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Food and
Agribusiness
Industry
Advisors

2021 Outlook for Food and Agriculture: Reversion to Normal

March 2021

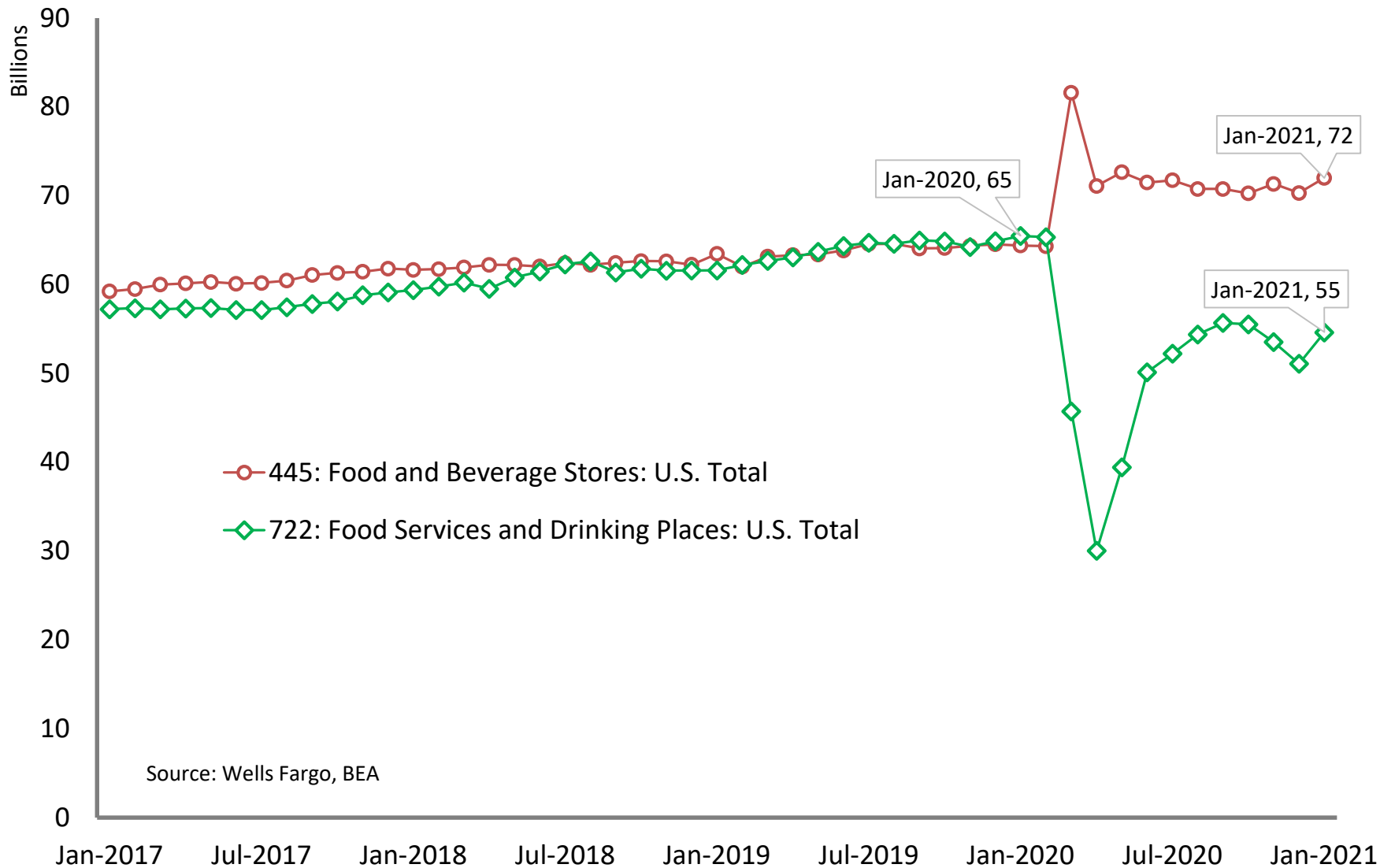
2021 Issues: Reversion to Normal?

1. Where are we going to eat?
 1. Who is doing the cooking?
 2. What habits will stick around?
 3. Impacts on pricing and labor.
2. The economics of trade.
 1. Relative growth rates
 2. Currency strength
 3. Trade disputes (are there any other kind?)
3. Government support
 1. Unsustainable levels
 2. What mechanisms will be favored
4. Keep track of technology

It all depends on your sales channels.

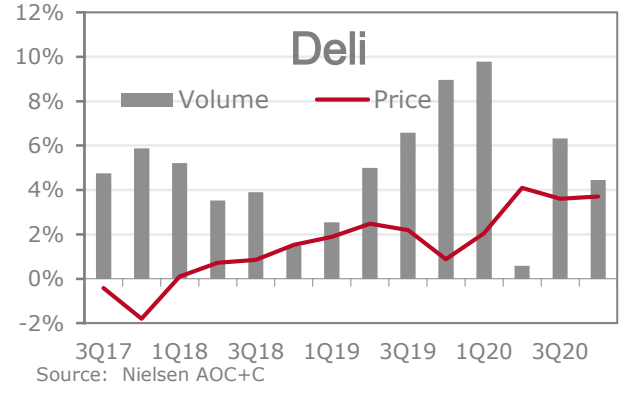
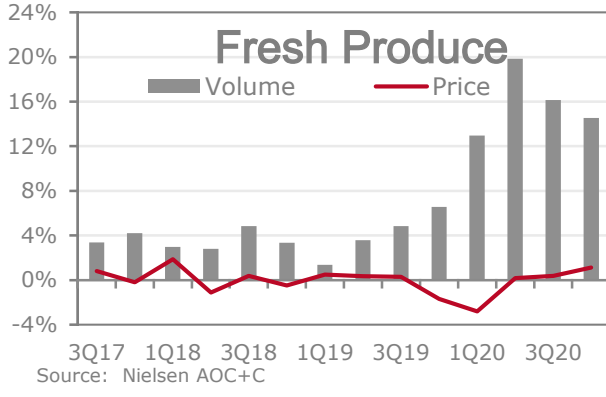
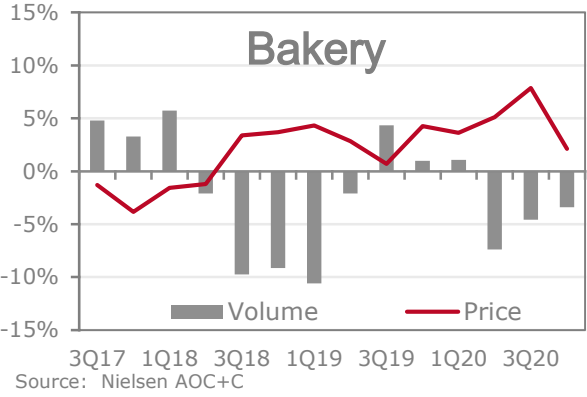
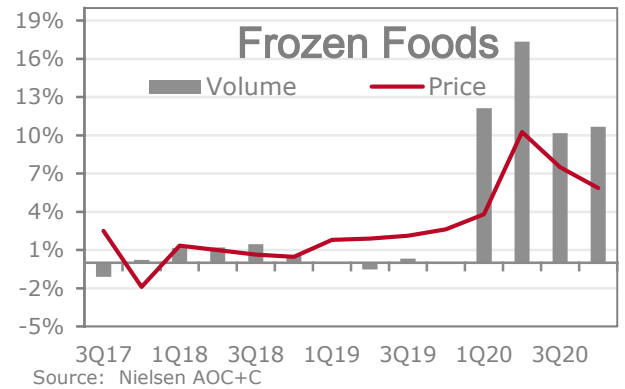
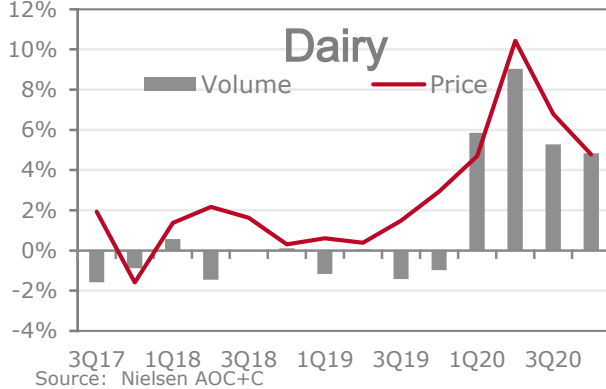
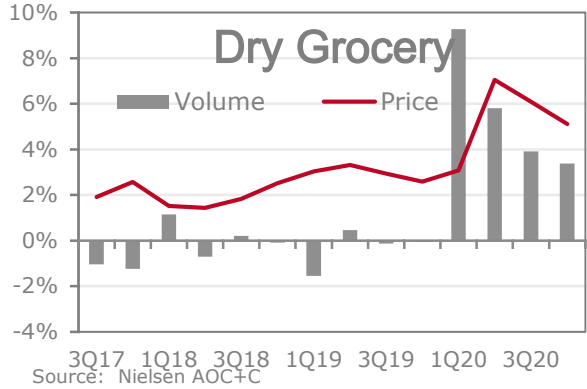
BEA Retail Sales

in billions of USD monthly seasonally adjusted



Source: Wells Fargo, BEA

The strength of grocery: Nielsen retail sales trends by department



Transitory or Permanent?

