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The Liquidity of Illinois Grain Farms: Current Ratio

Gerald Mashange

Department of Agricultural and Consumer Economics
University of Illinois

Bradley Zwilling and Dwight Raab

Illinois FBFM Association and Department of Agricultural and Consumer Economics
University of Illinois

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In our final installment of our liquidity series, we examine the current ratios of grain farms in Illinois. Throughout our analysis of various liquidity measures—such as working capital, the working capital to gross farm returns ratio, and the working capital to operating expenses ratio—we have observed similar trends, particularly when considering farm size and region. Given that farm liquidity is a key concern for lenders today, it is important to understand the financial condition of these farms. For the remainder of this series, we will compare the distribution of the current ratio across grain farms using data from the Illinois Farm Business Farm Management (FBFM) by including the average, lower quartile, median, and upper quartile of the measure to clearly illustrate their differences in trends and quality.

The current ratio is one of many liquidity measures that is used to assess a farm's ability to meet its short-term financial obligations as they become due. It is calculated by dividing the value of a farm's current assets by its current liabilities. In other words, it measures a farm's ability to pay off its short-term liabilities with its short-term assets. According to the Farm Financial Scorecard developed by the Center for Farm Financial Management, a farm with a current ratio that is less than 1.3 is categorized as *vulnerable*, a ratio between 1.3 and 2.0 is categorized as *cautionary*, and a ratio that is greater than 2.0 is categorized as *strong*.[1] Therefore, the higher the current ratio, the more liquid the farm is.

We report the trends of the average, lower quartile, median, and upper quartile current ratio of grain farms in Illinois statewide over twenty-one years from 2003 to 2023. Quartiles divide sorted data into four groups, each containing an equal number of values. In the context of the current ratio, the first quartile (lower quartile) represents the value below which 25% of the current ratio values fall. This indicates that 25% of farms have a current ratio lower than this value. The second quartile is the median of the dataset, meaning that 50% of the current ratio values fall below this point. This represents the middle value of the

[1] The Farm Financial Scorecard adheres to the guidelines set by the Farm Financial Standards Council

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current ratio for all grain farms. The third quartile (upper quartile) is the value below which 75% of the current ratio values fall. This means that 75% of farms have a current ratio less than this value. In the top panel of our figure, we use the color-coding system from the Farm Financial Scorecard to indicate the category of each farm's current ratio. The region shaded in red indicates a *vulnerable* ratio, yellow represents a *cautionary* ratio, and green indicates a *strong* ratio. Finally, in the bottom panel of our figure, we display the trends of the two components that make up the current ratio by calculating the annual average current assets and current liabilities across all grain farms by farm size. It is important to note that calculating the current ratio from these values does not equate to the average reported current ratio in the top panel of the figure. An example is provided in the appendix of this article.

