

# 2024 US Dairy Situation & Outlook

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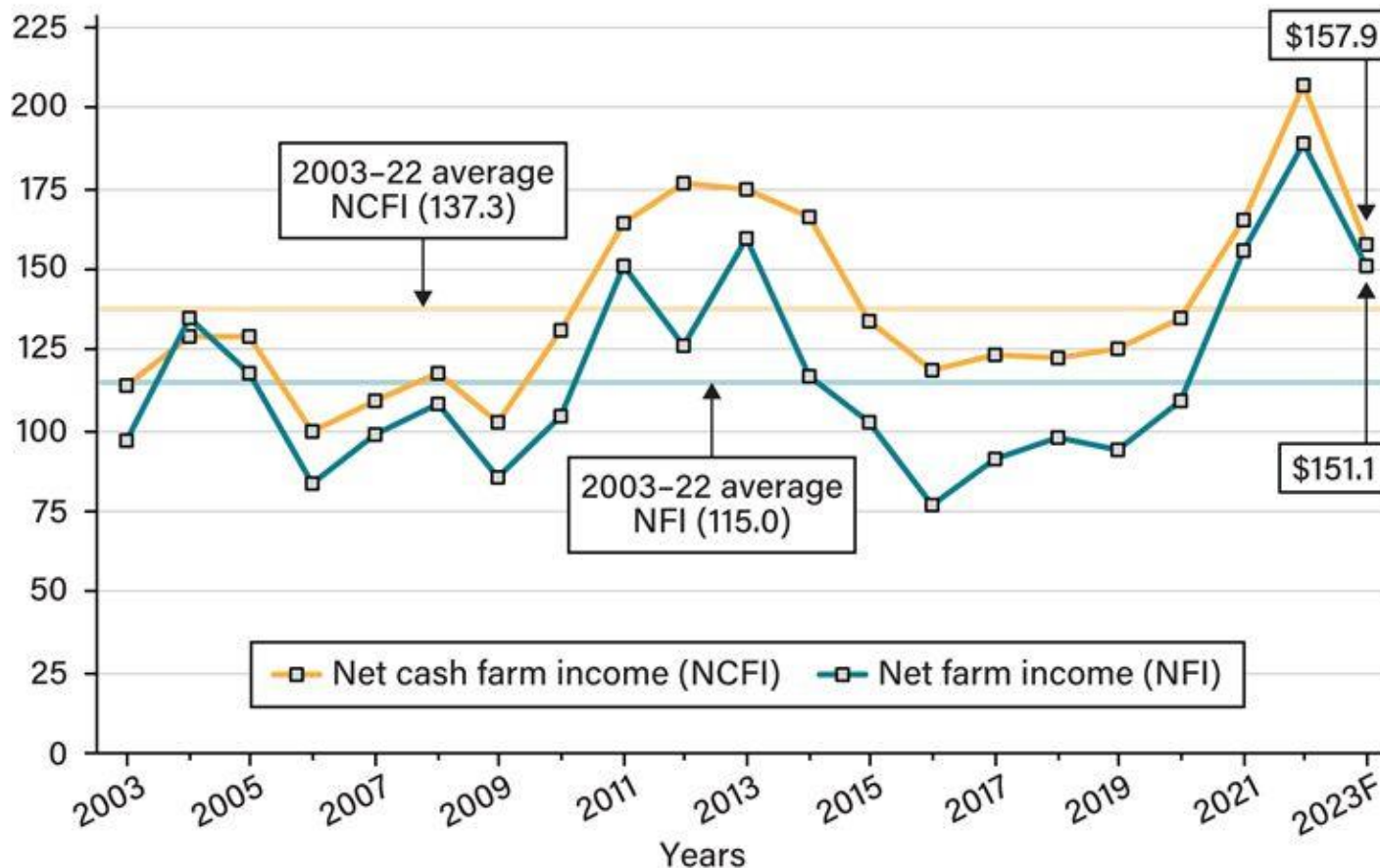
**Dyson School of Applied Economics and Management**

**Cornell University**

**December 19, 2023**

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

2023 dollars (billions)

