RISING FARM DEBT: INCOME AND ASSET VALUE CONSIDERATIONS

James Ryan
Agricultural Economist, Economic Research Service
U.S. Department of Agriculture

Introduction

Supported by the continuing high level of net cash income in 2005, farm business asset, debt, and equity values are expected to rise through the end of the year. In a generally healthy agricultural economy, these financial measures reflect farm investors' and lenders' collective decisions about the longer-term profitability of farm investments. The improvement in farm business balance sheets in the last few years is evidenced by rising equity values and lower debt-to-asset ratios. Increases in debt levels have been more than offset by farm asset value gains, which have been driven largely by rising farmland values. Within the framework of a strengthening balance sheet, nominal farm business debt has gradually risen to record levels.

Total farm business debt is anticipated to exceed $213 billion by the end of 2005, up from about $205.9 billion in 2004 (figure1). Farm business debt has been rising steadily since the end of 1992, and will have increased almost $82 billion from the beginning of 1993 through year-end 2005. This 61-percent increase in farm debt translates into an average annualized growth rate of 3.8 percent over the 13-year period. In 2002, farm debt surpassed its previous nominal record level of $188.8 billion, attained in 1984.

The rate of debt accumulation during the last 13 years is modest compared with a similar time period prior to 1984. During 1971-1984, farm debt more than tripled, rising from less than $53 billion to almost $189 billion, growing at an annualized rate of more than 10 percent. Farm debt reached a level that could not be adequately serviced by income subsequently earned in farming, and it could not be paid down by the orderly liquidation of farm assets. In what is popularly called the "farm financial crisis of the 1980's," farm debt was reduced by nearly $58 billion by the end of 1989, with lenders' loan losses absorbing nearly $20 billion of that decrease. In the following years, lenders became more judicious in extending credit, and farmers became more cautious in incurring debt. Nominal farm debt did not regain its 1984 level for more than 18 years. For a variety of reasons, the recent rise in farm debt is not likely to precipitate a recurrence of widespread farm financial problems.

While nominal farm business debt has reached new record levels annually beginning in 2002, farm debt growth appears much less problematic when adjusted for inflation. The GDP Implicit Price Deflator indicates an annualized inflation rate of 4.1 percent during 1970-2005. In real terms, 2005 farm debt is only 24 percent higher than at the end of 1992, and currently is 37 percent lower than the peak, in real terms, that it reached in 1981 (figure 2). Adjusted for inflation, farm business debt is at its highest level since 1986, but it is lower than its level during 1973-1986. In real terms, farm business debt in 2005 is about the same as it was in 1972.

The remainder of this paper addresses why the current rise in farm debt is not likely to be problematic. Debt levels are first considered within the context of the balance sheet, in both nominal and real terms. Farmland values account for more than 80 percent of all farm assets, and strong demand for farmland for nonagricultural uses is addressed as a source of support for asset values continuing to rise relative to debt levels. The farm credit market is mature, and growing competition among primary lenders means that adequate loan funds are likely to be readily available for qualified farm borrowers. The ability of farmers to service debt obligations from current income will be considered, including the contribution that Government payments have made in helping farmers repay debt. Debt service of farm and nonfarm debt will be discussed for farm operators in various USDA farm typology groups.

Farm Balance Sheet

While farm debt has been rising in recent years, the position of debt in the farm balance sheet has remained relatively stable. The value of U.S. farm business assets is forecast to gain 3.6 percent in 2005, surpassing $1.5 trillion for the first time (figure 3). The value of farm assets quadrupled between 1970 and 1980. By the end of 1986, asset values had declined 28 percent, driven largely by falling land values as the sector adjusted to changing economic conditions. Nominal asset values have doubled since 1986, reflecting both a generally improving farm economy and growing demand for farmland for nonfarm purposes. In real terms, the value of farm assets is up 32 percent since 1986, but remains 28 percent below its peak level attained in 1980 (figure 4).

The value of farm real estate accounted for more than 81 percent of all farm business assets at the end of 2004 (figure 5). Machinery and equipment, livestock, crop and inputs inventories, and financial assets combined to constitute less than 19 percent of all assets. The real estate component of the balance sheet has been growing in recent years, a trend that is expected to continue. Farm real estate values are anticipated to increase by 4.5 percent in 2005, following a gain of 6 percent in 2004.

Considering the balance sheet from the credit (liabilities and equity) side gives a somewhat simplistic view of the sources of capital for U.S. farm businesses (figure 6). Only about 14 percent of farm assets were financed by debt at the end of 2004, while equity accounted the remaining 86 percent. Almost three-fourths of farm capital can be attributed to farm real estate equity. These relationships suggest that, though rising, farm business debt remains low relative to the equity values that can be attributed to both real estate and nonreal estate components of the farm assets.

In the farm sector business balance sheet, debt secured by farmland is reported as real estate debt, while loans that are either unsecured or secured by nonreal estate assets are reported as nonreal estate debt. Throughout much of 1970-2005f, farm business debt has been fairly evenly divided between real estate and nonreal estate debt. In recent years, real estate debt has been a growing share of all farm debt (figure 7). Real estate debt is anticipated to rise 5.2 percent in 2005, following a similar increase in 2004. Nonreal estate loan balances are expected to increase less than 2 percent in 2005, after rising 2.5 percent in 2004. Farm business debt was equally divided between real estate and nonreal estate loans at the end of 1997, with each accounting for about $78.5 billion in loan balances. During 1998-2003, real estate debt rose at an annualized rate of 5.3 percent, while nonreal estate loans grew at a more modest 2.3 percent rate. From equivalent starting points of $78.5 billion at the end of 1997, farm real estate debt is expected to approach $120 billion by the end of 2005, while nonreal estate loans are anticipated to near $94 billion.

Despite the recent growth of debt, the debt-to-asset ratio for the farm sector has been relatively stable as increases in farm asset values have offset rising debt (figure 8). Debt-to-asset ratios constructed for the real estate and nonreal estate components of the balance sheet provide an additional view of the relative importance of real estate equity. While farm business debt-to-asset ratios have ranged between 14.1 percent and 15.2 percent since 1992, the farm real estate debt-to-asset ratio has been below 10 percent, and trending downward, throughout 1992-2005f.

Even as farm borrowing has gradually shifted toward real estate debt, the real estate debt-to-asset ratio has decreased. As a result of farm real estate values rising faster than farm mortgage debt, the degree of farmland leverage has declined slightly. This has provided farmland owners with an added equity cushion to lessen the impact of potential short-term declines in income or asset values. The relatively slow rise in the value of nonreal estate assets has resulted in the nonreal estate debt-to-asset ratio rising in recent years.

Farmland Values

Farm real estate values are expected to remain strong through the end of 2005. Historical high nominal net cash income, improvement in the general economy, and a robust housing market are anticipated to support further growth in farm real estate values, though at a rate slower than the annualized gains of 5.85 percent over 1999-2004. Favorable mortgage interest rates have aided growth in the housing sector over the last few years, resulting in strong demand for land for urbanization purposes. Despite the recent lowering of capital gains tax rates, owners of land being converted to urban uses may still find it advantageous to defer taxation of capital gains on sales of their properties. Tax deferred exchanges allow metropolitan area sellers to purchase much larger agricultural tracts in more remote regions, supporting farmland values outside of urban areas. Relatively low interest rates in 2004 contributed to the strength of the second-home market, and boosted demand for land in recreational areas. The anticipated moderate rise in long-term interest rates in 2005 is not expected to curtail nonfarm demand for agricultural land. Implementation of the 2002 Farm Act, which reduced uncertainty concerning future farm program payments, has also been a factor contributing to recent farmland value gains in more remote agricultural areas.

Land value data collected in USDA's 2004 June Area Survey indicated that U.S. farmland value per acre increased 7.1 percent, on average, between mid-2003 and mid-2004 (figure 9). States with per acre land values growing at rates above the national average were in the upper Midwest and along the Atlantic Coast. Recent surveys of bankers by the Federal Reserve Banks of Minneapolis, Chicago, Kansas City, and Dallas also indicate land values in regions served by their banks have continued to rise through the end of the third quarter of 2004.

A strong housing market suggests that demand for additional agricultural land for residential development is likely to continue to support farmland values. The Office of Federal Housing Enterprise Oversight (OFHEO) prepares a Housing Price Index (HPI) based on resales and refinancings of existing homes with current and/or previous Fannie Mae and Freddie Mac loans. The most recent HPI indicates a 13-percent annual increase in U.S. home prices in the year ended September 30, 2004 (figure 10). While Nevada, California, Arizona, Florida, and States in the upper Northeast experienced housing price appreciation rates higher than the national average, HPI growth rates throughout the U.S. suggest that housing prices may be supporting agricultural land values, even in less urbanized areas.

Data reported in USDA's annual Agricultural Resource Management Surveys (ARMS) suggest that the farm households' residences are an important component of real estate assets owned by the operation.

Respondents to the 2003 ARMS (the latest survey for which data are available) indicated that the value of the operator's dwelling accounted for almost 18 percent of the value of all real estate assets (figure 11). The dwelling value share of real estate varied among USDA farm typology groups. Small family farms that primarily serve as rural residences accounted for about 62 percent of all family farms, and reported that the operator's dwelling represented more than 26 percent of total farm real estate. The dwelling share of the value of real estate was 14 percent for intermediate farms, and 6 percent for commercial farms, those with sales greater than $250,000.

Farm Debt and Agricultural Lenders

Commercial banks supplied about 40 percent of the farm business credit at the end of 2004, while the Farm Credit System (FCS) provided about 30 percent (figure 12). Individuals and others provide about 21 percent of farm debt, primarily through seller financing of farm real estate transactions, and through machinery manufacturers and input suppliers provision of credit as an inducement to product sales. Life insurance companies provide about 6 percent of total farm business debt through mortgages secured by farmland. The Farm Service Agency direct lending programs supply the remaining 3 percent of total debt.

While market shares have varied over time, as specific lenders have become more or less involved in agricultural lending, banks and the FCS have jointly provided about 60 percent of farm credit since the early 1980s (figure 13), and have been aggressive competitors in most areas of the country. At the end of 2004, the FCS was the primary lender in farm real estate markets, with a 37 percent market share, while banks, providing 48 percent of nonreal estate debt, were the principal lenders in that market.

Viewing farm mortgage market shares over the much longer period of 1910-2004f, FCS, banks, and life insurance companies have each been the principal provider of farm real estate debt at different points in time (figure 14). The FCS is a government-sponsored enterprise (GSE) that was established in 1916 to improve credit availability to farmers and ranchers, a group perceived at that time to have limited access to affordable credit, especially long-term mortgage loans. Through the years, FCS has expanded credit services to include loans for seasonal production and nonreal estate purposes, cooperatives, and rural residences.

The FCS first became the primary provider of farm mortgages during the 1930s, when such credit was in short supply from other sources. Life insurance companies were the dominant provider during the 1950s and 1960s. In recent years, farm mortgages have been a declining portion of the total mortgage portfolios of life insurance companies. Banks' farm mortgage market share has risen rapidly since the early 1980s, as least partially due to banks seeking farmland as additional security for other types of loans. Banks briefly passed the FCS as the principal farm real estate debt provider in 2000, but the FCS has since regained a 4-point market share margin.

On July 30, 2004, Rabobank Group, a Netherlands-based cooperative bank with a growing presence in U.S. agribusiness and nonreal estate lending, offered to purchase Farm Credit Services of America (FCSAmerica), an Omaha-based FCS Agricultural Credit Association. FCS America is an important provider of long-term credit to farmers and ranchers in Nebraska, Iowa, South Dakota, and Wyoming, and provides about 3 percent of all U.S. farm business debt, as measured in the USDA farm sector accounts. The Rabobank acquisition of FCSAmerica would have been the first purchase of a GSE by a private entity. For a variety of reasons, the agreement was terminated on October 21, 2004. While this particular acquisition failed to materialize, it signals rising competition among farm lenders, especially among those seeking to provide an enhanced range of financial services to their farm borrowers.

Farm Operator Household Debt

While this paper has focused on rising farm business debt, ARMS data suggest that nonfarm debt may be a growing factor in the balance sheets of many farm households. ARMS data indicate the financial complexity of today's family farms: households other than the operator's have an ownership interest in assets of the family farm, and the farm operator household also invests in assets, and incurs debt, unrelated to the family farm. For many family farm households, nonfarm debt may be more problematic than farm debt (figure 15).

While 38 percent of all family farms reported farm business debt at the end of 2003, almost 53 percent reported nonreal estate debt, with two-thirds reporting some combination of farm and/or nonfarm debt. The share of farms reporting farm debt increased with larger family farm typology groups: farm debt was reported by 32 percent of rural residences, 45 percent of intermediate farms, and 71 percent of commercial farms. Differences in the share of farms reporting nonfarm debt were less pronounced, ranging from 45 percent of intermediate farms to 56 percent of rural residences.

Farm business debt was about 59 percent of 2003 total family farm household debt, with nonfarm debt accounting for the other 41 percent (figure 16). The farm/nonfarm composition of debt varied across farm typologies. Rural residences reported that only 38 percent of household debt was farm business debt, with the remaining 62 percent due to nonfarm borrowing. Intermediate and commercial farms indicated larger shares of household debt could be attributed to the farm business: about 66 percent of debt for intermediate farms, and 85 percent of debt for commercial farms.

Farm Operators' Ability to Service Debt

The rise in farm debt in recent years apparently has not resulted in additional financial difficulty for many farm operators, nor has it precipitated widespread financial distress in agriculture. In recent Federal Reserve Bank Surveys, bankers have reported that while land values were generally strong, other financial indicators of their farm borrowers also strengthened in the year ending September 30, 2004: loan demand was higher, loan funds were readily available, repayment rates were higher, and requests for extensions and renewals were lower. All these factors suggest improving farm financial conditions.

