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United States Department of Agriculture

## Impact of Pandemic Related Aid on Demand for Farm Lending and Financial Performance of Agricultural Lenders

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### Disclaimers:

The findings and conclusions in this presentation are those of the authors and should not be construed to represent any official U.S. Department of Agriculture (USDA) or U.S. Government determination or policy. This research was supported in part by the USDA, Economic Research Service.

The views expressed here are those of the speaker and do not necessarily reflect the opinions of the Federal Reserve Bank of Kansas City or the Federal Reserve System.



# Outline of Presentation

- **Government Payments**
  - Pandemic related aid to the farm sector
  - 2019 distribution of government payments by farm type
- **Farm Debt**
  - Balances
  - By lender
  - Average and share of farms with loans by farm type
  - Farms that received and did not receive government payment
- **Financial Conditions of Agricultural Lenders**
- **Discussion**



# Pandemic Related Aid to the Farm Sector

- 2020 Total: (in 2021 dollars) \$47.4 billion
  - New programs
    - Coronavirus Food Assistance Program (CFAP): \$23.5 billion
    - Paycheck Protection Program (PPP): \$6.0 billion
  - Farm Bill Programs: \$17.9 billion

Source: USDA, Economic Research Service calculations using data from the Farm Income and Wealth Statistics (Sept. 2, 2021) data product and [www.farmers.gov](http://www.farmers.gov)



# Government Payments by Farm Type, 2019

	Government payments to farm operator households			
	Countercyclical	Marketing loans	Conservation	Other
Major programs included	PLC, ARC	LDP, MLG	EQIP, CSP, CRP	MFP, disaster and other emergency
Average payment in 2019 (\$), by farm type				
Commercial	28,093	48,444	21,376	67,807
Intermediate	5,800	10,236	7,043	11,157
Residence	2,660	9,240	7,173	6,470

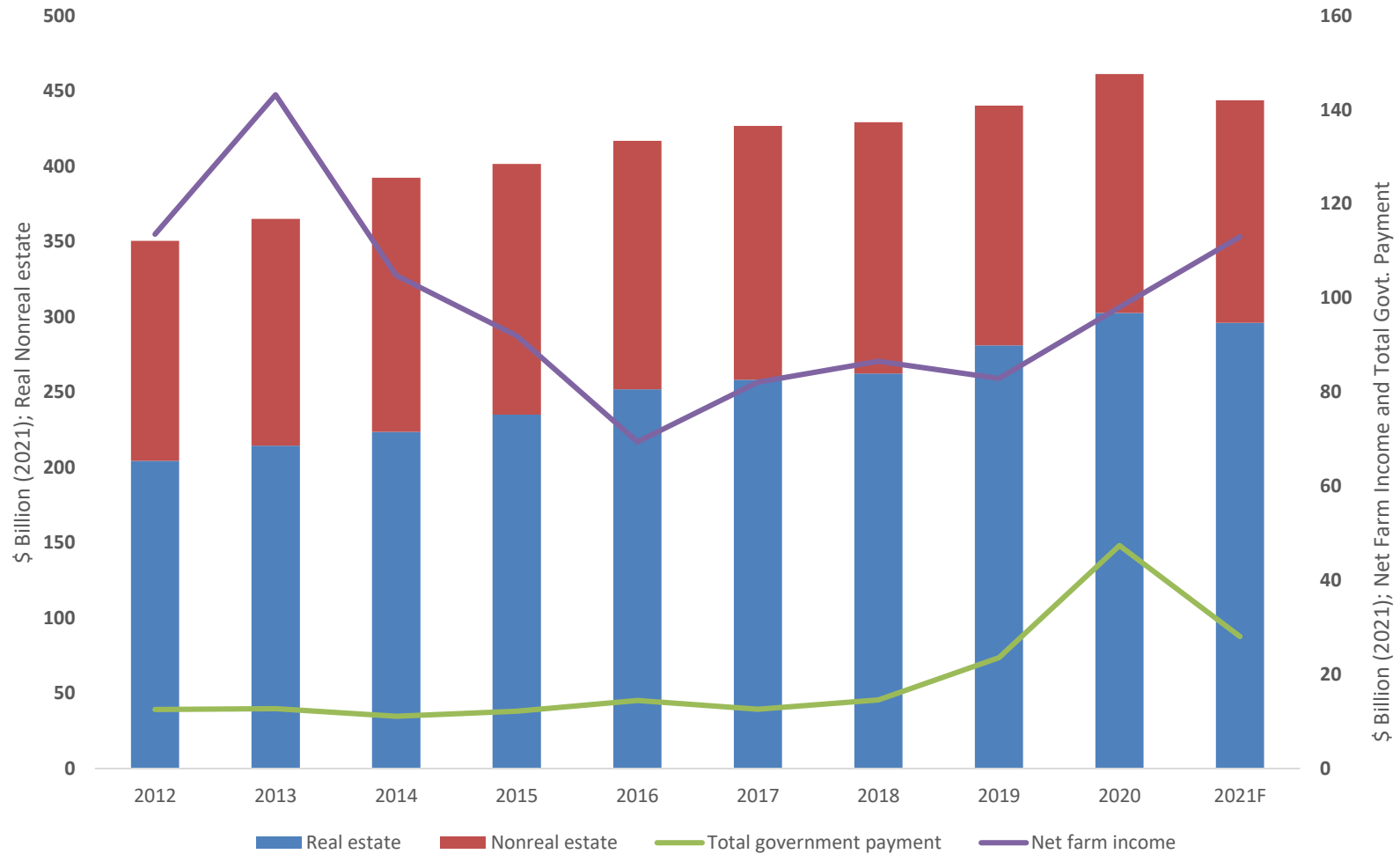
Note: Average is calculated for households participating in government programs (not all farm households).

