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SOME PERSPECTIVES ON STATE-LEVEL PROPOSALS FOR FINANCING ASSISTANCE TO COLORADO AGRICULTURAL PRODUCERS

by

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Preface

Faculty in the Department of Agricultural and Natural Resource Economics are participating in Project ARC (Agricultural Resources for Colorado), in part, by analyzing a series of legislative options for assisting farmers and ranchers impacted by the current agricultural crisis in Colorado. In discussions with Dr. David Carlson, Director of the ARC Project, it was agreed that four broad legislative options would be analyzed. These were: 1) a limited public/private partnership for buying agricultural land; 2) interest buy down programs for producer loans on agricultural land; 3) state-linked deposit programs, primarily for reducing interest payments on annual operating loans and equipment loans; and 4) targeting funds for agricultural economics research and Extension that would focus on managerial and marketing needs of agricultural producers. This report presents some overall perspectives on interest buy down plans state-linked deposit programs, and related options such as guaranteed loans, land purchase schemes, and providing credit relief to beginning farmers.

Introduction

The difficulties facing U. S. agriculture and the agricultural credit system--both public and private--are well documented elsewhere. (1,2) Corn Belt and Northern Great Plains states such as Illinois, Iowa, Minnesota and North Dakota have seen dramatic increases in farm foreclosures, farm bankruptcies and delinquent and non-performing agricultural loans in the 1980s. These adverse conditions are moving to the West and eastern Colorado is already being impacted about as badly as Nebraska and Kansas.

Agricultural land prices have fallen rapidly during this same period. The average value of Minnesota farmland has decreased by 48 percent in the last five years from a high of $1,310 an acre in 1981 to $686 in 1985 (Dion and Raup, 1986) and similar declines are now being experienced in eastern Colorado (Skold, et al., 1986). This loss of collateral value has pushed increasing numbers of farmers into insolvency. In Minnesota, the number of PCA loans in bankruptcy or foreclosure increased from 55 in December of 1982 to 288 in September of 1985. The number of Federal Land Bank loans in foreclosure or bankruptcy increased from 100 in December of 1982 to 687 in September of 1985 (Minnesota, 1986).

Although agriculture in Colorado has not seen the dramatic declines in land values such as have occurred in the Midwest grain export-oriented states, it shares the problems of low commodity prices, high interest rates, and high input prices with the rest of U. S. agriculture. According to the Denver Post, Colorado farm foreclosures more than doubled in 1985 from 1984. As the financial problems of the U. S. farm credit system continue to worsen, obtaining financing will likely become

a major problem for many Colorado farms, just as it has been for midwestern farms during the past 24 months.

The following are some perspectives on possible actions the Colorado legislature can take to help alleviate some of the problems of financing agriculture in the current adjustment period. The analysis is based primarily on the senior author's participation on the Minnesota Interagency Working Committee on Farm Policy and discussions with other faculty in the University of Minnesota Department of Agricultural and Applied Economics and the Agricultural and Natural Resource Economics (ANRE) Department of Colorado State University. This analysis draws heavily on two of the issue papers prepared by the "Financial Stress in Agriculture Discussion Group" of the Department of Agricultural and Applied Economics at the University of Minnesota (Appendix Items A and B).

Is State Action Needed or Desirable?

The financial stress of many farmers today is not due to simple mismanagement. Many farmers are in trouble today because of actions taken in the 1970s. Many farmers made rational decisions to expand capacity in a period of high commodity prices, low interest rates and federal policy statements that encouraged increased agricultural production (Miller, Trock and Smith, 1986). The consequences of widespread farm failures during the 1980s will adversely impact many related areas of society, agri-related businesses and rural communities, including capital markets, tax revenues, and welfare payments. Therefore, it is in the interest of the state and general public to assist in the current restructuring of agriculture and share in some of the costs. A state's resources are limited, however, and its actions should be targeted to where it can make a cost-effective impact. In this regard, the Financial Stress in Agriculture Discussion Group at Minnesota, but with relevance to Colorado as well, recommended that:[1]

(1) State programs should focus on resolution of financial stress and adjustment problems, not on freezing the process or keeping farmers operating "just one more year." It makes little sense to rescue farmers from their plight this year, only to find that they have no long-run future in farming because of their continued precarious financial position.

(2) A fundamental problem for many farmers (and one that the state can assist in resolving) is that of debt load and debt servicing. The state can

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[1] The following section is taken from "A Framework for a State Agricultural Adjustment Program" by the Financial Stress in Agriculture Discussion Group of the Department of Agricultural and Applied Economics of the University of Minnesota, February 1986. (Appendix A)

do little about farm prices, excess commodity supplies, or other production costs.

(3) A strategy of selective recycling of farmers and farm assets should be accepted as a legitimate alternative to that of assisting them in "holding on" until their equity is all gone.

(4) The adjustment costs needed to alleviate financial stress should not be borne only by farmers and farm lenders. Since developments external to the agricultural sector were partly responsible for financial stress, the public at large should share the burden of easing the necessary adjustments and bearing part of the costs.

(5) If the public does not bear part of the required adjustment costs now, other costs, in the form of higher interest rates, increased demands on social programs, etc., will be incurred in the future.

(6) State action cannot "save" all farmers as farmers but it can facilitate the adjustment process, and in this sense "save" farmers and their families.

For purposes of targeting state programs, the farm population can be classified into three categories:

Not restructurable

Farmers in this category are generally characterized by high debt/asset ratios (.70 or higher), low profitability, and associated high debt service costs. Some high debt farms are profitable.

Alternatively, annual net worth declines of 20 percent or more are characteristic of farms which are not restructurable. Approximately 15 percent of all U. S. farm operators fall into this group.

Restructurable

Farmers in this category are more moderately leveraged with debt/asset ratios between .40 and .70.

An alternative indicator for this category of farmers is that the annual rate of change in net worth varies between a decline of 20 percent and an increase of 5 percent. Depending on the criteria, nationally up to 46 percent of all farm operations might be classified as restructurable.

Financially stable

Farmers who are financially stable have relatively low debt loads (debt/asset ratios of .40 or less).

As an alternative indicator, average net worth is estimated to increase annually by 5 percent or more. Approximately 39 percent of all farm operators in the U. S. are in this third category.

Farmers in the first category will likely need to exit or recycle. Their problem is clearly one of excessive debt that can not be serviced and must somehow be eliminated--partially or totally.

Debt can be eliminated in one of three ways; it can be paid off using retained earnings, it can be paid off using the proceeds from the sale of assets, or it can be written off (discharged) by the lender. Since earnings are inadequate to service the debt, it can be eliminated only through sale of assets or by being written off and absorbed by the lending community.

Either of these strategies transfers part of the cost of the financial stress problem to the remaining farmers. The sale of assets results in generally declining collateral values and credit worthiness of farm borrowers as a whole. Higher write-offs on the part of the lending community result in additional pressures for lenders to raise interest rates to offset those higher losses. The burden of paying these higher interest rates will primarily be borne by moderately leveraged farmers so that the cost of financial stress will be diffused. The potential transfer of adjustment costs is an important consideration when designing public policies to alleviate the problem.

The second group of farmers includes those that may be in a financially vulnerable situation. Their cash flow is currently adequate, but could become insufficient if interest rates remain at their current levels or rise due to the pass through of loan losses. For this group of farmers, the policy focus should be more on interest costs and interest rates and less on total debt.

