



## Ag Finance Update

# Farm Loan Performance Remains Solid and Ag Bank Liquidity Improves

by: Cortney Cowley, Ty Kreitman and Chris Summers

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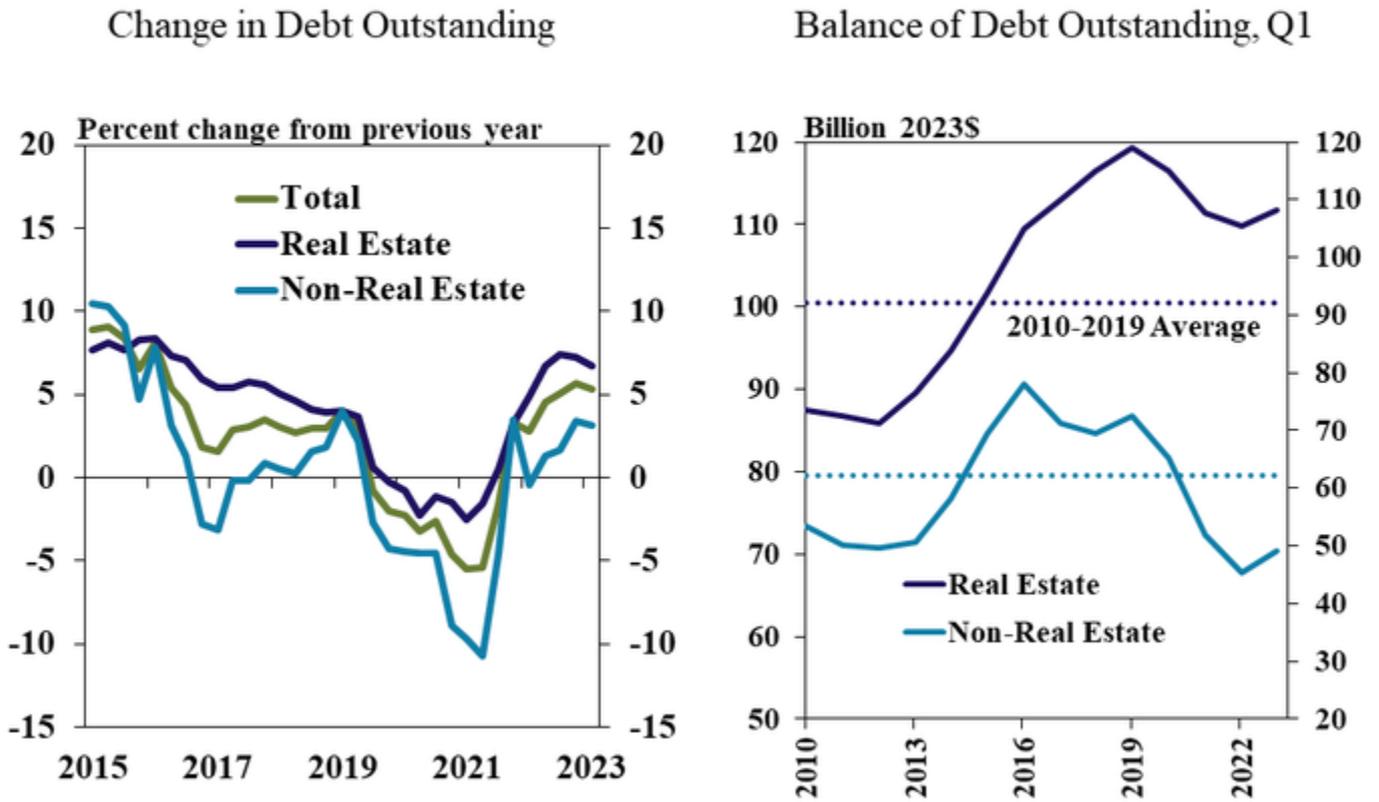
Farm debt at commercial banks grew at a steady pace in the first quarter and loan performance improved gradually. The rise in benchmark interest rates over the past year supported considerable growth to interest income that boosted earnings, but higher funding costs have curbed net interest margins in recent months. Like other commercial banks, the rapid rise in interest rates at agricultural banks also has pushed unrealized losses on securities holdings to very high levels. Through the first quarter, sound liquidity eased some of the ongoing risks and continued to support the ability of farm lenders to meet credit demands.

