



Growing Complexity of Agricultural Lending Decisions

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The face of agricultural lending has changed dramatically over the last several decades from both a demand and supply perspective. Farm numbers are down, but size is up. The distribution of farms is increasingly bimodal; 2% of farms today produce over one half of total sales. Large-sized operations are capital intensive, utilizing the latest technologies embodied in variable and fixed inputs to expand productivity and lower costs. The use of debt capital in agriculture has reached an all-time high. Total farm debt outstanding today is up almost 50% from 1990 and now exceeds the peak debt outstanding before the farm financial crisis in the mid-1980s. These borrowers are increasingly sophisticated in their marketing strategies, alliances, and use of available information technology.

There has also been considerable change in the lenders providing loans to farmers. The Farm Credit System (FCS), which accounts for 38% of real estate farm debt and 22% of non-real estate farm debt, has transformed itself from 12 farm credit districts down to just four Farm Credit Banks (FCBs) and CoBank, which serves cooperatives nationwide in addition to its affiliation with major agricultural credit associations (ACAs) on both coasts. The recent failed attempt by the Dutch banking conglomerate Rabobank International to purchase one of the larger ACAs in the FCS raised a number of policy issues addressed by other papers in this theme. Commercial banks, the largest commercial lender to farmers, account for 33% of real estate farm debt and 49% of non-real estate farm debt outstanding. The credit delivery system at both lenders has changed considerably in recent years, with credit scoring and information technology playing a major role in credit decisions and resulting in efficiency gains in terms of decision turnaround and cost of operations. Other lenders to farmers and ranchers are undergoing change as well.

This paper focuses on the drivers of change at the farm level and emerging credit analysis issues. The remaining papers in this theme provide background on and discuss the implications of the attempted Rabobank purchase of an ACA, the implications that the Basel II Accords have for lending and portfolio decisions by agricultural lenders, and a look at where agricultural lending may be headed over the next several decades.

Drivers of Change at the Farm Level

There are a number of forces that will drive further change in agricultural lending in the next few years. These drivers in turn will influence credit analyses and portfolio management decisions at agricultural lending institutions.

For starters, the next farm bill will likely see several changes that will affect agricultural lending. This includes the potential de-emphasis on commodity safety nets (loan deficiency payments and countercyclical payments) as well as direct payments and increased emphasis on revenue insurance for a broad range of crop and livestock commodities. Continued programs may involve payment limitations and needs testing. Other policy-related drivers include issues related to water rights, zoning, and other regulations dealing with odor, dust, chemicals, and noise in agricultural production. Finally, macroeconomic policies affecting the general economic health of the domestic and global economies will also affect farm profit margins and debt repayment capacity.

Environmental, food safety, and bioterrorism concerns will also drive changes in production at the farm level. Regulations governing input use such as fertilizer and chemicals can affect both yields and the cost of production. Traceability in production processes and other Environmental Protection Agency (EPA), Federal Drug Administration (FDA), and Homeland Security regulations can also affect the cost of production but could have

positive effects on demand if these regulations give consumers greater confidence in finished goods.

International competition and globalization will affect trade flows and market shares for agricultural products and hence affect the prices received by farmers. Supply and demand conditions in China alone can have a substantial impact in the global marketplace. Brazil may also surpass the United States in terms of production of major commodities in the foreseeable future. These trends were happening before NAFTA and recent WTO rulings. The ultimate impact on US farmers will depend upon the relative efficiency and comparative advantage of competitor nations, including the United States. Although commodity prices may be global, production costs are local. Avocado production in Mexico, for example, requires no irrigation, whereas irrigated water represents California avocado growers' single largest input cost. This makes Mexico growers extremely competitive with California growers. Absent of quality differences between Mexican and Californian avocados, one would expect declining prices for avocados in US markets as Mexican growers gain broader access to markets in the United States. The general competitiveness of US farmers in global markets will also depend on exchange rates, trade agreements, and the agricultural policies of competitor nations.