Farmers in the third group are generating modest levels of income, in large part because of low levels of debt. They should not receive assistance from public sector programs targeted towards those who are financially stressed.

Selected State Assistance Programs

Interest Rate Buy Downs Programs[2]

Interest rate buy down programs are probably the most effective way to target aid to the middle group of farmers, those that are viable or potentially viable but have cash flow problems and/or difficulty in obtaining operating loans because of relatively high interest rates.

Interest rate buy downs or subsidies may serve a number of purposes. They lower the cash flow requirements to service debt. They may "buy time" for farmers by reducing the immediate cash flow requirements, allowing more orderly and longer term internal adjustments in debt and asset levels and to external economic conditions. They allow the lender to collect interest payments from troubled borrowers so that the cost of losses are not transferred to other borrowers in the form of higher interest rates. They reduce or minimize the necessity to liquidate farm assets to cover debt service and indirectly stabilize farm asset values. Finally they keep funds flowing to financially stressed farmers who might otherwise not be able to get loans.

An example of a successful interest buy down program is the one included in the 1985 Minnesota Emergency Farm Operating Loan Act. The program included $25 million for interest rate buy downs in 1985. The results were disappointing to some of the political sponsors of the bill, however, because only $2.8 million was expended for interest rate buy downs rather than the full $25 million. The late passage date (March 6, 1985), the unfamiliarity of lenders with the new program and competition from federal credit assistance programs reduced the amount expended. However, the program had a substantial impact and must be judged a success, for the following reasons.

A total of 1,875 borrowers obtained 1985 operating loans at an average interest rate of 8.4 percent and 402 farmers were able to refinance existing loans under the program. Loans totaling 84 million dollars were directly subsidized under the program for the $2.8 million of state funds expended and some additional credit was provided to participants as a result of their improved financial projections. A total of 148 state banks, 54 national banks, 52 PCAs, one FLBA, and one savings and loan association participated in the program. The Minnesota Department of Commerce has estimated that over $120 million in private capital was made or remained available to farmer borrowers who were having difficulty obtaining or turning over loans, as a result of the 1985 interest buy down program (Minnesota, 1986).

Since a state's resources are limited, an interest buy down or similar subsidy program should:

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[2] For a more detailed discussion of Interest Rate Buy Downs, see Appendix B.

A. Be targeted toward farmers in the middle group of farmers whose operations are truly restructurable. In those cases where operations cannot be restructured, the states limited funds should be devoted to other adjustment programs such as job training and relocation assistance.

B. Be clearly identified as a temporary program, with the possibility of extension to a multi-year program if the farm crisis continues for some time.

C. Be structured so that the state program can be piggybacked on any Federal interest rate buy down programs for which the borrower is eligible.

D. Operating and short-term loans should generally have priority over real estate and long-term loans if subsidy funds are limited.

E. Require the lender to assume part of the cost of the reduced interest and a major part (preferably all) of the risk of default.

F. If real estate loans are included in the program, the lender should be required to assume some of the cost of the interest buy down and retain all of the risk of default on the principal. If the lender does not retain the risk of default, the state would end up guaranteeing land values.

The state's role should be that of oversight and approval. Existing lenders should be best able to determine which operators will be viable with assistance. Lenders should retain most of the risk of default so that they are not overly tempted to put operators in group 1 (not restructurable) in the program and convert questionable loans into a state-guaranteed loan program. Lenders should provide a portion of the interest subsidy so that they are not tempted to put operators in group 3 who can pay market interest rates in the program.

Interest rate subsidies should be temporary and limited to the period of time necessary for the required adjustments to be made. There should be no intention to make such programs permanent, although the severity of the current situation means that some operators may require subsidies for more than one year.

State-Linked Deposit Programs

In a linked deposit program, states use revenues from their investment portfolios or common cash funds to purchase low-yielding Certificates of Deposit (C.D.s) at participating financial institutions. These institutions agree to use the funds to make loans at below market interest rates to farmers. At least six states have linked deposit programs, with Illinois having the largest with $176 million. The programs were generally started or expanded in 1985. Interest rates on

the C.D.s ranged from 3.5 to 7.88 percent while the interest rates paid by farmers ranged from 6.5 to 11 percent. Three states require the lender to loan to farmers at a rate no greater than the C.D. rate plus 2.5 percent. One state (Michigan) allows lender spreads of up to 5 percent. These programs can provide a very real benefit to farmers who receive the loans. The 1985 interest rates of 6.5 to 11 percent compare very favorably to rates commercial banks were charging last year. However, the state linked deposit programs have provided little incentive for the banks to make more marginal loans since the lender retains all risk of default (Popovich, 1986).

State-linked deposit programs can be an effective mechanism for subsidizing agricultural interest rates similar to interest buy down programs. However, most of the current state programs do not meet the objectives stated above because they do not attempt to target group 2 (restructurable) farmers. That is, there are generally no debt-to-asset ratio or lender-of-last-resort restrictions. Consequently, it is very likely that many of the current linked deposit loans are going to group 3 farmers who could pay full market interest rates on their own. However, there is no reason why new (or existing) linked deposit programs could not be designed to specifically target aid to group 2 farmers.

State-Guaranteed Loans

Loan guarantees are sometimes viewed as a "cheap" way for the state to aid agricultural (or other) industries. By guaranteeing the loan, the state assumes the "risk" premium portion of the interest rates so that the cost to the borrower is lower, as is the apparent return to the lender (if the loan would have been made at all). The state has no cash outlay at the time the guarantee is made. The effect of loan guarantees will be to lower interest rates to the borrower and allow more funds to be loaned to operators in the agricultural sector.

Loan guarantees can also be used in conjunction with interest rate buy downs and state-linked deposit programs. However, the states assume the risk of default of the loan and the eventual costs can be very substantial, depending on the type of guarantee and subsequent economic conditions and related events. In order to be a low cost program to the state, credit risk and collateral adequacy must be screened by the state far more closely than for a simple interest buy down program. The lender has less incentive to do this because the loan is "risk free." Specifically, if a loan guarantee program is instituted by the state, extreme care must be taken to avoid lenders rolling over non-performing and other troubled paper into the loan guarantee program. Lenders will try to do this by any number of ingenious means. Their behavior will be dictated by both business sense and a drive for survival.

The Minnesota Farm Security program is an example of a loan guarantee program that was initially very low cost. It was established in 1977 to help beginning farmers who would not otherwise be able to get credit, to purchase farm real estate by guaranteeing 90 percent of the loan and providing an interest adjustment of 4 percent on the outstanding

principal. The guarantee was available on loans through any lender or a contract for deed. Because of the guarantee of 90 percent of the loan principal, many lenders such as retiring farmers, had no real incentive to critically analyze the borrowers cash flow and debt service requirement.

Initially because of the inflation in land prices and high commodity prices in the late 70s, the program was operating without major problems. The number of loan defaults has increased rapidly in the past two years, however, and most of the 400 recipients are now expected to default. Minnesota is expected to have to pay out up to $20 million in loan guarantees in the 1985-87 budget period. Another $40 million in guarantees may be needed in the next budgeting period.[3] These high costs contrast with the 1985 interest buy down expenditures of only $2.8 million. Because of these adverse developments, the program was suspended indefinitely on February 14, 1985.

