

Farm Finance



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Agricultural Boom & Bust: Will History Repeat in the 1990's?

The recent deterioration in commodity prices following several years of healthy gains in farmland values and rising debt levels has led to speculation that agriculture could be entering a contraction similar to that of the 1980's. Over the past 2 years, prices for many key agricultural commodities (especially grains, oilseeds, and hogs) have fallen dramatically. In addition, preliminary 1998 real net farm income is lower than for 4 of the preceding 5 years, and the 1999 forecast indicates further deterioration. Because lenders may balk at extending loans to agricultural borrowers who cannot demonstrate solid repayment ability, some have characterized the anticipated downturn as a "credit crisis." But whether reduced incomes create financial hardship depends on initial farm financial strength, how far income falls and how long it remains low, and the decisions that farmers and lenders make as events unfold.

The 1970's Boom Became The 1980's Bust

The Boom. Commodity prices surged from 1973 through 1975 and remained high through 1979. During this period, farm income, rate of return on assets from current income, and rate of return from

real capital gains were unusually large. Farmers responded strongly to perceived profit opportunities from increased production by bringing more land under cultivation and by investing in productivity-increasing technologies.

One factor that contributed to the initial surge in farm income was the increase in effective demand abroad for U.S. agricultural products. This increase stemmed partly from devaluation of the dollar following a major change in foreign exchange valuation—in 1972 the U.S. abandoned the fixed exchange rate regime that had been in place since the end of World War II—and partly from adverse weather conditions in competing production regions overseas. For example, exports to the Soviet Union increased when the Soviets began to purchase feed to offset domestic production shortfalls, instead of cutting livestock herds.

Government policies during the 1970's amplified the supply response. Along with many other governments concerned about foreign exchange or food security issues, the U.S. expanded support for agricultural production. Federal commodity programs encouraged higher production and indirectly encouraged increased farm borrowing. By setting price floors, commodity

programs reduced risk associated with falling prices, making farm income a more reliable source for debt repayment. Price floors were raised during the boom period, when the increase involved no immediate increase in Federal budget expenditures, further supporting farm income and farm borrowing.

Increased farm income, rising inflation, readily available credit, and low to negative real interest rates led to sustained increases in farmland values and in outlays for farm machinery and equipment. Because financial assets lose value with inflation while real assets gain value, rising inflation encourages investors to shift their holdings from financial to real assets. Such a shift exacerbates the loss for financial assets but strengthens the gain for real assets, including farmland.

Real interest rates—nominal interest rates less the rate of inflation—were low or negative during much of the 1970's. Low real interest rates encourage debt financing, since debt can be repaid in the future with cheaper, inflated dollars. From the beginning of the boom in 1972 through the peak in land values in 1981, farm debt grew 15 percent faster than assets. Although the increase in asset values was widely dispersed, the increase in debt was concentrated among farmers who were financing new purchases of land or equipment. With strong equity, rising incomes, and increasing collateral values during the boom years, most farmers had little trouble getting loans. Given the strong farm financial picture, lenders at that time fully expected to recover both the balance due and all foreclosure costs in the event of default.

The Bust. By the end of 1970's, concern was mounting about declining farm liquidity and about indications of farmers' vulnerability to cash flow or interest rate shocks. For example, interest and principal payments had grown from less than one-sixth (16 percent) of gross cash income in the early 1970's to almost

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one-fourth (24 percent) of gross cash income by 1980. Nevertheless, farmers, lenders, and economists were slow to realize the extent of needed adjustments. Instead, many who anticipated a contraction argued that it would be short and would involve shifting income from asset accumulation to debt service, but that asset values would remain sound.

By the early 1980's, many of the factors that spurred the boom were reversing. Commodity prices fell, input prices and interest rates rose, export demand turned down, and farm income declined. Many farmers who had bought land or made other long-term investments—especially those who used debt financing—now had difficulty meeting their other financial obligations or even making a living.

Nominal interest rates rose sharply in 1980, peaked in 1981, and remained high for several years, the result of inflation-fighting policy decisions by the Federal Reserve Board. High interest rates made dollar-denominated investments attractive and caused the foreign exchange value of the dollar to appreciate, making U.S. goods relatively expensive for purchasers abroad. The monetary tightening successfully curbed the double-digit inflation of the late seventies—inflation as measured by the Consumer Price Index peaked at 12.5 percent in 1980 and fell below 2 percent by 1986. But the high value of the dollar along with high price floors for program commodities hurt U.S. agriculture's international competitiveness and pressured farm incomes.

