

The Farm Credit Crisis

Policy Options and Consequences

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Foreword

The enclosed articles represent a response by the Extension Service, the Economic Research Service and the Land Grant University System to the need for a comprehensive documentation of the broad spectrum of policy options available to deal with the farm credit crisis. Emphasis is placed upon a description of options and their consequences.

The topics covered in the articles were specifically designed to look at policy options from a broader perspective than the tools available to deal with the current crisis. It attempts to analyze some of the factors that have significantly aggravated the current crisis (the overvalued dollar, high real interest rates, or excessive agricultural resources) from the perspective of the policies designed to deal with them (macroeconomic policy, domestic farm policy, tax policy, and rural resource development policy).

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Farm Financial Stress: Extent and Causes

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Financial conditions of many farmers and farm lenders have deteriorated significantly during the past four years. Large supplies and weak demand have squeezed farm income and reduced the net worth of farmers. Many farmers face insufficient cash flow, declining asset values, problems of access to credit and forced liquidation, foreclosure or bankruptcy. This financial stress is transmitted to farm lenders through loan delinquencies, loan losses and inadequate security for loans, causing insolvency and failure of lending institutions in some cases. The need for federal government action to deal with the financial crisis has become increasingly apparent, with many different policy and program options being suggested.

Recent Performance in the Farm Sector

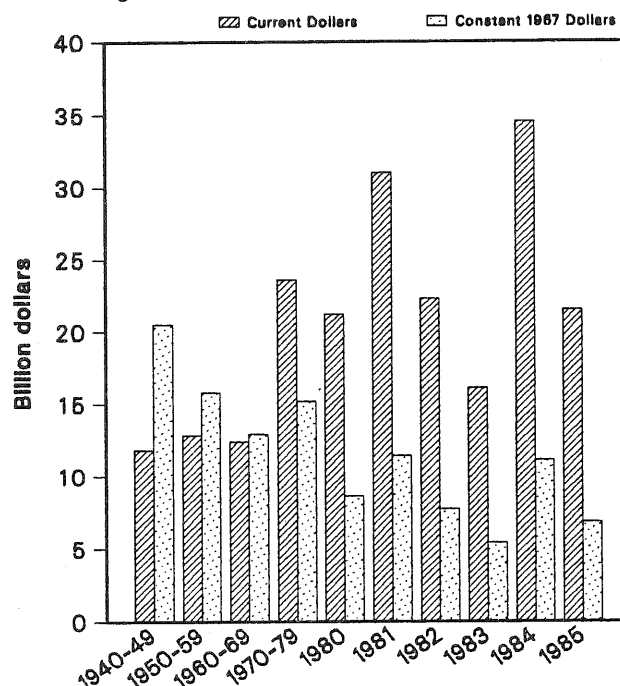
The extent to which farmers face financial problems can be gauged by changes in the value of their assets, debt commitments and farm cash-income positions. Asset values continue to decline in many areas. Farm financial situations, as measured by debt/asset ratios (total debt as a percentage of total assets owned), continue to worsen. Farmers with significant debt continue to have cash shortfalls that require them to refinance, stretch out their loans or liquidate some of their assets.

Net Farm Income

Net farm income after inventory adjustment is a measure of net returns to farm operators from all agricultural production in a year. Net farm income averaged \$23.6 billion in current dollars throughout the 1970s, and \$24.3 billion in the 1980s. However, from the 1970s to the 1980s, half the purchasing power of net farm income was eroded away by inflation (Figure 1). Net farm income in constant dollars

dropped from an average of \$15.2 billion in the 1970s to an average of \$8.5 billion in the 1980s.

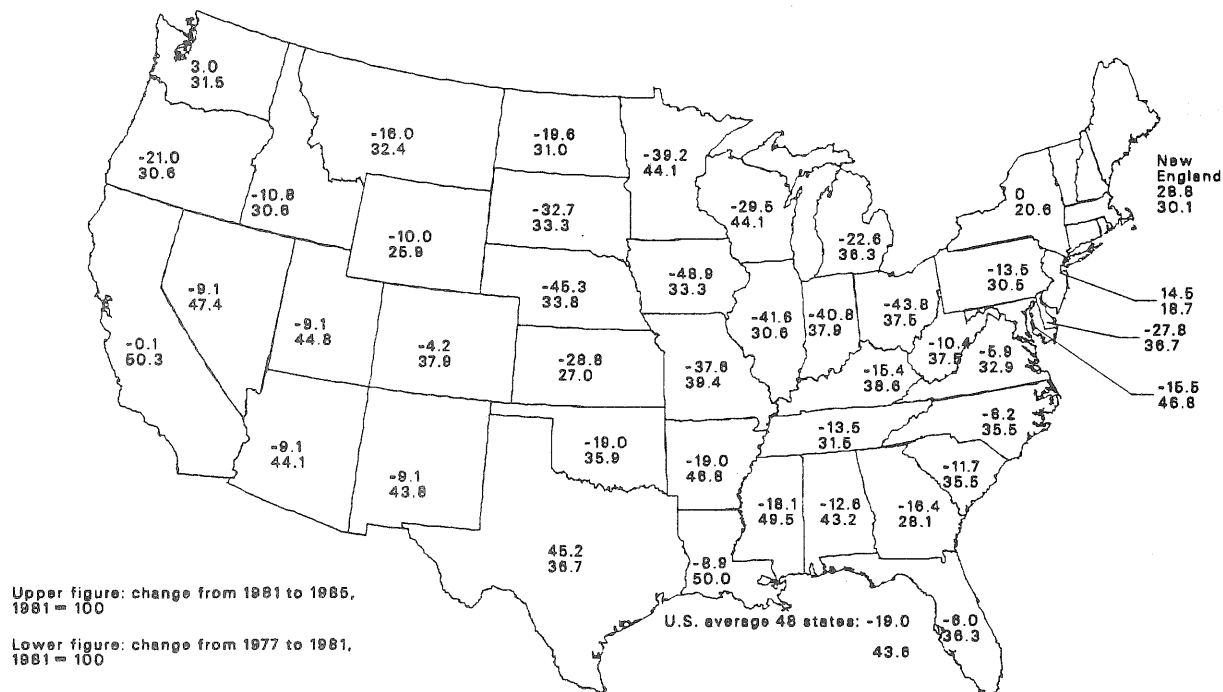
Figure 1 Net farm income and asset values, 1940-85.



Farmland Values

Farmland values peaked in 1981. Since then they have dropped as much as 49 percent in some Corn Belt states (Figure 2). Iowa, Nebraska, Ohio, Indiana and Illinois experienced the sharpest declines -- each more than 40 percent. In these states, the declines in land value between 1981 and 1984 largely offset the gains made between 1977 and 1981. Many farmers who purchased land or started farming after 1977

Figure 2. Change in average value of farm real estate per acre, 48 contiguous states, February 1977 - April 1985.



suffered capital losses from the prices at which they purchased the land or assets. If the farmers paid above-average prices or financed more than 75 percent of their purchases, their debt/asset ratios may exceed 100 percent at today's land prices. Farmland values continue to drop in most midwestern states. Farmland values are especially sensitive to net farm income prospects and the prospects for inflation in the general economy.

Income and Asset Value Prospects

In the current international market and macroeconomic and policy environments, the farm sector could face continued financial pressure during the next several years -- until sufficient resources leave agriculture to bring production capacity back into line with domestic and international demands for farm products. With no changes in farm support programs, farm income could drop another \$2 billion to \$4 billion (5-10%) in 1985-86 and 1986-87, while land values could slip another 10 percent or more before bottoming out (falling even more in the most affected states and regions). If farm price and income support programs are significantly altered or reduced in the 1985 farm bill, further declines in net farm income and farm asset values will result. If

commodity prices fall to market-clearing levels without income support, net farm income might drop by \$6 billion to \$8 billion and land values might drop 30 percent before bottoming out.

Financial Status of Farmers

Farm financial stress can be gauged by two primary measures:

- *Farm cash flows*: the amount of short-run cash income from farm and off-farm sources that is available to the farm household to service principal commitments and family living needs.
- *Debt/asset ratios*: the ratio of total debt owed by the farm household to total value of assets it owns.

By both of these measures, farm financial strength has deteriorated during the past five years -- severely for some types of farms and some regions.

Farm Cash Flows

Farm cash flows indicate whether the farm operator could meet his or her debt repayment

commitments and provide for minimum family living needs by postponing replacement of capital and cutting expenses to the bone. For this analysis, family living needs have been estimated as the median family income for nonmetropolitan counties, reduced by the implicit net rental value of the farm dwelling (because the operator's house is generally provided as part of the farm) and further reduced by the amount of income taxes that would be due on the average income. Minimum family living needs after these adjustments were estimated to be \$12,950 for the average farm family. Principal repayment commitments were estimated conservatively to be 8.6 percent of outstanding debt. This amount is consistent with the farmer having half of the debt as long-term real estate mortgages, with 20 years remaining, and half of it as short-term non-real estate debt, amortized over five years.

Debt/Asset Ratios

The debt/asset ratio of a farm is one of the primary factors that determines if the farm will have cash flow difficulties. Under current levels of prices, input costs and asset values, the majority of farms start having difficulty meeting principal repayment commitments at debt/asset ratios around 40 percent. Another critical point is reached if the debt/asset ratio of the farm rises to 70 percent. Above this point, farms generally cannot meet either their interest commitments or their principal repayment commitments. With debt/asset ratios above 70 percent, many farms start sliding toward eventual insolvency. The final critical point is insolvency -- when the total debt of the farm exceeds the total value of owned assets. At this point the farms generally cannot meet either interest or principal payments. The value of assets, if sold, would not be enough to retire the debts. Thus, there are four categories of farms by debt/asset ratios:

- *0-40%:* generally few financial problems and very strong net worth.
- *40-70%:* problems meeting principal repayment but strong net worth.
- *70-100%:* problems meeting principal repayment and serious current cash-flow shortfalls
- *Over 100%:* severe problems meeting principal and interest commitments and negative net worths. These farms are technically insolvent and sale of the farms' assets would not bring sufficient returns to retire their debts. All farms with debt/asset ratios over 40 percent are said to have potential financial stress.

Combined Cash Flows and Debt/Asset Ratios

The farms that have the most serious problems are those that have both high debt/asset ratios and cash flow shortfalls. These farms are consuming their equity and sliding toward insolvency. However, not all farms in these highly leveraged categories had cash flow shortfalls in 1984. Many farms had off-farm income sources, others may have had exceptionally favorable returns above variable production costs. Still others operated large proportions of rented land which allowed them to safely handle higher debt loads. Farms with both high debt/asset ratios and negative cash flows are said to have actual financial stress in this analysis.

Proportion of Farms in Financial Stress

On January 1, 1985, some 319,000 farms were very highly leveraged (Table 1), indicating a wide range of potential financial problems. These problems included insolvency (50,600 farms; 3.0% of all farms), delinquency on interest payments (72,400 farms; 3.6% of all farms) and inability to make principal payments (196,500 farms; 11.6% of all farms). Farms with high debt/asset ratios, in total, account for more than 60 percent of all farm debt. Some 13.1 percent of all farm debt is owed by farms that are technically insolvent; 15.1 percent of all farm debt is owed by farms with debt/asset ratios between 70 percent and 100 percent; and 32.9 percent of farm debt is owed by farms that have debt/asset ratios between 40 percent and 70 percent. All of these farms have potential problems maintaining access to credit and keeping up interest and principal commitments.

Farms with actual financial stress problems -- high debt/asset ratios and cash flow shortfalls -- number slightly less than those with potential financial stress problems (Table 1). Farms that are already technically insolvent and unable to meet interest or principal payments number 38,000 (2.2% of all farms) and owe nearly 11 percent of all farm operator debt. Farms with debt/asset ratios between 70 percent and 100 percent generally have little borrowing capacity left and are sliding rapidly toward insolvency. There were about 54,000 such farms as of January 1985 (3.2% of all farms) and they owe 12 percent of farm operator debt. Farms with cash flow problems and debt/asset ratios of 40 percent to 70 percent (121,000 farms, 7.2% of all farms) still have some reserve borrowing capacity but cannot meet their principal payments. They require loan stretch-outs or other forbearance by their lenders. These farms owe 22 percent of farm operator debt. Farms with debt/asset ratios below 40 percent have strong equity positions.

Their cash flow shortfalls generally are not related to use of credit, but to small farm size, tax sheltering or adverse production conditions in 1984.

Financial stress is most serious on dairy and cash grain farms, and is most serious in the upper Midwest -- the Great Lake states, the north Plains and the Corn Belt (Table 2). All sizes of farms exhibit nearly the same degree of financial stress, from \$40,000 on up to the highest sales class. From \$40,000 down, financial stress is less and less of a problem -- only five percent of farms with less than \$10,000 sales have both high debt/asset ratios and cash flow shortfalls.

Trends in Financial Stress

Financial stress, as measured by proportions of farms with high debt/asset ratios, has been worsening since 1980 (Table 3). The proportion of farms with debt/asset ratios over 40 percent nearly doubled from 12.3 percent in 1980 to 22 percent in 1985. Part of the increase was due to declining asset values, but

accumulated farm losses and rising debt loads of farms also contributed. Asset values may decline further, but the aggregate level of farm debt has stopped increasing in the last two years.

Financial Status of Farm Lenders

The reverse side of farm financial problems is farm lender problems. As farms experience financial stress, they transmit it, to some extent, to farm lenders through loan delinquency and loan losses. As farmers' asset values decline, lenders have less adequate security for new or existing loans. If too high a proportion of a farm lender's portfolio becomes nonperforming loans, then the lender may face failure or reorganization. The distributions of debt by debt/asset ratios and cash flow status are thus crucial indicators of likely stress on agricultural lenders, as is the proportion of the lender's portfolio in agricultural loans.

Table 1. All farms, farms with cash shortfalls, and proportions of debt by debt/asset ratios; January 1, 1985.

Category	Debt/asset ratio	Potential financial stress		Actual financial stress Farms with cash shortfalls	
		All farms			
		Farms	Proportion of farm operator debt	Farms	Proportion of farm operator debt
Technically insolvent farms	Over 100%	50,600 (3.0%)	13.1	38,000 (2.2%)	10.7
Very highly leveraged farms	70-100%	72,400 (3.6%)	15.1	54,600 (3.2%)	12.2
Highly leveraged farms	40-70%	196,500 (11.6%)	32.9	121,000 (7.2%)	22.4
Low leverage farms	Under 40%	1,350,400 (81.8%)	38.2	638,500 (37.8%)	18.5
Total ¹		1,669,900 (100.0%)	100.0	852,000 (50.3%)	63.8

¹The Farm Cost and Returns Survey excludes 250,000 farms that do not have actual sales of \$1,000 in the survey year, and undercounts the sales of less than \$20,000 by approximately 300,000 farms.

Table 2. Farms with high debt/asset ratios and negative cashflows: distribution by size, type and region; January 1, 1985.

Size group	Percent with financial stress	Type of farm	Percent with financial stress	Region ¹	Percent with financial stress
\$500,000 and up	17.9	Dairy	23.1	Lakes States	19.3
\$250,000-\$500,000	20.7	Cash grain	14.8	Northern Plains	19.2
\$100,000-\$250,000	20.6	Poultry & egg	14.2	Corn Belt	15.2
\$40,000-\$100,000	20.3	Vegetable & melon	14.0	Mountain	14.1
\$20,000-\$40,000	16.3	General crop	11.6	Delta	13.0
\$10,000-\$20,000	10.2	General livestock	10.8	Pacific	11.5
Less than \$10,000	5.1	Other livestock	10.2	Northeast	9.7
All Sizes	12.8	Fruit and nut	9.6	Southeast	9.4
		Field crop	7.2	Southern Plains	7.4
		Nursery & greenhouse	5.0	Appalachian	5.9
		All types	12.8	All Regions	12.8

¹ Northeast: ME, NH, VT, MA, CN, RI, NY, NJ, PA, DE, MD. Lake States: MI, WI, MN. Corn Belt: OH, IN, IL, IA, MO. Northern Plains: ND, SD, NB, KA. Appalachian: VA, WV, KY, TN, NC. Southeast: SC, GA, AL, FL. Delta: MS, LA, AR. Southern Plains: TX, OK. Mountain: MT, ID, WY, CO, UT, NM, NV, AZ. Pacific: WA, CA, OR.

Table 3. Trends in farm financial stress.

Date	Percent of farms with debt/asset ratios of:			
	Less than 40 percent	40 to 70 percent	70 to 100 percent	Over 100 percent
January 1980	87.7	8.9	3.4	1
January 1984	82.3	11.1	3.6	3.0
January 1985	78.1	11.6	4.3	3.0
Percent change 1980-84	-6.2	+30.3	+94.1 ²	---
Percent change 1984-85	-5.1	+2.5	+10.6 ²	---

¹Not available, included in the 70 to 100% debt/asset ratio category.

²Including over 100% debt/asset ratio category.

Who Holds the Debt?

The major farm lenders are the commercial banks, the Farm Cooperative Credit System, Farmers Home Administration (FmHA), life insurance companies, the Commodity Credit Corporation, individuals and others (Table 4). Borrowers' cash shortfalls and loan delinquency are the most critical for commercial banks, who hold the largest share of non-real estate debt. The Federal Land Bank holds the largest share of real estate debt and is thus the most affected by declining land values, which represent 12 percent of all outstanding farm debt. Its non-real estate debt holdings rose dramatically in the 1970s. The third most important class of lender is "individuals and others," which accounts for nearly as much total debt as commercial banks.

Very little is known about terms and conditions of loans from individuals, nor how such lenders fare when their borrowers face financial stress. Lenders whose loans are unsecured tend to fare the worst of all creditors. However, if unsecured lenders are holders of land contracts, they may fare the best of all creditors.

Farm Lender Situations

Commercial banks, holding nearly 20 percent of non-real estate loans, have experienced sharp increases in delinquencies and loan losses over the past few years. Delinquent loans are up by nearly 20 percent at agricultural banks. Nonaccrual loans, which are more than 90 days overdue and not accruing interest, have nearly doubled to 1.6 percent since December 1982. Agricultural problem banks, as defined by the Federal Deposit Insurance Corporation, have more than tripled -- to more than 363 in the past two years. Agricultural bank failures increased from six in 1983 to 44 in just the first nine months of 1985.

Farm Cooperative Credit Banks, which hold at least 30 percent of all farm debt, are having severe problems. In 1984, ten Production Credit Associations were liquidated in the districts of the Spokane and Omaha Federal Intermediate Credit Banks. Loan losses and charge-offs continue high in both Production Credit Associations and Federal Land Banks. Other banks made provisions to save the Spokane bank from default. The Omaha Bank has raised its interest rates to borrowers to cover larger than anticipated loan losses. In mid-1985 the system requested special government assistance to assure that its assets would remain secure from borrower default.

Life insurance companies, holding six percent of all farm debt, indicate that their agricultural loans recently have had much higher rates of delinquency and foreclosure than their nonagricultural loans. Nearly three percent of life insurance company farm loans were in foreclosure proceedings in 1984.

Farmers Home Administration (FmHA), as the lender of last resort, would be expected to have a loan portfolio with a high rate of delinquency. FmHA holds about 12 percent of all farm debt. Delinquent FmHA debt has increased fivefold during the past four years, and now stands at \$5.4 billion (21% of the outstanding principal). Much of this delinquent FmHA debt is concentrated in the South, with three states -- Georgia, Texas and Mississippi -- accounting for nearly one-third of delinquent FmHA debt. FmHA has exercised forbearance to the maximum extent possible. Most FmHA borrowers who discontinued farming did so through choice or unforced procedures -- even before the foreclosure moratorium.

Summary of Lender Prospects

Farm lenders are already feeling the pressures of poor farm loan performance. Delinquencies, nonaccrual delinquencies and charge-offs are all up sharply. Agricultural banks are considerably worse off than their nonagricultural counterparts. The number of problem banks reported by the FDIC has more than doubled to 975 banks during the past two years, with problem agricultural banks more than tripling.

Bank failures -- 82 in the first nine months of 1985 -- currently are running more than ten times their average annual rate for the past three decades. Depending on the proportions of their portfolios in farm loans, institutional lenders may have severe problems absorbing increases in the numbers and amounts of troubled farm loans during the next few years. As a result, additional lender failures and increases in the costs of credit to agricultural borrowers seem likely.

Causes of the Sector's Problems

American agriculture is going through its most traumatic period of adjustment since the Great Depression. Agribusiness firms, especially capital goods suppliers and grain exporters, have also been hit hard. The roots of the problem are intertwined and run deep -- adding to the pain of adjustment and the difficulty of explaining what is happening.

Table 4. Distribution of farm debt by lender; January 1, 1985¹.

Lender	Type of debt		Total
	Real estate	Non-real estate	
		Percent	
Commercial banks	4.8	19.1	23.9
Farm credit system	22.8	9.0	31.8
Federal Land Banks	22.8	---	22.8
Product Credit Associations	---	8.6	8.6
Federal intermediate credit banks ²	---	.4	.4
Farmers Home Administration	4.7	7.2	11.9
Life insurance companies	5.8	---	5.8
Individuals and others ³	14.1	8.6	22.7
Commodity Credit Corporation	---	3.9	3.9
Total	52.3	47.7	100.0

--- Not applicable.

¹Preliminary. Due to rounding, subcategories may not add to totals.

²Financial institutions other than PCA's that obtain funds from the FICB's.

³Includes Small Business Administration.

From the current vantage point it seems clear that the sector's problems are largely rooted in events of the 1970s -- rapid growth in inflation, burgeoning export markets and a boom in debt financing. But, the roots extend from excessive debt financing to U.S. tax policy, farm policy and demographic changes. These can be understood best as a convergence of: 1) cyclical factors, which periodically adjust and readjust as business cycle conditions change, 2) secular or long-term trend factors, which signal permanent changes in agricultural conditions, and 3) national policy factors which can only be addressed by altering national policies.

Cyclical Factors

Perhaps the most readily understood of these forces is cyclical adjustment. Because of worldwide problems with accelerating inflation, the United States and other industrial countries moved toward more restrained national economic policies to restore price stability. In the resultant recession, for the first

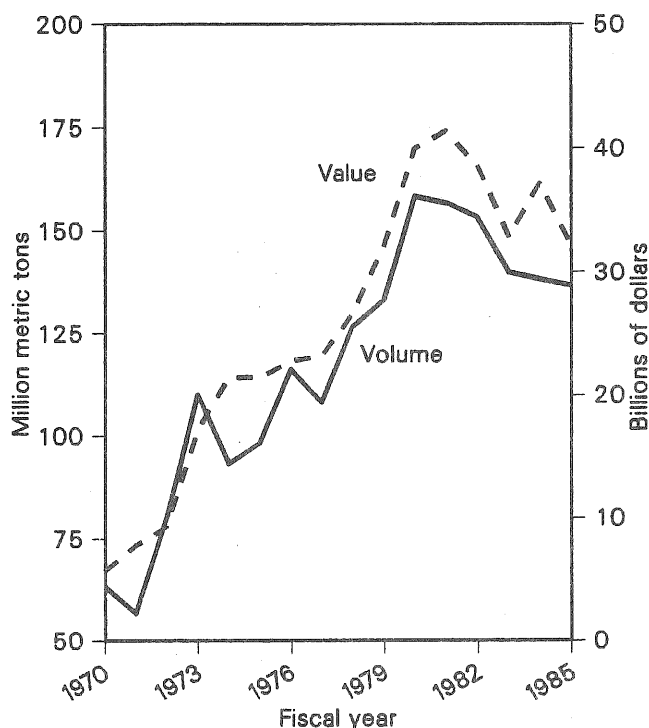
time since the 1930s, inflation-adjusted GNP growth from 1979 to 1982 was essentially unchanged. Conditions worldwide were worse inasmuch as real economic growth in the major developed countries, other than the U.S., declined by eight percent from 1979 to 1982.