1. Structural change → Permanent

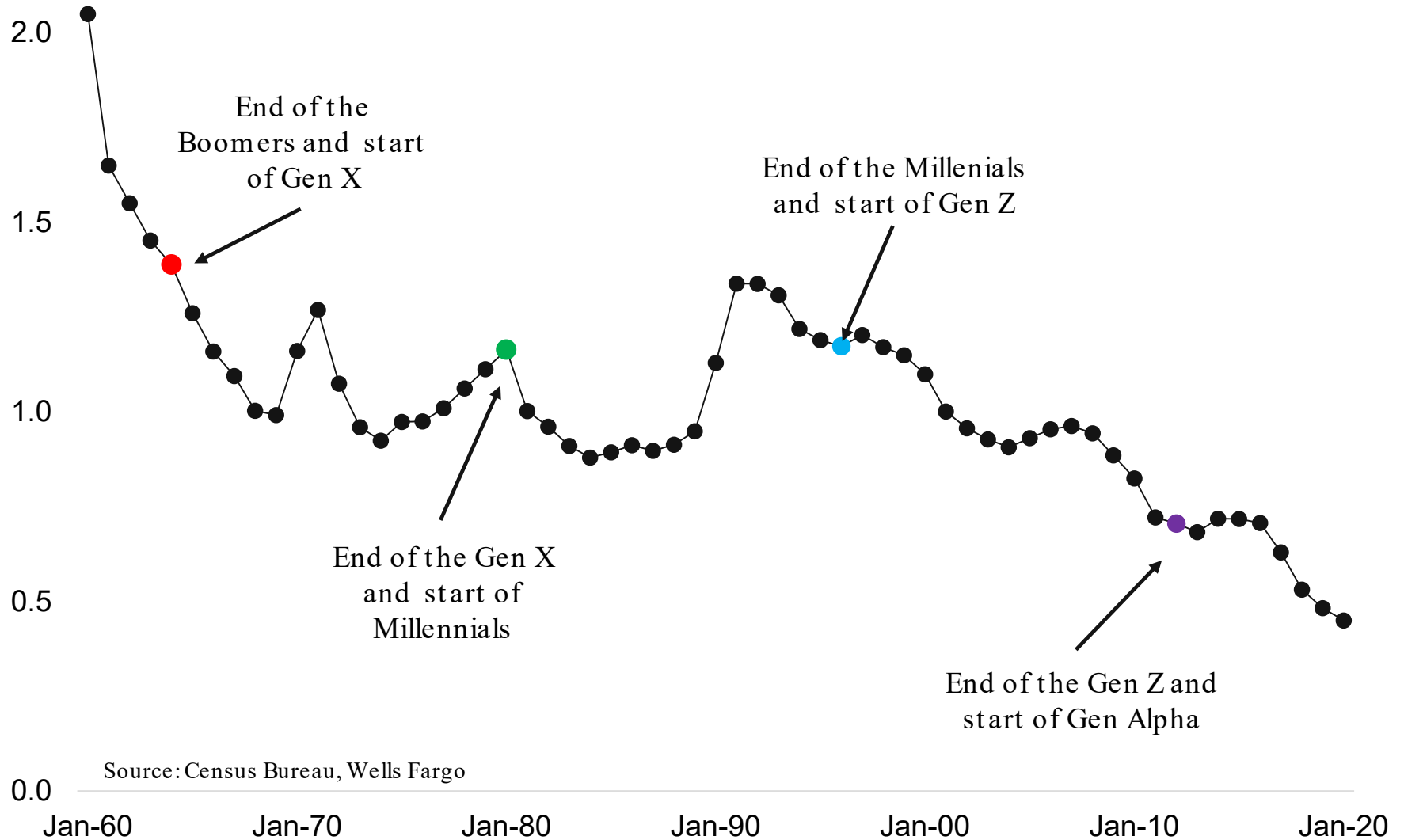
1. Elimination of demand?
2. Alternative technology?
3. Regulatory change?

2. Cyclical change → Transitory

1. Supply or demand shock
2. Currency or trade issue
3. Weather events
4. Change in interest rates

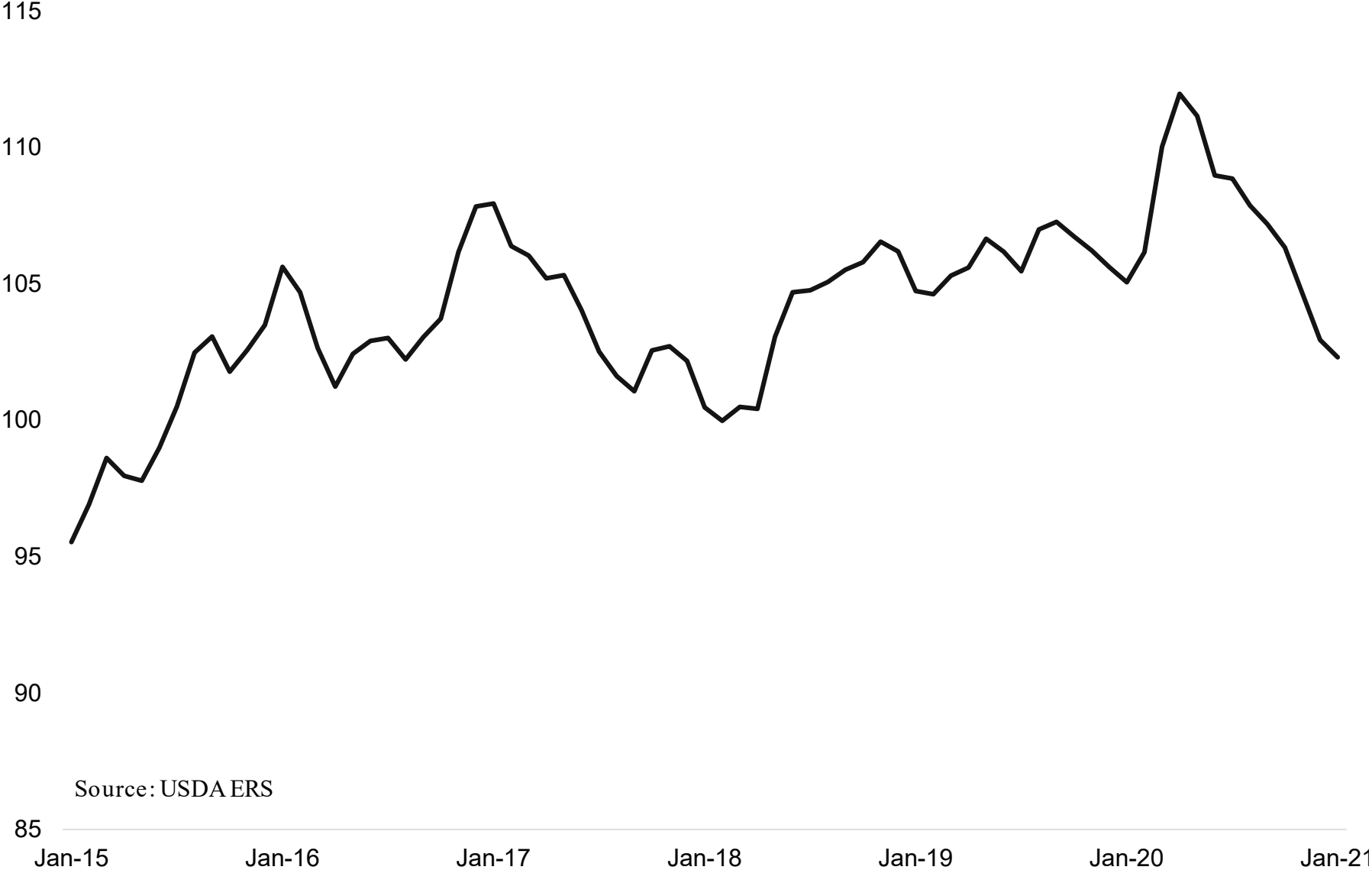
Demographics are destiny?

U.S. Population Growth Rate
year over year percent change



A weaker dollar always helps

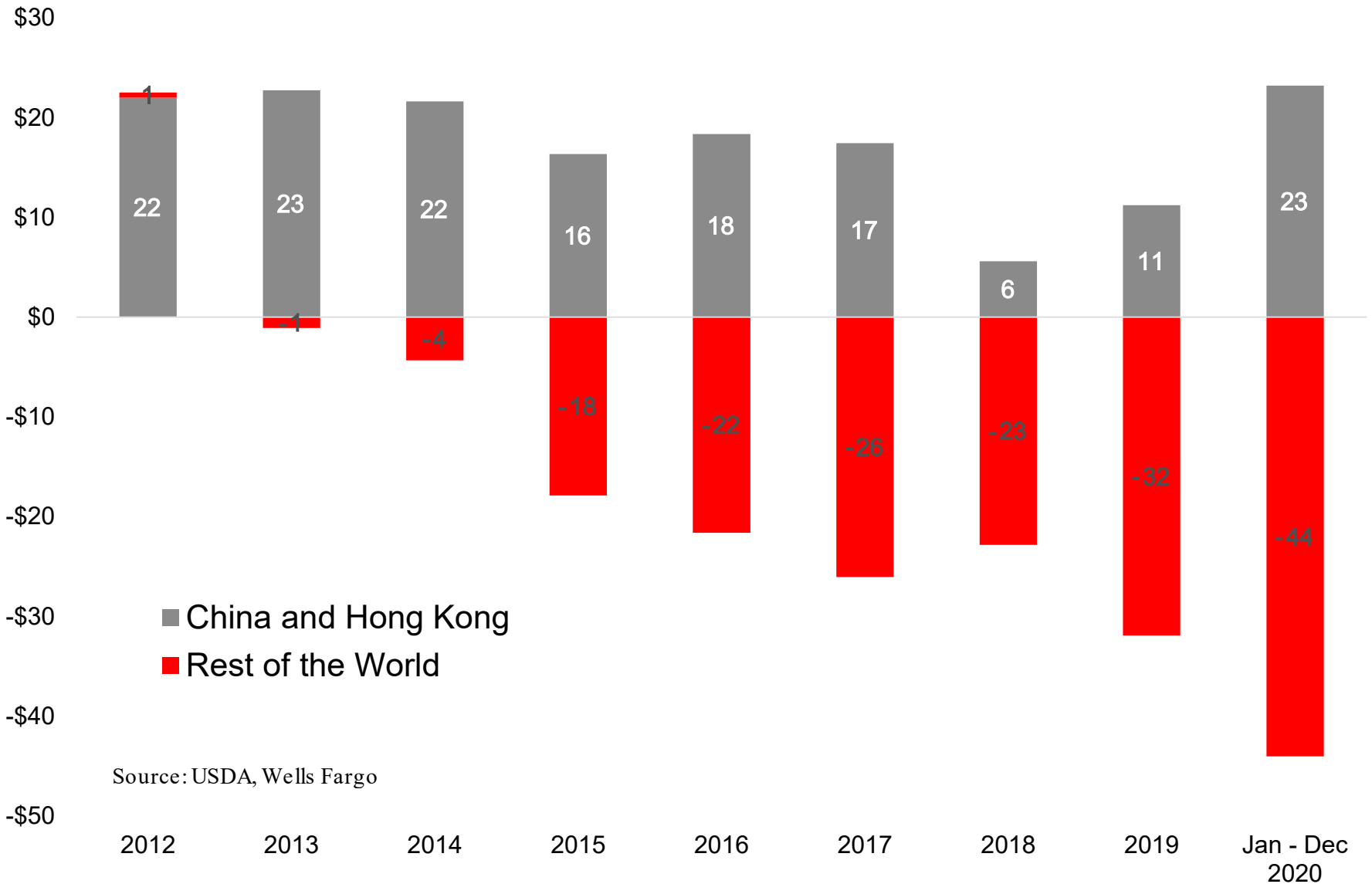
U.S. Agricultural Dollar Index



Source: USDA ERS

China is back on top of the trade charts.