The [outlook for the U.S. farm economy](#) has moderated in recent months, but farm finances remained solid with support from historically strong incomes in recent years. The prices of several major commodities have contracted in recent months and tempered profit opportunities for many producers. Higher production costs have [pushed up credit needs for some borrowers](#), [while many others have utilized cash holdings to supplement loan balances and reduce interest expenses](#). Strong borrower liquidity also has supported loan performance and kept delinquency rates at historically low levels.

## Outstanding Farm Loans and Delinquency Rates

Farm debt at commercial banks grew steadily in the first quarter. Real estate and non-real estate farm loan balances increased 7% and 3%, respectively, from a year ago, which was similar to recent quarters (Chart 1, left panel). The rebound pushed non-real estate debt balances up from multi-year lows a year ago, and real estate debt remained elevated at just 6% less than the all-time high of \$119 billion in 2019 (Chart 1, right panel).

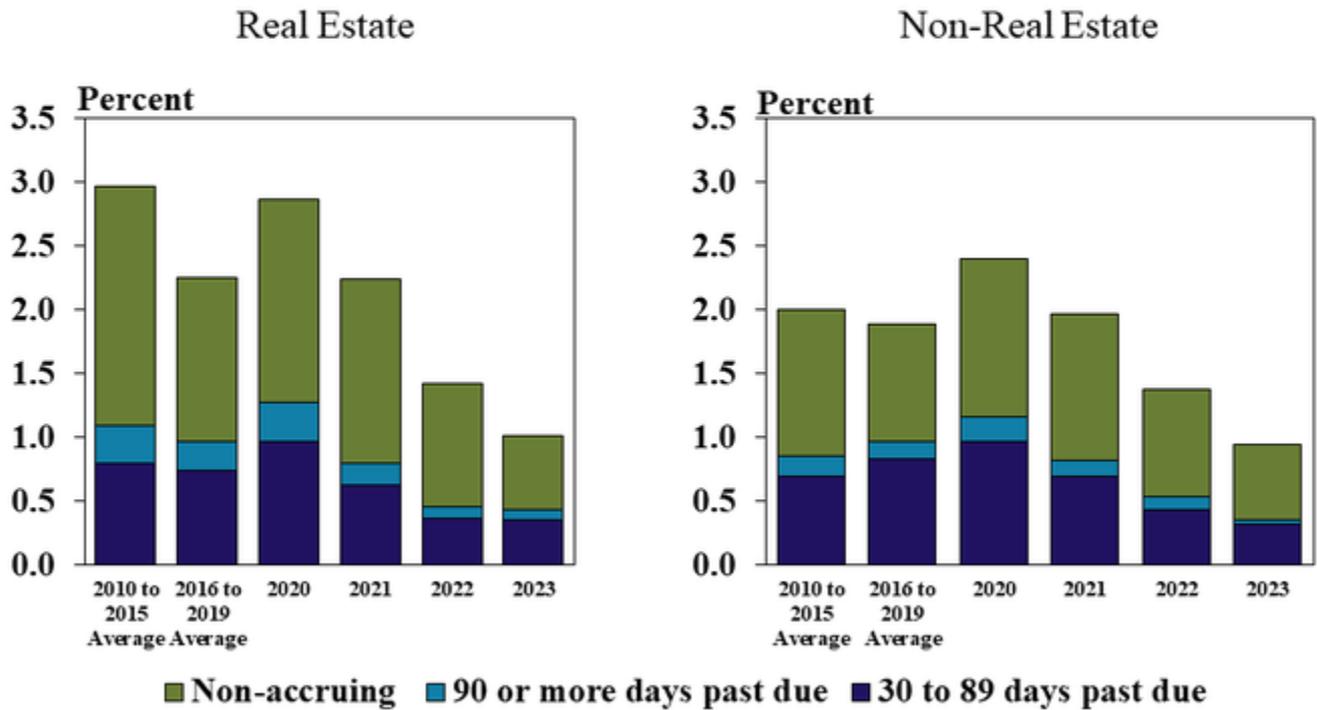
# Chart 1: Farm Debt Outstanding at Commercial Banks



Sources: Reports of Condition and Income and Federal Reserve Board of Governors

Strong conditions in the farm economy continued to support solid loan performance. The rate of delinquency on both real estate and non-real estate loans dropped for the third consecutive year to just 1% in the first quarter (Chart 2). The decline in delinquency rates over the past year was largely due to a reduction in non-accruing loan balances, signifying a broad degree of strength in farm finances and repayment capacity.