Viewed from the farm sector level, farm operators' reliance on available credit lines in 2005 is expected to rise only slightly from 2004 levels. In applying a typical debt coverage ratio standard of 1.25, lenders effectively require that no more than 80 percent of a loan applicant's available income be used for repayment of principal and interest on loans. For farm operators, this income available for debt service (measured as net cash income plus interest for the farm sector) can be used to determine the maximum amount of loan payment the farmer could make. Given current market interest rates and an established repayment period, the maximum debt that the farmer could carry with this loan payment can be determined. Using current bank interest rates and a 7-year repayment period, maximum feasible debt conceptually measures the line of credit that could be available to farmers (figure 17). High net cash incomes and favorable interest rates have contributed to a surge in the maximum amount of debt that farm operators could service with current income during 2003-2005f.

Debt repayment capacity utilization (DRCU), computed as the ratio of actual debt to maximum feasible debt, effectively measures the extent to which farmers can service existing debt using only current income. The projected 2005 rise in net cash income means that operators will generate more available

cash from their farming activities to meet family living expenses, to fund capital purchases, and to service debt loads. If expectations of moderate increases in debt levels and interest rates prove correct, there will be only a slight rise in farm operators' DRCU in 2005 (figure 18). The projected DRCU ratio indicates that, in 2005, farmers can be expected to use about 48 percent of the debt that could be supported by their current incomes. While DRCU is up from its 46-percent level in 2004, it remains low relative to its average of 53 percent levels over 1995-2004.

While Government payments have contributed to farming's high net income levels in recent years, they have also increased the amount of cash that farmers have available to service debt. To an extent, Government payments have served as a substitute for farm operating loans, and may have contributed to the decline in nonreal estate debt relative to real estate borrowings. The importance of Government payments is reflected in a comparison of DRCU with the level it would have been in the absence of government payments. Payments contributed to farmers' ability to service debt most heavily in the 1980s and then again in the late 1990s. DRCU was about 60 percent in 2000, indicating that farm operators had borrowed about 60 percent of the debt that could be serviced with current income. Without government payments, DRCU would have spiked above 83 percent in 2000. DRCU has been less affected by the contribution of Government payments in the last few years.

DRCU measures based on the farm sector accounts consider only farm operators' ability to service farm debt from net cash income from farming. ARMS data allows the construction of farm-level DRCU estimates that incorporate nonfarm income, family living expenses, estimated tax liabilities, and nonfarm debt obligations into the calculation of a comprehensive debt repayment capacity utilization measure. ARMS data for 2003 indicated that family farm operations had farm and nonfarm borrowings of about 50 percent of the amount that they could repay with current income from farm and nonfarm sources (figure 19). DRCU for farming activities suggest that households borrowed about 30 percent of farm debt that could be serviced with current household income. Considering the service of nonfarm debt added 20 percentage points to the DRCU measure.

While total DRCU for rural residences was similar to the U.S. average, the relative importance of farm and nonfarm components of household debt reversed. For these households, nonfarm debt accounted for about 32 percent of the debt that could be serviced with household income, while farm debt added 19 percentage points of the DRCU value. Intermediate farms recorded an average household DRCU of 58 percent, the highest among farm typologies. About 20 percentage points of this value could be attributed to nonfarm debt. Household DRCU calculated for commercial farms illustrates the financial importance of the farming operation to the household: these households reported the lowest average household DRCU, about 45 percent, with only 7 percentage points due to nonfarm debt.

While farm sector DRCU has indicated potential widespread financial problems when it has remained above 60 percent for extended periods, as was experienced in 1977-1986, individual farm operations can sustain higher levels of credit utilization. By drawing on savings, liquidating inventories, curtailing all but essential costs, and making other adjustments individual farmers can remain financially viable as long as DRCU remains below some threshold level.

Using 2003 ARMS data, and arbitrarily setting the threshold level at 120 percent of the amount of debt that could be serviced with current net cash farm income, the share of farms that could potentially experience debt repayment problems has been estimated (figure 20). About 29 percent of family farm households were above the debt repayment threshold at the end of 2003, with 21 percent above the threshold due to farm debt, and 8 percent due to nonfarm debt. Of the 29 percent of rural residence households that exceeded the 120 percent DRCU threshold, 18 percent were due to farm debt, and 11

percent were due to nonfarm debt. Nonfarm debt pushed about 5 percent of intermediate farms and 3 percent of commercial farms over the threshold.

Summary and Conclusions

Farm debt levels have been rising in recent years. However, in real terms and considered within the context of the farm balance sheet, debt levels do not appear to be cause for concern at this point in time. Strong demand for farmland for nonagricultural uses has been a source of support for the farm balance sheet, and the rate of increase in asset values continues to exceed the rate of growth of farm debt. The farm credit market is mature, and lenders report ample credit supplies and improving borrower conditions. While most farm operator households appear to be able to service their farm and nonfarm debt obligations, nonfarm debt may become increasingly burdensome for farm households.

For additional information, visit the balance sheet section of the ERS website at:

http://www.ers.usda.gov/Briefing/FarmIncome/wealth.htm

Rising Farm Debt: Income and Asset Value Considerations

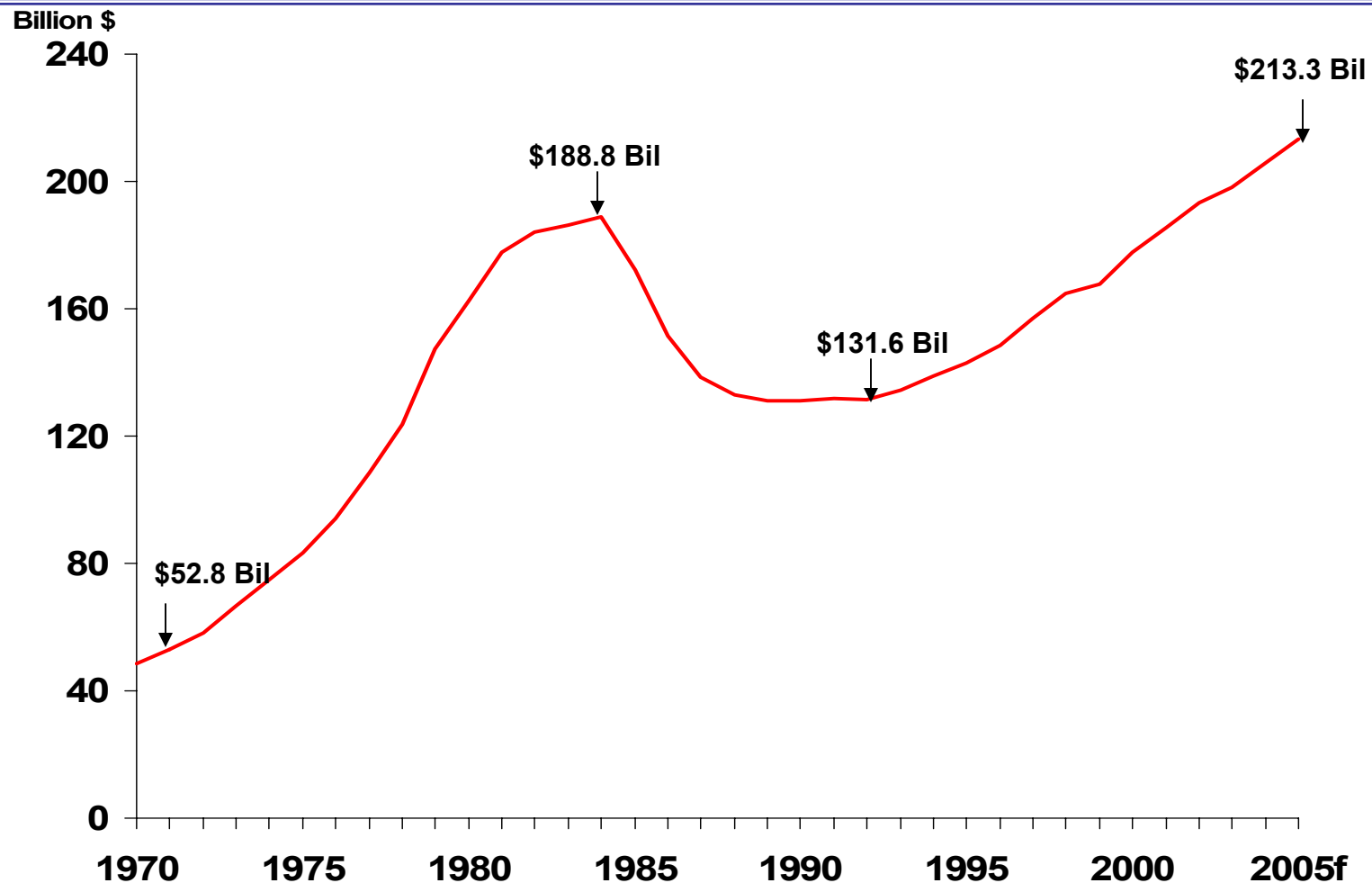
James Ryan

Economic Research Service

Purpose of Presentation

- Farm economy is generally healthy in 2005
- Farm income measures are relatively high
- Farm business balance sheet has improved
  - Farm assets have increased faster than debt
  - Equity values have increased
  - Debt-to-asset ratios have declined
- Farm business debt has risen to record levels
- Are debt levels likely to be a problem relative to:
  - Value of farm business assets?
  - Farmers' ability to service debt?

Total farm business debt, 1970-2005f



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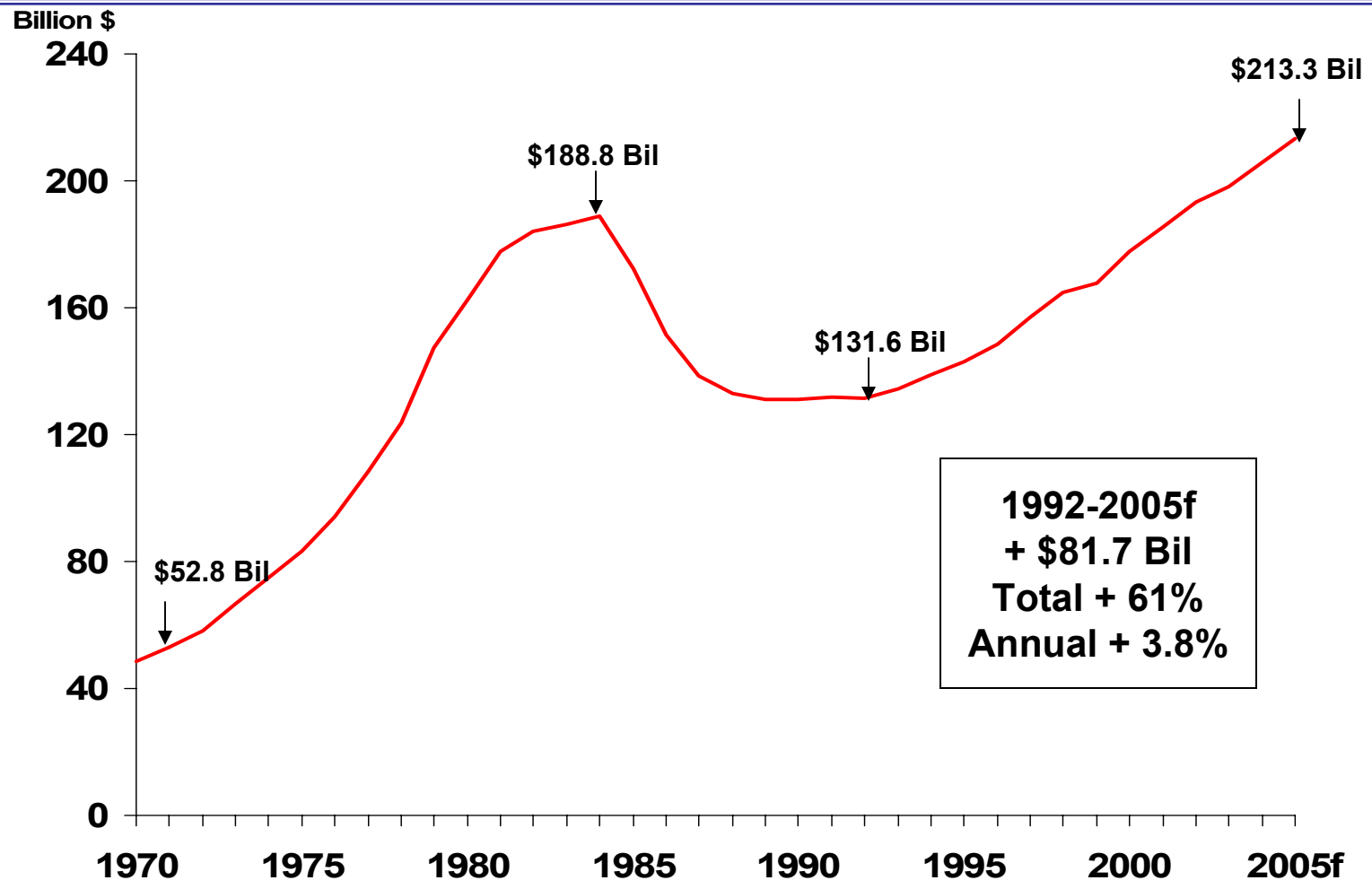
Source: Economic Research Service, USDA

