

The Impact of Financial Futures on Agricultural Banks

By Mark Drabenstott and Anne O'Mara McDonley

Financial futures have emerged as the most rapidly growing segment of futures trading. Financial institutions are increasingly turning to this developing futures market as a means of reducing interest rate risk brought about by volatile financial markets. To better understand the impact that financial futures are having on agricultural banks, the Federal Reserve Bank of Kansas City has conducted a national survey of agricultural banks.

Agricultural banks traditionally have enjoyed a high degree of insulation from movements in national interest rates due to their localized deposit structure and the stable operating environment that has characterized the entire banking industry since the 1930s. However, agricultural banks face new challenges today that transcend the increased risk that all banks are encountering in today's more volatile interest rate environment.

Rural financial markets have been transformed in recent years by a combination of two factors. First, the deregulation of the banking industry through the Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMCA) has placed rural agricultural

banks in more direct competition for funds with urban banks and other depository institutions. Second, rural savers have gained access to a wider assortment of savings instruments since the late 1970s. As a result, rural community banks have been under increasing pressure to replace their noninterest bearing demand deposits with higher yielding deposit accounts, such as money market certificates. Consequently, these banks no longer hold a large pool of demand deposits with which to insulate themselves against adverse movements in national interest rates. Agricultural banks, therefore, faced with increased competition and the integration of rural financial markets, are being significantly affected by volatile interest rates.

Financial futures are a relatively new and potentially effective risk management tool that agricultural banks may use in dealing with the new operating environment. This article examines the impact financial futures may have on agricultural banks. The first section provides a brief overview of financial futures markets and how they relate to interest rate risk management by banking institutions. Section two employs the results of a recent national survey of agricultural banks to analyze the extent to which these banks are using financial futures and their accompanying reasons. The

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third section reviews some of the major issues relevant to the use of financial futures that are of concern to the banking industry and discusses current opinions of agricultural banks on these issues as recorded in the survey. The final section examines the question of the suitability of using financial futures as a risk management tool by agricultural banks.

FINANCIAL FUTURES AS A RISK MANAGEMENT TOOL

Financial futures have their roots in agricultural commodity futures markets. These markets evolved because of the need to reduce the risk associated with uncertain prices for the future purchase or sale of a particular commodity. An agricultural producer can reduce the risk of price fluctuations by hedging, which is the establishment of a position in the commodity futures market opposite from that held in the cash market. Similarly, a bank may reduce the risk of adverse interest rate fluctuations by hedging in the financial futures market.

Banks automatically are exposed to interest rate risk when they have a mismatch in the maturities of interest-sensitive assets and liabilities. For example, a bank that holds a portfolio consisting of predominantly long-term fixed rate assets and short-term variable rate liabilities faces the risk of rising interest rates. Should interest rates rise, the spread—that is, the difference between the rate earned on assets and the rate paid on liabilities—would narrow, which would reduce expected earnings, or it could turn negative, resulting in a loss. Moreover, the market value of its assets would decline. The savings and loan industry, in recent years, is a prime example of the devastating effects of narrowing spreads.

For many years, banks have employed a number of risk management techniques, such as matching the maturities of interest-sensitive

assets and liabilities and using variable interest rate loans. While these management techniques have served to reduce risk, it is becoming increasingly difficult for banks to rely on these traditional tools to assure an adequate profit margin. Financial futures offer a potentially more effective method of reducing interest rate risk.

A financial futures contract, in effect, is a vehicle for transferring cash market interest rate risk to the futures market, where it is assumed by other market participants. Such a contract is an agreement between two parties whereby one party, the seller, agrees to deliver a specific financial instrument to the other party, the buyer, at a predetermined date in the future. The buyer of the contract holds a “long” position, while the seller holds a “short” position. Because the futures contract is based on a financial instrument whose value will fluctuate according to movements in interest rates, the value of the futures contract will fluctuate in conjunction with it.