## Chart 2: Farm Loan Delinquency Rates at Commercial Banks, Q1



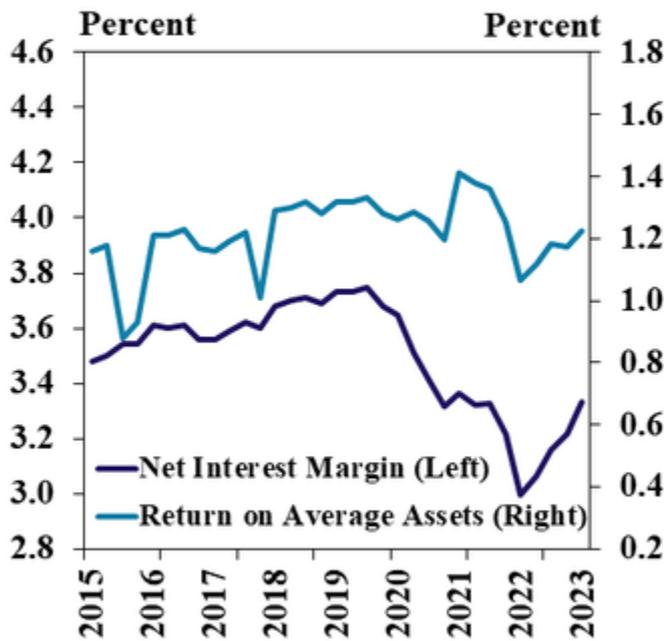
Sources: Reports of Condition and Income and Federal Reserve Board of Governors.

### Earnings Performance at Agricultural Banks

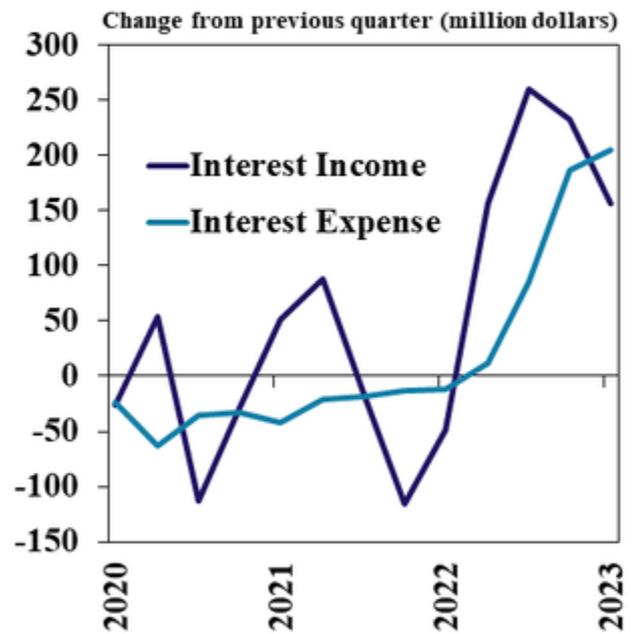
Interest margins increased alongside higher benchmark rates, but costs of funding have also risen in recent quarters. On an annualized basis, the net interest margin at agricultural banks increased to more than 3%, the highest level since early 2021, and returns on average assets also increased (Chart 3, left panel). In contrast to recent periods, the increase in interest expenses in the first quarter was larger than the growth in interest income and could reduce net interest margins in the months ahead.