U.S. Net Trade in Agricultural Products: Billions of dollars

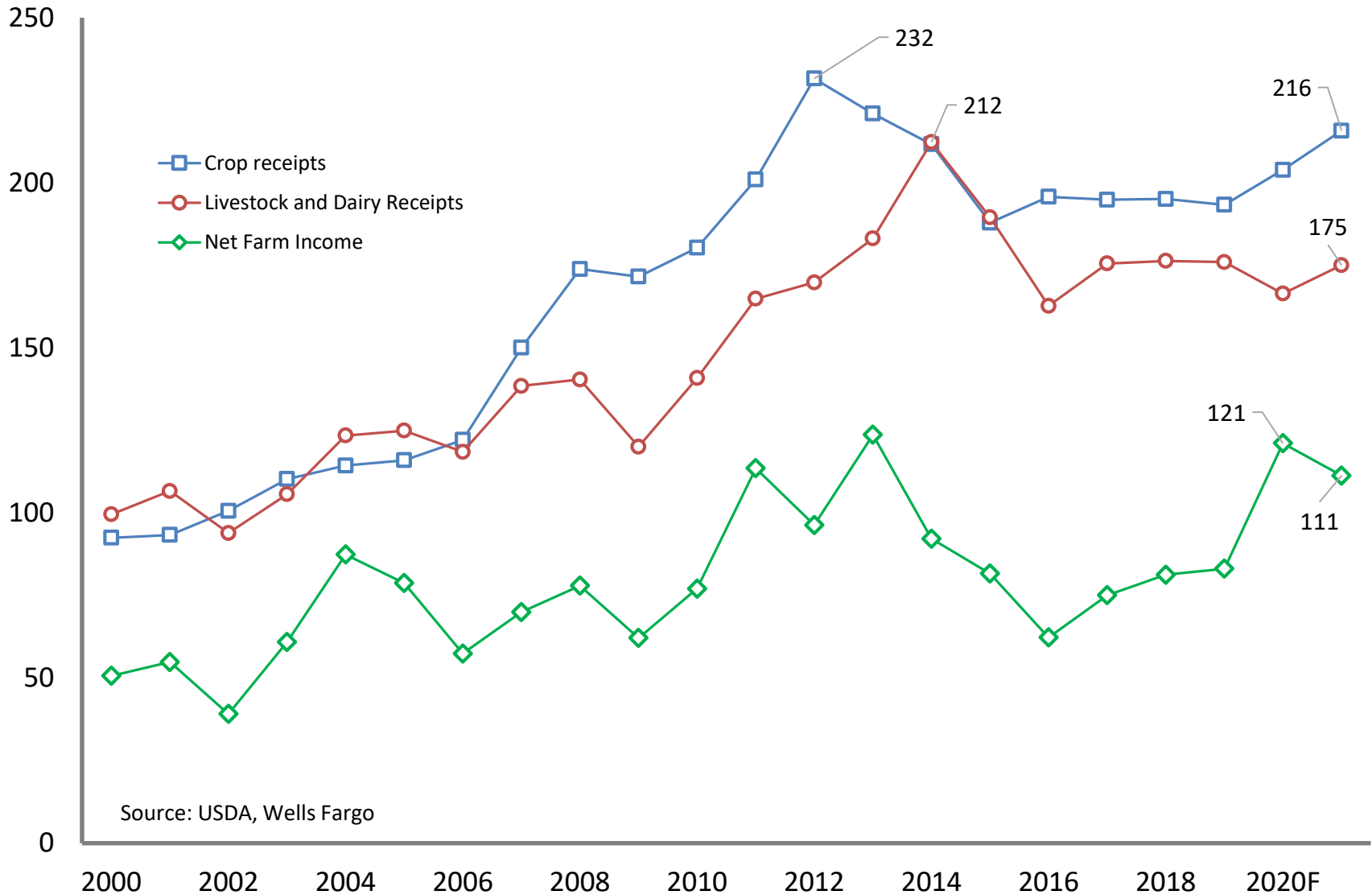


Source: USDA, Wells Fargo

Source: Wells Fargo, USDA

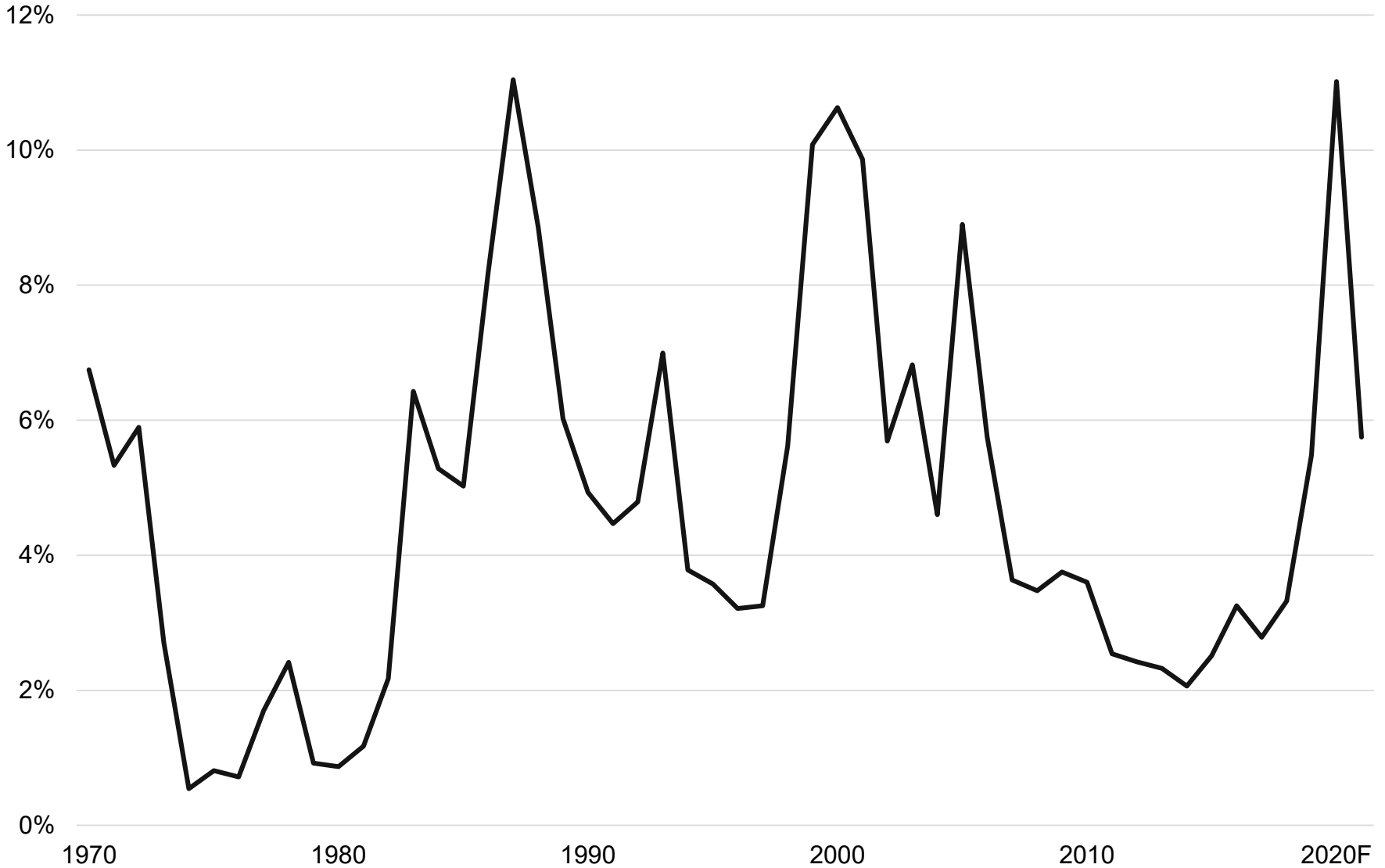
All said and done, 2020 was profitable.

USDA Farm Financials in Billions of Dollars



A sudden spike in support.

Government Direct Payments as a Percent of Value-Added



Source: USDA ERS

Source: Wells Fargo, USDA

There have been many programs over the years.

Federal Government direct farm program payments, 2011-2020F
Nominal (current dollars)

United States	2015	2016	2017	2018	2019	2020F
	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Direct government payments	10,804,486	12,979,676	11,531,611	13,669,010	22,447,200	46,477,193
Price Loss Coverage (PLC)	754,928	1,942,170	3,213,642	2,064,825	1,945,080	5,030,000
Agriculture Risk Coverage (ARC)	4,376,892	6,061,419	3,797,083	1,109,009	710,107	1,070,300
Loan deficiency payments	154,844	165,850	8,459	-515	6,780	16,916
Marketing loan gains	53,528	40,158	3,440	0	695	151,632
Dairy Margin Coverage Program	686	10,394	19	250,013	294,551	184,101
Conservation	3,618,928	3,763,963	3,824,171	3,986,516	3,830,392	3,845,000
Biomass Crop Assistance Program (BCAP)	7,364	6,879	1,236	236	83	NA
Supplemental and ad hoc disaster assistance	1,800,619	657,543	679,465	915,566	1,447,919	32,430,302
Market Facilitation Program	NA	NA	NA	5,127,345	14,202,517	3,720,273
Miscellaneous programs	-24	9,259	3,129	2,514	10,445	28,669

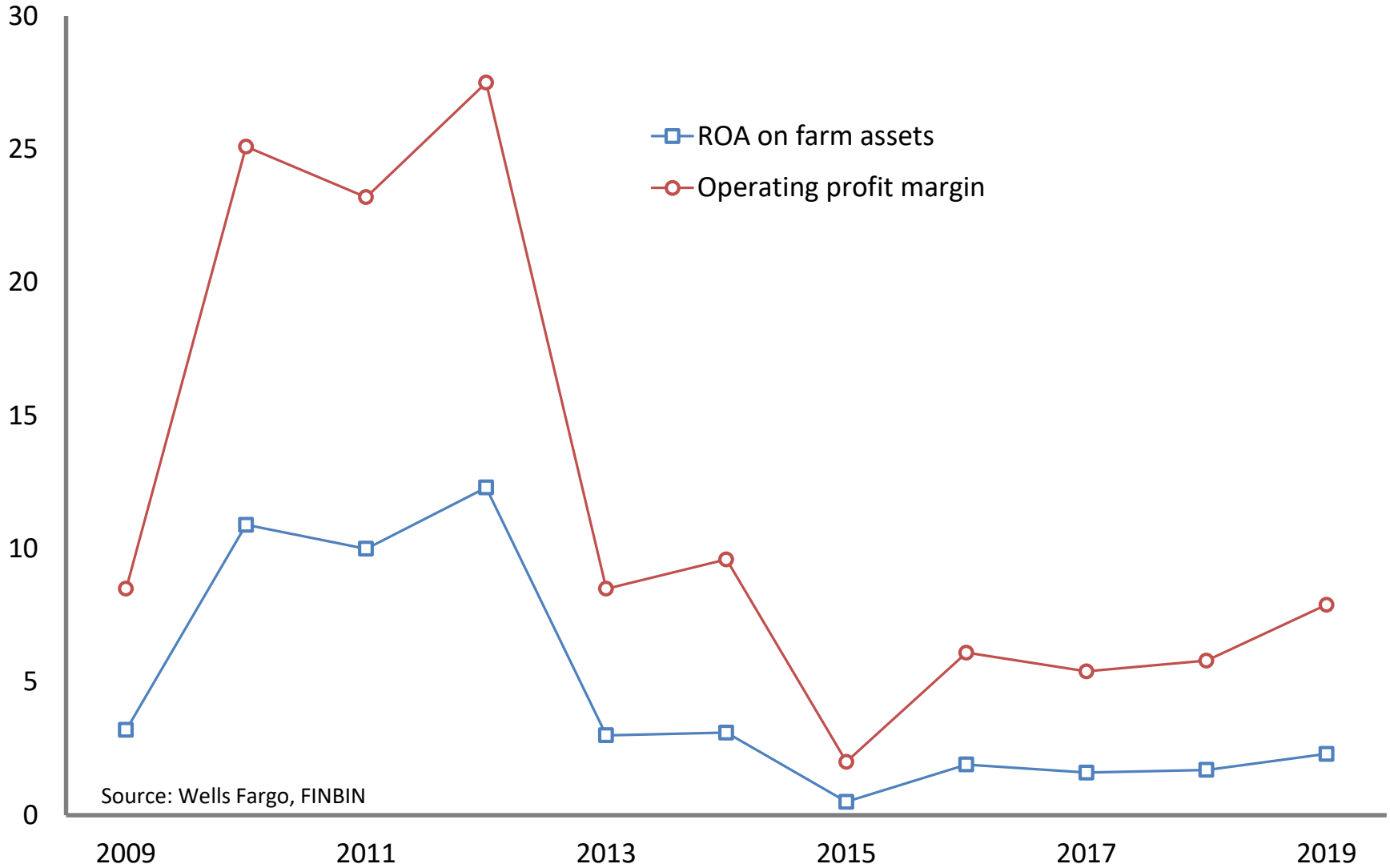
Source: USDA ERS

What drives the turn-over in agriculture?

