatives. A duration gap of zero indicates that with small changes in interest rate movements the fair value change of Farmer Mac's interest-earning assets is effectively offset by the fair value change of its debt and financial derivatives.

Each of the interest rate risk metrics is quantified using asset/liability models and derived based on management's best estimates of factors such as implied forward interest rates across the yield curve, interest rate volatility, and timing of asset prepayments and callable debt redemptions. Accordingly, these metrics are estimates rather than precise measurements. Actual results may differ to the extent there are material changes to Farmer Mac's financial asset portfolio or changes in funding or hedging strategies undertaken to mitigate unfavorable sensitivities to interest rate changes.

The following schedule summarizes the results of Farmer Mac's MVE and NES sensitivity analysis as of March 31, 2022 and December 31, 2021 to an immediate and instantaneous uniform or "parallel" shift in the yield curve:

Table 32

	Percentage Change in MVE from Base Case	
Interest Rate Scenario(1)	As of March 31, 2022	As of December 31, 2021(1)
+100 basis points	1.1 %	3.7 %
-100 basis points	(0.9)%	(0.1)%

	Percentage Change in NES from Base Case	
Interest Rate Scenario	As of March 31, 2022	As of December 31, 2021(1)
+100 basis points	3.4 %	6.6 %
-100 basis points	(1.1)%	(0.1)%

(1) The down 100 basis points shock scenario was replaced in 2020 with a proportional shock relative to 50% of the 3-month Treasury bill rate, with the approval of the Financial Risk Committee of the Board of Directors. The replacement down shock scenario was negative 25 basis points as of March 31, 2022 and negative 2 basis points as of December 31, 2021.

As of March 31, 2022, Farmer Mac's duration gap was positive 0.2 months, compared to negative 1.5 months as of December 31, 2021. Farmer Mac updated its duration gap measure to interest-earning assets, debt, and financial derivatives as of December 31, 2021. Interest rates within the yield curve increased significantly during first quarter 2022 with the 2-year and 10-year U.S. Treasury Note yield-to-maturity increasing by approximately 160 basis points and 83 basis points, respectively, versus year-end 2021. This rate movement contributed to extending the duration of Farmer Mac's funded assets compared to its debt and financial derivatives, thereby narrowing Farmer Mac's duration gap.

Financial Derivatives Transactions

The economic effects of financial derivatives are included in Farmer Mac's MVE, NES, and duration gap analyses. Farmer Mac typically enters into the following types of financial derivative transactions principally to protect against risk from the effects of market price or interest rate movements on the value of interest-earning assets, future cash flows, and debt issuance, and not for trading or speculative purposes:

- "pay-fixed" interest rate swaps, in which Farmer Mac pays fixed rates of interest to, and receives floating rates of interest from, counterparties;
- "receive-fixed" interest rate swaps, in which Farmer Mac receives fixed rates of interest from, and pays floating rates of interest to, counterparties;
- "basis swaps," in which Farmer Mac pays floating rates of interest based on one index to, and receives floating rates of interest based on a different index from, counterparties; and
- exchange-traded futures contracts involving U.S. Treasury securities.

As of March 31, 2022, Farmer Mac had $18.9 billion combined notional amount of interest rate swaps, with terms ranging from less than one year to just over thirty years, of which $8.1 billion were pay-fixed interest rate swaps, $9.5 billion were receive-fixed interest rate swaps, and $1.4 billion were basis swaps.

Farmer Mac enters into interest rate swaps to more closely match the cash flow and duration characteristics of its interest-earning assets with those of its debt. For example, Farmer Mac transacts pay-fixed interest rate swaps and issues floating rate debt to effectively create fixed rate funding that approximately matches the duration of the corresponding fixed rate assets being funded. Farmer Mac evaluates the overall cost of using interest rate swaps in conjunction with debt issuance as a funding alternative to duration-matched debt and enters into interest rate swaps to manage interest rate risks across the balance sheet.

Certain financial derivatives are designated as fair value hedges of fixed rate assets classified as available for sale or liabilities to protect against fair value changes in the assets or liabilities related to a benchmark interest rate (e.g., LIBOR or Secured Overnight Financing Rate (“SOFR”)). Also, certain financial derivatives are designated as cash flow hedges to mitigate the volatility of future interest rate payments on floating rate debt.