# Chart 3: Earnings, Interest Income, and Interest Expense at Agricultural Banks

Earnings Ratios



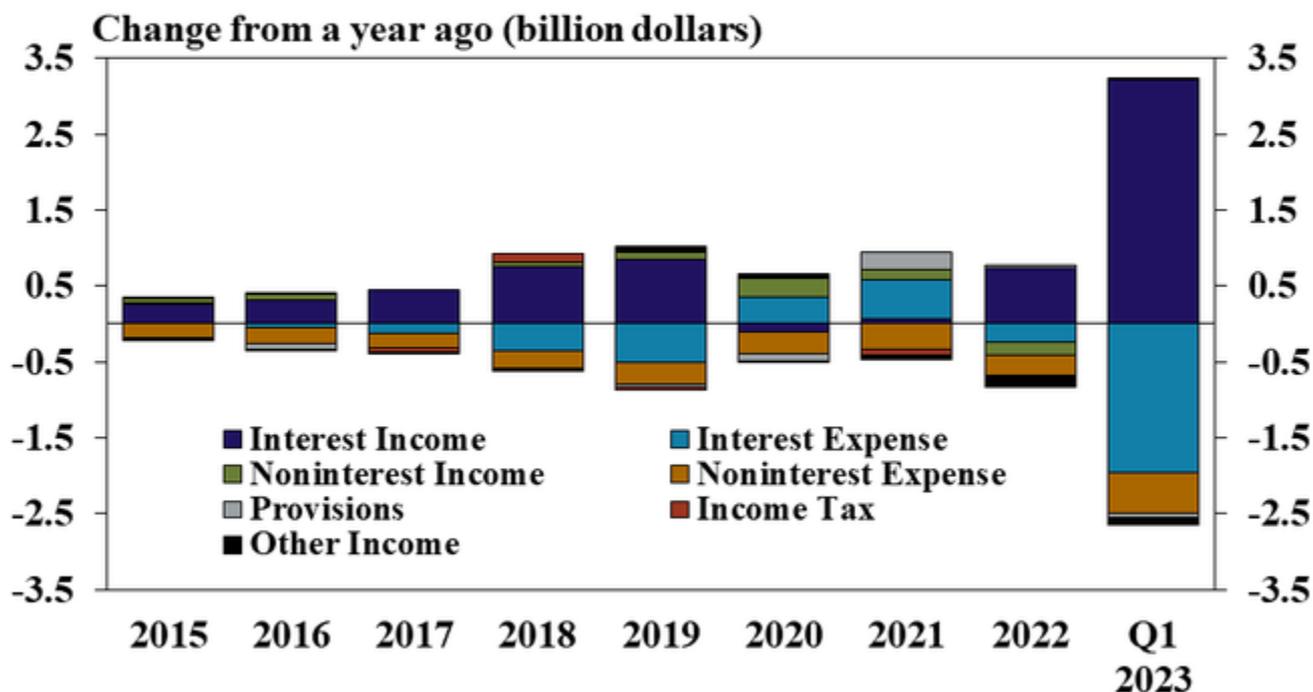
Quarterly Change in Interest Income and Expense\*



\*Includes a panel of 993 agricultural banks from Q1 2023.  
 Note: Agricultural banks include all banks with total agricultural loans representing at least 25% of total loans.  
 Sources: Reports of Condition and Income and Federal Reserve Board of Governors

Despite an uptick in funding costs, growth in interest income over the past year was strong and has supported bank profits. The 300% increase in annualized interest income in the first quarter of 2023 more than offset a rise in all categories of expenses (Chart 4). Compared with 2022, growth in income from interest was 65% more than the increase in interest expenses, but that gap could narrow with a faster increase in funding costs in recent months.

## Chart 4: Contribution to Change in Net Income at Agricultural Banks\*



\*Includes a panel of 993 agricultural banks from Q1 2023. Figures for 2015-2022 are as of December 31. Figures for Q1 2023 are annualized. A decline in an expense item is displayed as a positive contribution to net income and the sum of all items in each quarter equals the total change in net income.  
 Note: Agricultural banks include Includes all banks with total agricultural loans representing at least 25% of total loans.  
 Sources: Reports of Condition and Income and Federal Reserve Board of Governors.

