

Financial Troubleshooting

File C3-53

For a farmer, a lender, or an extension specialist, untangling a farm business that is experiencing financial problems can be a rather daunting task. Different financial problems often require different strategies. Management decisions, technical difficulties, and family problems contribute in complex ways to creating undesired financial outcomes. In many cases, a clear course of action to resolve the financial difficulties is not easily determined.

This publication describes a simple framework that farmers, lenders, or extension specialists can use to identify the type of financial problem a farm business is experiencing, clarify the underlying causes, and list a number of management responses that could contribute to its resolution. We borrow the term “troubleshooting” from the electronics or automotive repair industry. Using a series of diagnostic tests, along with a decision tree, a wiring diagram, or a taxonomy, a repair specialist can quickly identify and replace a failed component. Unfortunately, a farm business is not as structured or predictable as a radio or an engine. Further, human behavior always complicates the identification and implementation of needed managerial or business changes. Nevertheless, it is still possible to borrow some ideas from troubleshooting and apply these to farm business analysis. Using the framework developed in this publication, you should be able to approach the resolution of financial problems in a more systematic way.

Identifying the Problem

The financial performance of any business can be assessed using three well known concepts: profitability, liquidity, and solvency. For the sake of completeness, we will review some basics.

Profitability

Profitability is the most important determinant of long-term business performance. Profit in an

economic sense is the return to management (and operator labor in the case of a family farm) and equity. In the long run, the farm manager must earn a competitive return on these contributed resources if the business is to continue. In the short run, the farmer must earn sufficient returns to at least pay for variable costs. If this is not possible, then some short-term response to minimize losses will be necessary. Profit can be measured with an income statement at the farm or enterprise level.

Liquidity

Liquidity, or cash flow, refers to the ability of the business to meet its cash obligations within a specific time period. Profitability and liquidity are related concepts — but by no means are they equivalent. Unlike profit, cash flow includes loan principal payments, proceeds from liquidated assets, and family living expenses. Cash flow does not include profitability factors such as depreciation, the value of inventory changes, or capital gains and losses. Liquidity is best measured with cash flow statements or budgets.

Solvency

Solvency refers to the ability of the farm business to secure debt or withstand adverse conditions. Solvency is synonymous with net worth or owner equity. Owner equity serves as a source of security for acquiring debt capital. Or it can simply serve as a potential credit source, a credit reserve to allow borrowing for unexpected events. Finally, solvency gives an indication of the risk-bearing ability or capacity of the business. Solvency is measured using a balance sheet.

The first step in financial troubleshooting is to identify the type of problems that the farm is experiencing. Is the problem one of profitability, liquidity, or solvency? More than one of the above? Income statements, cash flows, and balance sheets can be used together to characterize

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the farm's financial performance. Several years of data summarized in a trend sheet provide an ideal measure. Failing that, a single year's financial statements can give some insight into the problem. Pro-forma financial statements calculated for a typical year can also help sort out the long-term problems from situations arising from a specific year.

Identifying Potential Causes

A farm that is experiencing financial difficulties is, in most cases, in that predicament for several reasons. It is extremely rare to find a situation where a single management problem or decision is the sole cause of poor financial performance. The consequences of financial difficulties will be low profitability, liquidity, or solvency. The underlying cause will generally be associated with one or more diagnostic or causative factors—efficiency, scale, and debt structure.

Efficiency

Efficiency, as used in this publication, refers to the observed relationship between inputs and outputs in the farm business. Efficiency can be measured in physical terms — crop yields, pigs per litter, rate of gain. Efficiency can also be examined using economic measures such as variable costs per acre or returns per dollar of feed fed. There are no perfect measures of efficiency. Normally you will have to examine several aspects of the business before a clear picture begins to emerge. Efficiency, to a large extent, is determined by the farmer's managerial and technical skills. In larger operations, efficiency will reflect the performance of the owner as well as hired managers and workers.

Farms with low efficiency will generally show below average profitability. In fact, efficiency and profitability are two sides to the same coin. Low returns and high costs can also affect liquidity. And in the long run, poor profitability translates into losses in earned equity and reduced solvency, although some farm businesses may have sufficient equity to withstand low efficiency for many years.

Improving efficiency, in the majority of cases, requires improving basic farm management and technical skills. This is not a simple thing to do. Detailed production records can help identify problem areas. Outside technical or managerial consultants or experienced specialists can also be helpful. In the end, improving efficiency means improving resource allocation, enterprise choice, and the motivation and coordination of farm employees.

Scale

Scale refers to the size of the farm business. Farms can be too large or too small. In large or complex operations, managerial control or input can be spread too broadly. The efficiency of the business suffers as a consequence. Scale problems occur more frequently with farm businesses that are too small. In particular, scale problems occur when the labor supply is large relative to the capacity of the farm to fully employ and support it. Even large complex farm businesses can have scale problems of this sort, such as when several families attempt to farm together. Small farms may also have higher production costs per unit because fixed investment costs are spread over relatively low output levels.