Total farm business debt, 1970-2005f



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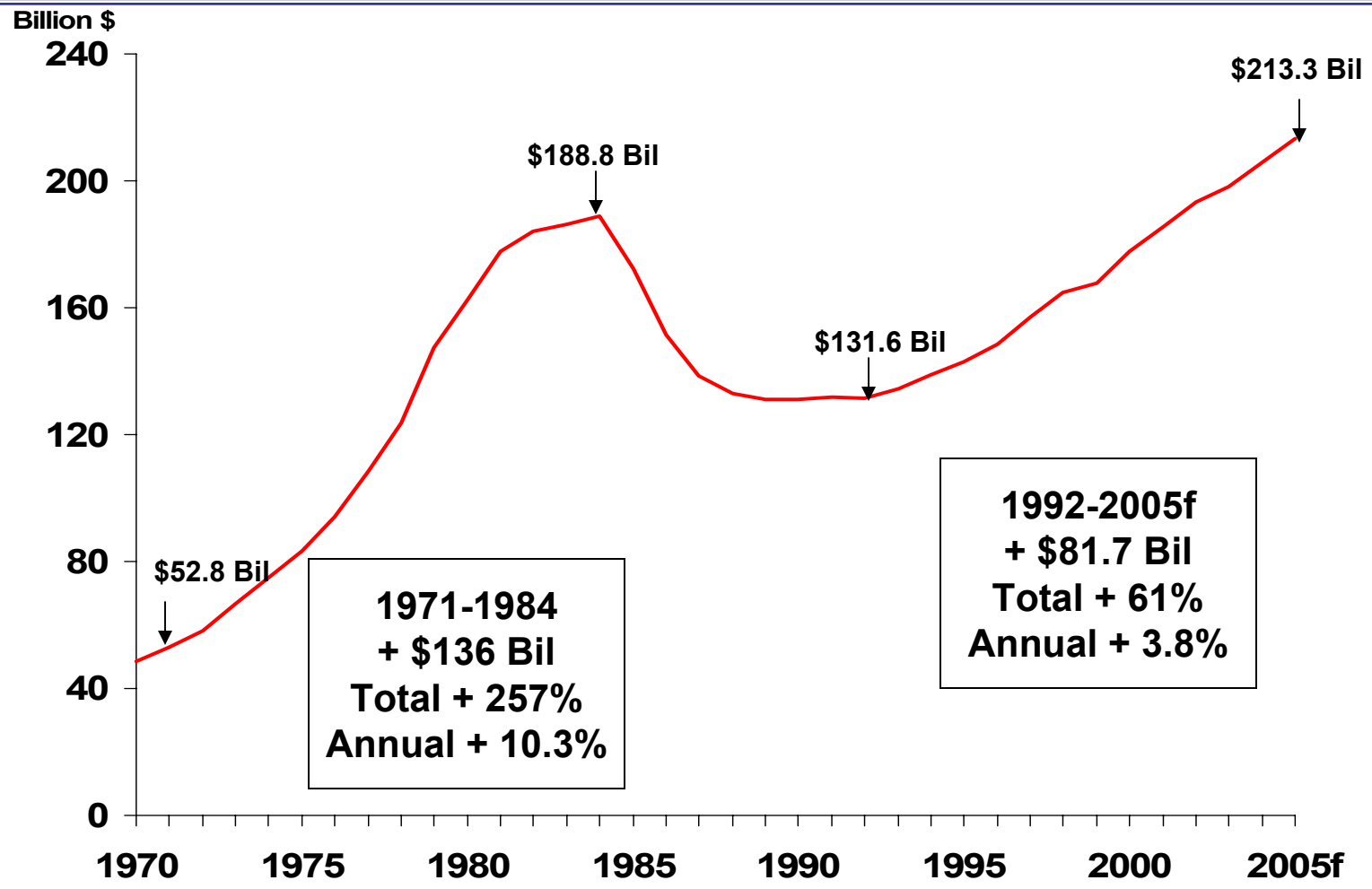
Source: Economic Research Service, USDA

Total farm business debt, 1970-2005f



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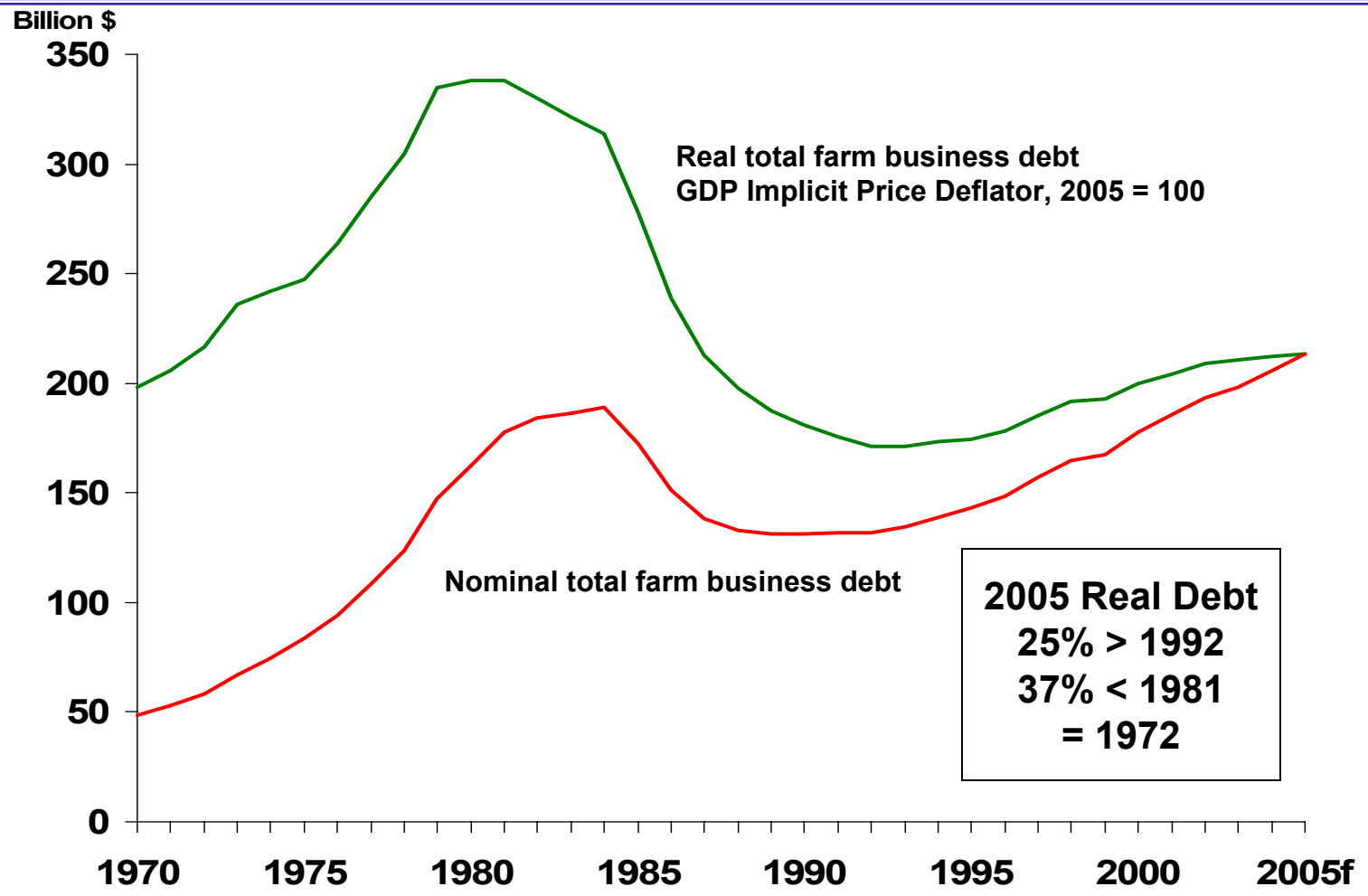
Source: Economic Research Service, USDA

Real and nominal total farm business debt, 1970-2005f



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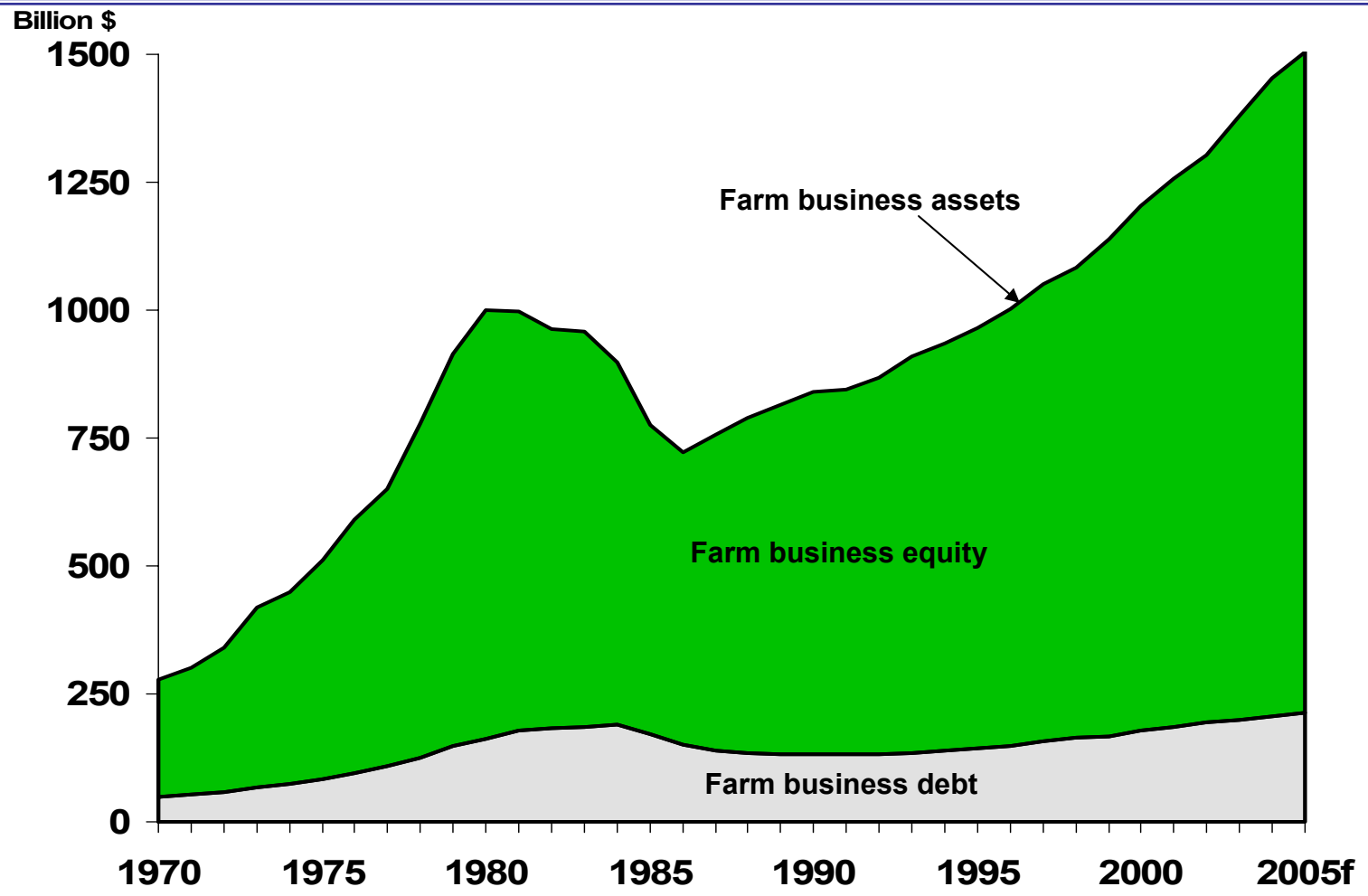
Source: Economic Research Service, USDA

Nominal farm business balance sheet, 1970-2005f



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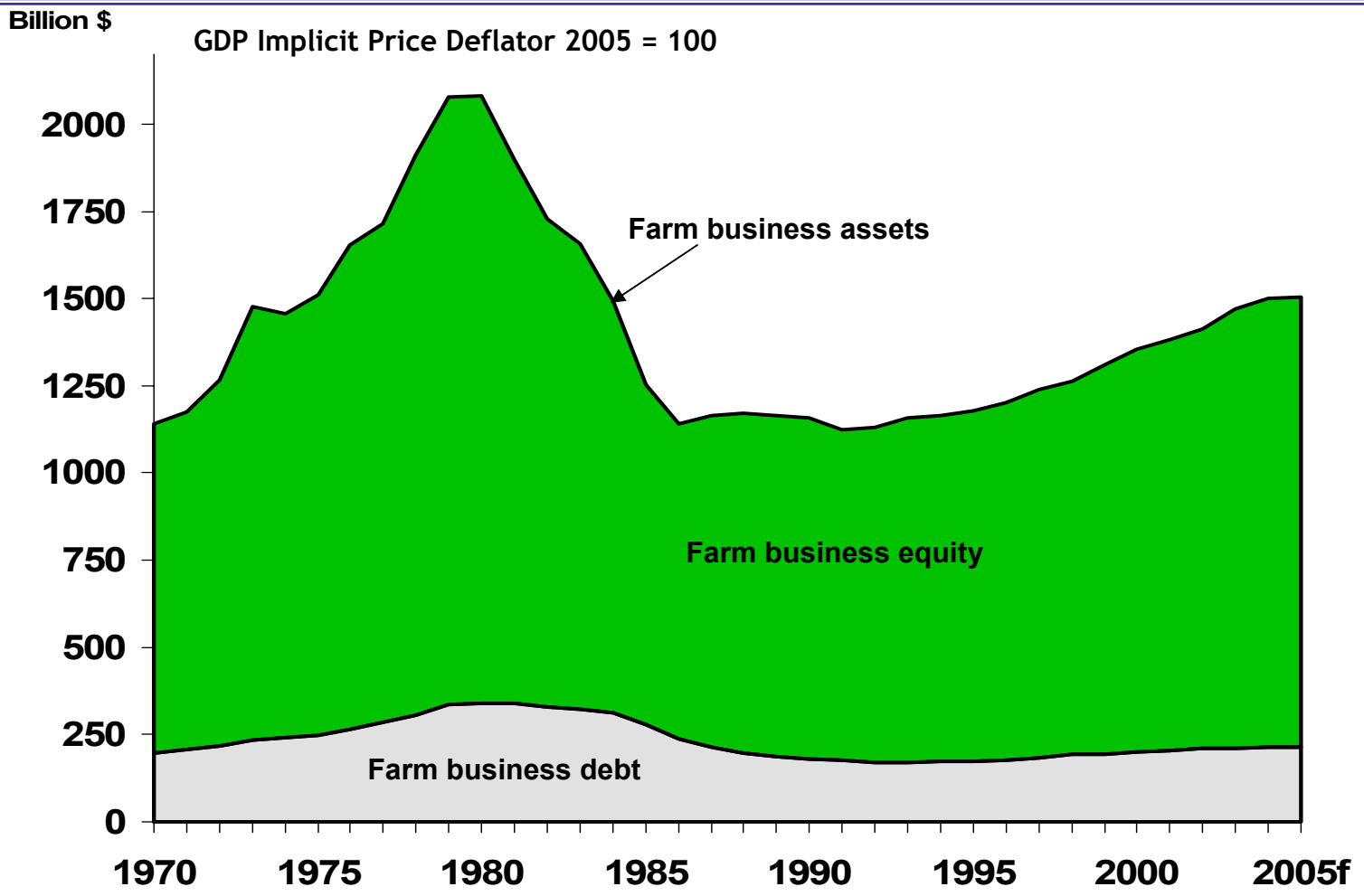
Source: Economic Research Service, USDA