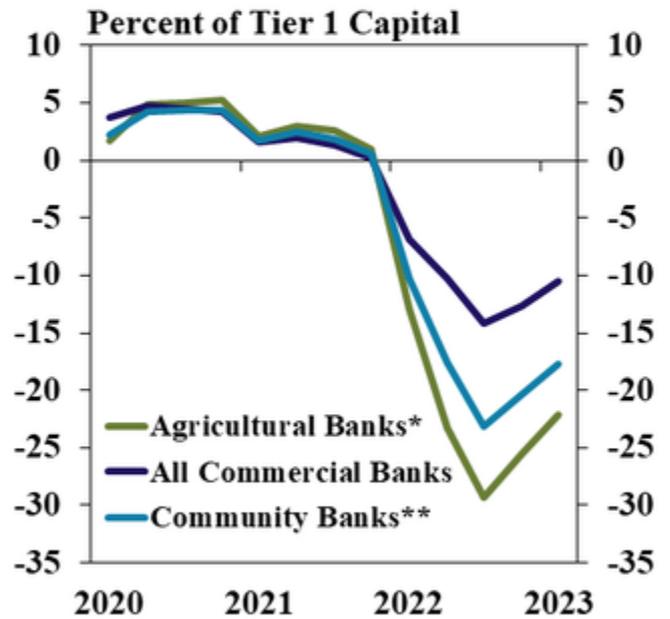
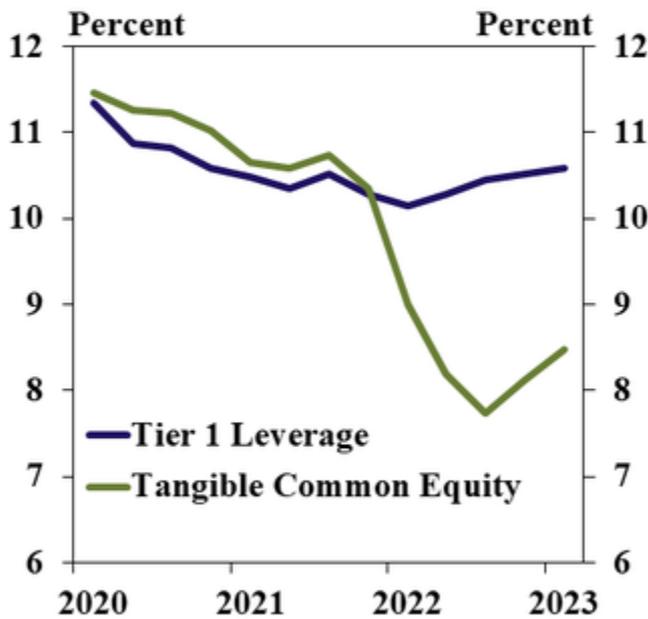
### Capital and Liquidity at Agricultural Banks

Capital ratios improved slightly alongside earnings, but **unrealized losses** remained elevated in the first quarter. The tangible common equity ratio<sup>[1]</sup> remained low at agricultural banks but increased from a historic low reached in 2022. Also, the **Tier 1 leverage ratio**, which measures Tier 1 capital<sup>[2]</sup> to average assets, continued to improve and has increased every quarter over the past four quarters (Chart 5). The level of unrealized losses improved slightly but remains high and represented a comparably higher share of capital at agricultural banks than other lenders.

# Chart 5: Capital Ratios and Unrealized Losses

Capital Ratios at Agricultural Banks\*

Unrealized Gains/Losses in Available for Sale (AFS) Securities



\*Agricultural banks are defined as banks with total agricultural loans comprising at least 25% of total loans.

\*\*Community banks are defined as banks with total assets under \$10 billion.