The fall in real farm income and the increase in real interest rates altered the economic environment that had made debt-financed investment in farmland and other nonfinancial assets attractive, delivering a double whammy to heavily indebted farmers. Because the value of capital assets is directly related to the cash flows they generate and inversely related to interest rates, falling incomes and rising interest rates pressured farm asset values, which fell dramatically from 1981 through 1986.

Lender Stress Followed Farm Loan Defaults

Like the agricultural crisis, the crisis among lenders—banks, thrifts, and the Farm Credit System (FCS)—had its roots in the 1970's. Increased instability in banking, as in agriculture, arose from the change in the exchange rate regime, rising inflation, volatile nominal interest rates, and anti-inflationary Federal Reserve Board monetary policies. And as in agriculture, there were few obvious signs of trouble for lenders in 1980, when small banks (those with less than \$100 million in assets) and FCS institutions were enjoying good rates of return on assets and returns on equity, low loan charge-offs, and improving equity-to-asset ratios.

According to the Federal Deposit Insurance Corporation (FDIC), most of the bank failures in the 1980's—a period of more bank failures than any decade since the 1930's—were precipitated by four regional and sectoral recessions, including the one in agriculture. Banks were vulnerable to these recessions because they tended to serve relatively narrow geographic markets, but not all regional recessions were accompanied by bank failures. Generally, failures were associated with recessions in sectors that had experienced a fairly sustained expansion and had grown faster than the national economy. Agriculture was such a sector. In contrast, recessions that were preceded by slow growth (such as in the rust belt) did not lead to many failures.

Recessions that caused problems for lenders were similar in that each followed a period of rapid expansion, speculation that contributed to the runup in asset values, and wide swings in demand for real estate that contributed to the severity of downturns. But the behavior of agricultural lenders and their regulators arguably accentuated the sector's boom and aggravated the 1980's decline. Credit helped fuel the boom, and when the down cycle hit, some borrowers inevitably defaulted, weakening lenders.

Lenders who found themselves in trouble had generally not been in a seriously weak condition in the years preceding the recessions. But lenders who failed had often assumed greater risks than the sur-

vivors, measuring risk as the ratios of total loans and nonresidential real estate loans to total assets. Still, only a small fraction of lenders with high risk exposures failed. Mitigating factors included strong equity and reserve positions, more favorable risk/return tradeoffs, superior lending and risk management skills, and proactive changes in risk policies before losses became severe. Lenders that relaxed credit standards, entered markets where management lacked expertise, made large loans to single borrowers, or experienced loan growth that strained their internal control systems or back-office operations were most likely to fail. These factors were as much associated with distress among FCS lenders as with distress among commercial banks.

The greater a lender's exposure to agriculture, the more problems arose from defaulting farm loans. Life insurance companies and large banks were least affected because of the relatively small share of their assets related to agriculture. Even many rural banks were adequately diversified to survive the downturn. Of 5,000 agricultural banks existing in 1981, 328 failed in the next 10 years, but return on equity for agricultural banks never fell below 5 percent, on average, and capital-to-asset ratios were higher on average than at other banks, even improving over the decade. FCS lenders faced greater challenges because their loan portfolios were not diversified either by geography or by industry, and because of organizational and operating inefficiencies.

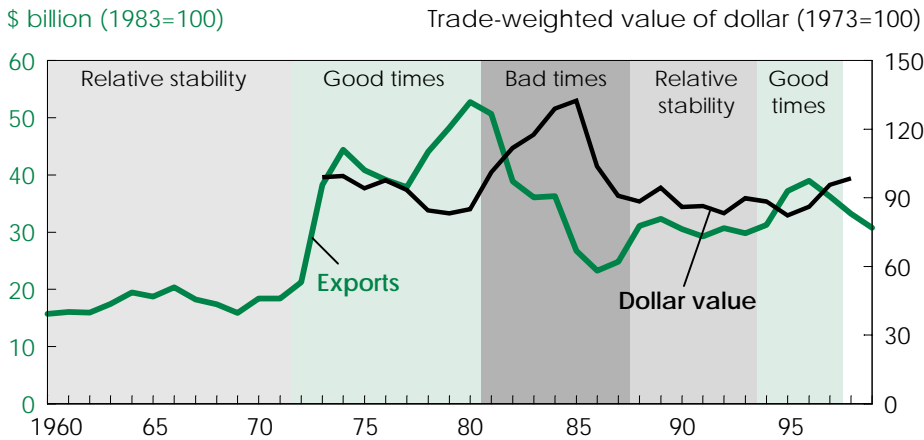
The 1990's: Deja Vu?