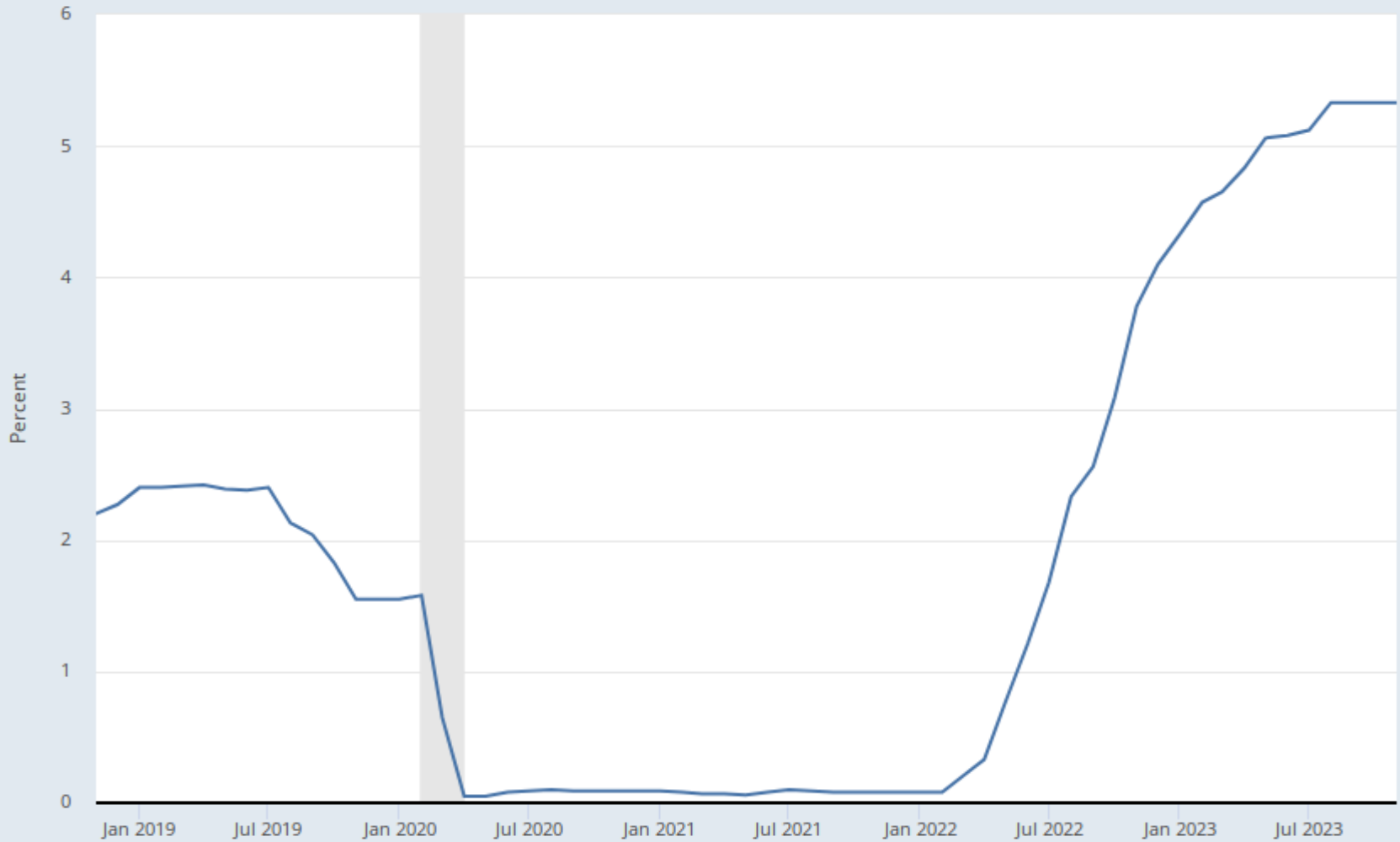


Note: F = forecast. Values are adjusted for inflation using the U.S. Bureau of Economic Analysis Gross Domestic Product Price Index rebased to 2023 by USDA, Economic Research Service. **Net cash farm income (NCFI)** equals gross cash income minus cash expenses. **Net farm income (NFI)** is a broader measure of farm sector profitability that incorporates noncash items, including changes in inventories, economic depreciation, and gross imputed rental income.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of November 30, 2023.