As discussed in Note 4 to the consolidated financial statements, all financial derivatives are recorded on the balance sheet at fair value as derivative assets or as derivative liabilities. Changes in the fair values of undesignated financial derivatives are reported in "Gains on financial derivatives" 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 related to the risk being hedged are reported in "Net interest income" in the consolidated statements of operations. Interest accruals on derivatives designated in fair value hedge accounting relationships are also recorded in "Net interest income" in the consolidated statements of operations. For financial derivatives designated in cash flow hedge accounting relationships, the unrealized gain or loss on the derivative is recorded in other comprehensive income. Because the hedging instrument is an interest rate swap and the hedged forecasted transactions are future interest payments on floating 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. All of Farmer Mac's interest rate swap transactions are conducted under standard collateralized agreements that limit Farmer Mac's potential credit exposure to any counterparty. As of both March 31, 2022 and December 31, 2021, Farmer Mac had no uncollateralized net exposures based on the mark-to-market value of the portfolio of interest rate swaps

Re-funding and repricing risk

Farmer Mac is subject to re-funding and repricing risk on any floating rate assets that are not funded to contractual maturity. Re-funding and repricing risk arises from potential changes in funding costs resulting from a funding strategy whereby Farmer Mac issues floating rate debt across a variety of maturities to fund floating rate or synthetically floating rate assets that on average may have longer maturities. Changes in Farmer Mac's funding costs relative to the benchmark market index rate to which the assets are indexed can cause changes to net interest income when debt matures and is reissued at then current interest rates to continue funding those assets.

In addition, many of Farmer Mac's floating rate assets may prepay before the contractual maturity date. Farmer Mac is subject to re-funding and repricing risk on a portion of its fixed rate assets as a result of its use of pay-fixed receive-floating interest rate swaps that effectively convert the required funding needed from fixed rate to floating rate. These fixed rate assets are then effectively synthetically floating rate assets that require floating rate funding.

Farmer Mac can meet floating rate funding needs in several ways, including:

- issuing short-term fixed rate discount notes with maturities that match the reset period of the assets;

- issuing floating rate medium-term notes with maturities and reset frequencies that match the assets being funded;
- issuing non-maturity matched, floating rate medium-term notes with reset frequencies that match the assets being funded; or
- issuing non-maturity matched, fixed rate discount notes or medium-term notes swapped to floating rate to match the interest rate reset dates of the assets.

To meet certain floating rate funding needs, Farmer Mac frequently issues shorter-term floating-rate medium-term notes or fixed rate medium-term notes paired with a received-fixed interest rate swap because these funding alternatives generally provide a lower cost of funding while generating an effective interest rate match. As funding for these floating rate assets matures, Farmer Mac seeks to refinance the debt associated with these assets in a similar fashion to achieve an appropriate interest rate match in the context of Farmer Mac's overall debt issuance and liquidity management strategies.

However, if the funding cost of Farmer Mac’s discount notes or medium-term notes increased relative to the benchmark market index of the associated assets during the time between when these floating rate assets were first funded and when Farmer Mac refinanced the associated debt, Farmer Mac would be exposed to a commensurate reduction of net effective spread. Conversely, if the funding cost on Farmer Mac’s discount notes or medium-term notes decreased relative to the benchmark market index during that time, Farmer Mac would benefit from a commensurate increase to net effective spread.

Farmer Mac's debt issuance strategy targets balancing liquidity risk and re-funding and repricing risk while maintaining an appropriate liability management profile that is consistent with Farmer Mac's risk tolerance. Farmer Mac regularly adjusts its funding strategies to mitigate the effects of interest rate variability and seeks to maintain an effective mixture of funding structures in the context of its overall liability management and liquidity management strategies.

As of March 31, 2022, Farmer Mac held $5.1 billion of floating rate assets in its lines of business and its investment portfolio that reset based on floating rate market indices, such as LIBOR or SOFR. As of the same date, Farmer Mac also had $8.1 billion of interest rate swaps outstanding where Farmer Mac pays a fixed rate of interest and receives a floating rate of interest, primarily LIBOR or SOFR.

Discontinuation of LIBOR

As described in "Risk Factors—Market Risk" in Part I, Item 1A of the 2021 Annual Report, Farmer Mac faces risks associated with the reform, replacement, or discontinuation of the LIBOR benchmark interest rate and the transition to an alternative benchmark interest rate. Farmer Mac is evaluating the potential effect on our business of the replacement of the LIBOR benchmark interest rate, including the possibility of replacement benchmark interest rates.