Some of the experiences of the past few years are astonishingly similar to events of the agricultural cycle of the 1970's and 1980's. Some of the events and conditions supporting recent gains in farm income and asset values parallel those that occurred in the boom years of the 1970's, starting with the recent up-cycle which followed a pattern of rising agricultural exports during a period of tight stocks that resulted from production controls and unusually bad weather in many growing areas worldwide. This combination, then as now, led to high prices and optimism about future income from farming which along with falling interest rates, supported farmland price increases.

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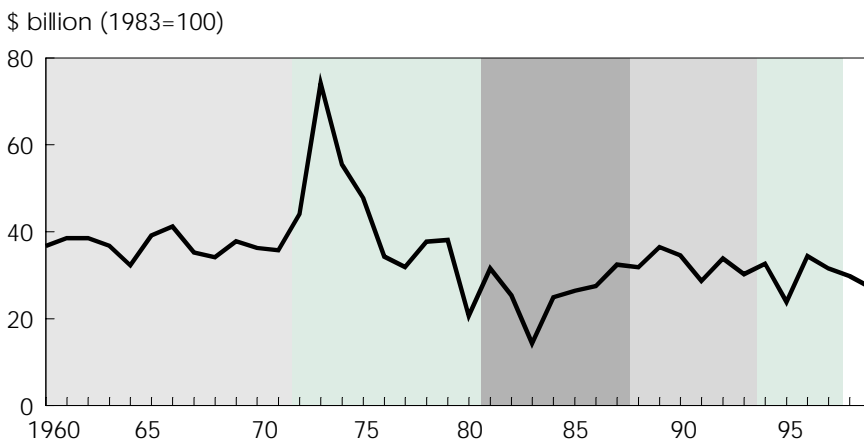
Toward the End of the Early Boom . . .

Real Ag Exports Turned Down as the Dollar Appreciated

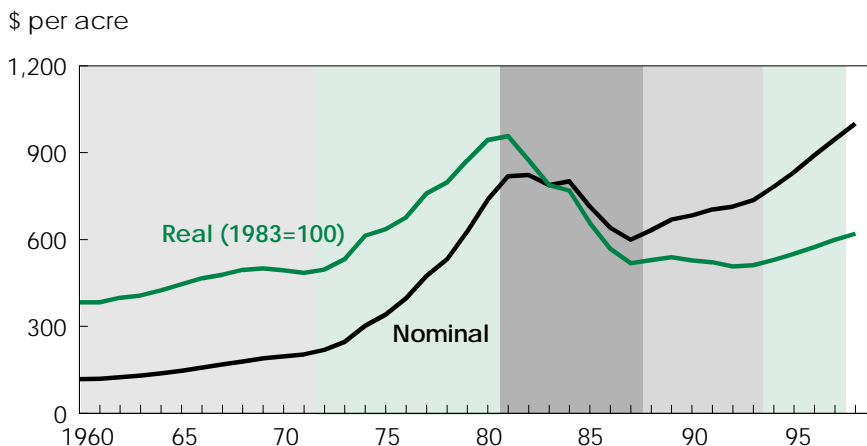


Real trade-weighted value of the dollar before 1973 is not available.
Source: Economic Report of the President for trade-weighted dollar value.

Real Net Farm Income Declined Steeply



Real and Nominal Farmland Values Reached Unusually High Levels



1998 and 1999 forecasts.
Economic Research Service, USDA

Recent increases in farm indebtedness add to the sense of déjà vu. The beginning of the current down-cycle also shows parallels—policies that imposed supply controls on agricultural production have been relaxed, foreign demand has diminished in the face of financial crises that started in Asia, the dollar has appreciated relative to other currencies, and carryover stocks of grains and oilseeds are increasing.

Despite the similarities, many factors are substantially different. In contrast to the early 1980's, the farm sector and its lenders are far less vulnerable to economic instability, because they use leverage more conservatively now than in the 1970's. Today's stable domestic economic environment, strong overall economic growth, and low unemployment in most parts of the country—unlike the stagflation and recession of the late 1970's and early 1980's—make income from off-farm employment a reliable alternative source of debt repayment capacity for farm families in many parts of the country.