Real farm business balance sheet, 1970-2005f



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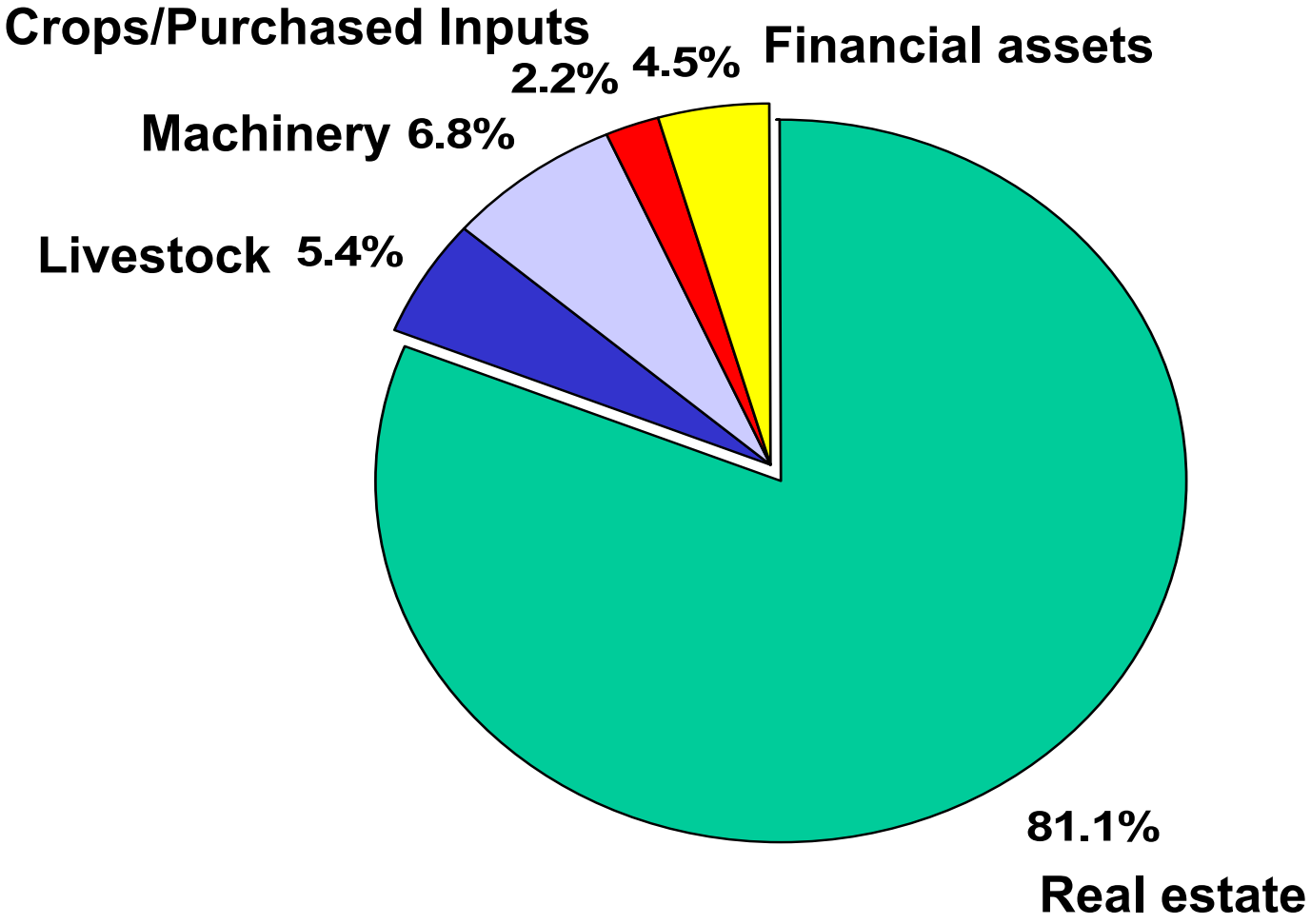
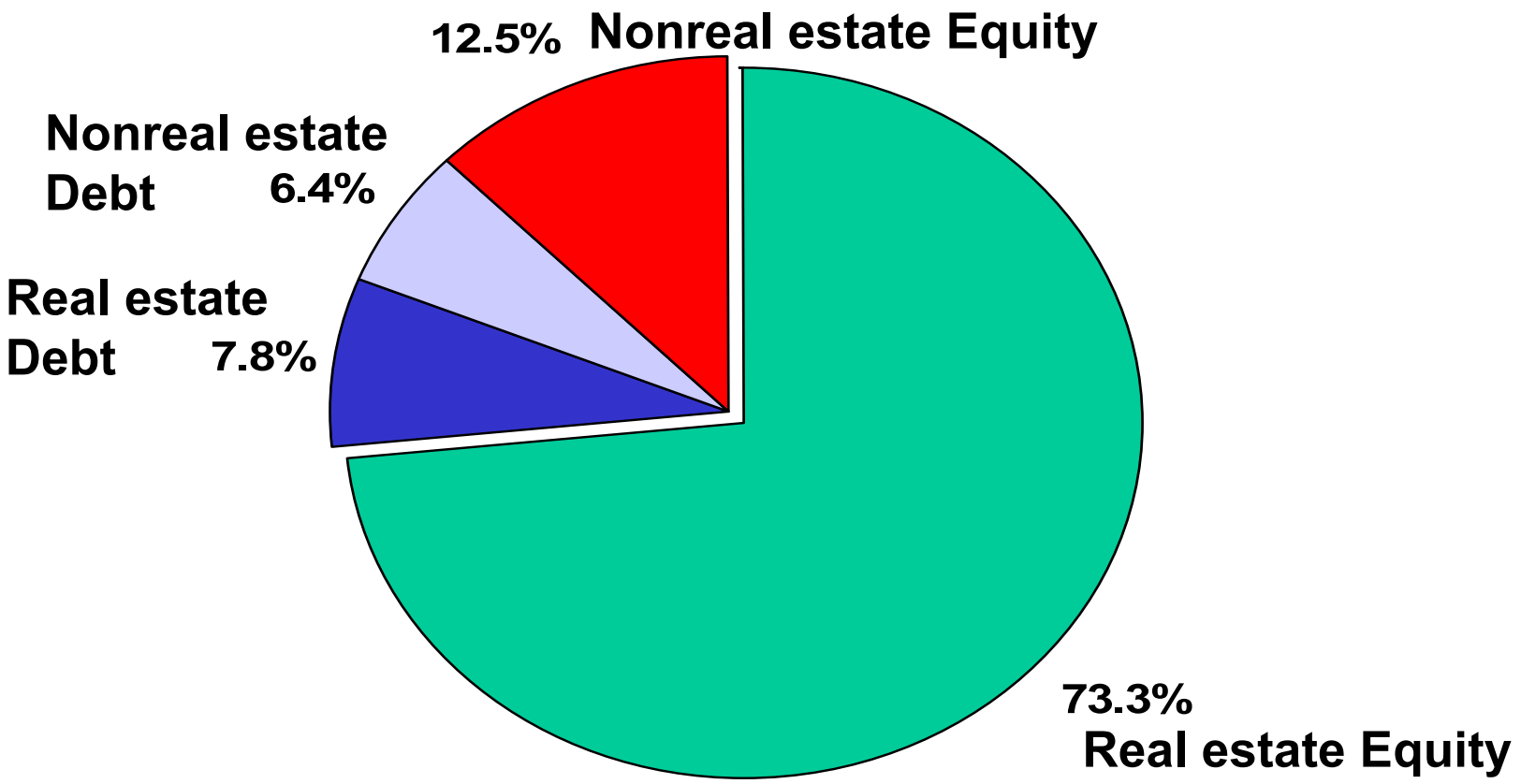
Source: Economic Research Service, USDA