Scale can be assessed by determining the labor requirements for the farm and comparing that to the existing labor supply after making allowances for off-farm work. Other labor-based measures of scale include sales per worker or workers per acre. A similar set of measures can be developed for the capital stock—investment per acre, per animal produced, or per worker.

Full employment is, in most cases, necessary to ensure an acceptable standard of living. If labor is in excess, the dollars withdrawn for wages or family living expenses can adversely affect the profitability and liquidity of the farm business. If the scale of a business is inadequate—in other words the farm is too small relative to its labor supply—a number of options can be considered. The labor supply can be reduced through off-farm employment or by elimination of hired or family employees. Or labor utilization can be increased through expansion—by

purchasing or leasing additional assets, shifting to more labor-intensive enterprises, or attempting to improve productivity through more intensive management.

Debt Structure

Debt structure refers to the amount of outstanding debt, its term, and cost. A farm can have too little debt, which limits its size, efficiency, growth, and earning capacity. For the most part, however, debt structure problems arise when the debt load is excessive, too costly, or must be paid off over too short a term.

Debt structure influences profitability through interest costs, liquidity through debt servicing requirements, and solvency through the value of the assets available to secure the farm's liabilities. Some debt structure problems are relatively easy to resolve — for example, lengthening loan terms to improve cash flow. Most, however, involve adjustment in the asset or liability structure of the business. Farmers might sell assets and reduce liabilities. Or they may simply attempt to eliminate assets that have debt service requirements in excess of their cash generating potential. Lenders in certain situations may be willing to consider debt write-off, forbearance on interest or principal payments, or sale-lease back options. Adjustment of debt structure usually requires a negotiated settlement between borrower and lender.

Troubleshooting with a Diagnostic Tree

Figure 1, on page 4, sketches out a diagnostic tree or procedure that involves examining the efficiency, scale, and debt structure of a farm business. In the interest of simplicity, the analyst decides whether or not the factor is “OK” or “not OK” at each node (oval) in the diagnostic tree. Clearly this oversimplifies the process. But it does demonstrate the interrelationship of efficiency, scale, and debt structure and the adjustment strategies that might be appropriate to remedy each problem.

The diagnostic tree also implies that a range of specific management options or adjustments exists for farms on each branch. A farm business with acceptable efficiency but unacceptable scale and debt load faces choices that are quite different from a farm with poor efficiency, acceptable scale, and unacceptable debt load. Further, there is always a question of order or priority in attempting to resolve financial problems. Which problem should be fixed first? In Table 1, several management options are presented for each branch on the diagnostic tree. The lists are by no means exhaustive. They simply illustrate ways in which profitability, liquidity, or solvency problems might be resolved, given the farm's efficiency, scale, and debt structure.

Summary

Troubleshooting a farm business requires an orderly approach, good data, and occasional intuitive leaps of faith. The procedure outlined in this publication helps the analyst go from symptoms to cause to cure. The difficulty, however, is that poor financial performance can be caused by several interacting factors. And the resolution of the problems will, in most cases, reflect the unique situation of a given farm business. This suggests that effective troubleshooting involves more than rules of thumb or simple financial guidelines. Appropriate financial analysis can only come from careful attention to the resources and needs of the individual farm family.

Related Publications

Iowa Farm Costs and Returns,
AgDM Information File C1-10

Financial Performance Measures,
AgDM Information File C3-55

Farm Financial Statements,
AgDM Information File C3-56

Figure 1. Financial troubleshooting.

