

USDA FARM INCOME FORECASTS

FARM REVENUES AND COSTS

SEPTEMBER 2023

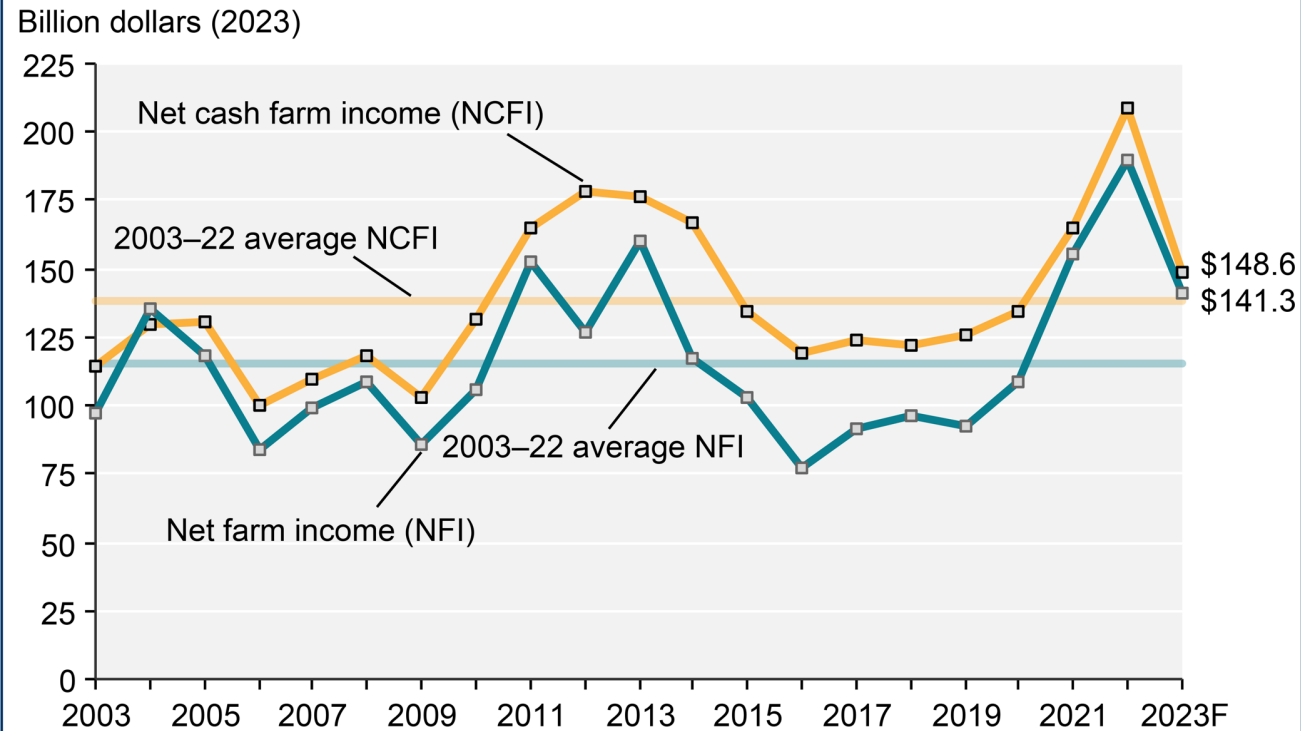
Brady Brewer, Associate Professor of Ag. Economics

Michael Langemeier, Professor & Associate Director, Center for Commercial Agriculture



Center for Commercial Agriculture

U.S. net farm income and net cash farm income, inflation adjusted, 2003–23F

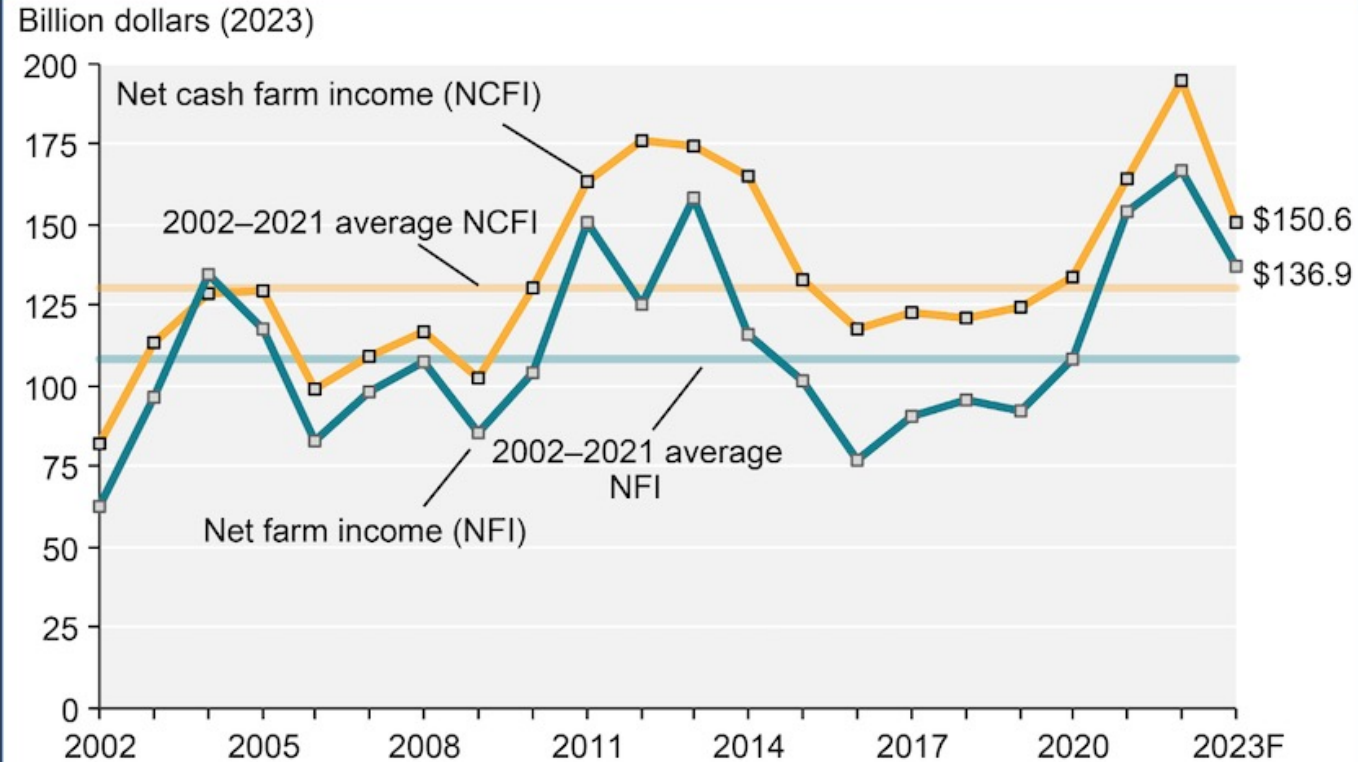


Note: F = forecast. Values are adjusted for inflation using the U.S. Bureau of Economic Analysis Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2023 by USDA, Economic Research Service.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

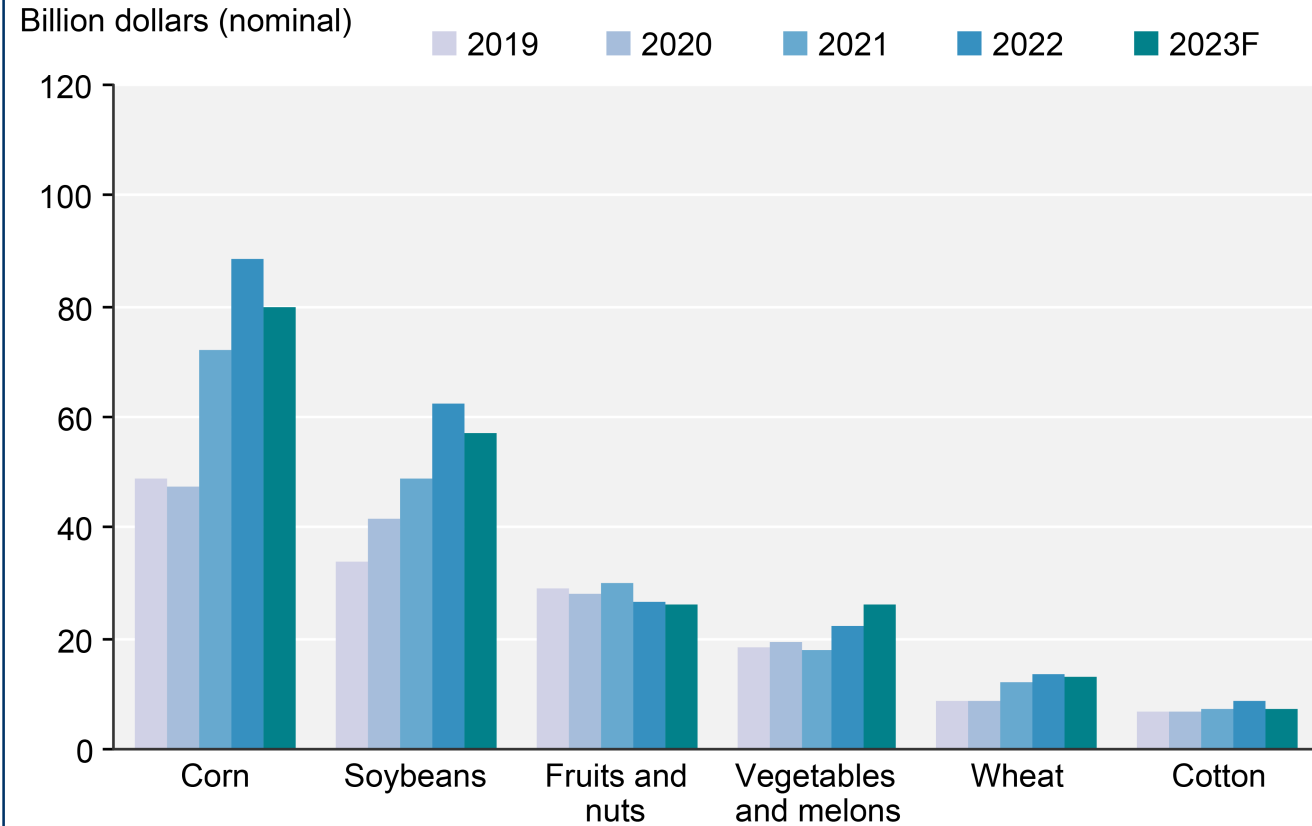
Data as of August 31, 2023.

U.S. net farm income and net cash farm income, inflation adjusted, 2002–2023F



Note: F = forecast. Data for 2022 and 2023 are forecasts. Values are adjusted for inflation using the U.S. Bureau of Economic Analysis Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2023 by USDA, Economic Research Service.
 Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
 Data as of February 7, 2023.

U.S. cash receipts for selected crops, 2019–23F

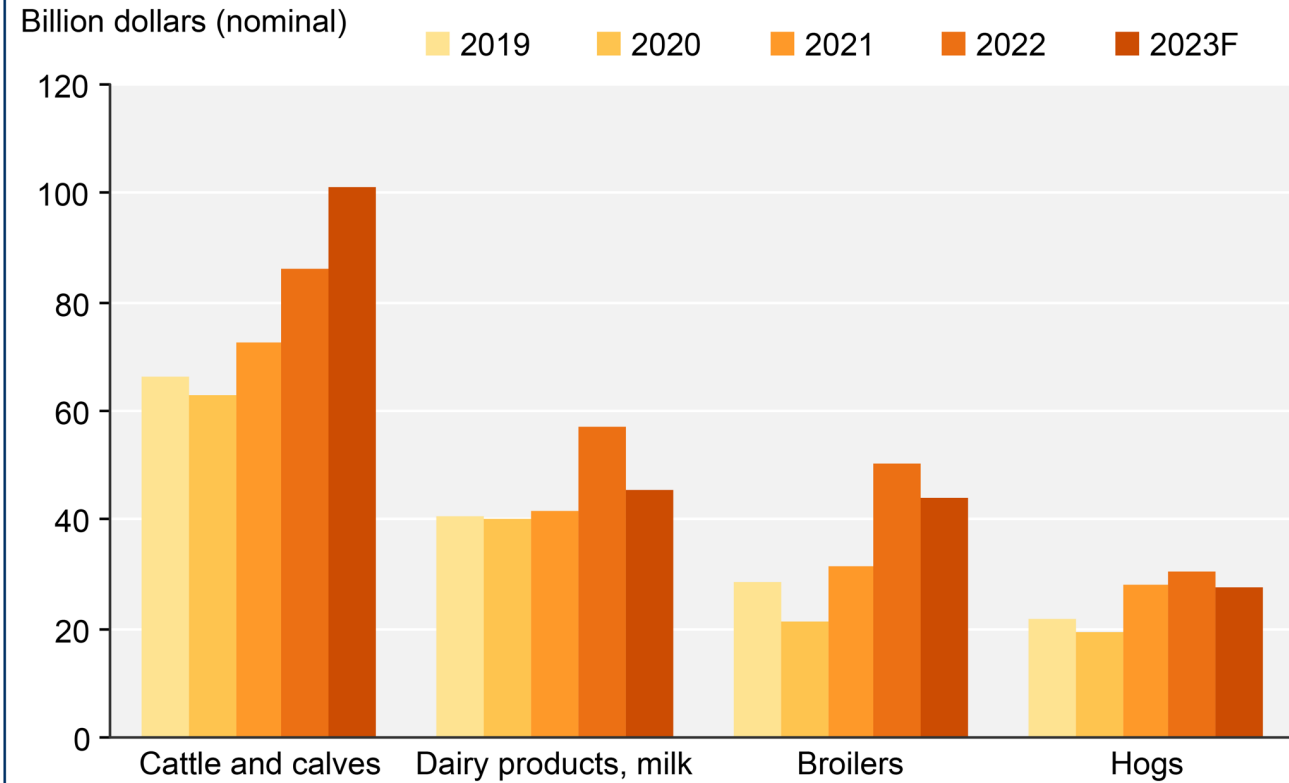


Note: F = forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

Data as of August 31, 2023.