Farm Sector Assets, December 31, 2004F



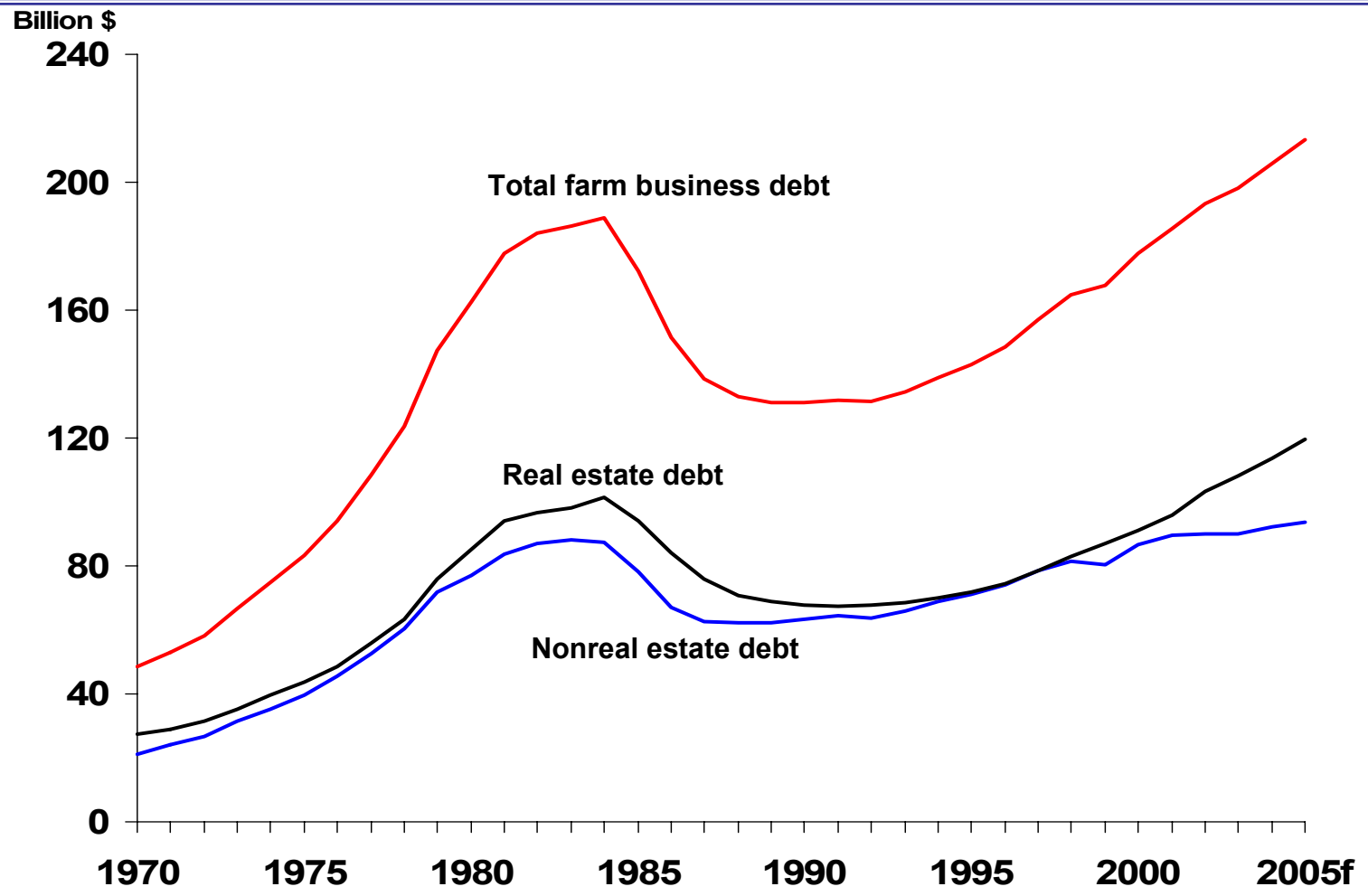
Source: Economic Research Service, USDA

Farm Sector Liabilities and Equity, December 31, 2004f



Source: Economic Research Service, USDA

Farm business debt, 1970-2005f



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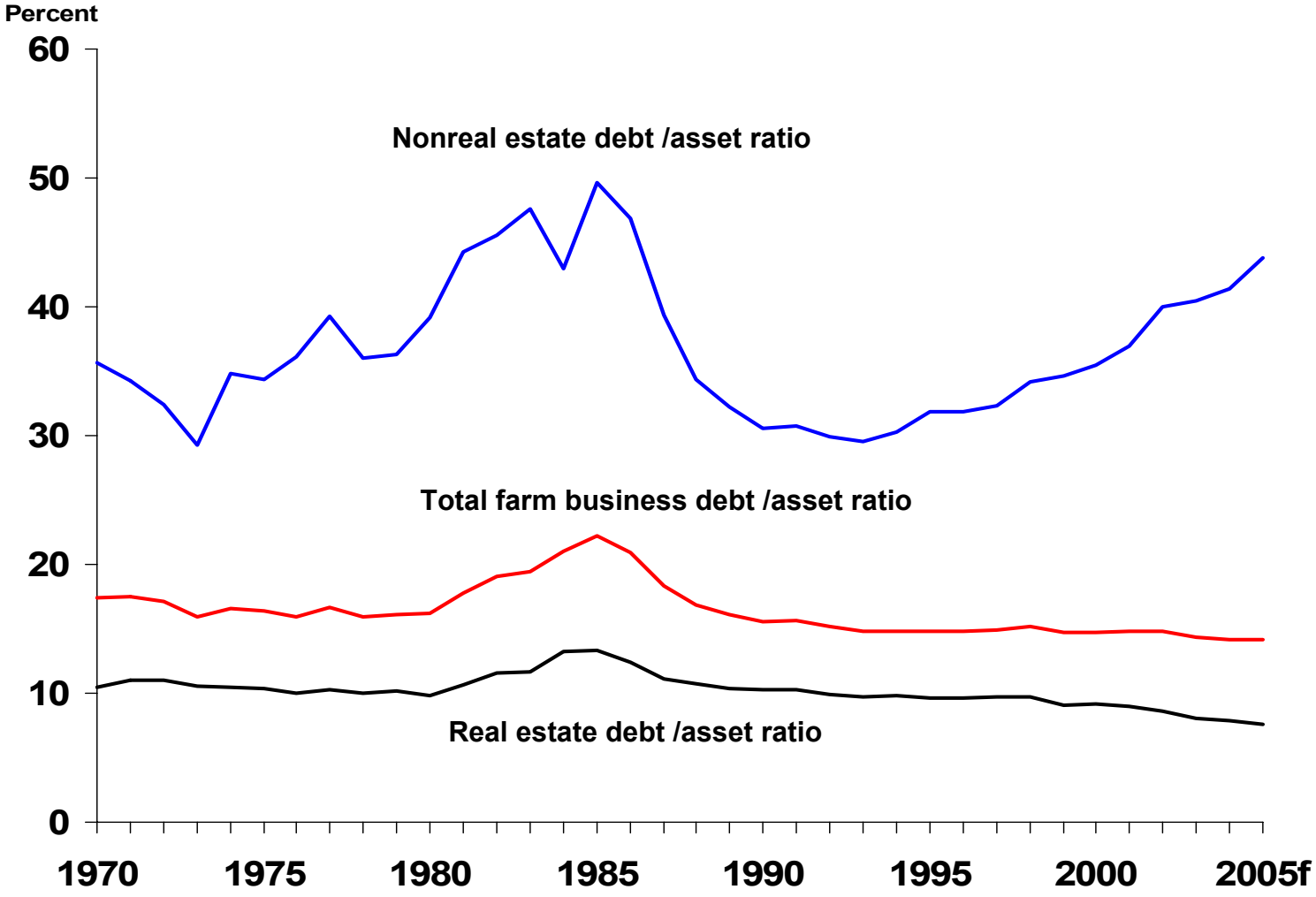
Source: Economic Research Service, USDA

Farm business real estate, nonreal estate, and total debt/asset ratios, 1970-2005f



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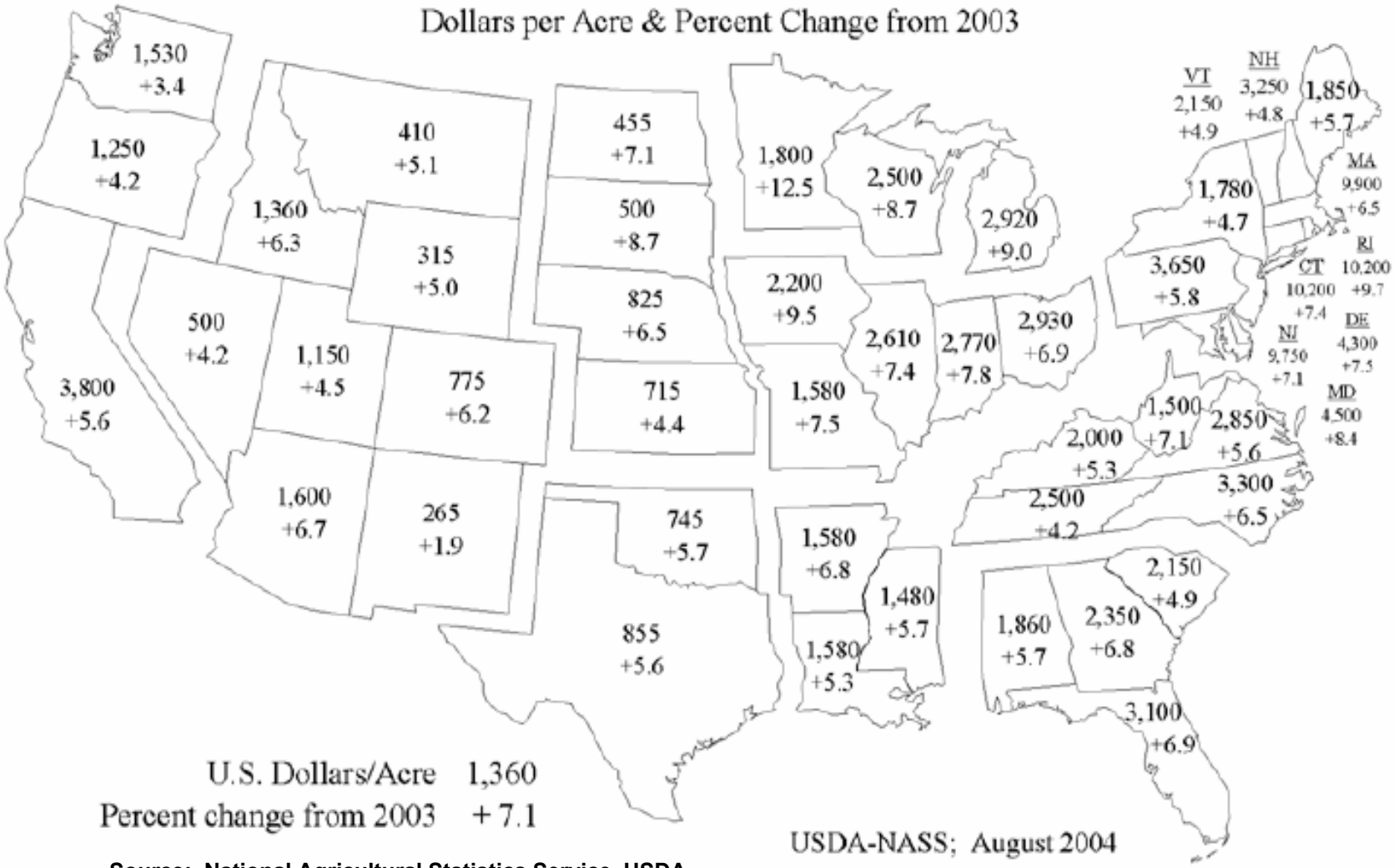
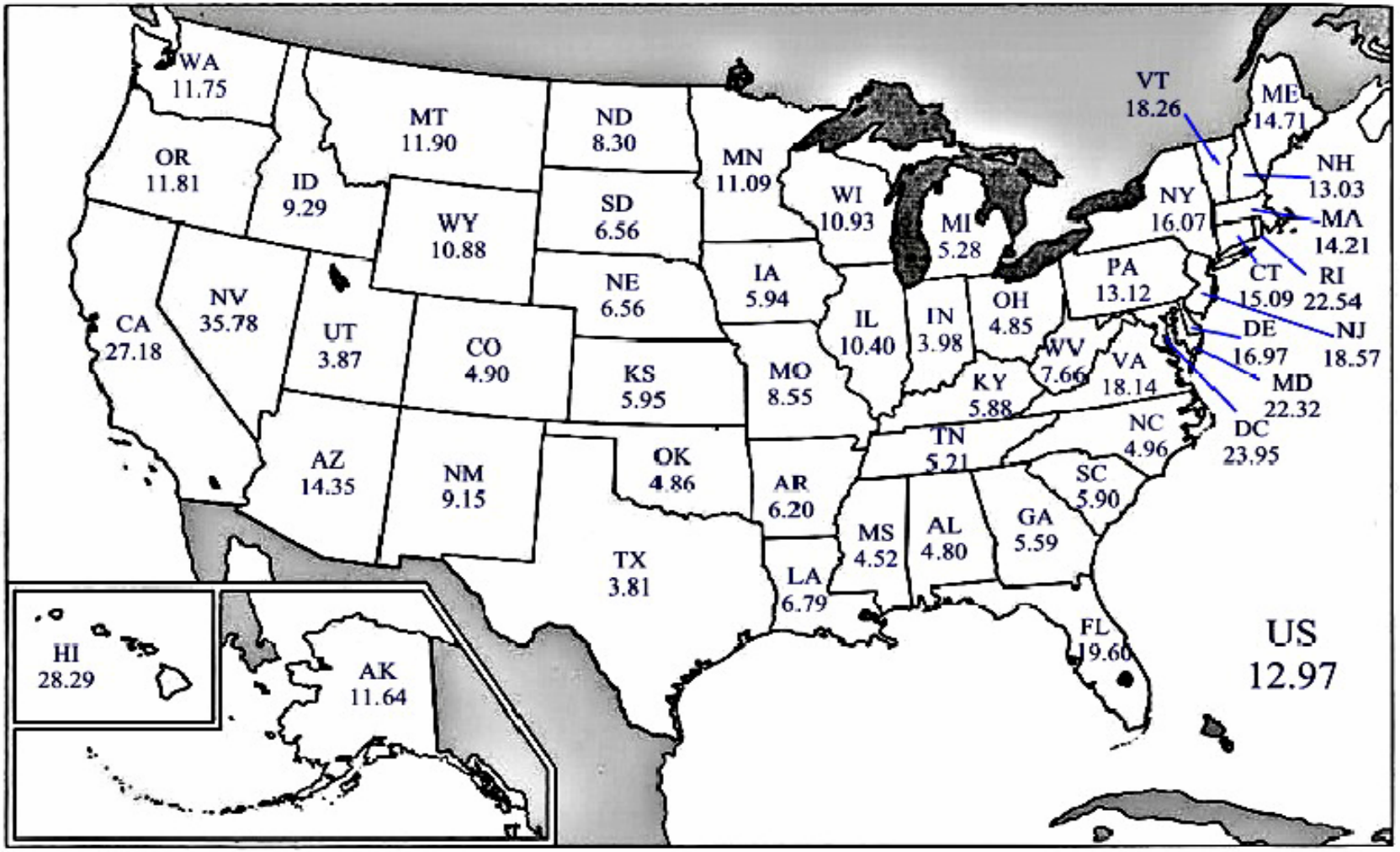
Source: Economic Research Service, USDA

Farm real estate value, by State, 2004



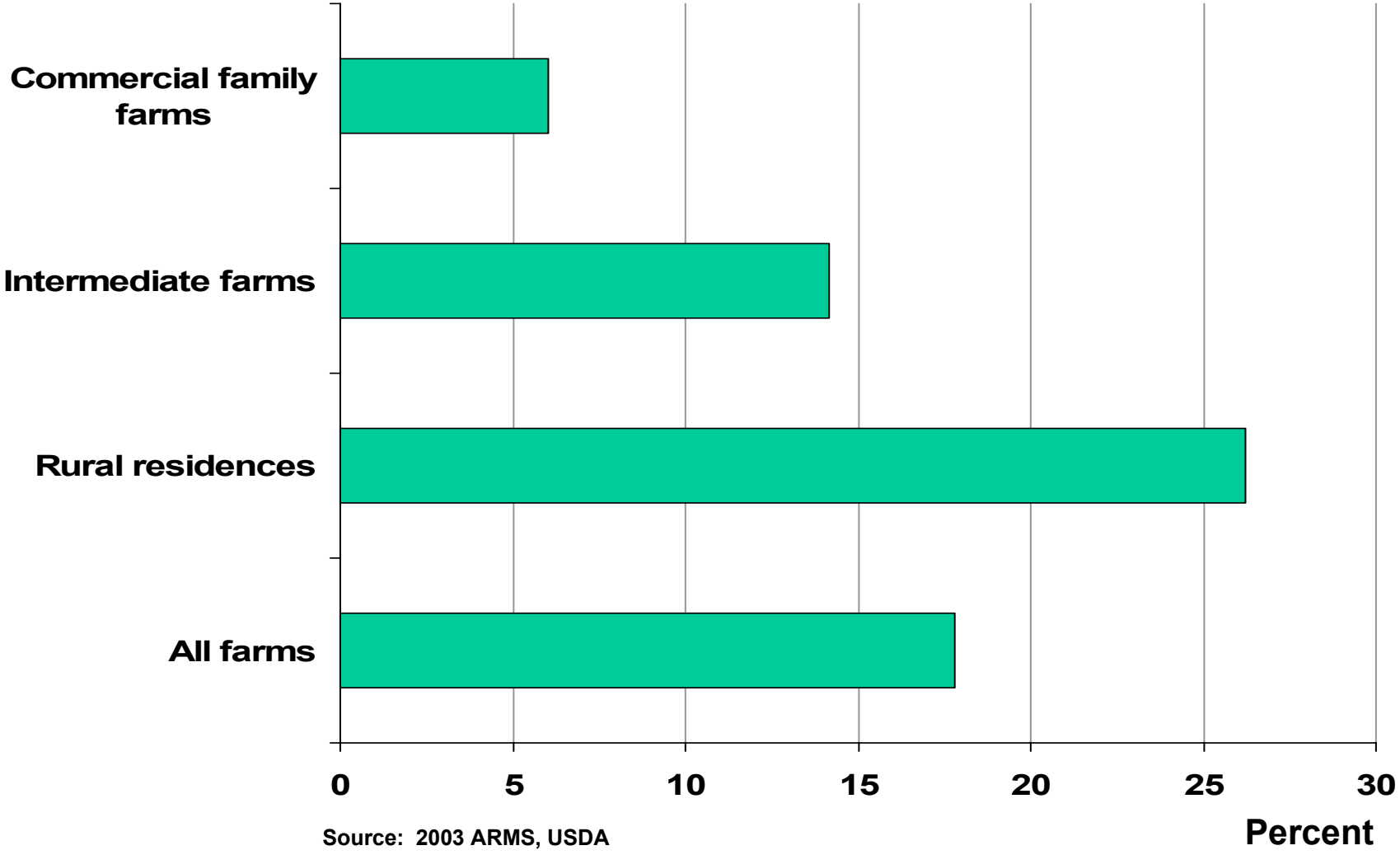
Source: National Agricultural Statistics Service, USDA