**FRED**

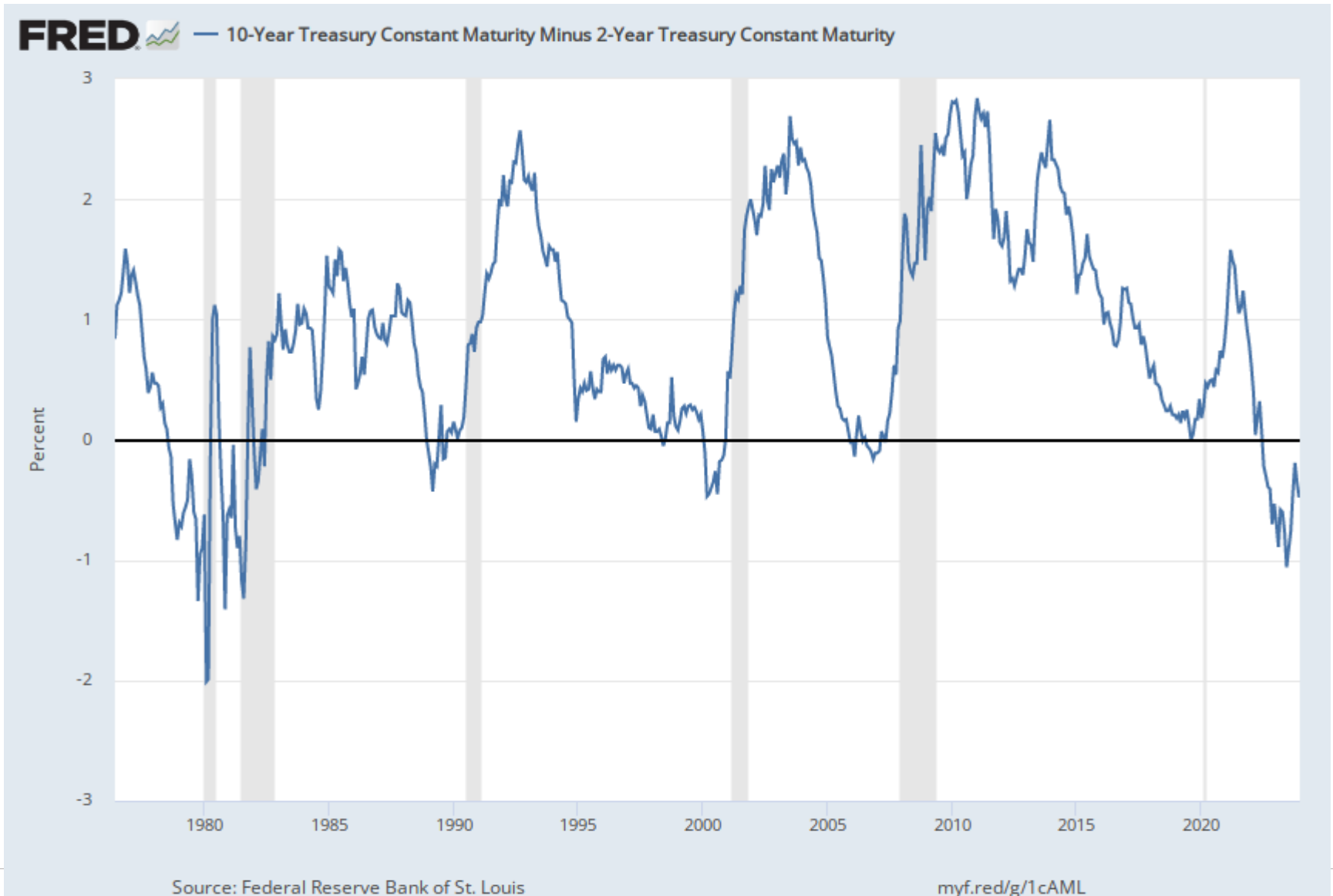
Federal Funds Effective Rate



Source: Board of Governors of the Federal Reserve System (US)

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# Inverted Yield Predicts Recession