U.S. cash receipts for selected animals/products, 2019–23F



Note: F = forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

Data as of August 31, 2023.

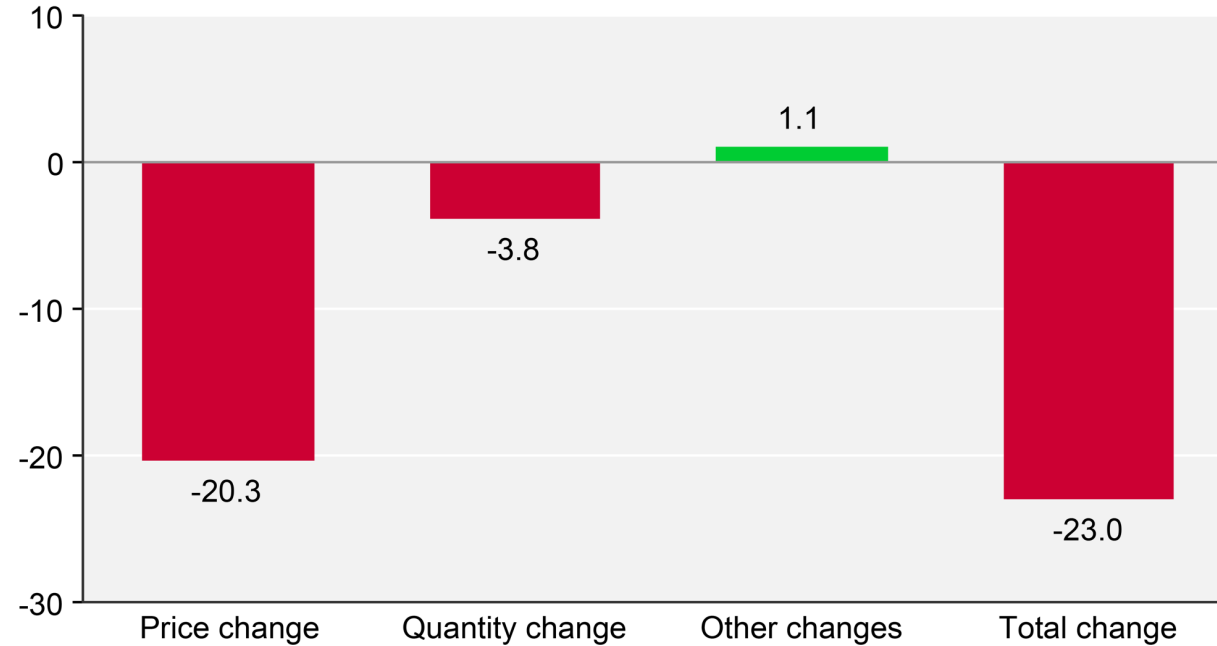
U.S. Farm Sector, 2023 Balance Sheet

Source: USDA-ERS

	February 2023 (billions)	August 2023 (billions)	% Change
Net Cash Farm Income	151	149	-1.3%
Net Farm Income	137	141	3.2%
Corn Receipts	86	80	-6.9%
Soybean Receipts	59	57	-3.4%
Fruits and Nuts Receipts	31	26	-16.3%
Vegetables/Melons	20	26	29.9%
Wheat	15	13	-13.1%
Cotton	8	7	-8.5%
Cattle and Calves	89	101	13.9%
Dairy Products	49	45	-7.6%
Broilers	45	44	-2.4%
Hogs	29	28	-4.9%

Change in U.S. farm cash receipts, 2022–2023F, by component of change

Billion dollars (nominal)

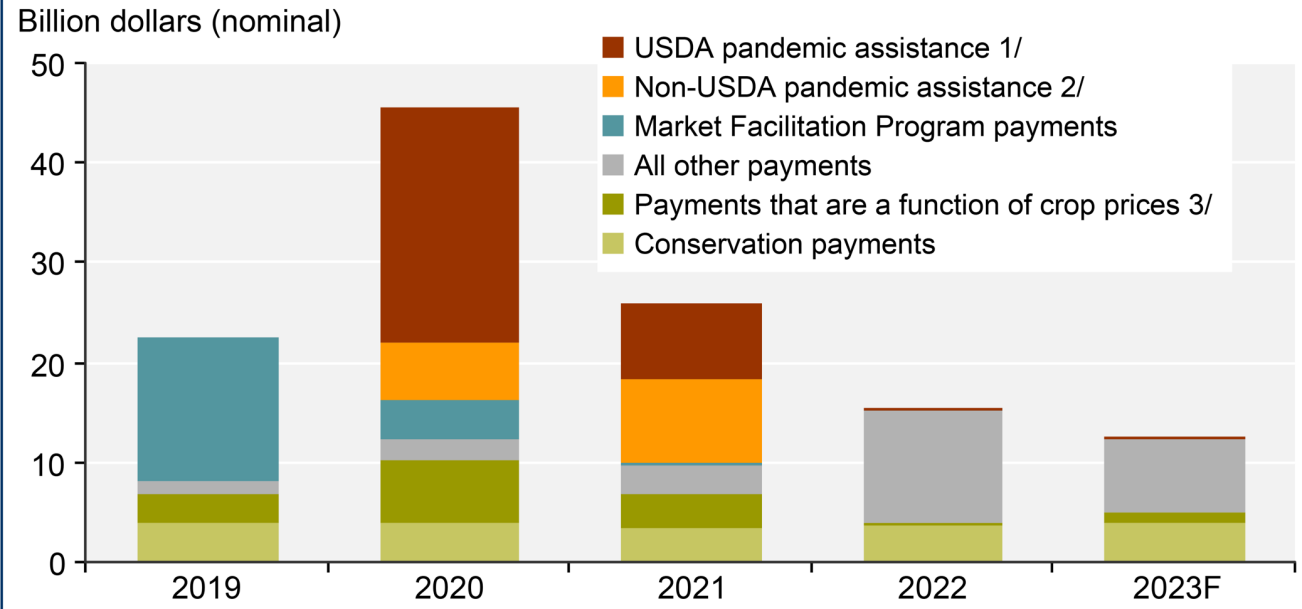


Note: F = forecast. Other changes include price/quantity changes in "all other crops" (excluding sugarcane and sugarbeets), proso millet, and miscellaneous animals/products for which data are not available. Price, quantity, and other changes may not sum to total because of rounding.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

Data as of August 31, 2023.

Direct Government payments to U.S. farm producers, 2019–23F



F = forecast.
 1/ Includes payments from the Coronavirus Food Assistance Program and other USDA pandemic assistance for producers.
 2/ Includes forgiven loans from the Paycheck Protection Program.
 3/ Includes Price Loss Coverage, Agriculture Risk Coverage, loan deficiency payments (excluding grazeout payments), marketing loan gains, certificate exchange gains, and dairy payments.
 Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
 Data as of August 31, 2023.

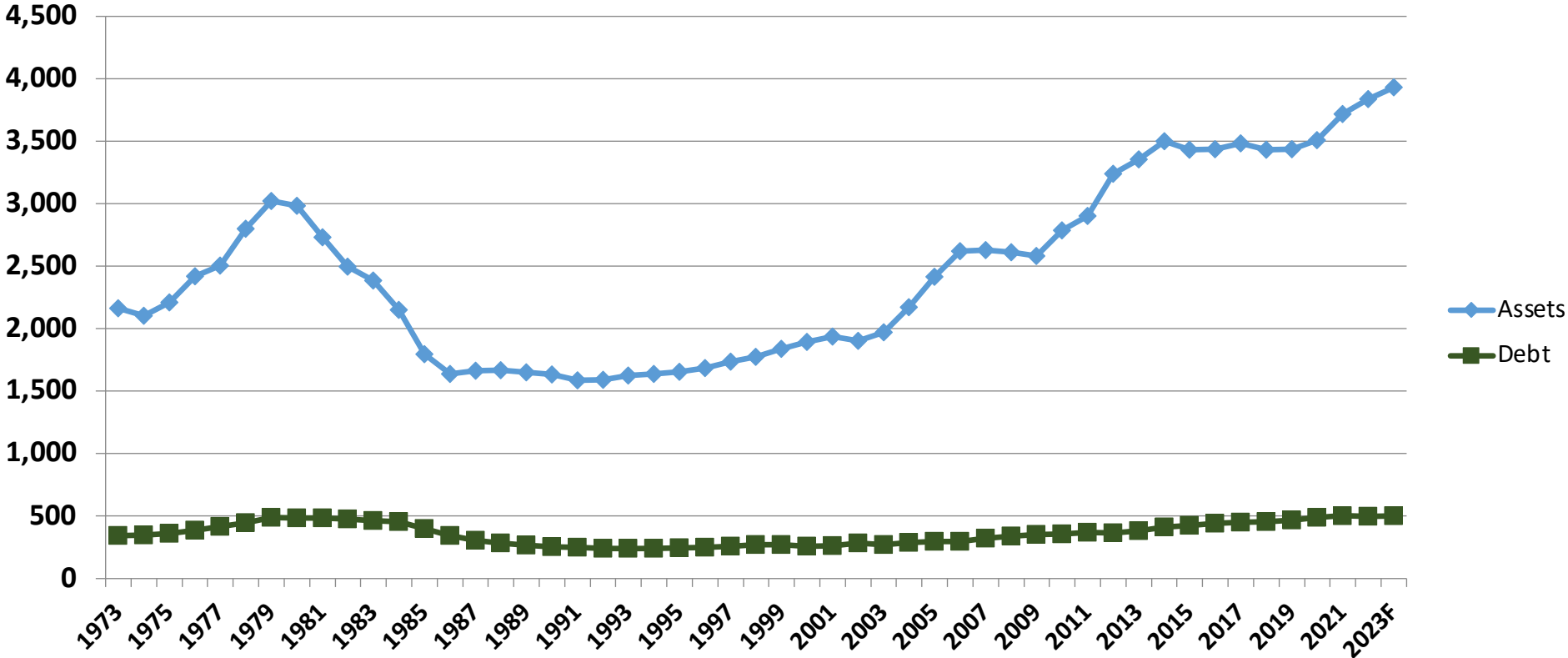
U.S. Farm Sector, 2023 Balance Sheet

Source: USDA-ERS

Item	\$ Billion	Percentage
Financial Assets	115.6	2.8
Purchased Inputs	21.7	0.5
Crop Inventories	68.7	1.7
Livestock Inventories	102.0	2.5
Machinery and Equipment	361.9	8.9
Real Estate	3,418.3	83.6
Total Assets	4,088.2	100.0
Total Debt	520.1	12.7
Farm Equity	3,568.1	87.3