The Illinois Guarantee Program for Restructuring Agricultural Debt

This loan guarantee program is targeted at group 2 (restructurable) farmers. It is designed to consolidate and spread out a farmer's existing debt over a longer time period at a reduced interest rate. New operating loans or purchases are not covered. Applicants must have debt to asset ratios of not less than 40 percent and not greater than 65 percent. In return for the state guarantee of 85 percent of the principal, the lender agrees to lower the interest rate to 250 basis points over one year Treasury bill rates. (The effective interest rate to the farmer on February 24, 1986 would have been just over 10 percent.) The interest rate will be adjusted yearly, based on the then current T-bill rate. Loans will be set up on a 30-year amortization schedule with a balloon payment in 10 years.

Participating farmers must have and maintain sufficient collateral to cover the 85 percent state guarantee at all times. It is permissable to have a guarantor sign the note and/or pledge additional collateral if the applicant does not have enough collateral in his own right.

This program appears to be well designed to meet many of the objectives previously discussed. It should be effective in assisting farmers who have adequate assets but cash flow problems servicing their debts because of currently existing excessive short term debt or high interest rates, or both.

It assists creditors in that a major lender can convert a problem account to one that is current, producing sufficient interest to cover the lender's cost of funds and expenses and have 85 percent of the principal guaranteed. (Note that this is designed to consolidate loans so presumably a number of creditors will be paid up entirely.) The net impact should be to increase credit to other farmers as well and at lower

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[3] Appendix B, page 5.

interest rates than if lenders had to take loan losses. The state appears to be reasonably protected in that its 85 percent guarantee is more than covered by sufficient collateral at all times.

From a practical standpoint, however, there are two potential problem areas to be aware of in this type of legislation. The first is the state's role in valuing the collateral. The second is future interest rate levels to the farmer. These problems, of course, are not new or unique, but can greatly effect the success or failure of the program; i.e., what is the value of land and machinery at the present time? It is to the advantage of both farmers and lenders to place a high value on a farmer's assets so that he is eligible for the loan guarantee program. This problem will remain critical until the general level of land and machinery prices stops declining and stabilize or start to increase. If commodity prices remain low and if it is necessary to call some of the loans, the collateral values may not be there and the state may have substantial losses. Further, the program as structured would put foreclosed assets on the market rapidly and potentially drive all farm asset price levels down further.

A participating farmer will have a term loan with a variable interest rate tied to short term instruments (one year T-bills). The farmer and not the lender bears the entire interest rate risk in this case. Although interest rates have been trending downward recently and normally short term rates are less than long term rates, this situation could reverse on short notice and thereby increase the farmers' debt service requirements dramatically.

These two considerations do not negate the value of such a program. These real world risks must be borne by someone but should be recognized when administering the program.

Public or Private Land Purchase Plans

A number of proposals have been made for investors and/or public agencies to buy agricultural land and/or entire farming operations as a means of assisting financially strapped farmers. Many of these proposals include provisions for the current farmer land owner to continue to farm as a tenant and to repurchase the farm at some time in the future.

The stated advantages are that private capital can assist farmers by allowing them to stay on their farms and that by purchasing land and providing capital , somehow stop the decline in land and machinery values.

It is expected that the private investor would be willing to commit capital in anticipation of a market rate of return on his investment. In some cases, however, a public agency or a non-profit foundation could subsidize the project by covering part of the capital risk or taking a below market rate of return in order to enhance the return to the private investors.

However well meaning these proposals are, most are uniformly naive in that they do not understand and take into account the magnitude of the restructuring needed in agriculture and the probable long term nature of agriculture's problems.

Most of the proposals assume that land prices have bottomed out or will do so in the next few months. There is no evidence that this has or will occur, even considering last year's precipitous decline in most areas. Low world commodity prices and federal budgetary pressures will continue to hold down farm income and the returns from agricultural land. There is a lack of outside speculative interests, (and indeed speculative disinterest in agricultural land), at present because of the recent decline in land values, low cash returns and the low level of inflation in the economy.

Our perspective is that downward pressure on land prices will continue while land prices decline through "normal" levels--i.e., a capitalized value based on cash return plus inflation--to land price levels where land will almost "cash flow." For example, based on present farm prices and expenses, this could mean a further drop of 20 to 50 percent from 1985 land prices in southwest Minnesota where land prices have already dropped 50 percent from their 1981 levels. Significant declines could occur also in Colorado, especially for dry land wheat areas where the declines to date have been relatively small. This may well be a temporary phenomenon but the psychological euphoria on the upside has a counterpart in a psychological depression on the downside. Land prices should eventually recover to their "equilibrium" level, where the value of land is equal to a capitalized value based on expected cash returns, plus inflation.

Farm land prices in the United States peaked in 1922-23 and 1981-82, covering a period of 60 years. The previous bottom of this cycle did not occur until the mid to late 1930s. Although there are many differences in the economic situation today compared to in the earlier period, this phenomenon illustrates the potential long term period of land price cycles in the United States. We do not see any evidence that land price cycles in Colorado will not continue in line with national cycles in the current situation.

Even if the conventional wisdom assumption that land prices have or will bottom soon turns out to be correct, corresponding projections of future land price increases are probably too optimistic, considering the world supply and demand outlook for agricultural commodities for the next decade. Therefore the only way to achieve annual six to eight percent increases in land prices would be through monetary inflation.

The sponsors of public/private land purchase programs generally over estimate the impact of investing, say, $50, $100, or $200 million in land and asset values. Considering the total number of farms under stress, such investments would only have a minor impact on the overall problem. For example, one hundred million dollars will buy at most a few

hundred commercial farms and less than 100 farms in some areas of higher valued lands.

The issue of "poor" farmers in terms of production or management skills is generally not raised. An indiscriminate commitment to attempt to keep all the existing farmers on the land will lower the potential returns to investors. Some farmers who lack the necessary managerial skills should leave agriculture--at least as farm operators. Some existing farm units should be restructured because they are the wrong size.

Finally, many of the cash flow projections of the programs are relatively too optimistic. If the farmer can earn enough to live on and save enough to buy back the farm at the inflated prices necessary for the investors to get a market return, he should be able to restructure his debts with his existing lenders. Private investors would likely be faced with the prospect of earning less than a market rate of return for a decade or more.

The Colorado Agricultural Investors Proposal

This is a proposal to form a limited partnership to invest in distressed Colorado farmland, operate or rent out the land for a period of time and then dispose of the properties (in most cases, back to the original owners). A profit is anticipated, based on projected cash flows and long term land value appreciation. The proposal calls for utilizing private investment capital (up to 40 percent), the State of Colorado Public School fund (at least 10 percent) and borrowed money (50 percent).

The Colorado Agricultural Investors Proposal was recently analyzed by a faculty team in the Department of Agricultural and Natural Resource Economics (ANRE) at Colorado State University (Skold, et al., 1986). Utilizing research based assumptions based on extensive research, the team concluded that the projected before tax cash flow would be negative until year 12 in the 15 year program. The $2.5 million reserve would be exhausted by the end of the fifth year and the loss of returns on this amount would decrease partnership returns even more than reflected in the projections. Land values in 15 years were projected to increase about 1.16 percent annually, rising from a present value of $750/acre to about $892/acre at the end of the 15 year period (in 1986 dollars). This projected value would result in an internal rate of return of approximately 0.80 percent. The results of the ANRE analysis reveal, however, that the current and projective returns in agriculture envisioned in this proposal are not sufficient to service debt loads, no matter who holds the debt.

