# Four Reasons Why We Aren't Likely to See a Replay of the 1980's Farm Crisis

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**THERE ARE** plenty of alarming signs indicating a possible farm crisis: current corn prices are half the 2013 peak level of US $7/bushel; farm income has declined for major commodities (corn, wheat, cattle), falling from the previous year to levels well below recent years; weak farm income and worsening credit conditions continue to trim farmland values, which are expected to trend lower in the months ahead, thus weakening the equity position of producers and the collateral value for lenders. Given the heightening farm financial crisis, many agricultural lenders, academics, and other stakeholders in the US farm sector worry another farm crisis is looming. However, there are four economic and legal reasons why this farm downturn is unlikely to slide into a sudden collapse of agricultural markets.

### Reason 1: Much stronger, real income accumulation before the current downturn

When debunking or confirming the idea of a farm crisis replay, it is useful to closely investigate the previous farm crises of the 1920s and 1980s, and it's equally important to investigate the golden eras before them. Through that comparison, I argue that the much stronger income accumulation during the late 2000s, fueled by growing export demand from China, historically low interest rates, and the expanding biofuel market, puts agricultural producers and businesses a much better condition now to weather storms.

Table 1 presents the average annual percentage change in inflation-adjusted Iowa land values, gross and net farm income for the three golden eras, and farm downturns. While it is concerning to see that since 2013 gross and net cash income has decreased 4.5 percent and 9.8 percent per year, respectively, it is equally important to note that from 2003 to 2013, gross and net income consistently grew 4.5 percent and 8.1 percent every year, reaching almost record-high levels in both farm income and land values. Forecasted income for 2017 by USDA-Economic Research Service seems to suggest that farm income is stabilizing for Corn Belt states like Iowa.

A comparison between this third golden era and the two previous reveal that farmers accumulated much more income, especially cash, during the most recent decade than during the 1910s and 1970s before those farm crises. Net cash income before the 1980s farm crisis is actually much smaller, even though land values skyrocketed during the same time. In other words, high commodity prices in the 2000s seem to have positioned agricultural producers nowadays to withstand the current headwinds.

### Reason 2: Historically low interest rates

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.

Low interest rates are favorable to keep the farmland market afloat: on the one hand, it encourages stronger loan demand due to lower interest payments, and on the other hand, low interest rates also signals that the returns for other competing assets, such as stocks and bonds, aren't so robust that farmland investors are willing to accept a lower rate of return. Figure 1 reveals that even with recent hikes, interest rates are still very low compared to the 1980s, and the Federal Reserve is likely to raise the interest rate at a slow pace as opposed to a sudden hike, which makes loan restructuring possible for producers wanting to take advantage of current favorable interest rates.

**Table 1. Average Annual Percentage Change in Inflation-adjusted Iowa Land Values and Farm Income**

| | Average % change in inflation-adjusted values per year | | |
|---|---|---|---|
| **Golden Eras** | **Land** | **Gross Income** | **Net Income** |
| 1910-1920 | 1.2% | 0.8% | 0.2% |
| 1973-1981 | 9.7% | 0.9% | -3.2% |
| 2003-2013 | 11.1% | 4.5% | 8.1% |
| **Crises and Declines** | **Land** | **Gross Income** | **Net Income** |
| 1921-1933 | -5.8% | -1.9% | -1.0% |
| 1981-1987 | -15.0% | -2.5% | 2.6% |
| 2013-2017 | -4.5%* | -4.5% | -9.8% |

Note: The average land value change from 2013 to 2017 is approximate because 2017 land values are unknown. The 1910–1933 gross and net farm income changes are for the whole United States due to limited data at the state level. Land values are based on USDA Census of Agriculture and USDA NASS Land Value and Cash Rent Survey, while the data on farm income is from the USDA Economic Research Service Farm Income and Wealth Statistics database.

