Will the soaring farmland market continue to rise?

Ag Decision Maker
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Special Report

The Iowa and Midwest farmland markets have seen tremendous momentum over the past 18 months. Both the Iowa Land Value Survey (Table 1) and the Federal Reserve Bank at Chicago's AgLetter show that average farmland values in Iowa rose 29–30% last year, to the highest nominal values since the 1940s. Concerns about the sustainability of high land prices and possible changes in interest rates were the second- and third-most frequently mentioned negative factors in the 2021 Iowa Land Value Survey, after higher input costs. This article will discusses the factors behind the recent farmland value surge and examines the impacts of proposed interest rate hikes.

Decoding the recent surge in farmland values

Table 2 presents the two most recent quarterly surveys of agricultural lenders by the Federal Reserve Banks of Kansas City and Chicago. Non-irrigated cropland values in Kansas, western Missouri, and Nebraska saw 29%, 22%, and 24% growth, respectively, from the first quarter of 2021 to the first quarter of 2022. Illinois, Indiana, and Wisconsin also saw 18%, 23%, and 13% annual growth, respectively, since April 2021. Focusing on Iowa, according to the May 2022 Chicago Fed Ag Letter, on average, "good" Iowa farmland saw a 3% increase in the first quarter of 2022, which shows a slow-down in the momentum but the land market is still on the rise.

Put simply, land value is the net present value of all discounted future income flows. With certain assumptions imposed, one could think of land value being net income divided by interest (discount) rate. In other words, interest rates inversely correlate with farmland values. At lower interest rates, demand for farm loans increases due to lower interest payments, signaling lower returns on competing assets such as bonds, thereby leading to a higher demand for land. As a result, the recent interest rate hikes put downward pressure on farmland values.

Table 1. Recent changes in Iowa farmland values

Year	Value per acre	Dollar change	% change
2012	$8,296	$1,588	23.7%
2013	$8,716	$420	5.1%
2014	$7,943	-$773	-8.9%
2015	$7,633	-$310	-3.9%
2016	$7,183	-$450	-5.9%
2017	$7,326	$143	2.0%
2018	$7,264	-$62	-0.8%
2019	$7,432	$168	2.3%
2020	$7,559	$127	1.7%
2021	$9,751	$2,192	29.0%

Source: Iowa State University Land Value Survey

Table 2. Farmland value changes in the midwest and great plains states

Farmland value change: Q1 2021 to Q1 2022				Value of "good" farmland		
	Non-irrigated	Irrigated	Ranchland		Jan 1, 2022 to Apr 1, 2022	Apr 1, 2021 to Apr 1, 2022
Kansas	+29%	+26%	+22%	Illinois	+4%	+18%
Western Missouri	+22%		+23%	Indiana	+8%	+23%
Mountain States	+32%	+25%	+18%	Iowa	+3%	+28%
Nebraska	+24%	+19%	+25%			
Oklahoma	+16%	+19%	+16%	Wisconsin	+4%	+13%
Tenth District	+24%	+21%	+22%	7th District	+4%	+23%

Sources: Chicago Fed Ag Letter; Kansas City Fed Ag Credit Survey

The recent surge is buoyed by substantially higher commodity prices, low interest rates, stronger-than-expected crop yields, strong demand, including from investors, and limited land supply. Despite the substantially higher input costs in part due to the Russia-Ukraine conflict, commodity prices are substantially higher, and a vast majority of farmers are still capturing a decent profit margin. At the same time, respondents are increasingly concerned about higher input costs, the sustainability of high land prices, hikes in interest rates, and political uncertainty regarding policies, such as possible tax law changes, which were all cited as negative factors influencing the land market.