Annual Change in US Housing Prices, 9/30/03 to 9/30/2004



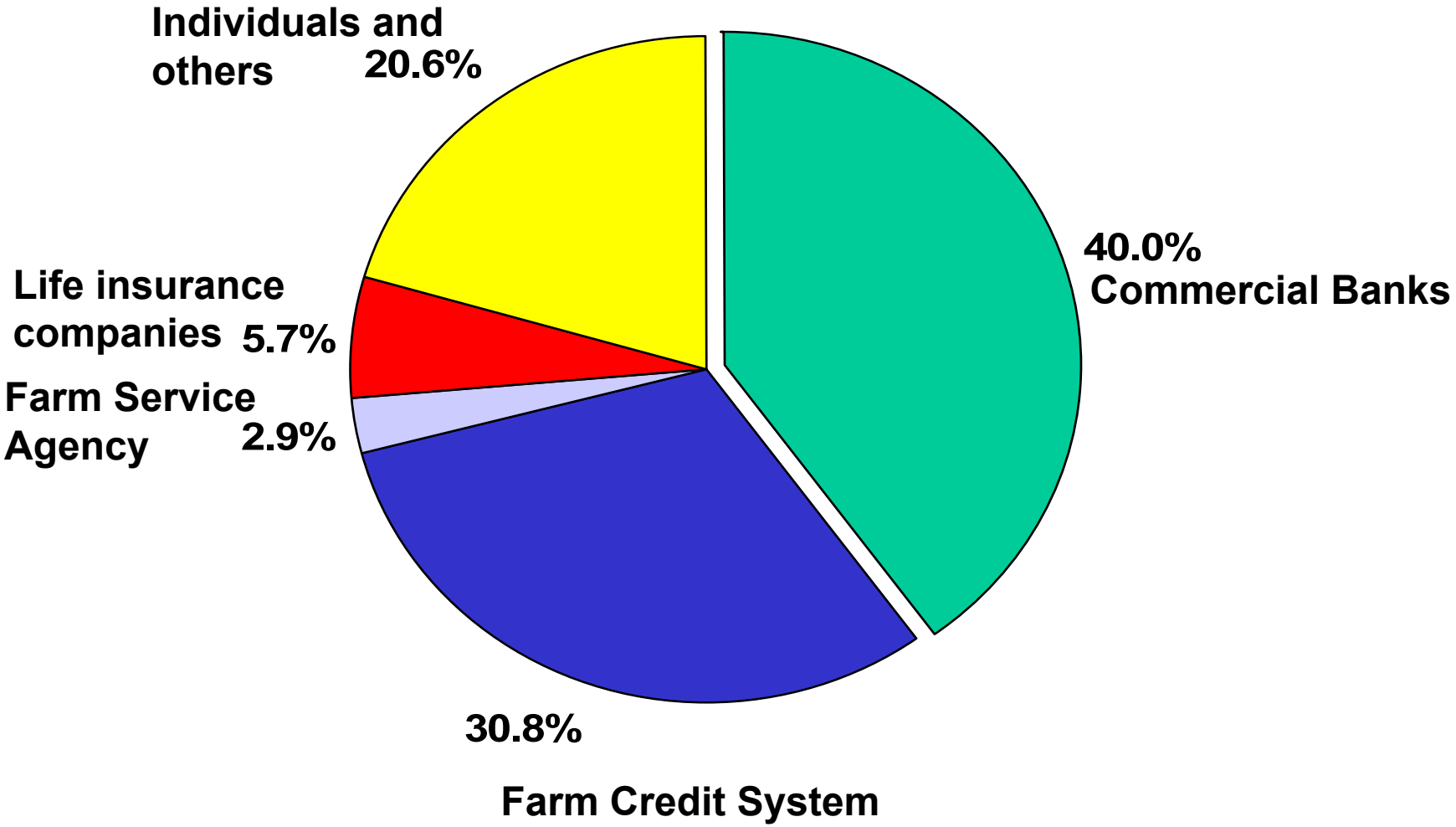
Source: Office of Federal Housing Enterprise Oversight, OFHEO Housing Price Index, released Dec 1, 2004

Operator dwelling share of value of farm real estate, by farm typology, 2003



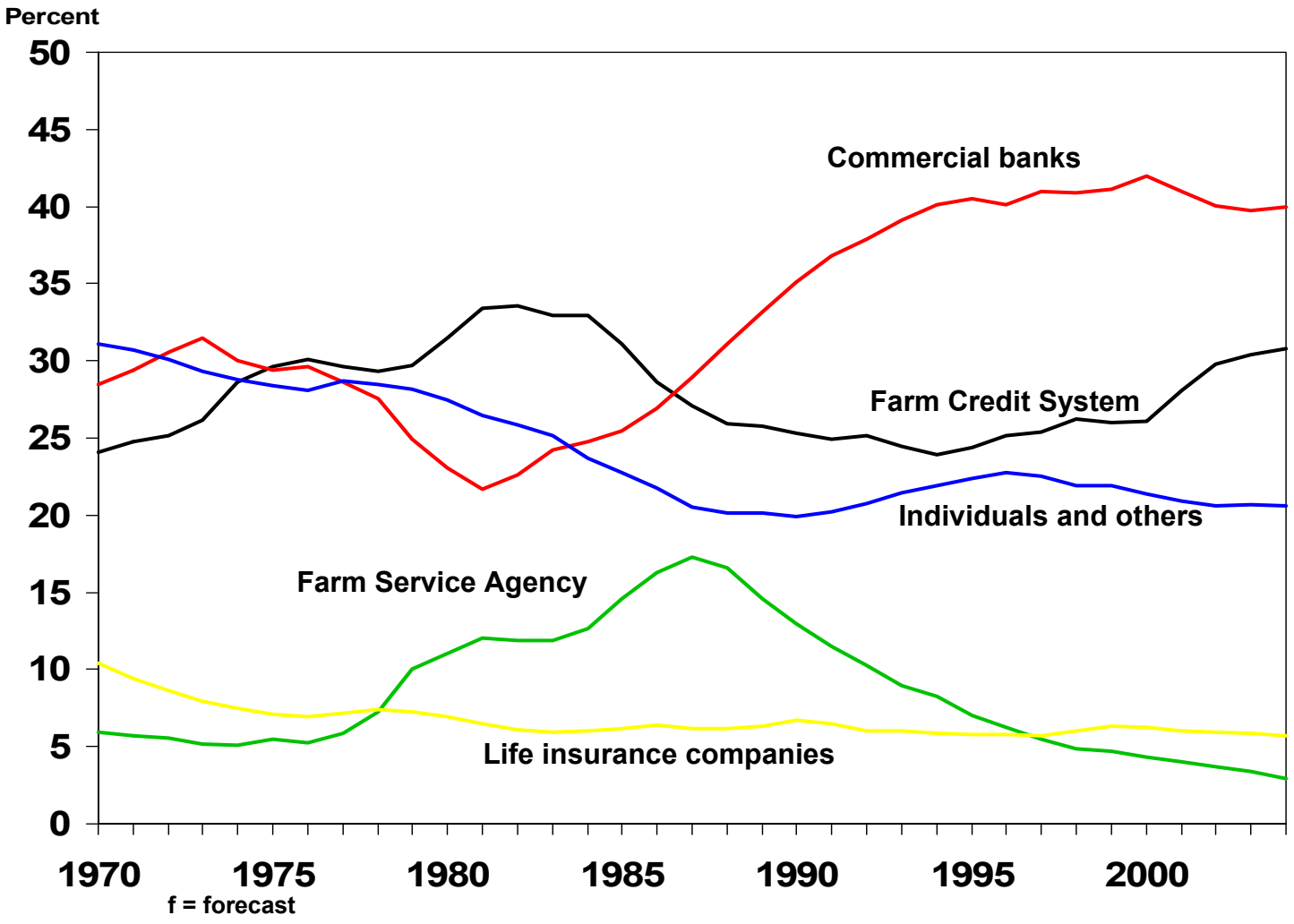
Source: 2003 ARMS, USDA

Lender shares of total farm business debt, December 31, 2004f



Source: Economic Research Service, USDA

Lender market shares of total farm business debt, 1970-2004f



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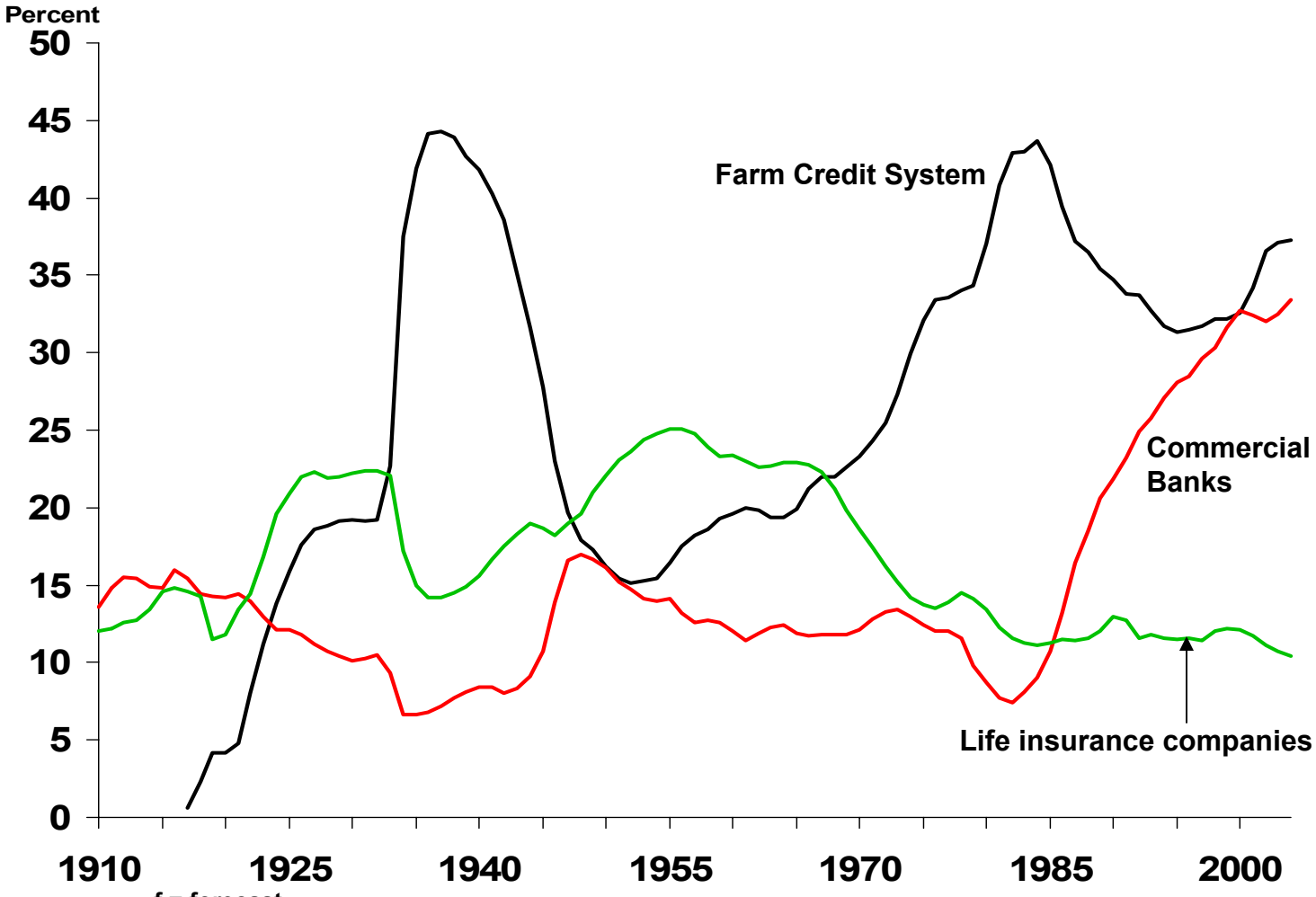
Source: Economic Research Service, USDA