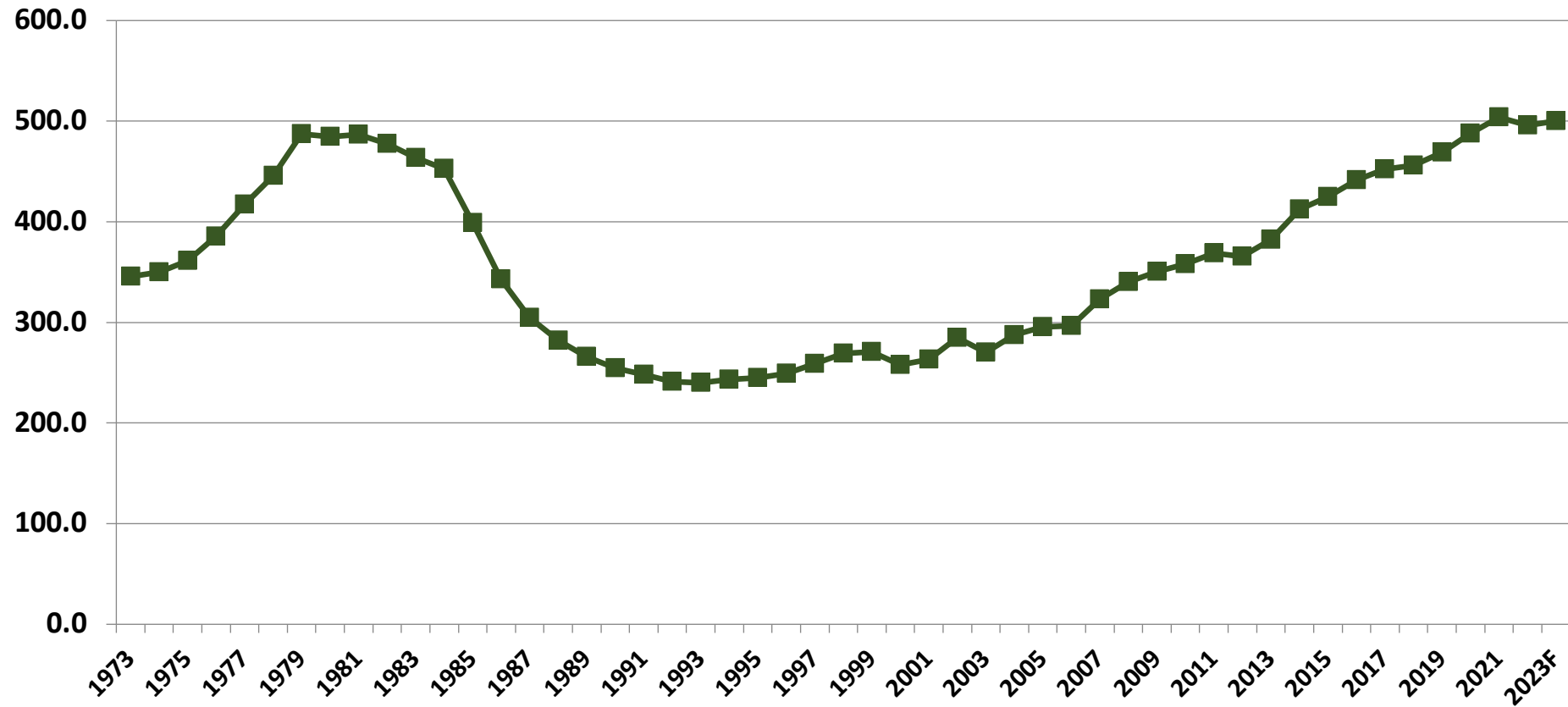
Real U.S. Farm Sector Asset and Debt Values (billions of dollars)

Source: USDA-ERS



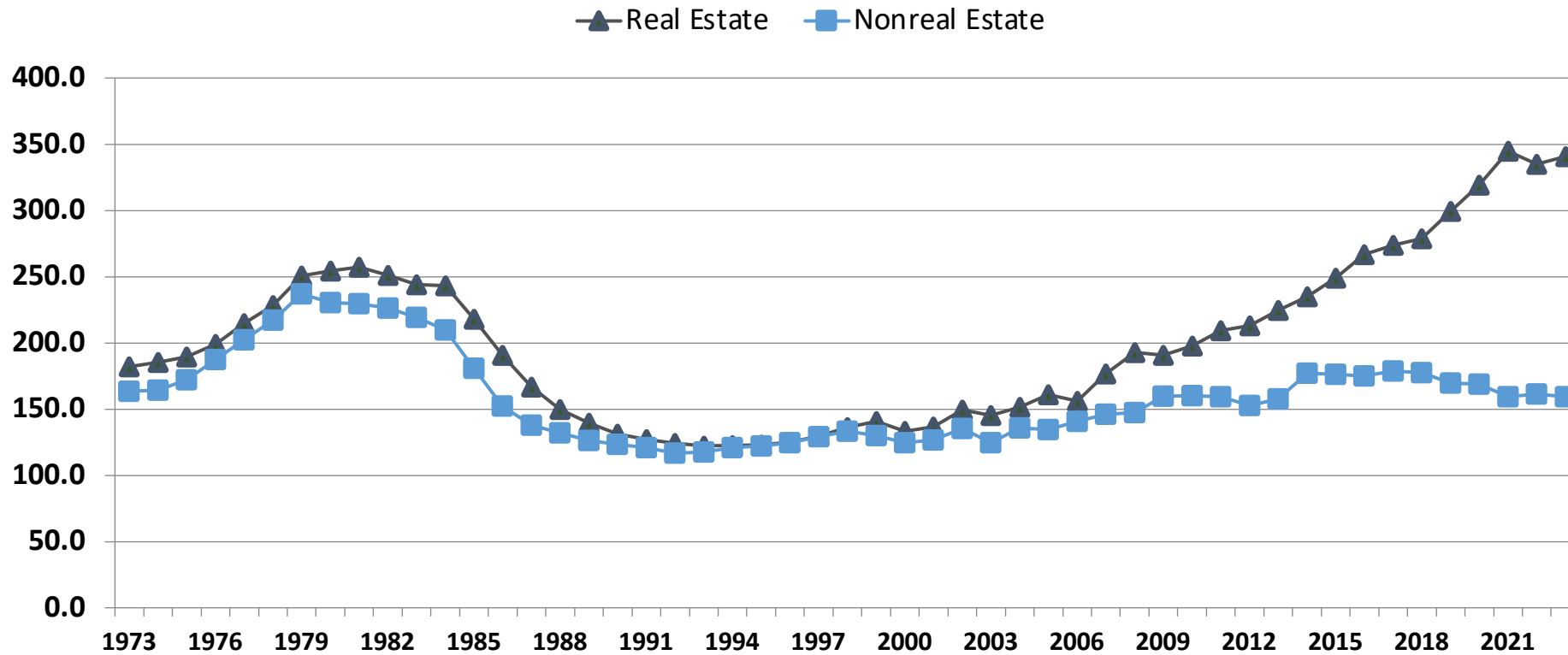
Real U.S. Farm Sector Debt Values (billions of dollars)

Source: USDA-ERS



Real U.S. Farm Sector Real Estate and Nonreal Estate Debt Values (billions of dollars)

Source: USDA-ERS



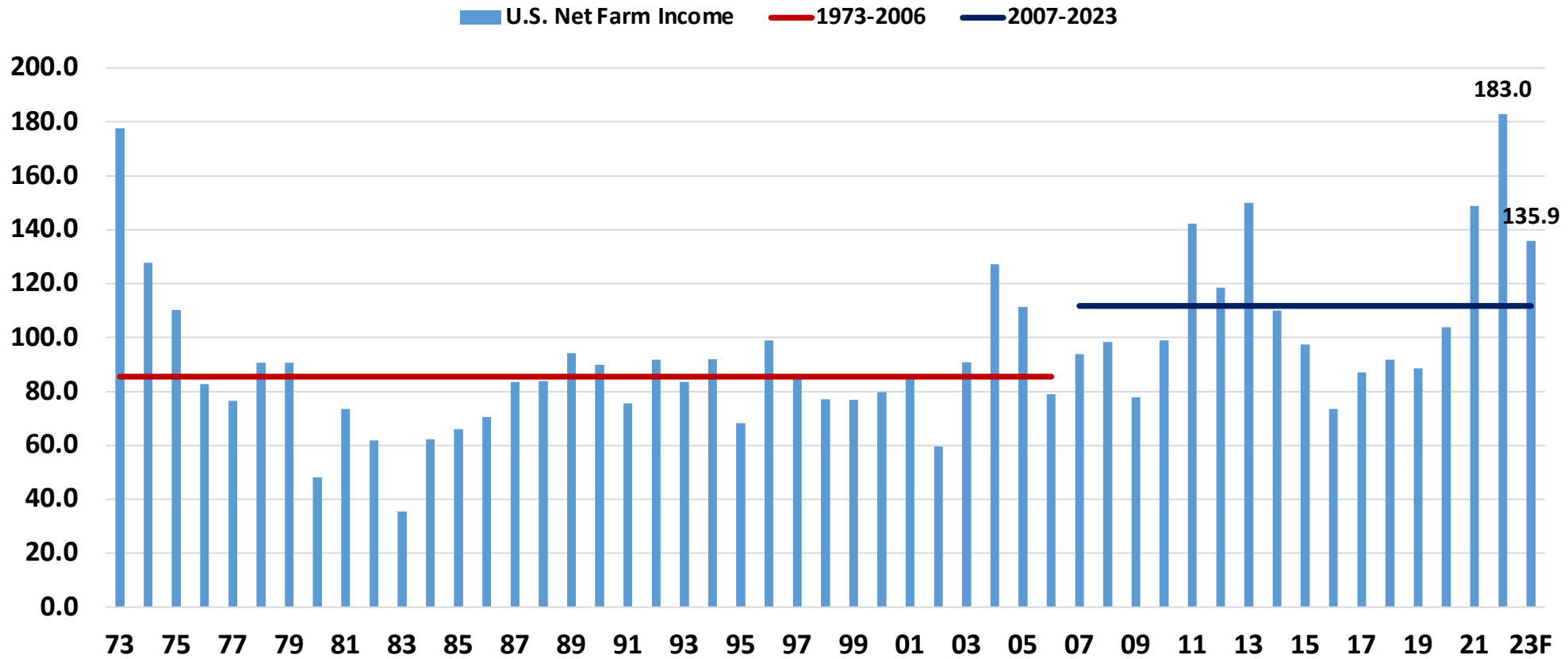
U.S. Farm Sector Balance Sheet

- Liquidity is expected to decline in 2023
 - CR in 2022 = 2.15
 - CR in 2023 = 2.08
- Solvency remains relatively low
 - Debt to asset ratio = 0.127

- **Source: USDA-ERS**

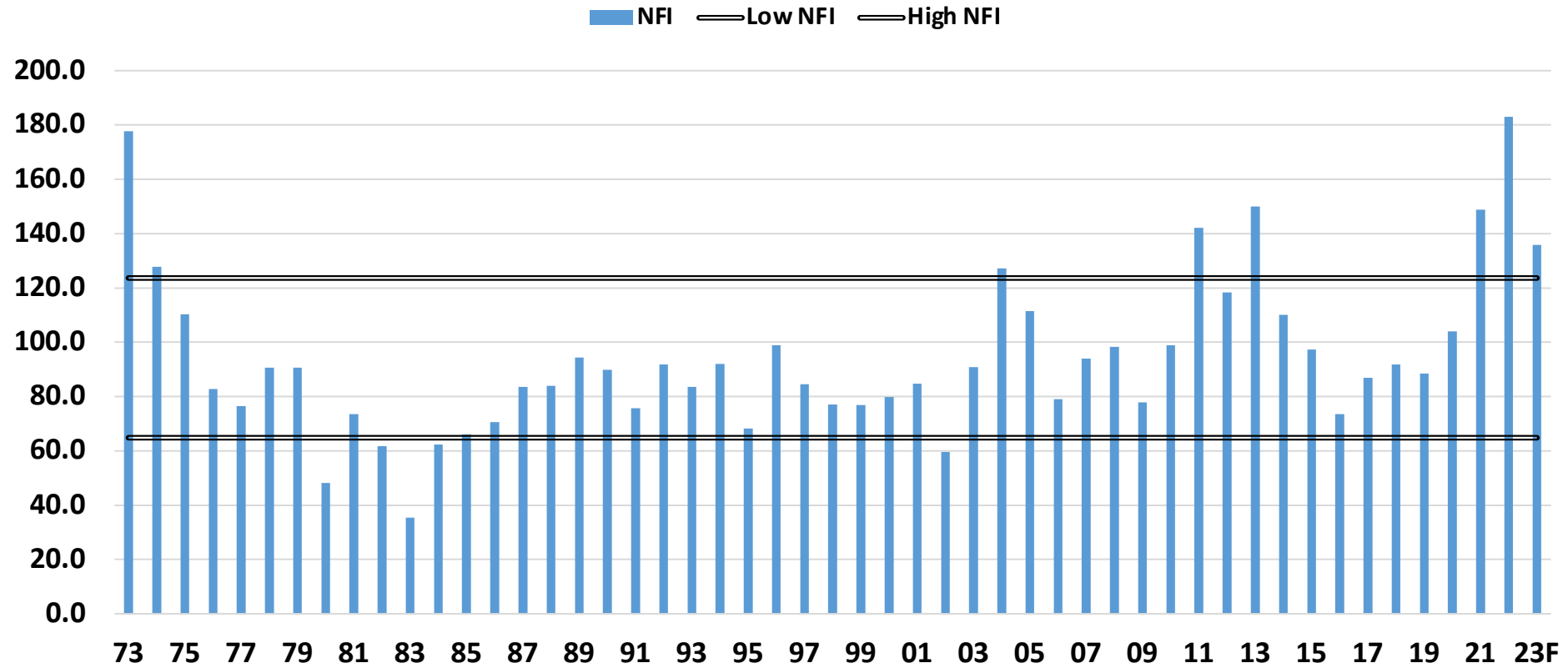
Real U.S. Net Farm Income (Billions of \$)

Source: USDA-ERS



Real U.S. Net Farm Income (Billions of \$)