Programs to Aid Beginning Farmers

State programs to assist people start farming at this time may be desirable for at least two reasons. First, it would help replenish the number of family farmers, replacing those who are retiring or leaving agriculture because of financial problems. Continued entry is needed to

maintain a reasonably balanced age distribution of farmers and to maintain the number of family farms. However, if the supply of farm credit is restricted, credit to the unproven new entrants will be even more restricted or non-existent. The effect will be to keep potential family farmers out of agriculture. Second, such a program would assist in the recycling of farm assets and maintaining farm asset values, especially for machinery.

Because of the inherent risk of farming and the large capital outlays required for land, a state credit program for beginning farmers should be targeted for operating and intermediate term loans for seed, feed, livestock, machinery, etc. The program should encourage the beginning farmer to rent land, preferably on shares, to reduce cash flow requirements and minimize the leverage on the limited assets of the typical beginning farmer. The program should be risk-averse in that it maximizes the chances of long run survival based on earnings from operations and avoids speculating for capital gains.

The major flow of the now suspended Minnesota Farm Security Program discussed previously in the guaranteed loan section was that it encouraged the sale of entire operations, including land, to beginning farmers. The young farmers started out in a very highly leveraged situation that depended on high commodity price levels (and monetary inflation) to meet debt service requirements. Although high activity at the time of peak land prices clearly aggravated and hastened the problems of the Minnesota Farm Security Program, land debts caused many of the beginning farmers to be too highly leveraged even for normal price levels. In this situation, land appreciation cannot be captured as cash flow on an annual basis but land depreciation decreases net worth immediately!

On the other hand, a beginning farmer who borrows money for operating expenses, livestock and machinery and rents land on shares appears to have a reasonable chance of success, even at current price levels.

The Idaho Family Farm Development Authority Proposal

This proposal is to set up an authority that can issue tax free revenue bonds and use the proceeds to provide funds to lenders for loans to assist beginning farmers establish farming operations. Loans would be made at 2 to 3 percent below the market interest rate. (Note the similarities to linked deposit plans.) Eligible beginning farmers will have net worths of less than $100,000.

Loans could be for up to $125,000 for depreciable agricultural property such as equipment and breeding stock or up to $500,000 for agricultural land and improvements. The program would not cover any operating loans. These would have to be obtained from commercial lenders.

If the loan is for the acquisition of agricultural land, the beginning farmer has to have access to adequate working capital, farm equipment, machinery or livestock. If the loan is for the acquisition of depreciable agricultural property, the beginning farmer has to have access to adequate working capital and land.

Although definitely targeted toward beginning family farmers, the program is oriented to land purchases and does not allow operating loans. It runs the risk of over leveraging beginning farmers, especially if land prices continue to decline. We would recommend that if such a program was instituted in Colorado it be oriented toward operating and machine loans and away from real estate loans.

Risks (and costs) to the state appear minimal in the Idaho proposal in that the loans are not guaranteed and the bonds are pure revenue bonds that are not obligations of the state or its political subdivisions. However, since in reality these bonds will be backed only by loans and loan revenues from agricultural land and equipment, they may not be widely accepted by sophisticated private investors. The bonds, however, would be legal investments for other state agencies with investment funds so it is quite possible that other public agencies as bond holders would assume part of the interest rate subsidy cost and the risks of default.

Conclusions

1. Many farmers today are highly leveraged and/or have a debt structure that causes cash flow problems with current commodity prices. The current cash flow problems of these farmers will not be alleviated in one crop year, perhaps not even in several years. Asset values, especially land, are still declining and the world supply/demand situation for U. S. farm commodities is not promising for the next few years.

2. Highly leveraged farmers have only three options: (a) leave farming and seek other employment, (b) recycle through sale of assets to reduce their debt load, or (c) have part of their debt written off.

3. If lenders have to absorb all of the losses and costs of resolution of financial stress of the highly leveraged farmers, they will have to pass most of these costs on to moderately leveraged farmers.

4. It is in the interest of the public at large to share some of the burden of restructuring some of the farm debt. The alternative will be social and financial distress in rural communities and higher interest rates to surviving farmers and rural businesses.

5. All farmers can not survive the current agricultural crisis. Some are so highly leveraged that their operations are not restructurable and they will have to leave farming. Career counseling, job training and other adjustment assistance is appropriate for this group. Others have debt loads that can be managed or restructured via programs like interest

rate subsidies or long term refinancing. A third group of farmers has low levels of debt. They should be able to meet their financing needs from the private sector.

6. Because the state has limited resources, a state's financial aid programs for farmers should be targeted to the middle group, those that are restructurable.

7. Interest rate buy downs can be an effective type of state-level program, especially if private lenders participate in the subsidy and retain a substantial portion of the risk of default.

8. If the operator has sufficient collateral but problems of servicing debt because of too much short term debt and/or high interest rates, state programs such as the Illinois Guarantee Program may be effective.

9. Programs to buy large amounts of farmland will have little impact. Even more important, however, is that they are doomed to earn less than a market rate of return for the next several years. The reason many farmers are in financial trouble today is that farm assets are overvalued, given current market conditions. A below market rate of return can be expected until U. S. agriculture has completed the required adjustments in productive capacity, a fact of life for farmers operating on their own or under any of the state level assistance programs now under consideration in Colorado.

10. Some states have enacted (Minnesota) or are considering (Idaho) guaranteed loan programs for beginning farmers. Such programs would help to replenish the number of family operators as older farmers are leaving agriculture in increasing numbers. Such an effort in Minnesota, the Minnesota Farm Security Program, was started at the wrong time in the farm land price cycle and when prices declined in the early 1980s, many of the participating farmers were over leveraged. The proposed program in Idaho, however, appears to be more timely. If such a program were instituted in Colorado, it would be preferable to focus it primarily on operating and equipment purchase loans, rather than to purchase farm land.

REFERENCES

Dion, Douglas and Philip M. Raup, "The Minnesota Real Estate Market in 1986." Minnesota Agricultural Economist. Number 650, January 1986. Agricultural Extension Service, University of Minnesota.

Miller, Thomas, Warren Trock, and Danny Smith, Future Prospects for Agriculture in Colorado. ANRE Working Paper WP:86-3. Department of Agricultural and Natural Resource Economics, Colorado State University. February 1986.

Minnesota Farm Financial Data Collection Task Force, 1985 Report to the Minnesota Legislature: Complete Report. St. Paul: University of Minnesota, Agricultural Extension Service, 1986.

Popovich, Mark G., A Review of State Emergency Farm Financial Assistance Programs. Council of State Policy and Planning Agencies, Washington, D. C. January 1986.

Skold, M. D. (Team Leader), et al., Colorado Agricultural Investors: An Analysis of Financial Feasibility and Potential. ANRE Working Paper WP:86-4. Department of Agricultural and Natural Resource Economics, Colorado State University, March 1986.