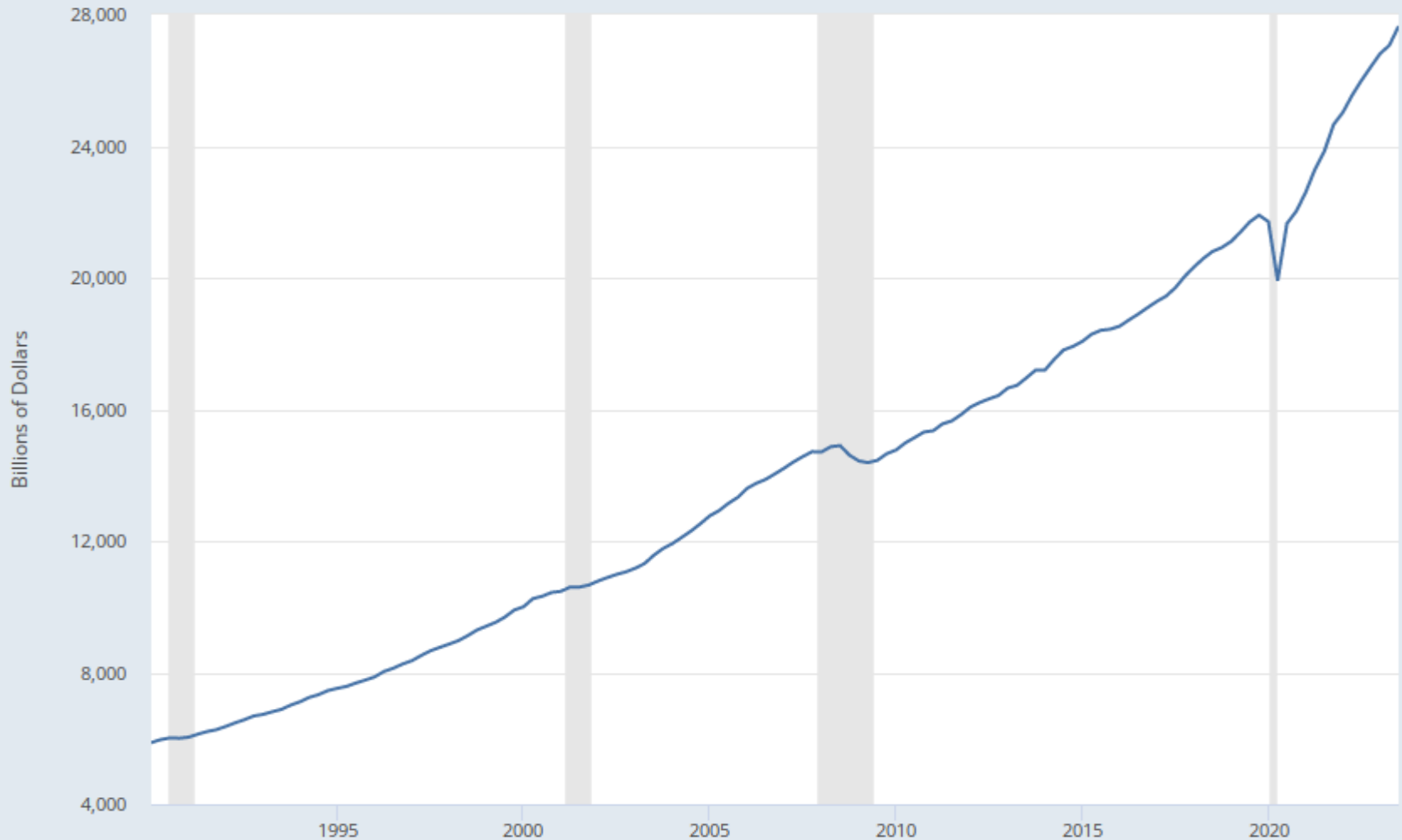
# US Recessions since 1990

Dates	Length	Cause	Peak Unemployment	GDP decline
July '90 – Mar '91	8 mos	Oil prices, inflation triggered interest increase	7.8%	-1.4%
Mar '01 – Nov '01	8 mos	Tech bubble	6.3%	-0.3%
Dec '07 – Jul '09	18 mos	Housing mortgage crisis	10.0%	-5.1%
Feb '20 – Apr '20	2 mos	COVID	14.7%	-19.2%

# Recessions → less eating out

FRED

— Gross Domestic Product



Source: U.S. Bureau of Economic Analysis

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# Consumption Patterns Since 1990

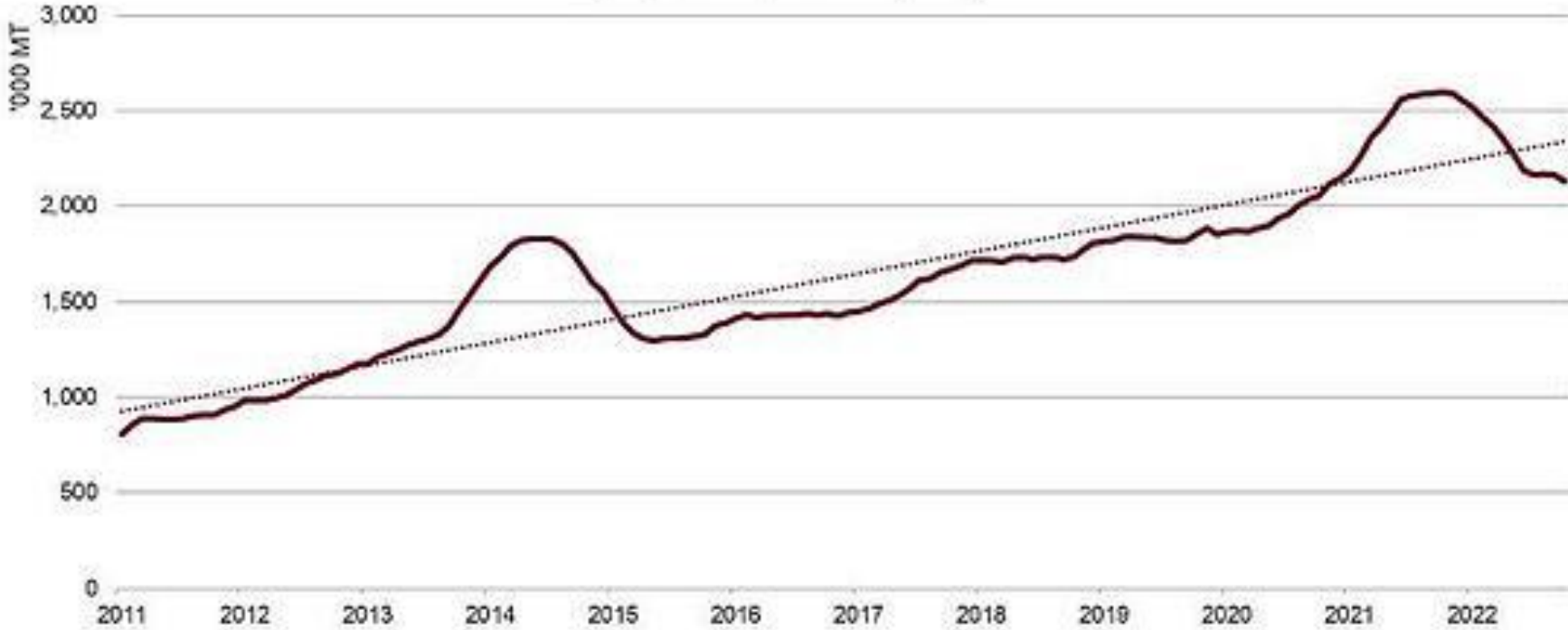
Dairy Product	Non-recession years % change per capita	Recession years % change per capita
Fluid milk	-1.7	-0.9
Cheese	1.5	0.3
Butter	1.4	0.7
Yogurt	4.4	4.9