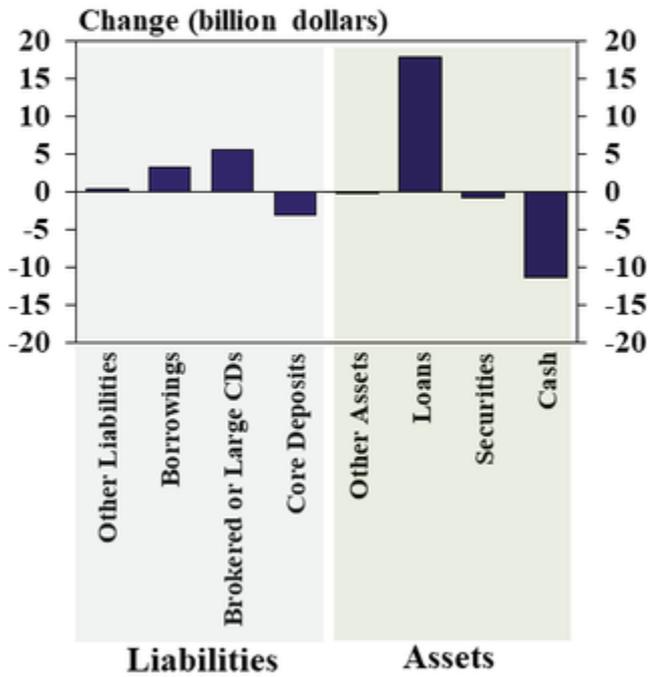
Note: Unrealized gains (losses) are included in the calculation of accumulated other comprehensive income (AOCI). Banks may elect to “opt-out” of including AOCI in the calculation of Tier 1 Leverage Capital utilized for regulatory purposes. However, these amounts are included in the calculation of the tangible common equity capital variable utilized in the Ag Finance Update – Commercial Bank Call Report data tables.

Sources: Reports of Condition and Income and Federal Reserve Board of Governors

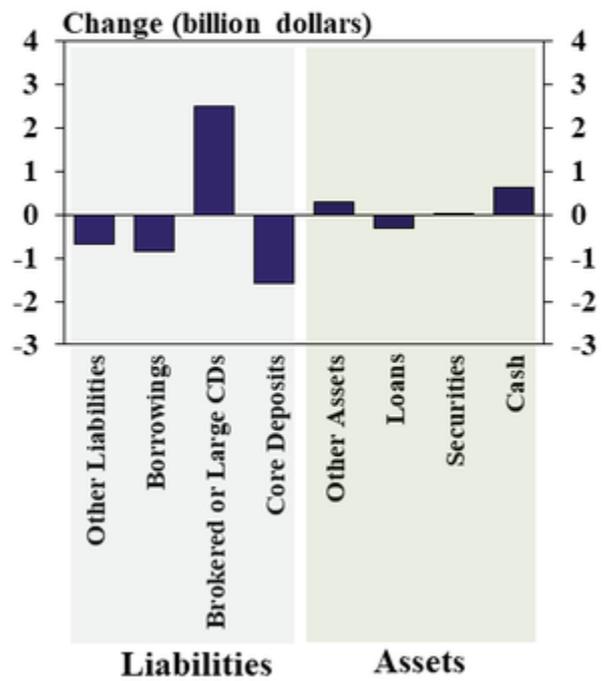
The scale of unrealized losses and financial stress for some lenders has led to heightened risk management across the banking sector, resulting in some changes in balance sheets at agricultural banks. Over the past year, agricultural banks primarily funded strong loan growth through cash holdings and utilized brokered deposits, large time deposits, and other borrowings to a lesser degree (Chart 6, left panel). In the first quarter of 2023, industry-wide liquidity pressures caused a broad pullback in lending. Agricultural banks boosted cash reserves with brokered and large time deposits, while core deposits declined slightly (Chart 6, right panel).