Parallel price movements in a cash market financial instrument and its futures market counterpart make it possible for banks to transfer cash market risk by assuming a position in the futures market. For example, a bank that holds a fixed-rate asset and faces the risk of rising interest rates can hedge this risk by selling a closely correlated futures contract of equivalent value. If interest rates rise, a profit is incurred in the futures market equal to the eroded value of the cash market asset. The hedge is lifted when the futures market position is offset by purchasing the same futures contract at a price lower than it was sold. This results in a gain in the futures market equal to the loss in the cash market, which amounts to a perfect hedge of interest rate risk. This illustrates a theoretical hedge. In actual practice, a bank must also be aware of the effects that a futures position will have on its overall risk exposure.

The perfect hedge, however, is rarely executed in the real world of financial futures markets. Hedging interest rate risk implies that basis risk is being substituted for cash market risk. The basis is defined as the difference in price between a futures contract and the cash market value of the financial instrument upon which the contract is based. In theory, there is minimal basis risk because the basis is constant, since the movement of the futures contract price and the value of the cash market instrument should be perfectly parallel. In practice, however, the basis fluctuates in response to several market stimuli, including market expectations concerning the future course of interest rates. Nonetheless, basis risk is typically less than cash market risk because, on balance, changes in the basis tend to be more stable and predictable than the risk of changing interest rates and resulting price fluctuations of financial instruments in the cash market. Thus, financial futures are a viable risk transferral mechanism for banks.

The rapid development of financial futures contracts on a number of commodity exchanges has made hedging a readily accessible and efficient risk management tool for banks. Financial futures contracts have grown very quickly in a short period of time. The first financial futures contract, a contract in GNMA mortgage-backed certificates, was introduced on the Chicago Board of Trade in 1975. Since that time, several other contracts have been added and trading volume for financial futures has increased at an impressive rate. Currently, a total of nine financial futures contracts are traded on three different exchanges. Trading volume on the Chicago Board of Trade has grown from less than 100,000 contracts in 1975 to more than 16 million in 1981. The International Monetary Market of the Chicago Mercantile Exchange has witnessed a similar explosive growth as 110,000 contracts traded in 1976, compared to nearly 15 million in 1981.

The development of new financial futures contracts allows banks to more effectively match cash market risk with a futures contract, thereby minimizing basis risk. In theory, the perfect hedge matches a cash market instrument with a futures contract based upon the same instrument. In practice, banks often hold assets or liabilities which can be hedged only by choosing a futures contract based upon a *similar* instrument, a strategy known as cross hedging. The prices of the two different instruments should have a high degree of correlation in order for cross hedging to be effective. The need for cross hedging is minimized as a broader mix of futures contracts develops.

Increased trading volume as well as the central location of commodity exchanges has provided more efficiency and liquidity in financial futures markets. Efficiency improves with trading volume because market participants are all aware of price changes at the same time and in the same location. Moreover, increased volume and competition tend to result in a narrower bid/ask spread. As market efficiency improves, the transaction costs also decline. Additionally, as financial futures markets become more liquid through greater trading volume, banks tend to face less uncertainty in entering and exiting from a hedge.

SURVEY OF AGRICULTURAL BANKS

As a result of the volatile economic conditions that have prevailed since the beginning of the 1980s, there has been increasing interest in the use of financial futures by the banking industry. However, data are scarce that indicate the extent to which banks currently use financial futures. The only published information available originate from surveys performed by the Commodity Futures Trading Commission and Arthur Anderson & Co., neither of which exclusively addressed the banking industry. These studies suggest that a very small fraction of all commercial banks are regular users of

futures markets.¹

To more accurately assess the degree to which agricultural banks use financial futures as a risk management tool, a national survey was recently conducted by the Federal Reserve Bank of Kansas City. A total of 460 agricultural banks were surveyed, representing approximately 10 percent of the total agricultural banks in the United States.² The number of respondents to the survey totaled 332 banks, a 72 percent response rate.

The purpose of the survey was to determine the extent that agricultural banks use financial futures and their reasons for using or not using them as a risk management tool. The survey also sought information on two key issues—regulation and accounting—relevant to the use of futures by the banking industry.