Source: USDA, Economic Research Service (ERS) analysis of data from ERS and USDA, National Agricultural Statistics Service, 2019 Agricultural Resource Management Survey.



# Farm Debt by Type, 2012-2021F

U.S. farm sector debt in 2021 is forecast to decline from the previous year for the first time since 2003.

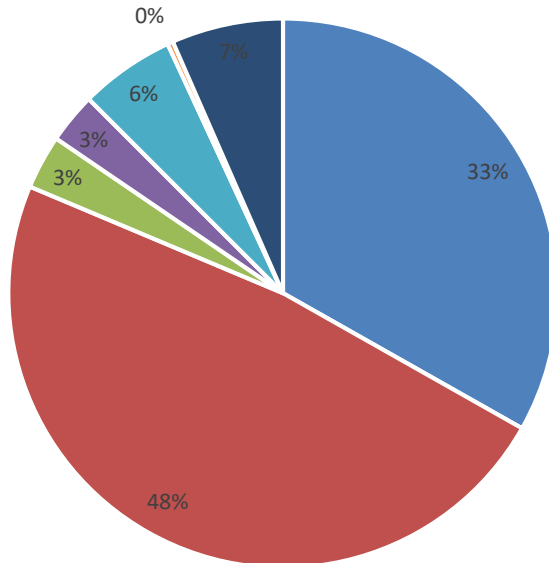


Source: USDA, Economic Research Service calculations using data from the Farm Income and Wealth Statistics data product, Sept. 2, 2021



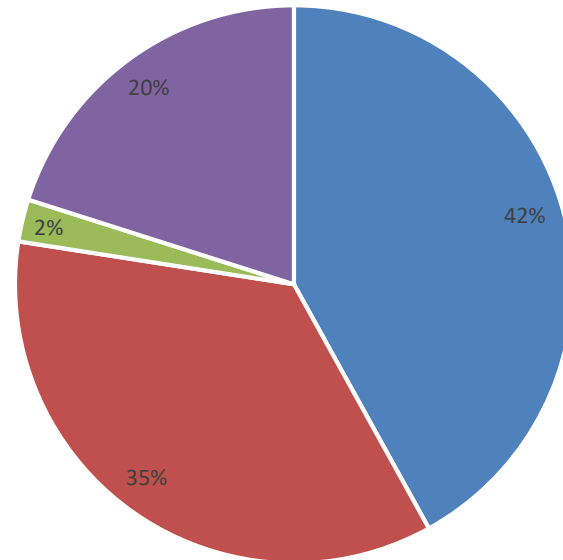
# Share of Farm debt by Lender, 2020

Real estate loan by lenders, 2020 (\$302.5 billion)



