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The downturn in agriculture: Implications for the Midwest and the future of farming

by David B. Oppedahl, senior business economist

Prices for key agricultural products have fallen from their peaks in recent years, while input costs have not fallen as much. Consequently, many farm operations in the Midwest have had lower revenues and thinner profit margins—and some even losses. On November 29, 2016, the Federal Reserve Bank of Chicago held a conference to examine the agricultural downturn in the Midwest and discuss future directions for farming.

According to the U.S. Department of Agriculture (USDA), net income for the farm sector declined for a third consecutive year in 2016. The downturn in farming has hit the Midwest hard, as seen in the region's lower farmland values and cash rental rates for cropland. Even some of the area's Main Street businesses have been affected. Experts from academia, government, industry, and policy institutions explored the agricultural downturn's implications for both the farm sector and the broader regional economy. The goals of the conference included understanding key trends in farm income, product prices, and input costs; assessing the primary factors behind the sector's downturn; examining policies that provide support to farm operations and promote risk management; and discussing the role of agricultural lending under these challenging circumstances, as well as in the next phase for farming.

Materials presented at the conference are available at https://www.chicagofed.org/events/2016/ag-conference.

Providing context for the day's discussions, David B. Oppedahl, senior business economist, Federal Reserve Bank of Chicago, described the declining role of agriculture in the U.S. economy over the twentieth century and into the new millennium. In terms of both the number of farms and farm employment, there has been a marked decline from 1910 through the present. In 2014, households with small farm operations depended on off-farm income much more than farm income, whereas those with large farm operations still relied on agriculture to provide most of their income. Despite farming's diminished role, agricultural output in the U.S. more than doubled from 1948 through 2011, based on tremendous gains in productivity, even as farm inputs were relatively flat (when indexed to 1948 levels). This productivity bonanza translated into substantial increases in farmland values across the Seventh Federal Reserve District[1] and other parts of the nation—particularly during the 1970s and in 2004–12, before the recent downturn in farming.

Impacts of the downturn on farms and rural communities

Bob Young, chief economist and deputy executive director, American Farm Bureau Federation, illustrated the downturn in agriculture by showing how cash receipts for the crop and livestock subsectors plummeted from their recent peaks (in 2013 and 2014, respectively). Given that agricultural production expenses decreased more moderately, net farm income for the U.S. dropped in 2014 and 2015, said Young. During those years, values for agricultural assets (including farm real estate, crop inventories, and machinery) fell as well. Moreover, there was a substantial slippage in sales of large tractors and self-propelled combines in 2014–16; as of September 2016, about 60% of farm equipment dealers considered their inventory levels too high, so a turnaround in sales is not expected anytime soon. Citing a baseline forecast,[2] Young argued that crop utilization and prices would remain in ranges similar to those of recent years. Thus, projections for farm income (adjusted for inflation) would be only slightly higher by 2025. Young emphasized concerns brewing about rising agricultural debt, particularly non-real-estate loans backed by farm real estate as collateral. He articulated the view that financial stresses are building for the farm sector, as the benefits of the "go-go" years fade. Young said that farmers should consider implementing strategies that helped them survive the early 2000s. One way to cut costs would be to forgo equipment purchases, even though enticing deals on used equipment are likely to be offered. To close, Young expressed hope in the potential for production shortfalls to raise agricultural product prices and boost farm incomes above current somber projections.

Dave Swenson, associate scientist, Iowa State University, said that while the current downturn in farming is concerning, the longer-term decline in rural populations (especially their young) presents a bigger challenge to overcome. Focusing on the Midwest, he said the farm crisis of the 1980s contributed to a steep loss of jobs in the region and in Iowa. Iowa's job losses, in turn, led to population losses, primarily from its agricultural areas. As people left rural areas from the 1980s onward, farming's share of total earnings declined in Iowa—as well as in most other Seventh District states. This dwindling share had been the long-term pattern until the early 2010s. By then, farming's share of total earnings had begun to rise, as agricultural profits picked up and the broader economy continued to slowly recover from the Great Recession. However, about two years ago, farming's fortunes began to tumble yet again. At the time of the conference, 2016 profit margin estimates (in dollars per acre) for Iowa indicated there would be losses from corn acres and razor-thin gains from soybean acres. Additionally, the lowest quintile of Iowa farms in terms of cash farm income in 2015 would likely encounter financial stress, given their expenses were 19% higher than their revenues (the average farm's expenses were 94% of its revenues). Lost income for farm proprietors in Iowa and elsewhere would impact the Midwest economy more broadly, as seen by the drop in employment at farm machinery manufacturers since 2014. Swenson pointed out that gains in farm income in the early 2010s were unable to arrest the negative effects of longer-term population declines in rural areas. The instability in these areas has less to do with the current downturn in agriculture and more to do with this trend that stems back to at least the 1980s, according to Swenson.