During the recent recessionary period, the highest U.S. unemployment rates since 1940 no doubt changed some consumer buying habits, especially for higher-priced foods. Care must be taken, however, not to confuse a possible cyclical slowdown in demand growth with what might also be a longer term shift in consumer demand patterns.

The cyclical impact of the recession on export demand is clear. Since 1979, world trade in food and feed grains and in oilseed crops has grown at an annual rate of 1.6 percent -- well below the eight percent rate for 1972-1979. Since 1981, U.S. farm export sales have fallen (Figure 3).

Many in U.S. agriculture still believe -- or possibly simply hope -- that world trade growth and product prices will return to those of the export heyday of

Figure 3. U.S. agricultural exports.



the 1970s. If that were the case, policy directions would be relatively straightforward. Agricultural income supports could be held high during what would be only a cyclical downturn. Private sector lenders could stay with financially troubled borrowers because the coming recovery, hypothetically, would greatly improve their borrowers' fortunes. Farmland values would not need to be written down on farmer balance sheets because an improving farm economy would quickly return land values to previous levels. Government loans to farmers could be prompt and generous to tide farmers over until better times. And finally, major export subsidies would be justified to hold world market shares during a short-lived decline in demand growth.

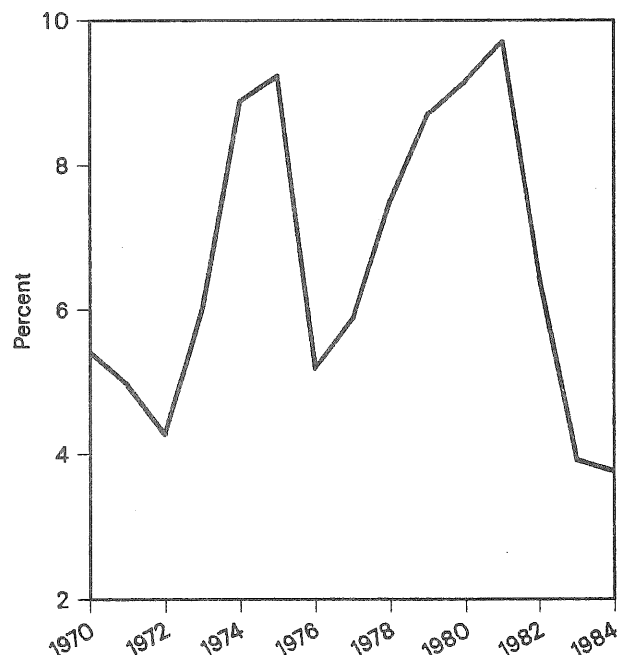
But, what if agriculture's problems are not all cyclical? What if far-reaching long-term trend changes are taking place in world agricultural product markets? Then solutions appropriate to cyclical problems would prove ineffective, costly and perhaps even counterproductive.

Secular Factors

It is increasingly apparent to agricultural economists that important long-term secular changes are occurring in U.S. agriculture. On change is a return to relative price stability in the United States and other industrialized countries, coupled with deregulation of U.S. financial markets. During nearly all of

the 1970s, the U.S. economy was undergoing increasing inflation (Figure 4). Even though export growth had peaked by the late 1970s, worldwide inflation added to price strength in agricultural commodities. Expectations of continued inflation were deeply ingrained in the U.S. economy.

Figure 4. Inflation: annual percentage change in the GNP deflator.



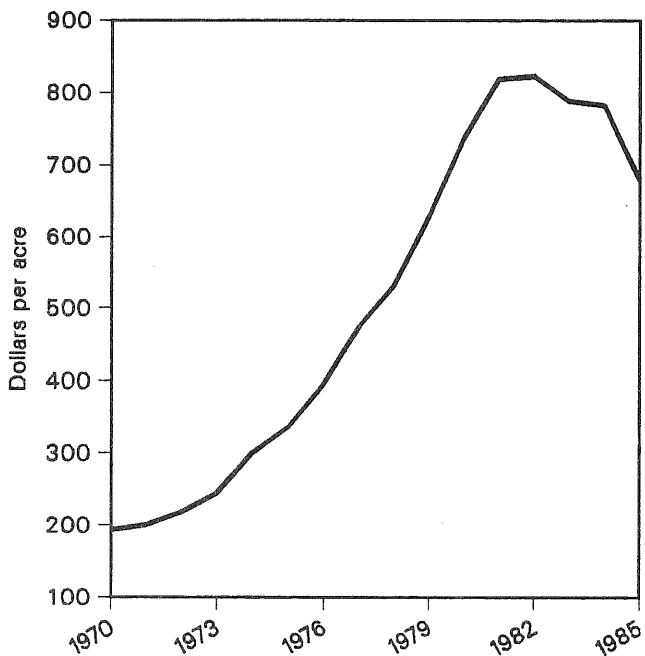
Expected increases in commodity prices, coupled with regulated financial markets, caused farmland prices to go even higher. Regulated financial markets meant savers could not protect their wealth as readily by investing in financial assets. As a result, there was greater flight by investors to real assets -- ranging from art objects to farmland -- to protect wealth against the ravages of inflation. Consequently, farmland values increased at a rate in excess of inflation, as they had done each year with only two exceptions since World War II. A fundamental factor underlying this result was that inflation-adjusted interest rates paid by farmers remained very low because of regulations which limited interest rates paid on savings. During the 1970s, real interest rates, on a before-tax basis, hovered around zero.

But the network of factors supporting land values began to crumble late in the decade. In order to curb a dangerously high rate of inflation, the Federal Reserve moved to a policy of monetary restraint in late 1979, as did the central banks in other industrial countries. Furthermore, in late 1979, the Federal

Reserve changed the way it implemented monetary policy. The practical effect of the change was to link market interest rates to supply and demand forces in the marketplace -- just like the price of corn or cattle. Finally, the Monetary Control Act of 1980 set in motion a phased deregulation of financial markets and interest rates.

Lower Land Values. Expectations about the future course of inflation were lowered and signalled a downward adjustment in farm asset values. Price deflation was particularly marked in world commodity markets. From 1979 to 1985, the futures prices for wheat and corn on the Chicago Board of Trade declined by 25 percent and 7.5 percent, respectively. In 1981, U.S. farmland values peaked and fell into a decline that continued in 1985 (Figure 5). Declining farmland values are not unique to the United States. For example, farmland values are also declining in Canada and Europe.

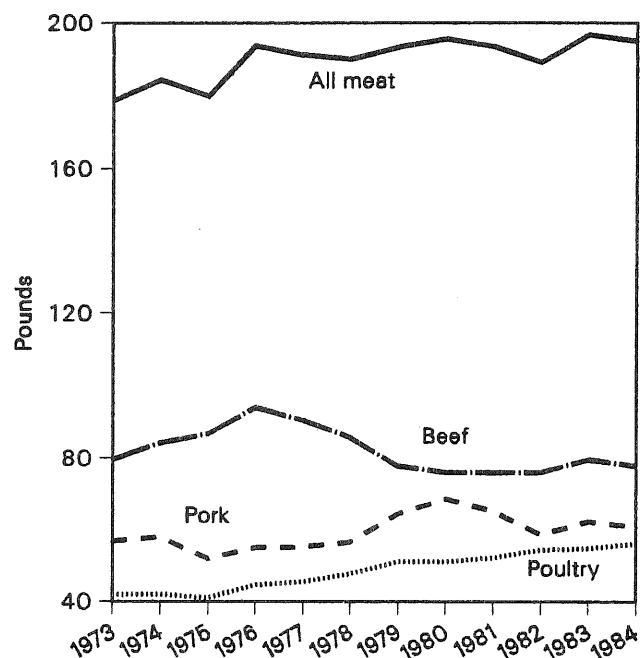
Figure 5. U.S. farm real estate values.



Lagging Market Growth. Mature domestic food and fiber markets pose major adjustments for U.S. agriculture. These markets will grow more slowly in the future than they did in the 1970s. Americans, already well-nourished, spend a very small part of any new income for additional food and fiber products. Moreover, the U.S. population is growing more

slowly and is growing older. Annual population growth during the last two decades of this century is projected to be about 0.6 percent, compared with an average growth rate of one percent to 1.3 percent for the previous two decades. The median age of Americans has increased from 29.4 years to 31.3 years during the past two and a half decades. Americans have a generally sedentary lifestyle, but also a growing awareness of health. Considering all this, slower demand growth for red meats, feed grains and oil seed crops appears sure (Figure 6).

Figure 6. U.S. per capita consumption of meat.



Changes in lifestyles, older population segments and shifts in relative prices have contributed to a shift in demand from red meats and milk to poultry, fruits and vegetables. These changes have a magnified effect on demand for farm products through greatly reduced demands for feed grains. The other industrial countries of the world are likewise becoming mature food and fiber markets, resulting in reduced export demand.

Technological Advance and Excess Capacity. Growth in U.S. agricultural productivity has resulted in production capacity that has outstripped domestic markets. Our growing agricultural output must find new markets abroad -- particularly in the developing countries of the world. Further compounding the problem of overly abundant U.S. food and fiber

stocks is the prospect that biotechnology and information advances will accelerate domestic agriculture's productivity beyond the 1.75 percent annual growth rate experienced during the post-World War II period. Thus, the prospect of excess capacity -- at prices unacceptable to farmers -- now seems quite likely to extend well into the future.

U.S. farmers and agribusinessmen were not alone in making new investments in production capacity during the 1970s (Table 5). The same commodity price incentives that increased U.S. agricultural investment and production during the 1970s spurred infrastructure investment and production increases elsewhere, as technology advances in U.S. agriculture have been transferred readily across national boundaries. Thus, around the world, food and fiber production has increased significantly more rapidly than demand in recent years. As a result, world commodity prices have fallen below the production costs of some U.S. farmers. This has come as a bitter blow to farmers who had been told repeatedly they were the world's low-cost producers of major traded crops.

These changes in the market environment are likely to be relatively long-lasting. The U.S. stake in world markets has grown substantially during the past couple of decades and is likely to grow even more. Moreover, the world marketplace for food and fiber is now much more competitive. Thus, the downward adjustment in U.S. commodity prices and asset values will likely continue for at least another year or two. As a consequence, improved U.S. farm profitability will have to come from reductions in

cost and improved productivity rather than from substantially higher commodity prices.

Change in Monetary and Fiscal Policy

The downward pressures on commodity prices and asset values have been further compounded by national economic policies and by agricultural policies, some of which have had a perverse impact on the sector.

Both monetary and fiscal policies have affected the economic well-being of the nation's agricultural sector. During the past several years, the Federal Reserve successfully moved to slow the economy's rate of growth in money and credit in order to reduce the rate of inflation and eventually return the economy to price stability. From an annual rate of increase for the GNP deflator of 9.6 percent in 1981, the inflation rate fell to just under four percent in 1984. While still too high by historical standards, inflation no longer poses the dangerous problem it did in the late 1970s and early 1980s.

Reduced inflation has been helpful to agriculture -- interest rates have fallen sharply from previous highs and increases in farm and agribusiness production costs have slowed dramatically. Inflation no longer seriously distorts the meaning of profit, asset values and business decisions as it did just a few years ago. But there have been costs -- commodity prices and agricultural asset values have declined, and inflation-adjusted interest rates have risen, partly due to deregulation of financial markets.

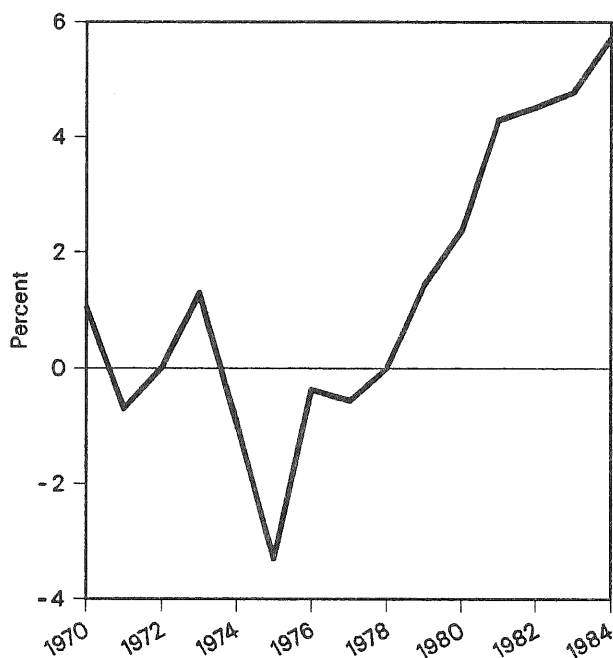
Table 5. Crop production in the United States and the rest of the world, selected years 1970-1985.

Time period	Grains		Oil seeds		Cotton	
	United States	Rest of world	United States	Rest of world	United States	Rest of world
Million metric tons						
1970-71	186.7	917.6	34.4	47.2	10.2	44.9
1975-76	249.1	997.6	47.3	86.1	8.3	45.8
1980-81	269.6	1,177.8	55.7	99.6	11.1	53.7
1984-85	312.2	1,317.5	59.3	127.1	13.3	71.0

High Deficit and Federal Debt. The role of monetary policy in fostering economic growth and price stability has been made more difficult by growing federal budget deficits. The United States has long had problems balancing its budget -- succeeding in only eight years since 1945. The federal debt has grown by \$1.3 trillion during the post-World War II period. Except for the 1975-76 period, however, budget deficits did not typically exceed 10 percent of total private savings in the U.S. economy.

Fully 43 percent of the entire national debt, now amounting to \$1.85 trillion, has been piled up just since 1981. During that time, federal deficits have amounted to as much as six percent of the nation's gross national product and 34 percent of total private savings -- an unprecedented situation in peacetime. Meanwhile, inflation-adjusted interest rates, which hovered around zero during the 1970s, have escalated to near record heights. This reflects concern in financial markets over how the deficit problem will be resolved, and upward pressure on rates in credit markets as the federal government annually seeks to borrow about \$200 billion (Figure 7). High real interest rates have added a higher exchange value to the U.S. dollar.

Figure 7. Real interest rates, GNP deflated.



The combination of high debt-carrying costs and a high-valued dollar has been particularly damaging to the nation's agricultural sector, since it is both capital intensive and export dependent. However, it would be simplistic to attribute all increases in real interest

rates and the value of the dollar to the federal budget deficit. Nevertheless, most economists believe a credible plan for reducing the federal budget deficit would lead to an easing of both real debt-carrying costs and the exchange value of the dollar. Without progress on the deficit, it is not likely that sector-specific agricultural policy can fully offset the adverse effects of current fiscal policy.

Tax Policies. Government tax policies have also added to agriculture's problem. Two mechanisms are at work. First, the favorable tax treatment of business has made capital investment in the United States very attractive to foreigners. Some equalization in business taxation across international boundaries will likely be needed to slow the inflow of foreign investment and limit the strength of the U.S. dollar.

The second tax mechanism affecting agriculture works through the use of agricultural investment to shelter income from taxation. Agricultural investments, such as dairy cattle or beef breeding stock, provide opportunities to defer income from one tax year to another and, in some cases, to turn ordinary income into capital gains, which are taxed at a much lower effective rate. For example, some costs associated with agricultural land development and orchard development can be written off as they occur rather than being amortized over the productive life of the investment. Finally, with the strong support of farm groups, investment tax credit and accelerated cost recovery (which were created as a spur to general business investment) have been made applicable to agricultural investment.

The bottom-line result is that nonfarmers and farmers alike find agricultural investments attractive as a tax-sheltering device. However, commercial rates of return to farmers are depressed by increased competition from nonfarmers wishing to shelter nonfarm income. According to IRS data for 1982, about 933,000 farm tax returns reported profits totaling \$8 billion, while another 1.75 million returns reported losses totaling nearly \$18 billion. Over time, the use of agricultural investments as tax shelters has driven the market value of agricultural assets above what economic fundamentals would dictate. It also has added to the supply of many farm commodities, often more rapidly than demand has grown. The effect has been lower commodity prices as a result of overinvestment. For example, in the West, wine vineyards and avocado orchards have proliferated.

Agricultural Policies. Agricultural policies themselves have often worked against farmer interests, especially in recent years as U.S. dependence on

export markets has grown. U.S. agricultural policies place a price floor under many farm commodities traded in international markets. As a result, price risks are reduced for farmers in other countries and strong incentives are created for them to bring on new agricultural production. For example, while the United States was cutting back on food and feed grain acreage in 1983 and 1984, the rest of the world increased acreage for those crops. High U.S. price supports also lower the costs of internal and external subsidy schemes in other countries, such as those of the European Economic Community.

Finally, new foreign production typically utilizes state-of-the-art technology, presenting a challenge to the widely held thesis that the United States has a strong comparative advantage in the production of major field crops for the export market. If support prices in the United States are held well above market-clearing levels for even a few more years, our food grain and cotton producers would find they are no longer the world's low-cost producers. Fixed costs of U.S. production would stay high while foreign producers using low-cost land and labor, combined with state-of-the-art technology, could undercut U.S. commodity prices in world markets.

On balance, the impact of national policy on U.S. agriculture has grown in importance as the sector has become more dependent on export markets and, in many ways, has become more like other sectors of the nation's economy. Increasingly, national economic policies that improve the performance and competitive position of U.S. business in a world marketplace will also be policies that benefit agriculture.

Summary

Farm financial stress has worsened over the past five years as farmers have faced stagnating markets, rising interest costs and declining farm asset values. Land prices have declined as much as 49 percent in some states of the upper Midwest and are off 19 percent nationwide. Farms with high debt/asset ratios generally have difficulty keeping up their principal payments, and in some cases, their interest payments.

As of January 1985, farms with actual cash flow shortfalls and debt/asset ratios over 40 percent numbered about 213,000 (13 percent of all farms) and owed about 45 percent of all farm operator debt. The financial status of these farms ranges from technically insolvent (38,000 farms) to very highly leveraged (54,000 farms) to highly leveraged (121,000 farms). Dairy farms and cash-grain farms are the hardest hit types; and the Great Lake states, the

northern Plains and the Corn Belt are the most seriously affected regions.

Prospects are for continued financial stress among farmers and farm lenders as the sector continues to produce more than domestic and international markets will absorb at prices which cover farmers' cost. Net farm incomes and farm asset values will likely continue to decline until enough capital and production capacity have been forced out of the sector to restore balance between U.S. production capacity and market demands. The new equilibrium of production and demand will likely entail further reductions in net farm incomes, farm asset values and farm production costs.

Financial stress in the farm sector is quickly transmitted to agricultural lenders through loan delinquency and loan losses. Financial stress among institutional lenders -- commercial banks, the Farm Credit System, life insurance companies and the Farmers' Home Administration -- is mounting; loan losses and lender failures are running at rates not seen since the 1930s. With the prospect of continued declines in farm asset values and continued pressure on farm profitability, agricultural lenders will face increased problems with their own solvency and stability.

The current distress among farmers and farm lenders is strongly rooted in the economic conditions of the 1970s, and the adjustments from that expansionary era to the sharply different conditions of the 1980s. A combination of cyclical factors related to worldwide recession, monetary restraint and restricted world trade have contributed to lower demands and slower growth of markets for U.S. farm products in the 1980s. These factors periodically correct themselves with a change in the business cycle.

More importantly, several secular factors, such as controlling inflation through monetary restraint and deregulating financial markets, have resulted in near-record levels of real interest rates (nominal interest rates corrected for inflation). Also, changes in eating habits and composition of the U.S. population have led to slower growth in domestic markets for U.S. farm products. Growth in the production capacity of foreign competitors has also affected international markets for U.S. commodities.

Finally, national policies of monetary restraint along with large budgetary deficits (fiscal stimulation) have contributed to a very high-valued dollar in international exchange. The high-valued dollar, in turn, has stifled foreign demand for U.S. farm products. Overinvestment, stemming from tax-sheltered investments by nonfarmers, has stimulated excess capacity in the farm sector. Support of U.S. farm

commodity prices has raised and stabilized prices for foreign competitors and stimulated them to expand their investment and production capacity. In short, macroeconomic policies, agricultural policies and tax policies have: 1) stimulated excess capacity in the

U.S. farm sector, 2) provided an umbrella under which foreign competitors could expand, and 3) dampened U.S. export potentials through a very high-valued dollar. Adjustment to these conditions is likely to be long and painful.

Short-Term Transition Policies to Ease the Financial Crisis

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Traditional ways of dealing with business failure from farm financial stress include:

- *Liquidation*, which is most useful when both borrower and lender agree on the need to liquidate and work together.
- *Foreclosure*, which tends to occur when the borrower does not agree to liquidate.
- *Bankruptcy*, which tends to be a borrower option used to salvage some equity and dismiss debts when other options would leave no equity and perhaps would still leave additional liens against the borrower.

Without new policies to meet the current financial crisis of farm borrowers, adjustment will occur primarily by use of these three means. In some cases, the results will be unnecessarily harsh. Some operators may be forced out of business needlessly. Given the extent of problems in some areas of the country, farm asset markets could become even more depressed from the sheer volume of exits from farming under the traditional approaches.

Policy makers are concerned that traditional means for adjustment are inadequate. Numerous short-term transition policies have been discussed and will continue being discussed in coming months and years. However, many such discussions seem to assume that the current financial stress in agriculture is short-term in nature; i.e., if we can just help financially stressed farmers hold on for a year or two, the situation will return to "normal". Hence, short-term policies might be effective if farm incomes improved dramatically within a year or so, or interest rates on debt fell several percentage points. Unfortunately, the 1981-85 period may be the norm rather than the relatively prosperous period of the mid '70s. If the situation does not improve soon, short-term policies

may be detrimental to those very people they were designed to help. By encouraging a financially strapped operator to hang on another year or two, the policy may only serve to exhaust the operator's remaining equity and further depress prices for other farmers.

Probably a more useful approach is to view short-term policies as transition programs to aid in an ongoing adjustment process. An important perspective is that such programs:

- help those who have a reasonable chance to survive to do so.
- help those who don't have much chance for survival to exit in a dignified manner with as much equity as possible.
- stabilize asset markets.
- have minimal detrimental effect on other farmers, the agricultural industry and rural communities.