The impact of the Federal Reserve interest rate hikes

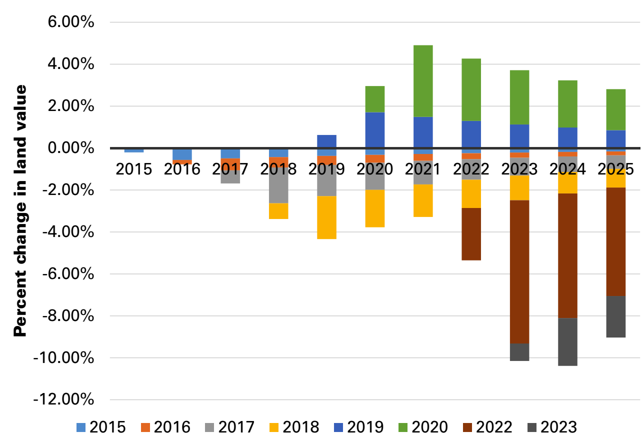
The Federal Reserve recently announced increases to its benchmark interest rate–the federal funds rate–to curb inflation, which is running at a 40-year high rate of 7.5%. The Federal Reserve's so-called dot plot, in which US central bankers reveal their projections of the future interest rate path, shows that officials expect to raise the federal funds rate three-to-four times in 2022 and three times in 2023, based on median projections. This means that the farmland and operating loan rates could increase by 1.5–2% by the end of 2023, which would be a 30–40% increase compared to current farm mortgage rates.

In a 2021 Agricultural Finance Review article (see Basha, Zhang, and Hart 2021), we provide the first quantification of the impact changes in interest rates since 2015 have had on farmland values, and show that changes in federal funds rates have long-lasting impacts, as it takes multiple years, at least a decade, for the farmland market to capitalize the effects fully.

Our model focuses on the federal funds rate, which is unique in that it is the only interest rate officially set by the Federal Reserve. Thus, it is the major policy lever used by the Federal Reserve to steer the economy. During the 2015–2018 calendar years, the Federal Reserve undertook a series of small interest rate hikes. However, it changed course and started lowering interest rates with a drastic 1.5% cut in March 2020 to combat uncertainty due to the COVID-19 pandemic. The effect of one monetary policy move takes multiple years to be fully capitalized in the land market. The long time horizon is because many of the farmland or farm operating loans are negotiated semi-annually, at most, and the lagged effect of prior interest rate movements might offset the effect of new policy proposals. That said, the collective sustained interest rate increases from 2015–2018 contributed an over-1.5% decline in farmland values for 2018, a 3.3% decline for 2019, and a projected 4% decline in 2020. The modest interest rate reversal in 2019 is not sufficient to offset these effects, but the larger cut in the interest rate in March 2020 has fully offset the 2015–2018 hikes.

Figure 1 reveals the dynamic path when the monetary policy changes will be most noticeable. The peak impact of the 2020 cut will reveal itself in 2022 and the uplift on the land market due to the 2020 cut will overwhelm the remaining impact of the 2015–2018 hikes. In other words, without the proposed interest rate hikes, the 2020 cut will dominate the net effect for the immediate future, leading to a net positive interest rate environment at the beginning of 2022.

Figure 1. The short- and long-term impacts of recent Federal Reserve interest rate moves on I-states' farmland values



Note: the legend shows the policy years during which the Federal Reserve made changes in the benchmark federal funds rates. The 2022 and 2023 projections assume twelve and four hikes based on the Federal Reserve Dot Plot, or 3-percentage-point and 1-percentage-point increase.

Similarly, in Figure 1, the downward-pointing brown and gray bars show the effect of the proposed interest rate hikes in the next two years. The peak effects of these projected federal funds rate increases will be felt most in 2024 and 2025. The magnitude of the 2020 rate cut is so substantial that its effect will still be dominant for most of the calendar year 2022. But in June 2022, the Federal Reserve raised the benchmark interest rate by 0.75%, the largest since 1994, The Fed also penciled in a 3.25–3.5% federal funds rate by the end of 2022, while markets are bracing for rates to rise by 3.75–4.0% alone this year. These have already reversed the pressure and the proposed interest rate hikes will exert downward pressure on the farmland market and the farmland market likely will start to feel the downward pressure from higher interest rates in late 2022 or early 2023.This is consistent with projections of how 2022 farmland values and residential home prices will go. Agricultural professionals and producers generally expect to continue seeing an increase in their local farmland values, probably around 10% in the core Corn Belt area. Cash rents show a 10–20% increase compared to 18 months ago as well.