¹ A survey conducted by the CFTC in 1979 gathered information concerning the commitments of traders for several financial futures contracts categorized by trader occupation. Commercial banks accounted for 2.3 percent of total traders tabulated. A study conducted by Arthur Anderson & Co. in 1981, commissioned by the research foundation of the Financial Executives Institute, was targeted toward the use of interest rate futures by commercial companies in the United States and Canada. Its purpose was to examine the accounting, reporting, internal control, and tax implications of using financial futures. The results of the study, however, have not yet been published. Another research study conducted jointly by the Treasury Department and the Federal Reserve System addressed the following issues: 1) impact of futures trading on the cash market, 2) possible constraints on the Treasury's debt management, 3) assessment of CFTC's ability to effectively maintain surveillance of futures markets, and 4) adequacy of safeguards for unsophisticated investors. Other surveys of a specialized nature exist, but they are for private interests and have not been published.

² The survey was conducted in January of 1982. The survey sample consisted of the 100 largest commercial banks in agricultural lending and the top 10 percent in terms of farm loan volume, as defined by the American Bankers Association (ABA). For purposes of the survey, an agricultural bank is defined as a bank with at least \$2.5 million in farm loans and/or 50 percent of its total loans in agricultural loans. The sample was divided into five geographical regions: 1) Corn Belt, 2) Northeast, 3) Plains, 4) South, and 5) West. These regions correspond to those used in the ABA's annual agricultural credit survey.

The results of the survey indicate that only 7 percent of the responding banks are currently using financial futures. However, 15 percent of the respondents indicated that they were planning to use futures at a later time. Banks not currently using financial futures represented 77 percent of the total respondents, while banks which previously used futures but no longer do comprised only 1 percent.

According to the survey, financial futures are the least used tool for managing interest rate risk, even among user banks. Instead of using financial futures, the majority of the agricultural banks surveyed have responded to increased interest rate volatility by employing traditional risk-reducing techniques. The two most common methods used are variable interest rate loans as an alternative to fixed rate loans and shortening the maturity of assets to more nearly match that of liabilities. Another method frequently employed is the use of market interest rates other than the national prime as benchmarks for adjusting loan rates.

The survey results are analyzed and divided under three main categories: 1) banks currently using financial futures, 2) banks planning to use futures, and 3) banks not currently or no longer using them. A tabulation of some balance sheet characteristics of the responding banks is contained in Table 1.

Current Users

Banks currently using financial futures are generally large, with adequate resources and manpower to commit to a hedging program. Deposits averaged \$7.9 billion for this group, compared with average deposits of \$1.1 billion for banks planning to use futures. The number of people involved averaged 4.5, with an estimated time commitment of 92.3 manhours per month. Vice presidents and investment officers were the primary people responsible for the administration of their financial futures program.

Table 1
BALANCE SHEET CHARACTERISTICS OF AGRICULTURAL BANKS
RESPONDING TO FINANCIAL FUTURES SURVEY
(Millions of dollars)

	Number of Respondents	Assets	Deposits	Total Loans	Total Agricultural Loans	Percentage of Agricultural Loans
Currently Using						
Total:	23					
Average Value		11,434	7,862	6,357	175	2.8
Range		49-62,085	43-48,158	29-38,779	1-1,676	—
Tenth District:	2					
Average Value		1,529	1,111	744	83	11.2
Range		979-2,079	719-1,502	509-980	34-132	—
Planning To Use						
Total:	51					
Average Value		1,499	1,119	849	45	5.3
Range		30-15,668	25-11,406	21-10,312	8-483	—
Tenth District:	11					
Average Value		648	465	300	28	9.3
Range		68-1,887	56-1,371	46-960	15-49	—
Not Using						
Total:	254					
Average Value		199	161	107	19	17.8
Range		22-4,711	19-3,537	14-2,539	1-139	—
Tenth District:	59					
Average Value		117	92	58	20	34.5
Range		26-903	22-660	18-384	12-46	—
No Longer Using						
Total:	4					
Average Value		2,215	1,731	1,286	57	4.4
Range		38-4,233	34-3,235	28-2,558	12-144	—