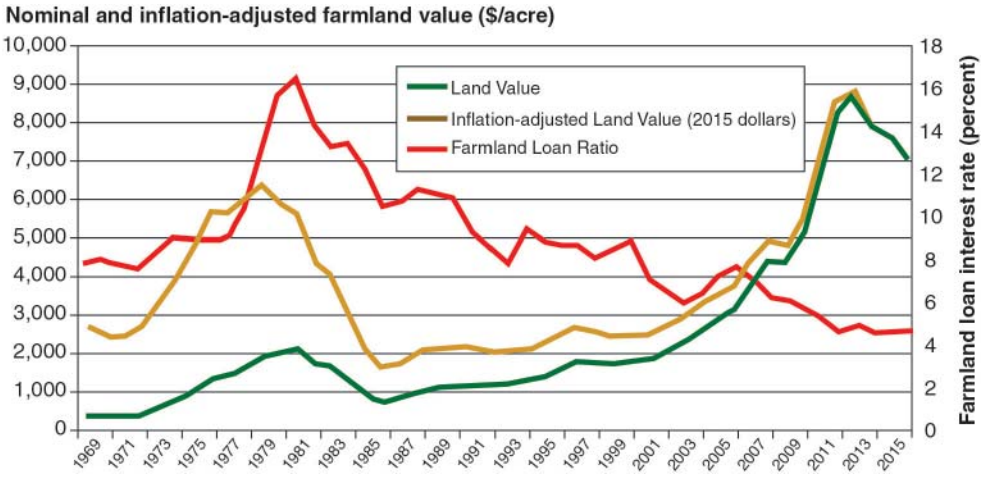


**Figure 1. Iowa Farmland Value and Farmland Loan Interest Rates 1969-2016**

*Source:* Farmland value data is from Iowa State University land value survey and the farmland loan interest rate is from the Federal Reserve bank at Chicago.

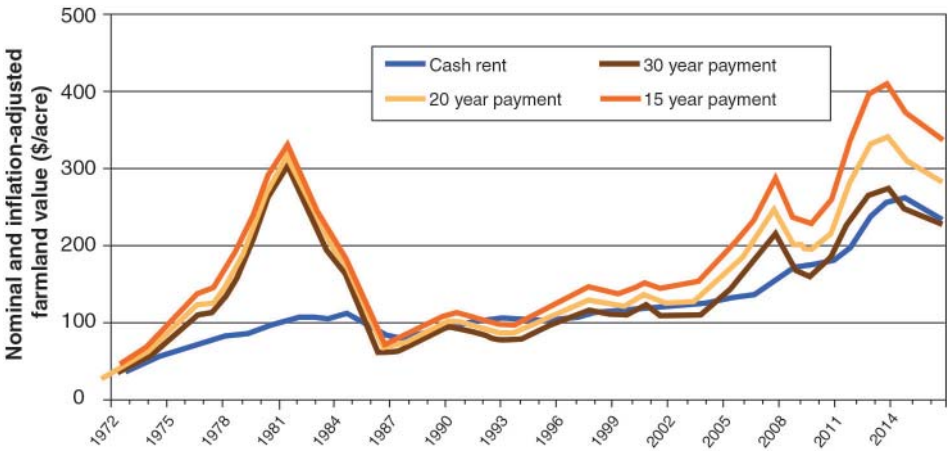


**Figure 2. Cash Rent and Annual Mortgage Payments for Iowa Farmland Loans Under Prevailing Interest Rates**

*Source:* Farmland value data is from Iowa State University land value survey (Zhang 2017), cash rent data is from the ISU cash rent survey, and the farmland loan interest rate is from the Federal Reserve bank at Chicago.