As of March 31, 2022, Farmer Mac held $3.2 billion of floating rate assets in its lines of business and its investment portfolio, had issued $0.3 billion of floating rate debt, and had entered into $12.9 billion notional amount of interest rate swaps, each of which reset based on LIBOR. In addition, our Non-Cumulative Series C Preferred Stock currently pays a fixed rate of interest until July 17, 2024. It becomes redeemable at our option on July 18, 2024 and thereafter pays interest at a floating rate equal to three-month LIBOR plus 3.260%.

The market transition away from LIBOR and towards alternative benchmark interest rate indices that may be developed is expected to be complicated and may require the development of term and credit adjustments to accommodate for differences between the benchmark interest rate indices. The transition may also result in different financial performance for existing transactions, require different hedging strategies, or require renegotiation of existing transactions. As of March 31, 2022, we had $1.8 billion outstanding in medium-term notes based on SOFR, a potential alternative benchmark interest rate index.

Liquidity and Capital Resources

Farmer Mac's primary sources of funds to meet its liquidity and funding needs are the proceeds of its debt issuances, guarantee and commitment fees, net effective spread, loan repayments, and maturities of AgVantage and investment securities. Farmer Mac regularly accesses the debt capital markets for funding, and Farmer Mac has maintained access to the debt capital markets at relatively favorable interest rates throughout first quarter 2022. Farmer Mac funds its purchases of eligible loan assets, USDA Securities, Farmer Mac Guaranteed Securities, and investment assets and finances its operations primarily by issuing debt obligations of various maturities in the debt capital markets. As of March 31, 2022, Farmer Mac had outstanding discount notes of $1.9 billion, medium-term notes that mature within one year of $4.7 billion, and medium-term notes that mature after one year of $16.7 billion.

Assuming continued access to the debt capital markets, Farmer Mac believes it has sufficient liquidity and capital resources to support its operations for the next 12 months and for the foreseeable future. Farmer Mac has a contingency funding plan to manage unanticipated disruptions in its access to the debt capital markets. Farmer Mac must maintain a minimum of 90 days of liquidity under the Liquidity and Investment Regulations prescribed for Farmer Mac by FCA. In accordance with the methodology for calculating available days of liquidity under those regulations, Farmer Mac maintained a monthly average of 408 days of liquidity during first quarter 2022 and had 416 days of liquidity as of March 31, 2022.

Farmer Mac maintains cash, cash equivalents (including U.S. Treasury securities and other short-term money market instruments), and other investment securities that can be drawn upon for liquidity needs. Farmer Mac's current policies authorize liquidity investments in:

- obligations of or fully guaranteed by the United States or a U.S. government agency;
- obligations of or fully guaranteed by GSEs;
- municipal securities;
- international and multilateral development bank obligations;
- money market instruments;
- diversified investment funds;
- asset-backed securities;
- corporate debt securities; and
- mortgage-backed securities.

The following table presents these assets as of March 31, 2022 and December 31, 2021:

Table 33

	As of March 31, 2022	As of December 31, 2021
	(in thousands)	
Cash and cash equivalents	$ 890,046	$ 908,785
Investment securities:		
Guaranteed by U.S. Government and its agencies	1,766,255	1,579,452
Guaranteed by GSEs	2,455,068	2,282,655
Asset-backed securities	18,961	19,254
Total	$ 5,130,330	$ 4,790,146

The objective of the investment portfolio as of March 31, 2022 and December 31, 2021 was to provide a level of liquidity that mitigates enterprise risk, provides a reliable source of short-term and long-term liquidity, to prepare for the possibility of future volatility in the debt capital markets, and to support program asset growth.

Capital Requirements. Farmer Mac is subject to the following statutory capital requirements – minimum, critical, and risk-based. Farmer Mac must comply with the higher of the minimum capital requirement and the risk-based capital requirement. As of March 31, 2022, Farmer Mac was in compliance with its statutory capital requirements and was classified as within "level 1" (the highest compliance level).

In accordance with FCA's rule on capital planning, Farmer Mac's board of directors 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). That policy restricts Tier 1-eligible dividends and any discretionary bonus payments if Tier 1 capital falls below specified thresholds. As of March 31, 2022 and December 31, 2021, Farmer Mac's Tier 1 capital ratio was 15.0% and 14.7%, respectively. The increase in our Tier 1 capital ratio was due to that fact that capital growth, driven by increases in retained earnings, outpaced the growth in risk-weighted assets during first quarter 2022. As of March 31, 2022, Farmer Mac was in compliance with its capital adequacy policy. Farmer Mac does not expect its compliance on an ongoing basis with FCA's rule on capital planning, including Farmer Mac's policy on Tier 1 capital, to materially affect Farmer Mac's operations or financial condition.