This paper discusses a number of short-term transition policy options that have received, or are receiving, consideration as possible means for dealing with farm financial stress. Most proposals or legislative bills will likely combine several options; but in order to examine effects of specific alternatives, the options are discussed here one at a time. The format for discussion is to: 1) list each specific alternative, 2) explain how it would work and when it was used in the past, and 3) discuss its consequences for farmers, lenders, consumers, taxpayers and rural communities. The financial stress of lenders has been given substantially less publicity in the mass media than the financial problems of farmers. Yet, the lender situation is a concern because failure of lenders directly affects financially stressed farmers, other farmers and many rural communities.

Forbearance

Forbearance is a conciliatory or compromising approach rather than a hard-nosed approach used by public and private lenders in dealing with borrowers who are having financial difficulty. The rationale behind forbearance is recognition that times are difficult for farmers and that many situations could be improved if the lender and farmer cooperated. Forbearance on the part of private lenders is difficult to legislate; it has to be accepted voluntarily. A lender using forbearance would be expected to exhaust various strategies for improving the quality of a loan before foreclosing or pressing the farmer to liquidate. Such strategies might include restructuring debt, scaling down payments and working more closely with the borrower to improve serviceability of the loan.

A forbearance approach can be relatively effective for farmers who are not overwhelmed with difficulties. For farmers in deep trouble, forbearance is of little help. Forbearance may or may not have an effect on farmers who are not in difficulty. If forbearance does not increase losses to the lender, there is little effect on non-troubled farmers. However, if forbearance results in more lender losses, some of those costs will be passed on to other borrowers.

Forbearance requires lender cooperation, so the lender has some choice in whether to use the option and how far to go in reorganizing or adjusting the borrower's debt. In some cases, forbearance will result in lower income for the lender. To the extent that forbearance is a solution for some marginal borrowers, it represents a benefit to the rural community, as opposed to the insolvency or liquidation that might otherwise occur.

Moratoria

A foreclosure moratorium or a debt moratorium affecting public and private lenders is another approach that has received much attention. A moratorium is a stay of proceedings. For example, a moratorium on mortgage foreclosures would stop foreclosure proceedings. The purpose of a debt moratorium is to temporarily relieve the financially pressed producer of financial obligations associated with excessive debt. A key to the success of such proposals is the assumption that the financial condition of the firm and the industry will improve sufficiently in the intervening period so that the obligations can be repaid.

Moratoria were applied under the Frazier-Lemke Act in the 1930s to bankruptcy proceedings. In general, the moratorium was applied to real estate

mortgage loans only. The farm was appraised, and then the court granted a stay of proceedings for three years, during which the farmer kept possession of the property, continued to farm it and paid rent for its use. Within three years, the farmer could pay the appraised value and redeem the property. If the property was not redeemed, it was sold to satisfy the debt against it. The farmer was not held liable for loan amounts greater than the appraised value of the property or its sale price.

The moratorium approach required borrowers to pay something for use of the property, but it also limited losses to the appraised or sales value of the property. One advantage of debt moratoria was that the courts, in their supervisory position, could require creditors and borrowers to work out their differences. While the moratorium approach might be beneficial for a few farm situations, relatively few farmers took advantage of the moratorium during the widespread financial distress of the 1930s. Because of the moratorium, creditors quickly made adjustments in their lending practices. That is, they reduced the number of new loans in states which had debt moratoria.

Income foregone by lenders is the major direct cost of a debt moratorium. In addition to this cost, there is serious concern about the implications of such programs on the long-run performance of financial markets. Implementation of a debt moratorium would likely lead lending institutions to conclude that a high probability exists for moratoria in future periods of financial stress. Lenders would then expect to be compensated for increased risk through higher rates of interest. Further, some borrowers would be unable to obtain credit, even with adequate collateral, because debt moratoria negate the value of collateral in the credit extension decision. A moratorium would likely stabilize asset values because fewer assets would be forced onto the market. In summary, debt moratoria likely would cause chaotic conditions in financial markets, higher interest rates for the agricultural sector, fewer credit opportunities for farmers, but possibly more stable asset values in the short run.

A relatively low proportion of farmers used debt moratoria in the 1930s. However, the moratorium kept some of the most financially stressed borrowers in business until they could get back on their feet. These farmers were allowed to stay on the farm through a rental arrangement and continue to produce, probably creating extra competition for farmers who were not in trouble. But, because land was not forced onto the market, land values were likely more stable. This benefited both farmers and lenders.

Moratoria have other implications for lenders. Costs to private and public farm lenders rise from litigation and delays in foreclosure on nonperforming loans. Given the loss-sharing agreements that exist among Farm Cooperative Credit System agencies, losses to such agencies in a state with a moratorium may be passed on to Farm Credit System borrowers outside that state. Smaller, rural banks would be affected by a moratorium more than larger banks with a smaller proportion of agricultural loans. Taxpayers, especially local taxpayers, are affected by moratoria because costs are shifted to the local level and to public overhead, in part to cover the expense of required legal proceedings.

Some attempts have been made to develop targeted or limited moratoria. The objective of such an approach is to place conditions on the lender's right to foreclose. For example, a limited moratoria might allow the lender to foreclose, but only after making good faith attempts to use all available public sector credit assistance programs. Or the lender might be restricted from foreclosing for nonpayment of principal, and could only foreclose if scheduled interest payments were not made. The purpose of limited moratoria is to encourage lenders to utilize public sector assistance programs or accept forbearance and other restructuring approaches, while maintaining the foreclosure right. In essence, conditional moratoria are one means to encourage reluctant lenders to cooperate with and assist borrowers who are facing financial stress.

Deferral of Interest or Principal Payments

Deferral of interest or principal payments by public and private lenders means the borrower is not required to make that part of the payment on his debt service for some designated time period. However, because payment is only deferred, balances accumulate and become due later. Hence, if the interest payment were deferred, the borrower would make only principal payments. Interest due would continue to accumulate. The deferral approach is different from a waiver of interest in which the amount due is forgiven by the lender during the period of waiver.

The rationale behind deferral of principal or interest payments is that the pressure of debt service can be eased temporarily until conditions improve. Then the interest or principal payments could be started up again. If the deferral period were very long, it might be necessary to increase the payments because of the larger outstanding balances. The Farmers Home Administration (FmHA) is using a

variation of this deferral plan in their current approach to farm financial stress. They permit a farmer to defer payment of up to 25 percent of principal as long as five years into the future. In the meantime, interest payments due on the set aside portion are waived. Later, at the end of the deferral, the debt is restructured and a new payment schedule set up to pay off the remaining principal, including the 25 percent that was deferred earlier.

If the period of financial stress were short-lived, deferral of interest or principal payments could be a relatively effective means of dealing with financially stressed farmers. Stress, as well as delinquencies and foreclosures, could be reduced by deferring principal or interest payments.

If financial stress is a long-term phenomenon, then two or three years deferral of interest payments would only make matters worse and further weaken balance sheets. Probably the biggest effect on stable farmers would be the increased risk of losses to their lenders if the financial stress turns out not to be short-lived. An added problem with deferring principal or interest payments in the current situation is that high interest rates make interest deferrals very expensive. For example, a farmer with a \$200,000 debt and interest rates of 15 percent would find the principal had increased to \$260,000 or more two years later if interest payments were deferred. In short, high interest rates make carrying costs prohibitive.

The deferral approach reduces cash flow for lenders and substantially increases their risk of losses. In effect, lenders would be betting that the financial situation improves within a relatively short period. If it does not, lenders likely will see increased losses from borrowers who are currently in financial stress.

Short-run effects for consumers and taxpayers appear relatively unimportant. In the long run, if stress continues and recovery does not occur, there could be consequences to both consumers and taxpayers from increased losses of farms and farm equity, as well as increased losses by lending institutions. Those increased losses might require public expenditures to salvage at least a portion of the financial system. Rural communities could benefit in the short-term from deferral of interest and principal payments, but the community might well be worse off in the long run if the financial situation did not improve quickly.

Costs to lenders of principal payment deferrals are minimal, and costs of interest deferral are low as well if the economic situation improves soon. If not, costs of this approach to lenders could be very high as borrowers default on the higher amounts of loans outstanding.

Debt Restructuring

Debt restructuring by public and private lenders refers to the rescheduling of loan commitments. Debt may be restructured by rewriting short-term or intermediate-term debt to a long-term basis if the collateral justifies such a change. The amount to be paid per year is then reduced. Without sufficient additional long-term collateral, debt restructuring is limited to rescheduling each class of loans -- short-, intermediate- and long-term -- over a longer repayment period. The premise of restructuring is that providing additional time to repay the principal reduces annual obligations, thus enabling borrowers to meet these lower interest and principal payments out of present cash flow.

Debt restructuring can be done by lenders on a voluntary basis. The effectiveness of debt restructuring depends upon the nature of each borrower's situation. For borrowers who have a high proportion of their total debt on a short- or intermediate-term basis, substantial improvement in debt service requirements can be obtained by restructuring to a longer payback. Higher interest rates, of course, reduce the potential effectiveness of debt restructuring since debt service will always be higher with 14 percent interest rates than with 10 percent interest rates. In the current period of financial stress, probably much of the potential voluntary debt restructuring has already taken place.

Debt restructuring can be useful for some percentage of farmers in trouble. For those who are too deeply in debt or have too small a cash flow, it will not be helpful; but for some farmers at the margin, debt restructuring could be an important part of a long-term solution. Debt restructuring affects farmers who are not in financial trouble only to the extent that lender losses from debt restructuring get passed on to them.

Lenders can choose to restructure debt voluntarily or they may do so because of a government guarantee which requires restructuring. FmHA, for example, has provided a guarantee for 90 percent of the principal if the lender will write down the debt by at least 10 percent (principal or interest rate equivalent) and then restructure the loan so that a budget shows cash flow obligations can be met.

Lender costs or losses should not be affected much by restructuring if lenders analyze the situation carefully before restructuring or obtain a guarantee program in the restructuring process. Debt restructuring programs also have few implications for consumers or taxpayers. Rural communities probably benefit somewhat when lenders and borrowers undertake restructuring since it helps some marginal

borrowers stay in business, if the borrowers ultimately recover from financial stress.

Loan Guarantees

Providing loan guarantees from a federal or state agency to indemnify the lending institution in case of default by the borrower is becoming more common. For example, a guarantee has been used to encourage the private sector to make, service or restructure certain loans. To provide this encouragement, a public agency, such as FmHA, guarantees the loan or some proportion of it. The guarantee approach gets private sector involvement toward a desirable end without requiring government personnel and funding to make the loan. Providing a government loan guarantee reduces the risk faced by the lender, thus encouraging forbearance and loan restructuring. A loan guarantee might be conditional upon an approved plan of liquidation or other more permanent solutions.

Loan guarantees can be helpful to marginal farmers who are in trouble but might recover given slight reductions in debt amounts, rescheduling of loans or the like. Loan guarantees have few implications for farmers who are not in financial trouble.

Lenders see direct benefits in loan guarantee programs. Some potential losses can be shifted to taxpayers, thus ultimately reducing losses suffered by private lenders. If pursued liberally as a long-term policy, loan guarantees could reduce the vigilance with which lenders scrutinize loan applications, thus increasing the potential for losses. There are few implications for consumers, although a loan guarantee program is likely to raise costs to taxpayers by the amount that lenders are reimbursed for losses from their borrowers. If losses become substantial, taxpayer costs accelerate sharply. Rural communities could realize marginal benefits since the losses which would have been borne by firms in the rural community are borne instead by taxpayers across the country.

To be a permanent and effective solution, a loan guarantee program should be combined with other alternatives, such as systematic asset or liability restructuring to reduce the debt obligation or increase the cash flow of a business. Properly structured, a loan guarantee program may provide the time necessary to implement more permanent solutions and protect farm asset markets from collapsing in the process. Without such a long-term solution, a loan guarantee program might be perceived as a "lender bail-out". The approach does invite private lenders to shift their worst loans to the public sector,

but that effect can be diminished by limiting the guarantee to a fixed term and by carefully scrutinizing loans for which guarantees are approved.

Principal Buy-Down

A principal buy-down (or write-down) refers to a reduction or write off of part of the outstanding principal. In essence, this amounts to a forgiveness on some part of the principal due. A buy-down usually refers to a public expenditure to encourage private lenders to write-down a loan. A write-down of the loan amount, for example, may reflect that the value of an asset has fallen below the loan level and that the farmer's cash flow does not permit repayment on the present schedule. So a write-down might result in renegotiation of the loan contract to reschedule principal and interest payments in line with lower income or asset values, thereby easing debt service requirements. Similarly, a land contract note might be renegotiated to accomplish the effect of a write-down. A write-down can be quite beneficial to the borrower. Of course, whether it will be a sufficient solution depends on how much the debt service burden can be reduced in relation to income.

While a write-down could be voluntary on the lender's part, it usually occurs as part of a public program for debt restructuring or because an examiner requires a loan be written down commensurate with lower asset values. A write-down initiated by an examiner can create a problem for the lender because it represents a direct write-off or loss of equity on the lender's books. The lender might not agree with the examiner's analysis; yet, the examiner forces the lender to show a lower value on the books. In this case, the write-down might not result in restructuring of debt or reduced payments for the farmer borrower.

A principal buy-down is typically initiated through a public credit policy in which an FmHA guarantee, for example, is available if the lender writes down part of the outstanding principal and restructures payments to ease the borrower's debt service burden. In this case, the principal buy-down is initiated to ease the borrower's position; where the principal write-down initiated by examiners is likely to make the lender worse off without improving the borrower's situation.

A principal buy-down can be helpful to overextended farmers since it reduces the amount of principal they owe on a loan and typically leads to restructuring of the loan to make payments easier. Principal buy-downs often lead to ill-will on the part of financially stable farmers as they see farmers who

cannot repay their debts having loans forgiven.

The effect on lenders of principal write-downs or buy-downs depends upon the nature of the principal reduction. If it comes about from examiner requirements, it represents a loss to the lender. On the other hand, if it comes from a government program through which the private lender receives a reimbursement or guarantee, then it can result in benefits that may offset write-down costs. Consumers are affected little by principal buy-downs. Taxpayers bear the cost of principal buy-downs that are part of farm programs. The effects on rural communities of buy-downs would be marginally beneficial since the policy may keep a few operators from being forced out of business.

Interest Buy-Down

An interest buy-down involves an interest rate reduction on an existing loan. The government pays part of the reduction cost to private lenders who, in turn, reduce the interest rate on the loan by some agreed amount. For example, suppose a farmer's loan were at 14 percent. If the federal government were to implement a four percent buy-down, the interest rate would decrease to 10 percent. Half of the cost might be borne by the government and the other half by the private lender. Of course, the proportion of cost-sharing could be other than 50-50. If the government pays the full cost of the interest rate reduction, then the interest buy-down becomes an interest subsidy.

The purpose of an interest rate buy-down is to reduce the interest component of the cost structure for farmers. Temporary interest rate reductions would benefit financially stressed farmers in the short run because interest has become a major component of the cost of production, particularly for those who are highly leveraged.

Interest rate buy-downs can be implemented in many ways, including:

- a direct government subsidy of interest rates,
- an increased tax write-off for farm interest payments,
- a public guarantee to reduce the risk faced by lenders and therefore allow lenders to charge lower interest rates to borrowers, and
- the use of tax-exempt revenue bonds to obtain lower cost funds for agriculture.

The effectiveness of an interest rate buy-down is in direct proportion to the amount of the buy-down. A substantial buy-down of interest rates could be

very beneficial by easing cash flow commitments of heavily indebted farmers. Of course, an interest buy-down would be of no help to farmers who are not in financial trouble. It could create ill-will toward farmers receiving the benefits from farmers who pay high interest rates but do not receive the buy-down. An interest buy-down is a relatively effective way of dealing with farmers' cash flow problems, but it is also a very expensive solution. FmHA could also implement a reduced interest rate program, but this would represent a subsidy rather than a buy-down of interest rates.

The effect of an interest buy-down on lenders is directly related to whether the government pays the full cost or a fraction of the cost of the interest rate reduction. The cost of an interest buy-down has to be compared to the possibility of loss through default on the loan if the borrower is not given some relief. In general, one could expect that lenders would accept the buy-down for those borrowers who could not stay solvent otherwise, but would likely resist putting borrowers in the program if there were any other way of salvaging the operation. An interest buy-down approach would be relatively expensive to taxpayers because they pay for the buy-down. Rural communities would likely benefit in direct relationship to the amount of buy-down in the community since it would ease the cash flow burden of farm borrowers and possibly decrease the number of losses and liquidations of farms in that community.

Expanded Government Credit

Expanded government (public) credit would involve new loans, presumably by FmHA, as a response to the current financial stress. The rationale for this approach is that farmers are suffering from circumstances beyond their control (i.e., public policy, weather and commodity price problems) and therefore, the public sector has an obligation to help. FmHA is already recognized as a lender of last resort for natural disasters and economic emergencies.

A number of policy issues revolve around expanded government credit. Providing public credit through FmHA or other agencies to preserve the normally healthy moderate-sized farm that is temporarily caught in adverse conditions seems consistent with long-term agricultural policy goals. Such goals include efficiency, resiliency and future flexibility of agriculture; providing economic opportunity for more people; and ultimately, assuring food security.

The same arguments may not hold in the case of public credit for very large farms. Similarly, there appears to be no direct economic reason for offering

subsidized public credit to preserve farms that are submarginal even under normal economic conditions. On the other hand, providing public credit to farmers hit by natural disasters would be consistent with goals of efficiency, competitiveness and future flexibility. In short, consideration of expanded government credit raises questions about the social and economic objectives of credit policy.

For farmers in financial stress, expanded government credit could be beneficial. An important aspect of public credit, however, is the treatment of interest rates. If interest rates were charged at the government's cost of funds, as they have been recently, then continued high interest rates would likely lead to ultimate losses on many government loans. The effect of expanded government credit on farmers who are not experiencing financial stress would come primarily from increased stability in asset markets.

In the short run, private lenders would likely benefit from expanded government credit because they would undoubtedly find ways to shift potential losses into government credit programs. Expanded government credit would also likely hold machinery and real estate markets at a higher level than if substantial numbers of liquidations took place. This would support the asset values of individual balance sheets in lenders' loan portfolios. In the long run, however, government credit could act as a formidable source of competition to private lenders, potentially resulting in a largely government-financed farm credit system.

Taxpayers would be affected directly by expanded government credit. Additional costs would be involved. Ultimately, expanded government credit would lead to increased losses as some of the loans became unpayable. Rural communities would likely benefit from expanded government credit as additional farm operators were kept on farms in rural areas.

Other Policies to Support the Liquidity and Solvency of Lenders

A critical issue today is whether the public sector should play a role in regulating, monitoring or facilitating asset liquidations. Legitimate concerns have been expressed about the attitude of lenders who encourage cash sales of assets without recognizing the implications for producers or asset markets. Collateral values have declined, in part, because of forced sales of assets for cash in a market where there is no cash. Several possibilities for addressing this problem have been offered.

For example, lending institutions might be

encouraged to take title to real property in lieu of debt obligations and then lease the property back to the original debtor. This approach keeps property off the market and reduces downward pressure on asset markets. By leasing the property back to the original operator, other resources such as machinery and equipment do not require liquidation. Through this process, the lender might convert a nonperforming asset into one that generates at least some rate of return in the form of rental payments. To reduce the possibility of the lender tying up liquidity in such assets, the government might consider a program to provide the lender funds equal in value to the assets taken in lieu of debt. These funds could be provided to the institution at a lower cost than the cost of private sector funds. This, in turn, would partly offset the lower yield being earned by the asset. The lender might be required to remove the assets from its portfolio over a two to four year period with the original debtor having first option to buy.

Government programs could also be initiated to hold repossessed land off the market. For example, in some places FmHA is already holding foreclosed land for a period of one to three years so that it does not contribute to lower land values in the area. This is quite beneficial in counties where there has been extensive financial distress.

An alternative approach would be for the state or federal government to charter an entity to acquire from lenders nonperforming real estate debt and the assets securing that debt, and hold them off the market for a period of time. The property might be leased back to the original farmer or possibly put into a conservation reserve program to simultaneously reduce production and soil erosion. This government entity could be structured to own the land, or to provide a direct subsidy to private sector lenders to assist them in holding land off the market.

Private lenders could be assisted in other ways in holding land off the market. Bank regulations typically require that real estate assets taken over by banks be valued at market level. In many states, regulations require further annual write-downs of value to discourage holding of such assets. This causes the bank to write-off losses. The bank loses equity and is encouraged to dump assets on the market. Moreover, some states prohibit ownership of farmland by lenders or corporations. This contributes to dumping of farmland back onto the market for quick liquidation.

To implement a policy encouraging lenders to hold land off the market would at least require state involvement, and perhaps even federal authorization and guidelines. At a minimum, as noted earlier, banks would need extended credit from the Federal

Reserve discount window to maintain liquidity during the unusual periods when they are holding a substantial amount of nonliquid real estate assets.

Programs to stabilize asset values could be beneficial for farmers who are in financial trouble, primarily by maintaining collateral values on their individual balance sheets. Also, such policies would permit lenders to exercise forbearance because they would be in less severe financial circumstances themselves. There would be mixed benefits to farmers who are not in financial trouble. Asset values would remain at higher levels. Therefore individual balance sheets would be less negatively affected by downward pressure on asset markets from dumping and forced liquidations. However, untroubled farmers wanting to expand their asset base would have to pay more to acquire assets. Of course, lenders would be most affected by such policies since the basic purpose of the policies is to protect lenders.

With the stability and higher prices of assets as a result of such programs, private investors who might invest in farmland become the "losers." They either forgo investments or pay a higher price than if asset values dropped further. Consumers and taxpayers benefit from the increased stability associated with meaningful programs to keep asset markets from overreacting and becoming unjustifiably volatile. Rural communities would also benefit from public policies supporting the liquidity and solvency of farm lenders.

Summary

A number of short-term transition policies for managing the current financial crisis are being considered. These policies could be designed to deal with the financial problems of both individual farmers and their lenders. Several of the policies could be implemented by lenders on a voluntary basis. These include forbearance, debt restructuring and perhaps limited principal or interest deferment. Some policies might be implemented by either the federal government or state governments. These include foreclosure moratoria, interest buy-downs, principal buy-downs, principal and interest deferments, loan guarantees and expanded government credit. Some policies (for example, more flexibility in land holding) address the problem lenders have in dealing with their own liquidity and solvency problems.

In general, the more effective short-term credit policies are likely to be the most expensive. This is because the magnitude of farm financial stress generally is related directly to debt service costs. Those policies judged to be more effective include a

short-term waiver of interest, write-down of loans, interest subsidies and interest rate buy-downs. These policies involve direct reduction in debt service costs. Debt restructuring also has considerable potential and is less costly. Much restructuring has already occurred. Government guarantees may be required to encourage additional lender restructuring of borrowers' debts.