Lenders' shares of farm mortgage market, 1910-2004f



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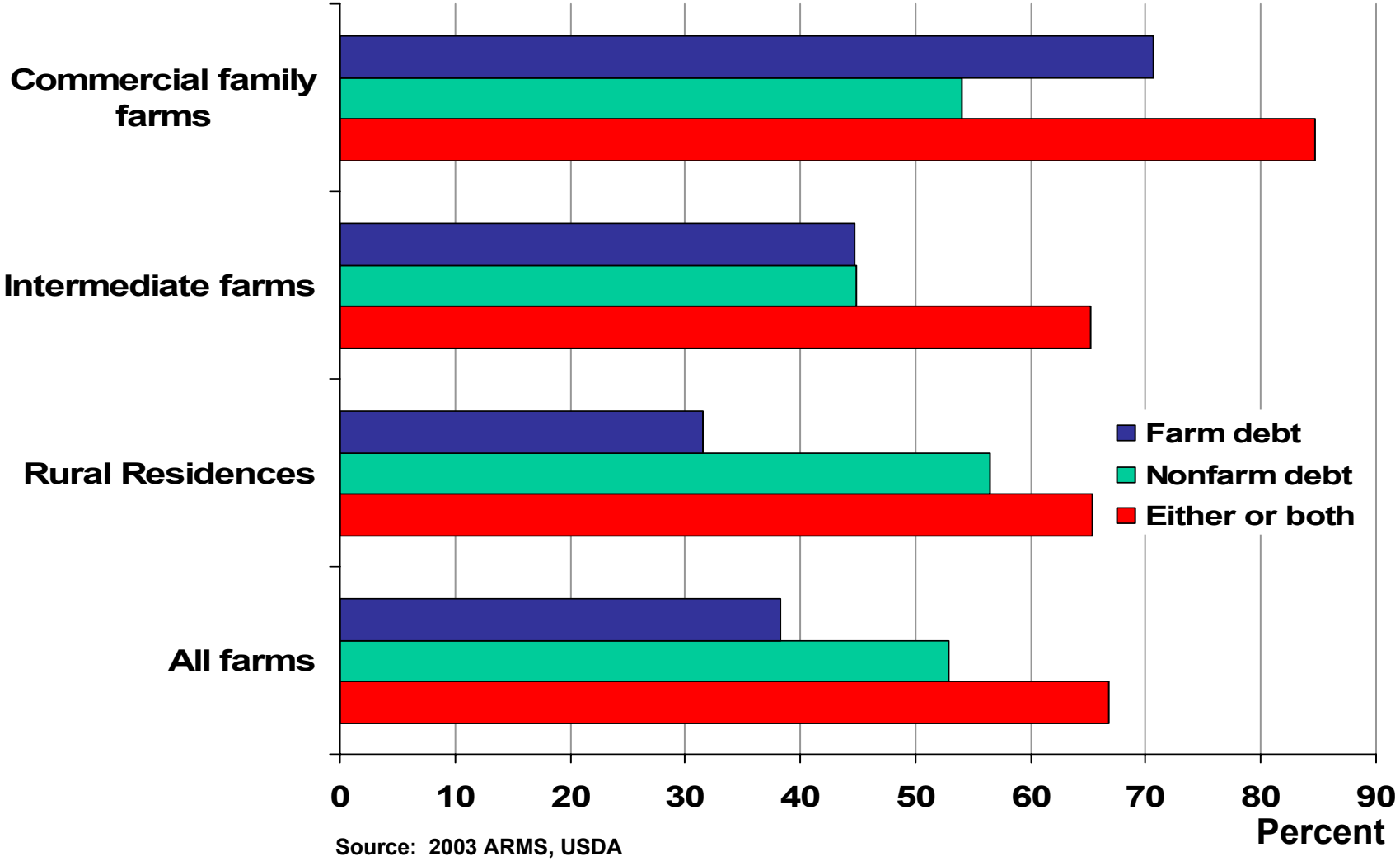
Source: Economic Research Service, USDA

Rabobank purchase offer for FCSAmerica

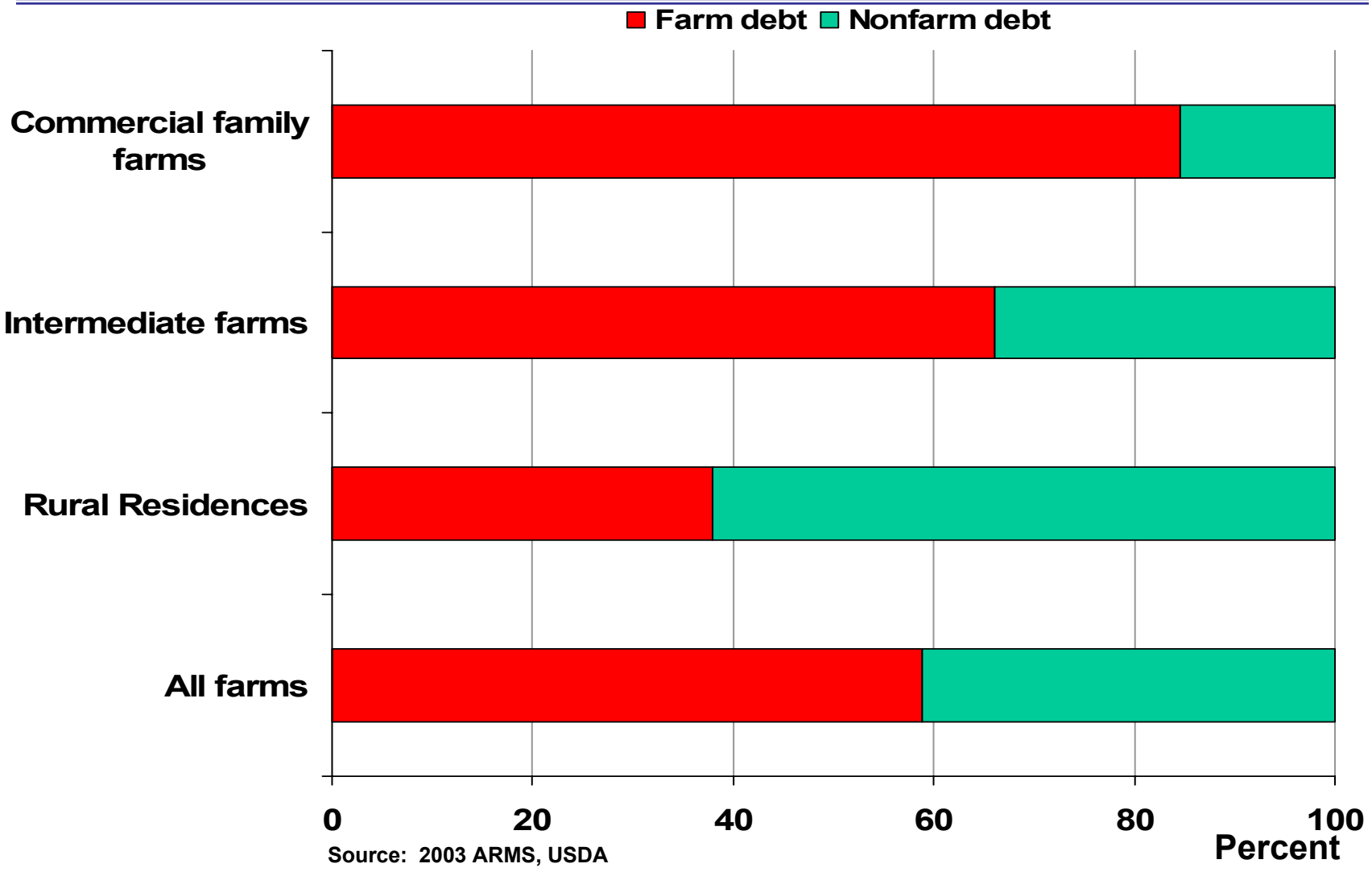
- Rabobank:
  - Netherlands-based cooperative bank
  - Growing presence in US agribusiness and nonreal estate loans
- FCSAmerica:
  - Omaha-based FCS Agricultural Credit Association
  - Provider of about 3 percent of US farm business debt
  - Portfolio is mainly real estate loans
- Offer: July 30, 2004 Terminated: October 21, 2004
- Would have been first purchase of GSE by private entity
- Signals rising competition among farm lenders
  - Seeking to expand range of financial services to farm clients

Share of farm households reporting farm and/or nonfarm debt, by farm typology, 2003



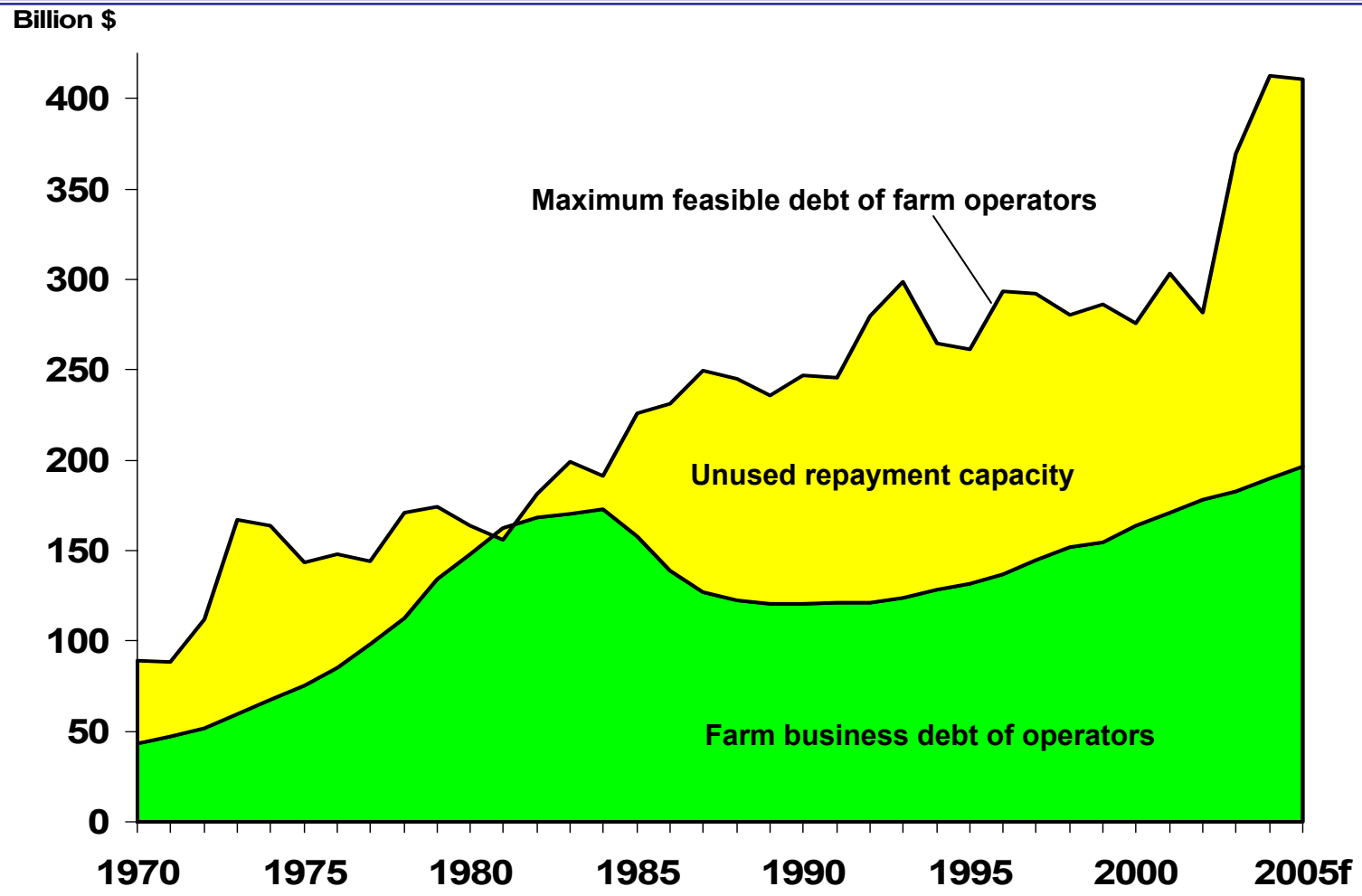
Source: 2003 ARMS, USDA

Composition of farm household debt, 2003



Source: 2003 ARMS, USDA

Farm operators debt repayment capacity and farm business debt, 1970-2005f



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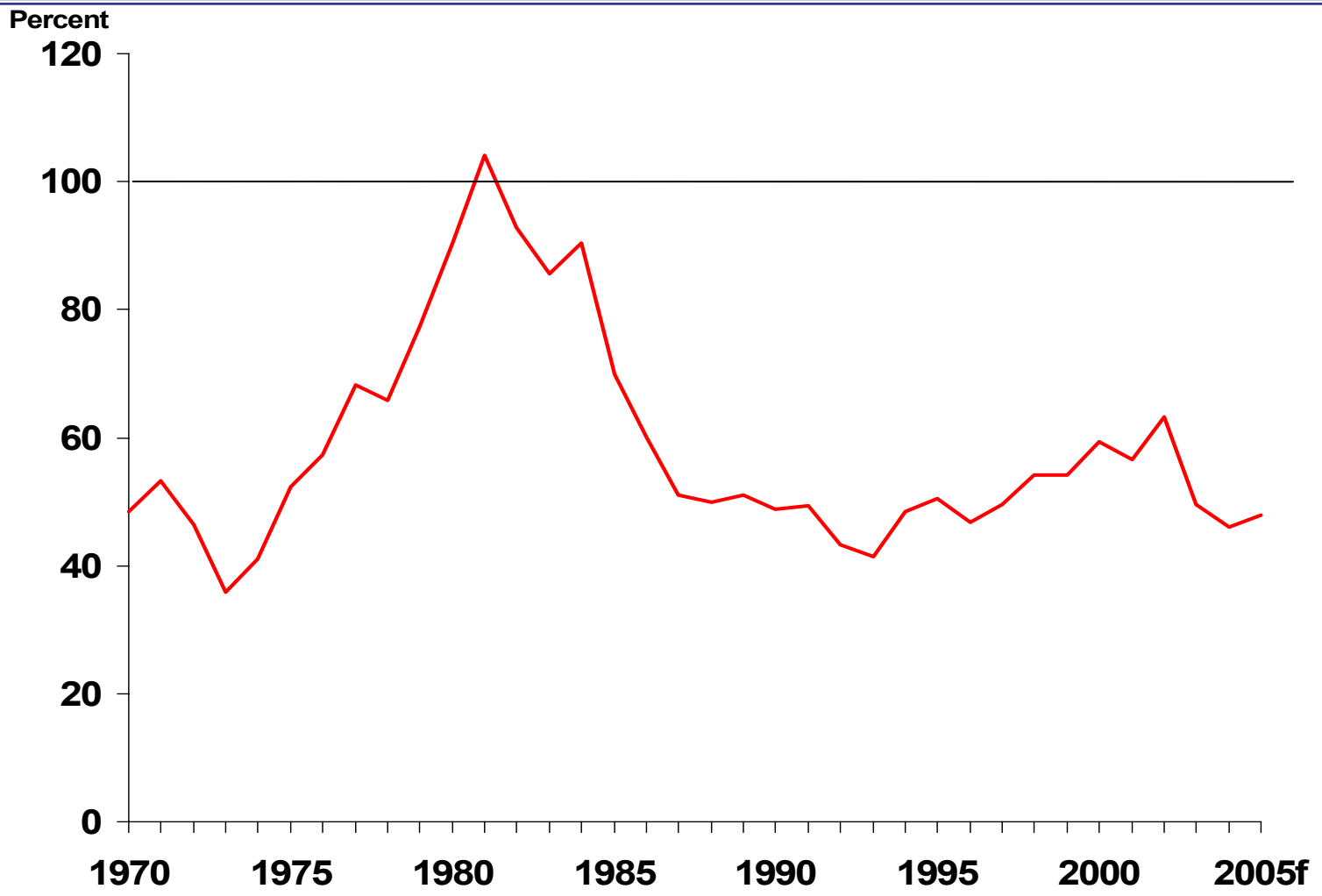
Source: Economic Research Service, USDA