APPENDIX B

APPENDIX B

FARM INTEREST RATE BUYDOWNS: ISSUES AND OPTIONS

Prepared By

The Financial Stress in Agriculture Discussion Group

Department of Agricultural and Applied Economics
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EXECUTIVE SUMMARY

An interest rate buydown (subsidy) is one of several potentially important policy interventions in the farm sector. Buydown programs may be implemented at the federal or state level, or through a combination of state and federal action.

Interest rate subsidies may be used to accomplish several objectives. One objective is to reduce cash flow requirements to service debt, resulting in increased net farm income and improved chances for survival. Interest subsidies also reduce pressure on immediate cash flow, buying time for longer term internal adjustments (asset and debt restructuring) and improvements in external economic conditions (farm commodity prices, input expenses, and interest rates). Borrowers not receiving interest rate subsidies benefit indirectly because the program reduces the need for lenders to maintain earnings by charging higher interest rates. There may also be indirect effects on farm asset values through reduced pressure on cash farm earnings and less need to liquidate productive farm assets. This would contribute to greater stability of farm asset prices and markets. Finally, an interest rate subsidy would keep funds flowing to financially-stressed farmers. The subsidy may improve credit access to those borrowers who are unable to acquire funds due to an inability to repay current debts or who lack adequate security.

Several recent federal and state programs have been enacted to assist financially-stressed farmers. Federal efforts include the 1985 FmHA Debt Adjustment Program and the 1986 FmHA Interest Rate Buydown Program. Minnesota programs include the Minnesota Interest Subsidy Program (1985) and the Minnesota Farm Security Program. A number of other states (Wisconsin, North Dakota, Illinois and Michigan) enacted interest buydown and deferral programs during 1984 and 1985.

Benefits to a farm borrower receiving an interest rate subsidy depend on the provisions of the program: size of the rate reduction, qualifying loan amounts, length of the subsidy, and farmer qualification requirements.

The adequacy of an interest rate subsidy in meeting a farmer's cash shortfall depends on the financial characteristics and financial performance of the farm business. Cash surpluses (deficits) vary significantly depending on both farm debt level and profitability of the business. The public debate concerning the appropriate credit policy should recognize that improved farm financial performance will hinge only partly on the ability to buy down interest rates.

Farm lenders might benefit financially from an interest buydown program through a reduction in loan losses, maintenance of viable borrowers, greater stability in farm asset values, maintenance of agricultural loan quality and associated improvements in earnings. Lenders may also gain satisfaction from "going the extra mile" with financially-stressed borrowers, and being able to keep more farm borrowers (and more nonfarm and farm-related businesses) in operation.

Several questions are pertinent to the design and implementation of an interest buydown policy: (1) Should public programs be initiated? (2) Under what conditions will subsidies be granted? (3) What is the appropriate size of subsidy? (4) For what purpose (s) will credit subsidies be available? (5) Over what period of time will subsidies be made available? (6) Are subsidies equitable? and (7) Are the level and distribution of risks altered?

Available evidence suggests that interest rate buydown programs can make a positive contribution toward alleviating farm financial stress. Such programs should not be expected to provide a complete solution. These programs complement other public and private activities which focus on farm financial adjustment.

FARM INTEREST RATE BUYDOWNS: ISSUES AND OPTIONS

Interest rate buydowns (or "subsidies") are one of several potentially important policy interventions in the farm sector. These programs can be implemented at the federal or state level, or through a combination of state and federal programs. This paper evaluates the issues faced by public policymakers and options for implementing interest subsidy programs.

Interest rates charged on farm debt have been high and unstable in the 1970s and 1980s. Individual farm loan servicing costs have also varied substantially, depending on the level of farm indebtedness. The combination of high levels of indebtedness (as measured by the debt/asset ratio) and high interest rates has proven extremely troublesome for many farmers.

Estimates indicate that nearly a fifth of all U.S. farmers were over 40 percent in debt in January 1984 (USDA, 1985). The reported percentage of Minnesota farmers over 40 percent in debt increased from 44.3% in January 1984 to 52.2% in January 1985 (Minnesota Farm Financial Data Collection Task Force, 1986). About a third of Minnesota's 45,000 full-time farmers were facing severe cash flow problems in 1984 (Hasbargen, 1985). Southwest Minnesota Farm Management Association records for 1979-84 reveal that interest costs (as a percentage of all cash operating costs) rose from 7.4 percent in 1979 to 14.8 percent in 1982. A modest decline occurred in 1984 (Table 1). Average annual interest paid per Association farm increased from $12,084 in 1979 to $29,498 in 1984.

I. PURPOSES OF INTEREST RATE SUBSIDIES

Lower Cash Flow Requirements to Service Debt

Interest payments have become a major component of the cost of farm production. Any reduction in interest charges as a result of an interest subsidy would be helpful to farmers, especially for highly leveraged farmers (Boehlje, 1985a). A reduction in the interest component of cash farm expense results in an increase in net farm income, as would any other farm cost reduction.

Method of "Buying Time"

An interest subsidy may "buy time" for farmers and lenders. It would reduce the pressure on immediate cash flow allowing longer term internal adjustments in debt and asset levels, and pending improvement in external economic conditions. Asset and debt restructuring (through liquidation) and debt rescheduling could then proceed at a more manageable pace. This potentially reduces liquidation losses and tax consequences in the case of liquidations, and allows for development of debt repayment schedules which are serviceable.

The success of using interest subsidies as a strategy for buying time hinges upon improvements in external economic conditions (farm commodity prices,

Table 1. Interest Costs As A Percentage of All Cash Operating Costs in the Southwest Minnesota Farm Management Association 1979-1984

Year	Interest Paid Per Farm	Total Cash Operating Expense	Interest As A Percent of Total Cash Oper. Expense
1979	$12,084	$164,162	7.4
1980	19,830	193,190	10.3
1981	26,187	210,323	12.5
1982	30,317	205,451	14.8
1983	27,769	191,634	14.5
1984	29,498	217,464	13.6

Source: Hasbargen, 1985, p. 9.

input expenses, and interest rates in particular). Short term interest rates are currently stable and trending downward. If short term rates remain at these lower levels, longer term rates will also gradually decline. Farmers will obtain future operating loans at lower future rates, and term debts (financed on a variable rate basis) will require less cash for annual debt service. Lower interest expenses translate into improved net cash farm earnings and greater capacity to repay principal. If these improvements do not occur, the interest subsidy has merely postponed financial difficulties.

Offset Transfer of Costs to Other Borrowers

Interest rate subsidies may help lenders collect a larger proportion of interest payments from highly leveraged borrowers. If this occurs, it will reduce the need for lenders to maintain their earnings by charging higher interest rates to more moderately leveraged farm borrowers. If interest rate subsidies reduce the number and amount of agricultural loans that are to be written off, they may reduce lenders' loan losses and the need to replenish loan loss reserves.

Indirect Effects on Farm Asset Values

Heavily-indebted farmers may be unable to acquire funds necessary to continue the farming operation due to an inability to repay current debts or a lack of security to obtain additional loans. If an interest rate subsidy successfully reduces pressure on cash farm earnings, there will be less necessity

to liquidate productive farm assets (machinery, equipment, breeding livestock, land) in an untimely fashion. Reduced liquidation activity would allow rural asset markets and asset prices to stabilize. In this way an interest rate reduction program can have indirect effects which generally strengthen farm financial positions.