One of the basic difficulties in analyzing policies is the projected length of the financial stress period. Many of the policies being considered seem to assume that the financial stress is a short-term phenomenon and that, within a couple of years, relationships will be back to "normal." That is a critical and maybe questionable assumption. If the period of financial stress turns out to be more than two or three years, many short-term policies will be relatively ineffective, in some cases quite expensive, and even detrimental to the very people they were designed to help.

Since one of the factors contributing to financial stress is decreased farmland values, policies which ease that downward pressure could be helpful to both individual farmers and their lenders. It could be helpful to assist public or private lending institutions

in holding land off the market to stabilize prices. In the case of banks, the Federal Reserve may need to provide long-term discount window credit to provide liquidity. Also, changes may be required in state laws, as well as policies and procedures of state regulators, to permit such holdings without forced write-downs of bank collateral values.

Short-term policies, many involving credit, realistically can only facilitate adjustments and reduce severe downward pressures on farm asset markets. Those goals may well be achievable by some of the policies discussed. Instead, some advocates undoubtedly want policies to keep financially distressed farmers in agriculture until times improve. That may not be a realistic objective.

Without substantial improvement in farm incomes or decreases in the level of interest rates facing farmers, none of the short-term credit policy options appear to have much promise over a five-to-ten year period. Fundamental help for the long-term may well be more a function of monetary and fiscal policy, i.e., general economic policy and perhaps even farm price and income policy, rather than a function of short-term credit policies.

Long-Term Policies Affecting Financial Markets for Agriculture

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Since the beginning of this century, a number of significant developments in private markets and public policy have occurred that affect the workings of financial markets for agricultural producers. Some examples of policy developments include:

- creation and evolution of the cooperative Farm Credit System (FCS),
- maintenance of a dual system of commercial banking (basically, large and small banks) with some special provisions for financing agriculture,
- creation of government credit programs for agriculture -- Farmers Home Administration (FmHA) and Commodity Credit Corporation (CCC) at the federal level and various credit programs at the state level,
- actions and policies taken by the federal and state governments to discourage or impede the flow of outside equity capital into the agricultural production sector, and
- encouragement of seller financing of farmland that keeps the financing function within local communities.

The current structure of agricultural capital markets is characterized by significant holdings of equity capital by farmers, considerable leasing of farmland and heavy reliance on borrowed funds by many farmers. While the types of credit institutions are relatively few, they differ greatly in their organizational structures, geographic scope, operating characteristics, specialization in farm lending, legal and regulatory environment and government affiliation. For non-real estate farm lending, most activity involves commercial banks and Production Credit Associations that, along with merchants, dealers and back-up support by government credit, offer a fairly wide range of choices to farm borrowers. The range of choices is narrower in long-term lending where

Federal Land Banks dominate and where considerable financing by individual sellers of farmland occurs as well. Life insurance companies, commercial banks, FmHA and miscellaneous lenders also are active in long-term lending, but on a smaller scale than Federal Land Banks.

Viewed over the long-term, readily available credit from these sources and related financial policies have facilitated various structural changes within the agricultural production sector. Examples of such structural changes include the mechanization and modernization of farm units, greater capital intensity, growth in farm size, reductions in farm numbers, greater leverage from debt and leasing, and greater market coordination. Credit also plays an important risk-bearing role through the liquidity it provides to cope with risk.

Besides these effects, however, special credit programs and concessionary terms may occasionally over-facilitate changes or hamper long-term resource adjustments. For example, some observers have suggested recently that the current financial stress of farmers is due partly to excessive public credit. They contend that more credit will only worsen conditions for highly leveraged farmers--that credit is not a substitute for the borrowers' income.

In general, the relationship between credit, credit policy and structural change in agriculture is three-fold. First, the availability of credit (and other financing methods) is a necessary condition for undertaking capital investments and other activities that enhance the well-being of agricultural producers. However, credit availability is not a sufficient condition since investments require basic profit incentives as well.

Secondly, rural financial markets play an important risk-bearing role for agricultural producers. These markets have the potential to add considerable stability to rural areas as well as to financial markets

in general, even though rural markets are vulnerable to swings in income within the agricultural sector.

Thirdly, although credit and credit policies can help facilitate structural change in agriculture, they are not very effective as a direct policy instrument because the unintended effects (i.e., too much debt, too much risk, resource immobility) may outweigh the intended positive effects. Thus, credit markets should not be expected or asked to do too much in resolving farm income problems. Excessive credit on subsidized terms will exceed and erode the fundamental mission of credit as a liquidity-providing mechanism to finance commercial activity in agriculture. Targeting public assistance programs to only one or a few sectors may seriously distort the workings of financial markets. Nonetheless, considering possible changes in the organization, structure and performance of rural financial intermediaries is consistent with their role of financing an evolving agricultural industry.

In the following sections, a range of policy issues and options affecting the cooperative Farm Credit System, commercial banking and public credit programs are discussed. Also considered are secondary markets for agricultural loans and potential new sources of equity capital for farmers.

Alternatives for Preserving the Integrity of the Cooperative Farm Credit System

In the mid-1980s, considerable uncertainty has arisen concerning the ability of the Farm Credit System to cope with deep and widespread financial stress in agriculture. Loan volumes have declined for some FCS units; higher loss and delinquency rates have occurred; some borrowers have been discontinued or have otherwise left the system; interest rates have risen to higher than usual levels to cover increased lending costs and loss rates; the incidence of mergers among associations has increased; and new experiences are being gained with loss-sharing arrangements within and among the FCS districts.

Since the FCS is the largest agricultural lender to farmers and their cooperatives, its failure would have repercussions throughout rural America. In at least the short run, the availability of loans to farmers and cooperatives would be severely curtailed. In the absence of substantial infusions of government loans (presumably through FmHA), interest on loans to farmers would rise substantially. Farmers and their cooperatives would lose current investment capital in the FCS. Confidence in agriculture as an investment opportunity would continue to deteriorate. The

effects would be most severe in rural areas and communities that are the most dependent on agriculture and the most remote from major financial centers.

These potential consequences have already drawn great concern and calls for action to preserve the financial integrity, competitiveness and solvency of the Farm Credit System. Government initiatives designed to take such action fall into three general categories:

- actions that give the FCS greater flexibility in control and the allocation of limited equity resources.
- actions that maintain competitive FCS interest rates.
- actions that maintain the solvency of the system.

Providing Increased Flexibility

Revisions in the system's legislative authority would enable it to respond better to: financial problems in agriculture; long-term directions in agricultural finance; and the generally less regulated, more competitive forces in financial markets. Several actions could be taken to give the FCS greater flexibility:

- Creating a system-wide entity would assure greater uniformity in risk analysis, risk assessment and supervision throughout the system, as well as provide a backup funding reserve for responding to serious financial problems in selected banks and associations. The system is already initiating its own program for centralizing the risk management function, and future legislative changes may aid these developments.
- Allowing the merging of capital structures within the Farm Credit Banks at the district level, and associations at the local level, would provide greater system-wide uniformity and more effective mobilization of the system's financial reserves.
- Authorizing additional sources of equity capital, as with the sale of stock to investors in financial markets, would provide greater loan security.
- Authorizing changes in the number and makeup of the twelve Farm Credit System districts would strengthen capital structures, build risk-carrying capacities and enhance management effectiveness. A number of districts are adopting the concept of a single, district-wide production credit association. Legislative changes in the future may also aid this type of development.
- Authorizing a wider scope of lending and investment activities, perhaps to include agribusinesses

and other types of borrowers in rural areas, as well as equity participations with borrowers, would allow further diversity in the system's asset structure and enhance its risk-bearing ability.

- Requiring all borrowers in the system to purchase stock with "hard cash" instead of borrowed funds would increase the level of security associated with the system's equity base. In the past, borrowers or users of the PCA-FICB and the Federal Land Bank components of the system have been able to borrow their equity contribution. As a result, part of the borrowed funds upon which the customer paid interest was "held back" and allocated to capital stock. The result is a "soft" equity base for these components of the system. If the borrower is unable to repay the loan obligation, the equity base is also vulnerable because it is financed with borrowed funds. In contrast, borrowers from the Bank for Cooperatives have typically been required to contribute cash or other "hard-valued assets" to purchase stock, which provides a more solid equity capital base for the institution. A fundamental issue for the future is whether users of the system will continue to be able to borrow funds for their required stock purchase, or whether they will be required to make cash or hard-value asset contributions to capitalize the system.

Maintaining Competitive FCS Interest Rates

Deterioration in the FCS financial position almost inevitably causes higher interest rates on bonds which the system sells to raise funds, which are then lent to borrowers. In addition, higher lending costs and loss rates put upward pressure on interest rates for loans. If relatively higher interest rates continue in the FCS, its competitive and financial position may deteriorate further as well-financed borrowers flee the system for lower-cost sources of funds. Several actions could be taken to maintain the competitiveness of FCS interest rates.

Agency Status. The FCS already has agency status. However, proposals have been made to remove that privilege, which would further increase the system's cost of funds. Retention of agency status would help relieve some interest rate pressure. Agency status basically provides regulatory exemptions and preferences affecting the system's sales of securities and the income tax obligations of various banks and associations. Since 1980, considerable attention in policy circles has been given to changing or removing this agency status, although the current financial

problems in agriculture have temporarily forestalled these changes. Nonetheless, the FCS likely will continue to face this issue in the future. The issue may raise the following types of questions:

- Should income tax exemptions for Federal Intermediate Credit Banks and Federal Land Banks be terminated?
- Should other regulatory exemptions and preferences be terminated?
- Should a fee be levied on the Farm Credit System (and other agencies) for using the agency status privilege?
- Should FCS borrowers be required to cross-comply with federal farm programs such as commodity programs, soil conservation and crop insurance?

Changes in one or more of these areas would raise the cost of funding the Farm Credit System, and thus raise the cost of borrowing for farmers. Such changes would also create greater uncertainty about the supply of loan funds available to the system. Without agency status, the system will give even more attention to the risk characteristics of its borrowers and the quality of loan portfolios. This will make it more difficult for less credit-worthy borrowers (younger or beginning farmers and operators of small subsistence farms) to obtain financing.

Future changes in agency status may depend primarily on the FCS response to current financial stresses in agriculture. If the system comes through financial adversity in relatively strong condition with effective service for its borrowers, then agency status likely will be regarded as less essential to the system's future performance. However, if the system continues to experience considerable adversity, perhaps needing public assistance, then agency status for its securities will continue to be important. In general, the long-term trend during the past 50 years has been toward privatization of the system's ownership, operations, management and financing. Clearly, removal of agency status would be another step in the privatization process.

Legislation. If changes in agency status are considered, the FCS, in turn, may seek offsetting legislation to acquire a wider scope of funding activities (offering deposit services, public equity offerings, etc.), a broader customer base and greater diversity in lending and other types of financial services for customers. This broadening of scope would enable the system to gain further efficiencies in risk management in order to offset the higher risks of non-agency status, and to continue as a reliable agricultural lender through all phases of the economic cycle.

Loan pricing. A key operational policy issue will be loan pricing. The first dimension of this pricing issue is that of differential pricing for borrowers who exhibit different risk characteristics. From a theoretical perspective it seems logical to charge higher rates to customers who have higher risk in order to compensate the lender for taking increased risk. However, it may not be practical since the higher risk customer may not be able to pay a higher rate because of cash flow problems.

A second related pricing problem is the impact of high loan losses on pricing decisions. If reserves are inadequate, loan losses must be covered by higher rates for all borrowers. This undermines the competitive position of lenders and adds further to the financial stress of borrowers.

A third dimension of the pricing policy issue is that of marginal cost pricing versus average cost pricing. FCS agencies use average cost pricing procedures. When the cost of money increases, the borrower is charged a blended rate of both low cost and high cost bonds rather than the higher rate needed to cover the cost of newer bond issues. The result is a lag in upward adjustment of interest rates assessed FCS borrowers when rates are rising, and a similar lag in downward adjustment of rates when market rates are falling. During the period of rising rates in the late 1970s, the result of this policy was a subsidy from "old" borrowers to "new" borrowers. Rates for old borrowers were adjusted upward through the variable rate mechanism, while new borrowers paid lower rates than the actual cost of money used to fund their loans. A second impact of this pricing procedure was to maintain lower interest rates to the borrower than the true market rate, thus encouraging excessive borrowing. These pricing decisions will be critical to the competitive position and the operating efficiency of the Farm Credit System and its farmer members in the future.

Interest subsidies. Continuing deterioration in the competitive position of FCS interest rates could lead to proposals to provide FCS with interest subsidies. Such subsidies could equal the difference between the interest rate on FCS bonds and that on "unaffected" bonds sold by other government agencies having agency status. The need for interest subsidies would result from a lack of confidence in FCS bonds and the related "flight" of lower risk borrowers from the system because of its higher interest rates. Interest subsidies would constitute a direct cost to the government and would almost certainly lead to increased government involvement in the activities of the system.

Maintaining FCS Solvency

The above options would help assure that FCS remains solvent and survives as a credit institution for farmers and its cooperatives. However, the situation may become severe enough that the government directly intervenes, either by injecting funds into the system or by providing other types of assistance. Indeed, in September 1985, the governor of the Farm Credit Administration, with subsequent agreement by the FCS leadership, announced that within 18 to 24 months of that time substantial federal assistance possibly would be needed to keep the system solvent if farm financial conditions continued to deteriorate. Such assistance could come in several forms:

- The government could purchase shares of stocks in FCS. Such action is not unprecedented. When the system was first established, the government owned all of its stock. This stock was gradually retired as farmers and cooperatives took out loans in the system. The last government stock was retired in 1968.

Government ownership of FCS stock would provide increased security for loans. However, it would also undoubtedly mean increased accountability for the FCS and involvement by the government in system activities. The government's initial outlay for FCS stock could be as high as \$20 billion. Such an investment would presumably be recovered by the government as the system's financial condition returned to normal.

- The government could guarantee either FCS bonds sold to investors or FCS loans. Either action should instill confidence in the system and ensure more competitive interest rates.

Government guarantees would result in a dispersion of government outlays as losses are incurred by the system. A more dispersed incidence of outlays, rather than a large government investment in FCS stock, may be more consistent with the goal of reducing federal spending exposure over the next few years. However, there would be no potential for recovery of such losses as there is in the case of FCS stock purchases.

- CCC loans could be channeled through FCS with the system being reimbursed for loan servicing and interest costs. CCC loan volume normally amounts to more than \$20 billion. Channeling this volume of guaranteed loans through FCS would significantly enhance the quality of its loan portfolio. It would also make up for lost loan volume. The CCC reimbursement for interest and servicing costs would channel substantial revenue into the system, while allowing ASCS loan

activities and costs to be scaled back.

The channeling of CCC loans through FCS would be particularly feasible if CCC loans were converted to marketing loans, as proposed in the current farm bill. If the marketing loan concept were not utilized, a mechanism would have to be developed for CCC takeover of forfeited commodities.

- The government could create an entity to acquire nonperforming loans and other assets acquired by lenders from troubled borrowers. A government-sponsored corporation that is capitalized to purchase farmland from heavily stressed farmers and lenders is an example. The land could be held for a limited period of time (three to five years) and then resold in the market, perhaps giving the farmer-seller the first purchase option. This would relieve capital pressures on both the farmer and lender and provide support to land values in typically thin land markets. Other types of lenders could utilize the program as well (see the "Aggie Mae" section below for discussion of loan acquisitions by the government).

Commercial Banking Issues

Since the beginning of the 1980s, commercial banking in the U.S. has experienced profound changes in its regulatory environment, changes that likely will continue to evolve through the rest of this decade. These changes have contributed, in part, to the financial stress affecting farmers. Along with farm credit problems, the changes have significantly affected the profit performance, loss positions and lending capabilities of many small agricultural banks. Included among these regulatory changes are the decontrol of interest rates on deposits, the range of products and services that depository institutions may offer, and controls on ownership forms (branching and holding companies) and the geographic scope of banking.

The deregulation of interest rates on bank deposits has made the pricing environment more similar among depository institutions and has greatly reduced the traditional insulation of rural banking markets from national and even international forces. A major consequence has been higher, more volatile interest rates for farm borrowers. These interest rate conditions contributed to the financial problems of farm borrowers by reducing farm profits, diminishing liquidity, raising financial risks and exerting downward pressures on land values. In turn, these financially-related farm problems have also adversely

affected banks (and other lenders) through greater lending risks and reductions in loan profitability.

Branch Banking, Holding Companies and Related Geographic Scope Options

The range of products and geographic scope of banking are issues that are under consideration by Congress and numerous state legislatures. The geographic scope issue involves more liberal authorities for branch banking within or across state lines, and similar provisions for holding company activities by participating banks. In the past, the philosophy has been to let individual states determine branching and holding company activities within their boundaries. In recent years, many states have initiated geographic liberalization, using existing reciprocal authorities with other states to allow interstate banking activities. This approach has allowed market forces to work more fully. In this setting, many banks have aggressively sought to expand, as illustrated by the development of regional banking markets in parts of the country, the creation of nonbank banks, and the rapid expansion of multi-bank holding companies and mergers in states that have eased restrictions on these activities.

Geographic liberalization of banking at the federal level likely will experience a moderate pattern of deregulation that clearly avoids national branching, at least for the next decade or so. Moderate deregulation would have the greatest effect on smaller banks. A substantial decline could occur in the number of banks in the United States -- perhaps by one-third by the mid-1990s. Of course, this could significantly affect agricultural financing in the traditional unit banking states of the Corn Belt and Great Plains, in which smaller or limited branching community banks have been heavily involved in farm lending.

The issues associated with geographic liberalization are several-fold. One potential effect is that geographic liberalization could lead to greater concentration of power in banking and diminished interest in serving selected sectors of the economy, including farmers and other small businesses. Some observers believe that funds in rural areas could be drained away to metropolitan centers where lending profits appear greater. If this occurred, it would further destabilize the availability and cost of credit to rural borrowers. But evidence also indicates that geographic liberalization could improve credit services for agriculture through greater competition and service orientation among financial institutions. However, even then the credit arrangements would be more along the lines of commercial lending for commercial-scale farmers and consumer lending for smaller farmers.

As geographic liberalization occurs, there likely will be a continued swing toward more financing from larger, sophisticated banking systems seeking the business of large farm units and agribusinesses. This trend may enhance the risk-bearing capacity of bank lending to agriculture, but may bring riskier lending as well. It may also make agriculture more vulnerable to swings in credit availability and change the pattern of traditional lending policies and practices by commercial banks. This, in turn, would affect the structure of agriculture.

Future characteristics of commercial bank involvement in agricultural lending will exhibit considerable diversity. More successful community banks that are well-managed, well-capitalized and strongly localized will likely coexist with much larger regional and national-oriented banks that serve different types of markets and customers. Considerable cross-utilization of services among banks will continue to occur. The location of credit control and loan decisions may continue to shift away from local rural communities. However, the availability of experienced well-trained farm lenders in rural areas should maintain local servicing of farm loans. In general, these developments should benefit agricultural borrowers, although farmers' management of financing and risks will be of significant importance as they compete for credit services.

On balance these conditions suggest that changes occurring in commercial banking should not have significant adverse long-term effects for agricultural lending. Rather, the diversity in banking along with its orientation toward commercial credit should be consistent with continued development of business skills by agricultural producers and continued commercialization of business activities in agriculture. However, for some banks the size of their agricultural losses may require significantly higher interest rates and major changes in credit standards and business forms. In the near term, some agricultural banks may benefit significantly from reduced losses made possible by short-term credit policies for responding to current stress conditions.

Like the units of the Farm Credit System, commercial lenders must make a number of internal policy decisions that will influence their competitive position and ability to service the agricultural sector. These policies involve pricing and rate decisions related to size, enterprise, risk and other characteristics of the customer, as well as the funding, credit risk and administrative costs associated with various loans. Policies about market segmentation and targeting of products and services to specific customers will also have an important effect on the competitive position of commercial lenders. Given past loan

losses and concerns about continued financial stress in agriculture, a basic issue for some commercial lenders will be whether or not to actively participate in the agricultural market. In contrast, some lenders may decide to expand their product and service offerings to agriculture, including real estate mortgage financing, capital leasing, information and financial counseling services, brokerage and market planning services and other financially-related services. These critical decisions will affect the service, efficiency, operating procedures and competitive position of commercial lenders.

Public Credit Programs for Agriculture

It is also appropriate to consider the long-term directions of public credit programs for agriculture at both the federal and state levels.

Federal Credit for Farming

Federal credit programs currently administered by FmHA and CCC have long been important in achieving social objectives for agriculture. These programs help channel funds to selected geographic areas and types of borrowers; they have helped foster the smaller scale pluralistic structure of the farm sector; they provide financing opportunities for beginning and limited resource farmers; they provide valuable liquidity for emergency situations; and for the CCC they provide a source of very low risk inventory financing for crop farmers. Also, from the policymaker's standpoint, credit programs are a popular, politically expedient policy instrument. They are relatively easy to administer. The administrative and risk-bearing costs are difficult to measure and are effectively hidden from taxpayers. In addition, they are highly visible to constituents; can be quickly developed in response to crisis situations; and do not directly influence resource markets, even though the secondary effects on asset values, income and risk can be significant.

The growth in FmHA loan programs has been substantial in recent years, especially in various emergency loan programs. This lending softened the impacts of high interest rates and low farm income, and relieved private sector lenders of many problem loans. But, as indicated earlier, this liberal lending may have helped worsen some farmer's financial conditions. Moreover, from a long-term perspective, strong government lending may have helped at times to overfinance farmers, shift too much risk to the government and put upward pressure on land values.

The rapid growth of FmHA, its widening scope

and recent farm credit problems have brought the agency under close scrutiny. Fundamental questions have been raised about the proper role of public credit programs for agriculture, about the best form of credit to provide and about the practices followed in program administration. Concerns have been expressed about the size of subsidies, the possibility of shifting FmHA lending to the private sector, which borrowers should be served and not served, length of service and the balance between federal and state programs.

In general, the prevailing long-term sentiments throughout the agricultural community point toward reduction in size and scope of FmHA programs, and reduction in reliance on credit to resolve financial problems in agriculture. This would avoid the erosion of credit markets that results from heavily subsidized loan programs and would respond more directly to the fundamental economic problems in agriculture. But, efforts to move in these directions have been thwarted by poor financial conditions in agriculture and recent political pressures involving farm credit.

Many hold the short-term view that there is a compelling need for additional credit assistance to provide an orderly transition for farmers from these troubled times. Thus, we see the current debates and deliberation about numerous policy issues affecting agricultural finance: continued forbearance by lenders, debt moratoria, deferral of debt obligations, debt restructuring, loan write-downs, interest subsidies, public land acquisition, greater FmHA lending, changes in tax provisions and expanded counseling programs for distressed borrowers.