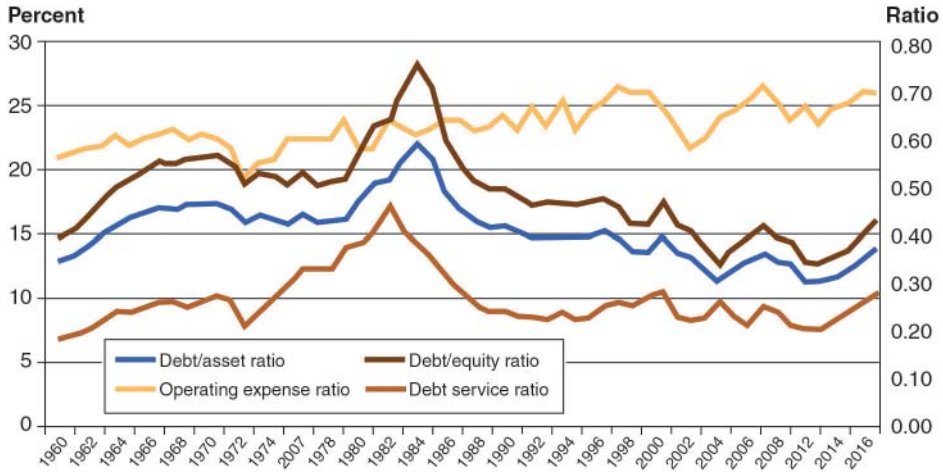


**Figure 3. The Agricultural Liquidity, Profitability and Solvency Ratios for the U.S. 1960 – 2016**

*Source:* USDA Economic Research Service Farm Income and Wealth Statistics. Please use the right y-axis titles for the two dashed lines: total rate of return on farm assets, and debt to asset ratio.

Figure 2 specifically compares the average cash rent and annual mortgage payments per acre for a typical Iowa farmland loan under prevailing farmland loan interest rates and varying terms.[1] It shows that due to abnormally high interest rates in the 1980s, the mortgage payment for a typical farmland loan was almost three times higher than the typical cash rent, and extending the farmland loan repayment schedules from 15 to 30 years did almost nothing to alleviate the financial burden faced by landowners. However, under today's low interest rate environment, debt restructuring is feasible and makes sense: under current prevailing farmland loan rates, extending a farmland loan from a 15 to 30-year repayment schedule would cut the annual mortgage payment needed from over $350 per acre—higher than the 2016 cash rent of $230—to a level comparable to the typical cash rent. In fact, many lenders are now advising their clients to take advantage of the current favorable interest rates to secure repayment capacity.

### Reason 3: More prudent agricultural lending in part driven by more stringent regulations

The most striking aspect of the 1970s land boom during this high-inflation era is that debt capital largely financed the massive investment in agricultural assets. One reason is that loan requirements by lenders like Farmers Home Association were fairly lenient—it was not uncommon for agricultural lenders to give out large-cap loans up to 80 or even 85 percent of the collateral value. What made it worse was the way collateral value was calculated—market value unadjusted for inflation, which means that the book value of collateral rose when inflation skyrocketed. Figure 2 shows that both factors, in addition to high interest rates, contributed to the staggering agricultural debt and highly