- Commercial banks
- Farm Credit System
- Farm Service Agency
- Farmer Mac
- Individuals and others
- Storage facility loans
- Life insurance companies

Nonreal estate loan by lenders, 2020 (\$158.9 billion)



- Commercial banks
- Farm Credit System
- Farm Service Agency
- Individuals and others

Data source: USDA, Economic Research Service calculations using data from the Farm Income and Wealth Statistics data product, Sept. 2, 2021



# Share of Farms with and without Debt and Average Debt by Farm Typology, 2019

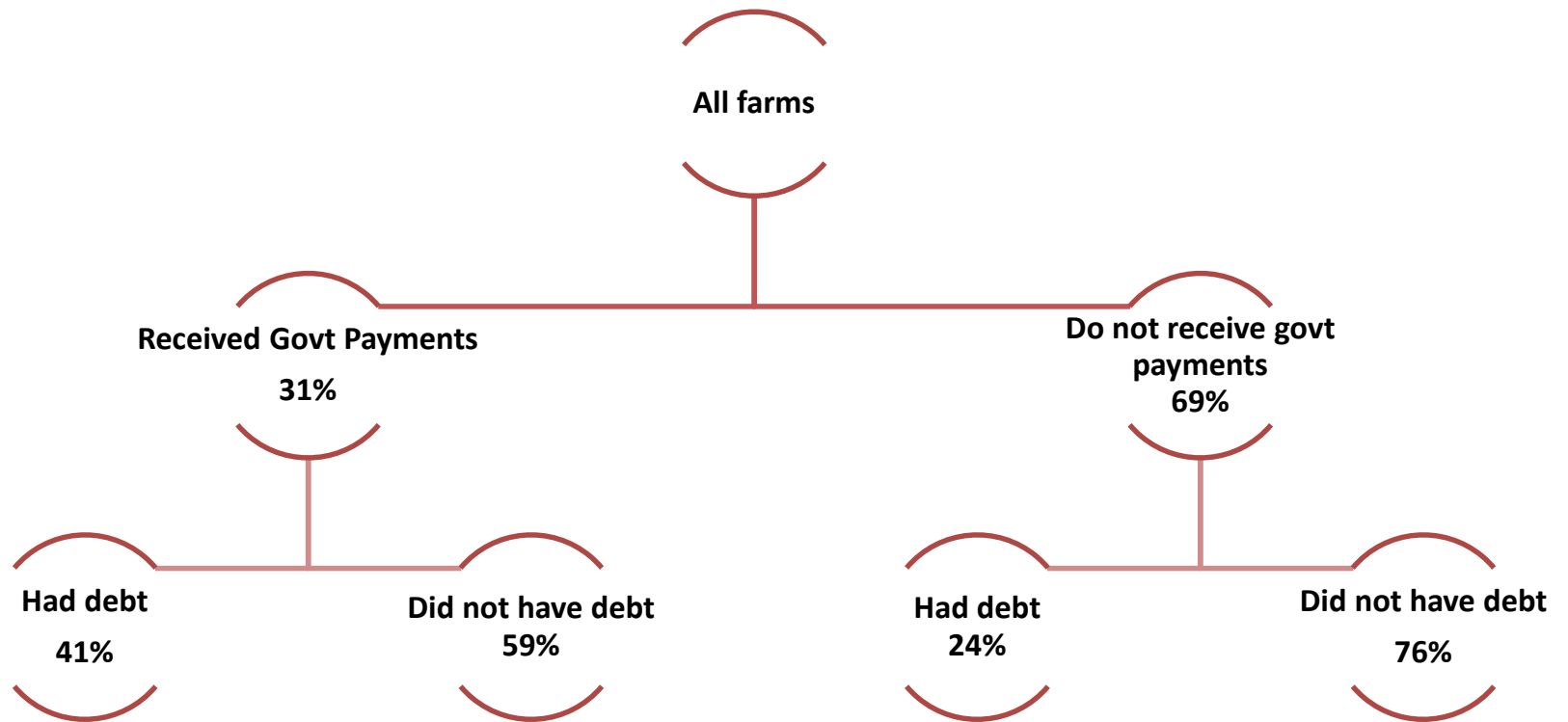
	Share (%) of farms with debt	Share (%) of farms without debt	Share (%) of total debt for the sector	Average debt for farms with debt
Small (GCFI less than \$350,000)				
Retirement	11	89	2	\$172,000
Off- farm Occupation	26	74	13	\$130,000
Low sales	23	77	9	\$136,000
Moderate sales	65	35	12	\$390,000
Midsize (GCFI between \$350,000 and 999,999)				
	73	27	26	\$730,000
Large-scale (GCFI of \$1,000,000 or more)				
Large	81	19	24	\$1,435,000
Very large	84	16	9	\$4,157,000
Nonfamily	28	72	6	\$950,000
All farms	29	71	100	\$377,000