Clearly, the mid-1980s is a watershed era for FmHA and agricultural finance. How the agency and the industry emerge from these times will set the tone for federal credit programs for agriculture for a long time to come. The principal directions for FmHA appear to involve reductions in the magnitude and scope of the agency's loan programs, as well as a shift to greater reliance on guaranteed loans versus direct loans in order to fully utilize the skills and resources of private sector lenders. The FmHA also appears headed for fuller measurement and documentation of subsidies, more definitive graduation requirements for borrowers and closer coordination of credit programs with other instruments of agricultural policy.

Credit has also played an important role in price and income support programs administered by the CCC. Price support loans have provided substantial inventory financing, especially in lower income years, which enables crop farmers to store their crops for more orderly marketing and perhaps higher prices.

In the future, however, inventory financing by the government for larger commercial farm segments may not be needed. Comparable credit is available from private sector lenders and many farmers have substantially improved their marketing skills. Thus, inventory financing could be provided by other sources without jeopardizing either the farmers' marketing programs or financial position, and price and income protection could occur in other more direct ways.

State Credit for Farmers

A number of states have developed farm credit programs with heavy emphasis on financing farmland and other capital assets for younger farmers. These programs vary but generally make considerable use of tax-exempt bonds and various tax incentives affecting land purchases and leasing by young farmers. In addition, emergency credit programs have been developed recently by several states to assist financially troubled farmers. In the future, the general importance of state credit programs could grow, especially if federal credit programs are curtailed and the states choose to respond.

Secondary Markets for Agricultural Loans

The issue of developing secondary markets for trading agricultural loans or claims on agricultural loans has a long history. It has received renewed attention in light of current financial conditions in agriculture. The basic purposes of a secondary market are to add market liquidity, to encourage holding of financial assets by investors and to provide greater funding flexibility for the original lender. To date, however, secondary loan markets have had little development in agricultural finance. Major limiting factors are the relatively high risk of agricultural loans, the nonuniformity of loan documentation and credit arrangements, and the relatively small sizes of these loans. Furthermore, in the urban real estate market a critical element is the opportunity to obtain mortgage guarantee insurance, which significantly reduces the risk of the buyer in the secondary market. No such policy initiatives or private sector developments have occurred to significantly further the development of secondary markets for agricultural loans.

An exception has been the case of farm, agribusiness and rural development loans guaranteed by the Small Business Administration or the Farmers Home Administration. These received growing yet moderate use during the late 1970s and early 1980s. The

loan guarantee alternative has enabled some rural banks to accommodate farm loans that are large in total volume and individual size, and high in risk. Lending risks are much reduced and rates of return from interest and service fees have been favorable for the lenders. Moreover, the guaranteed portion does not count against a bank's legal loan limit. Brokers have helped in finding buyers, including other banks, credit unions, thrift institutions, trust companies, insurance companies, individuals and corporations. From the investor's standpoint, the government guarantee reduces the risk on these loans to levels comparable to other government securities, and thus makes them safe to hold.

Another type of secondary transaction is the direct purchase of farm real estate loans by life insurance companies from originating rural banks or other correspondents. However, these purchases have generally occurred on a prearranged basis and are not indicative of a well-developed secondary market.

Aggie Mae

Stress conditions of the 1980s have heightened concern about improving the marketability of agricultural loans, although the near term focus is mostly on methods of acquiring problem loans in order to relieve primary lenders. However, implementing asset and liability restructuring to obtain a financially healthy agriculture will require new lending activities and possibly a new institutional structure. As an example, Congress might create an agricultural credit corporation similar to the Federal Farm Mortgage Corporation of the 1930s, or something like the Federal National Mortgage Corporation (Fannie Mae) which buys residential mortgages. This "Aggie Mae" would buy high quality new loans made to those who acquire property from financially distressed farmers or lenders. It would also acquire weak farm debt from lenders at a discount on the principal, interest or both, with the loan backed by the federal government. On weak loans, the lender would be relieved of the debt, and the farmer would have a reduced obligation to fulfill. The relief portion of the program would phase out as stress conditions were alleviated and as loans matured. In turn, acquisition of problem loans might reduce the need for government units to acquire farmland or other property, unless, of course, loan foreclosure occurs.

From a long-term perspective, an entity like Aggie Mae might have considerable merit for financing farm real estate and perhaps other types of farm assets. The idea would be to add liquidity to the long-term lending market with either secondary sales of loans or purchases of primary farm loans. Other

measures could include pooling into aggregate portfolios and selling pooled participations based on pass-throughs of principal and interest or on mortgage bonds sold to investors in the financial markets. As with comparable arrangements for mortgage financing of residential housing, initial assistance from the federal or state governments would likely be needed to facilitate administrative arrangements, standardization of loan paper and utilization of public guarantees or commercial insurance. However, eventually such an entity should be capable of reverting to a private status to assure its long-term viability.

A major advantage of this approach is that it enables direct access to capital markets for mortgage financing of farm real estate and perhaps other types of farm assets. This would complement the type of access achieved by federal land banks. In the process, financial institutions that are principal mortgage originators will not necessarily be the mortgage owners. This would widen and deepen the market for farm real estate loans and thus reduce the mortgage lending risks for the ultimate owners.

Equity Infusions

Many farms in financial difficulty are well-organized, have adequate size and use appropriate technology. However, their financial structure is characterized by excessive leverage. In a few cases, recapitalization may be possible and appropriate. This can be accomplished by adding equity from an outside source. In some cases, family members may be willing to provide such an equity infusion to protect the integrity of the family business. An expected future inheritance of nonbusiness assets could be converted into current cash through sale to other family members. A nonfamily investor might be willing to contribute capital for a larger-than-proportionate share of farm ownership. Some investors may be attracted by the tax shelter available from operating losses, since an operating loss is, under certain conditions, an asset for investors in high tax brackets. And unused tax credits may be available to make the equity infusion more attractive for the investor.

The third source of an equity infusion is the lender. In some cases, the financial condition of the firm is so weak that the lender will incur a significant loss if the note is called, if foreclosure occurs or if the operator initiates bankruptcy procedures. If the firm has current cash flow problems because of high leverage and aggressive growth, but has strong management and the potential for reasonable future

earnings, the lender may minimize losses or increase the chances of recovery by converting debt obligations into equity capital. This conversion reduces the current cash flow burden of excessive debt servicing and releases resources (both funds and management) to use in more productive activity that will enhance current and future income. A similar situation may occur using a sale-leaseback arrangement. In this case, debt would be repaid with the proceeds of the sale, and business size would remain unchanged if the assets were leased back. Again, tax shelter considerations should not be ignored in such arrangements. Convertible debt instruments (such as convertible corporate bonds) or subordinated debentures may accomplish a similar goal of giving the firm the financial flexibility to reorganize and improve its chances of survival.

Limited partnership arrangements may also enable highly leveraged firms to recapitalize and continue operation. Such an arrangement can be used to combine funds from several investors into a larger pool, much like a mutual fund. The pooled funds would then be used to buy financial interests in farming operations. This involves pooling funds from many investors and investing those funds in a variety of farms to reduce financial risks, as opposed to a single investor acquiring a single farm. Again, such arrangements could be structured to utilize tax shelter provisions.

The "off-farm" investor strategy for resolving financial stress is a controversial approach at best. Many people are critical of the infusion of nonfarm equity into agriculture, arguing that it will destroy the family farm structure and result in "outsider" or "corporate" control of the production sector. In fact, some states have severely restricted nonresident alien investors as well as corporate ownership of farms in order to protect agriculture from "outside investors."

Policy responses to encourage increased equity capital flow into agriculture include:

- Eliminate restrictions on outside investment to open up farm capital and asset markets to a broader group of participants.
- Establish tax incentives to encourage equity investments in agriculture. Such tax incentives might include: increased flexibility in transferring and utilizing operating and capital losses; exemptions or credits on income earned on assets acquired from distressed farmers on a sale-lease-

back basis; exempting capital gains of financially stressed farmers from the alternative minimum tax; and expanded tax sheltering potential in general.

- Form state or federally funded venture capital entity -- an agricultural development bank -- to share the private sector risk of equity investments in agriculture. Such an entity might, for example, provide low cost funds or industrial revenue bonding for firms that buy assets from financially distressed farmers on a sale-leaseback basis.

An important and fundamental issue related to nonfarm equity capital is the property rights of owners (landlords) and users (tenants). Increased separation of ownership and control of real estate will have different implications depending upon the legal rights and institutional structure used in the farm real estate rental market. Changing the balance of property rights between tenants and landlords, including the potential for long-term leases and compensation to the tenant for making improvements, may have a significant impact on the economic and social attractiveness of renting versus owning farmland. The institutional structure surrounding farmland rental is a significant function of property laws and public policy in general. If "reasonable" terms of trade are maintained between owners and users, the perceived negative social consequences of "outside equity" may be partially offset. Substitution of nonfarm equity for debt may improve the financial resiliency of the agricultural sector.

Concluding Remarks

Long-term policies that deal with the financial crisis in agriculture have a major advantage over short-term strategies because they are designed to encourage adjustment, while short-term strategies tend to deal mainly with the immediate symptoms of problems. Long-term strategies are designed to make financial markets work better. That does not necessarily mean preserving any particular farm segment, and therefore, does not fulfill the goals that many hold for dealing with the current farm credit crisis. Nonetheless, these long-term policies should reflect the continued evolution of institutions, instruments and lending practices in financial markets, as well as respond to the financial problems of the agricultural sector.

Impact of Macroeconomic Policy on Future Farm Financial Conditions

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Much attention has been given in recent months to formulating a credit policy that would alleviate the financial stress being experienced by highly leveraged farmers. Policies currently being considered include proposals to: 1) place a moratorium on foreclosures, 2) institute a program of interest or principal write-downs, 3) allow farmers to defer interest or principal payments, 4) offer loan guarantees, and 5) expand government credit to the sector. An all-important assumption implicitly made by proponents of these proposals is that economic conditions in agriculture will improve in the near future. The hope is that a policy can be found to enable highly leveraged farmers to survive this period of financial stress and still be in business when farm economic conditions improve. Yet this "good-times-are-just-around-the-corner" scenario is far from guaranteed.

A critical issue which must be addressed when evaluating short-term credit assistance proposals is whether economic conditions in agriculture can realistically be expected to improve under current macroeconomic policies. If not, our concern should also focus on identifying the specific combination of monetary and fiscal policy that is most likely to bring about improvement. The purposes of this paper are to:

- present projections to the year 1990 of economic conditions in agriculture under broad combinations of selected monetary and fiscal policy, and
- identify the combination that will restore financial health to the sector in the long run, and thus help justify the expenditure of funds on short-term credit assistance programs.

These projections are made using COMGEM, a commodity-specific general equilibrium model of the U.S. economy developed initially at Texas A&M University. This model places heavy emphasis on the

nation's farm sector and its interface with the rest of the economy.

Agriculture and the Macroeconomy

Before projecting the effects of macroeconomic policy choices on future economic conditions in agriculture, this paper reviews several key changes taking place in the sector, identifies some causes underlying the current financial stress and examines the scope of the problem.

Growing Sensitivity to Macroeconomic Events

After World War II, the farm sector of the U.S. economy became increasingly dependent on other sectors for supply of goods and services. A few key statistics help illustrate this point. The number of farms has declined by one-half from the 5.6 million farms that existed in 1950, while the average farm size has more than doubled. The 50,000 largest farms accounted for 36 percent of total farm product sales in the early 1980s versus only 23 percent in the early 1960s. In lockstep with this trend is the expanded use of manufactured resources on farms. Capital's share of total farm production expenses has doubled since 1950, while labor's share has fallen by one-half. Today there is almost twice as much capital invested in buildings and equipment per worker in the farm sector as there is in all nonfarm businesses combined. In addition to the sharp increase in capital accumulation in the sector, the proportion of this accumulation financed with debt capital has also risen dramatically.

U.S. farmers have also increasingly produced for world markets. Although down somewhat from the early 1980s, the quantity of U.S. farm products shipped abroad has tripled since 1950.

Approximately 40 percent of our total production of grain and oilseed crops is exported to other countries.

These trends suggest that the farm sector is much more an integral part of the U.S. and world economies today than it was at the end of World War II. It relies more on other sectors for inputs and financing and it relies more on export markets for the sale of its products. These interdependencies stress the need for an increased awareness of conditions elsewhere in the economy, including effects of specific macroeconomic policies which influence prices in various markets.

Seeds of Current Financial Stress

While net farm income and farm asset values have dropped dramatically during the 1980s, the seeds of financial stress in agriculture today were planted in the 1970s. The first seed sown was the *high level of borrowing* which took place in the mid-1970s. Outstanding farm debt rose from \$65 billion in 1973 to \$166 billion just seven years later. Nominal interest rates declined to the seven-to-eight percent range in the mid-1970s, inflation was making the real cost of capital even less, and most farmers were enjoying several good income years in a row. In undertaking substantial debt obligations with variable rate terms to expand their operations, farmers no doubt were expecting the high real net returns, low real interest rates and significant real capital gains of the 1970s to continue into the 1980s.

The second seed sown during the 1970s was the combination of policies that led to *record-high interest rates*. The Federal Reserve System announced late in 1979 a change in its operating policies which allowed interest rates to seek their own level. This policy change, coupled with the Federal Reserve's subsequent efforts to fight inflation with tax cuts despite continued high levels of government spending, has led to historically high real interest rates in the 1980s. Real interest rates on PCA loans, which averaged 2.1 percent during the 1976-79 period, averaged 6.3 percent during the 1980-1983 period.

Dimensions of the Current Problem

Rising interest rates in the 1980s have been particularly hard on farmers who borrowed heavily in the 1970s. The sharp increase in their interest payments has driven up their production expenses. Interest payments for the sector as a whole have risen from eight percent of total cash operating expenses in 1973 to almost 19 percent in 1983; that is, interest payments represent almost *one-fifth* of

farmers' total cash expenses. Higher interest rates also have an impact on farm revenues through the level of prices farmers receive for their products. Higher real interest rates in the United States bid up the value of the dollar in foreign currency markets relative to the value of other currencies. A stronger U.S. dollar in turn increases the cost of buying U.S. farm products, reduces foreign demand for these products and lowers domestic farm prices. This also means greater imports of selected farm products like hogs. Higher U.S. interest rates may also have precipitated a crisis in the Third World which has been borrowing to finance both capital and human development. Their current debt repayment problems have forced these nations to reduce their imports of U.S. farm products. Reduced levels of farm revenue, coupled with higher production expenses, have led to lower levels of net farm income, particularly for highly leveraged farmers.

Farm asset values in the 1980s have also suffered from high interest rates and subsequent declines in net farm income. The combination of these two factors has led to a chaotic land market in many regions of the country, causing a decline in net worths and insolvency in some cases.

The current financial health of the farm sector can be characterized as poor. Real net farm incomes have been low for five consecutive years, asset values are declining and debts are overdue. Recent surveys show two to three times the normal proportion of farmers are leaving the sector, voluntarily or because of forced sales. Farm loan losses at banks and in the Farm Credit System have grown dramatically. Delinquencies at the Farmers Home Administration now exceed 30 percent. A recent USDA report suggests that 6.3 percent of all commercial farms in this country are technically insolvent. Another 7.4 percent are moving rapidly toward insolvency. An additional 20 percent are in serious financial condition but should be able to survive a few more unfavorable years.

Finally, the deterioration of farm financial conditions has also had spinoffs that seriously affect agricultural lenders and rural communities. Commercial banks have experienced sharp increases in delinquencies and loan losses over the past few years. Twenty-three agricultural banks failed in 1984. Agricultural banks comprise approximately 40 percent of the some 1,100 "problem" institutions being monitored by the Federal Deposit Insurance Corporation. The Farm Credit System is also having severe problems. The Government Accounting Office projects the Farm Credit System will experience loan losses of \$2.6 billion for the year ending June 30, 1986. Finally, rural communities closely

tied to agriculture are also experiencing severe problems. For example, Mount Ayr, Iowa, a town of 1,900 people, has lost three farm implement dealers, its major department store, one of its two banks and its grain elevator during the 1984-85 period.

Effects of Alternative Macroeconomic Policies

To formulate credit policies that do more than simply react to past conditions, we need to know more about *future economic conditions* in the farm sector. Three different projections of future economic conditions are presented in this section. The design of these scenarios can be summarized as follows:

- The first scenario (low deficits and moderate money growth) assumes an adherence to more restrictive fiscal policy than observed during the 1980-1985 period, and a monetary policy sufficient to sustain economic growth without causing inflation. While this scenario represents an admittedly optimistic view of the future, it is one which has some chance of occurring.
- The second scenario (high deficits and slow money growth) assumes adherence to the expansionary fiscal policies and restrictive monetary policies followed in the early 1980s. Such policies would be reflected in continued high government deficits and slow growth in the money supply to fight inflation. While inflation has currently fallen to the four-to-five percent range, this is almost as high as that which caused the Nixon administration to implement price-and-wage controls in the early 1970s. Therefore, it is not beyond the realm of possibility that the Federal Reserve will continue to slow the growth of money.
- The third scenario (high deficits and fast money growth) assumes the Federal Reserve will allow the money supply to grow at a faster rate, in the face of high budget deficits, than it did in early 1985. Past history reveals that periods of low economic growth and low inflation are often followed by periods of rapid economic growth and higher inflation.

The projections presented in the remainder of this section should not be interpreted as forecasts of what *will happen*, but rather as what *could happen if* specific policies are adopted. The projection period begins in 1984 and carries through to the end of 1990. No attempt has been made to out-guess farm policymakers in these three scenarios. Farm policies

are identical across all three scenarios; each assumes continuation of the 1981 Agriculture and Food Act at 1984 levels of support (excluding the delayed impact of the 1983 Payment-in-Kind program). No surprises in either energy prices or weather are assumed in these scenarios, although both will likely have an effect on the sector during the remainder of this decade.

Low Deficits and Moderate Money Growth

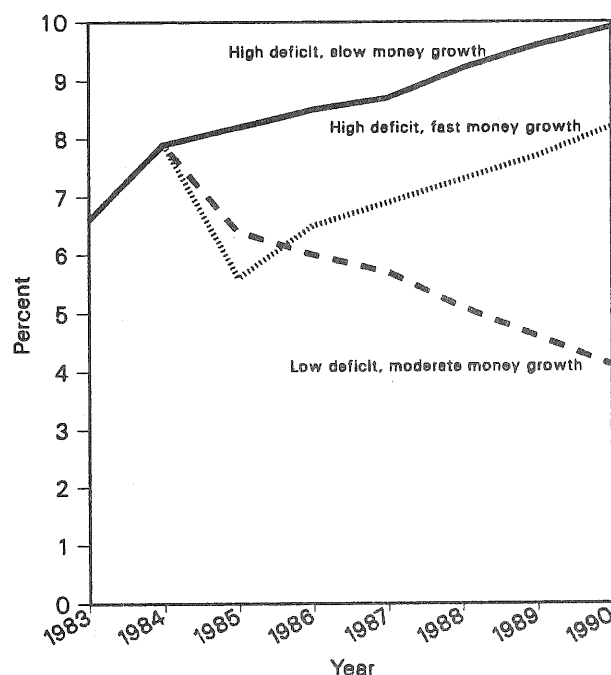
In this scenario it is assumed that the annual federal budget deficit will decline in real terms by about 15 percent per year through 1990, due to an assumed slowdown in the growth of government expenditures. Monetary policy is assumed to allow a moderate growth in money, which would lead to an annual inflation rate of less than one percent by the end of the decade. While it may be hard to imagine economic policymakers generating a smooth transition to the noninflationary economy suggested by these results, the implications for the farm sector of such a transition are enlightening.

Events in the General Economy. The projected growth in real gross national product (GNP) in this scenario will be *higher* than in the high deficit-slow money growth scenario examined next -- because monetary policy is *less restrictive*. However, real GNP growth in this scenario will be *lower* than in the high deficit-fast money growth scenario examined last, because monetary policy is *more restrictive* and fiscal policy is *less stimulative*.

The trend in real interest rates with this scenario underscores the significant reductions that could be gained if monetary and fiscal policies were to work toward a common goal. Continued reduction in government borrowing reduces the total demand for loanable funds. On the other side of the market, less restrictive growth in money supply adds to the supply of loanable funds in the economy. The net result is declining real interest rates throughout the period (Figure 1). Moreover, declines in inflation help nominal interest rates to fall even further.

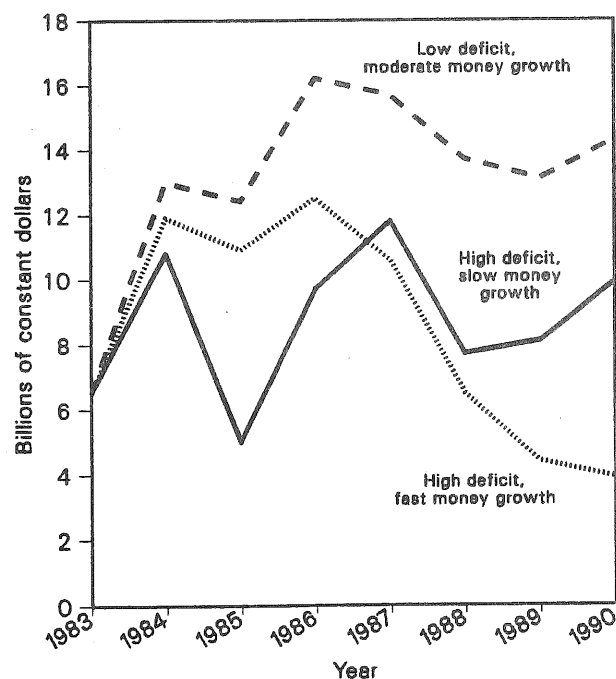
Implications for the Farm Sector. The implications for the farm sector are clear. This scenario would lead to higher incomes, rising assets values and moderate growth in the use of debt financing. Real net farm incomes in this scenario (see Figure 2) rise rapidly and then fluctuate at higher levels. While projections of real incomes do not reach the \$26 billion level of 1973, they substantially exceed levels achieved in the early 1980s. Projected average real net farm income during the 1985-1990 period is \$14

Figure 1. Projected real prime interest rate.



billion annually, which is considerably higher than the \$9 billion annual average observed during the 1980-1983 period. This increase can be attributed to reduced interest and inflation rates. Lower interest rates decrease the value of the dollar and expand

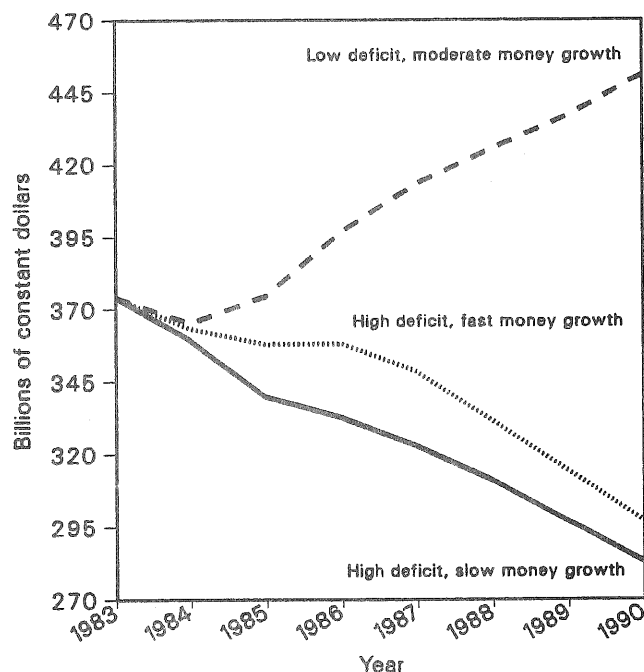
Figure 2. Projected real net farm income.



export demand. They also help increase domestic demand by holding economic growth high and reducing inventory carrying costs. Lower rates of inflation keep farm production expenses from growing rapidly. The net result is a higher level of profitability for the sector.