China	2022				
MMT	Fluid	WMP	SMP	Cheese	Butter
Production	40,350	1,050	25	20	13
Imports	1,050	750	350	155	140
Consumption	41,400	1,800	375	175	153
% imported	2.5	41.7	93.3	88.6	91.5



# Global Dairy Trade to China

(Rolling 12 Months, Milk Solids Equivalent)



Source: USDEC

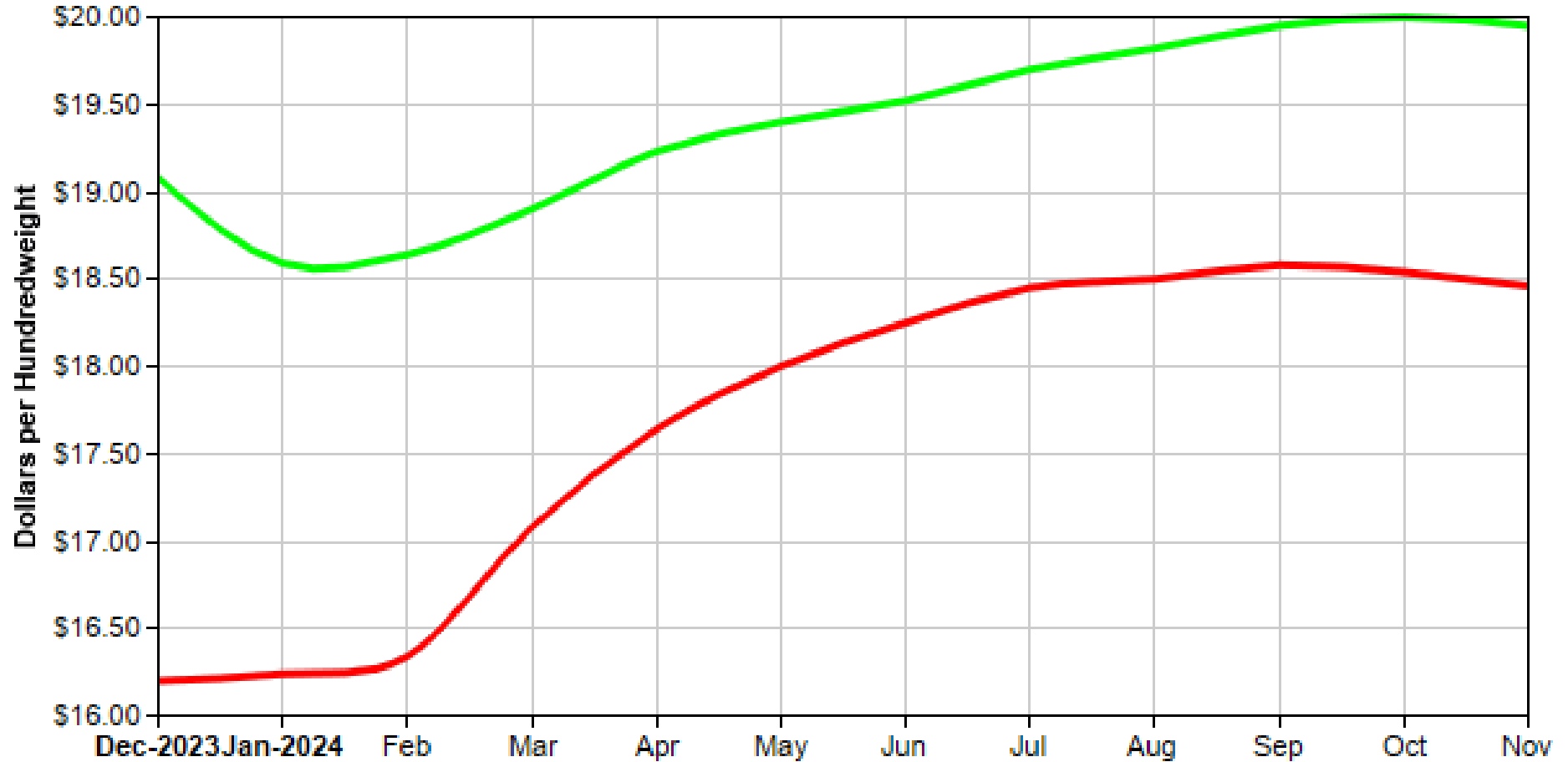
# Farm Finance in 2023

- Farm mailbox milk price down \$4.50/cwt YoY
- Costs down \$0.50 - \$1.00/cwt
  - Down: feed, fuel
  - Up: labor, interest