Source: USDA-ERS



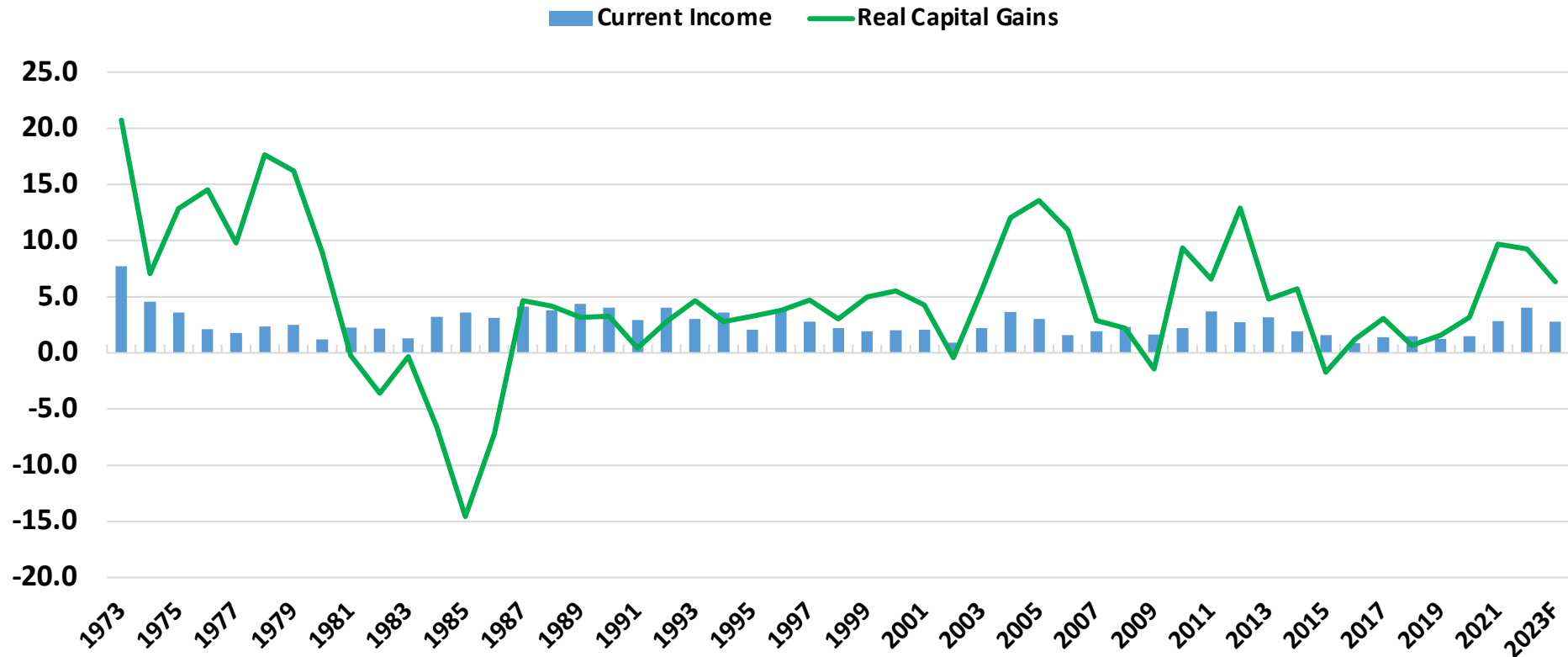
Components of U.S. Net Farm Income

Item	2023	% Δ 2022
Gross Cash Farm Income (a)	580.3	-4.0%
Nonmoney Income (b)	23.9	1.7%
Value of Inventory Adjustment (c)	-4.9	N/A
Total Gross Farm Income (d) = (a+b+c)	599.3	-2.0%
Total Expenses (e)	458.0	6.9%
Net Farm Income (f)	141.3	-22.8%

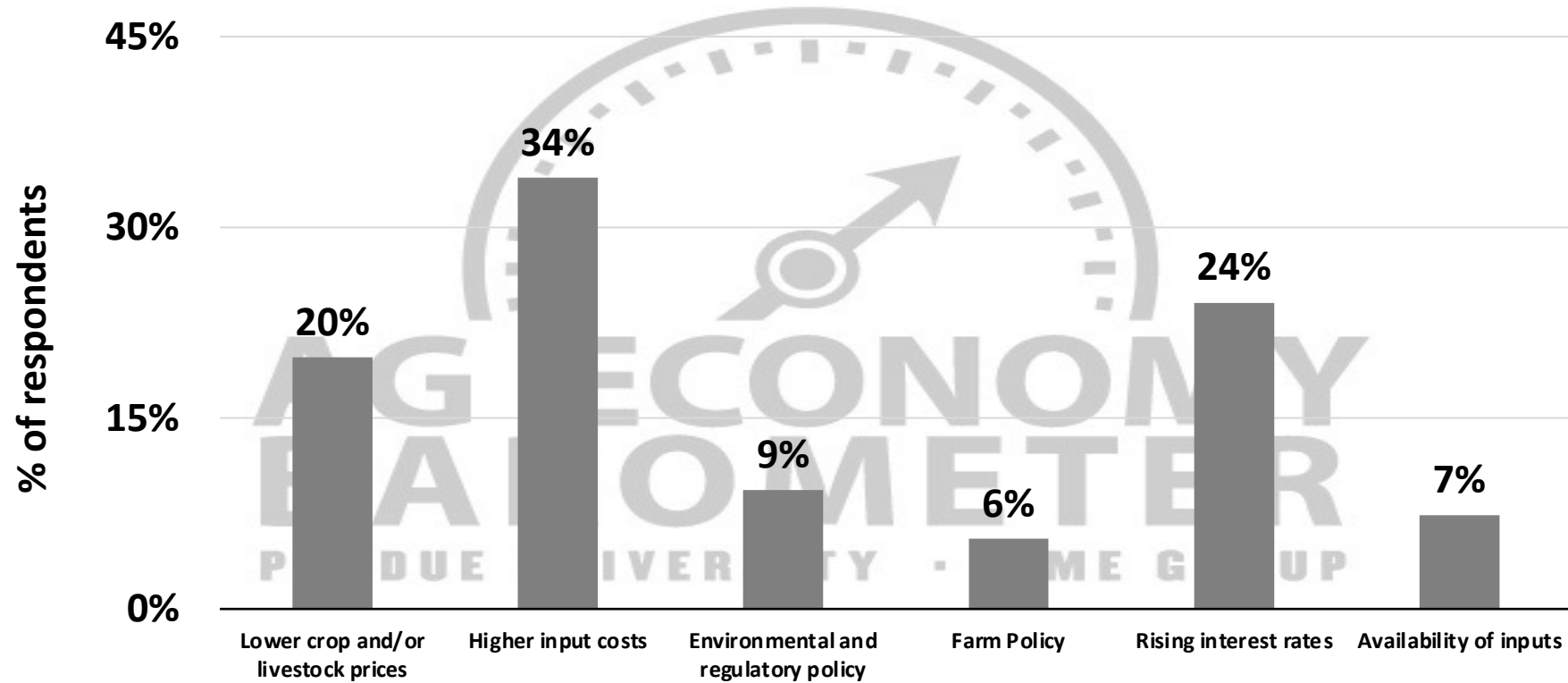
Long-Run Averages: Return on Farm Assets

Current Income = 2.7%; Real Capital Gains = 4.9%

U.S. Farm Sector, Rate of Return on Farm Assets
Source: USDA-ERS



Looking ahead to next year what are your biggest concerns for your farming operation?



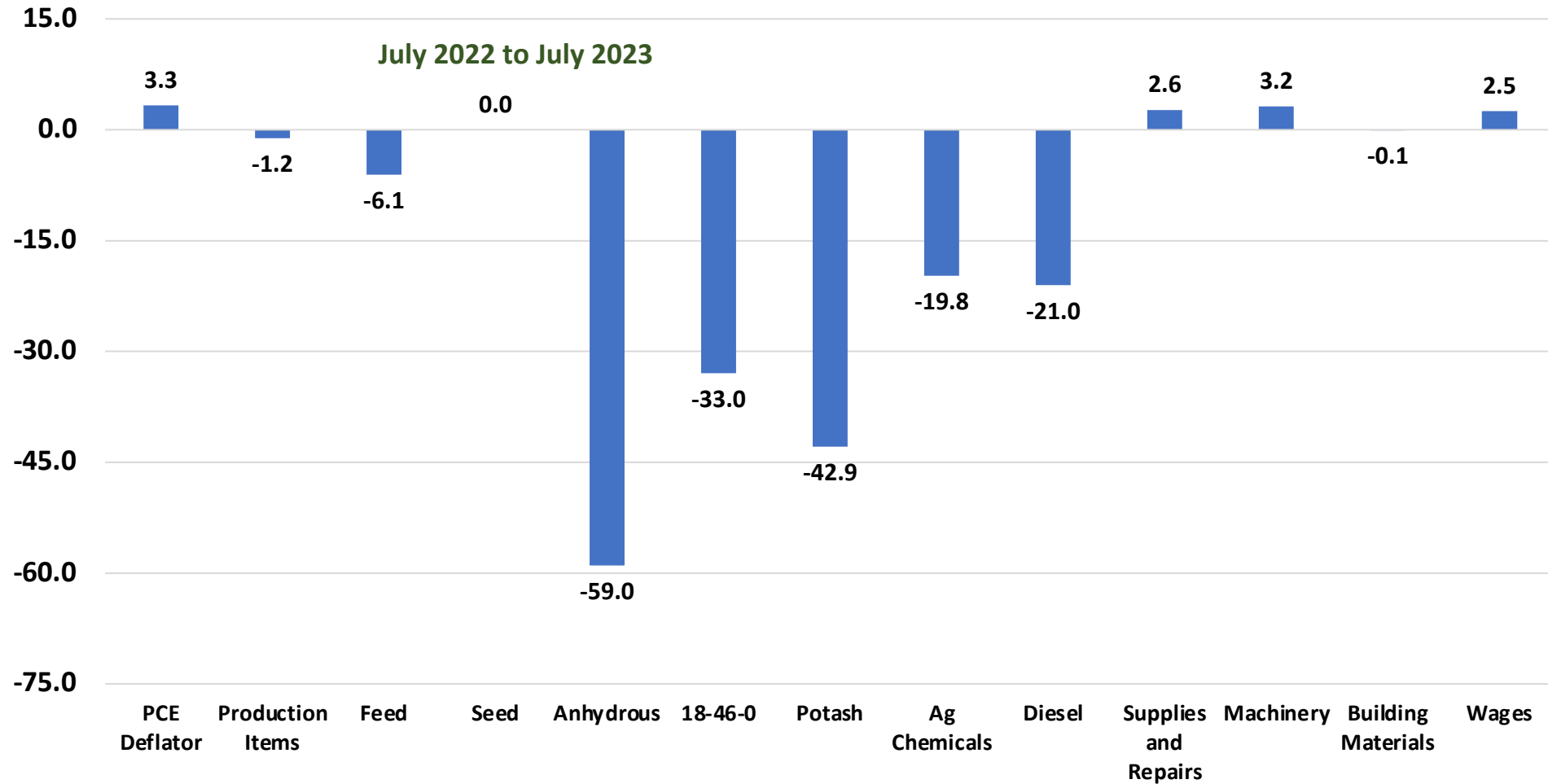
Source: Purdue Center for Commercial Agriculture, Producer Survey, August 2023

Historical Changes in Input Prices (% per Year)

Source: USDA-NASS

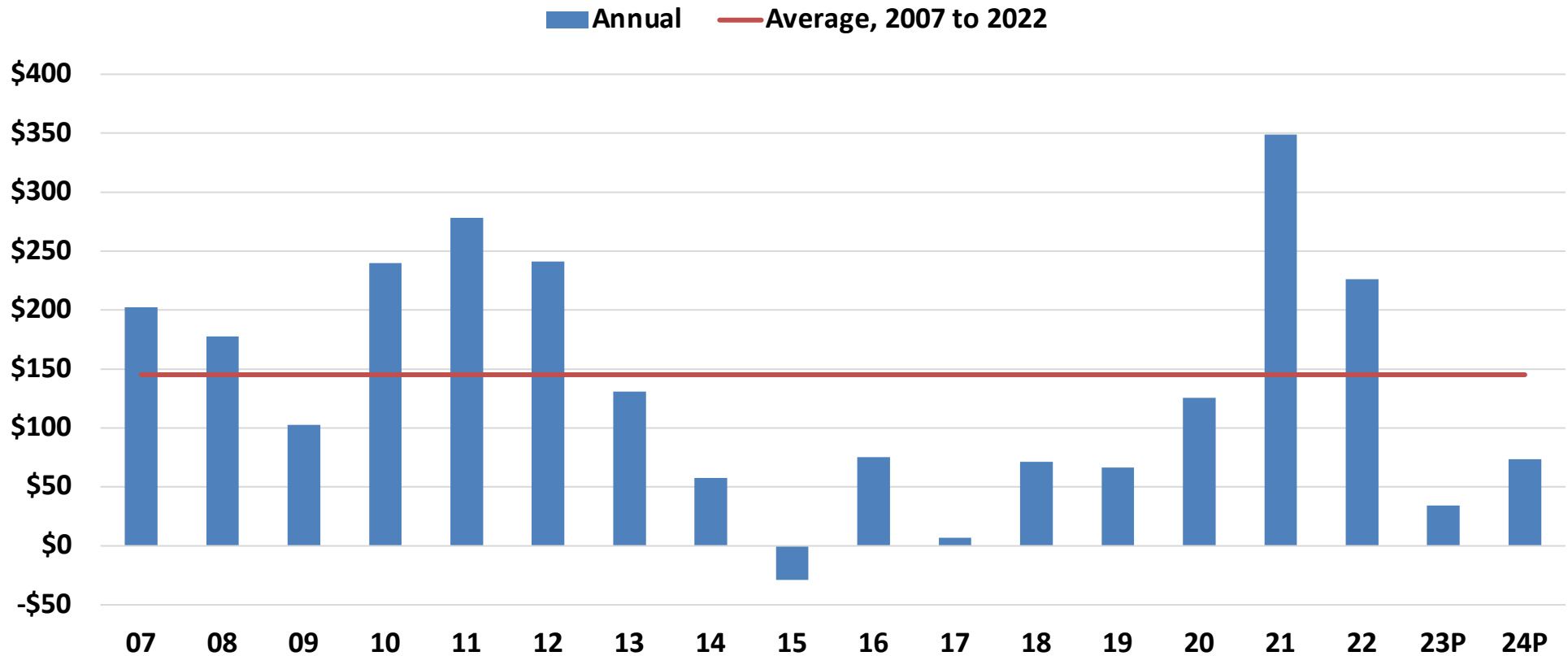
Item	2022	2013 to 2022
PCE	6.3%	2.1%
Agricultural Production Items	17.0%	2.8%
Feed	13.3%	2.1%
Seed	12.3%	2.4%
Anhydrous Ammonia	78.8%	9.9%
Phosphorus	36.1%	6.4%
Potash	53.7%	6.2%
Diesel	63.0%	5.9%
Wages	7.4%	4.3%