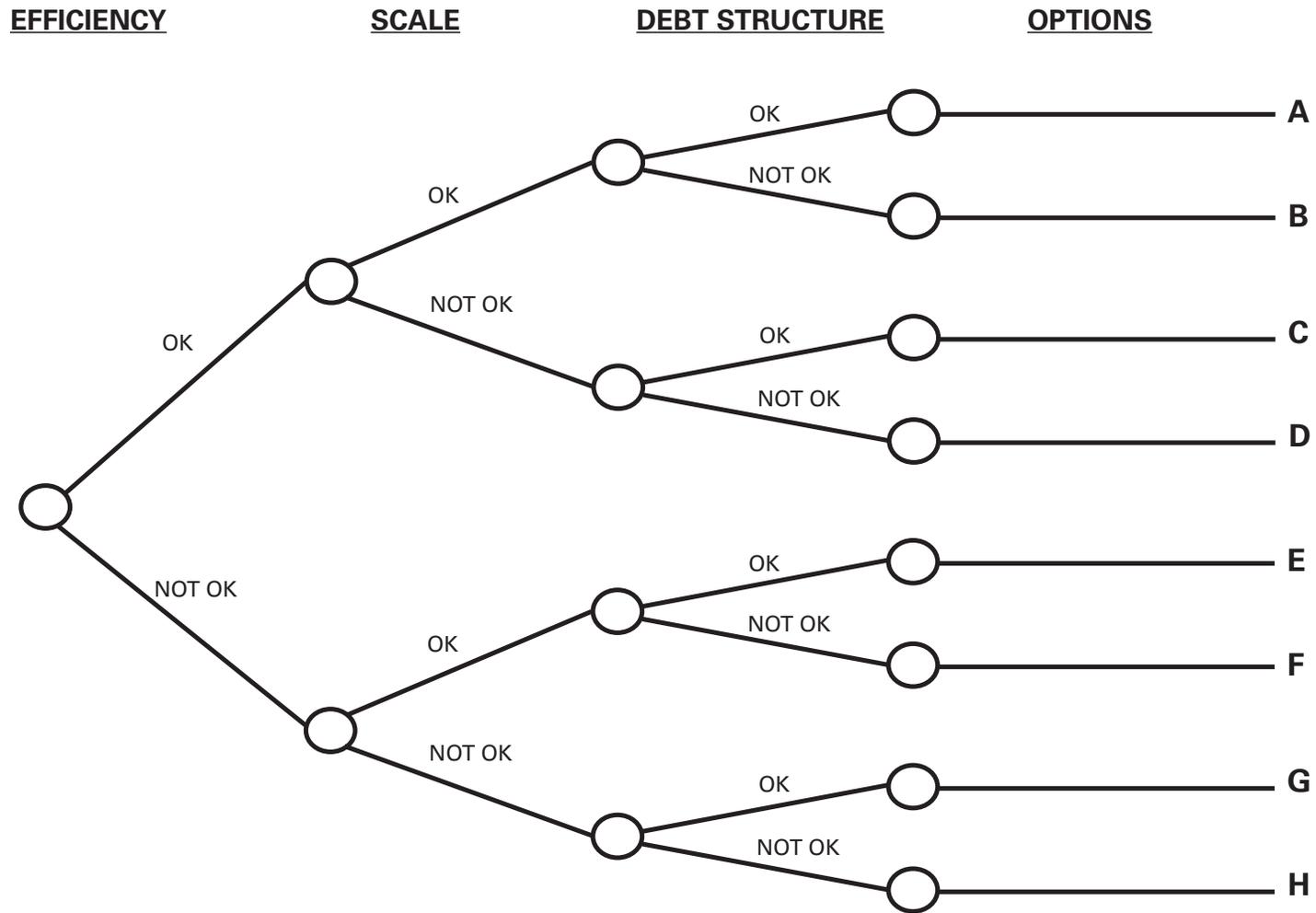


Table 1. Financial troubleshooting.

Diagnostic factors				Options
	<u>Efficiency</u>	<u>Scale</u>	<u>Debt</u>	
A.	OK	OK	OK	1) Review financial performance annually 2) Keep current on new technology 3) Tell them they are doing a good job 4) Potential for expansion 5) Also look at off-farm investments
B.	OK	OK	Not OK	1) Restructure debt—lengthen term or reduce interest rate to improve cash flow 2) Sell assets to reduce debt 3) Reduce debt through “shelving” or write-off 4) Chapter 12 bankruptcy
C.	OK	Not OK	OK	1) Cash flow problems will develop unless scale problem is addressed 2) Expand by adding enterprise or expanding existing enterprises—use records to make expansion decision 3) Custom crop farming, custom livestock feeding 4) Are they using their resources fully—machinery, labor? 5) Do they have the management ability and emotional stability to handle the additional stress of expansion? 6) Off-farm income—will this affect their efficiency in farming? 7) Retire
D.	OK	Not OK	Not OK	1) Often a young farm family 2) Tell them they are doing a good management job 3) Least costly way of expansion—rent additional land or facilities or custom feed livestock—crop-share rent vs. cash rent, custom crop farming 4) Off-farm income—will this reduce their efficiency? 5) Scale back and obtain off-farm income 6) Take Chapter 7 and start again

Financial Performance Measures

Diagnostic factors			Options
<u>Efficiency</u>	<u>Scale</u>	<u>Debt</u>	
E. Not OK	OK	OK	<ol style="list-style-type: none"> 1) Enterprise analysis—enterprise record keeping 2) Re-orient priorities—spend more time on management 3) Management is a personal thing and affects self image—may be difficult to discuss with them—try to deal with facts 4) Difficult to make a permanent improvement in management—may increase efficiency for short time buy back-slide 5) Use advisory services 6) Improve marketing 7) Is poor efficiency due to uncontrolled family living expenditures or due to high operation costs? 8) Is the operation too large to efficiently manage? 9) Do they like farming—should they quit while they still have good equity—are they afraid to make a change? 10) Establish a point where bank will not extend credit 11) Would they be better off working at a job rather than self-employed?
F. Not OK	OK	Not OK	<ol style="list-style-type: none"> 1) Must change two major factors to be successful—rather unlikely 2) Are the debt problems due to poor efficiency—will debt problem develop again if solved now? 3) Poor efficiency leads to other problems 4) Should they quit farming?
G. Not OK	Not OK	OK	<ol style="list-style-type: none"> 1) Hobby farming 2) Should they leave before their equity is gone? 3) Can resources be employed better elsewhere? 4) Off-farm employment is vital
H. Not OK	Not OK	Not OK	<ol style="list-style-type: none"> 1) Is it worth the hassle? 2) What else is at risk—marriage, family? 3) Take Chapter 7 and stay out of farming

... and justice for all

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