When higher profitability is combined with lower interest rates, farm asset values in this scenario increase, as shown in Figure 3. The average annual growth rate for real farm asset values during the 1985-1990 period in this scenario is four percent. This is less than the six percent actual real growth rate experienced during the 1970s. On the other hand, real interest rates in this scenario continue higher than those observed during the 1970s. Most of the gain in the value of assets is in farm real estate, although machinery and equipment also show steady gains.

Figure 3. Projected real farm asset values.



Outstanding farm debt expressed in constant dollars shows only a moderate growth in this scenario, a 3.5 percent annual average growth rate during the 1985-1990 period. Reasons for this slow growth in farm debt include the fact that more internal funds are available because of higher levels of profitability; and real interest rates, while declining, continue to be high by historic standards.

Cash flows and financial ratios show the farm sector would be in much better financial condition by

the end of the decade with this scenario. Purchases of capital would account for only about two-thirds of net cash income. The ratio of debt outstanding to total cash income would decline from 3.8 observed in 1983 to 3.0 by 1990. The sector's debt-to-asset ratio would also decline, from 21 percent in 1983 to 20 percent by 1990. Under the macroeconomic policies assumed in this scenario, abnormal adjustments currently underway in the sector would likely be stopped or reversed. Farmers who prefer not to borrow could probably avoid doing so. And farmers with moderate debt-to-asset ratios would not be forced into more highly leveraged situations.

In summary, reducing government deficits and allowing moderate growth in money supply could leave the farm sector in improved financial condition by the end of the decade. Steady economic growth, lower inflation and lower interest rates would probably result in higher net farm incomes, higher farm asset values and a moderate growth in farm debt.

High Deficits and Slow Money Growth

The annual government budget deficit in this second macroeconomic policy scenario is held at its 1984 level in real terms through 1990. Monetary policy is designed to eliminate inflation in the face of large deficit financing in the nation's capital markets. Attempts to eliminate the remaining inflation would probably introduce more volatility into the economy than shown in these projections. Nevertheless, the implications for agriculture are clear if another period of disinflation and high budget deficits occurs.

Events in the General Economy. Eliminating inflation in the face of continued fiscal stimulus would lead to slow growth throughout the economy and higher real interest rates. Growth in real GNP would average 2.3 percent from 1985 to 1990, substantially below the economy's long-run potential growth rate of three percent. Inflation would be controlled by 1987, after which the implicit GNP price deflator would not change by more than 0.2 percent annually. The solid line in Figure 1 illustrates the trend in real prime interest rates suggested by this scenario. The real prime interest rate continues to grow throughout the period, reflecting both the continuing conflict between fiscal and monetary policy, and adjustments made by financial intermediaries in response to the higher cost of loanable funds.

Implications for the Farm Sector. The effects of slow growth in the economy and high real interest rates on the farm sector are clear: lower net farm incomes and declining asset values. Net farm income

expressed in 1967 dollars and calculated through 1990 fluctuates between \$5 billion and \$12 billion annually. Its average during the 1981-1990 period would be \$9 billion, compared to the \$15 billion average observed during the 1971-1980 period (Figure 2).

Farm asset values also decline substantially in this scenario. By 1990, they are projected to be 82 percent of their 1983 value in nominal terms and 75 percent in constant dollars (Figure 3). All of this takes place in physical assets, with the principal loss coming in farm real estate values. Financial assets increase in this scenario, reflecting the incentive for farmers to divert their available funds into nonfarm assets.

Debt is also projected to grow, but at a much slower rate than in the 1970s. The average growth in nominal farm debt during the 1980s with this scenario would be four percent. That compares with a growth in nominal farm debt of 13 percent during the 1970s. Almost all the projected growth in debt would be secured by real estate. While real estate values are declining, real estate still provides the safest collateral for farm loans. In addition, projected net farm incomes are so low that farmers will have difficulty repaying short-term loans and may need to refinance their debts over longer repayment periods. Such refinancing would almost certainly shift debt to the real estate category.

The net result of declining assets and increasing debt is a substantial decline in sector wealth and an increase in financial leverage ratios. Proprietors' equities would decline 29 percent in nominal terms and 35 percent in constant dollars. The debt-to-asset ratio for the sector as a whole is projected to grow from the 21 percent observed in 1983 to 32 percent by 1990. There would likely be fewer debt-free farmers if these projections are realized. In addition, farmers with low debt-to-asset ratios in 1983 would likely be more highly leveraged by 1990. Those farmers who currently have moderate to high leverage ratios will likely be forced out of business.

Projected cash sources and uses of funds in the farm sector also reflect the adjustments imposed on the sector by the macroeconomic policies assumed in this scenario. Capital outlays by farmers and non-farm landlords to maintain equipment and structures, and to buy farm assets from discontinuing proprietors, are projected to average 79 percent of net cash income during the 1985-1990 period. This is substantially higher than the 57 percent average observed during the 1971-1979 period. The principal reason for this shift is a decline in net flow of loan funds. The ratio of net flow of loan funds to total capital flow is projected to decline from an annual

average of 48 percent observed in the 1970s to an annual average of 16 percent during the 1985-1990 period.

Therefore, prospects for the sector are dim if the deficit remains high for the next six years, and if there is another round of inflation-fighting using monetary policy exclusively. Farm incomes will likely remain low, asset values will probably continue to decline and debt financing would be constrained. Under these conditions, the sector would probably end the decade in very weak financial health, unable to show much resilience and perhaps less productive than it has become today.

High Deficits and Fast Money Growth

Annual government budget deficits in this scenario are also held at their 1984 level in real terms through 1990. A monetary policy that allows inflation to grow at about one percent per year is assumed. The effects of these policies on the economy in general and the farm sector in particular are as follows.

Events in the General Economy. The impact of these policies would be largely reflected in real interest rates. These rates would first decline in 1985, as shown in Figure 1, and then return to 1984 levels by 1990. The surprise of monetary authorities reversing their policies is projected to allow both nominal and real rates of interest to decline in the short run. However, as this new policy stance becomes generally accepted and built into expectations, real rates will grow to clear financial markets that service huge government borrowing demands. Nominal rates will grow even faster, reflecting continued increases in inflation which would reach double-digit rates by the end of the decade.

In this scenario, growth in real GNP would be higher than the annual rates of growth shown in the second scenario for all years. Since this growth is also higher than the sustainable three percent increase in potential GNP, it is probably being borrowed from future periods. This means that a renewed fight against inflation will likely be needed sometime after 1990 to reduce GNP to its long-run growth path. Inflation is held low through 1985 by policies already implemented during 1984. However, it is projected to jump about 1.5 percentage points in 1986 and grow at a rate of 1 percentage point per year through 1990.

Implications for the Farm Sector. The projected effects of this set of macroeconomic policies suggest that a faster growth in money helps the farm sector in the short run (about three years), but harms the

sector over the long run. Real net farm income is projected to be higher than in the second scenario through 1986. This is principally due to higher domestic and foreign demands for food. The recession projected for the domestic economy in 1985 under the second scenario would not occur in this scenario. The early reduction in U.S. real interest rates in this scenario would reduce the value of the dollar relative to other currencies and stimulate demand for agricultural exports. By 1990, however, growth in real interest rates would increase the value of the dollar, decrease export demand and increase farmers' interest expenses. Moreover, the high rate of inflation in this scenario would generate rapid increases in farm production expenses. Long-run constraints on growth in demand and rapid increases in production expenses result in projections of real net farm incomes by the late 1980s that are below those generated by either of the other two scenarios (Figure 2). Real farm asset values in this scenario decline at a slower rate than in the second scenario in the first few years. Figure 3 shows this decline becomes greater in later years because farm profitability is lower.

Growth in real farm debt is highest for this scenario, although still slower than the growth rates observed in the 1970s. The average annual compound growth rate in real debt from 1984 through 1990 would be four percent, much lower than the six percent growth rate in the 1970s. The reasons for faster growth in debt are related to farm debt repayment problems caused by declining incomes after 1986, lower real interest rates and slower declines in asset values than seen in the second scenario. This generates more demand for debt financing and provides more collateral to allow the demand to be realized.

Cash flows and financial ratios in this scenario confirm stories told by the sector income statement and balance sheet. After two or three years of improved financial conditions, the effects of more rapid inflation on the sector become evident. Capital purchases start to exceed net cash income from farming in 1989. Loan funds are more heavily relied upon by the late 1980s than in the second scenario. Loan funds would account for only 27 percent of purchased capital during the 1984-1986 period. This average would increase to 77 percent during the 1987-1990 period. The ratio of debt outstanding to total cash income grows from 3.8 in 1983 to 6.6 by 1990. Finally, the debt-to-asset ratio for the sector increases from 21 percent in 1983 to 33 percent by 1990. Such a rise indicates that many of the same ownership adjustments expected from the second scenario would take place even with increased growth

in money supply. The principal difference between these last two scenarios, which both postpone problems in the sector by inflating the economy, is that ownership adjustments take place in a shorter period of time in the second scenario.

Therefore, monetizing the deficit is no solution to the problems faced by highly leveraged farmers. This scenario suggests that agriculture would end up in a weaker financial position at the end of the decade than it would under either of the first two scenarios.

Implications for Credit Policy

Large government deficits, and a monetary policy that reduced inflation by more than one-half from 1980 to 1984, have had a dramatic negative effect on highly leveraged farmers. Improvement in their future financial position depends to a large degree on decisions made about future blends of monetary and fiscal policies. Three sets of assumptions about future macroeconomic policies were used in this study to examine the range of possible effects on the farm sector during this decade. Two scenarios that assumed the existence of large deficits showed a farm sector with substantial financial problems by the end of the decade. Both scenarios pointed to high real interest rates, low farm incomes, declining farm asset values, rising farm debt and further growth in farm leverage ratios. Neither scenario indicated a signifi-

cant decline in production of food and fiber, but substantial adjustments in farm ownership patterns would likely occur.

In contrast, significantly different results for the farm sector were generated in a scenario showing reduced federal budget deficits and a moderate monetary policy. In this scenario, higher farm incomes, increasing asset values and moderate growth in farm debt would occur. Such outcomes would likely leave the sector more productive and more capable of dealing with external shocks.

Current credit policy proposals that call for restructuring debt or postponing payments may serve a useful purpose in buying some time so that more fundamental problems can be addressed. *However, they are not sufficient to solve the difficulties of highly leveraged farmers if federal budget deficits are not reduced.* In fact, it can be argued that many current credit policy proposals may do more harm than good. Postponing farm problems by interfering in farm credit markets may compress eventual farm ownership adjustments into a shorter time period. This may cause discontinuing farmers to suffer greater losses in net worth because of the thin nature of farm asset markets. Only a more restrictive fiscal policy and a moderate monetary policy appear to have a good chance of returning long-run economic health to the sector, and laying the groundwork for short-term credit policies to alleviate the financial stress currently facing many highly leveraged farmers.

Commodity Price and Income Policies

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Farm price and income support programs are not generally thought of as credit policies. Yet, through their effects on farm income, price and income support policies have substantial impact on the economic health of agriculture. In times of depressed farm income, political appeals are made for price and income programs to avert further deterioration in loan defaults, asset values and farm numbers. It is frequently suggested that credit programs are band-aids which fail to reach the heart of farm problems -- the inability of farming to generate sufficient income. Price and income policies are frequently looked to as means of dealing with the income dimension of the problem.

The purpose of this article is to explain the role that price and income policies can play in reducing farm financial stress. In addition to explaining the tools of price and income policies, the article will evaluate the impact of specific contemporary policy proposals on the financial condition of farmers.

What are Price and Income Policies?

Price and income policies are government programs designed to stabilize or raise the level of farm prices or income. This may be accomplished by two general means:

- Raising farm prices and, thereby, increasing farm income. Specific programs designed to raise prices include price supports, production or marketing controls and storage (reserve) programs.
- Providing direct income supplements to farmers. Specific programs designed to supplement farm income include target prices and related direct payment concepts.

The Use of Price and Income Programs and How They Work

Whether farm income is supported by raising prices or by direct income supplements has decidedly different effects on both agriculture and the general economy. This differential impact is seldom appreciated fully.

Raising Farm Prices

Until the late 1960s, farm income was primarily supported by programs that had the effect of raising farm prices. While farm prices are still supported by government, the level of support has been decidedly reduced. Recently, proposals have been made to reduce price supports even further to assure competitiveness of U.S. farm products in world markets.

Alternative tools (programs that are or could be used to support farm prices) include:

The nonrecourse loan program establishes an effective floor price at the loan rate for eligible commodities. When faced with a market price less than the loan rate, producers place their eligible commodities in a government loan. Thus the loan rate establishes a floor price in years of relatively high supply. If the producer is unable to profitably sell the commodity and repay the loan, the commodity may be forfeited to the USDA in full payment of the loan (principle and interest). The nonrecourse loan is currently available for all major grains, soybeans and cotton.

The commodity purchase program removes stocks of commodities from the spot market with government purchases. In dairy, the government buys manufactured dairy products at specified purchase or support prices. An effective floor price for producers is thus.

established indirectly. In other commodities, the government may periodically enter the market and buy commodities, thus supporting price temporarily.

Storage programs hold reserve commodity stocks, the release of which is at least partially government controlled. Such programs include the farmer-owned grain reserve, CCC stocks (acquired by the government through either a purchase program or forfeited loans) and strategic commodity reserves. Storage programs exist for all price-supported commodities, although the farmer-owned reserve is limited to wheat, corn and grain sorghum.

Production and marketing control programs attempt to limit the quantity of commodities produced either by removing land from production or by placing limits on the quantity marketed. Set aside or diversion programs require a farmer to remove a certain percent of cropland from production as a condition of receiving farm program benefits. Long-term land retirement programs (e.g., the Soil Bank) pay farmers to take land out of production for more than one or two years. Allotment programs limit the number of acres that can be planted. Quota programs place absolute limits on the quantity which can be marketed each year. All of these output control forms have been or are being used. Currently, the emphasis is on acreage diversion programs. Quotas are limited to tobacco and a few minor commodities under marketing orders. In general, these farm programs raise market prices by reducing commodity supply. Production controls are cost-effective farm programs for raising farm prices when the goal of the program is to raise prices. If farm programs attempt to raise prices without production controls, excess supplies result. Production controls then become necessary to avoid low prices and the accumulation of large stocks.

Direct Income Supplement

Since the late 1960s, farm income has been supported with direct payments from the government rather than with price supports. Alternative direct payment tools include:

The target price program has been the primary policy tool for directly supporting farm income from the major grains and cotton. If the market price falls below the target price, the government makes up the difference in the form of a deficiency payment. Subject to a lower limit at the loan rate, commodity prices are free to seek their market equilibrium. A limit has been set on the maximum payment that can

be paid an individual. The effectiveness of such limits appears to be questionable.

Targeted, direct payment programs have been suggested as an alternative to the target price program. Such programs would make some form of lump sum payment to eligible individuals. For example, family farmers having annual income below the average nonfarm income could be given a lump sum payment equal to the difference. As specific segments of the farming community encounter financial problems, targeted programs might gain increased consideration or acceptance.

What Are the Consequences?

To the extent that either price supports or direct payments raise producer income and in turn, land values, the financial position of producers is improved. However, raising prices has decidedly different effects on agriculture and the general economy. In addition, the short-run impacts may be considerably different than the long-run effects. In this analysis, the impacts of three basic price and income support alternatives are evaluated:

- Continuation of the 1981 farm bill provisions.
- Elimination of farm price and income support programs.
- A general scaling back of farm price and income support, including loan rates and target prices based on the moving average market price.

The analysis places emphasis on the farm level effects of each alternative. The results are based on a 10-year simulation of typical farms for each policy scenario.

Continuation of the 1981 Farm Bill

Despite substantial dissatisfaction with past programs, there is an expectation that the 1985 farm bill debate could result in an extension of the 1981 farm bill provision. Such an extension forms the basis for evaluating the consequences of alternative farm program options. In this base scenario, the following assumptions are made:

- The CCC loan program is available to all producers with the loan rate maintained at the 1985 level.
- The target price is available to all producers in all years at the 1985 level.
- A 20 percent diversion is in effect with five percent being a paid diversion at the 1985 level.

Each of the typical farms analyzed are assumed to participate in the diversion program.

The results of the analysis suggest that continuation of 1981 farm bill policies would not resolve current financial difficulties in agriculture. Farmland values would continue to decline until they fully adjusted to lower real farm incomes. A continuation of the general trend toward fewer but larger farms would undoubtedly continue. Yet, in all size categories, well-managed farms that do not have a high debt level would have a high probability of surviving, growing and remaining relatively sound financially.

Continuation of 1981 farm bill provisions would not solve the problems of highly leveraged farms having a debt to asset ratio of more than 65 percent. The probability of such farms surviving is substantially lower than for the typical farm having a relatively sound balance sheet. For those few highly leveraged farms that survive, their growth is severely limited. Despite substantial government deficiency payments, the net farm income of highly leveraged farms is generally negative due to large debt servicing costs.

From a more macroeconomic perspective, continuation of current policies would result in high levels of farm program expenditures -- most likely in the \$10 billion to \$20 billion range that has existed in recent years. Therefore, farm programs would continue to be the subject of criticism from a budget exposure perspective. In addition, loan rates would continue to be sufficiently high periodically to create competitive problems in the export market for farm products. So further erosion in export market shares might be expected.

Elimination of Farm Price and Income Programs

There is a substantial body of thought that farm programs have become counterproductive. This perspective holds that price supports and production controls interfere with exports enough to reduce market revenue; that deficiency payments from the target price program unduly add to the federal deficit; and that protection of farm income has made U.S. farmers less efficient. This perspective reflects the "need to make agriculture mean and lean" syndrome.

The immediate impact of eliminating farm programs is to reduce the level of farm prices and incomes as prices fall to market clearing levels. It is contended that lower U.S. farm prices would foster increased export demand both in terms of recapturing lost markets and in terms of tearing down such

barriers to trade as the EEC Common Agricultural Policy.

Questions remain as to how rapidly the export rebound would occur and to what levels. Our analysis takes a relatively pessimistic view on this issue. This pessimism is based upon the continued expectation of relatively high real interest rates, low purchasing power in developing countries, increased production in countries such as China and Argentina and resistance to institutional change in the EEC. The results are anticipated to be generally lower market prices (in the absence of deficiency payments) and considerably more variable market prices (in the absence of price support loan and storage programs).

Eliminating farm programs would indeed make agriculture mean and lean. It would also make credit institutions serving agriculture mean and lean. The farms most adversely affected by discontinuing farm programs would be:

- those that produce commodities that have benefited most from farm programs. These farms would experience materially reduced farm growth, generally negative income and a decline in asset values. For example, wheat, rice and cotton producers would be profoundly affected by the absence of target price protection. Feed grain producers would also be affected adversely, but not nearly as much. Milk producers' income would drop dramatically if the price support program were discontinued.
- moderate-size farms. They would be more adversely affected than large-scale farms because large-scale farms are generally more efficient, purchase inputs at lower prices, sell products at higher prices and deal with risk better. The survival of moderate-size family farms would be in serious doubt if all price and income programs were discontinued -- even on a phaseout basis.
- highly leveraged farms. These farms would stand virtually no chance of remaining solvent for the next 10 years in the absence of farm programs. Because one-third of U.S. farmers are considered to be highly leveraged, even a transition policy to phase out farm price and income support would likely cause rapidly falling land values, accelerated structural change and added stress on the agricultural financial sector. The brunt of such adverse conditions would be directly felt by rural lending institutions. In fact, the solvency of the rural credit system could be seriously threatened if asset values continued to decline from their current relatively low level. Almost complete curtailment of

private sector credit to moderately and highly leveraged farmers could be anticipated. Even larger scale, more solvent farmers would likely experience capital rationing.

From a more macroeconomic perspective, public sector savings in farm program expenditures could be offset by private and public sector losses in asset values and potentially by increased expenditures on rural social programs. The potential for repayment of existing FmHA loans would fall to near zero, although this potential may be close to zero already. Substantial political pressure would exist for FmHA to assume obligations for a larger share of farm loans, resulting in greater government expenditures on lending programs and greater exposure to risk.

Reduced and More Targeted Support

Some proposals for future price and income policy lie somewhere between a continuation of 1981 farm bill programs and elimination of farm programs. These proposals would generally lower the level of support for farm prices; tie target prices to loan rates as a means of providing a more direct market signal; and more effectively target farm program benefits to moderate-size farms.

The consequences of such programs depend on the effectiveness in targeting farm program benefits and the level of price and income supports provided to eligible producers. Without an effective procedure for targeting benefits, generally reduced loan rates and target prices would disadvantage moderate-size farms more than large-scale farms. The result would be proportionally greater deterioration in the financial position of moderate-size farms relative to large-scale farms. Both moderate- and large-size farms that are highly leveraged would likewise experience lower farm incomes and greater chances of bankruptcy than under the current farm program.

Effective procedures for targeting farm program benefits to moderate-size farms would only improve the position of these farms on a *relative* basis -- unless as a result of targeting, the level of support to moderate-size farms could be increased. The more specific the targeting, the better the chances of increasing the level of support.

Past efforts to target farm program benefits by limiting payments to \$50,000 per person appear to have been only moderately successful. Division of farm units to avoid the payment limit is undoubtedly a problem. Lowering the payment limit makes such divisions more difficult, but reduces income benefits

to moderate-size farms that have the greatest need for income support under the farm program. For effective targeting, improved procedures would be required.

From a macroeconomic perspective, proposals to reduce loan rates are designed primarily to improve the competitive position of U.S. farm products in world markets. Basing loan rates on a percentage of the world market price (such as 75 percent to 90 percent) provides increased assurance that U.S. loan rates will not be higher than world market prices. This procedure for setting loan rates has been used with soybeans and cotton, however the formulas have been hampered by legislated minimum loan rates. For wheat and feed grains, the use of proposed loan rate formulas would lower loan rates 25 cents to 90 cents per bushel for 1986.