Percentage Change in Inflation and Farm Input Prices in the Last 12 Months



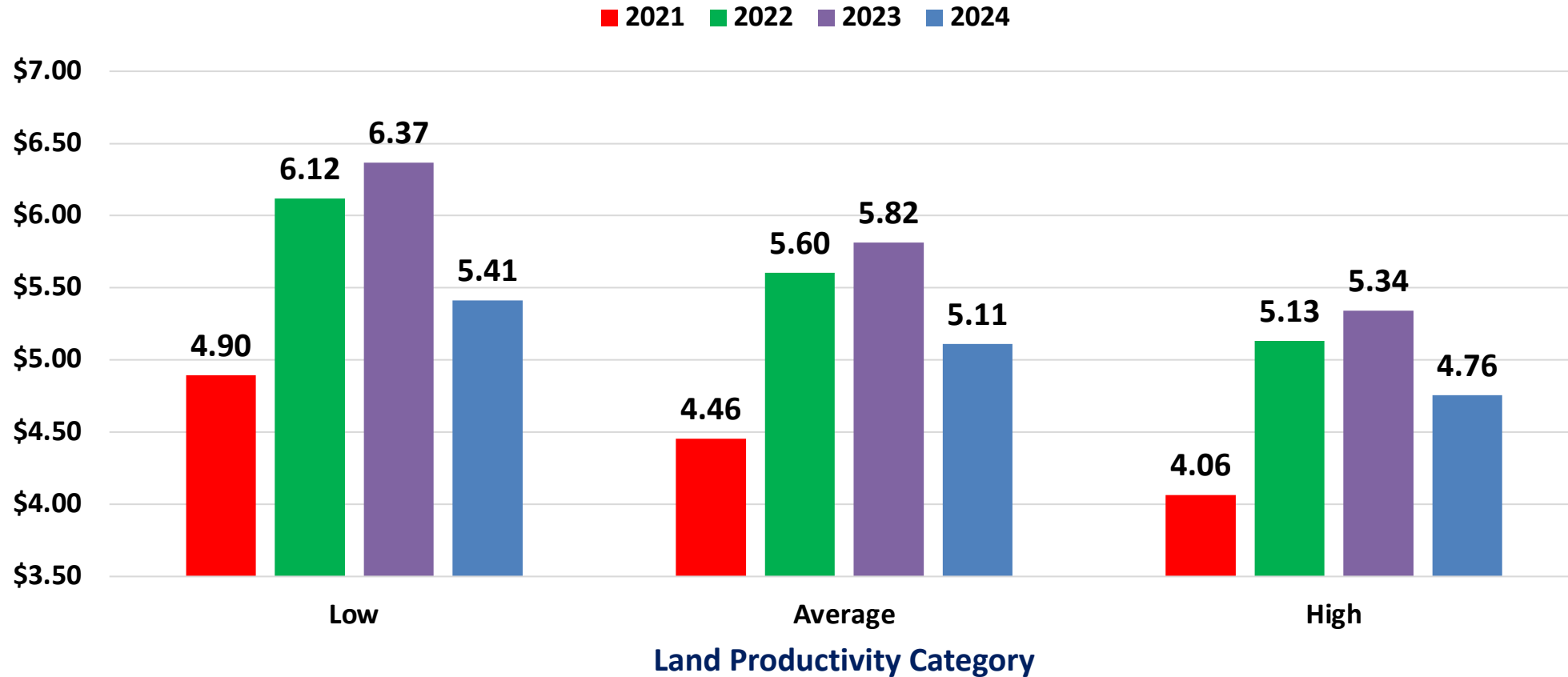
West Central Indiana Case Farm 3000 Acres of Corn and Soybeans

Net Farm Income, Corn/Soybean Rotation (\$ per Acre)
West Central Indiana Case Farm



Breakeven Prices for Corn are Expected to Decline 12%

Breakeven Prices for Rotation Corn in Indiana



Summary

- U.S. net farm income is expected to decline from \$185 billion in 2022 to \$141 billion in 2023
- Net farm income in 2023 is still substantially above the long-run average (\$94 billion)
- U.S. farm balance sheet is strong
- Breakeven prices for corn and soybeans are expected to decline in 2024
- Net farm income per acre is expected to increase in 2024, but is expected to remain below the long-run average since 2007

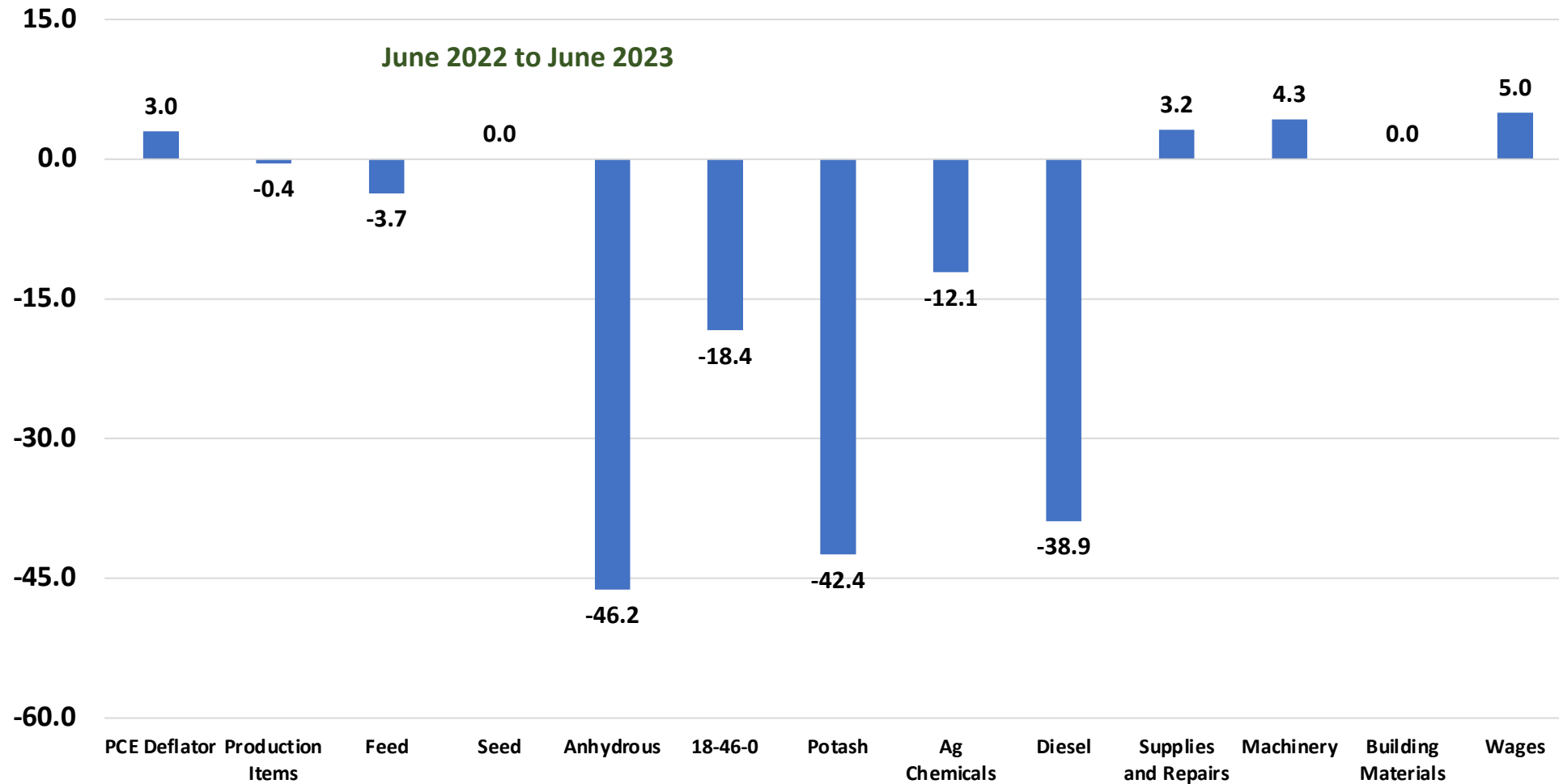
purdue.edu/commercialag

Historical Changes in Input Prices (% per Year)

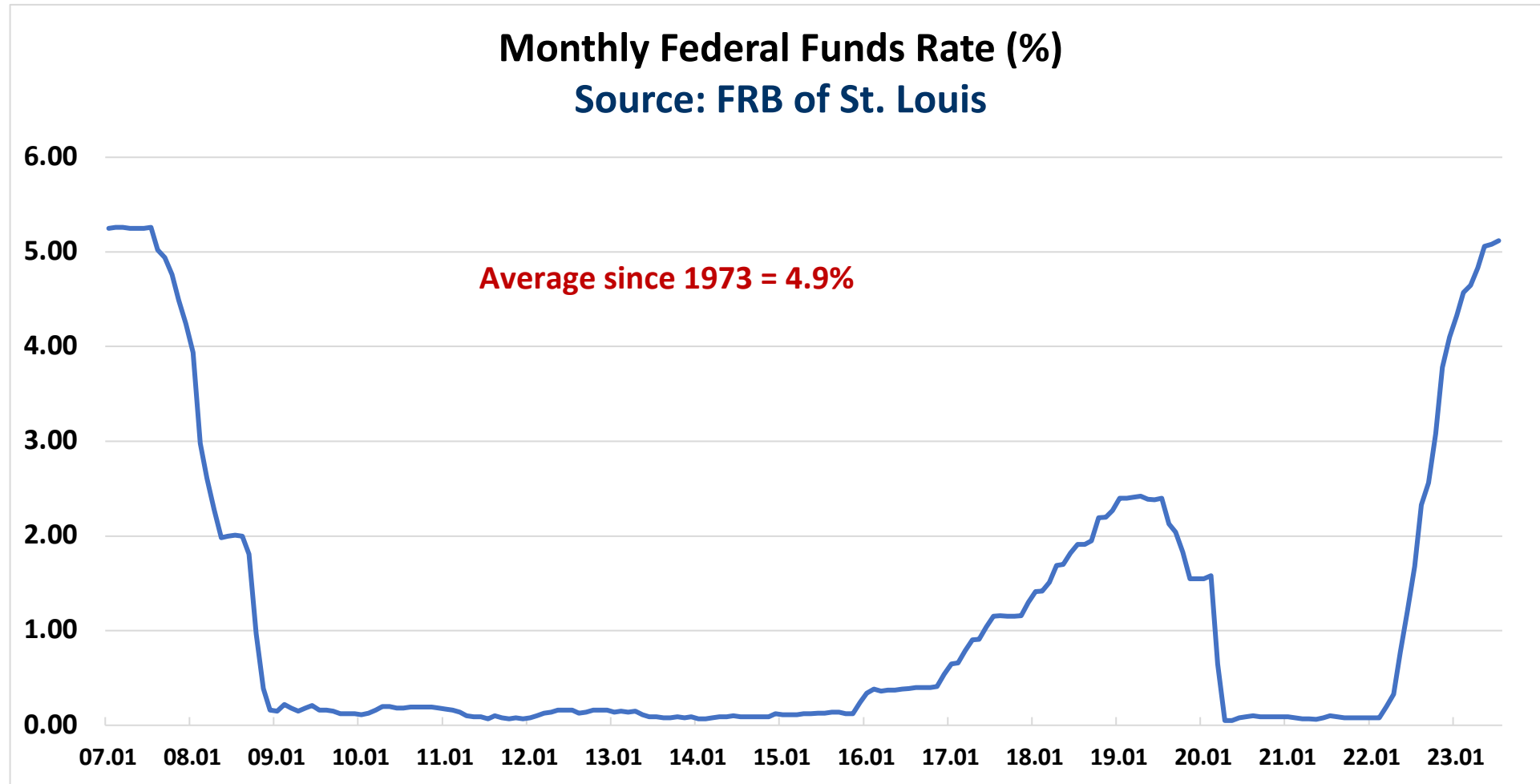
Source: USDA-NASS

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Percentage Change in Inflation and Farm Input Prices in the Last 12 Months