Data source: USDA, Economic Research Service (ERS) analysis of data from ERS and USDA, National Agricultural Statistics Service, 2019 Agricultural Resource Management Survey.





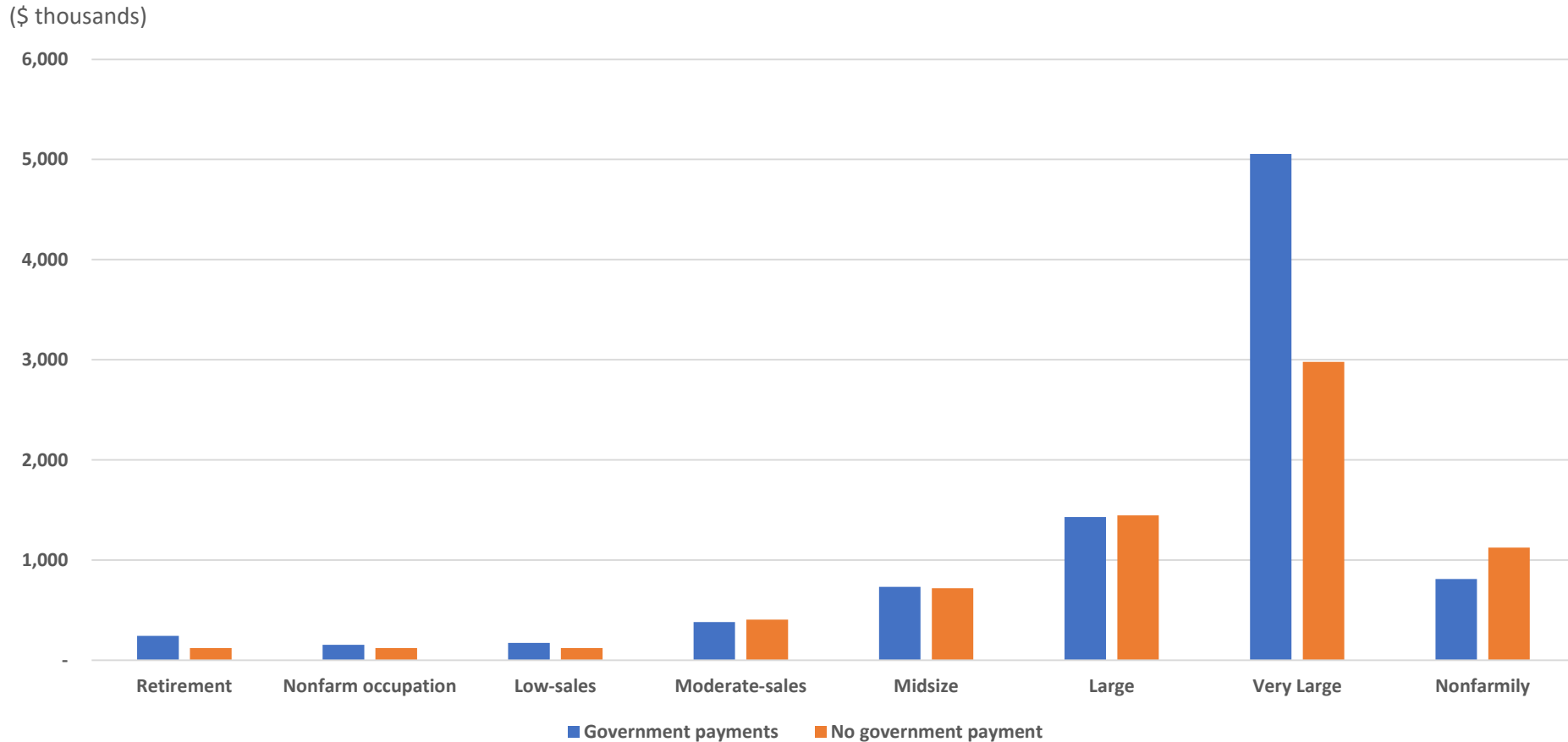
# Government Payments and Farm Debt, 2019



Source: USDA, Economic Research Service (ERS) analysis of data from 2019 Agricultural Resource Management Survey.