1. Technological change management
2. Financial and I/T skill sets
3. The business management mentality

What is normal for agricultural returns?

Farm/Livestock Financial Indicators: Median Value



Source: Wells Fargo, FINBIN

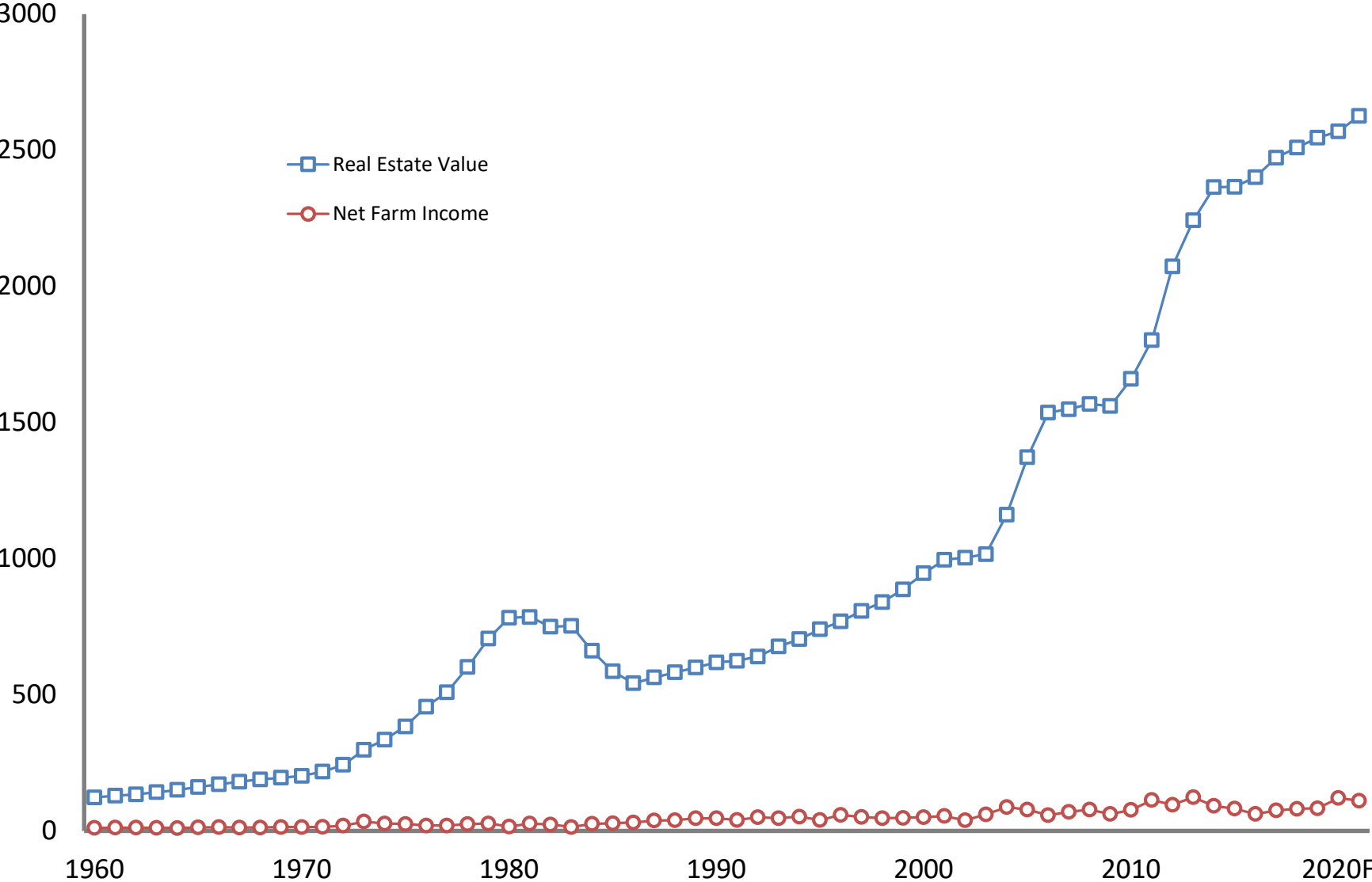
Astounding variation between the participants.

2019 FINBIN Decile Distribution of Key Farm Financial Results

	Group Median	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Return on Assets	2.3	-11.4	-4.2	-1.4	0.3	1.7	3	4.5	6.3	8.8	16.6
Operating profit margin	7.9	-51.8	-14.1	-4.7	1.2	6	10.1	14.3	18.7	24.6	36.3
Net Farm Income (000s)	\$ 36	\$(122)	\$(33)	\$(5)	\$11	\$27	\$45	\$74	\$114	\$178	\$347
* Source: Center for Farm Financial Management FINBIN, Wells Fargo											

Income versus the cost of financing.

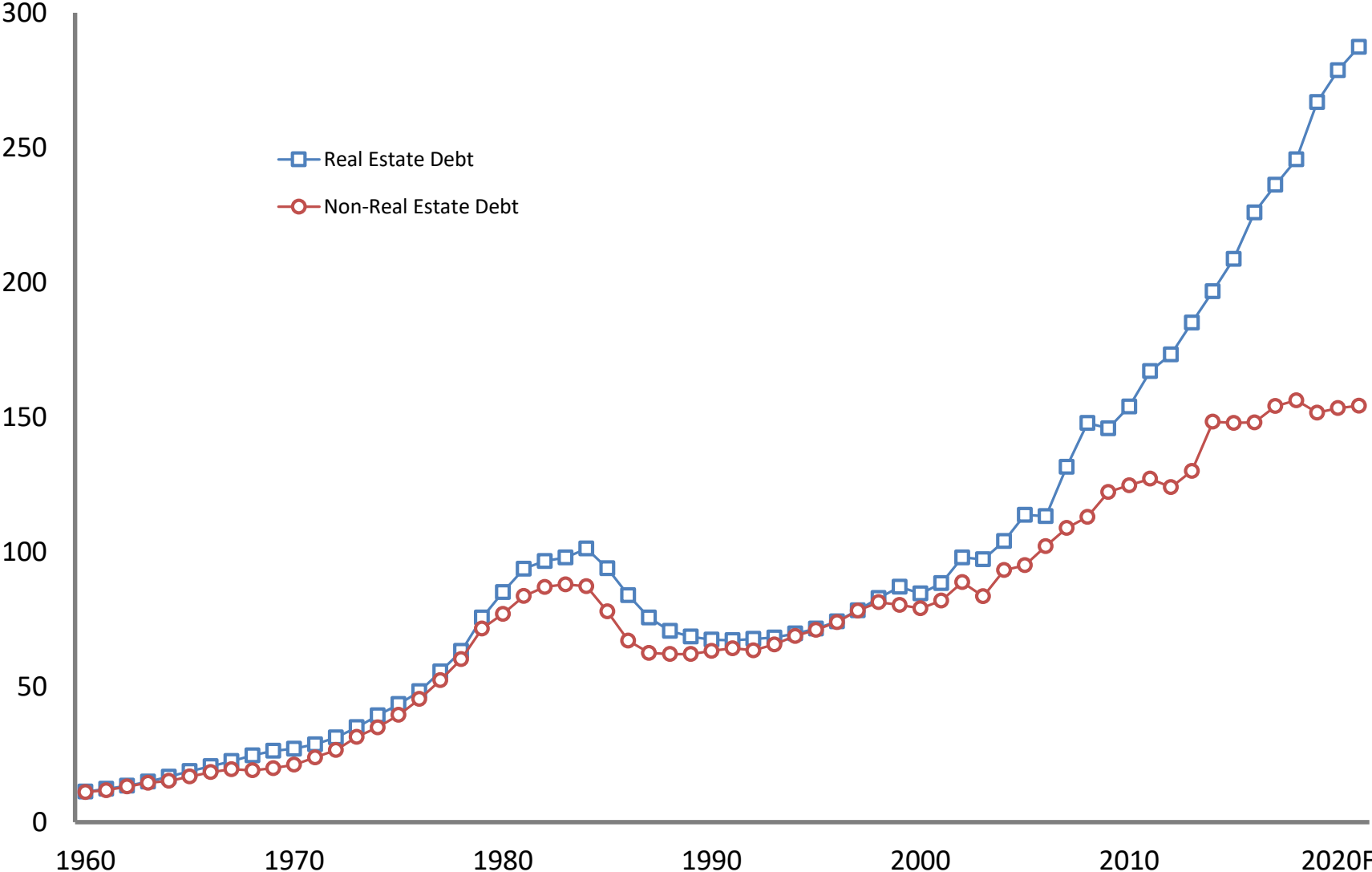
Farm Income and Land Values in Billions of Dollars



Source: USDA, Wells Fargo

This has become unbalanced.