# Chart 6: Balance Sheet Changes at Agricultural Banks\*, Q1 2023

Annual Change



Quarterly Change

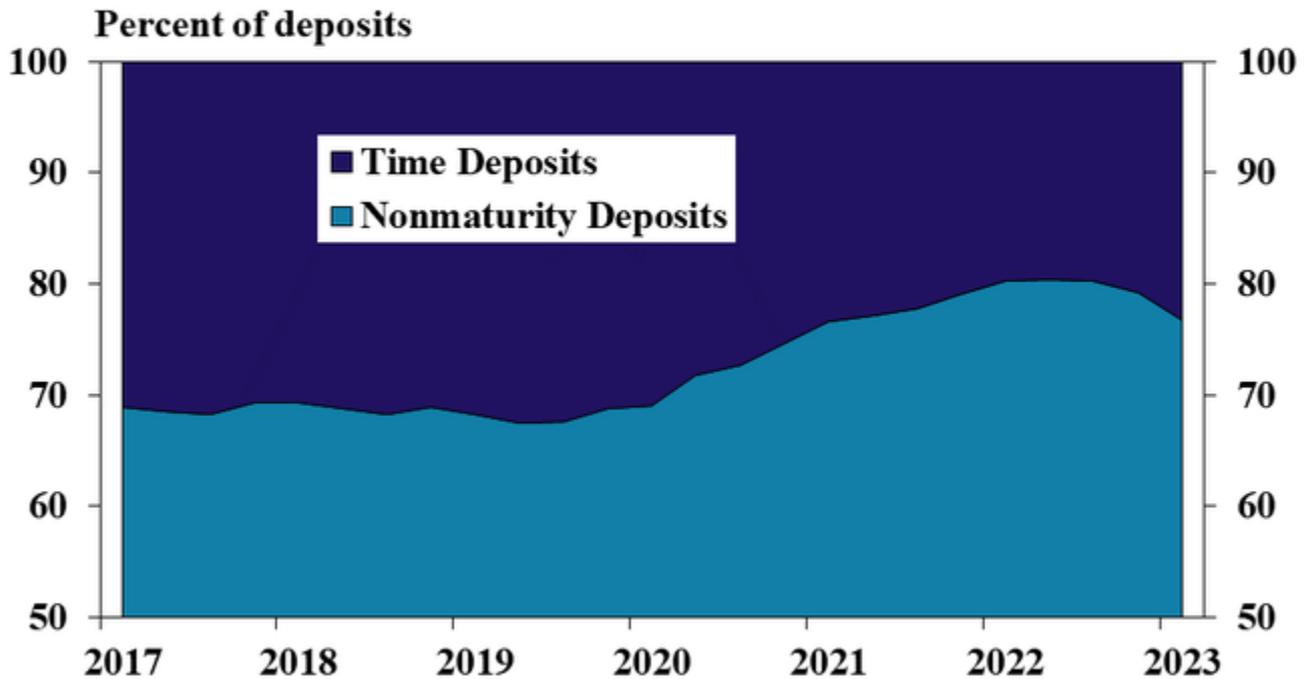


\*Agricultural banks are defined as banks with total agricultural loans comprising at least 25% of total loans. Above figures are calculated using a panel of 1002 agricultural banks from Q1 2023.

Sources: Reports of Condition and Income and Federal Reserve Board of Governors

The composition of deposits at agricultural banks has also changed with the higher interest rate environment. Following a sharp influx of non-maturity deposits (or demand deposits) in 2021 and 2022, the share of deposits held in longer-term time deposits (or CDs) has increased in recent quarters (Chart 7). As the rate paid on deposits has increased with higher benchmark rates, demand for higher paying time deposit accounts has increased, reverting toward recent historical norms.

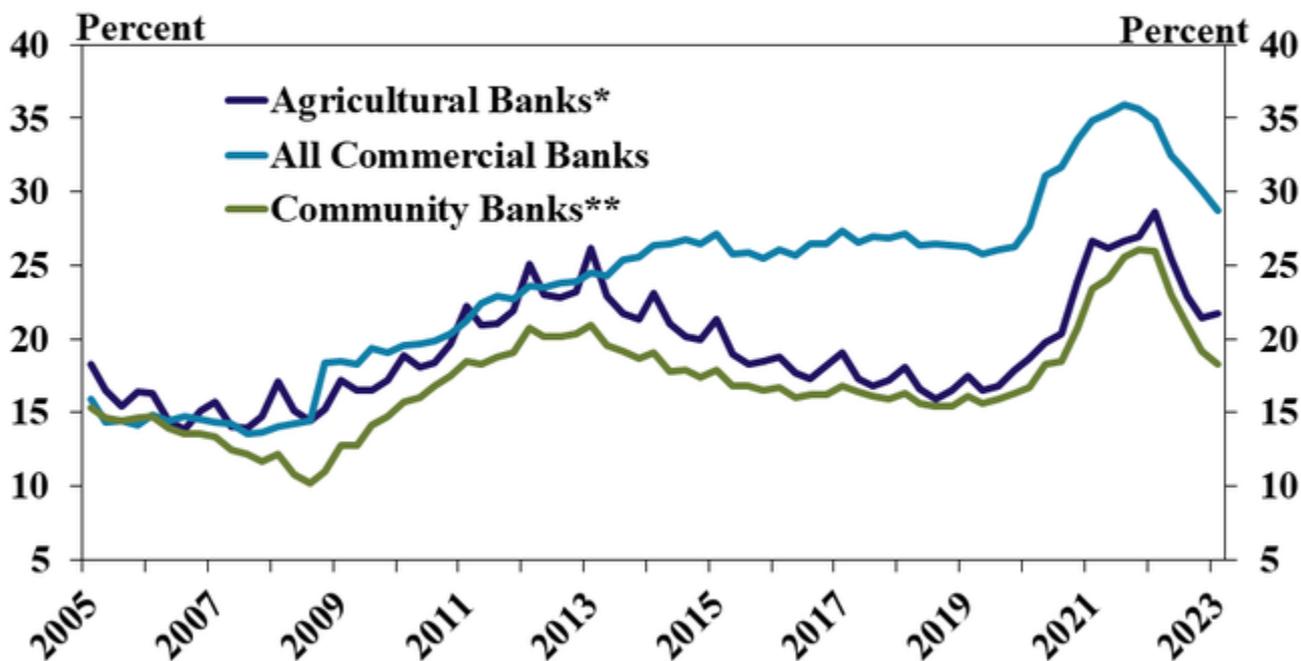
## Chart 7: Composition of Deposits at Agricultural Banks\*