A number of the banks surveyed that are currently using or plan to use financial futures have some familiarity with commodity futures. Specifically, of the responding banks currently using financial futures, 39 percent have a working knowledge of the commodity futures market. This knowledge is derived from their

long-standing experience with farm and ranch borrowers—advising customers on the use of commodity futures, loaning funds for customer margin requirements, and occasionally requiring customers to hedge commodities as a form of loan security. Of those banks planning to use financial futures, 69 percent have ex-

perience with commodity futures. If these two groups of respondents are combined as being representative of agricultural banks understanding the potential role of financial futures for risk management, a total of 59 percent of the total banks surveyed have experience with commodity futures.³ This experience may provide an advantage to agricultural banks over nonagricultural banks in implementing a financial futures program.

Banks using financial futures, as well as banks planning to use them, were asked to rank selected sources of information about futures in the order of their usefulness in instituting and administering their financial futures program. Banks responded that the most beneficial sources, in the order of perceived usefulness, were commodity brokers/dealers, professional seminars, commodity exchanges, accountants, market researchers, economists, and financial consultants. The survey revealed that when developing hedging strategies, banks relied most heavily on internal bank management for their expertise. However, of the banks that lacked expertise, 43 percent indicated that the establishment of a financial futures advisory service would encourage their involvement in financial futures.

The survey showed that financial futures are used by banks to hedge interest rate exposure in a variety of situations. The most common use for a hedge is protection against an increase in the cost of a bank's funds and for anticipated borrowings.⁴ Hedges also are used to protect

³ While the survey was directed at agricultural banks, results might be applied to a broader range of commercial banks. This is true for two reasons. First, the survey sample included large money center banks as well as smaller rural community banks. Second, the definition of an agricultural bank used in this survey was more liberal than the standard banking industry definition.

⁴ From the regulator's perspective, anticipated borrowings may be speculative in nature. Care should be exercised in the construction and documentation of such hedging strategies in order to comply with regulators' guidelines.

existing and anticipated investments from losses due to fluctuating interest rates.

The survey further revealed that 74 percent of the banks currently using financial futures take an active role in managing their hedge positions. The management of a hedge involves the use of futures market contracts to control the cyclical interest rate risks of a mismatch of asset and liability maturities. Managed hedges generally require an interest rate forecast or the ability to judge the most favorable timing for the placement or removal of a hedge. Using an interest rate forecast to gain a better understanding of the direction of interest rates for a hedging decision is sometimes considered speculative. According to the survey, fluctuations in the basis and revisions in interest rate expectations are factors considered most critical in monitoring hedge positions. Yield fluctuations and changes in economic conditions play a secondary role in hedge management decisions. Of the responding banks, 58 percent depend primarily on their own market judgment regarding the movement of interest rates rather than on a formal forecast in developing hedging strategies. In cases where such a forecast is utilized, it is normally generated by internal bank management rather than by outside consultants.

An increasing number of banks are incorporating financial futures into their overall asset-liability management program to better manage net interest rate exposure. Of the responding banks, 85 percent determine their interest rate exposure primarily through the use of interest rate sensitivity analysis. The mismatch between the maturities of assets and liabilities, when quantified by the calculation of the gap, provides a bank with a measure of total interest rate exposure.⁵ Other methods

⁵ The term "gap" has become associated with such phrases as "gap management" and "hedging the gap." A gap

used in determining interest rate exposure are spread analysis and asset-liability management modeling.

Planning to Use

Banks planning to use financial futures tend to be medium to large in size, with deposits averaging \$1.1 billion, in comparison to average deposits of \$161 million for nonusers.⁶ Banks not currently using financial futures but planning to use them at some point were asked to specify the preparatory steps they have taken toward initiating a risk management program utilizing financial futures. They noted the following, in order of preference: initiation of more detailed asset/liability management, careful consideration of the accounting aspects, education of more people within the bank about financial futures, strategy discussions with senior bank management, and consultation with other professional users.