For more information about the capital requirements applicable to Farmer Mac, its capital adequacy policy, and FCA's rule on capital planning, see "Business—Government Regulation of Farmer Mac—Capital Standards" in Farmer Mac's 2021 Annual Report. See Note 8 to the consolidated financial statements for more information about Farmer Mac's capital position.

Other Matters

None.

Supplemental Information

The following tables present quarterly and annual information about new business volume, repayments, and outstanding business volume:

Table 34

New Business Volume

	Agricultural Finance		Rural Infrastructure Finance		
	Farm & Ranch	Corporate AgFinance	Rural Utilities	Renewable Energy	Total
			(in thousands)		
For the quarter ended:					
March 31, 2022	$ 2,452,539	$ 103,353	$ 377,965	$ 41,636	$ 2,975,493
December 31, 2021	2,075,540	411,838	631,338	12,594	3,131,310
September 30, 2021	1,791,662	122,043	609,745	4,152	2,527,602
June 30, 2021	925,950	159,958	410,666	3,441	1,500,015
March 31, 2021	1,087,897	186,393	171,546	23,484	1,469,320
December 31, 2020	907,316	242,394	145,416	44,313	1,339,439
September 30, 2020	1,059,891	212,829	52,300	10,000	1,335,020
June 30, 2020	1,069,693	279,021	358,866	—	1,707,580
March 31, 2020	768,700	165,128	392,668	10,000	1,336,496
For the year ended:					
December 31, 2021	$ 5,881,049	$ 880,232	$ 1,823,295	$ 43,671	$ 8,628,247
December 31, 2020	3,805,600	899,372	949,250	64,313	5,718,535

Table 35

	Repayments of Assets				
	Agricultural Finance		Rural Infrastructure Finance		
	Farm & Ranch	Corporate AgFinance	Rural Utilities	Renewable Energy	Total
			(in thousands)		
For the quarter ended:					
Scheduled	$ 1,535,369	$ 39,480	$ 266,349	$ 7,790	$ 1,848,988
Unscheduled	434,794	60,947	397	—	496,138
March 31, 2022	$ 1,970,163	$ 100,427	$ 266,746	$ 7,790	$ 2,345,126
Scheduled	$ 928,663	$ 205,778	$ 816,802	$ 18,526	$ 1,969,769
Unscheduled	318,024	48,042	—	—	366,066
December 31, 2021	$ 1,246,687	$ 253,820	$ 816,802	$ 18,526	$ 2,335,835
Scheduled	$ 725,713	$ 406,285	$ 95,443	$ 4,043	$ 1,231,484
Unscheduled	374,287	—	201	—	374,488
September 30, 2021	$ 1,100,000	$ 406,285	$ 95,644	$ 4,043	$ 1,605,972
Scheduled	$ 380,684	$ 139,774	$ 225,257	$ 4,704	$ 750,419
Unscheduled	409,393	3,921	1,652	—	414,966
June 30, 2021	$ 790,077	$ 143,695	$ 226,909	$ 4,704	$ 1,165,385
Scheduled	$ 721,090	$ 120,621	$ 100,482	$ 2,671	$ 944,864
Unscheduled	501,651	82,090	2,279	—	586,020
March 31, 2021	$ 1,222,741	$ 202,711	$ 102,761	$ 2,671	$ 1,530,884
Scheduled	$ 365,732	$ 197,108	$ 405,597	$ 561	$ 968,998
Unscheduled	400,809	27,850	1,610	—	430,269
December 31, 2020	$ 766,541	$ 224,958	$ 407,207	$ 561	$ 1,399,267
Scheduled	$ 569,820	$ 74,038	$ 211,152	$ 279	$ 855,289
Unscheduled	531,062	1,489	—	—	532,551
September 30, 2020	$ 1,100,882	$ 75,527	$ 211,152	$ 279	$ 1,387,840
Scheduled	$ 523,721	$ 109,543	$ 67,708	$ 240	$ 701,212
Unscheduled	448,900	50,737	3,935	—	503,572
June 30, 2020	$ 972,621	$ 160,280	$ 71,643	$ 240	$ 1,204,784
Scheduled	$ 320,488	$ 94,775	$ 165,467	$ —	$ 580,730
Unscheduled	326,078	8,318	—	—	334,396
March 31, 2020	$ 646,566	$ 103,093	$ 165,467	$ —	$ 915,126
For the year ended:					
Scheduled	$ 2,756,150	$ 872,458	$ 1,237,984	$ 29,944	$ 4,896,536
Unscheduled	1,603,355	134,053	4,132	—	1,741,540
December 31, 2021	$ 4,359,505	$ 1,006,511	$ 1,242,116	$ 29,944	$ 6,638,076
Scheduled	$ 1,779,761	$ 475,464	$ 849,924	$ 1,080	$ 3,106,229
Unscheduled	1,706,849	88,394	5,545	—	1,800,788
December 31, 2020	$ 3,486,610	$ 563,858	$ 855,469	$ 1,080	$ 4,907,017