Tying target prices to loan rates provides a more direct signal to producers regarding the market supply-demand balance. Past policies of holding target prices constant regardless of market price levels tended to foster surplus production. The effect was to exacerbate the farm price problem and to cause potentially greater financial problems for farmers over the long run. One problem with lowering target prices is that it would have a greater negative effect on producers' incomes than an equal reduction in the loan rate.

Conclusions

Farm price and income policies have a significant impact on farm incomes and the financial position of farmers. Even if current levels of farm price and income support were continued, many farmers with substantial debt loads would go out of business. If farm programs were discontinued, farms of all sizes would experience lower incomes, with moderate-size farms suffering more than large-scale farms. Scaling back the level of support for all farms would have the same effect, although the magnitude of impact on moderate-size farms would be reduced. Scaling back the level of price and income support by tying target prices and loan rates to market prices would make agriculture more responsive to market forces. If lower government expenditures on farm programs are desired, the only means of reducing the resulting financial stress is to target program benefits toward moderate-size farmers. Substantial tightening of targeting procedures will be required to avoid past problems with payment limitation loopholes. In other words, the 1985 farm bill is not likely to solve the farm problem.

Federal Income Tax Alternatives for Dealing with Financial Problems in Agriculture

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Federal tax laws are frequently cited as an important influence on investment decisions in agriculture. Livestock, land improvement and equipment investment decisions are often heavily influenced by specific tax benefits enjoyed by farmers. It might even be suggested that tax-avoidance investment decisions have been among the factors leading to the current financial crisis in agriculture. The purpose of this paper is to identify and evaluate income tax alternatives for dealing with agriculture's financial situation. This discussion is particularly appropriate and timely in light of current congressional debate on tax reform. Discussion of these alternatives implies neither endorsement nor rejection of them. The alternatives identified herein need to be evaluated against other possible public policy actions.

Social Objectives and Tax Laws

There are numerous policy alternatives through which policymakers seek to achieve social objectives. Tax laws are one alternative; direct cash transfers and loan subsidies are others. The issues can be viewed as two-fold:

- Does agriculture, or a subset of agriculture, "deserve" special treatment?
- Are tax alternatives a more equitable and efficient manner of achieving social objectives than other policy alternatives?

Actions of the federal government suggest there has been a rather strong perceived need for special treatment of agriculture. Commodity price support programs and subsidized Farmers Home

Administration loans have been perhaps the most visible evidence of special help for the agricultural sector. Examples of more subtle forms of help for agriculture include subsidized irrigation water in the western United States; special tax treatment which allows farm firms to report income on a cash rather than accrual basis; and special farm finance leasing laws.

Like other sectors of the economy, agriculture historically has received special tax treatment. The rationale for this special treatment appears to be closely tied to:

- the fact that farming is a basic industry with significant multiplier effects on the remainder of the economy,
- a value system which places emphasis on the agrarian way of life, and
- the uniquenesses of agriculture as a predominantly small business, capital intensive industry.

There appears to be a growing concern that special tax laws for agriculture do not generate their desired objective. For example, tax laws that made hog facilities eligible for investment credit and rapid depreciation were originally perceived as beneficial to hog producers. However, the net effect has been to encourage a rush of taxpayer-subsidized expansion into the hog business by nonfarm investors. This has caused hog prices to fall and forced some producers out of hog production. Similar examples can be drawn from cattle feeding, dairy, grapes and other agricultural enterprises.

While the perception of a need to help agriculture appears strong, there is a growing uneasiness over the best way to accomplish this social objective. Some suggest that tax law changes made to

accomplish social objectives are doomed to failure; others suggest that greater attention must be given to long-run consequences. It is within this context that one should evaluate proposed tax law changes designed to help alleviate or prevent financial stress in agriculture.

Current Tax Laws Contribute to the Problem

Long-term viability of farming operations depends on profitability. Short-term credit that maintains a farming operation for another year does not offer a long-term viable solution. Borrowing additional money is not a solution to an income problem. Rather, firms that lack long-term profitability must make changes in the nature and scope of their operation. For farmers with no remaining equity in their business, any actions short of complete asset liquidation are unlikely to solve their income problem. However, there are a substantial number of farmers who have serious financial problems, yet maintain some equity investment in their operation. Tax consequences of partial asset liquidation may discourage these individuals from taking steps necessary to place their farming operation in viable economic position.

Farmers need to realize that liquidating their assets could trigger significant tax obligations. For those who report income on a cash basis, liquidation of crop and livestock inventories would generate additional taxable income. Likewise, liquidation of machinery, equipment or land could generate taxable income from ordinary income, capital gains income and possibly recapture of investment credits. Recognizing this situation, the attitude of farmers may well be to continue farming and hope for a turn around rather than pay taxes. In essence, they feel trapped in agriculture.

Preventive Changes

A primary reason farmers feel trapped is because tax laws allow them to report income for federal taxes on a cash rather than an accrual basis. Consequently, as crop and livestock inventories build up over the years, no taxes are paid on this *accrued* income. While a change in tax laws to require that farmers report income on an accrual basis would not help with current problems, it could help prevent a repeat of this situation for other farmers who are accumulating inventories.

For many agricultural producers, accelerated depreciation methods have created a situation in which machinery and special purpose buildings have a market value well over current book value (cost less accumulated depreciation). The intent of such

tax laws has been to provide an incentive for investment. Unfortunately, these laws also create a disincentive for asset liquidation. A change in tax laws to remove accelerated depreciation could reduce potential adverse tax consequences of subsequent liquidations of depreciable assets.

A more subtle reason that compels farmers to remain in farming for tax purposes involves tax laws concerning estate transfers. If a farmer completely liquidates, considerable federal taxes may be owed. In contrast, if a farmer retains assets until death, the heirs will receive a "stepped up" basis in the land. Likewise, the heirs would also receive a stepped up basis in crop and livestock inventories if the farmer was actively engaged or materially participating in farming at the time of death.

Tax Alternatives for Dealing with Current Financial Stress

There are numerous tax alternatives which might be considered for dealing with current financial stress in agriculture. They fall into three broad categories:

- income enhancement
- encouragement for farmers in financial trouble to liquidate assets
- encouragement for investors to acquire assets of farmers in financial stress

Income Enhancement

Tax laws can be changed to modify the amount of taxes paid and consequently, the after-tax income of individuals and firms. For farm firms experiencing financial stress, taxable incomes typically are low and often negative. Tax laws could be changed to increase the after-tax income of farms in financial trouble.

Negative Income Tax. One possibility is a "negative income tax" whereby people with negative incomes receive a payment from the government. Negative income tax proposals are difficult to administer and have never received strong political support. While negative income taxes provide income at the time of greatest need, they also tend to discourage people from moving out of unprofitable activities.

Tax Credit Sector Income Support. Another proposal that could enhance the income of financially stressed farmers is the tax credit sector income support program (TCSISP). Under this proposal, the U.S. government would assure producers *as a group*

a specific level of net farm income. However, the farm-related net income levels of individuals would not be assured directly. Prices in markets would be free to adjust. Quantities consumed, exported and stored would reflect market prices and the tax credits associated with the program.

As the name implies, the TCSISP would be income-tax based and related to the net income of the agricultural sector. Suppose that Congress decided that the annual net income of the agricultural sector should be no less than \$20 billion. If net income exceeded this amount, there would be no cost to the government and no distribution to the agricultural sector in that year. However, suppose that net farm income dropped to \$12 billion -- \$8 billion below the required level of \$20 billion. Then, \$8 billion would be distributed under the TCSISP from an income payment pool. The program could be administered through revised IRS tax forms.

The following consequences arise from the TCSISP:

- Producers would receive income when it is needed the most.
- It represents a major departure from past price and income support programs for agriculture, making political acceptability difficult.
- It may prevent resource adjustments that are needed to deal with excess production.
- Because most farmers report on a cash rather than accrual basis, it would be relatively easy to adjust taxable incomes when it appeared that payments under the plan would be forthcoming.
- Costs of the program could not be readily predicted and could become quite high.

Extend Loss-Carry Back Period. Another possibility would be to change tax laws so net operating losses could be carried back further than the three years now allowed. This could help farmers recoup tax payments made in earlier years. A one-time provision allowing a longer carry-back could provide assistance to some financially stressed farmers. However, government revenues would fall as the carry-back period lengthened.

Changes to Encourage Asset Liquidation

Changes in tax laws could help encourage asset liquidation as a means of alleviating the current problem. This could be accomplished in two ways:

- tax laws could be modified to forgo the collection of taxes associated with asset liquidation, and
- investment tax credit recapture provisions could be changed to encourage liquidation.

Such changes would reduce or remove tax impediments experienced by many farmers when considering asset liquidation.

In one case, a farmer sold all his land and machinery to satisfy creditors. These liquidations triggered approximately \$100,000 in income tax liabilities. When assets are liquidated without bankruptcy, tax liabilities are the responsibility of the debtor. Consequently, when equity in the business is low and tax liabilities from liquidation are high, the debtor has a strong economic incentive to file for bankruptcy rather than voluntarily liquidate the business.

If changes in tax laws are intended to help alleviate current financial problems, then it seems imperative that such changes exist for a limited period. There is considerable precedence for tax laws designed to deal with transition problems.

There appear to be three major obstacles to tax law change that encourages asset liquidation:

- Tax revenue would decline, but it is difficult to quantify exactly how much. A complete forgiveness of tax obligations, for some farmers, could cause a substantial reduction in tax revenues. However, farmers who are losing money but stay in business because of current tax laws also represent tax revenue losses.
- Eligibility criteria need to be established to specifically limit who could receive tax benefits. Such criteria would be difficult to establish for several reasons. First, "financial stress" has to be defined. Measures such as the level of farm income, or farm interest expenses as a percent of gross value of farm production, could be calculated from Schedule F. However, such criteria do not completely reflect financial stress or the need for asset liquidation. A second problem is distinguishing between "sales in the normal course of business" and "sales to liquidate assets." Another complication involves protecting against exploitive use of tax laws by nonfarm investors.
- All taxpayers would have to be treated equitably. Designing a tax program to help a small segment of the economy does have precedence (e.g., farm finance leasing, oil depletion allowances, etc.), but other sectors experiencing financial difficulty may also demand special treatment.

On balance, it appears that tax law changes could help prevent a situation in which farmers feel compelled to avoid taxation by holding assets. It is also possible to change tax laws to help alleviate current financial problems in agriculture by encouraging farmers in financial stress to liquidate assets.

However, designing a tax change law with this sole objective would be difficult.

Encouraging Investment in Agricultural Assets

Current financial problems in agriculture have caused significant declines in asset values, particularly of farm machinery and farmland. This has eroded the collateral position of farm borrowers and has resulted in rather significant accumulations of property by farm lenders. Several policy proposals have attempted to deal with this situation by creating a stronger demand for agricultural assets as a means of stabilizing values. For example, the Farm Credit System has proposed formation of a government-backed corporation to acquire up to \$20 billion of farmland from lenders and financially-stressed farm operators.

An alternative approach would be to create greater tax incentives for the private sector to own agricultural assets. One procedure for creating a greater incentive for investment, while helping farmers with the greatest degree of financial stress, would be to change tax laws that deal with net operating losses.

Alternative Minimum Tax. Under current tax laws, taxpayers may face taxation according to alternative minimum tax rules, even though net operating losses exceed the amount of ordinary taxable income that would be received from liquidation. For example, in computing the alternative tax, net operating losses are reduced by preference items occurring that year. One of the preference items of concern to some farmers is "the excess of accelerated depreciation over straight-line depreciation on nonrecovery real property." It is conceivable farmers who generate net operating losses through rapid depreciation of machinery or hog facilities could still owe alternative minimum taxes, even though they have a net operating loss to carry forward.

Another tax preference item of concern to many farmers is "the long-term capital gains deduction." Upon liquidation of land or purchased breeding livestock, farmers could face capital gains taxes. Under ordinary tax treatment, only 40 percent of the capital gains is taxable. However, when computing alternative minimum taxes, all capital gains are included. For a farmer who sells land with large capital gains, the alternative minimum taxes could be effective. Also, if a farmer has investment tax credit (ITC) carry-over, it cannot be used in calculating alternative minimum taxes.

Tax laws governing alternative minimum tax are complex and not well understood. This creates a great deal of uncertainty on the part of farmers who

need to liquidate assets. To the extent that uncertainty does exist and to the extent that alternative minimum taxes do come into play, farmers are discouraged from liquidating assets. Thus the adjustment process is slowed by current tax laws. Modifications in tax code which eliminate alternative minimum taxes for farmers could be envisioned, but it would be difficult to distinguish between farmers who liquidate because of financial stress and farmers who liquidate for other reasons.

Transfer of Losses with Assets. Another proposal to increase demand for agricultural assets is to allow net operating losses to be transferred with assets, as the assets are sold to other farmers or nonfarm investors. Some have argued that such a change would facilitate needed asset redistribution, while others believe it would create too strong a tax incentive for nonfarm investors. Large corporations can buy tax losses from other corporations, so it could be reasoned that the same privileges should be extended to agricultural producers. To address this issue more fully, it is useful to review tax laws concerning transfers of net operating loss carry-over.

As a general rule, a net operating loss can be carried over only by the taxpayer who sustains the loss. However, a successor corporation is allowed to carry over the net operating loss and certain other items of its predecessor under certain conditions. Such use of net operating loss carry-overs by the new corporate owner may be limited. For example, at the end of the loss corporation's taxable year, if any one or more of the 15 largest shareholders obtain an increase in stock ownership which is more than 60 percentage points above their stock ownership at the beginning of either of the two preceding taxable years, a reduction of net operating loss carry-over is required. Under these tax rules, corporations may be able to use the net operating loss carry-over of acquired corporations. In contrast, individuals or partnerships may not be able to acquire such tax losses.

Transfer of Capital Losses. Investment in agricultural assets could be encouraged by allowing capital losses to be transferred to the purchaser of the asset. For example, suppose a farmer purchased land for \$2,000 per acre, but the land fell in value to \$1,000. If the farmer liquidates this land, the capital loss can be used to offset other taxable income, if any, of the seller. Such capital losses are frequently unusable by financially distressed operators. If such losses could be transferred to the buyer, there would be a strong incentive for high tax-bracket investors to acquire agricultural assets.

If tax laws were changed to allow individual proprietors to shift net operating losses or capital losses to the entity acquiring the assets, there could be a tremendous incentive for high tax-bracket individuals, both farmers and nonfarm investors, to acquire the assets of failing farmers. Such a change would tend to stabilize or enhance the value of agricultural assets. Financially stressed farmers would find asset liquidation much easier. The short-term effect of such a tax law change may be beneficial to farmers in financial trouble. However, the long-term consequences of encouraging additional tax-oriented investment in agriculture by nonfarm investors may not be favorable to existing farm operators. Such a change could also prevent the magnitude of downward adjustment in asset values that may be needed to return agriculture to a long-term profitable situation.

Tax Simplification Proposals

Proposed changes in tax laws are a hotly debated issue at the present time. President Reagan has proposed a bundle of changes commonly referred to as the Tax Simplification Proposal. Key items in this proposal include a reduction in the number of tax brackets to three, an increase in the amount of the personal exemption, elimination or reduction of preferential treatment of capital gains, elimination of investment tax credit, elimination of state and local taxes as an itemized deduction, and an increase in the length of time over which capital assets can be depreciated. While a complete review of the effects of the tax simplification proposal is not possible here, it is useful to evaluate the proposal's potential effects on financially stressed farmers.

It is apparent that some proposed tax simplifications could help prevent future problems in the agricultural sector. For example, the elimination of investment tax credit and an increase in the length of depreciation could help prevent over-investment in capital assets, which has led to over-production and depressed prices in the past. Likewise, to the extent that the proposed changes reduce taxes paid by farmers, after-tax income will increase, thereby providing a stronger base for repayment of operating and capital debts.

For farmers who already face serious financial difficulty, tax simplification proposals offer little hope of any significant help. For farmers with no taxable income -- a common characteristic of farmers in financial difficulty -- a reduction in tax rates is of

no significant consequence. If fact, such farmers may be hurt by the tax proposal since incentives for nonfarm investment in agricultural assets would be reduced. Reduced demand for agricultural assets would further impede the adjustment process and would add to downward pressure on asset values.

There is also evidence that the Reagan tax proposals would favor large farms over small- and moderate-size farms. The tax proposals, therefore, would accelerate the trend toward large-scale farming.

Many tax alternatives previously discussed for dealing with financial stress in agriculture run counter to the basic thrust of tax simplification. For example, transfer of net operating losses or capital losses to the purchaser of assets would complicate, not simplify, the tax code. Likewise, changes in the tax code to temporarily forgo taxation upon liquidation of assets would increase the complexity of the tax code.

Summary

Financial stress in agriculture has created a perceived need for public policy intervention. Tax law changes constitute one alternative for dealing with financial stress in agriculture. While many different ideas have been raised, it is possible to classify these into two broad categories:

- changes in tax laws that would help prevent problems in the future, and
- changes in tax laws to deal with the current situation.

Preventive changes include the requirement that farmers report income on a cash rather than accrual basis, elimination of investment tax credit, and depreciation schedules for capital assets which more closely approximate the useful life of such assets. Such changes are basically consistent with current tax simplification proposals, but offer little, if any help for farmers who are currently in financial difficulty.

For farmers in financial trouble, changes in the tax code which would temporarily forgo collection of taxes upon asset liquidation, or allow the transfer of net operating or capital losses to the purchaser of assets, would likely enhance the adjustment needed to restore financial soundness. Such proposals, however, are basically in conflict with tax simplification proposals. The political process will determine if farmers in financial difficulty should be helped through tax code changes or tax simplification.

Policies and Programs to Ease the Transition of Resources Out of Agriculture

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In most years since World War II there has been a need to move excess resources out of agriculture, as capital intensive technology has been substituted for land and labor resources. Current conditions and future prospects suggest that this situation will continue. For the most part, the transition has been left to market forces. Yet questions continue to arise about the appropriate role for government in easing or facilitating resource adjustment.

This paper presents adjustment strategies which financially distressed farmers and agricultural communities may consider as they respond to the reality of excess resources in agriculture. This extreme financial distress has resulted largely from the amazing ability of U.S. agriculture to increase total output even while the amount of land in production and the number of farmers has gone down.

As a result of these conditions, some -- perhaps many -- financially distressed farmers will find it necessary to leave their farms. Others may find that by making realistic adjustments to forecasts of current and evolving conditions, they can retain their land and increase the probability of an improved future for their families and their communities.

However, if this transition occurs on a widespread basis, some agriculturally-centered communities may find it necessary to seriously reevaluate their future. These communities need to determine if they have a healthy economic outlook or if they should seek alternative adjustment options.

As farmers and members of agricultural communities study their alternatives, they will find that adjustment strategies divide into two major classes:

- those that relate to labor (or human capital) and
- those that relate to land or other natural production resources such as water, soil quality or soil fertility.

The purpose of this paper is to discuss some of the adjustment choices these two classes of strategies present to policymakers, farmers and their communities. The adjustments are intended to be consistent with three objectives:

- to raise farm family income,
- to reduce the total production of commodities that are in chronic oversupply, and
- to maintain the productive potential or capacity of the nation's high quality agricultural land.

Evolving into Distress

Economic policies installed since about 1970 to cope with conditions facing the general economy have resulted in a "credit crisis" for many farmers. The combined effect is a financially distressed agriculture. In the 1970s, farmers responded to increased grain sales to Russia and other countries, which caused grain and oilseed prices to rise to record levels. These conditions fostered a full production strategy by farmers. Expansion of farm output was further encouraged by commodity price and income support levels that were set in light of high inflation rates and projections that existed at the time.

Productivity and output in agriculture soared. This set of events, together with rising prices for commodities and rising returns from farming, combined to make farming very profitable. These conditions helped drive the price of farm assets, especially land, to very high levels. Farm debt soared from \$50.4 billion in 1970 to \$200.9 billion by 1983. A record farm income of \$34.4 billion was reached in 1973 -- but dropped to \$22.1 billion in 1982. That

was the lowest farm income, taking inflation into account, since 1933.

Other events also struck the agricultural sector during the 1970s and 1980s. International demand for agricultural commodities declined, partially as a result of a fiscal policy that produced record-breaking deficits, which in turn contributed to high real interest rates and record high values for the dollar in international markets. Price support policies kept U.S. commodity prices above world market prices, thereby contributing to the decline of U.S. agricultural exports.

By the end of 1983, U.S. farmers faced credit problems of catastrophic proportions. Debt totaled \$200.9 billion; farm income for the year totaled \$22.1 billion. Uncertainty regarding future inflation and interest rates caused bankers to shift their credit pricing from fixed interest rates to variable interest rates. Subsequently, farm foreclosures and bankruptcies reached their highest rates since the Great Depression.

The farm policy component of the problem developed from two sources:

- U.S. support prices for basic farm commodities have been set chronically above market clearing levels and, hence, above world prices. The effect has been to foster production in the United States and retard exports. High U.S. price support also encouraged competing countries to expand production.
- Income supports have been set even higher than price supports. Income supports were not responsive to changes in costs of production; nor to inflation, which failed to continue at the high levels anticipated.

The bottom line is that U.S. agriculture has more capacity to produce than purchasing power to consume -- domestically and internationally. Under these conditions, resources must be moved out of agriculture. The question is whether that transition is left to market forces or facilitated by government.

Adjustment Strategies for Labor

Traditionally, farmers who earned less from farming than they could from nonfarm labor migrated to nonfarm employment. By doing so, they were investing in their own human capital -- a term that refers to a laborer's ability to turn skills and knowledge into income.

An estimated 30 million persons migrated from U.S. farms and rural areas between 1940 and 1980.

During this period, farm numbers fell from 6.1 million to 2.4 million. Many of the 30 million migrants from rural areas were not from farms, but from towns that served the agricultural industry.

The opportunity to migrate successfully is closely linked to:

- the number of employment opportunities in the general economy;
- the individual's range of abilities, skills and encumbrances; and
- the individual's degree of willingness to move to take job.

In the 1930s, lack of economic opportunity in urban areas kept farmers and rural residents as underemployed farm labor in rural areas. World War II employment opportunities induced migration from rural areas. After the war, some of these people returned to farms and rural communities.

However, permanent migration from farms and rural areas became prevalent in the 1950s and 1960s when the general economy was performing well. The unemployment rate averaged as low as 4.6 percent during these two decades. An interruption in the outflow of people from farming and agriculturally-based communities occurred in the 1970s. However, as returns to labor and land devoted to farming have declined to record lows, this outflow has resumed.

Some individuals who decided to continue farming or to start farming during the 1970s now find they are experiencing severe financial distress. Particularly hard hit are highly leveraged farmers with high interest loans. Some are being advised to stop farming and change to nonfarm careers; but they do not see the answer as a simple matter of migrating to nonfarm employment. During the 1980s, unemployment rates have shown little prospect of declining much below seven percent. The level of skills required to migrate into nonfarm jobs is generally higher than it was in earlier decades. This means that special, carefully designed retraining programs may be required to help financially distressed farmers and residents of agricultural communities into nonfarm employment.