# December USDA WASDE

Commodity	2021	2022	2023 Proj. Dec	2024 Proj. Dec
Product Prices	Dollars per Pound			
Cheese	1.676	2.112	1.765	1.725
Butter	1.733	2.867	2.62	2.595
Nonfat Dry Milk	1.269	1.685	1.185	1.175
Dry Whey	0.574	0.606	0.36	0.4
	Dollars per cwt			
Milk Prices				
Class III	17.08	21.96	17.05	16.85
Class IV	16.09	24.47	19.1	18.9
All Milk	18.53	25.34	20.6	20.25

# CME Class III & IV Futures Values

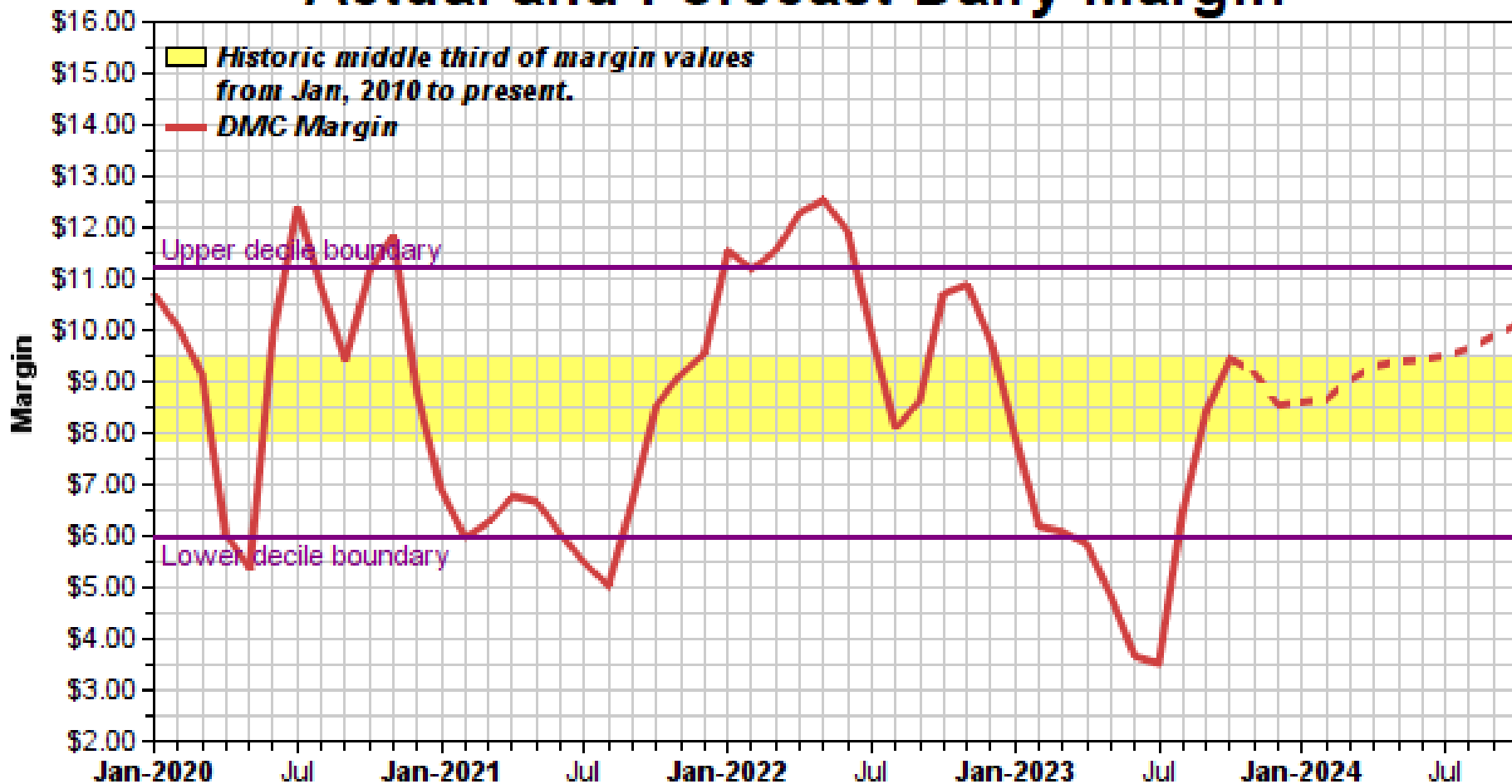


■ Class III Futures

■ Class IV Futures

**Updated 12/14/23**

# Actual and Forecast Dairy Margin

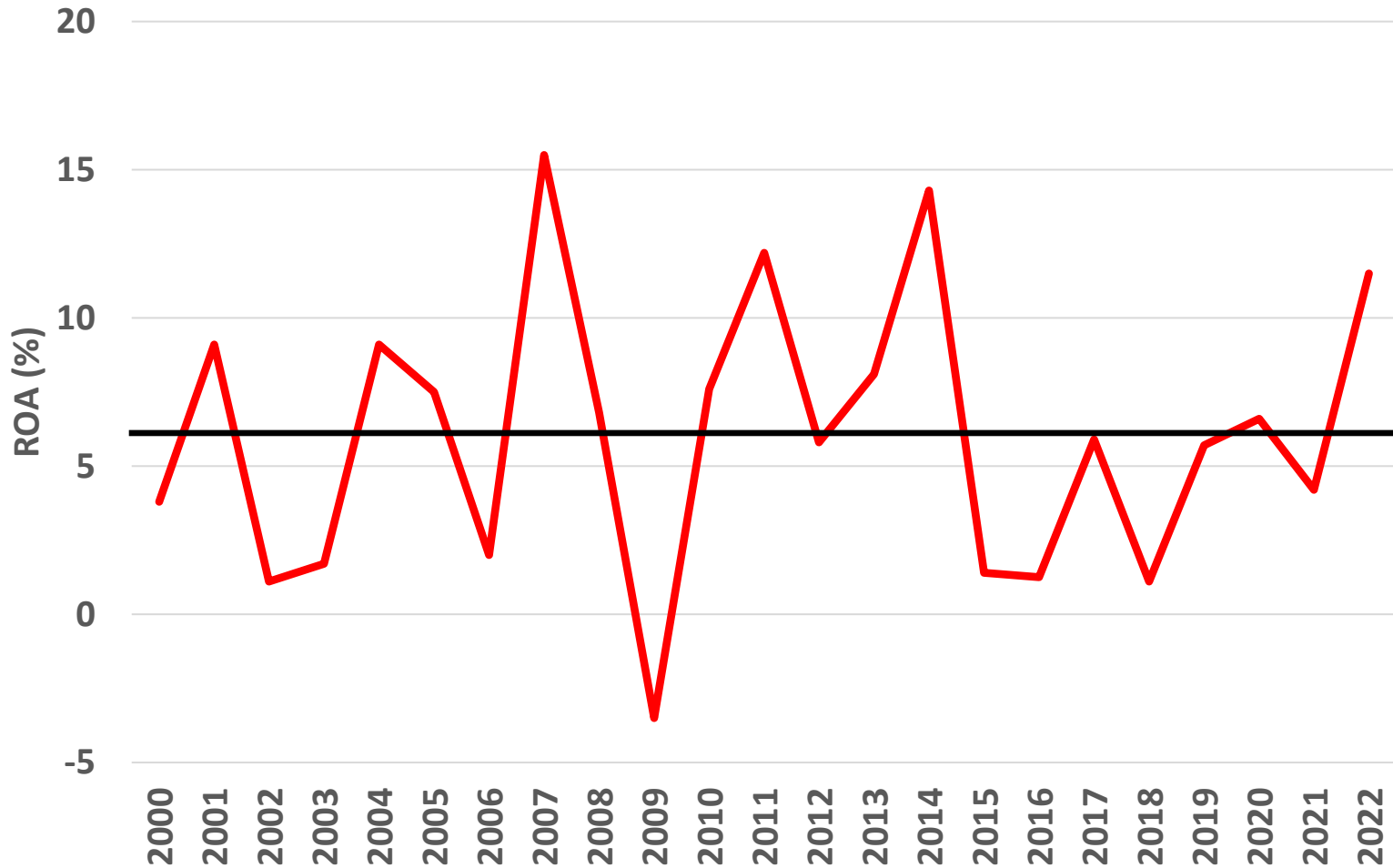


Updated 12/14/23

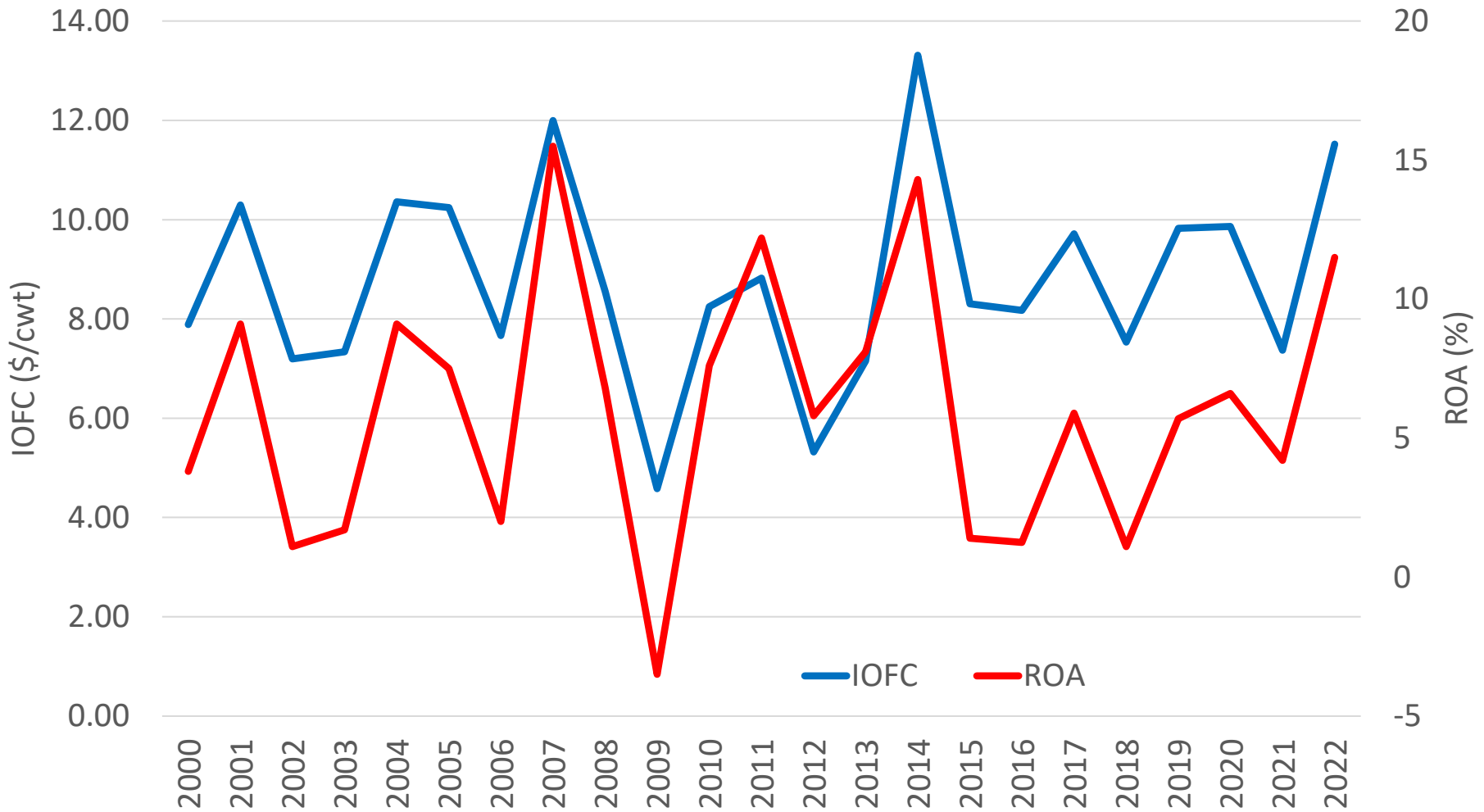
# Profitability by Year

Profit Category	Years	Average ROA	Dairy farm exits