Table 36

Outstanding Business Volume

	Agricultural Finance		Rural Infrastructure Finance		
	Farm & Ranch	Corporate AgFinance	Rural Utilities	Renewable Energy	Total
			(in thousands)		
As of:					
March 31, 2022	$ 16,575,595	$ 1,540,760	$ 6,006,446	$ 120,609	$ 24,243,410
December 31, 2021	16,094,639	1,537,834	5,895,227	86,763	23,614,463
September 30, 2021	15,565,589	1,379,816	6,080,691	92,695	23,118,791
June 30, 2021	14,873,926	1,664,059	5,566,591	92,585	22,197,161
March 31, 2021	14,738,052	1,647,796	5,382,835	93,848	21,862,531
December 31, 2020	14,872,894	1,664,115	5,314,051	73,035	21,924,095
September 30, 2020	14,737,485	1,646,679	5,575,841	29,283	21,989,288
June 30, 2020	14,778,474	1,509,378	5,734,694	19,562	22,042,108
March 31, 2020	14,681,403	1,390,637	5,447,470	19,802	21,539,312

Table 37

On-Balance Sheet Outstanding Business Volume

	Fixed Rate	5- to 10-Year ARMs & Resets	1-Month to 3-Year ARMs	Total Held in Portfolio
			(in thousands)	
As of:				
March 31, 2022	$ 14,174,611	$ 2,858,521	$ 3,443,816	$ 20,476,948
December 31, 2021	13,228,675	2,896,014	3,695,269	19,819,958
September 30, 2021	12,921,572	2,872,499	3,818,550	19,612,621
June 30, 2021	11,800,429	2,878,637	4,254,625	18,933,691
March 31, 2021	11,454,321	2,824,551	4,410,661	18,689,533
December 31, 2020	11,330,414	2,816,840	4,511,964	18,659,218
September 30, 2020	10,879,372	2,811,547	5,013,640	18,704,559
June 30, 2020	10,793,629	2,845,266	5,076,445	18,715,340
March 31, 2020	10,296,598	2,818,869	4,996,478	18,111,945

The following table presents the quarterly net effective spread (a non-GAAP measure) by segment:

Table 38

	Net Effective Spread[1]													
	Agricultural Finance				Rural Infrastructure Finance				Treasury					
	Farm & Ranch		Corporate AgFinance		Rural Utilities		Renewable Energy		Funding		Investments		Net Effective Spread	
	Dollars	Yield	Dollars	Yield	Dollars	Yield	Dollars	Yield	Dollars	Yield	Dollars	Yield	Dollars	Yield
	(dollars in thousands)													
For the quarter ended:														
March 31, 2022[2]	$30,354	1.02 %	$ 7,209	1.96 %	$ 3,159	0.23 %	$ 375	1.69 %	$16,738	0.28 %	$ 4	— %	$57,839	0.97 %
December 31, 2021	28,998	0.99 %	6,321	1.84 %	2,521	0.19 %	356	1.53 %	15,979	0.28 %	158	0.01 %	54,333	0.94 %
September 30, 2021	28,914	1.06 %	7,163	1.80 %	2,067	0.16 %	236	1.09 %	17,386	0.31 %	159	0.01 %	55,925	0.99 %
June 30, 2021	29,163	1.06 %	6,676	1.65 %	1,759	0.14 %	378	1.80 %	18,449	0.33 %	126	0.01 %	56,551	1.01 %
March 31, 2021[2]	26,461	0.98 %	6,921	1.67 %	1,720	0.14 %	249	1.28 %	18,394	0.33 %	114	0.01 %	53,859	0.97 %
December 31, 2020	25,596	0.95 %	6,237	1.53 %	1,838	0.15 %	123	1.20 %	20,585	0.37 %	143	0.01 %	54,522	0.98 %
September 30, 2020	23,735	0.89 %	5,786	1.45 %	2,022	0.16 %	75	1.19 %	20,034	0.37 %	150	0.01 %	51,802	0.96 %
June 30, 2020	21,597	0.83 %	4,997	1.36 %	1,701	0.14 %	47	0.93 %	19,449	0.37 %	(1,322)	(0.13)%	46,469	0.89 %
March 31, 2020	19,230	0.76 %	4,421	1.32 %	1,315	0.11 %	58	1.51 %	19,150	0.39 %	(11)	— %	44,163	0.89 %

(1) Farmer Mac excludes the Corporate segment in the presentation above because the segment does not have any interest-earning assets.