Debt repayment capacity utilization, 1970-2005f

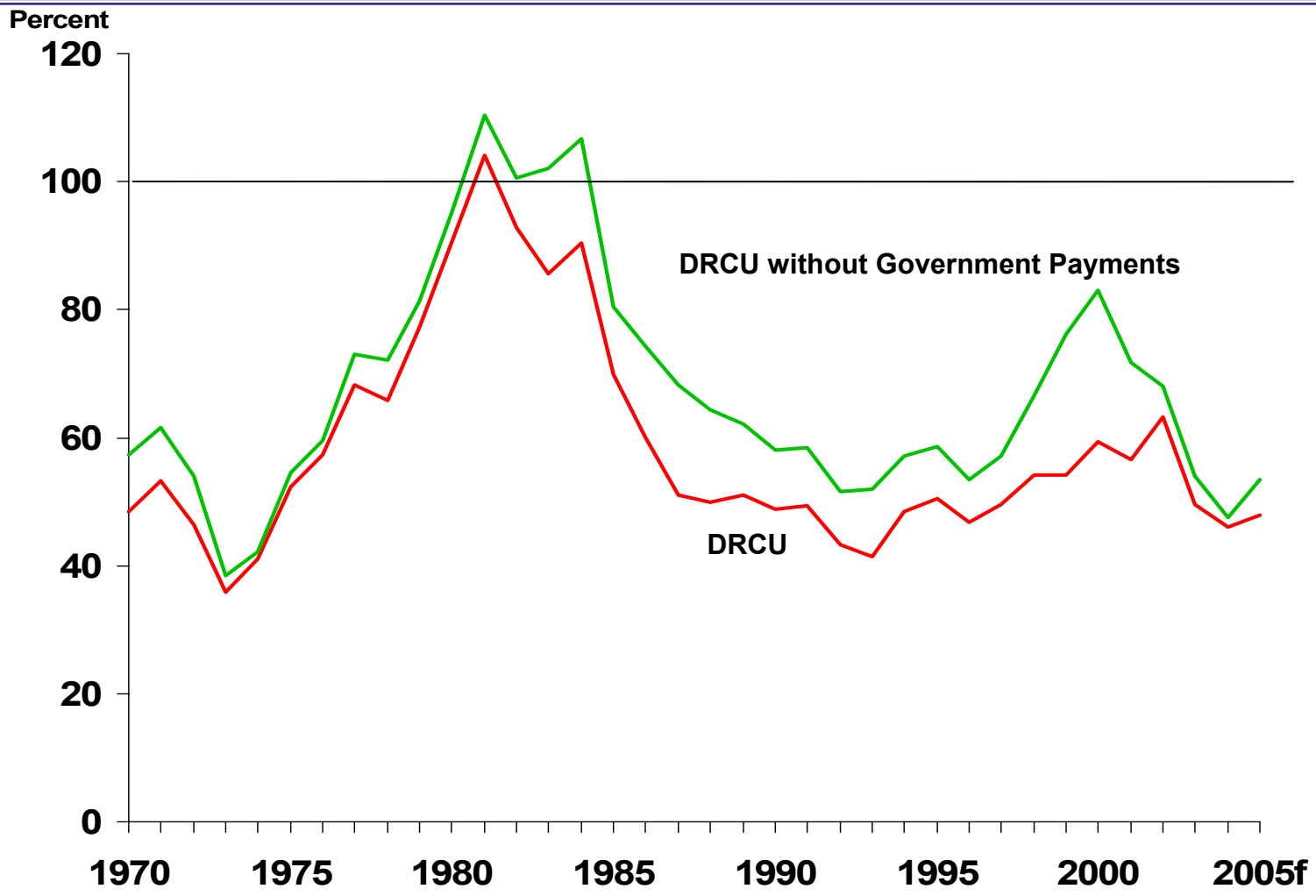


f = forecast

DRCU = For farm operators: Actual debt / Debt that could be repaid from current income

Source: Economic Research Service, USDA

Debt repayment capacity utilization, 1970-2005f

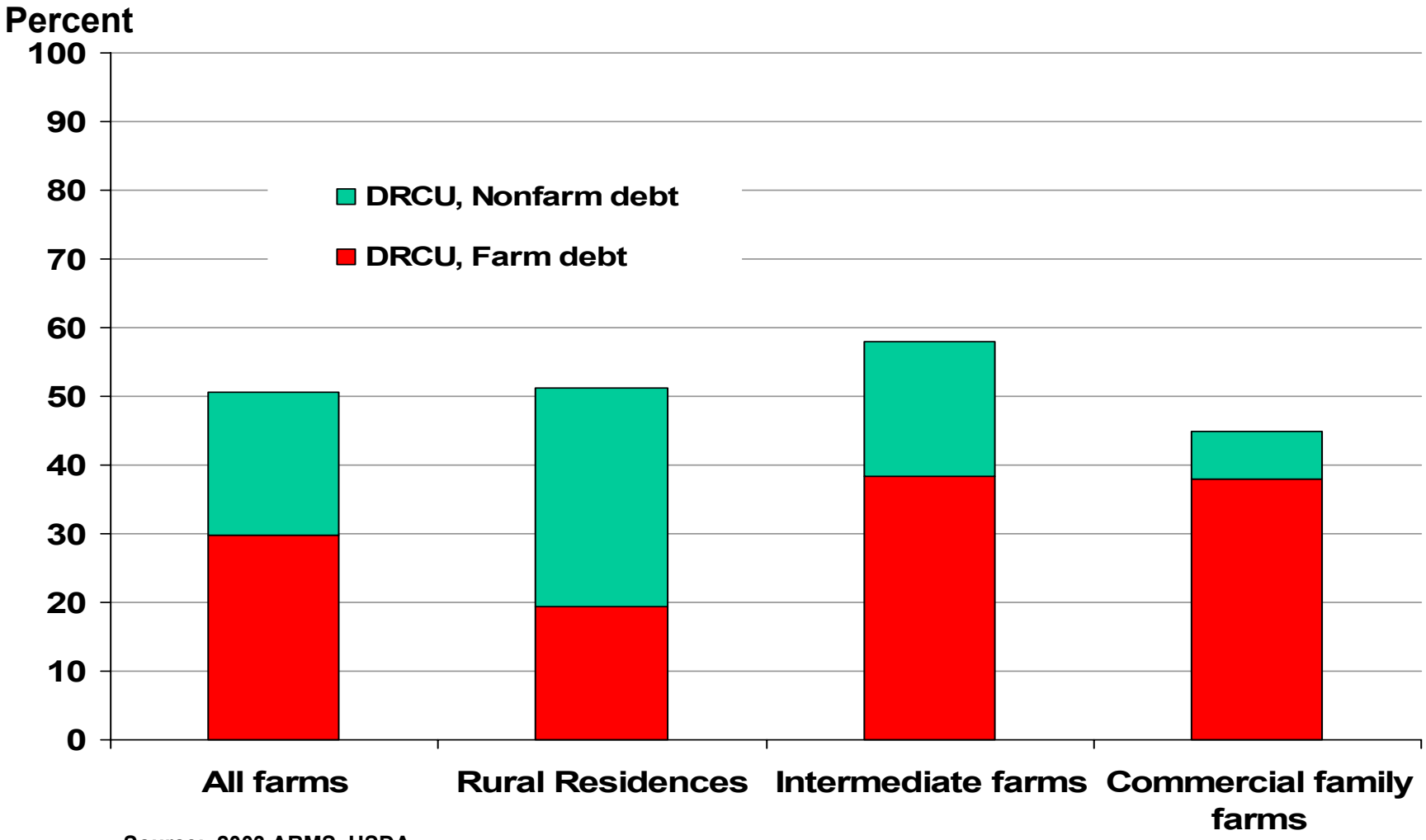


f = forecast

DRCU = For farm operators: Actual debt / Debt that could be repaid from current income

Source: Economic Research Service, USDA

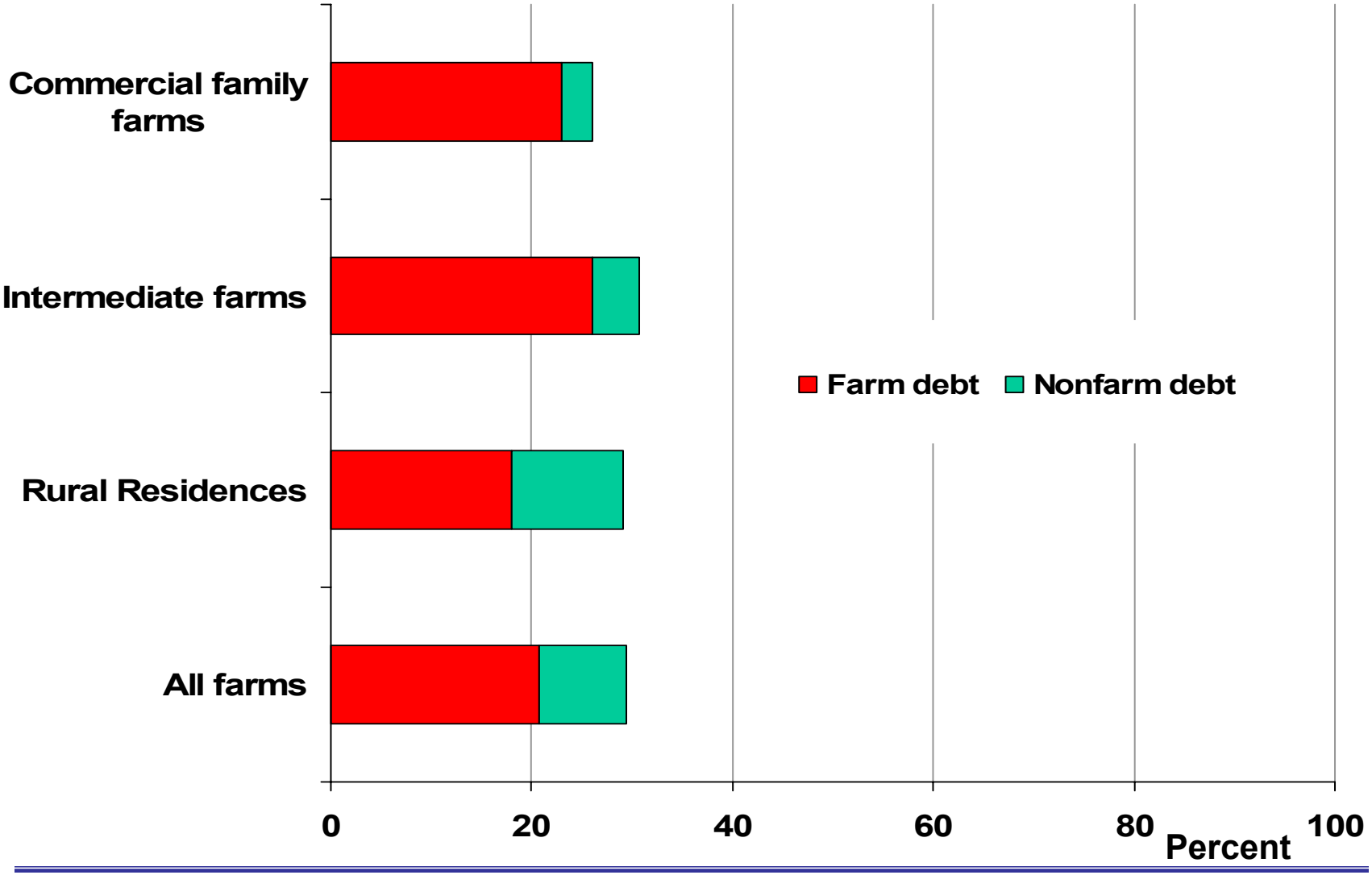
Farm and nonfarm debt components of DRCU of farm operator households, by farm typology, 2003



Source: 2003 ARMS, USDA

Share of farms with potential debt repayment problems, 2003

(based on DRCU > 1.2 estimated using net cash income)



Source: 2003 ARMS, USDA

Summary and Conclusions

- Farm business debt has risen to record levels
- Debt levels are not likely to be a problem relative to:
  - Value of farm business assets
  - Farmers' ability to service debt
- Strong demand for farmland for nonagricultural uses
- Credit availability is not a constraint
- Most farm households can service farm and nonfarm debt loads
- Nonfarm debt may become more burdensome

http://www.ers.usda.gov/Briefing/FarmIncome/wealth.htm