Impact and factors behind higher investor demand

Concerns about inflation and too-high stock prices nudged more investors to consider farmland as an investment option due to the strong positive correlation between farmland returns and inflation. Farmland has historically been a fairly robust investment that generates relatively stable returns, especially when compared with other investments, such as stocks. In particular, a recent article by Zhang and Duffy (2022) analyzes which is the better investment, Iowa farmland or the stock market, and it is a complicated question. The level of returns depends upon the initial investment year and the year of sale; or in other words, timing matters. Farmland purchased during peak value periods produce lower returns than the stock market. Land purchased in the late 1970s and early 1980s and land purchased from 2009 to 2019 show lower percentage returns than S&P stock purchased in similar years. Farmland purchased in 2019 or 2020 has shown greater return due to recent surges although given our assumptions, returns to land and stocks are similar for 2022.

From an investor perspective, farmland offers many attractive features: high excess return especially for higher quality ground, less volatility related to other assets, and farmland values tend to move up during high inflation periods such as what we are experiencing now. In addition, farmland ownership offers diversification risk: the correlation between farmland returns with S&P 500 is nearly zero, which means that farmland does not necessarily follow the stock market movements and offers diversification for investment portfolios. COVID-19 and higher tolerance for remote work also boosted demand for rural acreages and recreational grounds. The 2021 ISU Land Value survey reported that investors represented 25% of land sales, which is higher than the 22% in 2021. Sales to investors were highest in the Southwest, North Central, and South Central districts (31%).

Despite this uptick, the majority of farmland sales, 68%, were still to existing farmers, of which existing local farmers captured 66% of land sales. Over the past 18 months, both investors and farmers received large amounts of ad-hoc COVID-19-related government payments; and farmers have further benefited from higher commodity prices. Overall, Iowa farmers received over $4 billion from the CFAP and PPP payments, in total, over the past 18 months, and the higher corn and soybean prices resulted in at least another $4 billion in crop receipts.

Projecting future farmland values

In December 2021, the surging land market and recent commodity market rallies offered land value survey respondents optimism and confidence in the future farmland market; and, generally, respondents expect even higher land values in the future. A vast majority, 80%, of respondents forecasted an increase in their local land market in one year, and most people expected the land market would continue to grow less than 10% one year from now.

Results of a survey done in May 2022 (Table 3), show agricultural professionals are still optimistic, but less so compared to six months ago. On average, the majority of the agricultural professionals surveyed expected another 3–5% increase in their local land values from May 2022 to November 2022, but importantly they expected land values to stay flat in 2023 and potentially decrease in 2024. This is consistent with the strong yet declining futures corn and soybean prices. The Ag Economy Barometer led by Purdue University, a nationwide monthly agricultural producer survey, showed in June 2022 that 54% of the surveyed farmers expect higher farmland prices 12 months from now, 37% expect no change in their local land market, and only 9% forecast a decline.

The dramatic increase in the Iowa farmland market is a result of lower interest rates, higher commodity prices, strong crop yields, and significant government payments. The result is record-high nominal land values for all 99 counties in Iowa. Future changes in inflation, interest rates, and commodity prices will shape the trajectory of farmland market movements. Under current circumstances, many agricultural professionals still anticipate a stable and modestly rising farmland market in the near future, with more downward pressures in 2023 and 2024.

References

Basha, A., W. Zhang, and C. Hart. 2021. “The Impacts of Interest Rate Changes on US Midwest Farmland Values.” Agricultural Finance Review 81(5). doi: 10.1108/AFR-11-2020-0163.

Zhang, W.and M. Duffy, 2022, “Comparing the Stock Market and Iowa Land Values: A Question of Timing” Ag Decision Maker Newsletter, Iowa State University Extension and Outreach, July 2022

Table 3. Estimated land and cash crop price forecasts, Iowa State University Soil Management and Land Valuation Conference, May 2022

Land	Average estimated forecast for % change from May 2022				
	NW	NE	SW	SE	STATE
Nov 2022	2.8%	1.4%	4.7%	4.5%	2.9%
Nov 2023	1.9%	0.5%	5.3%	7.8%	3.0%
Nov 2024	-1.7%	1.8%	4.8%	12.3%	2.5%
Nov 2025	2.4%	7.8%	11.5%	15.8%	7.5%
Nov 2040	37.4%	39.6%	67.5%	63.1%	47.1%

Commodity Cash Prices ($/bushel)

	Corn	Soybeans
May 2022	$7.84	$16.08
Nov 2022	$7.17	$14.83
Nov 2023	$6.36	$13.52
Nov 2024	$5.81	$12.68

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