(2) See Note 10 to the consolidated financial statements for a reconciliation of GAAP net interest income by segment to net effective spread by segment for the three months ended March 31, 2022 and 2021.

The following table presents quarterly core earnings (a non-GAAP measure) reconciled to net income attributable to common stockholders:

Table 39

	Core Earnings by Quarter End								
	March 2022	December 2021	September 2021	June 2021	March 2021	December 2020	September 2020	June 2020	March 2020
	(in thousands)								
Revenues:									
Net effective spread	$ 57,839	$ 54,333	$ 55,925	$ 56,551	$ 53,859	$ 54,522	$ 51,802	$ 46,469	$ 44,163
Guarantee and commitment fees	4,557	4,637	4,322	4,334	4,240	4,652	4,659	4,943	4,896
Gain on sale of mortgage loans	—	6,539	—	—	—	—	—	—	—
Other	514	241	687	301	451	512	453	1,048	674
Total revenues	62,910	65,750	60,934	61,186	58,550	59,686	56,914	52,460	49,733
Credit related expense/(income):									
(Release of)/provision for losses	(54)	(1,428)	255	(983)	(31)	2,973	1,200	51	3,831
REO operating expenses	—	—	—	—	—	—	—	—	—
Losses/(gains) on sale of REO	—	—	—	—	—	22	—	—	(485)
Total credit related expense/(income)	(54)	(1,428)	255	(983)	(31)	2,995	1,200	51	3,346
Operating expenses:									
Compensation and employee benefits	13,298	11,246	10,027	9,779	11,795	9,497	8,791	8,087	10,127
General and administrative	7,278	8,492	6,330	6,349	6,336	6,274	5,044	5,295	5,363
Regulatory fees	812	812	750	750	750	750	725	725	725
Total operating expenses	21,388	20,550	17,107	16,878	18,881	16,521	14,560	14,107	16,215
Net earnings	41,576	46,628	43,572	45,291	39,700	40,170	41,154	38,302	30,172
Income tax expense	9,024	9,809	9,152	9,463	8,520	8,470	8,297	8,016	6,598
Preferred stock dividends	6,791	6,792	6,774	5,842	5,269	5,269	5,166	3,939	3,431
Core earnings	$ 25,761	$ 30,027	$ 27,646	$ 29,986	$ 25,911	$ 26,431	$ 27,691	$ 26,347	$ 20,143
Reconciling items:									
Gains/(losses) on undesignated financial derivatives due to fair value changes	$ 1,698	$ (1,213)	$ (1,864)	$ (3,721)	$ 1,695	$ (1,758)	$ (4,149)	$ 8,700	$ (6,484)
Gains/(losses) on hedging activities due to fair value changes	2,024	1,476	(2,093)	(2,097)	(271)	3,827	(5,245)	(2,676)	(5,925)
Unrealized gains/(losses) on trading assets	94	(76)	36	(61)	(14)	223	(258)	(20)	106
Net effects of amortization of premiums/discounts and deferred gains on assets consolidated at fair value	20	71	23	20	16	(77)	97	35	3
Net effects of terminations or net settlements on financial derivatives	15,512	(429)	(351)	109	1,165	1,583	233	720	(1,300)
Issuance costs on the retirement of preferred stock		—	—	—	—	—	(1,667)	—	—
Income tax effect related to reconciling items	(4,063)	36	892	1,208	(544)	(798)	1,957	(1,419)	2,856
Net income attributable to common stockholders	$ 41,046	$ 29,892	$ 24,289	$ 25,444	$ 27,958	$ 29,431	$ 18,659	$ 31,687	$ 9,399

Item 3 Quantitative and Qualitative Disclosures About Market Risk

Farmer Mac is exposed to market risk from changes in interest rates. Farmer Mac manages this market risk by entering into various financial transactions, including financial derivatives, and by monitoring and measuring its exposure to changes in interest rates. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Risk Management—Interest Rate Risk" for more information about Farmer Mac's exposure to interest rate risk and its strategies to manage that risk. For information about Farmer Mac's use of financial derivatives and related accounting policies, see Note 4 to the consolidated financial statements.