Keep Funds Flowing to Financially-Stressed Farmers

Many farmers are currently unable to acquire funds necessary to continue operations due to an inability to repay current debts or a lack of adequate security to get further loans. An interest subsidy can improve credit access for those borrowers if the inducement to the lender is sufficiently attractive. Such a program may also contain features which encourage farmers and lenders to obtain FmHA loan guarantees.

II. HISTORICAL BACKGROUND

Several recent federal and state programs have been enacted to assist financially stressed farmers (Popovich, 1986). The following discussion focuses on interest buydown and deferral programs.

Federally-Supported Programs

1985 FmHA Debt Adjustment Program

The FmHA Debt Adjustment Program (DAP) guarantees loans with accompanying debt adjustment by lenders. The DAP provides a method for continuing the flow of credit to farm operators who could not otherwise repay their loans. Participating lenders must write down existing indebtedness to a level that assures that the guaranteed loan will result in a five-year positive cash flow. The writedown can be a 10 percent (or greater) reduction of principal and accrued interest, or an interest rate reduction which assures an equivalent cost reduction to the borrower. A combination of these two methods is possible.

1986 FmHA Interest Rate Buydown Program (1985 Farm Bill)

The 1985 Farm Bill, under the Credit and Rural Development Title, authorizes a $490 million interest rate buydown program, although no appropriation has been made. The program runs through September 1988, and calls for the FmHA and private lenders to share in the cost of reducing interest rates on guaranteed FmHA loans. The federal government can pay 2 percentage points of the buydown or one-half of the total, whichever is less.

Farm Credit Partnership Act (proposed by Sen. R. Boschwitz)

The purpose of the Act is "to ease credit problems of family-sized farms." This is to be accomplished by restructuring outstanding debt, reducing debt levels and interest costs of family farms, and stabilizing both the Farm Credit System and rural agricultural banks. The proposal has three components:

1. A 5 percent interest rate buydown: The interest rate would be reduced each year over a three-year period. The federal government would buy down the interest rate by 2 percent, the lender by 1 percent, and the state would have the option to buy down 2 percent.

2. Principal write-off: If adequate cash flow does not result after the interest buydown, lenders (FCS and commercial banks) would be allowed to write off up to 30 percent of loan principal. Commercial banks could amortize the loss over 10 years. Federally-guaranteed capital certificates would be issued to participating banks for the purpose of maintaining the bank's equity capital position.

3. Lease-back opportunity: If adequate cash flow does not result from the interest buydown and principal write-off, and farmers have long term debts with the FCS, a sale and lease-back option would be available. Assets would be turned over to the FCS Capital Corporation. Farmers would be allowed to farm the land under a leasing agreement. The farmer would retain a right of first refusal to repurchase the land.

Eligible farmers must have gross annual sales greater than $40,000, a debt/asset ratio over .40, and the debt/asset ratio must fall below 1.00 after debt restructuring. All commercial banks and FCS banks would be eligible for the program.

State-Supported Programs

Minnesota Interest Subsidy Program

The 1985 Minnesota Em rgency Farm Operating Loan Act established a two-part interest subsidy program authorized for $25 million. Program 1 was limited to existing debt and required the state to pay the first 60 days' interest beginning on the date of application. The lender absorbed the next 60 days' interest. Payments were made at the current market interest rate on the first $25,000 principal for farm ownership and/or operating loans. The lender must have applied for FmHA "approved lender" status and submited loans for FmHA restructuring. Payment from the State did not depend on FmHA approval. In addition, the lender must have agreed not to foreclose until FmHA acted on the loan, or until 90 days after the date of application. Minnesota residency was required and the lender had to sign an agreement stating that a loss may result from the loan.

Program 2 allowed lenders to apply for an interest subsidy on the first $75,000 of principal on new 1985 operating loans. The loans must have been payable before March 1, 1986 and have had an interest rate between 7 and 10 percent after the subsidy was applied. The state payed two-thirds of the difference between the interest rate on the loan and the Commissioner's interest rate (the monthly FICB rate plus 2.3 percent). The lender payed the other one-third. Eligibility required a debt/asset ratio exceeding .50. A cash flow requirement was included in the original program, but was subsequently removed. Acceptance of applications for the program ended on December 31, 1985.

Farm borrowers used $2.8 million as of December 31, 1985 of the $25 million authorized by the State. Interest subsidies on operating loans (Program 2) were granted to 1,875 borrowers resulting in an 8.4 percent average interest rate. Program 1 resulted in interest subsidies for 402 borrowers who had an average pre-subsidy interest rate of 13.6 percent. The Minnesota Department of Commerce estimated that over $120 million in private capital was leveraged by the $2.8 million state subsidy.

The Ag Financing Task Force (Minnesota Department of Finance) and a survey by the Minnesota Bankers' Association indicate that one important reason for unexpectedly low levels of participation was that the program was not enacted until March 5, 1985 (Ag. Financing Task Force, 1986, and Minnesota Farm Financial Data Collection Task Force, 1986). By that date, many spring operating loans had been made. The Minnesota Bankers' Association survey indicated that the relatively low level of farm assistance ($25,000 for Program 1 and $75,000 for Program 2) and narrow farmer eligibility requirements resulted in lower program use levels. The Department of Finance Ag. Financing Task Force endorsed a continuation of the program in 1986.

Minnesota Farm Security Program

The Farm Security Program was established to help beginning farmers, who would otherwise be unable to get credit, purchase farm real estate through guaranteed loans and deferral of interest payments. The program provides a 90 percent guarantee on loans made through any lender or on a contract for deed. A 4 percent interest adjustment is available on the outstanding principal balance.

A 1985 amendment allows the program to make up to two years of payments on defaulted loans. The farmer involved must have a unique circumstance and must show a projected positive cash flow.

Loan guarantees under the program are limited to $100 million (about $67 million is encumbered at this time). The number of loan defaults has increased rapidly in the past two years. Most of the 400 loan recipients are expected to default. The program was suspended indefinitely on February 14, 1985. The State is expected to have to pay out up to $20 million in loan guarantees in the current budget period ending in mid-1987. Another $40 million in guarantees may be needed in the next budgeting period (Minneapolis Star and Tribune, 1986).

Wisconsin Interest Buy-down Program

Wisconsin has implemented both an interest buydown and a loan guarantee program. The interest buydown program (from March 1985, through March 1986), is authorized at a level of $20 million. Qualified loans are restricted to operating loans in which lenders agree to provide an 11 percent or lower interest rate. The State will buy the rate down to 9 percent. If the loan is defaulted, the State absorbs all of the lost interest and up to 90 percent of the unpaid principal.

North Dakota Interest Deferral Program

North Dakota's Family Farm Security Act of 1984 provides for reduced interest payments on operating loans to farmers and ranchers. The loans are made through local lenders and the Bank of North Dakota. Local lenders provide 35 percent of the loan value at a rate of 12.7 percent (or less). The Bank of North Dakota provides the other 65 percent of the loan at 8 percent interest plus a 1 percent origination fee. An option to defer the interest due on the Bank of North Dakota's part depends on the loan size. The farmer pays 3 percent interest and the rest of the interest is deferred up to 5 years on loans of less than $50,000. Interest does not accrue in that time. The farmer pays 4 percent interest on loans from $50,000 to $75,000 and 5 percent on loans from $75,000 to $125,000. A maximum of 20 percent of the State funds made available for operating loans could be made to qualifying agribusinesses.