\*Agricultural banks are defined as banks with total agricultural loans comprising at least 25% of total loans.  
Sources: Reports of Condition and Income and Federal Reserve Board of Governors

Despite some changes in composition, liquidity at agricultural banks remained strong and mitigated some of the risks associated with the [high levels of unrealized losses](#). The share of liquid assets as a percent of total assets at agricultural banks has declined slightly over the past year but remained at a historically high level following a considerable buildup in 2021 and 2022 (Chart 8). Historically, agricultural banks also have held a slightly higher share of liquid assets than non-agricultural banks of a similar size, and that trend persisted in the first quarter.

## Chart 8: Share of Liquid Assets to Total Assets



\*Agricultural banks are defined as banks with total agricultural loans comprising at least 25% of total loans.

\*\*Community banks are defined as banks with total assets under \$10 billion.

Sources: Reports of Condition and Income and Federal Reserve Board of Governors

### Endnotes

- [1] Tangible Common Equity is calculated as total equity capital less goodwill, other intangible assets, and mortgage servicing assets deducted in Call Report Schedule RC-R as a percentage of average assets less goodwill, other intangible assets, and mortgage servicing assets deducted in Call Report Schedule RC-R.
- [2] Tier 1 capital is a regulatory capital measure that makes certain adjustments to bank stockholder equity.

## Authors



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Cortney Cowley is a senior economist in the Regional Affairs Department of the Federal Reserve Bank of Kansas City. She also serves as a special advisor on the agricultural economy to Federal Reserve Governor Miki Bowman. Cortney's current research focuses on agricultural finance, commodity markets, farm management, and natural resource economics and policy. Her responsibilities also include writing for the *Tenth District Survey of Agricultural Credit Conditions* and *Agricultural Finance Updates*. Cortney joined the Bank in 2015 after completing her Ph.D. in Agricultural Economics at Oklahoma State University. She holds a B.S. degree in Biosystems Engineering from Oklahoma State and a M.S. degree in Civil Engineering from Colorado State University.



### Ty Kreitman Associate Economist

Ty Kreitman is an associate economist in the Regional Affairs Department at the Omaha Branch of the Federal Reserve Bank of Kansas City. In this role, he primarily supports the Federal Reserve Bank of Kansas City and the Federal Reserve System efforts surrounding agricultural economics research, analysis and outreach. His responsibilities include co-authoring the *Tenth District Survey of Agricultural Credit Conditions* and *Agricultural Finance Updates*. Ty joined the Bank in 2015 as an assistant bank examiner in the Examinations & Inspections Department at the Omaha Branch and transferred to his current position in 2018. He holds a B.A. degree in Economics and Finance from the University of Nebraska-Lincoln and a M.A. degree in Financial Economics from Youngstown State University.