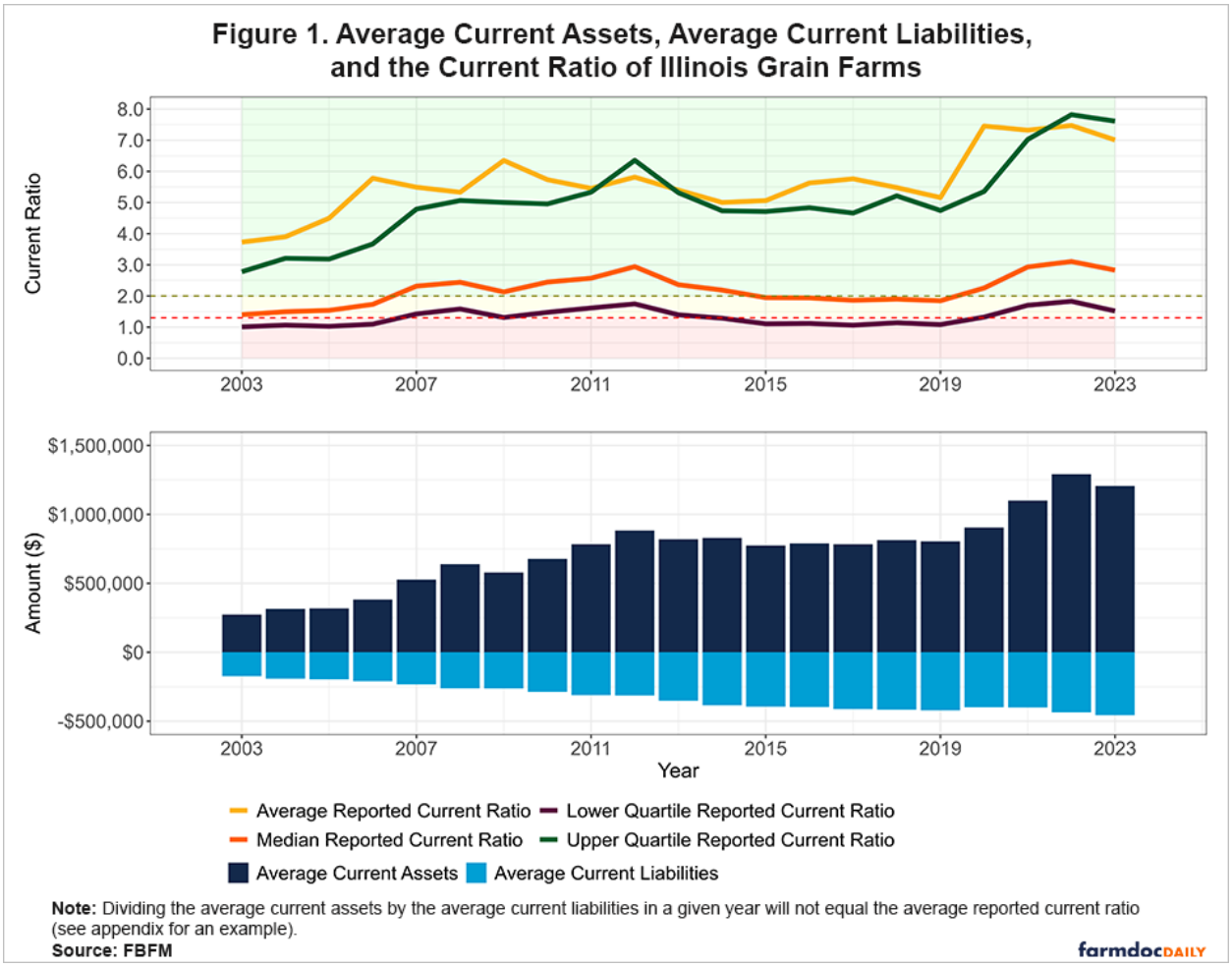

Figure 1 shows the average, lower quartile, median, and upper quartile of the current ratio for grain farms in Illinois, as well as the average current assets and liabilities. While the average current ratio indicates that these grain farms have maintained a *strong* liquidity position and strengthened it over time, this trend is more representative of the current ratio among grain farms above the upper quartile. Over the past two decades, grain farms in the upper quartile (75th percentile) have substantially improved their current ratio, increasing it from 2.78 (*strong*) in 2003 to 7.61 (*strong*) in 2023, which represents a 174% increase. In contrast, the median (50th percentile) and lower quartile (25th percentile) current ratio values are much lower than those of the upper quartile. Notably, in nine of the past twenty-one years, the median current ratio has fallen into the *cautionary* range but has improved by 102%, rising from 1.40 (*cautionary*) in 2003 to 2.83 (*strong*) in 2023. Not once did the lower quartile current ratio reach the *strong* range; it has only seen a 50.5% improvement over the same period, climbing from 1.01 (*vulnerable*) to 1.52 (*cautionary*).

Conclusion

The average current ratio of grain farms in Illinois has improved over the past two decades, mainly because the growth in average current assets has outpaced the increase in current liabilities during the

same period. Lower short-term liabilities, such as operating notes, have been sufficient when farms have had substantial current assets. While the average current ratios of these farms indicate a strong liquidity position that has strengthened over time, this trend is largely representative of farms above the upper quartile. Additionally, it is quite evident that the distribution in the current ratio between grain farms in the upper quartile greatly differs from the median and lower quartile. Farms reporting current ratios above the upper quartile are more than well-positioned to handle cash flow challenges and capitalize on market opportunities. According to the Farm Financial Scorecard, a current ratio greater than 2.0 is considered *strong*. In 2023, the upper quartile of the current ratio was 7.61. In comparison, the median and lower quartile values were considerably lower in 2023, coming in at 2.83 (*strong*) and 1.52 (*cautionary*), respectively. Despite the improvement in liquidity of Illinois grain farms in recent years, all four measures of the current ratio have been trending downward since 2022. Our analysis shows that a large share of grain farms in Illinois have historically reported current ratios in the *cautionary* and *vulnerable* range.

Acknowledgment

The authors would like to acknowledge that data used in this study comes from the Illinois Farm Business Farm Management (FBFM) Association. Without Illinois FBFM, information as comprehensive and accurate as this would not be available for educational purposes. FBFM, which consists of 5,000+ farmers and 70 professional field staff, is a not-for-profit organization available to all farm operators in Illinois. FBFM field staff provide on-farm counsel along with recordkeeping, farm financial management, business entity planning and income tax management. For more information, please contact our office located on the campus of the University of Illinois in the Department of Agricultural and Consumer Economics at 217-333-8346 or visit the FBFM website at www.fbfm.org.

Appendix

The data presented in Table 1 is fictional and will be used to illustrate how the average reported current ratio, displayed in the top panel of Figure 1, differs from the current ratio that would be obtained by dividing the average current assets by the average current liabilities shown in the bottom panel. Suppose in a given year, we have five producers reporting their current assets and liabilities. The first step is to calculate the current ratio for each producer by dividing their current assets by their current liabilities, shown in the fourth column of Table 1. Next, we calculate the average values of current assets, current liabilities, and the current ratio, shown in the table's bottom row. The average reported current ratio in that year would be 1.93. However, if we try to calculate the current ratio by dividing the average current assets by the average current liabilities, whose values would be shown in the bottom panel of Figure 1, we will obtain a value of 1.58 and not 1.93.

Table 1. Example Data Reported for Illustration Purposes Only

	Reported Current Assets	Reported Current Liabilities	Reported Current Ratio
Producer 1	$100,000	$50,000	2.00
Producer 2	$120,000	$80,000	1.50
Producer 3	$200,000	$50,000	4.00
Producer 4	$80,000	$70,000	1.14
Producer 5	$190,000	$188,000	1.01
Average	**$138,000**	**$87,600**	**1.93**

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