Debt Funding in Billions of Dollars



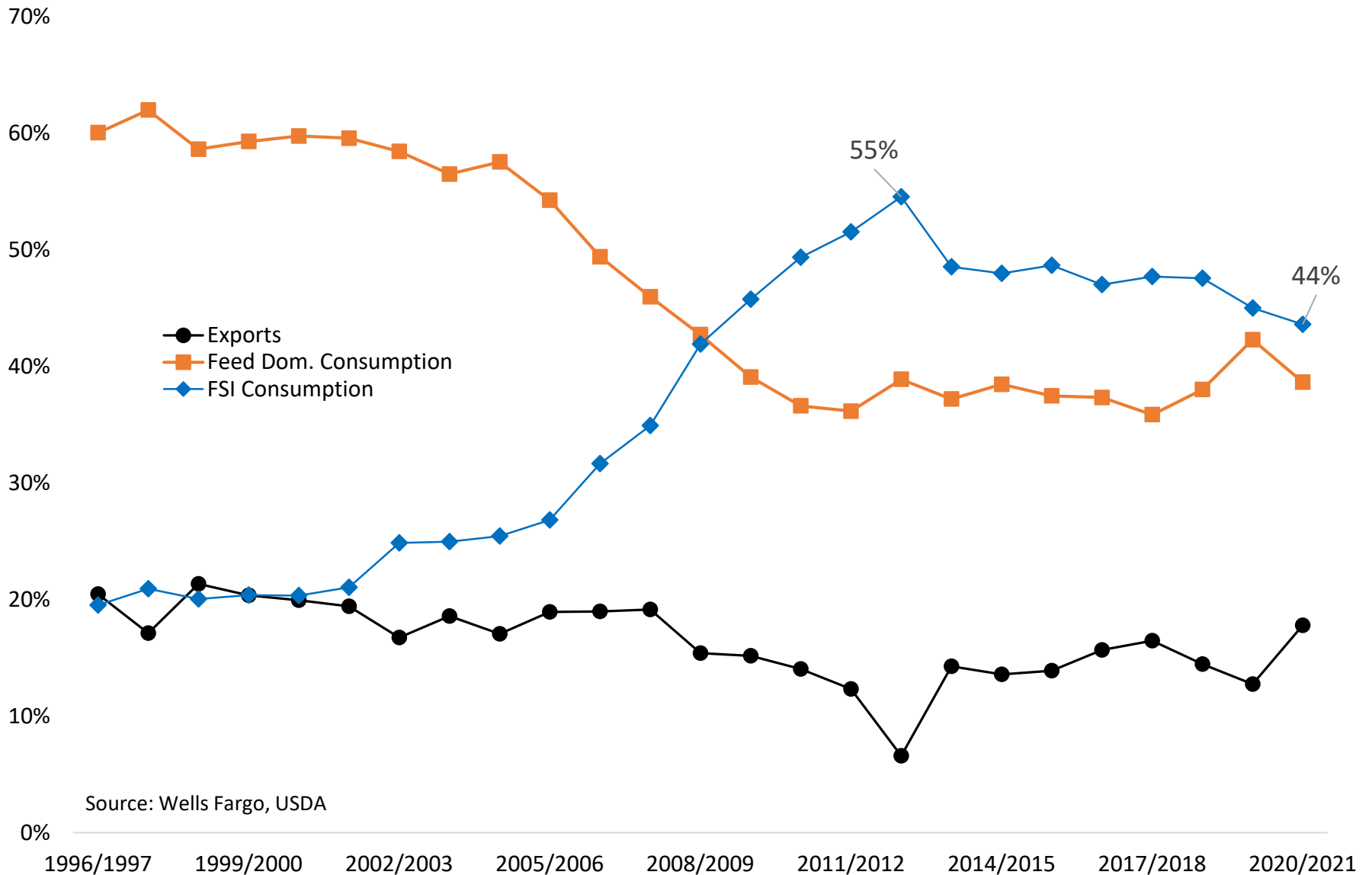
Source: USDA, Wells Fargo

Making hay while the sun shines.

1. Protein growth will be the long-term driver
2. Which proteins matter.
3. Ethanol will face technological disruption.

Where we came from for corn utilization.

Share of U.S. Corn Utilization

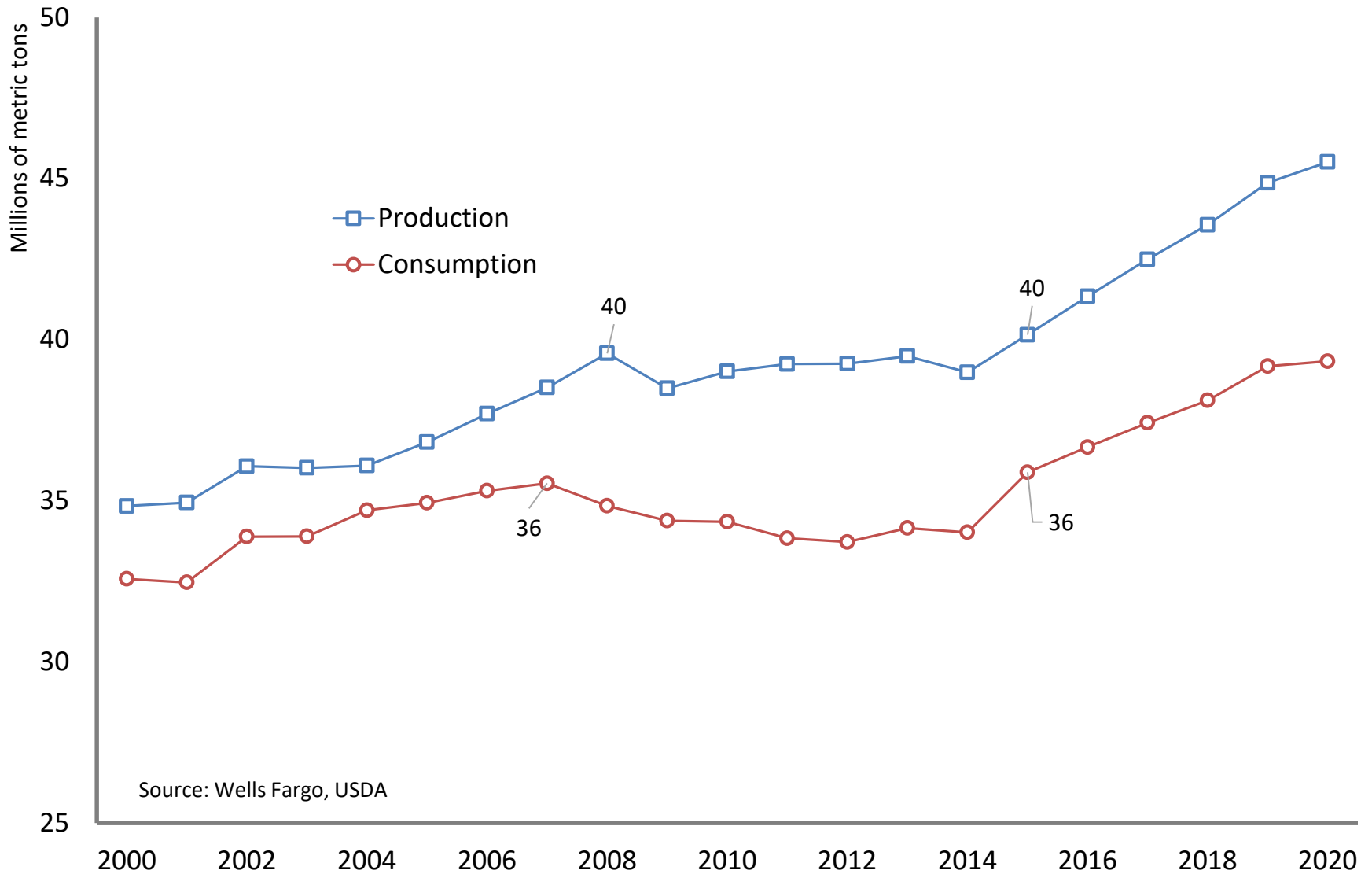


Source: Wells Fargo, USDA

Source: Wells Fargo, USDA

This is the long term driver of U.S. agriculture.

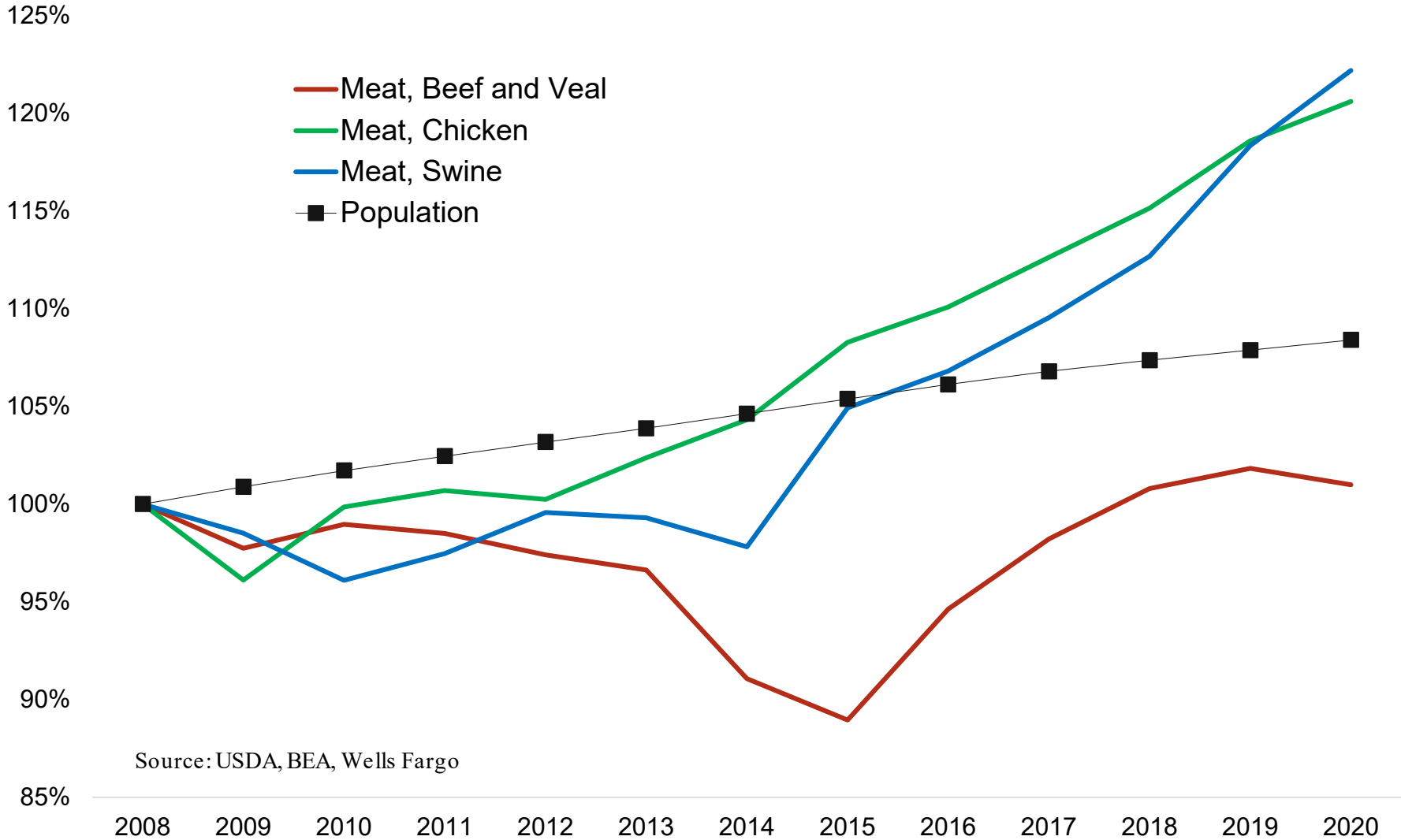
U.S. Meat Production and Consumption



Source: Wells Fargo, USDA

Only 2 of the big 3 are on the move.