NonUsers

Most banks not currently using financial futures are small in size, with limited resources, holding average deposits of \$161 million. There are several reasons these banks do not use financial futures. Lack of adequately trained personnel was cited as the main deterrent. Also cited was the lack of useful or easily understood information on financial futures with commer-

simply denotes the discontinuity that exists when the maturities of assets and liabilities are not perfectly matched. Asset/liability management techniques have evolved from spread management and have expanded to the determination of a net interest-sensitive asset or liability position at individual maturity layers. This net exposure, or gap, is then hedged in the financial futures market.

⁶ Besides answering questions in their section of the survey, the respondents also were asked to answer as many questions in the user's section of the survey questionnaire as they thought applicable. Those responses were incorporated in the current user's section.

cial banking applications. In addition, they found the inherent market risks that exist with financial futures difficult to comprehend as well as control. Some banks reported that they believed the matching of assets and liabilities in the cash market was sufficient and that they had no need for financial futures.

The boards of directors at some banks are reluctant to use financial futures because of problems associated with current regulatory and accounting guidelines. This reluctance often takes the form of bank policy which discourages a bank from implementing a financial futures program. The small number of banks that have had previous experience with financial futures but that have discontinued their use cite the lack of experienced personnel and financial losses resulting from the improper use of futures as the major reasons for this decision.

Factors that would motivate nonuser banks to seriously consider the use of financial futures consist of a better understanding of the applied uses of financial futures, the continued existence of interest rate volatility, and more consistent and clearly defined regulatory tax and accounting treatment. Some banks indicated that the availability of a financial futures advisory service from correspondent banks would encourage the use of futures.

MAJOR FINANCIAL FUTURES ISSUES

The two key issues that face the banking industry with regard to financial futures are regulation and accounting. Each remains a controversial and unresolved issue, in part because financial futures have developed rapidly over a brief period of time. How each is resolved will have a lasting impact on the degree to which banks adopt financial futures as a risk management tool. This section analyzes the regulatory and accounting issues relevant to use of financial futures by banks as indicated by survey responses of both user and nonuser banks.

Regulation of Financial Futures

Many user as well as nonuser banks responded that current regulatory guidelines, apart from the accounting issue, inhibit their use of financial futures. Approximately 44 percent of the user banks indicated that current banking regulations "somewhat" discourage their use of futures, while 13 percent said they "significantly" discourage their use. Slightly over a third of the user banks responded that current regulations do not affect their involvement in financial futures. Among nonuser banks, 38 percent said that more clearly defined regulatory, tax, and accounting guidelines would motivate them to seriously consider using financial futures. Hence, current banking regulations concerning financial futures appear too restrictive to many user banks and ill-defined to some nonuser banks.

Since the introduction of financial futures into the banking industry, bank regulators have become increasingly aware of the potential risks that financial institutions may incur as a result of the use of futures. The purpose of bank regulation is to monitor the soundness of a bank's overall financial condition as well as to deter activities associated with unacceptable levels of risk. The earliest and most all-inclusive set of regulations for financial futures and forward contracts were issued by the Comptroller of the Currency in 1976. In 1979, an inter-agency task force issued uniform guidelines for futures contract trading in the form of a joint Federal Reserve-Federal Deposit Insurance Corporation-Comptroller of the Currency policy statement. The guidelines of the three banking regulatory agencies, which were revised in March 1980, are similar in content and have comparable rules. For simplicity of discussion, direct reference will be made to the guidelines issued by the Comptroller of the Currency.⁷

The Comptroller, by its issuance of Banking

Circular No. 79, has recognized the legality of using financial futures as a hedging mechanism by banks. The Comptroller noted, however, that their use must be conducted "in accordance with safe and sound banking practices and with levels of activity reasonably related to the bank's business needs." While recognizing the appropriateness of using futures in investment portfolio operations, asset-liability management, and dealer-banking trading activities, the details for regulating futures trading are not specific. The regulations are of a generalized nature because a single set of rules governing the appropriate use of financial futures would not effectively apply to the numerous individual banking situations that could arise. However, one overriding guideline is that the use of financial futures should reduce the net interest rate exposure for the balance sheet as a whole.