Farm policy's role during the downturn and beyond

In his keynote address, Bill Northey, secretary of agriculture, Iowa Department of Agriculture and Land Stewardship, harkened back to his experiences during the farm crisis of the 1980s. At that time farm equity vanished as too much ground and equipment went to market, depressing their valuations. The challenges for some farmers, brought on by low crop and livestock prices and overexpansion of farm operations, were opportunities for others. The uncertainty about the future that faced agriculture in the 1980s still remains today, Northey argued. Record output levels and lower product prices have forced farmers to adjust their operations recently. Yet, a strong decade of agricultural sales, supplemented by low interest rates, had boosted the sector's equity to strong levels. Northey also emphasized that U.S. agriculture has a great base of demand from international markets, as well as from ethanol producers. Federal and state government policies supporting agricultural trade are key to the success of the industry, said Northey. He also highlighted the stability the industry derived from government ethanol standards and land conservation programs. He contended different levels of government can help maintain water quality (possibly through cost-sharing programs) to encourage better farm-management practices, rather than just imposing regulations. Enforcing high food safety standards, helping to contain crop and livestock diseases, and providing disaster assistance were some of the other ways governments have had positive impacts on the industry, according to Northey.

Jonathan Coppess, clinical assistant professor, University of Illinois at Urbana–Champaign, expanded on the role of government, particularly the USDA, in addressing the current downturn. Farm revenues were quite strong when lawmakers and other government officials were coming up with the current USDA support programs (formally implemented under the Agriculture Act of 2014).[3] One program designed to aid midwestern farmers offers county and individual forms of agriculture risk coverage (ARC), which pays out when crop revenues fall below trends over the five previous years.[4] Coppess showed that over 90% of corn and soybean acres are now enrolled in ARC with payouts based on county-wide performance, opening the door to disparities in government support for nearby farms in adjacent counties. Given the five-year rolling nature of ARC's payment trigger, the agricultural downturn did lead to valuable payments from the federal government for most midwestern counties, notably for 2014 and 2015. Yet, in future years, Coppess indicated, ARC revenue guarantees will adjust downward. Crop insurance programs, subsidized by the federal government, remain another key component of the farm safety net, said Coppess. The value of crop insurance was demonstrated during the 2012 drought in the Midwest, when payouts spiked to cover farm losses. Additionally, in order to achieve environmental benefits, various government conservation programs compensate farmers and ranchers for keeping marginal land out of production and for using certain conservation practices.[5] Coppess closed his remarks with some thoughts on the November election results and their impact on future support for agriculture. He conjectured that negotiations over the next farm bill (which is expected to be passed by 2018, when the current one expires) will be difficult for Congress, especially given budgetary pressures. Coppess said that under the new administration, there's upside potential for agriculture from increases in infrastructure spending, reductions in regulatory pressures, and tax reforms. However, he emphasized that downside risks exist from shifting trade policies and possible cuts to spending on farm policies.

Downward trends in the agricultural industry have made for difficult financial conditions that will require cost cutting, innovation, and nimble risk management.

