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Worksheets That Work for Measuring and Assessing Farm Financial Performance

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Worksheets That Work for Measuring and Assessing Farm Financial Performance

Abstract

An Extension program uses four worksheets to take data from beginning and end-of-year balance sheets, Schedule F, and, if needed, a Form 4797 and prepares an accrual-adjusted income statement. That information is then used to calculate the financial ratios recommended by the Farm Financial Standards Council. The worksheets enable Extension clientele and borrowers to analyze their agricultural businesses and lenders to evaluate loan requests.

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Introduction

Agricultural lenders usually desire and often expect agricultural borrowers to provide complete and accurate financial information. Guidelines developed by the Farm Financial Standards Council (FFSC) provide recommendations on how to prepare a comprehensive set of financial statements. A key recommendation of the FFSC is an accrual-adjusted income statement to accurately report agricultural income.

However, a challenge faced by many agricultural lenders is how to get borrowers to provide financial statements recommended by the FFSC, particularly an accrual-adjusted income statement. Many borrowers have neither the training to prepare financial statements nor the time to receive that training. Others have received the training, but the statements are prepared so infrequently it is difficult to retain that knowledge from year to year. On the other hand, many agricultural lenders understand how to prepare the statements, but lack the time to provide assistance to individual borrowers.

Worksheet 1 Collects and Organizes the Data

A tool developed by Extension Economists at Purdue University has proven to be useful for a number of agricultural lenders and their borrowers. It is discussed in an Extension publication *Farm Business Management for the 21st Century: Measuring and Assessing Farm Financial Performance*. With that publication is a set of four worksheets that provide a step-by-step procedure for reporting financial information. In addition, instructions are provided on how to calculate recommended financial ratios.

The first worksheet is used to collect and organize information from beginning and ending balance sheets, Schedule F, and, if needed, Form 4797 from the Federal Income Tax return. Each line on Worksheet 1 is labeled with a letter. For example, the first line is labeled "a" and reports the cost of livestock sold. Next, instructions are provided to assist the user in locating that information (i.e., Schedule F, line 2). Lines "a" through "f" report information collected from the Schedule F of the Federal Income Tax return. Lines "g" through "s" record information from beginning and end-of-

year balance sheets. Lines "t" through "v" are used to record other information (e.g., Form 4797, family living expenses, etc.).

Once this data is summarized, adjustments to calculate an accrual-adjusted income statement are performed by following the instructions on the worksheet. Completion of Worksheet 1 results in an accurate estimate of accrual-adjusted net farm income.

Worksheets 2 and 3 Provide the Analysis

Worksheets 2 and 3 are used to calculate the ratios and measures recommended by the FFSC. All the data needed to calculate the ratios are found on Worksheet 1. Worksheet 2 calculates the solvency, liquidity, profitability, and efficiency ratios. Also provided on Worksheet 2 is a place to include benchmarks for the ratios. These benchmarks can come from farm records programs or other sources. A lender and/or borrower can then compare the financial condition and performance for the operation to other operations. This comparison enables the user to identify business strengths and weaknesses.

Worksheet 3 is used to calculate the repayment capacity measures recommended by the FFSC. These measures involve several steps and are often difficult to calculate. As with Worksheet 2, the task is simplified by providing instructions to transfer numbers from Worksheet 1 to Worksheet 3. The measures are calculated by again following the instructions on Worksheet 3.

In addition, when term debt repayment margin is calculated, a user can estimate the additional debt the current margin could service. An amortization table is provided to enable users to divide the margin by the amortization factor corresponding to the interest rate and number of years the user may want to consider. The result is the maximum amount of additional debt the operation could service.

Worksheet 4 Lets the User Do "What-if Analysis"

A fourth worksheet (Worksheet 4) is provided to complete a detailed profitability analysis. The analysis is based on the relationship that exists among three key financial ratios:

- Operating profit margin,
- Asset turnover, and
- Leverage (calculated by dividing total farm assets by owner's equity).

When the three ratios are multiplied together and an interest cost adjustment is made, the result is rate of return on farm equity. The user completes the worksheet using information reported on the previous worksheets. Then the user can perform as many simulations as desired by changing the balance sheet and income statement entries collected on Worksheet 1 and rerunning the analysis.

Experiences and Benefits

The authors teach financial reporting and analysis at several lending schools and seminars and at producer workshops. The response has been very positive. Agricultural lenders view the worksheets as a practical way for borrowers to provide the information needed to perform a comprehensive analysis on an agricultural business, without having to commit numerous hours to individual consultations focused on "how to complete the forms". Instead, that time can be spent on discussing results and considering alternatives. Borrowers can provide the information requested by the lender by using financial statements already in their possession. Furthermore, they can do much of the financial analysis and identify possible alternatives before meeting with the lender.

How to Receive a Copy of the Worksheets

The authors of the publication and worksheets encourage users to copy and use the worksheets. To review and print a copy of the worksheets, go to www.agecon.purdue.edu/extension/programs/fbm21/Worksheets.pdf or contact Freddie Barnard at barnardf@purdue.edu.

References

Financial Guidelines for Agricultural Producers: Recommendations of the Farm Financial Standards Council (Revised). (July 1995).

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