Banking regulators have indicated that the responsibility for establishing a sound financial futures trading program lies with the board of directors of each individual bank. The directors are required to establish and implement written policies and procedures which will outline specific objectives that detail each hedging strategy, maintain an adequate record-keeping system, set and enforce contract position limitation, implement a system for monitoring and analyzing credit risk exposure, and establish appropriate internal controls. The objectives must detail strategies involving the use of financial futures contracts and their relationship to proper banking activities. Also, the

⁷ Banking Circular No. 79, issued by the Comptroller of the Currency, is applicable to all national banks. The circular was originally issued in November of 1979 and was subsequently revised and reissued on March 19, 1980. The purpose of the revision was to include the majority of activities relating to the hedging of interest rate risk under one set of regulations. This modification combines the previous guidelines covering forward placements, standby contracts, and GNMA contracts with financial futures.

records must be adequate to indicate how contract positions contribute to the attainment of the objectives.

The Comptroller's regulations contain a provision for the proper accounting treatment of financial futures. It is required that "all futures and forward contracts (with certain exceptions)...should be valued by a consistent method of either mark-to-market or mark to the lower of cost or market...[and] all losses resulting from monthly contract value determination should be recognized as a current expense item." The rationale behind the Comptroller's stand on the accounting treatment is that a mark-to-market approach is considered a deterrent to speculation. An in-depth discussion of the accounting issue is presented in the next section.

Regulatory policy is explicit in its allowance of hedging and its disapproval of speculating. However, the distinction between the two remains nebulous. Non-speculative transactions are contract positions that are defined as reasonable in terms of such factors as the size of the financial institution, its capital structure, its sources and uses of funds, and its capacity to fulfill outstanding obligations. Cash market as well as futures market transactions require some degree of interest rate forecasting and exposure to interest rate risk, which suggests that the potential for speculation always exists. The success of these transactions depends upon how actual interest rates move relative to expectations. It is inevitable that banks will be exposed to some variability in interest rates, but when properly managed, this risk is acceptable and is not considered speculative.

The Comptroller's basic philosophy is that if the futures markets are used to protect the difference between the cost of a bank's funds and the return on its assets, then such activities are considered "incidental to banking" and therefore an appropriate risk management tool. The development of a precise definition of

hedging and speculating for regulatory purposes would not be feasible because of the numerous situations it would have to address. Some observers have suggested that it might be more effective from the regulators standpoint to specify acceptable levels of risk that would be appropriate for the banking industry. Before such risk levels can be analyzed and defined for regulatory use, though, some actual experience in the use of financial futures by a variety of banks will be needed.

When a bank establishes its own self-regulatory guidelines for the prudent use of financial futures, the need for detailed regulatory requirements are greatly reduced. The success of any new technique to control risk depends upon the quality of bank management and its ability to adapt to a changing environment. Also, the market trading requirements imposed by the commodity exchanges and compliance with these regulatory guidelines help to insure proper usage of financial futures. Regulators might fulfill their function more effectively by providing information which educates banks about the proper methods of utilizing financial futures.

Banking regulators have established guidelines that are strict in the sense that contract positions must relate to prudent banking activities. At the same time, the guidelines are liberal in allowing individual banks to administer their own financial futures program. It is proper to expect regulators to require detailed documentation from banks justifying their implementation, administration, and working knowledge of financial futures. For many banks that have the appropriate expertise available to manage the use of futures, bank regulation fulfills the function of assuring compliance with safe and sound banking activities. On the other hand, for banks that are lured into a false sense of security by financial futures, regulation is necessary to prevent increased risk-taking.

Financial Futures Accounting

The accounting issue revolves around the manner in which banks should recognize futures contract positions in their financial statements. Current attitudes by regulators and banks reflect two different philosophical approaches to this issue. Bank regulators support lower-of-cost-or-market value accounting, also referred to as mark-to-market, which basically forces banks to recognize futures gains and losses in current income.⁸ Regulatory guidelines also require hedging strategies to be directed toward the overall net balance sheet exposure, a concept referred to as macro hedging, rather than hedging specific assets and liabilities.