# Average Farm Debt for Farms With and Without Government payments, 2019



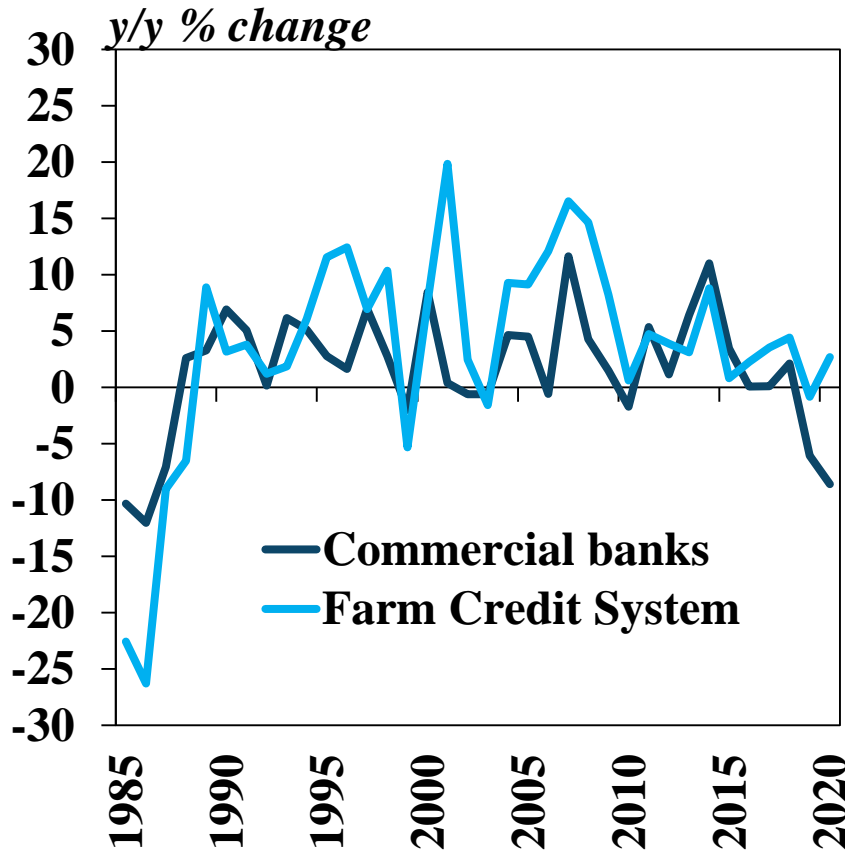
Note: Average for farms with debt (not all farms).

Source: USDA, Economic Research Service (ERS) analysis of data from 2019 Agricultural Resource Management Survey.