Item 4 Controls and Procedures

Management's Evaluation of Disclosure Controls and Procedures. Farmer Mac maintains disclosure controls and procedures designed to ensure that information required to be disclosed in its periodic filings under the Securities Exchange Act of 1934 ("Exchange Act"), including this Quarterly Report on Form 10-Q, is recorded, processed, summarized, and reported on a timely basis. These disclosure controls and procedures include controls and procedures designed to ensure that information required to be disclosed under the Exchange Act is accumulated and communicated to Farmer Mac's management on a timely basis to allow decisions about required disclosure. Management, including Farmer Mac's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the design and operation of Farmer Mac's disclosure controls and procedures (as defined under Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of March 31, 2022.

Farmer Mac carried out the evaluation of the effectiveness of its disclosure controls and procedures, required by paragraph (b) of Exchange Act Rules 13a-15 and 15d-15, under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer. Based upon this evaluation, the Chief Executive Officer and Chief Financial Officer concluded that Farmer Mac's disclosure controls and procedures were effective as of March 31, 2022.

Changes in Internal Control Over Financial Reporting. There were no changes in Farmer Mac's internal control over financial reporting during the three months ended March 31, 2022 that have materially affected, or are reasonably likely to materially affect, Farmer Mac's internal control over financial reporting.

PART II

Item 1. Legal Proceedings

None.

Item 1A. Risk Factors

Information about risk factors can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Forward-Looking Statements" in Part I, Item 2 of this Form 10-Q and in Part I, Item 1A of Farmer Mac's 2021 Annual Report.

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

(a) Farmer Mac is a federally chartered instrumentality of the United States whose debt and equity securities are exempt from registration under Section 3(a)(2) of the Securities Act of 1933. During first quarter 2022, the following transactions occurred related to Farmer Mac's equity securities that were not registered under the Securities Act of 1933 and were not otherwise reported on a Current Report on Form 8-K:

Class C Non-Voting Common Stock. Under Farmer Mac's policy that permits directors of Farmer Mac to elect to receive shares of Class C non-voting common stock in lieu of their cash retainers, Farmer Mac issued an aggregate of 373 shares of its Class C non-voting common stock in January 2022 to the five directors who elected to receive stock in lieu of their cash retainers. Farmer Mac calculated the number of shares issued to the directors based on a price of $123.93 per share, which was the closing price of the Class C non-voting common stock on December 31, 2021 (the last trading day of the previous quarter) as reported by the New York Stock Exchange.

In addition to the March 9, 2022 grants of stock appreciation rights ("SARs") and restricted stock units ("RSUs") to the four named executive officers and fifteen directors reported in Farmer Mac's Current Report on Form 8-K filed with the SEC on March 15, 2022, Farmer Mac made the following additional grants under its Amended and Restated 2008 Omnibus Incentive Plan on March 9, 2022 to other individuals as incentive compensation:

- an aggregate of 3,684 SARs to four executive officers, which have the same terms as the SARs granted to the named executive officers on March 9, 2022 – a grant price of $120.38 per share, an expiration date of March 9, 2032, and vesting in three equal annual installments on each of March 31, 2023, March 31, 2024, and March 31, 2025;

- an aggregate of 998 target number of performance-vested RSUs to four executive officers, which have the same terms as the performance-vested RSUs granted to the named executive officers on March 9, 2022 and are eligible for "cliff" vesting on March 31, 2025 in an amount between 0% and 200% of the target number of RSUs granted based on performance objectives related to cumulative core earnings before credit, subject to "gatekeeper" metrics related to compliance with regulatory capital requirements, for the performance period of January 1, 2022 to December 31, 2024;

- an aggregate of 1,998 time-vested RSUs to four executive officers vesting in three equal annual installments on March 31, 2023, March 31, 2024, and March 31, 2025; and

- an aggregate of 14,023 time-vested RSUs to 56 employees, all of which will "cliff" vest on March 31, 2025.

(b) Not applicable.

(c) None.

Item 3. Defaults Upon Senior Securities

(a) None.

(b) None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

(a) None.

(b) None.