Agricultural finance trends

Nathan Kauffman, assistant vice president and Omaha Branch executive, Federal Reserve Bank of Kansas City, focused on increasingly pessimistic financial trends in agriculture as the downturn lingers. Farm operators have needed to borrow more, as low commodity prices have impinged on their cash flows and working capital. Poor profit margins have plagued both crop and livestock operations over the past two years. So agricultural lenders have continued to face high demand for farm loans, even as loan repayment rates have deteriorated (and collateral requirements and interest rates for farm loans have risen). According to Kauffman, farm loan delinquencies are still at low (albeit rising) levels, as liquidity challenges have not yet resulted in widespread solvency issues for farms. However, given all these challenges, farm spending on both capital and household purchases has fallen at an accelerated pace, as indicated by data from the Kansas City Fed. Some relief on the cost side was recently seen in lower rental rates for agricultural land, Kauffman said, and moderating declines in agricultural land values helped keep equity levels relatively stable. Yet, the longer farm income remains depressed and farmland values keep easing down, the greater the potential for significant problems in farm finances to arise. Kauffman calculated several scenarios, with various increases in farm debt and interest rates combined with decreases in farmland values, and warned that the agricultural sector could reasonably encounter truly distressing circumstances by 2020, even though the downturn in farming has been gradual so far.

Ani L. Katchova, associate professor and Farm Income Enhancement Chair, Ohio State University, covered farmer bankruptcy in her presentation. When farm debt loads become burdensome, agricultural operators may pursue debt restructuring by filing for bankruptcy as one of many options. During stressful periods for agriculture (i.e., when farmers' net cash income and land values drop), there have been jumps in farm bankruptcies, Katchova observed. Filing for bankruptcy under Chapter 12,[6] which allows for reorganization of debt over three to five years while continuing operations, was initiated in 1986 for small farm operations as a response to the farm crisis that started earlier in the 1980s. The Bankruptcy Abuse Protection and Consumer Protection Act of 2005 made Chapter 12 a permanent option and changed some of its criteria for filing, including increasing limits on debt obligations. Still, many farm operations have become too large to file under Chapter 12 and must use other chapters when filing for bankruptcy. Katchova said that recent data show farm bankruptcy rates, which are seen as a lagging indicator of financial stress in agriculture, have risen somewhat but remain at historically low levels. For the Seventh District, Katchova's analysis indicated Michigan and Wisconsin had the highest rates of farm bankruptcies (per 10,000 farms) over the period 2001–16, while Iowa had the lowest. Katchova said that given the negative correlations between bankruptcy rates and agricultural income and land values, she anticipates further increases in farm bankruptcies if the agricultural downturn continues.

Sarah Tulman, economist, USDA, Economic Research Service, provided additional insights into farm bankruptcies, especially as they relate to delinquency rates on farm loans. Tulman discussed a model that started with a financial stressor and traced its impacts on a farm through the stages of consumption adjustments, asset restructuring, delinquency and debt restructuring, and bankruptcy, ending at any stage in either a return to financial stability or a cessation of operations. Tulman observed that agricultural loan delinquencies and bankruptcies follow similar patterns, with both having recent upticks. Moreover, she showed there was a link between farm loan delinquencies and the overall unemployment rate, likely because of the importance of off-farm income within the agricultural sector.

How will farm financing evolve in response to the downturn?

The conference concluded with a panel discussion on the ways that agricultural lenders have adjusted to the ongoing farm downturn and how agricultural lending may evolve in the years ahead. Paul Anderson, executive vice president and chief credit officer, GreenStone Farm Credit Services, said he views the current downturn in agriculture as a normal correction to the large gains in value of farm assets. To help its customers survive this phase of the agricultural cycle, GreenStone first segmented them based on their equity levels and cost structures, said Anderson. He posited that the current correction has led to conditions that reward agricultural producers with solid balance sheets and low production costs. So GreenStone's evaluation of customers with low equity and a high cost structure ("at risk" customers) became a focus in 2015. Because the borrower and lender are in a partnership, he said, GreenStone wants to assist its customers, but not enable unsustainable behavior. Especially for "at risk" agricultural customers, by providing them high-quality information about the industry outlook and peer group comparisons, as well as verifying their own data, GreenStone seeks to create an awareness and sense of urgency regarding the challenging financial situation they face together. Anderson stated that a key measure of how long a customer can survive is the liquidity burn rate, which requires analyzing residual borrowing capacity. In addition, Anderson emphasized that clear and open lines of communication between GreenStone and its customers have set the stage for preserving owner equity and developing plans for existing and future enterprises. Finally, Anderson expressed that financial decisions must be based on the long-term profitability of each unique farm operation.