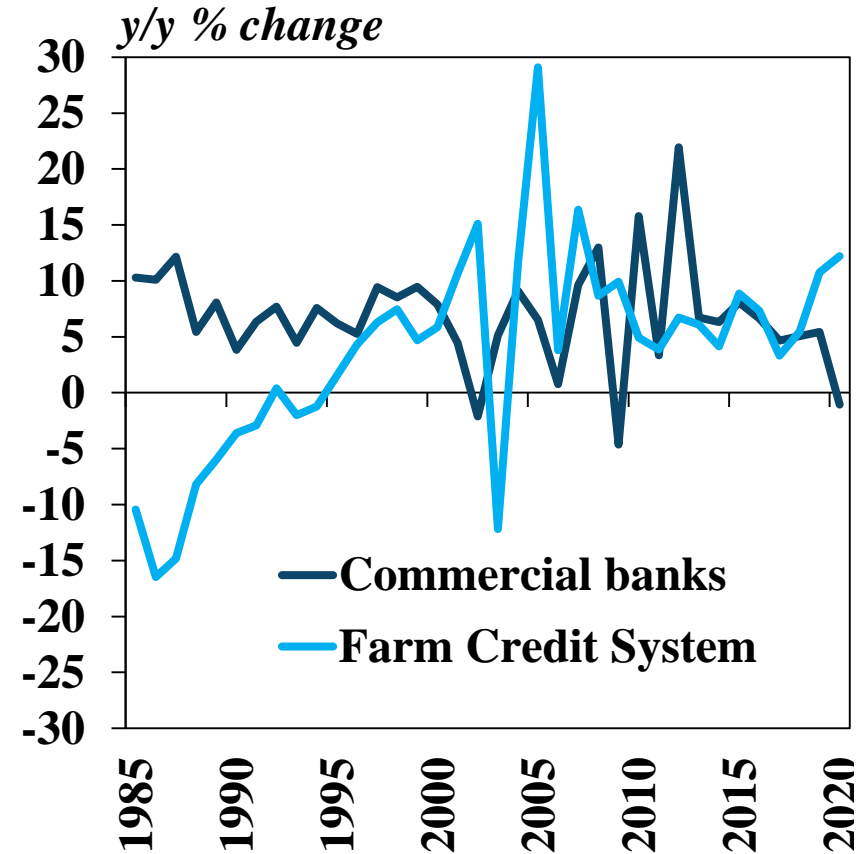


# Outstanding Farm Debt At Commercial Banks and the Farm Credit System

## Non-Real Estate Debt



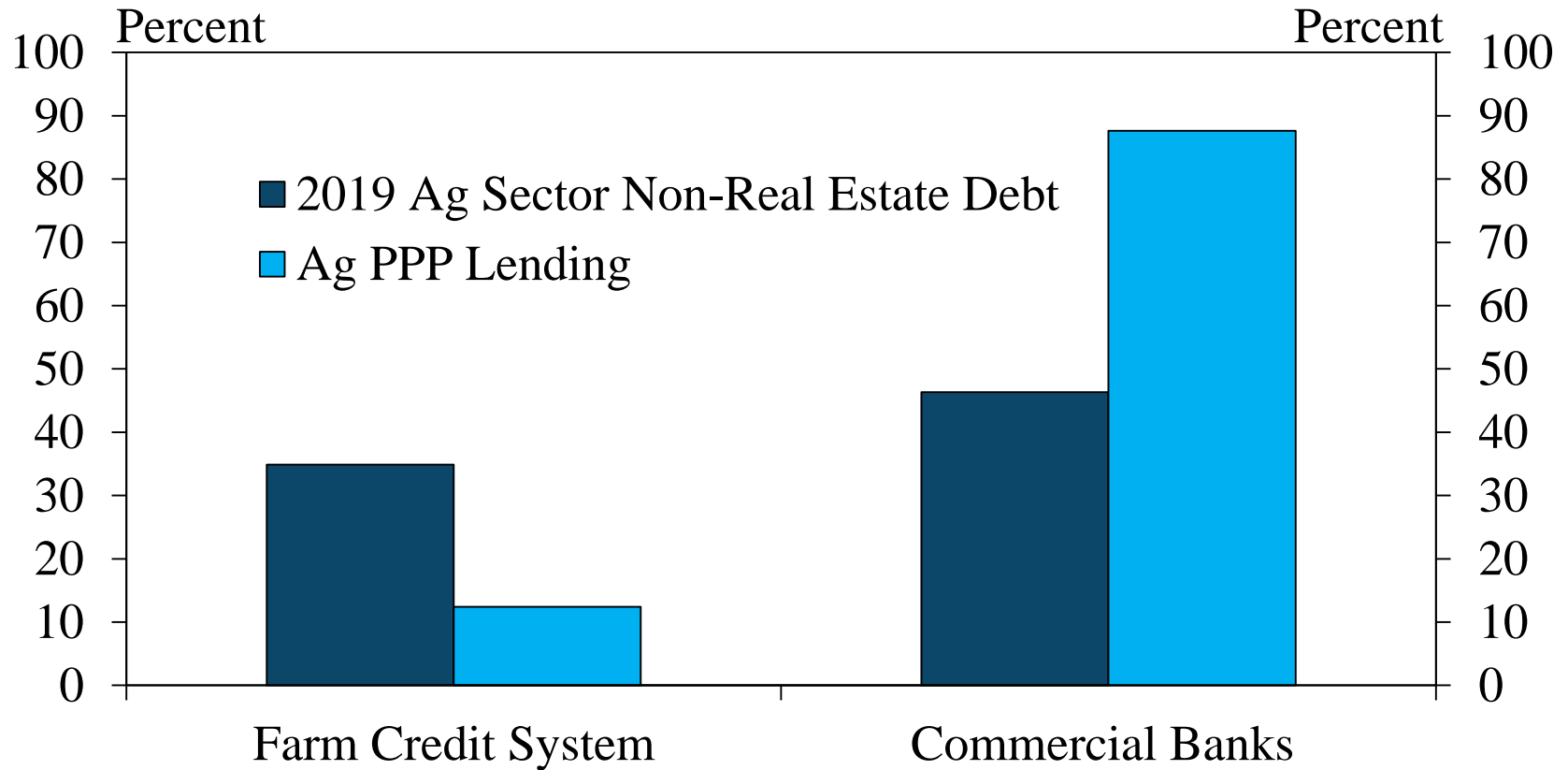
## Real Estate Debt



Source: : USDA, Economic Research Service (ERS) calculations using data from the ERS U.S. and State-Level Farm Income and Wealth Statistics.



# Share of Farm Lending and PPP at Commercial Banks and Farm Credit System



Note: PPP Lending includes all PPP loans to NAICS 11.  
Sources: SBA, USDA and Board of Governors.



# Measuring the Financial Impact of PPP Participation on Commercial Agricultural Banks

Percent changes in loan balances and select financial indicators at commercial agricultural banks by degree of participation in PPP

Bank Sample:

- Commercial banks with agricultural loans comprising at least 25% of total loans at any point during 2019
- Grouped by degree of participation in PPP –
  - Average Total PPP Loans/Average Total Loans (Q2 2020 to Q1 2021)
    - High Participation (above median)
    - Low Participation (below median)
    - No Participation
- Number of Banks= 1,264
- Median Average Total PPP Loans/Average Total Loans= 3.6%