Item 6. Exhibits

*	3.1	—	Title VIII of the Farm Credit Act of 1971, as most recently amended on June 18, 2020 (Previously filed as Exhibit 3.1 to Form 10-Q filed August 10, 2020).
*	3.2	—	Amended and Restated By-Laws of the Registrant (Previously filed as Exhibit 3.1 to Form 8-K filed May 12, 2020).
*	4.1	—	Specimen Certificate for Farmer Mac Class A Voting Common Stock (Previously filed as Exhibit 4.1 to Form 10-Q filed May 15, 2003).
*	4.2	—	Specimen Certificate for Farmer Mac Class B Voting Common Stock (Previously filed as Exhibit 4.2 to Form 10-Q filed May 15, 2003).
*	4.3	—	Specimen Certificate for Farmer Mac Class C Non-Voting Common Stock (Previously filed as Exhibit 4.3 to Form 10-Q filed May 15, 2003).
*	4.4	—	Specimen Certificate for 6.000% Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series C (Previously filed as Exhibit 4.6 to Form 10-Q filed August 11, 2014).
*	4.4.1	—	Certificate of Designation of Terms and Conditions of 6.000% Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series C (Previously filed as Exhibit 4.1 to Form 8-A filed June 20, 2014).
*	4.5	—	Specimen Certificate for 5.700% Non-Cumulative Preferred Stock, Series D (Previously filed as Exhibit 4.7 to Form 10-Q filed August 1, 2019).
*	4.5.1	—	Certificate of Designation of Terms and Conditions of 5.700% Non-Cumulative Preferred Stock, Series D (Previously filed as Exhibit 4.1 to Form 8-A filed May 13, 2019).
*	4.6	—	Specimen Certificate for 5.750% Non-Cumulative Preferred Stock, Series E (Previously filed as Exhibit 4.7 to Form 10-Q filed August 10, 2020).
*	4.6.1	—	Certificate of Designation of Terms and Conditions of 5.750% Non-Cumulative Preferred Stock, Series E (Previously filed as Exhibit 4.1 to Form 8-A filed May 20, 2020).
*	4.7	—	Specimen Certificate for 5.250% Non-Cumulative Preferred Stock, Series F (Previously filed as Exhibit 4.8 to Form 10-Q filed November 9, 2020).
*	4.7.1	—	Certificate of Designation of Terms and Conditions of 5.250% Non-Cumulative Preferred Stock, Series F (Previously filed as Exhibit 4.1 to Form 8-A filed August 20, 2020).
*	4.8		Specimen Certificate for 4.875% Non-Cumulative Preferred Stock, Series G (Previously filed as Exhibit 4.8 to Form 10-Q filed August 5, 2021).
*	4.8.1		Certificate of Designation of Terms and Conditions of 4.875% Non-Cumulative Preferred Stock, Series G (Previously filed as Exhibit 4.1 to Form 8-A filed May 27, 2021).
*	4.9	—	Description of the Registrant's securities that are registered under Section 12 of the Securities Exchange Act of 1934 (Previously filed as Exhibit 4.9 to Form 10-Q filed August 5, 2021).
*	21	—	List of the Registrant's subsidiaries (Previously filed as Exhibit 21 to Form 10-K filed March 8, 2018).
**	31.1	—	Certification of Registrant's principal executive officer relating to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
**	31.2	—	Certification of Registrant's principal financial officer relating to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
**	32	—	Certification of Registrant's principal executive officer and principal financial officer relating to the Registrant's Quarterly Report on Form 10-Q for the year ended March 31, 2022, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
**	101.INS	—	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
**	101.SCH	—	Inline XBRL Taxonomy Extension Schema
**	101.CAL	—	Inline XBRL Taxonomy Extension Calculation
**	101.DEF	—	Inline XBRL Taxonomy Extension Definition
**	101.LAB	—	Inline XBRL Taxonomy Extension Label
**	101.PRE	—	Inline XBRL Taxonomy Extension Presentation
**	104	—	Cover Page Inline Interactive Data File - the cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document included as Exhibit 101

* Incorporated by reference to the indicated prior filing.

** Filed with this report.

Portions of this exhibit have been omitted pursuant to a request for confidential treatment.

† Management contract or compensatory plan.

SIGNATURES

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

FEDERAL AGRICULTURAL MORTGAGE CORPORATION

/s/ Bradford T. Nordholm	May 9, 2022
By: Bradford T. Nordholm President and Chief Executive Officer (Principal Executive Officer)	Date
/s/ Aparna Ramesh	May 9, 2022
By: Aparna Ramesh Executive Vice President – Chief Financial Officer (Principal Financial Officer)	Date