An interest rate deferral, revolving fund program was also established using $2 million in general revenues. The fund will buy down the interest rate to 10 percent in the first year, and 6 percent in the second and third years of a loan. Deferred interest does not accrue as an interest liability to the farmer. The "Home Quarter Program" applies to purchases of up to 160 acres, or for financing land, buildings, maintenance, and other uses. Farmers must be in immediate danger of foreclosure or actually foreclosed within one year of redemption to quality. The program was started in April 1985, with no specified ending date.

Illinois Interest Deferral Program

The Illinois program provides interest rate deferrals for operating loans only. The State will pay one-half of the interest on a farmer's 1985 operating loan. Payback is based on 20 percent of the deferral in each of the next 5 years. The program provides an interest-free deferral on the State's part of the interest. The farmer must show a cash flow problem and inability to net more than 25 percent of gross income (based on 1984 tax returns). The program is set to run from May 1, 1985 to June 15, 1986 and has a loan limit of $50,000.

Michigan Agricultural Loan Program

Michigan established a $139 million linked deposit farm loan program to run through October 1, 1987. The program uses common cash funds to purchase certificates of deposit from Michigan banks that agree to make loans to farmers in an amount equal to the State's deposit. CD's are purchased at 2 percent below the 90-day Treasury bill rate. The program is designed to provide funds for equipment purchases, operating loans and refinancing of existing debt. The maximum loan amount is $100,000 and lenders may charge up to 5 percent above their cost of funds. Lenders can also relend repaid funds. The cost of the program to the State is established by the difference between its earnings from the program (2 percent below the 90-day T-bill rate) and what it could earn on its common cash investment.

III. BENEFITS TO FARM BORROWERS

The expected benefit (subsidy) which accrues to a farm borrower participating in an interest rate buydown is determined by the basic provisions of the program: the rate reduction; the amount of the loan(s) to which the reduction can be applied; the period of time over which the interest rate buydown applies; and the farmers ability to qualify for the subsidy. Farmers are frequently required to have a debt/asset ratio exceeding some minimum level to qualify (e.g., .5 or .7). In addition farmers may be required to demonstrate that all cash commitments of the business are expected to be met with the subsidy before the rate reduction is granted. The program may apply only to certain types of debt, such as operating loans, limiting both the amount of farm debt that qualifies and the subsidy which is available.

Results of Farm Financial Analyses

Financial analysis of an Iowa cash grain farm and a hog farm was used to evaluate the relative effectiveness of interest buydowns and asset restructuring for improving farm survival (Boehlje, 1985b). A one-year interest buydown on current and intermediate term debt (from 14 to 10 percent) coupled with a 5 percent rate reduction on long term debt (to 9 percent) for 4 years was analyzed. The interest cost reduction was marginally effective in reducing the probability of failure for hog farms with 67 percent debt. The risk of failure due to inability to service debt was generally greater for the representative cash grain farm than for the hog operation at all leverage positions. Above debt positions of 50 percent, interest buydowns must be accompanied by other measures to have long term impacts on farm survival. The most effective means of improving ability to service debt in both farm situations was through sale and lease-back of farm real estate.

These results on cash grain farms are corroborated by an analysis of an Illinois corn/soybean operation (Lins, 1985). The conclusion of that study was that, "an operating loan interest adjustment program would provide some short term assistance to farms." That assistance alone, however, would "not be significant enough to turn around a farm operation experiencing financial problems."

Weldon and Eidman (1986) analyzed the impact of an interest buydown on a large corn/soybean farm in southwest Minnesota from 1985-89. Results of the study indicated that annual interest cost reductions between $40,700 and $52,200 would be required to stabilize the 775-acre operation at its initial 50 percent equity position, assuming no improvement in interest costs, crop prices or other factors.

The adequacy of the interest cost subsidy in meeting the cash shortfall of the farm unit depends on farm financial characteristics and financial performance of the business. The level of indebtedness and profitability of the business were found to affect the size of interest subsidy required to eliminate the cash deficit on several types of Minnesota farms based on 1984 farm records (Pederson, 1986). Low-profit and medium-profit dairy farms would have required average subsidies of $27,165 and $8,412, respectively, to eliminate the 1984 cash deficits. High-profit dairy farms had lower levels of debt and higher profitability which resulted in positive average cash surpluses without interest subsidies. Parallel results were obtained for cash grain and hog farms. Farms with low and medium profitability would have required substantial subsidies to eliminate cash deficits, while high-profit farms generated a cash surplus. Like dairy, profitability was a significant factor in accounting for the difference in the cash position for both the cash grain and hog farm situations. These various studies suggest that the public debate about the appropriate credit policy should recognize that improved farm financial performance will hinge only partly (even minimally in some cases) on the ability to buy down interest rates. Other policies designed to reduce debt need to be considered.

IV. BENEFITS TO FARM LENDERS

Benefits to commercial banks and other farm lenders might be primarily non-economic in the short run. These include: (1) satisfaction from "going the extra mile" with financially-stressed borrowers, and (2) being able to keep more farm borrowers (and, subsequently, more nonfarm and farm-related businesses) in operation.

If participation in these programs can salvage farm operations that might otherwise be lost, there will be subsequent economic gains. These include:

1) A reduction in bank losses compared to what might occur with increasing farm foreclosures and bankruptcies.

2) Maintenance of viable (farm and nonfarm) borrowers (those able to repay loans) in the latter 1980s.

3) More stability in local farm asset values, maintenance of agricultural loan quality, and improved bank earning performance.

In addition, small banks that have been ignoring FmHA guarantee programs will be stimulated to start using those programs as part of an overall farm

lending strategy. This will allow them to keep some farm loans that are above their loan limits (the guaranteed portion of these loans is subtracted from the total loan when considering the legal lending limit). Consequently, these loans can be kept in the bank. A bank's expected earnings will potentially increase rather than decrease as a result of participation in an interest buydown program.

V. ANALYSIS OF POLICY ISSUES

An interest rate subsidy program must be discussed by considering the purpose(s) it is intended to accomplish. The five purposes discussed earlier are: (1) to lower cash flow requirements to service debt; (2) to buy time; (3) to offset transfer of costs to other borrowers; (4) to reduce downward pressure on farm asset values; and (5) to assure a flow of funds to financially-stressed farmers. With these purposes in mind, the key issues in implementing an interest rate subsidy are: (1) should public programs be initiated; (2) under what conditions will the subsidy be granted; (3) what is the appropriate size of the subsidy; (4) for what purpose will subsidized credit be available; and (5) over what period of time will the subsidy be made available? Related policy issues include: (6) are subsidies equitable, and (7) are the level and distribution of risk altered?

Should a Program Be Initiated?

The previous analysis suggests sizeable subsidies would be required for interest rate reductions to offset the cash flow deficit of farmers with debt asset ratios above .70. Nevertheless, interest subsidies can lower cash flow requirements to service debt during the subsidy period. If these subsidies increase interest payments received by the lender, they will avoid the transfer of those costs to other borrowers. In addition interest rate subsidies should reduce pressure to liquidate assets, allowing for more orderly transfer of assets to new owners. This reduces pressure to dump assets on the market and drive prices further downward.

Under What Conditions Will the Subsidy be Granted?