Monetary tightening by the Federal Reserve Board and vulnerability of farmers and lenders to interest rate changes were defining characteristics of the 1980's crises. Although indicators of farm sector financial strength have weakened, increases in nominal interest rates—likely to be small compared with those of the 1980's because inflation is relatively low—are not the threat they were in the early 1980's. Currently, interest and principal payments consume only 14 percent of farmers' gross cash income, compared with 22 percent in 1979 and 28 percent in 1983. Even though low commodity prices and farm incomes create concerns about loan repayment ability, low nominal interest rates have continued to support asset values, including farmland, rather than pressuring them.

Both the duration and amplitude of the recent up-cycle are compressed compared with the 1970's. Nominal net farm income rose 30 percent in 1972 and 77 percent in 1973 after a long period of stability. Over the next 5 years, real net farm income averaged 16 percent higher than during the 5-year period before the 1972 increase. In 1996, nominal net farm income rose 48 percent from 1995, but 24 percent

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over the average of the previous 5 years, and current projections for 1998/99 indicate this increase has not been sustained for even a few years.

Growth of real debt, while supported by a similar combination of factors, does not reach the magnitude of the 1970's. Much less of the recent increase in farm assets has been debt financed, indicating that the increase in farmland values has led to less borrowing against equity. From 1990 to 1998, nominal farm assets increased 34 percent, while nominal farm debt rose 23 percent. In contrast, debt increased 4 percent faster than assets from 1972 to 1979 and 15 percent faster from 1972 through 1981.

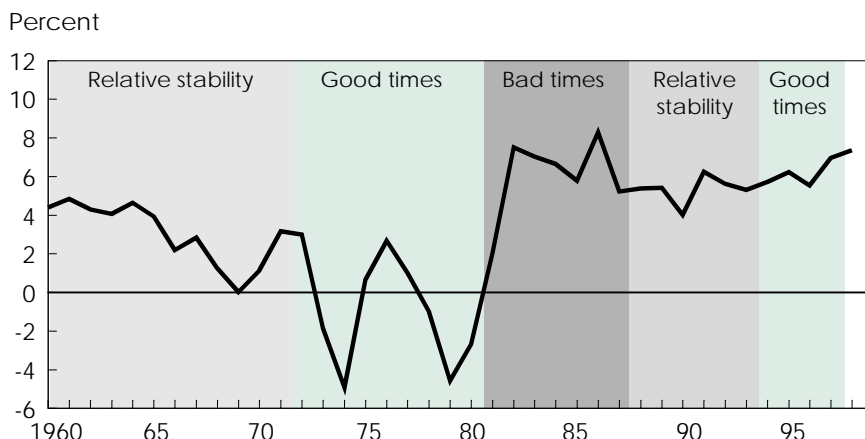
Unlike experts in the 1970's and early 1980's, farm financial advisers in the 1990's have been more temperate regarding expanding production and increasing debt loads. Instead, farm economists as well as financial regulators have advised farmers to proceed more conservatively. They have consistently warned, for example, that cash from production flexibility contract payments authorized by the 1996 Farm Act would drive up land prices initially, but that land values could fall as these front-loaded payments tapered off, and could result in loss of equity and borrowing capacity.

Overall, farm lenders are less vulnerable to downturns in the sector than they were in the 1980's. Many lenders have higher capital ratios, better quality capital, and better internal controls than during the 1970's and 1980's. Consolidation and financial innovations (securitization, third party guarantees, options, and swaps) have enabled many lenders to reduce their risk exposure to local economic conditions and interest rates movements. Regulatory changes, including risk-based capital standards, risk-based insurance premiums, and prompt corrective action increase the costs to lenders of allowing deterioration of credit quality in their loan portfolios. Lenders are also subject to closer scrutiny now from Federal regulators.