James L. Plagge, president and CEO, Bank Iowa Corporation, said that only half his firm's farm borrowers would have an improved net worth for 2016, according to projections made shortly before the conference. Because the values for agricultural machinery and land keep moving down, a looming concern was the possibility of rapid losses in the valuations of these assets. Given these risks, Plagge offered advice for the upcoming season of farm loan renewals: Plan mentally for a difficult year, prepare thoroughly for meetings about such renewals, schedule meetings to discuss riskier loans early, and remember the human aspects of business dealings. Negative cash flow projections for a farm are a challenge that requires a game plan developed together by the lender and borrower (the plan may entail reducing expenses, boosting income, restructuring debt, selling assets, or using guarantees from the Farm Service Agency of the USDA). Plagge stated his firm projects the further consolidation of farm operations due to liquidations. If there is indeed more farm industry consolidation, a key question would be whether the pace of consolidation among providers of farm credit would ramp up, given that larger farms typically need larger credit lines (implying a need for larger, more sophisticated lenders as well). Moreover, Plagge contended that the loss of human capital in rural communities is likely to lead to more mergers among agricultural lenders. He also highlighted the uncertain role of credit provided by farm input suppliers, whose assessment of credit risk can be less rigorous than those of other farm lenders, and the potential for a pullback in agricultural lending due to loan losses.

Paul N. Ellinger, vice provost for budget and resource planning and professor, University of Illinois at Urbana–Champaign, reflected on the results of his informal survey of agricultural lenders, farmers, industry consultants, and input suppliers on the state of farming and agricultural lending. He noted that the consensus among those surveyed was that the increased availability of agricultural financing during the boom years had led those involved with farming into an era of loan restructuring and relatively higher credit losses, with more emphasis on risk management. Today the focus of agricultural lenders is indeed on the adequacy of farm borrowers' working capital, cash flows, and cost controls. According to Ellinger's own analysis, the agricultural sector (especially in the Midwest) has already entered cautionary territory; more and more farms have become riskier from an investment perspective. Ellinger explained that as the farm sector deals with its problems, community banks that serve the sector will face a number of issues in the years ahead. These include rising interest rates, greater regulatory uncertainty and compliance costs, farm operations that outgrow the lending limits of institutions, limited tools for stress testing loan portfolios, and expensive technology investments.

Conclusion

Amid the gloom due to the agricultural downturn that started in 2014, farmers and lenders have faced formidable obstacles to profitability within the sector. Farmers with the most efficient operations and adequate equity have remained in good standing for credit. Downward trends in the agricultural industry have made for difficult financial conditions that will require cost cutting, innovation, and nimble risk management, particularly for vulnerable producers, in order to avoid loan delinquency or even insolvency. In the end, the Midwest, its farming sector, and the agricultural lenders serving them should become stronger by making adjustments in response to the downturn (including consolidations of some farm operations and agricultural lending institutions).

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[1] Farmland value data are from quarterly surveys conducted by the Federal Reserve Bank of Chicago. The Seventh Federal Reserve District comprises parts of five midwestern states—all of Iowa and most of Illinois, Indiana, Michigan, and Wisconsin.

[2] Food and Agricultural Policy Research Institute at the University of Missouri, 2016, *Baseline Update for U.S. Agricultural Markets*, No. 05-16, Columbia, MO, August, https://www.fapri.missouri.edu/wp-content/uploads/2016/08/Report-05-16.pdf.

[3] For details on the 2014 farm bill, see https://www.usda.gov/wps/portal/usda/usdahome?navid=farmbill.

[4] For more details on how the ARC payout is determined, see http://farmdocdaily.illinois.edu/2014/02/arc-and-plc-in-2014-farm-bill.html.

[5] Further details on USDA conservation programs can be found at https://www.fsa.usda.gov/programs-and-services/conservation-programs/.

[6] For more on filing for Chapter 12 bankruptcy, see http://www.uscourts.gov/services-forms/bankruptcy/bankruptcy-basics/chapter-12-bankruptcy-basics.

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