Average Fed Funds Rate since 2007 = 1.1%



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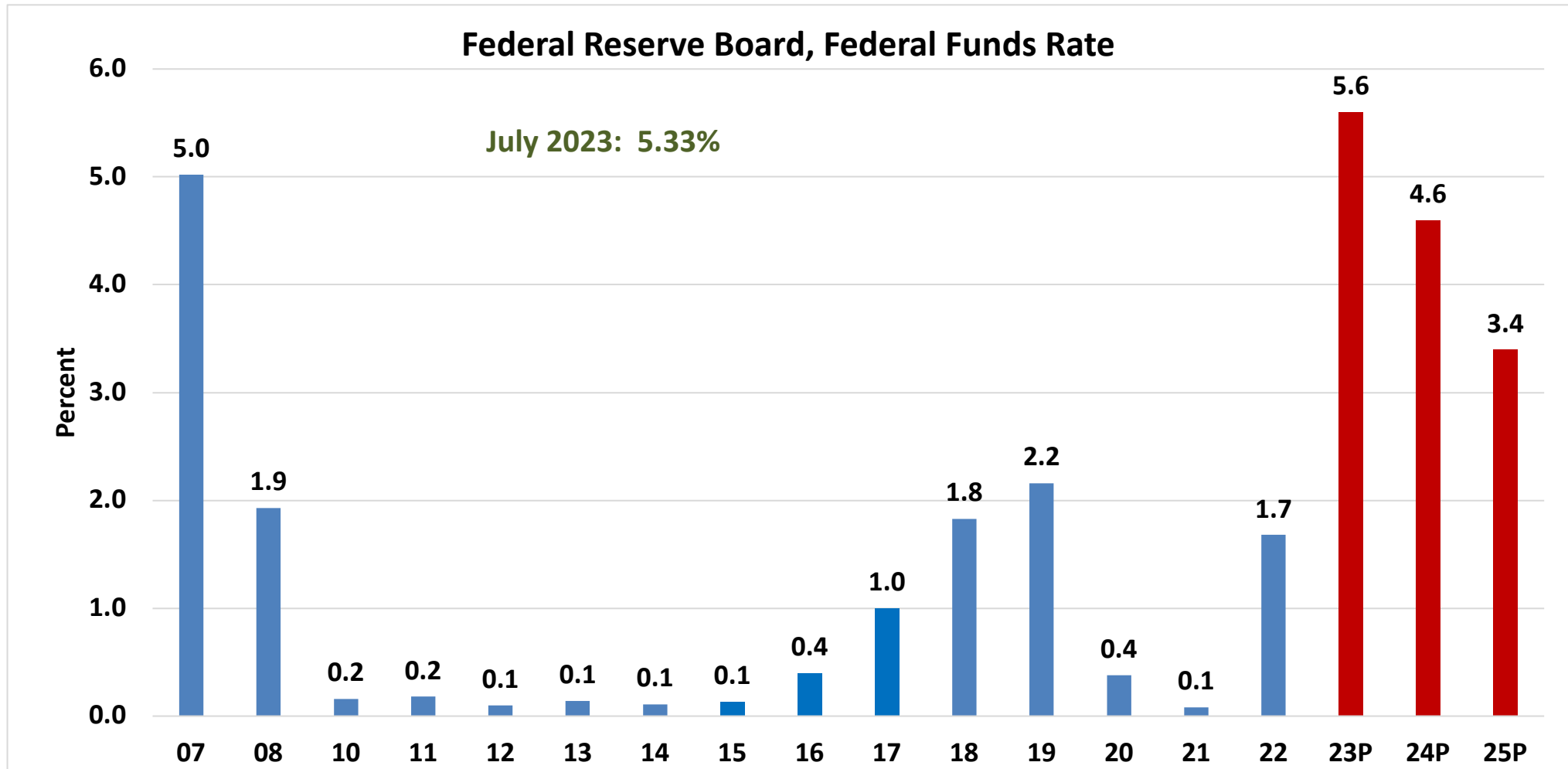
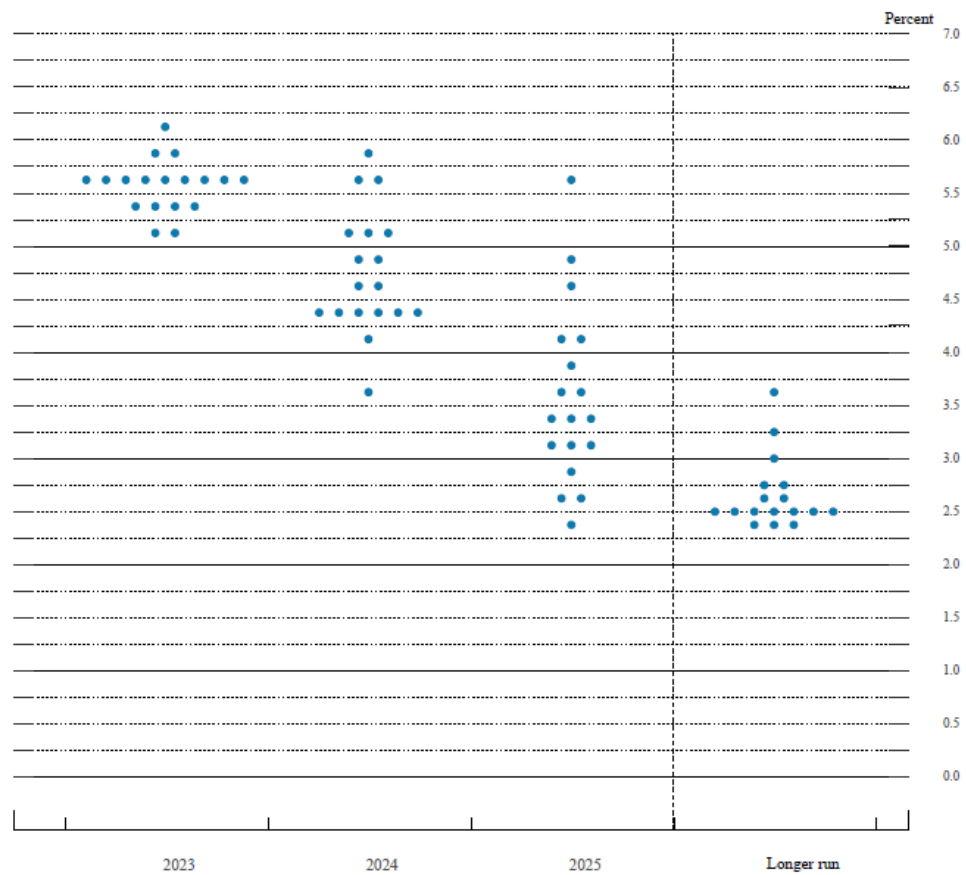
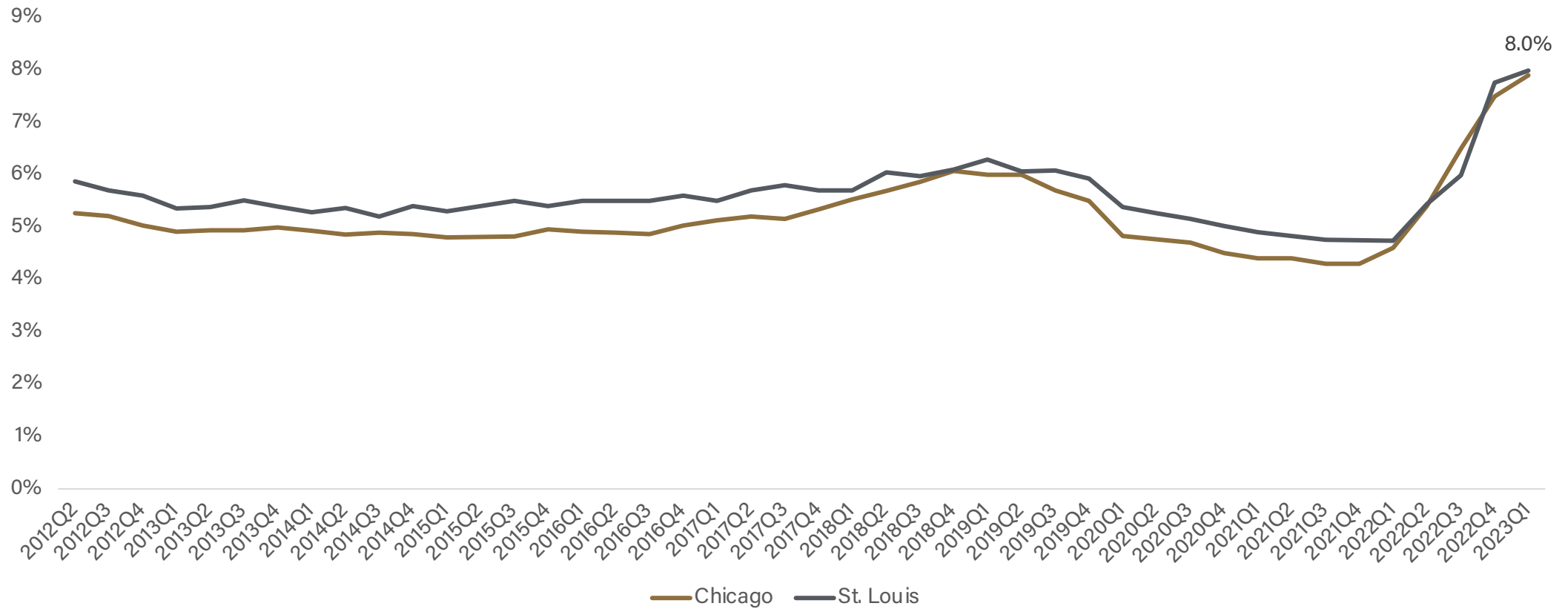


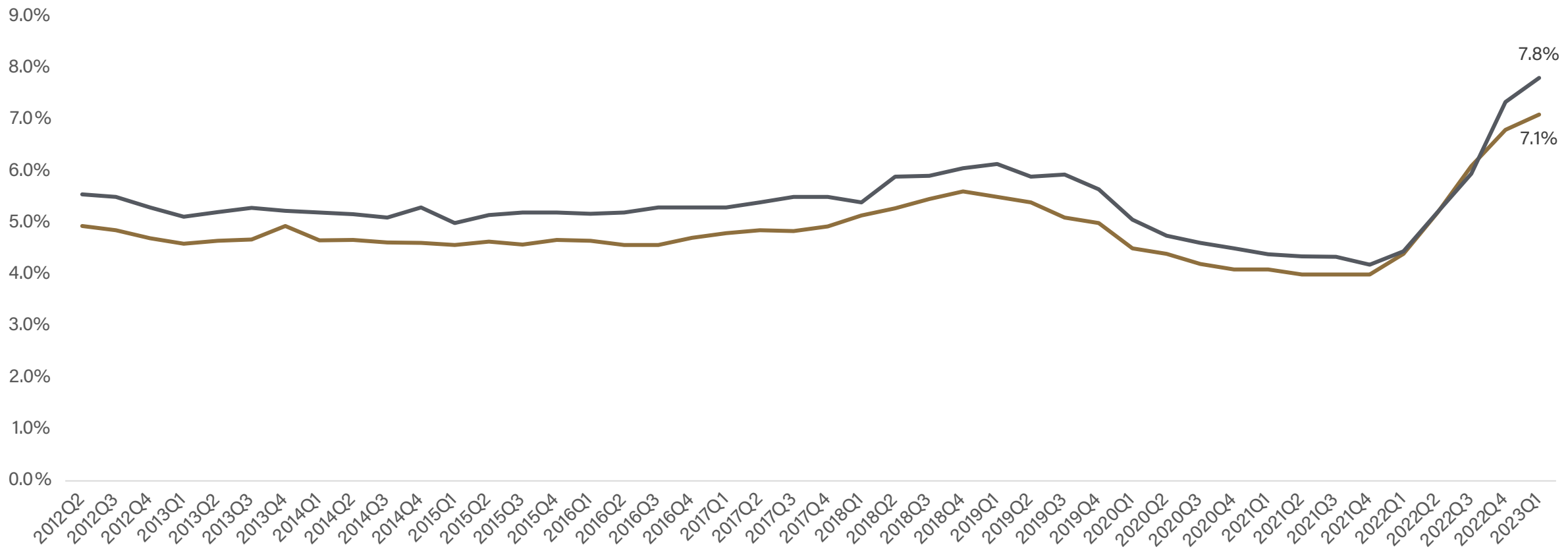
Figure 2. FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate



Average Fixed Short Term Operating Note Interest Rate

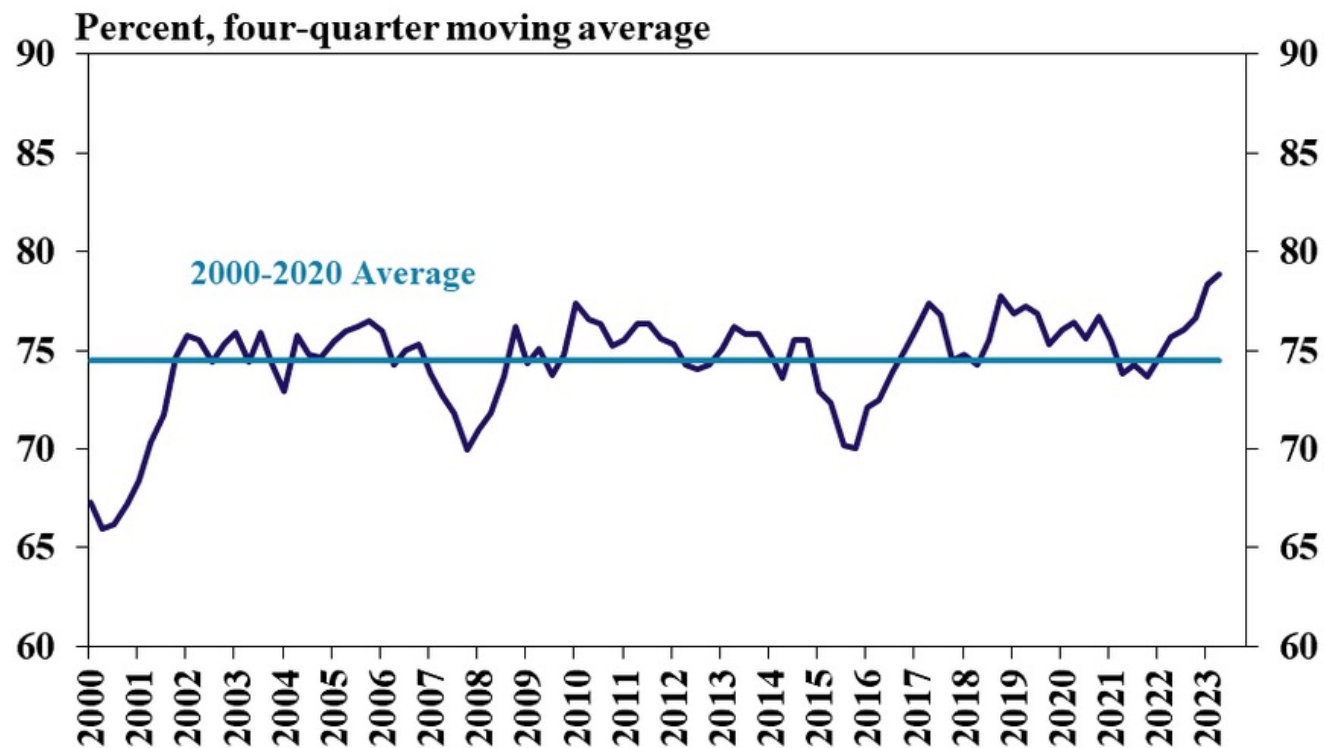


Average Fixed Interest Rate Farm Real Estate Loans



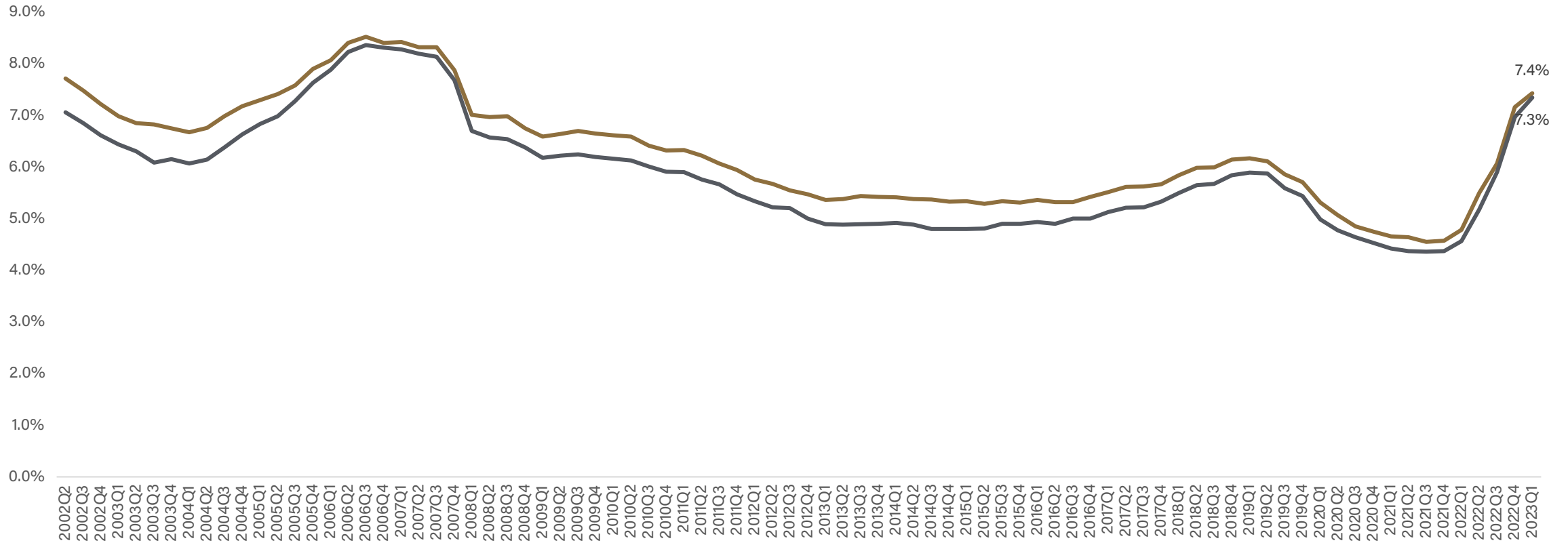
Center for Commercial Agriculture Chicago St. Louis

Chart 5: Share of Non-Real Estate Loans with a Variable Interest Rate



Sources: Survey of Terms of Lending to Farmers and Federal Reserve Bank of Kansas City

Variable vs Fixed Interest Rate Kansas City Farm Real Estate Loans



— Fixed Interest Rate
 — Variable Interest Rate



Center for Commercial Agriculture

Variable vs Fixed Interest Rate Kansas City Farm Operating Loans

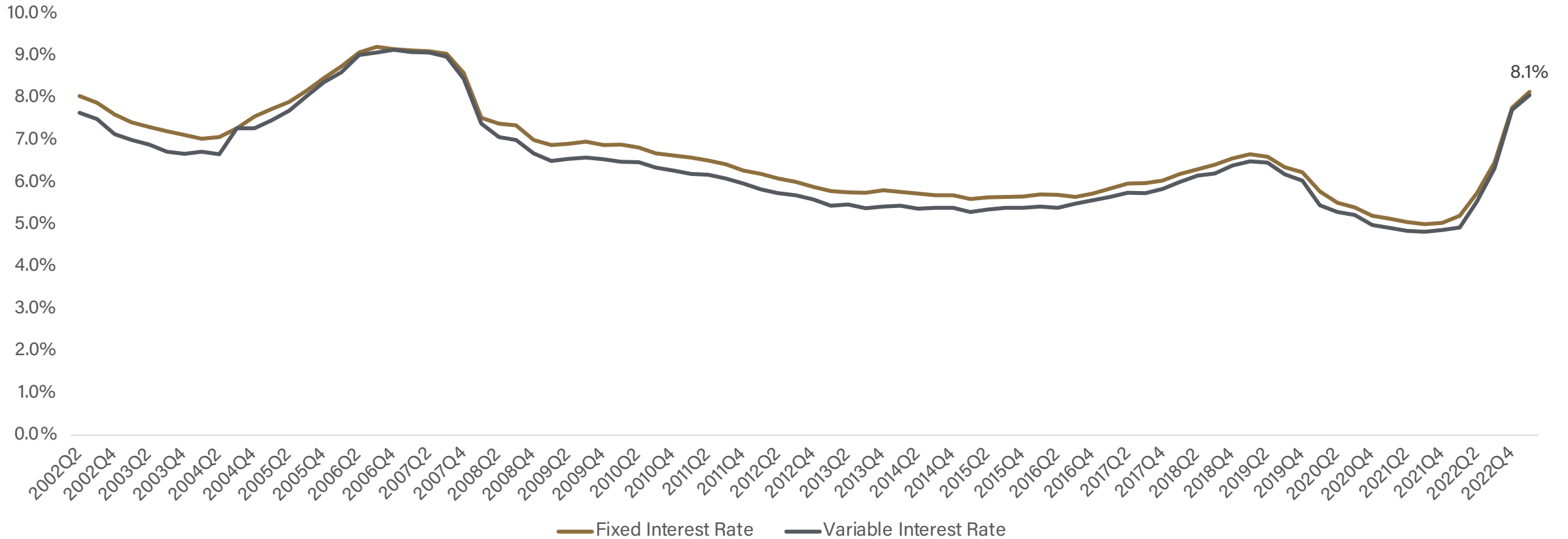
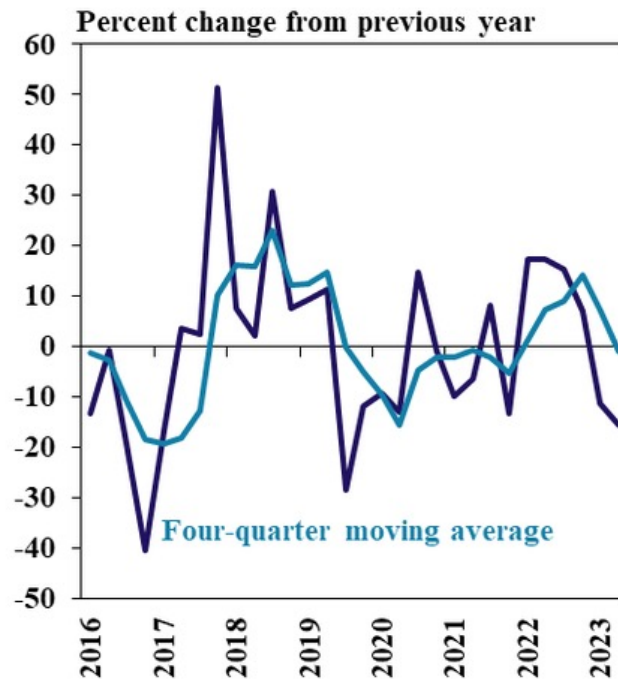
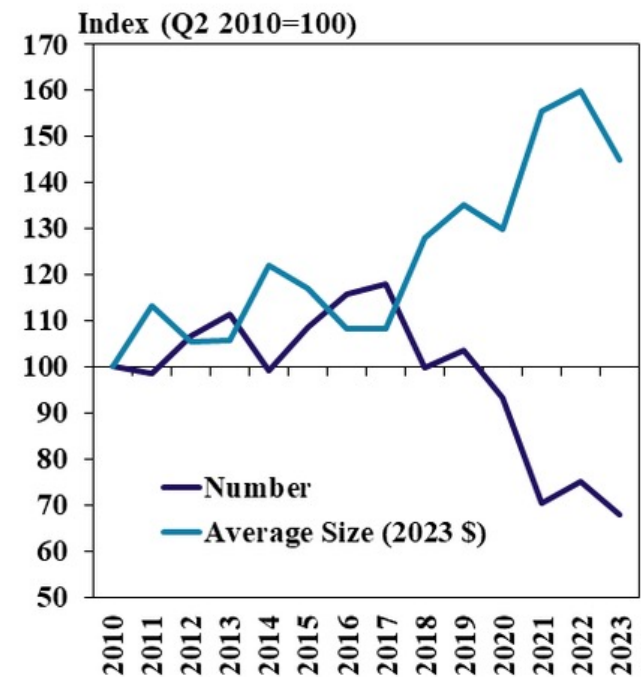