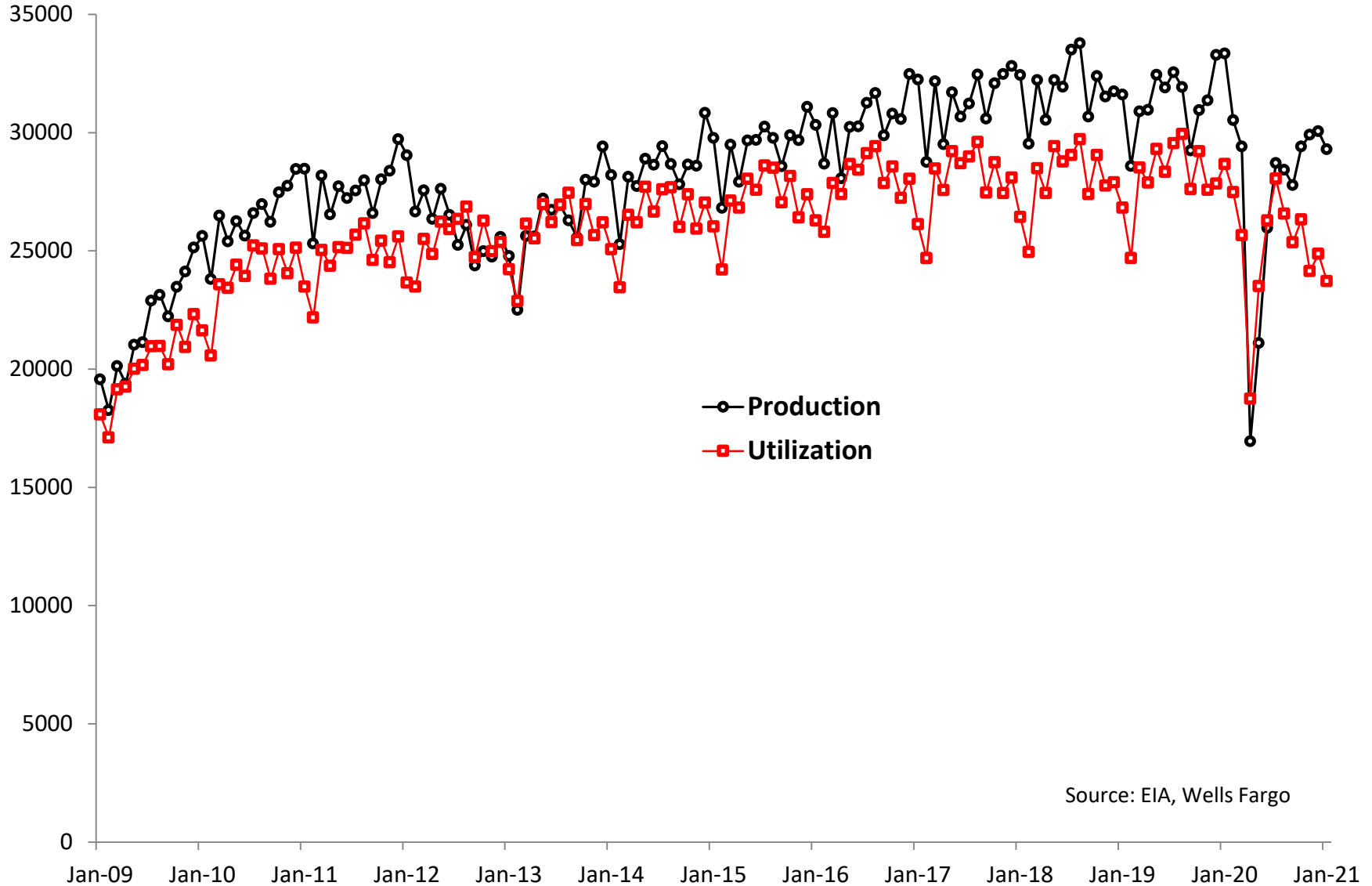
Meat Production versus Population
Indexed to 2008



Source: USDA, BEA, Wells Fargo

This is a transitory shock. Technological disruption comes later.

Ethanol Supply and Demand
000s of barrels



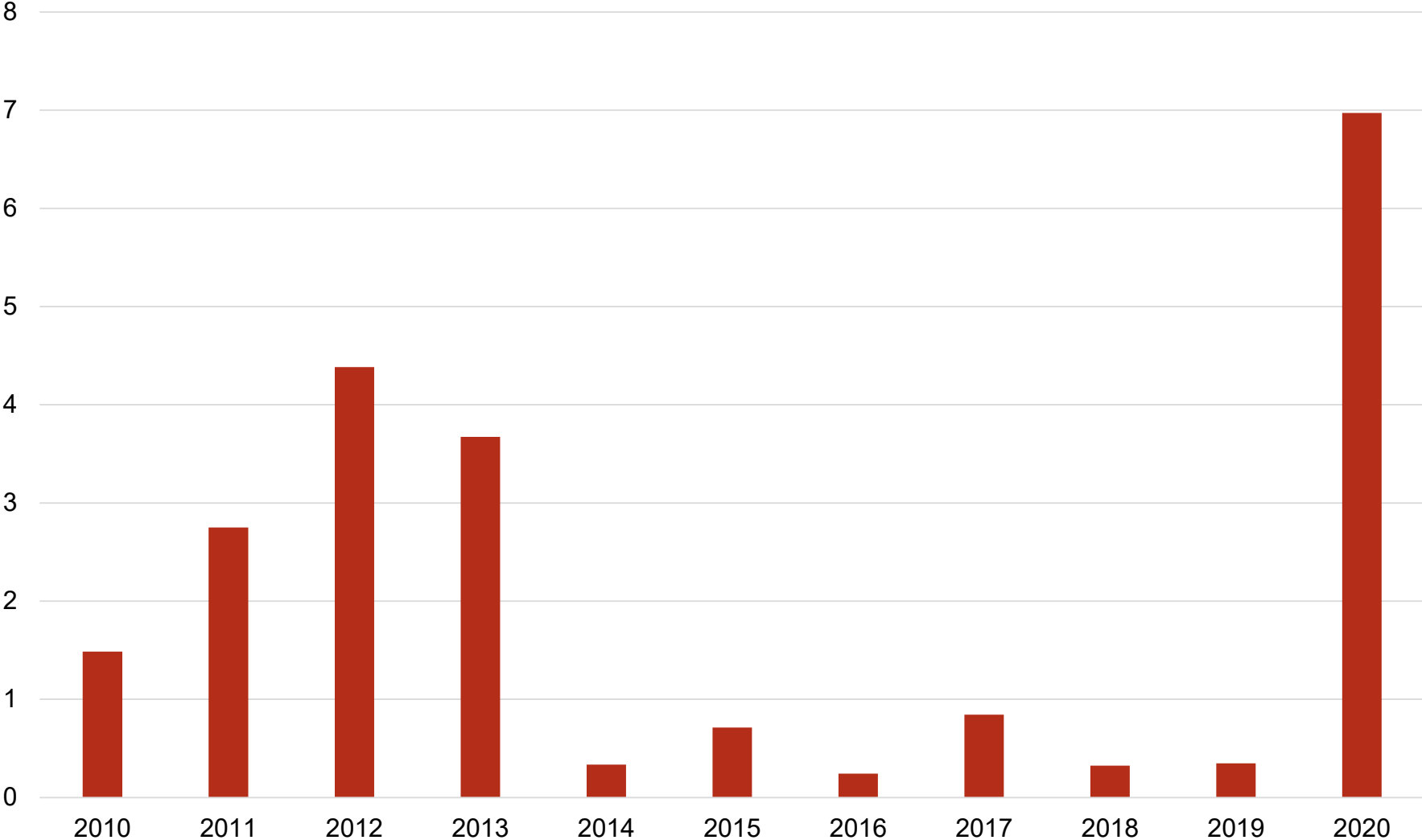
Source: EIA, Wells Fargo

What's up with the recent rally?

1. Mild supply shock
 1. U.S. yields were “slightly weak”
 2. South America is/was “too dry”
2. China is back
 1. Normalized trade
 2. Rebuilding it hog herds
 3. Economic growth normalizes
3. Protein demand will drive growth
4. Ethanol demand is weak
 1. It will recover from COVID
 2. It will decline from technological change

A big jump for a big country.

U.S. Corn Exports to China
millions of metric tons



Source: USDA

Source: Wells Fargo, USDA

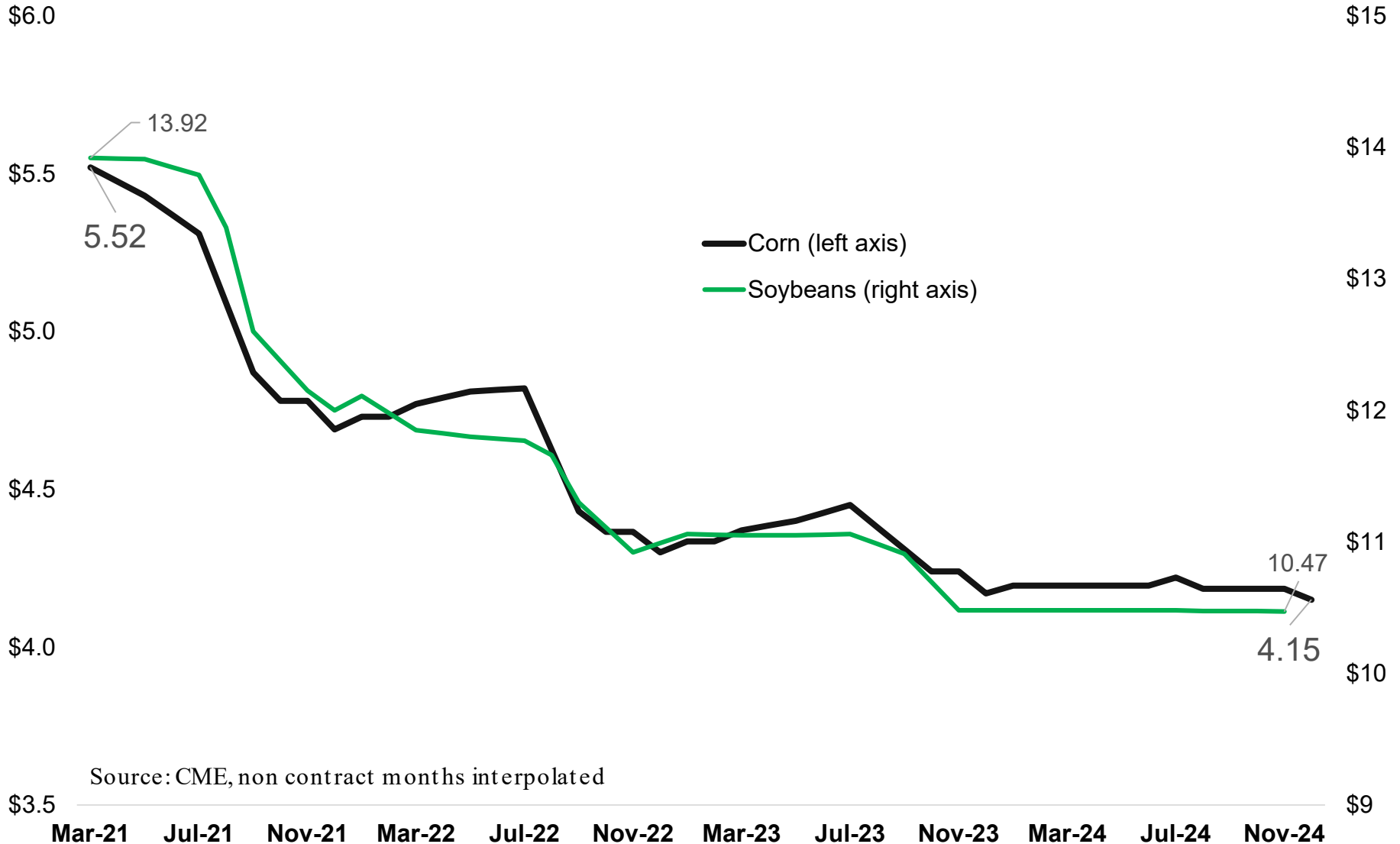
China used 289 million metrics of corn in 2020.