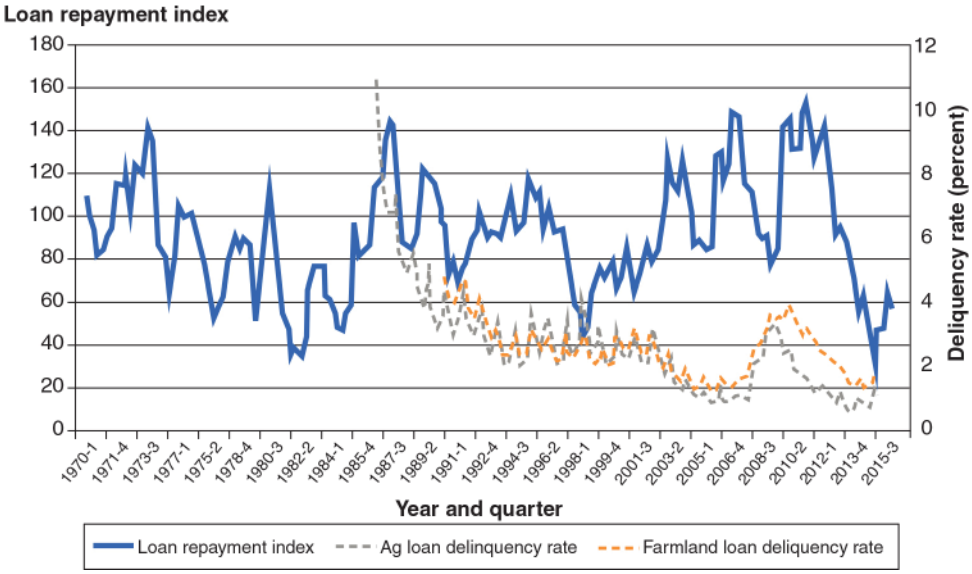


**Figure 4. The Agricultural Loan Repayment Index and Delinquency Rates 1970-2015**

*Source:* Federal Reserve Bank (2017).

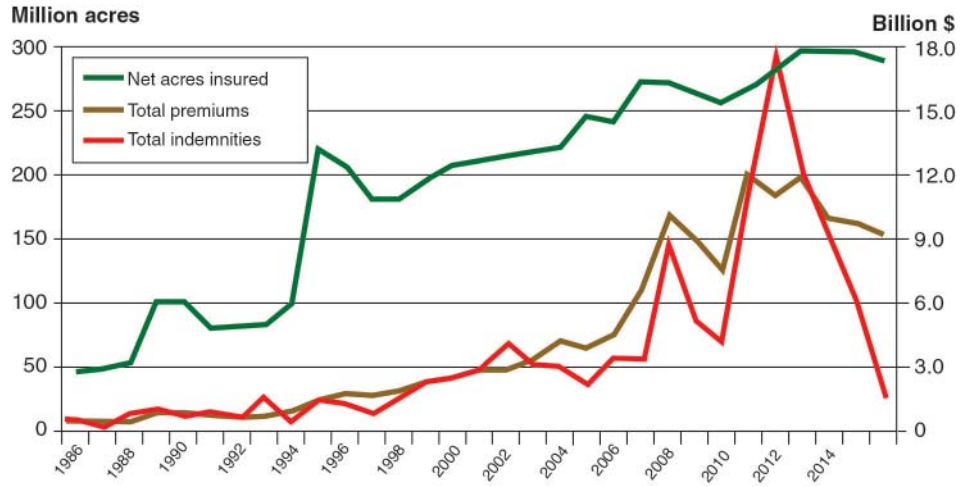


**Figure 5. Crop Insurance Coverage for U.S. 1986-2016**

leveraged agricultural sector. By 1978, the debt incurred averaged 76 percent of the purchase price, and between 1970 and 1980, the amount of farm mortgage debt increased 59 percent.

After the 1980s farm crisis, the regulations on agricultural lending limits got tighter, and agricultural banks reverted to a 65 percent loan-to-value ratio, which became an even more stringent 50 percent loan-to-value ratio after the 2007–2008 financial crisis. Nowadays, one more factor helps limit the amount of debt and leverage faced by the US agricultural sector—collateral value is often calculated using a cash flow approach, as opposed to inflated market value. For example, in 2012 even though corn prices are approaching $7/bushel, the long-term average price of $4/bushel is often used by lenders like Farm Credit Service in calculating collateral value.

Lower interest rates and more prudent lending practices definitely help agricultural producers manage debts now. Figure 3 shows the agricultural liquidity and solvency ratios for the United States since 1960, and Figure 4 shows agricultural loan delinquency rates since 1970. Although the current rate is rising, it is still well below the 1980s farm crisis level. The profitability ratio, such as rate of return on farm assets, is now inching down, but is also higher than the 1980s levels. It is likely that with the current stagnation of commodity prices and continued decline in farm income, the debt service ratio will continue to rise and the profitability ratio remain flat or decrease. However, it is more likely a liquidity and working capital problem, as opposed to a solvency problem. The balance sheet of the US farm sector is still very strong, which can be seen from the low level of debt to asset ratio in Figure 3. Similarly, although we see in Figure 4 the loan repayment index continued to decline, but the delinquency rates for both agricultural loans in general, as well as farmland loans, are still at very low levels.