Good: 8 years	2001, 04, 07, 10, 11, 13, 14, 22	10.9%	-2.8%
Average: 6 years	2005, 08, 11, 17, 19, 20	6.4%	-4.0%
Poor: 9 years	2000, 02, 03, 06, 09, 15, 16, 18, 21	1.4%	-4.7%

# Cornell DFBS Profitability



# DMC IOFC and NY ROA





# DMC Price Forecasts

MONTH	ALL MILK PRICE FORECAST (\$/CWT)	CORN PRICE FORECAST (\$/BU)	PREMIUM/SUPREME ALFALFA HAY PRICE FORECAST (\$/TON)	SOYBEAN MEAL PRICE FORECAST (\$/TON)	FEED COST FORECAST (\$/CWT)	DMC MARGIN FORECAST (\$/CWT)
Jan	\$23.10	\$6.64	\$328	\$482.40	\$15.16	\$7.94
Feb	\$21.60	\$6.80	\$324	\$500.53	\$15.41	\$6.19
Mar	\$21.10	\$6.67	\$314	\$484.40	\$15.02	\$6.08
Apr	\$20.70	\$6.70	\$315	\$457.25	\$14.86	\$5.84
May	\$19.30	\$6.54	\$317	\$423.58	\$14.47	\$4.83