Commodity	Attribute	Country	2020/2021	Unit Description
Corn	Area Harvested	China	41,264	(1000 HA)
Corn	Beginning Stocks	China	200,526	(1000 MT)
Corn	Production	China	260,670	(1000 MT)
Corn	Imports	China	24,000	(1000 MT)
Corn	Total Supply	China	485,196	(1000 MT)
Corn	Feed Dom. Consumption	China	206,000	(1000 MT)
Corn	FSI Consumption	China	83,000	(1000 MT)
Corn	Domestic Consumption	China	289,000	(1000 MT)
Corn	Ending Stocks	China	196,176	(1000 MT)
Corn	Total Distribution	China	485,196	(1000 MT)

Source: USDA FAS 2/17/2021

The new normal lasts about one trading session.

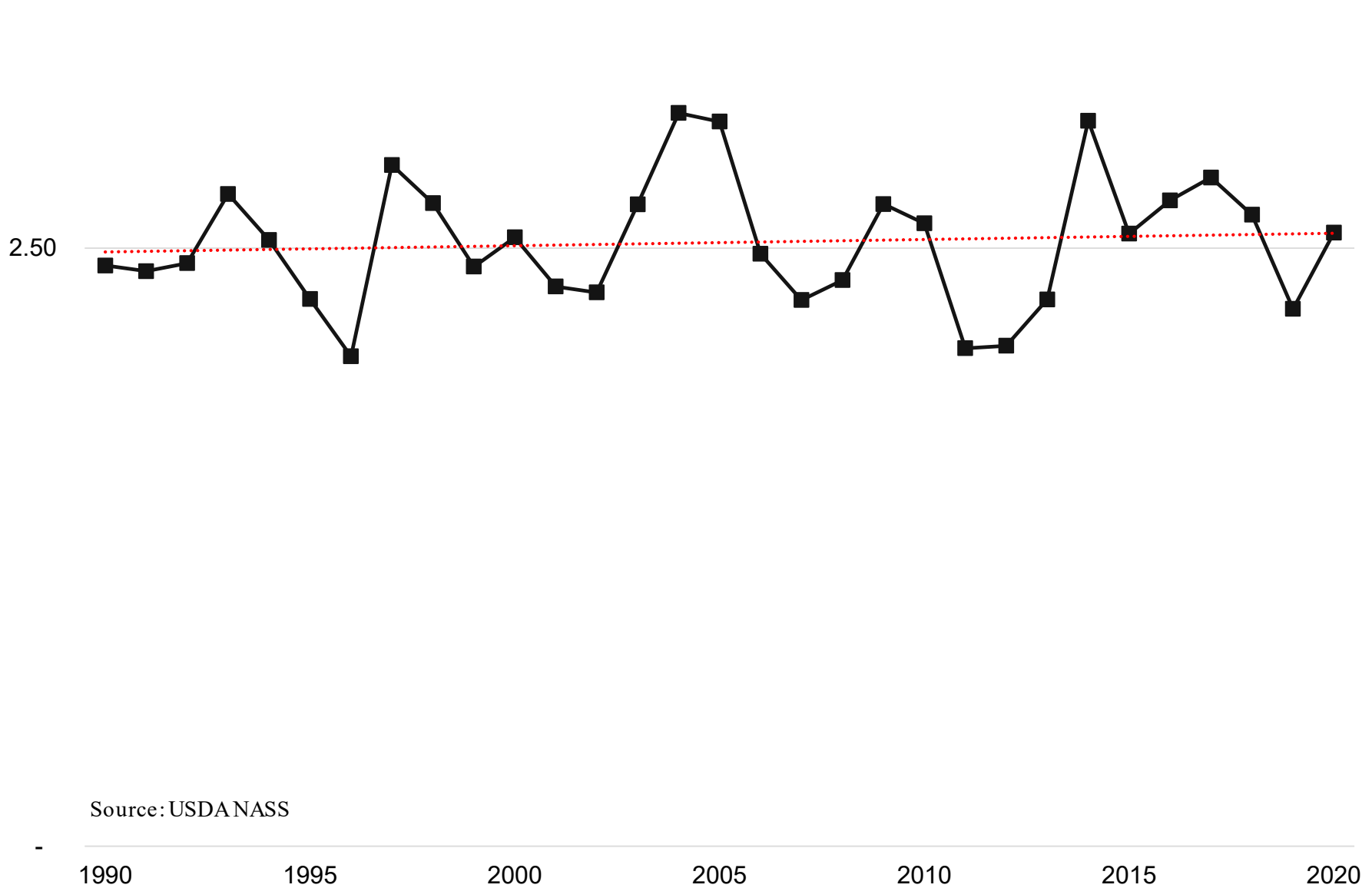
CME Snapshot of Corn and Soybeans- 2/26/21 @ 10:00 am CST
\$ per bushel



Source: CME, non contract months interpolated

When you “buy” acres you make it hard on yourself.

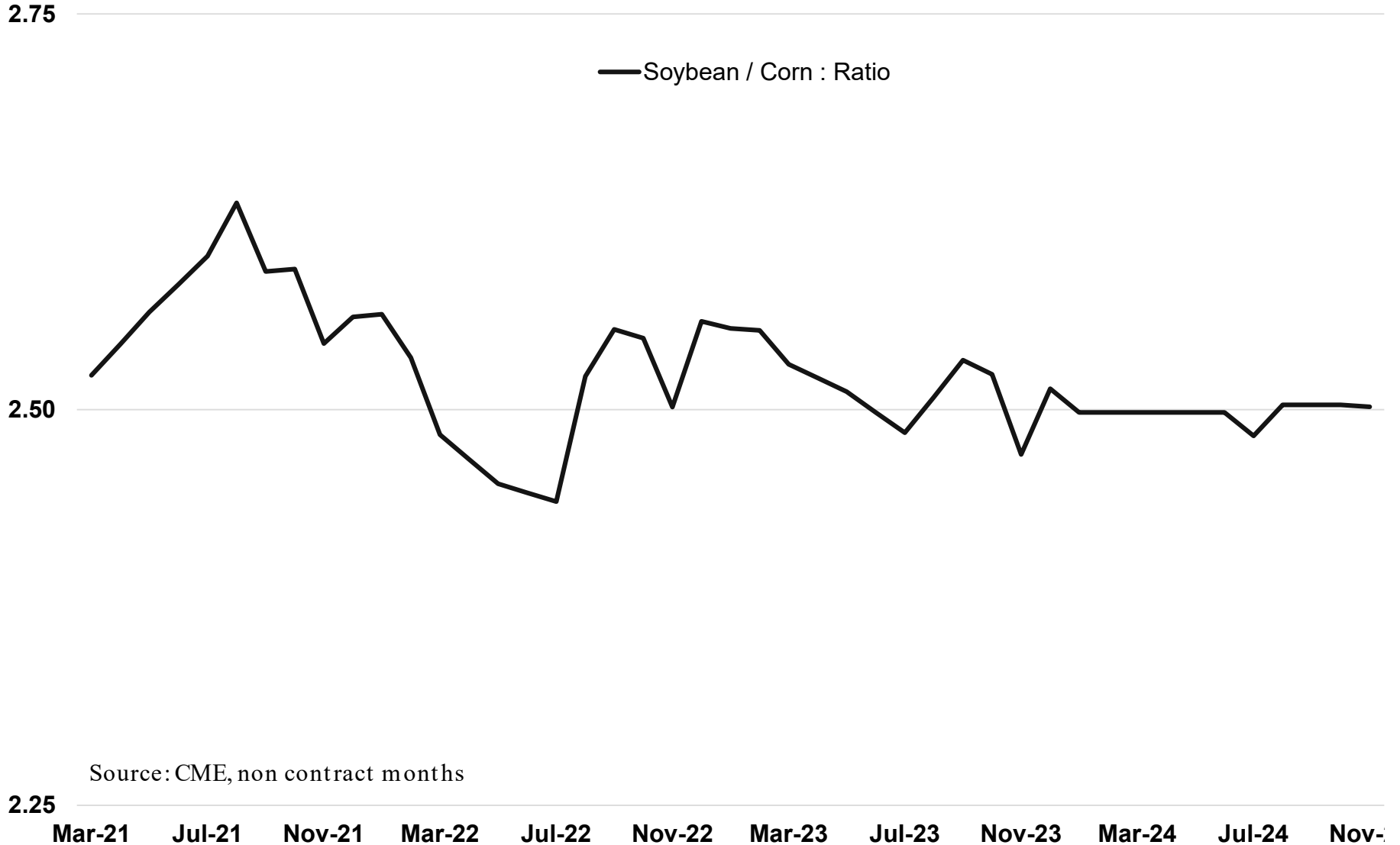
USDA Cash Price Ratio: Soybeans / Corn



Source: USDANASS

The price of anything is what you “gave up” to get it.