# Median Change in Select Financial Indicators by PPP Participation – Q4 2020

## Pre-Pandemic

2019 Average (% change from previous year)			
	High PPP	Low PPP	No PPP
Number of Banks	665	479	120
Total Ag Loans	3.8	3.7	2.6
Ag Real Estate Loans	4.2	5.0	0.0
Ag Production Loans	2.9	1.7	1.6
Volume of Delinquent Farm Loans	-2.8	-5.3	-5.8
Equity Capital Ratio	5.9	5.2	5.0
ALLL to Total Loans	0.7	1.3	0.6
Loan to Deposit Ratio	-0.2	0.5	0.7
Net Interest Margin	1.4	0.8	2.1
Return on Assets	1.9	0.2	0.1
Net Interest Income	4.8	3.4	3.7
Net Income	6.2	3.5	2.0
Total Loans	3.6	2.9	2.0
Non-Ag Loans	3.3	2.1	1.3
Ratio of Ag Loans-to-Total Loans	0.1	0.6	0.3

## Post-Pandemic

12/31/2020 (% change from previous year)			
	High PPP	Low PPP	No PPP
Number of Banks	665	479	120
Total Ag Loans	-3.4	-2.8	-5.8
Ag Real Estate Loans	0.5	0.0	-4.5
Ag Production Loans	-8.0	-7.0	-11.6
Volume of Delinquent Farm Loans	-33.1	-38.4	-50.8
Equity Capital Ratio	-5.1	-4.4	-6.0
ALLL to Total Loans	4.1	7.2	9.3
Loan to Deposit Ratio	-10.1	-12.0	-14.1
Net Interest Margin	-9.7	-10.3	-13.6
Return on Assets	-9.7	-13.0	-23.9
Net Interest Income	2.8	-1.9	-5.6
Net Income	4.1	-3.0	-14.6
Total Loans	4.1	-0.9	-2.6
Non-Ag Loans	9.3	1.1	-1.3
Ratio of Ag Loans-to-Total Loans	-6.6	-1.5	-2.2