Farm involvement in integrated supply chains will also influence the stability and profitability of farm borrowers. By enhancing the predictability of quality and supply to institutional buyers, these relationships ensure a market, and hence the stability of sales by farmers. Alliances, joint ventures in input use and production, and new forms of business

relationships will also lead to changes at the farm level.

Finally, other potential drivers of change at the farm level include the cost and availability of water, the cost and availability of capital, the Internet and the availability of decision tools online, biotechnology and its affects on the cost and productivity of crop and livestock production, and farm operations producing nontraditional differentiated products such as specialty grains.

Lenders will need the expertise to understand these drivers of change. Forming expectations of future debt repayment capacity requires lenders to understand the business relationships and environment in which their borrowers make decisions.

Emerging Credit Analysis Issues

As farms become larger and more complex, a number of issues are beginning to arise that will challenge traditional agricultural lenders. The measurement and assessment of risk evolving from the Basel II Capital Accords described in the paper by Katchova and Barry (in this issue) implies the need for using more sophisticated probability-of-default analysis tools for large exposures. Furthermore, the growing complexity of loan approval and portfolio management means the skills and knowledge lenders need to possess is going to change significantly. The remainder of this article identifies some of more significant issues we see emerging in credit analysis.

Alliances, contractual relationships, joint ventures, and interlocking ownership arrangements are becoming increasingly common as the food and fiber system moves toward coordinated supply chains. The analysis process will have to consider the terms and conditions of

these arrangements and how risks are shared between the parties involved. Sorting out how costs and returns are allocated and accounted for will also present a challenge. These arrangements will also raise questions concerning ownership interests, liability, and the methods of legal recourse underpinning them.

Multiple entities, multiple owners, and the various interlocking ownership and contractual arrangements will also magnify the importance of relationship risks. In addition to the previously mentioned financial and legal aspects, equally important are issues related to the commitment to the arrangement by the parties involved, compatibility and complementarities of management styles and philosophies, in addition to potentially different goals and objectives. Relationship risks are also not limited to interfirm arrangements. The interpersonal relationships within the closely held multiple-owner businesses are just as significant. Family business specialists frequently refer to preparing for the four D's: death, disability, divorce, and departure. The attributes of and need for buy-sell agreements between the parties, including their spouses, to address how different events will be handled will be an increasingly important factor in assessing business continuity and viability.

Many of the multiple entity relationships will be between agriculturally oriented businesses and businesses for which agriculture is only a minor part of their business portfolio. Many current agricultural lenders do not have the training or experience to assess the credit risks associated with these firms' nonagricultural business activities.

Evaluating the creditworthiness and business performance of hori-

zontally and vertically integrated firms will be far more challenging than traditional agricultural lending. The diverse and unique combinations of assets found in these firms are going to involve unique credit underwriting standards.

Although technical knowledge of farm operations has been a prerequisite for success of lenders in the past, the successful loan officer of the future will need to evaluate the economic value of alliances, information sources, and coordination methods.

Historically, farmers have operated in a limited geographic area, which allowed lenders to not only become familiar with the production practices, but also to have the ability to physically monitor performance and conditions. But that is changing rapidly. Geographic diversification is no longer limited to farming in different counties. Many farm operations are now spread over several states, and some are even multinational in scope. A significant number of US farmers are already operating in Argentina, Brazil, and Mexico. Not only are the production and market risks different, but the issues of coordination and control, as well as different economic, political, and legal risks, will also need to be considered.

Since the mid-1980s, agricultural lenders have placed much greater emphasis on cash flows and profitability; however, most farm loans are still asset-based transactions. One of the major changes occurring in agriculture that will challenge traditional lenders is the shift from hard to soft assets as the underlying strength in the borrower's business. In addition to the human resources of the business (which we will focus on next), contracts, brands, patents, leases, alliances, buy-sell agreements, and

franchise arrangements are important to the overall performance and viability of the business. These "soft assets" will represent challenges from the standpoint of both risk assessment and business valuation.