CME Snapshot of Corn and Soybeans - 2/26/21 @ 10:00 am CST
\$ per bushel

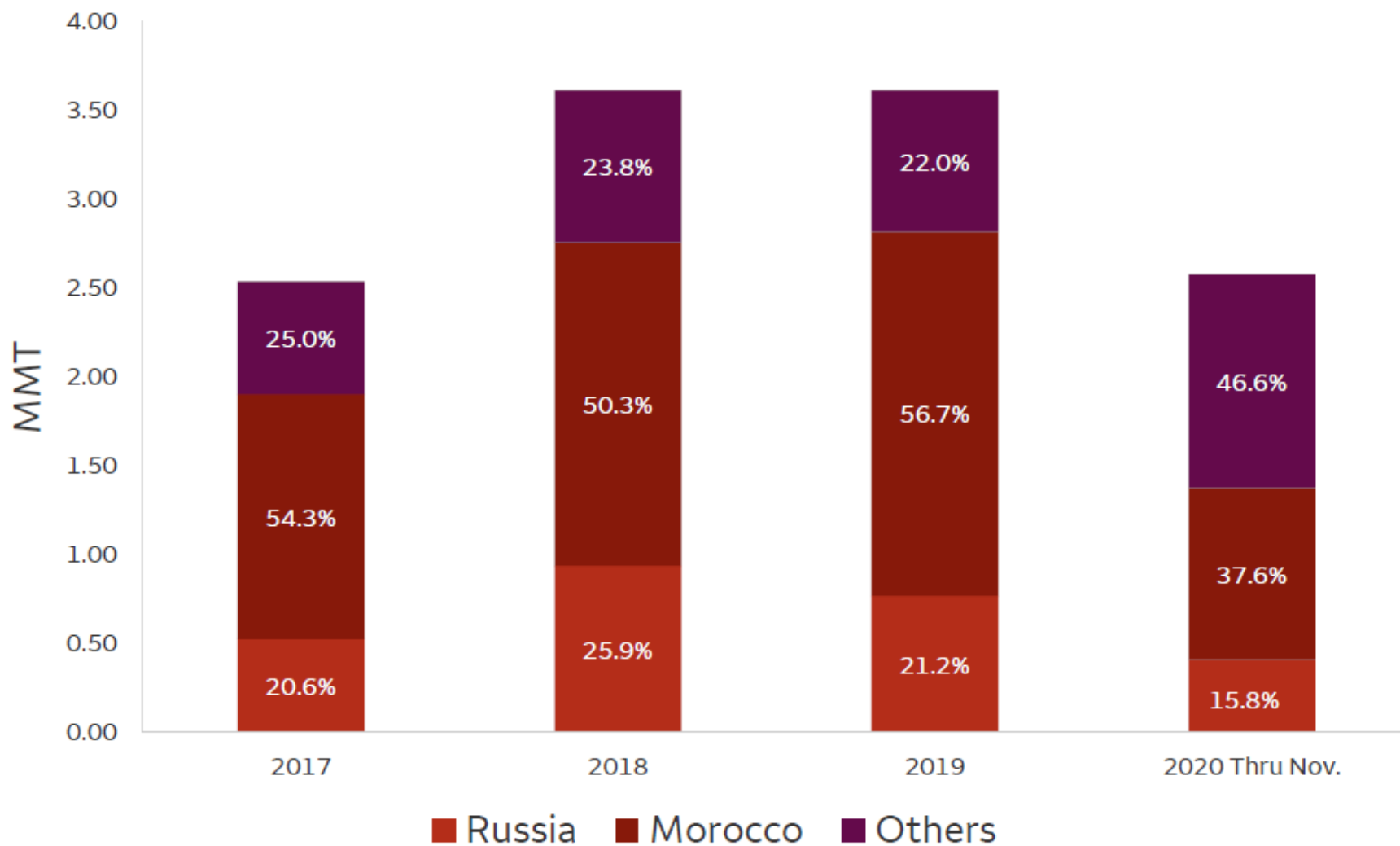


Crop Inputs

- Grain Prices/Acreage Plans
- Phosphates
- Fertilizer Price Trend/Affordability
- Regulatory Environment
- Carbon Trade/Sustainability
- Covid-19 Impact

Phosphate (P) imports are down

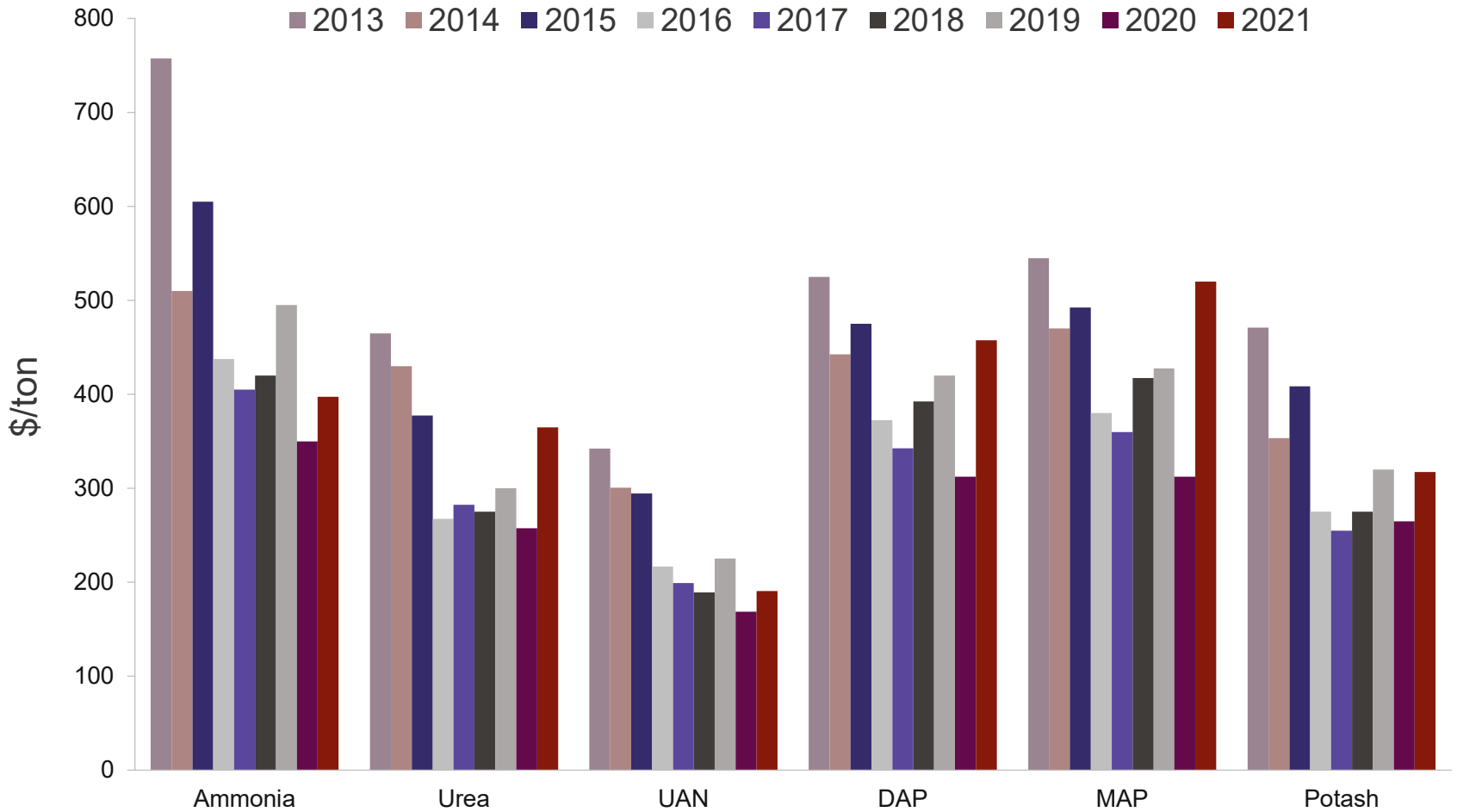
U.S. Phosphate Fertilizer Imports, 2017-2020



Source: [U.S. Census Bureau - accessed through Global Trade Atlas](#)

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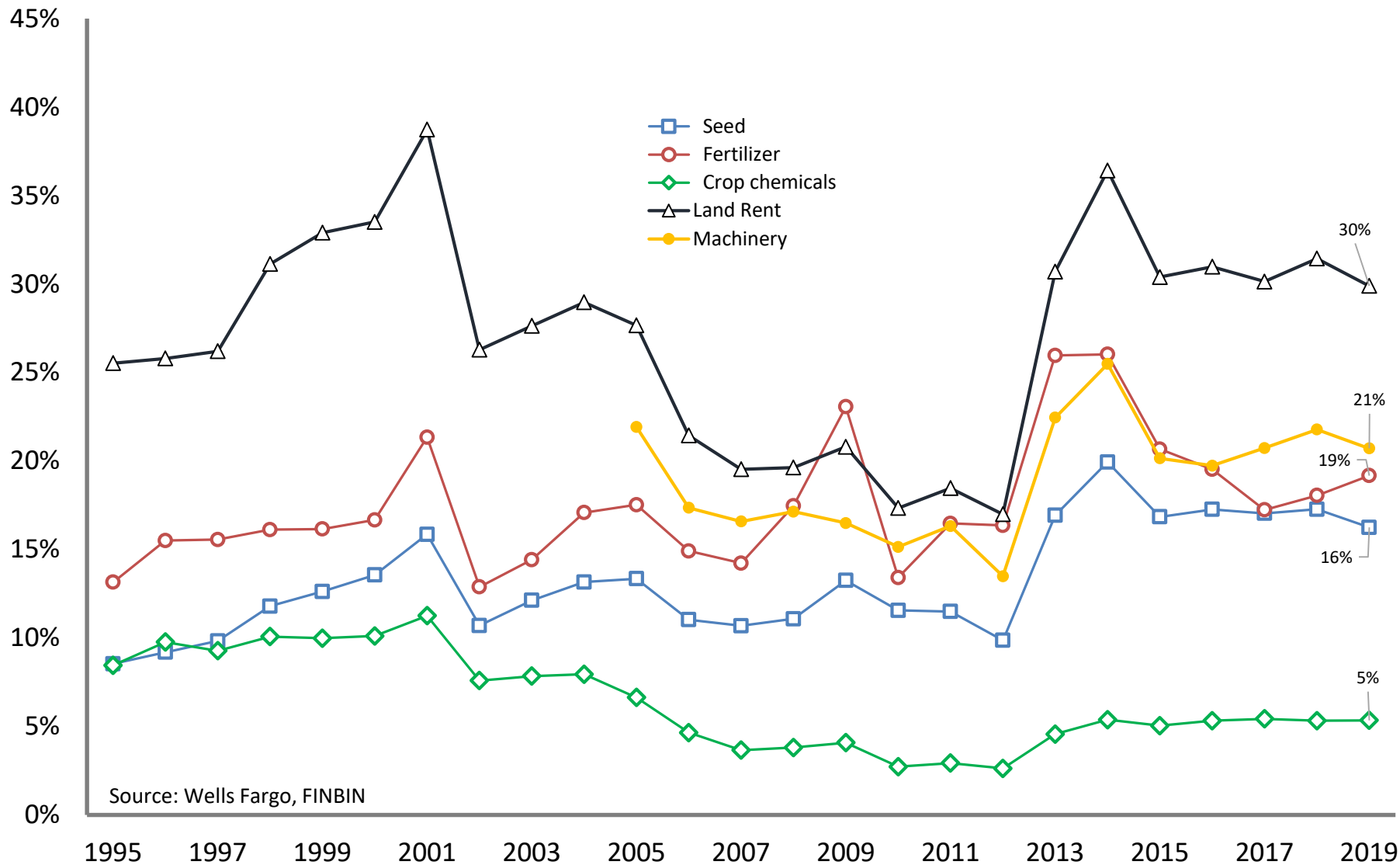
Corn Belt wholesale fertilizer prices as of late-January



Source: Green Markets

If you not playing MoneyBall, you are not playing.

Corn: Percentage of Crop Yield Paid to Input Factor



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