### Reason 4: Stronger government safety net

It is very important to point out the strength of the agricultural safety net—in 1987, only 50 million acres in the entire United States were insured in the Federal Crop Insurance program. Today, just the total cropland insured in Iowa exceeds 25 million acres, representing 93% of Iowa's corn and soybean production acres (USDA RMA 2015, for more information please see *Crop Insurance in Iowa, http://www.card.iastate.edu/ag_policy_review/display.aspx?id=26)*. There is arguably stronger support from the livestock insurance program as well. In addition, payments from federal and state commodity programs and disaster relief programs provide significant revenue and price protection. The 1980s farm crisis represents the failure of the government's safety test in the 'stress

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*Redistribution or Public Good: Which Direction for the New Farm Bill?*
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Another frequent argument made for farm subsidies is that farming is a risky business and all that stands between a farmer and financial ruin are farm subsidies and the crop insurance program. Stam and Dixon (2002) showed that farm bankruptcy rates were only high in the 1930s and the mid-1980s, periods of severe financial stress in the farm sector. The annual rate of bankruptcy in the 1930s peaked at about 0.13 percent. In the mid-1980s the rate of bankruptcies was higher at 0.25 percent. Data on current bankruptcy rates are not readily available, but bankruptcy rates outside these two periods of extreme financial stress are below 0.03 percent. It is tempting to use this statistic to conclude that more than 99.97 percent of farm payments do not prevent bankruptcy, but it cannot be known for certain whether bankruptcy rates would be higher or lower without farm programs, outside periods of severe financial stress. Suffice it to say that outside periods of severe financial distress, the vast majority of farm payments do not prevent bankruptcy.

A desire to protect farmers from financial stress is clearly a motivating factor for some supporters of farm payments. But such protection can be counter-productive because financial stress serves the economic purpose of signaling farmers that they need to change what they are doing. Response to market signals is what makes capitalism work. Current farm payment formulas use either fixed prices or past market prices to determine when payments are made. Some justify these formulas on the basis that farmers need to be protected from long-lasting declines in price; however, low prices signal that the world has abundant supplies. Buffering farmers from this market signal simply prolongs low-price periods.

The crop insurance program offers an alternative way of buffering farmers from financial stress. Although it is easy to identify changes to the program that would make it more efficient, the program's overall structure has a number of positive attributes. Program guarantees adjust each year to pre-planting time market price levels, so only unexpected declines in market prices or yields trigger payments. A minimum 15 percent deductible means that revenue must decline below expected levels before a payment is received. Lastly, although premiums are heavily subsidized, at least farmers must pay a portion of the cost of the program so years in which they do not receive a crop insurance indemnity, they end up sending their crop insurance company a payment.

The likelihood of Congress tilting their funding decisions away from redistributive commodity programs that benefit a small group of farmers towards programs that serve the public may not be zero, but it is close to it. This low likelihood reflects both the strength of the status quo in determining policy directions as well as the strength of the lobbying efforts that support redistribution. However, the recent House action cutting $840 billion over 10 years from the Medicaid program demonstrates that status quo redistributive programs may not always win out. Whether a willingness to cut a redistributive program that benefits poor people augers a willingness to cut redistribution to relatively wealthy and high-income farmers will soon be seen. ■

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test,' however, agricultural producers and the farm sector in general now have a much stronger safety net compared to the 1980s.

Despite the deteriorating agricultural financial conditions and continued decline in farm income, the current farm downturn is more likely a liquidity and working capital problem, as opposed to a solvency and balance sheet problem for the entire agricultural sector. Rather than an abrupt farm crisis, we are likely experiencing a gradual, drawn-out downward adjustment to the historical normal return levels for the agricultural economy. ■

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[1]This calculation makes two assumptions: (*a*) the average land value and cash rent value from ISU surveys is used as proxy for gross income and asset/collateral value; and (*b*) it assumes certain loan-to-value ratios based on regulations on agricultural lending and common lending practices, which we will discuss more in detail in Reason 3.