Changing Careers

When substantial sums of money are spent to keep some farm families in farming, and their operations do not appear to improve, a better policy option may be to provide public funds to help these families shift to nonfarm employment where they can be more productive and economically self-sufficient.

Such a farmer may find it necessary to develop his or her own skill levels through a designated training program, or by enrolling in a specific education program. In either instance, participating in counseling programs available through the federal-state employment service serving rural communities is an important first step to a nonfarm career.

Skill Training Program

Skills or jobs training, while sometimes offered by employers, can also be provided by public programs structured to conduct training in specialized tasks. These programs might provide skills in maintenance or operation of selected machinery or technology such as diesel engine repair or computer usage.

In some cases, skill training can be obtained through public programs that support private firms which train persons in skills the employer needs. These programs may be conducted by firms or by local colleges or training institutes. Such programs provide employment for the learner, thus serving as an income supplement.

However, most agriculturally-centered communities do not have a private employer large enough to meet the criteria for participating in these programs. Consequently, skill training programs may be of relatively limited value to most farmers who want to make a career change and still remain in their home community.

Schooling Programs

Farm operators who have more locational or financial flexibility may find enrollment in a formal school program to be the most effective way of increasing the value of their skills and labor.

Given the large number of farmers expected to withdraw from farming within the decade, a special public program of financial assistance, similar to the famous G.I. Bill, might be appropriate for farmers.

Even without such a special program, farmers who seriously think about a career change will find that most colleges and universities have grants, loans and other student financial assistance available. Financial assistance is provided on a competitive basis to all qualified students; it is not restricted to farmers or to individuals who are seeking to change occupations.

Some states have developed financial assistance programs that will enable financially distressed farmers to attend a state supported college or university. For example, the Wisconsin Governor's Commission on Agriculture is trying to revitalize rural areas through broad-based efforts that include grants and loans for retraining those who wish to invest in

job-creating enterprises in financially stressed rural areas.

Farmers and farm organizations in communities, regions or states where the farm financial crisis is most severe may find it appropriate to:

- encourage their state colleges and universities to direct information about their educational programs to financially distressed farmers, or
- modify existing programs to fill the needs of a special career-changing clientele.

Rural Public School Programs

A transition out of farming has serious effects on the entire farm family. The farmer and spouse may change careers and be assimilated into the nonfarm work force. The children must begin at an early age to learn nonfarm labor skills and be prepared for nonfarm work.

Farmers who make career changes and invest in schooling at a college or university, even if they remain in their original communities, can be expected to achieve improved job mobility and earning capacity. These individuals may also learn that the range of job opportunities available to their children is directly related to:

- the quality of education provided by public schools serving the locality, and
- the level of achievement demonstrated by the community of students.

As a result, some career-changing farmers may encourage their community to reevaluate itself, the services it provides and the changing role of agriculture within the town. Although there are exceptions, it is quite probable that the public school serving the family's "new" home in an urban or suburban location will be superior academically to the school in the rural area from which the family migrated.

Adjustment Strategies for Land

In addition to their labor assets, some financially distressed farmers hold title or partial title to land -- an immobile asset that will most likely remain in agricultural production unless retired in some type of conservation reserve program.

Therefore, financially stressed farmers who retain ownership interest in their land should explore income prospects from leasing to other farmers, or from government programs for acreage that qualifies

for set aside, reserve or other land retirement programs that offer cash payments. In the currently depressed farm real estate market, retaining farmland ownership would seem advisable until the land market improves.

Various land retirement and acreage reduction programs to cut excess production could be developed to facilitate the movement of farmers out of agriculture. A potential land retirement policy would have two primary facets:

- the purchase of selected agricultural production rights from farmland, and
- the outright purchase of marginal farmland in marginal agricultural areas.

Both types of land would be part of a conservation reserve. Each facet would require a separate program. Subject to budget restraints, these programs could operate simultaneously because they would be mutually exclusive. These programs could be part of a transitional strategy designed to phase out existing price and income programs as market prices for crops rise. However, if production control programs were applied extensively, the result could be reduced exports.

These land adjustment programs could enable the achievement of four farm policy goals:

- an eventual reduction in the annual cost of programs designed to reduce the use of land for agricultural production.
- an increase in government's ability to conduct effective supply management programs.
- long-run protection of high quality agricultural land.
- long-run conservation of areas especially sensitive to drouth, erosion and other natural hazards.

Labor and Land Adjustment Combined

In the mid-1950s, Theodore Schultz, a University of Chicago economist, suggested a government program to help farmers make adjustments in their careers. He called his proposal "Homesteads in Reverse" because it resembled the homestead land distribution programs adopted by Congress in the 1860s. Schultz proposed one-time, fixed-sum grants to eligible farmers who wanted to change careers and migrate to an urban location. The grant was to be irrevocable as long as the recipient farmer did not reenter farming for a specific number of years. When Schultz first proposed Homesteads in Reverse,

the suggested grant was \$5,000. If this sum were inflated to the same value for today, it would need to be about \$45,000 -- perhaps enough to resettle a family when combined with capital from the sale of a family farm.

The Schultz proposal rested on the assumption that earnings from the qualifying farm family's labor would rise if the family left farming. In addition, there was a good probability that any children involved would receive a better education when the family left the farm. The proposal was highly dependent on a condition mentioned earlier in this paper: the general nonfarm economy must perform well and have a place for the "re-homesteading farmer" to employ skills and labor.

The Schultz proposal was complemented by a marginal farmland purchase program or a long-term conservation reserve. These land retirement programs could effectively provide additional cash that many career-changing farmers would find essential for shifting part or all their land from production to alternative uses, and perhaps for resettlement.

Community Effects and Roles

The agricultural retrenchment needed in the 1980s will cause adjustment problems in farming and in all economic activities related to the agriculture industry. Therefore, both financially distressed farmers and agriculturally-centered communities have a continuing stake in expanding their range of adjustment options. This stake is greater when the community has an infrastructure that includes organized and continuing adult education, a college or university, and a variety of jobs that require different levels of knowledge and skills. Farmers residing near such communities have a greater chance for financial relief while changing careers and remaining within the community.

Such an outcome is far less likely for financially distressed farmers with farms in an area served by a small agricultural service center or town. Moreover, such communities have a high probability of experiencing severe problems themselves as financially distressed farmers select and carry out their adjustment strategies.

Agriculturally-centered communities have a 50-year record of population decline -- both among farmers and town residents. As financial distress causes more farmers to migrate, more agricultural communities will experience their own financial distress. Some will experience such declines in economic activity that the long-run economic health, financial stability and survival of the community is at

stake. Special community-wide efforts are necessary to determine the broad effects of financial distress in agriculture, the potential adjustments in ownership and management of the community's farmland assets, and new options open to the community as it adjusts its commercial, service, financial and industrial activities.

Community adjustment is a difficult problem because of the fragile interconnection between economic and social activities within the community, and because stress will impinge upon different parts of the community at different points in the overall adjustment process. For example, a land retirement program will affect seed and fertilizer dealers before it affects the owners of commodity storage facilities. Extreme financial stress among farm families will affect the dealer in consumer durables long before it affects the grocer or utility company.

Although few states have comprehensive programs for community development, many states can offer assistance through cooperative county extension personnel and the land-grant university.

Some states have gone further in preparing materials and programs. These range from assistance in finding part-time, off-farm employment to methods of appraising important factors that affect the future growth of a local community. All have a central theme: communities exist to serve an important economic function. They may serve to support an industrial plant, a hospital or agriculture. They may cater to the needs of tourists or they may be a place where retired couples come to live.

No matter what the purpose, if some external event affects that purpose, it will be felt by the community. Communities, like families, are influenced by both internal and external effects. Communities that have grown up to serve agriculture must do what they can to facilitate their own collective adjustment process. For example, USDA might coordinate efforts to assess community needs and facilitate adjustment through land-grant colleges of agriculture or federal and state agencies.

Conclusions

The agriculture industry in the United States has always been unstable but resilient, and above all else, highly productive. Although agriculture has gone through periods of severe economic stress in the past, the 1980s have brought more severe stress than most active farmers have ever experienced before. The stress stems from:

- the industry's immense production capacity, which always quickly responds to any economic or technological opportunity to expand output, but sluggishly responds to signals that call for contraction or retrenchment; and
- the unusual combination of events in the 1970s -- inflation, increased agricultural exports, high profits in agriculture, expanded demand for agricultural land and general stability in farm programs.

The 1970s were perhaps the best years for agriculture since the second decade of this century. Good times in the '70s came to an end when economic events generated outside of agriculture imposed reduced exports, huge surpluses, immense debt loads and extremely high interest rates on the industry in the '80s. The present situation has been called the "farm credit crisis" because of the importance that credit and credit policy have had on the survival of many farm firms.

Neither emergency nor standard credit policies will enable all farmers who are currently in financial distress to continue farming. Some farm operators will leave farming either voluntarily or involuntarily. These individuals will enter new occupations or seek employment opportunities either in their present community or in new locations.

Regardless of causes, time or name, one theme has persisted through present and past crises: there are too many resources in agriculture and the industry cannot adjust until some of these resources are removed.

Labor can be removed by investing in training or migration so that present farmers can carry out their productive lives in non-agricultural employment, with dependence on salaries and wages rather than unpredictable agricultural returns. The shift may require selective retraining, or participation by entire communities to help farm operators and their families find new sources of income.

Some individuals who leave farming may have an ownership interest in land. The choice to sell or keep this land will vary with individual situations. Various government program options for a conservation reserve, acreage reduction and outright purchase of production rights have been proposed and should be explored by farmland owners. In any case, sales or program participation should be voluntary -- it would give the farmer an option for turning resources into cash and finding alternative ways to make a living.

Changes in the structure of agriculture will also have immediate community effects. These are not well understood, but group activity such as community planning or perhaps direct participation in the local farm adjustment process, will help communities find new roles.

The farm credit crisis will pass but not without

massive readjustment in agriculture. This readjustment will require that many old and traditional actors leave the industry, and that many new and unknown actors enter. The process will not be easy but it should result in an agricultural sector that is much more streamlined and more effective as it enters the twenty-first century.

Policy Options for Dealing with the Farm Credit Crisis: A Summary

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With the exception of the early 1970s and World War II, post-depression agriculture has never been particularly attractive from an income perspective. Yet agriculture has generally been financially sound because of progressively rising land values and hard-working, thrifty farmers and ranchers. This changed dramatically in the early 1980s as both farm income and land values tumbled. The farmers most adversely affected were those who acquired relatively high debt during the 1970s by purchasing farm assets (land or machinery). Financial stress is the most severe in regions where farmland values have fallen the most, such as the Corn Belt.

Table 1 provides an excellent look at the relationship between financial stress, as measured by the ratio of farm debt to assets; regional location, and the age of the farm operator. It indicates that farmers less than 35 years old generally have the highest average debt/asset ratios. On the other hand, farmers

over age 55 generally have a low debt/asset ratio and thus a low level of financial stress regardless of where they are located. Yet, all farmers are affected by the lower land values and higher interest rates associated with farm financial stress.

Effects of the Farm Credit Crisis

The first wave of effects from the farm credit crisis is sweeping farms that experience financial losses -- losses that are frequently sufficient to put them out of business. Several recent studies indicate that farmers with debt/asset ratios over 60 percent have a poor chance of surviving continued financial crisis under the current set of macroeconomic, farm and credit policies. Available statistics suggest that at least 200,000 farms have a debt/asset ratio over 60 percent.

Table 1. Debt/asset ratios by region and age group.

Region	Age				
	<35	35-44	45-54	55-64	65+
----- debt/asset ratio -----					
Central	55.1	55.83	44.13	18.62	8.13
West	44.61	42.11	25.81	19.09	11.06
South	44.79	40.2	23.5	16.93	5.54
East	41.52	26.85	17.74	11.19	5.68

Source: General Accounting Office, U.S. Congress.

A second wave of the farm credit crisis is affecting agribusiness firms. With reduced incomes and higher interest rates, farmers almost immediately cut back on purchases of farm equipment. As a result, machinery dealers and manufacturers have experienced high failure rates, as evidenced by the sale of International Harvester. While less dramatic, farmer purchases of all types of farm supplies, as well as consumer durables, have likewise declined.

The third wave of the financial crisis is hitting lenders who financed farmers now experiencing financial losses. Lender stress perhaps is more visible than farm stress. The largest agricultural lender -- the Cooperative Farm Credit System -- has experienced sufficient losses to seek federal assistance. Failures of agricultural banks increased from an annual average of six during the period 1981-83, to 32 in 1984 and more than 50 in 1985.

The fourth wave of the farm credit crisis is landing upon rural communities. Declines in farm numbers, along with bank and agribusiness failures, raise havoc with the economic base of farming communities. Unemployment and even poverty have become an increasing problem. A Missouri study suggests that 40 percent of the farmers who go out of business end up in poverty. As the rural community tax base declines, it becomes increasingly difficult for the community to fulfill the ever-expanding social needs of its inhabitants.

Causes of the Farm Credit Crisis

Financial failures are symptoms of more basic problems in the farm economy, the national economy and the world economy. The most immediate symptom of the credit crisis is the inability of farmers to pay current expenses out of current income -- despite cutbacks in their level of purchases. As a result of this cash flow problem, loan delinquencies increase. As this occurs, farmers and lenders sharply curtail the flow of debt capital into agriculture. The result has been a plummeting of land values, which has been complicated by an increase in farm foreclosures. The problem is further compounded by farmers voluntarily selling land to restructure assets, reduce debts or salvage part of their remaining equity before values fall even lower. Declining land values are thus also symptoms of problems. Widespread cash flow problems result from unusually high expenses, low product prices or a combination of both. Once again high expenses or low product prices are symptoms of more basic problems.

These problems are highly complex and often are not fully appreciated. For example, in the Great

Depression, the farm problem was incorrectly attributed to low farm prices. Government programs to support prices merely aggravated the true problem of excess production capacity. Policymakers were not convinced of the *true* problem until the late 1940s when they took action to curb production.

It thus becomes very critical that the actual causes of the farm credit crisis be correctly identified so there is no illusion as to whether problems or symptoms are being treated. These causal factors include:

Macroeconomic policies that created high deficits in the face of restricted growth in money supply caused an unusually high real rate of interest throughout the early 1980s. The high real interest rate not only increased the cost of servicing farm debt but also resulted in a higher valued dollar internationally, which reduced export demand for farm products. This restrictive monetary policy followed a period of dollar devaluation and perhaps overly liberal money supply growth during much of the 1970s -- conditions which fostered unrealistically low real interest rates, rapidly expanding exports and a feverish boom in land values during that decade.

High debt in developing countries, in addition to the high-valued dollar, has been a contributing factor to reduced exports. By the late 1970s, developing countries had become the fastest growing market for farm products. High debt combined with a more protectionist, self-sufficiency policy fostered by the world food crisis in the early 1970s, further aggravated the impact of the high-valued dollar on exports.

Excess capacity once again reared its head as a major farm problem in the 1980s. In retrospect, the 1970s may have been an aberration from past chronic surpluses in terms of the supply-demand balance. Surpluses were once again fueled by farm policies which supported farm prices and incomes above market clearing levels -- treating the symptoms rather than the problem. These high price and income supports inhibited adjustment from occurring in agriculture, making the excess capacity problem even more severe than it otherwise would have been. Excess capacity has also been fostered by rapid technological change which almost invariably enhances output. Expectations for further acceleration in technological change is expected to exaggerate the excess capacity problem.

Changing domestic demand patterns reflect the shifting tastes and preferences of American consumers. These shifts complicate the process of adjustment in particular commodities. For example, medical concerns regarding the impact of cholesterol on health has reduced the per capita consumption of dairy products, eggs and beef. Beef consumption has

also been adversely affected by the lower retail prices of poultry. The beneficiaries of this trend toward lightness in the American diet have been fresh fruits and vegetables.

Unwise lending and borrowing strategies based on collateral/asset values rather than repayment ability have also been revealed as a cause of the current farm credit crisis. Boom conditions in the 1970s fueled undue speculation in farmland. They also lead farmers to overinvest in machinery and buildings. Agriculture's debt/asset ratio remained virtually constant from 1970 to 1980, while the debt/income ratio increased from 3:1 to 8:1 over the same period. In the case of Cooperative Farm Credit Banks, excessively lenient credit practices may have been fostered by moderate regulation of lending practices by the Farm Credit Administration, which has been controlled by a farmer-borrower board of directors.

Government agricultural credit programs further exacerbated the problem by deferring normal market adjustments, holding excess resources in agriculture and artificially supporting asset values. When farm income began to turn down in the mid '70s, managers who were only marginally successful even in the boom period, and managers who had inadequate repayment capacity, began to find credit markets tightening up. At the same time, the land market was relatively tight and there were successful operators who would have purchased assets if the market had been allowed to force unsuccessful operators out of agriculture. Instead, the federal government reacted by assuming the situation was a temporary phenomenon and did two things:

- It created the Economic Emergency Loan Program, which made billions of dollars of subsidized credit available at a time when real interest rates were already low or negative. (In addition, program eligibility requirements were more liberal than those of the FmHA, the traditional lender of last resort.)
- It instituted a moratorium on FmHA foreclosures, which forced continued financing of farmers who had not succeeded even under FmHA's liberal credit terms and below-market interest rates.

As a result, excess resources were held in agriculture instead of being moved out on an orderly basis, thus backlogging the adjustment process and at the same time supporting the continued bidding up of land values and acquisition of additional non-real estate capital.

Structural change in agriculture reflects the trend toward fewer but larger farms and higher levels of integration. Economies of size foster the growth of

large-scale farms and make it more difficult for moderate-size farms to compete. This is particularly apparent in beef where farmer-feeders are encountering problems competing with larger western feedlots. But it is also true in crops, where economies of size are becoming increasingly apparent. In hogs, traditional family farms are being challenged by integrated production-marketing systems -- foretelling an eventual structure similar to broilers. Not all efforts to enlarge or vertically integrate are successful. Some farmers and agribusiness firms expand too fast -- a partial reflection of the same financial stress experienced by rapidly expanding young farmers.

Tax policies providing special benefits to investors in agriculture foster both excess capacity and structural change. Major segments of agriculture are used to shelter income from taxation. Cash accounting, the investment tax credit, accelerated cost recovery, the write-off of land development as a current expense and the conversion of ordinary income into capital gains all act to foster large-scale farms and absentee ownership. At the same time, these tax principles tend to ease the credit crunch for some farmers by attracting equity capital into agriculture.

Policy Options

A wide array of policy options have been discussed in these leaflets -- too many to treat each option separately in this summary article. Therefore, an attempt is made to boil the options down into ten relatively discrete and homogeneous groups having the same general goals and consequences:

- Traditional private sector initiatives including forbearance, liquidation (complete or partial), foreclosure and bankruptcy.
- Credit subsidies to farmers including interest and principal buy-downs, and expanded government credit to farmers. Foreclosure moratoria are also included in this category because, in effect, they are a subsidy to the farmer from the lender -- whether a private or government financial institution.
- Credit subsidies to lenders include loan guarantees and government credit. Government subsidies sometimes also involve concessions from lenders to lower borrower interest rates or the principle on loans.
- Subsidies to farmers in the form of price and income supports including the Agriculture Conservation Corporation idea which would support the price of farmland.
- Increased tax benefits to agriculture.

- Reduced tax benefits to agriculture.
- Macroeconomic policies designed to balance the federal budget and place proportionate reliance on monetary and fiscal policy tools.
- Development of an additional secondary market for farm credit instruments (Aggie Mae).
- Increased regulation of farm lenders.
- Retraining programs and subsidies to aid farmers making a transition from farming.

Treating Problems Versus Symptoms

Table 2 summarizes the ten policy options in terms of whether they treat symptoms of the farm credit crisis or the problem itself. Note that increased subsidies, whether in the form of interest, price, income or tax concessions, treat only the symptoms of the farm credit crisis. Treating symptoms makes sense as a policy strategy only if the problems are considered to be short-term -- say two to three years in length. Therefore, buying down interest rates or subsidizing farm income may be logical if the crisis is expected to last only a year or two. Such a strategy may be appropriate if, for example, adverse macroeconomic policy is the primary cause of the problem and a change in these policies is expected soon. However, if the primary cause is chronic excess capacity, treating the symptoms only aggravates the problem by discouraging

adjustment. Where the problem is of long-term duration, the need is for strategies that move resources out of agriculture. Traditional foreclosure initiatives, reduced tax benefits, balanced macroeconomic policies, improved financial markets, increased lender regulation and policies that aid in transition from farming represent long-term policy initiatives that indeed treat the problem as opposed to its symptoms.

Consequences of Options

Table 3 provides a summary of some of the major consequences associated with each of the general credit policy options. While yes and no are self-explanatory, a -- means that the effect is indeterminant. For example, while a balanced macroeconomic policy would reduce the need for farm subsidies, it would not adversely affect farm numbers. However, macroeconomic policy has no apparent effect upon the credit practices of lenders. It is important to note that strategies which treat symptoms of the farm credit crisis generally impede the adjustment process. Price and income supports or credit subsidies are excellent examples. However, those that treat the problems also tend to put farmers out of business. An exception to this rule is a balanced macroeconomic policy which has no apparent negative consequences for agriculture.

Table 2. Extent to which general credit policy options treat symptoms of the farm credit crisis or the problem itself.

Policy Option	Treats Symptom (S)
	Treats Problem (P)
Traditional private sector initiatives	P
Credit subsidies to farmers	S
Credit subsidies to lenders	S
Price and income supports	S
Increased tax benefits	S
Reduced tax benefits	P
Balanced macroeconomic policy	P
Secondary farm credit market	P
Increased regulation of lenders	P
Aid exit from farming	P

Table 3. Consequences of general credit policy options.

Policy Option	Reduces Subsidies and Government Costs	Reduces Farm Numbers	Lowers Production Costs	Rewards Sound Investment Practices	Rewards Sound Credit Practices	Adjusts Supply- Demand Balance	Improves Financial Market
Traditional private sector initiatives	Yes	Yes	Yes	Yes	Yes	Yes	---
Credit subsidies to farmers	No	No	Yes	No	No	No	No
Credit subsidies to lenders	No	No	Yes	No	No	---	No
Price and income supports	No	No	No	No	No	No	---
Increased tax benefits	No	No	Yes	No	---	No	---
Reduced tax benefits	Yes	Yes	No	Yes	---	Yes	---
Balanced macroeconomic policy	Yes	No	Yes	Yes	Yes	Yes	Yes
Improved financial market	Yes	---	---	---	Yes	---	Yes
Increased regulation of lenders	Yes	Yes	---	---	Yes	Yes	Yes
Aid exit from farming	No	Yes	---	---	---	Yes	---