Subsidies have been directed to those farm borrowers for whom the funds contribute to continued financial viability. Those farm businesses may not be able to continue without it. Conceptually, the recipients should be selected based on the effect of a subsidy on the borrower's cash flow deficit. Minnesota's 1985 program restricted eligibility to farm operators with debt/asset ratios in excess of .50. The minimum ratio provides a crude test for identifying borrowers who have cash flow problems. Lenders are assumed to discriminate against borrowers with extremely high debt positions and to provide loans with subsidies only to those farmers with a reasonable chance of repayment.

If lenders are required to share in the cost of the subsidy, they have an added incentive to assist those farm borrowers who will be significantly helped by the subsidy. The smaller the required share of the subsidy paid by the lender, the less incentive there is to operate in this way. A reduction in the required lender share is expected to increase the total number of farmers provided with an interest subsidy, but a reduced lender share decreases the incentive to target those subsidies.

How Much Subsidy Will be Received?

Size of the subsidy will be determined by the percentage interest rate reduction and the size of the loan to which the subsidy applies. If a large loan limit is allowed, a given amount of state funds will provide greater benefits to fewer producers. The smaller the allowable loan, the larger the number of borrowers that may be assisted, but the impact this assistance will have on each producer is expected to be reduced.

The share of the subsidy paid by state taxpayers rises as the share paid directly by lenders falls (and vice versa), holding the size of the subsidy constant. A larger state share may induce lenders to extend additional credit, but this will lower the lender's incentive to target the subsidy. The subsidy itself will typically be small in relation to the total amount of the loan.

This illustrates a key feature. Interest rate subsidies may encourage lenders to lend more than they otherwise would to financially-stressed farmers. In Minnesota, although only $2.8 million in state monies were spent on interest subsidies between March and December 1985, over $120 million in subsidized loans were made. Whether these loans would be made in the absence of the subsidy remains a question.

What Types of Loans Will Be Subsidized:

Credit for farm operations is typically divided between short-term operating expenses and asset acquisition costs. The 1985 Minnesota interest rate subsidy program applied to both types of debt. The number of operating subsidies (1,875) greatly outnumbered the nonoperating subsidies (475). The lower level of use for term debt is expected because nonoperating loans are typically larger than the $25,000 limit in the 1985 program. The inconvenience and paperwork required to subsidize part of the total loan for an asset and the one year duration of the program may have significantly limited its use for nonoperating loans.

A limited subsidy can probably be most easily applied to operating loans. Farmers with sizeable term debt are also expected to borrow operating funds. A program with only limited funding can probably reach most financially-stressed farmers by concentrating on operating loans. The subsidy has the same dollar effect on the farmer's cash deficit, whether paid on an operating or a term loan. Limiting the subsidy to operating loans has the advantages of allowing the borrower and lender to reconsider whether it is appropriate to continue the

subsidy, should a multi-year program be available. It also provides an incentive (by not lowering interest costs on unserviceable term debt) for the borrower to dispose of assets and repay the debt.

In some cases it may be highly desirable to apply the interest rate subsidy to existing term debt. Lenders are generally willing to provide operating loans if term loans are performing. If the term loan is not performing, applying the subsidy to an existing loan on a capital asset may be an effective way to use the program. It is important, however, that the subsidy be applied to a loan for capital assets that are important to maintaining the cash flow of the business. Applying the subsidy to the loan for an asset that should be sold to reduce the debt level may inhibit rather than enhance the adjustment process. For example, subsidizing the loan for high producing dairy cows to make full use of the facilities may be appropriate if sufficient operating capital will be provided. Subsidizing the loan on an expensive piece of harvesting equipment for which custom services could be easily substituted would reduce the producer's incentive to liquidate the nonessential asset.

How Long Will the Subsidy be Granted?

Operating loans are typically scheduled for full repayment within a year, while term loans are typically amortized over several years. If the primary objective of interest rate subsidies is to provide adjustment assistance, rather than continuing transfers to financially-stressed producers, the length of subsidy is important. This issue is also affected by budgetary considerations. The magnitude of the adjustment problem is large and a multi-year program may be required.

Are Subsidies Equitable?

The financial burden of interest rate subsidies is distributed between farm lenders (directly) and the taxpaying public (indirectly). The indirect subsidization of interest costs by taxpayers results in some difficult questions about equitable treatment. Farmers who maintained debt/asset ratios below the threshold level required to qualify for the interest subsidy, are denied the direct benefits. Yet, they must continue to operate using higher cost funds and share in the cost of subsidizing other farmers. This transfer can be minimized by restricting the size and length of the loans which qualify, and limiting the rate reduction which will be subsidized. Farmers who maintained low debt levels will benefit indirectly in that they avoid some increase in interest rates paid and through the bolstering of farm asset values. How equitable (or inequitable) the transfers from taxpayers to farm borrowers are remains an important but complex public policy question.

Are the Level and Distribution of Risk Altered?

High incidence of farm financial stress implies high potential (and actual) levels of default on existing farm loans. Loan defaults often require that loan

losses be realized. Interest rate subsidies allow for a reduction in the potential level of default risk confronted by lenders, and a possible redistribution of the remaining risk among existing lenders. Unlike loan guarantees (where risk is diverted to the guarantor) an interest rate subsidy does not divert risk of default to the public. That risk remains with private sector lenders. This is in marked contrast to programs which guarantee the full cost of debt, such as the Minnesota Farm Security Program. The inducement of an interest subsidy program is that farm lenders will perceive a reduction in default risk (and attendant loan losses) through improved farm liquidity, and be willing to bear that risk until longer run adjustments can be made.

REFERENCES

Ag Financing Task Force, "Financial Assistance for Minnesota Farmers, The Ag Financing Task Force Report", Minnesota Department of Finance, January 7, 1986.

Boehlje, M.D., "Agricultural Policy and Financial Stress," mimeo, Iowa State University, 1985a.

Boehlje, M.D., "Policy Options for Agriculture," Economic Perspectives, Federal Reserve Bank of Chicago, November/December 1985b, pp. 29-35.

Hasbargen, P.R., "The Farm Income Situation - Implications for Government Revenues", paper presented at the Forum on Local Government Stress, November 8, 1985.

Lins, D.A., "An Evaluation of the IFDA Operating Loan Interest Adjustment Program" mimeo, Department of Agricultural Economics, University of Illinois, Urbana-Champaign, 1985.

Minneapolis Star and Tribune, "State Suspends Loan Program Aiding First-time Young Farmers," February 11, 1986.

Minnesota Farm Financial Data Collection Task Force, 1985 Report to the Minnesota Legislature: Complete Report. St. Paul: University of Minnesota, Agricultural Extension Service, 1986.

Pederson, G.D., "Debt, Earnings and Cash Position of Representative Farms in Minnesota," mimeo, Department of Agricultural and Applied Economics, University of Minnesota, 1986.

Popovich, M.G., "A Review of State Emergency Farm Financial Assistance Programs," Council on State Planning Agencies, Revised January 6, 1985.

U.S. Department of Agriculture, The Current Financial Conditions of Farmers and Farm Lenders, Agricultural Information Bulletin 490, Economic Research Service, Washington, D.C., March, 1985.

Weldon, R., and V. Eidman, "A Financial Analysis of Southwest Minnesota Farms," mimeo, Department of Agricultural and Applied Economics, University of Minnesota, St. Paul, 1986.