According to the survey, banks favor deferring recognition of gains and losses until the futures position is offset or the underlying cash market position is altered.⁹ Survey results reflect dissatisfaction with market value accounting by both user and nonuser banks. Of those user banks surveyed, 40 percent said that current accounting guidelines "significantly" discourage involvement, while 36 percent

responded that involvement was "somewhat" discouraged. Of the nonuser banks surveyed, 16 percent reported current accounting guidelines as a factor that influenced their decision not to use financial futures. Furthermore, 38 percent of nonuser banks indicated that more clearly defined regulatory, tax, and accounting treatments would encourage them to use financial futures.

Banks dislike market value accounting because of its disruptive effects on their financial statements. If interest rates behave in a volatile fashion, the resulting futures contract price fluctuations, and especially losses, will be reflected immediately in a bank's financial statement. This will occur even though assets and liabilities often continue to reflect their book value. A number of banks which now use financial futures have attempted to avoid the adverse effects of financial statement disruptions by maintaining two different sets of records. The official set of records meets the regulator's approval by using market value accounting. The other set of records, which is made public to stockholders, uses deferral accounting to minimize earnings variations resulting from futures trading.

Deferral accounting offers banks the opportunity to hedge against interest rate risk without inflicting frequent financial statement disruptions. Based on the survey results, the adoption of deferral accounting would stimulate more intense and widespread use of financial futures. The accounting treatment would be comparable to the way that banks presently account for their investment portfolio transactions. Deferral accounting does not, however, eliminate the effects of adverse interest rate fluctuations on individual assets. Rather, it postpones any consequences to a future period in time. This means that improperly managed hedges could go unnoticed to bank management until the hedge position is offset.

The resolution of the market versus deferral

⁸ Market value proponents argue that gains and losses on futures contracts should be recognized currently to associate them with their effect on the net interest rate exposure. This group believes that hedging may be accomplished only by the matching of interest-sensitive assets and liabilities. Any other type of hedging would be considered speculation by market value proponents. Financial futures as hedges, therefore, must be directed to net interest rate exposure. Since a mismatch of interest-sensitive assets and liabilities is currently accounted for in the income statement, gains and losses on futures contracts likewise should be currently recognized.

⁹ Deferral accounting advocates contend that in circumstances which constitute a hedge, it is appropriate to defer futures contract gains or losses until either the cash position is altered and/or the futures contract is offset. They believe that financial futures legitimately can be used to hedge net interest rate exposure. Because the cash market asset or liability which is being hedged against is normally carried at book value, deferral method proponents argue that financial futures contracts should similarly be carried at book value with realization of gains and losses when the contract is offset.

accounting issue likely will come about later this year when the Financial Accounting Standards Board (FASB) is expected to rule on a proposal put forward by the American Institute of Certified Public Accountants (AICPA). The AICPA proposal suggests criteria by which to distinguish a hedge from a speculative position and advocates deferred accounting in situations that are clearly hedges.¹⁰ Bank regulatory agencies are expected to review their present guidelines after the FASB decision.

The AICPA proposal, in its original form, is becoming somewhat outdated as the controversy surrounding the accounting issue broadens to include the macro versus micro hedging concept. A macro hedge is a hedge against overall net interest rate exposure, as determined by the interest-sensitivity characteristics of a bank's balance sheet. A micro hedge, on the other hand, is a hedge placed on specific assets or liabilities irrespective of the overall interest rate exposure. While the meaning of these terms is not debated, the question remains as to the proper use of macro and micro hedging by financial institutions.

The Comptroller takes the position that macro hedging is the most efficient method of protecting a bank's interest rate exposure. Micro hedging, on the other hand, may entail some risk because of the narrow perspective from which the exposure is analyzed. The contention is made that hedging specific balance sheet items gives no assurance of reducing interest rate risk and may in fact increase net risk exposure. Recent literature has suggested that the Comptroller would favor deferral treatment

¹⁰ Three criteria to distinguish a hedge from a speculative hedge are suggested. The purpose of the hedge and the asset or liability being hedged against should be documented when a futures position is entered into. The price of the futures contract should have a high degree of positive correlation with the price of the hedged asset or liability. An anticipated hedge should reasonably be expected to be offset in the ordinary course of business.

of gains and losses when banks utilize the macro hedging approach. In following this approach, however, banks should be careful to consider the underlying characteristics of the assets and liabilities that make up the total net interest rate exposure.