Data source: Reports of Condition and Income



# Median Change in Select Financial Indicators by PPP Participation – Q1 2021

## Pre-Pandemic

2019 Average (% change from previous year)			
	High PPP	Low PPP	No PPP
Number of Banks	665	479	120
Total Ag Loans	3.8	3.7	2.6
Ag Real Estate Loans	4.2	5.0	0.0
Ag Production Loans	2.9	1.7	1.6
Volume of Delinquent Farm Loans	-2.8	-5.3	-5.8
Equity Capital Ratio	5.9	5.2	5.0
ALLL to Total Loans	0.7	1.3	0.6
Loan to Deposit Ratio	-0.2	0.5	0.7
Net Interest Margin	1.4	0.8	2.1
Return on Assets	1.9	0.2	0.1
Net Interest Income	4.8	3.4	3.7
Net Income	6.2	3.5	2.0
Total Loans	3.6	2.9	2.0
Non-Ag Loans	3.3	2.1	1.3
Ratio of Ag Loans-to-Total Loans	0.1	0.6	0.3

## Post-Pandemic

3/31/2021 (% change from previous year)			
	High PPP	Low PPP	No PPP
Number of Banks	665	479	120
Total Ag Loans	-5.1	-4.9	-8.7
Ag Real Estate Loans	-0.6	-0.3	-5.7
Ag Production Loans	-11.3	-11.4	-15.0
Volume of Delinquent Farm Loans	-47.6	-51.6	-66.0
Equity Capital Ratio	-10.5	-9.2	-9.5
ALLL to Total Loans	3.0	5.9	6.4
Loan to Deposit Ratio	-13.7	-15.6	-17.8
Net Interest Margin	-10.3	-9.9	-19.2
Return on Assets	6.6	7.7	-28.7
Net Interest Income	4.8	1.6	-9.7
Net Income	26.7	23.6	-22.2
Total Loans	5.4	-0.3	-3.8
Non-Ag Loans	13.2	4.7	0.3
Ratio of Ag Loans-to-Total Loans	-9.2	-4.1	-3.8

Data source: Reports of Condition and Income



# Median Change in Select Financial Indicators by PPP Participation – Q2 2021

## Pre-Pandemic

2019 Average (% change from previous year)	High PPP	Low PPP	No PPP
Number of Banks	665	479	120
Total Ag Loans	3.8	3.7	2.6
Ag Real Estate Loans	4.2	5.0	0.0
Ag Production Loans	2.9	1.7	1.6
Volume of Delinquent Farm Loans	-2.8	-5.3	-5.8
Equity Capital Ratio	5.9	5.2	5.0
ALLL to Total Loans	0.7	1.3	0.6
Loan to Deposit Ratio	-0.2	0.5	0.7
Net Interest Margin	1.4	0.8	2.1
Return on Assets	1.9	0.2	0.1
Net Interest Income	4.8	3.4	3.7
Net Income	6.2	3.5	2.0
Total Loans	3.6	2.9	2.0
Non-Ag Loans	3.3	2.1	1.3
Ratio of Ag Loans-to-Total Loans	0.1	0.6	0.3

## Post-Pandemic

6/30/2021 (% change from previous year)	High PPP	Low PPP	No PPP
Number of Banks	665	479	120
Total Ag Loans	-4.4	-6.5	-9.5
Ag Real Estate Loans	0.8	-0.9	-7.2
Ag Production Loans	-12.1	-13.6	-14.7
Volume of Delinquent Farm Loans	-45.1	-50.5	-60.1
Equity Capital Ratio	-5.3	-5.8	-7.0
ALLL to Total Loans	8.1	6.2	5.4
Loan to Deposit Ratio	-13.3	-13.1	-12.6
Net Interest Margin	-6.2	-6.9	-15.0
Return on Assets	4.8	8.4	-26.6
Net Interest Income	6.1	5.5	-6.6
Net Income	19.7	23.4	-18.2
Total Loans	-1.9	-2.0	-3.7
Non-Ag Loans	-0.7	1.5	0.3
Ratio of Ag Loans-to-Total Loans	-2.3	-2.7	-4.8

Data source: Reports of Condition and Income





# Discussion

- Will record high government payment in 2020 change farm debt?
  - Short-run
  - Long-run
  - By farm types
- What does it mean for commercial banks?
  - Low and high participation in PPP loans



# Thank You!

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