Jun	\$17.90	\$6.49	\$310	\$413.46	\$14.25	\$3.65
Jul	\$17.40	\$6.22	\$288	\$443.15	\$13.88	\$3.52
Aug	\$19.70	\$5.73	\$282	\$438.80	\$13.24	\$6.46
Sep	\$21.00	\$5.21	\$288	\$411.07	\$12.56	\$8.44
Oct	\$21.60	\$4.93	\$278	\$416.16	\$12.16	\$9.44
Nov	\$21.61	\$4.81	\$262	\$464.27	\$12.16	\$9.45
Dec	\$20.63	\$4.69	\$257	\$436.50	\$11.76	\$8.87
2023	\$20.47	\$5.95	\$296.87	\$447.63	\$13.74	\$6.73

# USDA Prices

## December WASDE

Commodity	2022/23	2023/24 Forecast
Corn	\$6.54/bu	\$4.85/bu
Soybeans	\$14.20/bu	\$12.90/bu
Soybean meal	\$452/ton	\$390/ton

# Current Forecasts

	Class III	Class IV	All Milk
<b>WASDE</b>	<b>17.55</b>	<b>18.30</b>	<b>20.45</b>
<b>Futures</b>	<b>19.06</b>	<b>18.92</b>	
<b>DMC forecast</b>			<b>21.71</b>