The implications of this trend will be profound for agricultural lenders. First, the financial performance of farm operations will become increasingly dependent on management and returns to management, rather than the ownership of and returns on assets. Management will entail not only operations and marketing skills internal to the firm, but also successful negotiation of linkages with suppliers and processors or distributors and having the proper external partners.

The human/management factor has always been recognized as a key to the success of any business or lending relationship. But the assessment has largely been subjective or based on measures associated with past performance. In the future, the primary basis for a business being able to maintain a sustainable competitive advantage will be management's ability to learn and adapt faster than its competition. Assessing management's ability and willingness to innovate and adapt, as well as whether the business is structured in a way as to permit sufficient flexibility, will be a major challenge. This is particularly true because managers go through lifecycles in which their attitude toward adapting to change and taking on new risks tends to change over time. A key element here will be assessing the breadth and depth of the management team, how decisions are made, and whether there is a clear succession plan and basis for successor selection. Another emerging issue that will complicate management assessment is the trend toward outsourcing and pooling of specific

management services and decisions. In these situations, the evaluation of management quality will not be limited to the business's internal capacity.

The increasing emphasis on risk management by lenders, regulators, and business owners is also spurring the development of new risk management products and strategies. Some are and will be insurance products; others will be various forms of derivatives. New futures and options markets and different forms of risk-mitigating contractual arrangements are appearing or being proposed in almost every market. Unfortunately, most risk management tools can increase risk as much as they can reduce it, if the tools are misunderstood or not used properly. There will also be issues related to how these tools and markets are underwritten and regulated. The ability to assess and become knowledgeable about these emerging developments will challenge both farmers and their lenders.

Historically, most agricultural products have been sold in open commodity markets. Much of the remainder has been produced under some form of production or marketing contract. Developments in biotechnology are just beginning to create what will eventually become significant markets in specific attribute raw materials for both consumer and industrial products. While homogeneous commodity inventories represent a fairly definable level of inventory risk, these new products will add a new dimension in terms of potential attribute quality deterioration and technical obsolescence. Just as clothing fashions, computer hardware, and pharmaceutical products can experience rapid devaluation in light of the development of new sub-

stitutes, the same will be true for these agricultural inventories.

Most lenders recognize the importance of evaluating trends and cycles when analyzing agricultural loans. The increasing emphasis on value-added business activities and niche marketing is going to require even greater emphasis on the need to evaluate market entry and exit strategies. This will be true for both lenders and borrowers. Historically, most analysis has focused on trends as if they were linear. The acceleration in the speed of information transfer, globalization, and changes in consumer tastes and preferences and technological developments have resulted in some trends becoming exponential. Timing has always been important, but the early identification of tipping points, in terms of both getting into or out of a market, is becoming critical. The need for closer monitoring and recognizing that much of the impetus for change will come from outside the business will be increasingly important in the analysis process, the design of information systems, and the identification of leading indicators.

Related to the previous point is the ability of lenders to evaluate strategic risks when assessing both individual loans and portfolio risk. The importance of environmental scanning is going to become more important. Although significant changes and events can be envisioned, their probability of occurrence is often extremely low and frequently will be the result of events or developments outside the borrower's industry. The scope of the scanning process, the understanding of interrelationships, and the identification of leading indicators in markets largely unfamiliar to traditional agricultural lenders will present new challenges.

Most agricultural lenders are knowledgeable about the details of the various farm programs and the rules and regulations associated with environmental programs. However, as a result of increasing concerns and regulations associated with bioterrorism, food safety, and developments in biotechnology, compliance with Homeland Security Administration and FDA regulations may be associated with greater liabilities than traditional farm programs. These

programs not only will present the need to be knowledgeable about a wider range of regulations, but monitoring compliance may often be more difficult and more costly.

Summary and Theme Overview

There have been major changes to the face of agricultural lending over the past several decades. Many of the forces driving these changes have occurred at the farm level. Lenders have adapted to these changes in addition to changes in technology that permit greater efficiency in their operations. Lenders will have to continue to adapt to the increasingly complex and uncertain environment in which their clientele operate. In short, the future promises continued change to the face of agricultural lending.

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