The accounting profession takes the opposite position. They contend that a careful analysis should be made of the components of the net interest exposure in order to evaluate a hedging decision. When a hedge is initiated for a specific asset or liability, it would then be considered a micro hedge and qualify for deferred accounting treatment. Examples of balance sheet items qualifying for micro hedges are anticipated purchase of fixed interest rate assets, anticipated issuance of fixed-rate debt, and existing investment security or fixed-rate asset.

A blending of the macro and micro hedging approach might allow banks more flexibility in using financial futures. The identification of micro interest rate exposures allows better overall risk protection when coupled with an analysis of overall net risk exposure. Whether or not these two distinct hedging concepts can be intertwined for practical purposes depends upon the conclusions reached by the regulators and accountants. Only then can the issue of deferral accounting with regard to hedging be appropriately addressed.

IMPLICATIONS FOR THE USE OF FINANCIAL FUTURES

Because current users of financial futures tend to be large banks, the question arises as to whether financial futures are a suitable tool for rural agricultural banks. Survey responses indicate that despite their size, smaller agricultural banks may become regular users of financial futures. Nearly three-fourths of nonuser banks replied that a better understanding of the uses of financial futures markets would motivate them to seriously consider their use. This suggests that many small banks con-

sider financial futures a viable tool, but simply lack the expertise to become involved. The large number of small rural banks that are attending informational seminars on financial futures further demonstrates an attitude of developing interest by these banks.

Survey responses by nonusers suggest that despite the wealth of information available, it is difficult to gain a perspective on the viability of financial futures as a risk management tool as well as the specifics of implementing a hedging program. It is a difficult task to read and understand all the available material and to discern which information will be useful and accurate when applied to a particular bank's situation. This indicates that as more practical and useful information about financial futures is made available to the banking industry, the use of financial futures may grow.

In determining whether or not financial futures will be a suitable tool in managing interest rate risk, a bank must carefully analyze their potential use. A bank must first compare the use of financial futures against the effectiveness of traditional risk management tools. If a decision is made to use futures, an appraisal then must be made of the bank's capability to implement and manage their use. A bank may find that a financial futures program will place excessive time demands on personnel or that expertise is lacking to effectively carry it out. In this case, a smaller bank may find the employment of outside consulting services to be a more efficient means of directing a hedging program. However, it will still be incumbent upon the board of directors to take final responsibility for the hedging program.

Some banks distrust financial futures because of adverse publicity focused upon banks that have used futures in the past and incurred substantial losses. Such losses sometimes have been blamed on the inherent risks

associated with financial futures markets rather than on human error. Other banks have approached the use of futures with an overly optimistic attitude by utilizing advice in making trades that overstate the potential effectiveness of financial futures in hedging risk.

SUMMARY AND CONCLUSION

Financial futures offer agricultural banks a potentially effective tool to deal with interest rate risk in the new financial environment. Based upon a national survey of agricultural banks conducted by the Federal Reserve Bank of Kansas City, it was found that financial futures currently are used primarily by large banks with deposits of \$2 billion or more. Notwithstanding, a few small banks with deposits less than \$100 million were also found to be employing this tool. The vast majority of small rural agricultural banks do not currently use financial futures. However, the survey results also suggest that these banks may become regular users if their understanding of financial futures markets and banking applications is improved.

Banks that lack experience in financial futures need to exercise caution in implementing a hedging program. Improper and indiscriminant use of financial futures may lead to more rather than less risk exposure for a bank. On the other hand, careful planning and monitoring of hedging strategies in conjunction with overall asset-liability management can lead to more effective risk management.

Currently, financial futures are not being extensively employed by agricultural banks. In view of the changing and uncertain financial environment, it is likely that agricultural banks, with their background in commodity futures, may increasingly turn to financial futures as an appropriate risk management tool.

Issues in Monetary Policy: II

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Federal Reserve Bank of Kansas City

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