Chart 1: Non-Real Estate Farm Loans

Loan Volume

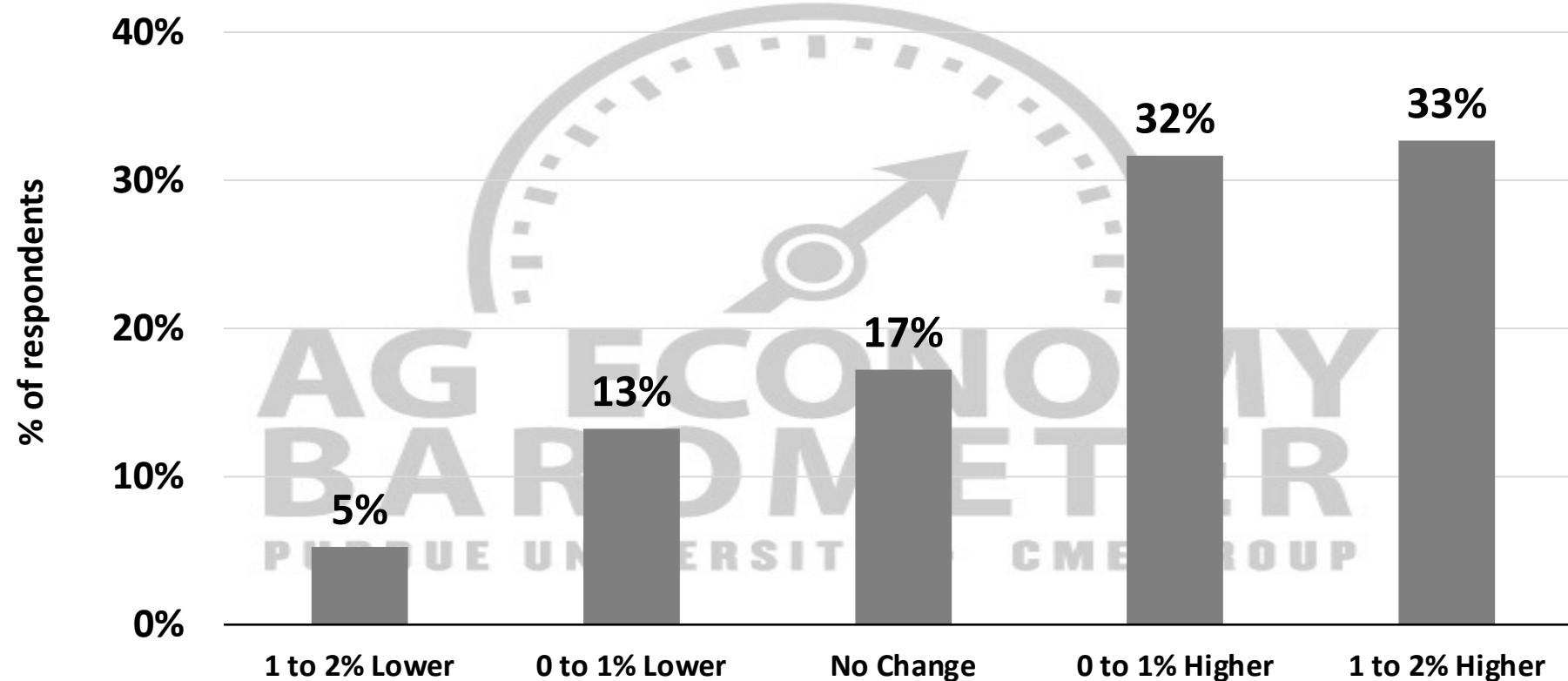


Number and Average Loan Size, Q2



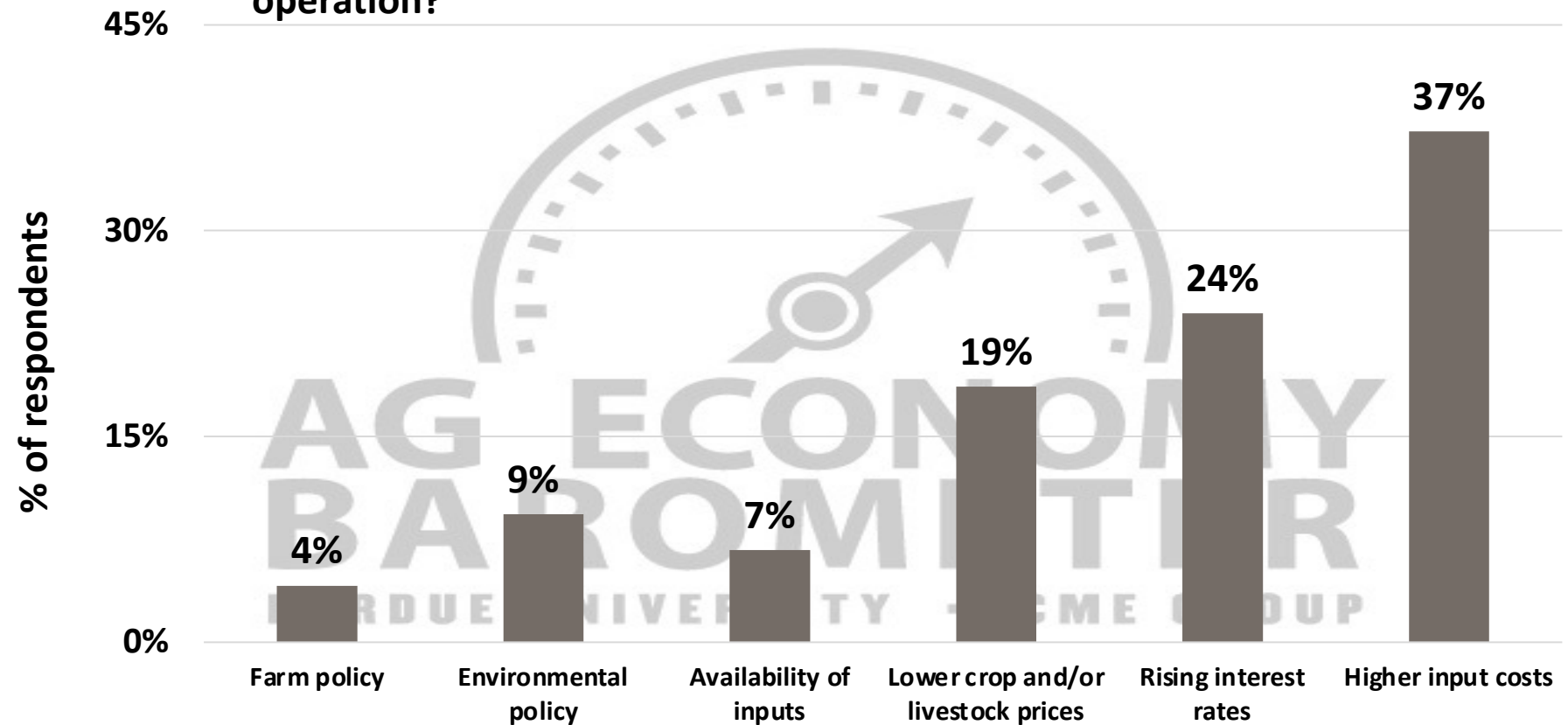
Sources: Survey of Terms of Lending to Farmers and Federal Reserve Bank of Kansas City

The U.S. prime interest rate is currently 8.25%. What do you expect the U.S. Prime interest rate to be one year from now?



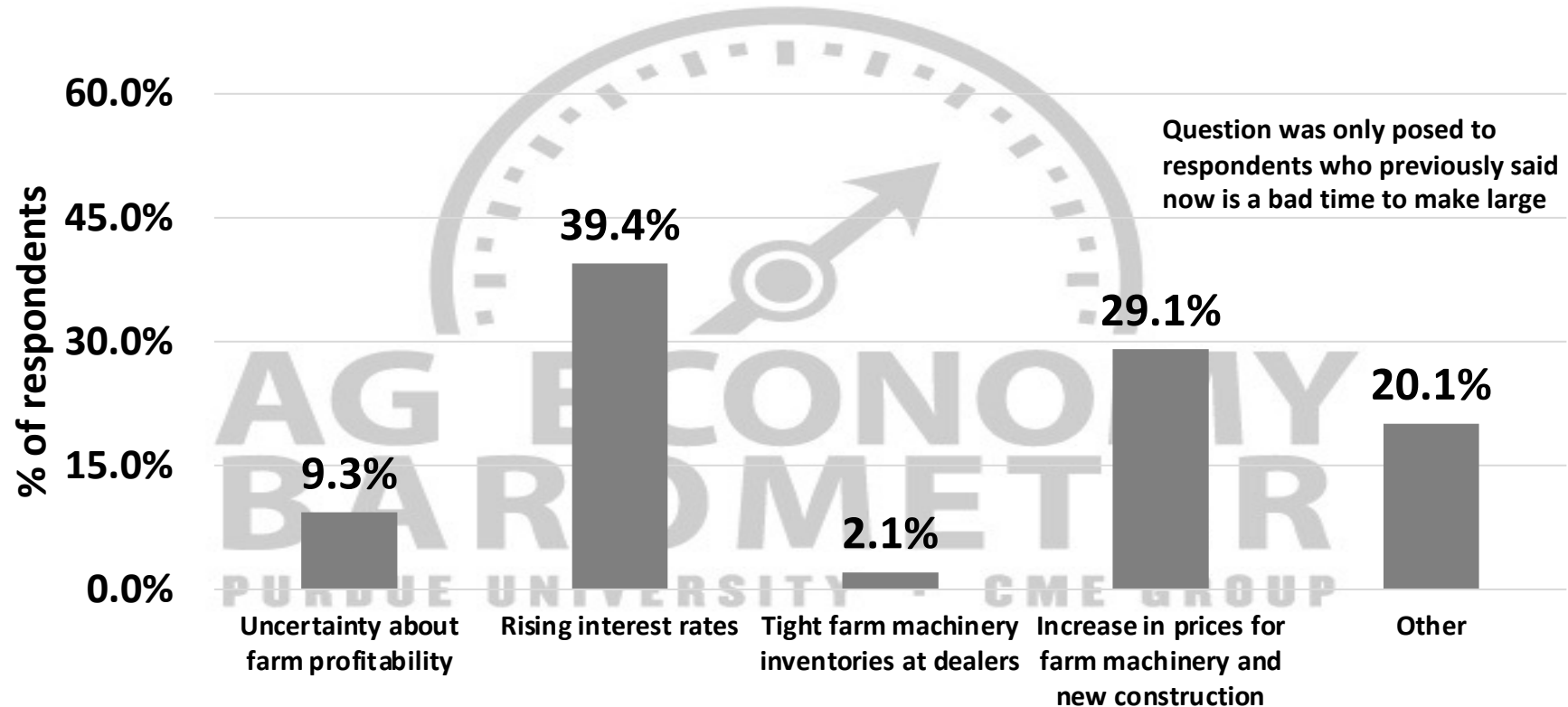
Source: Purdue Center for Commercial Agriculture, Producer Survey, July 2023

Looking ahead to next year what are your biggest concerns for your farming operation?



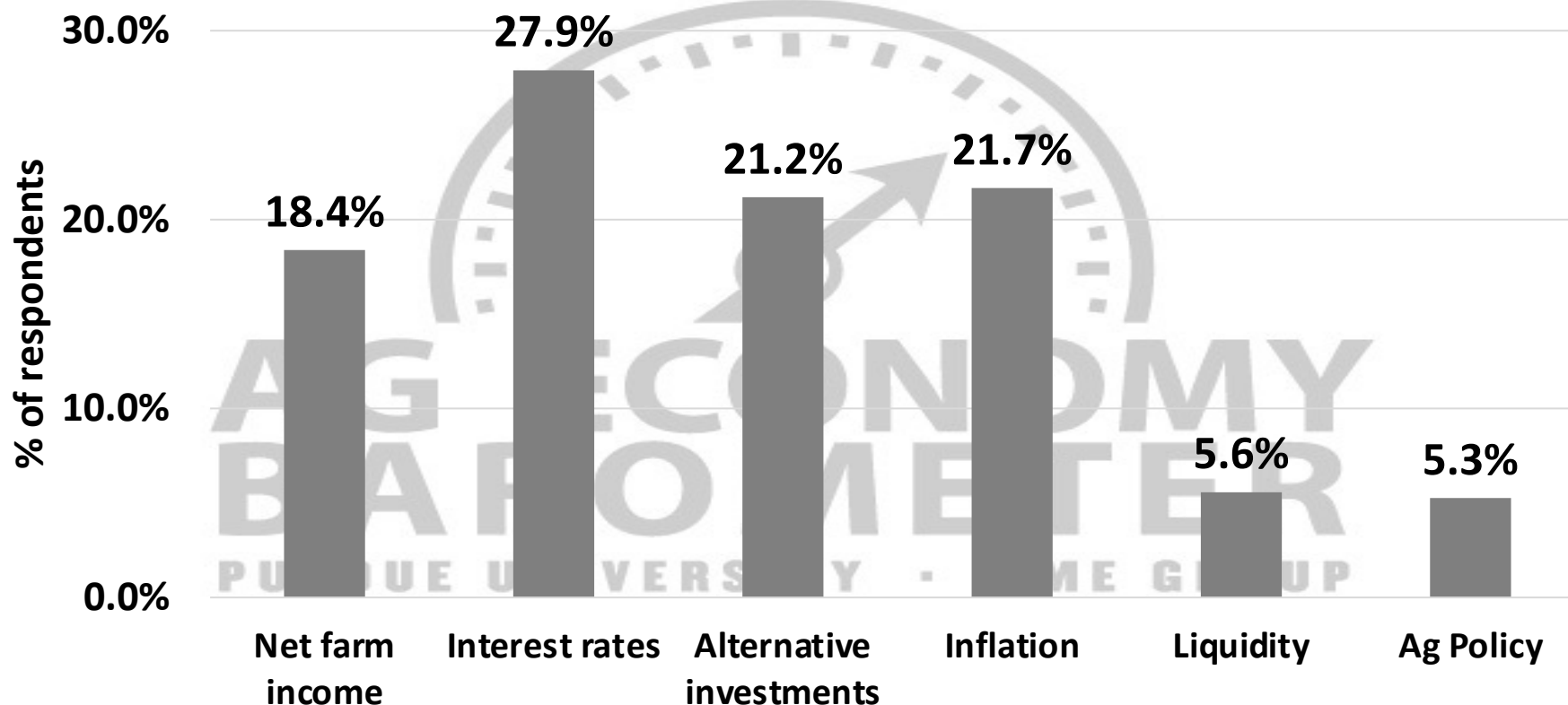
Source: Purdue Center for Commercial Agriculture, Producer Survey, July 2023

What is the primary reason you think now is a bad time to make large investments in things like buildings and machinery?



Source: Purdue Center for Commercial Agriculture, Producer Survey, July 2023

Which of the following factors is having the most influence on farmland values in your area (check up to two items)?



Source: Purdue Center for Commercial Agriculture, Producer Survey, July 2023