Conditions in the farm sector in the 1990's in some respects resemble those that contributed to the boom and bust cycle of the prior two decades. Reminiscent are changes in the value of the dollar,

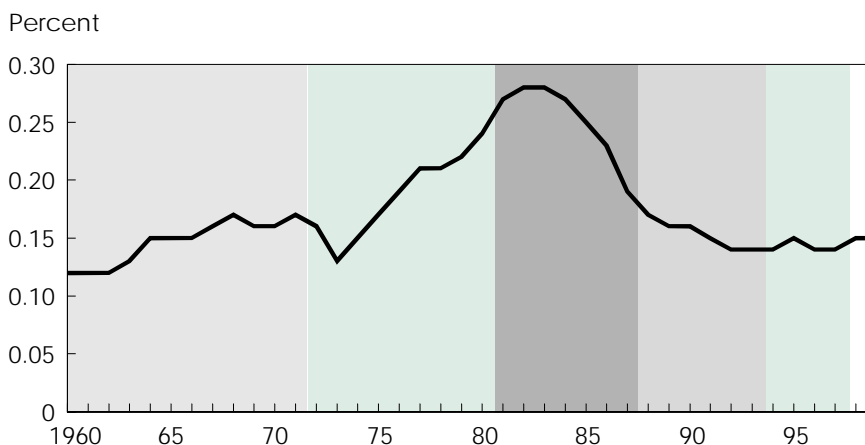
In the 1990's . . .

Real Agricultural Interest Rates Have Remained Relatively High



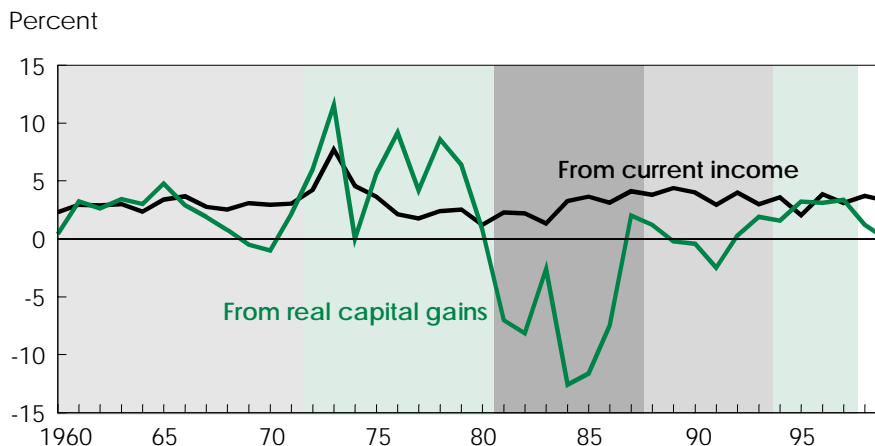
Real interest rate is negative when inflation exceeds nominal interest rate.

Ratio of Debt Service to Farm Income Is Low



Debt service ratio is the share of gross cash farm income used to pay principal and interest on loans.

Rate of Return on Farm Assets Has Been Relatively Stable



1998 and 1999 forecasts.
Economic Research Service, USDA

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the role of agricultural exports, weather-related problems followed by a surge in production, and sustained increases in farmland values and farm indebtedness.

But significant differences exist: the role of interest rates and inflation, more conservative attitudes toward borrowing for both farmers and lenders in recent years, and the more limited duration and amplitude of the recent up-cycle.

Downturn Could Intensify

While many of the conditions that led to the dramatic fall in commodity prices during 1998 are similar to those that produced agriculture's contraction in the 1980's, the differences that exist point to a sector better able to withstand adversity and less likely to be as dramatically

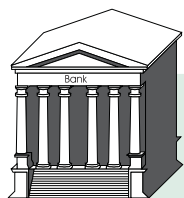
tested. Greater domestic economic stability, a less pronounced expansion, and more conservative borrowing and lending should help reduce the magnitude of any contraction.

Still, a number of factors could aggravate the current downturn. For example, some lucrative and traditional off-farm employment opportunities may disappear, especially in energy producing states. Changes in government policies could strengthen the dollar, affecting exports, or bring on greater agricultural production, possibly pressuring prices. Favorable weather here or abroad could also increase price pressure on major commodities. Continued demand shocks in food importing countries, or weakening of currencies of other agricultural exporters like Canada, Australia, and Brazil, could further erode

agricultural exports. Changes in agricultural lending or their regulation could affect lenders' willingness to lend to creditworthy farmers during a contraction.

The duration of the current contraction will be a key factor in determining successful strategies for farmers and lenders. Farmers may survive a short-lived contraction by liquidating inventories or delaying capital replacement in order to shift income or accelerate cash flows. However, if incomes do not improve, these techniques tend to increase liquidity problems and dissipate equity. A more drawn-out contraction, therefore, calls for more aggressive debt reduction and possibly asset liquidation. **AO**

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FARM CREDIT DEMAND IN 1999 WHAT ARE THE PROSPECTS?

Read about it in a forthcoming issue
of *Agricultural Outlook*

