



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

**Comparing the Loan Performance of Direct and Guaranteed Farm
Service Agency Loans**

Steven R. Koenig and Charles B. Dodson

**Agricultural and Rural Finance
Markets in Transition**

Proceedings of Regional Research Committee NC-1014
Minneapolis, Minnesota
October 3-4, 2005

Copyright 2005 by author. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

Comparing the Loan Performance of Direct and Guaranteed Farm Service Agency Loans

by

By Steven R. Koenig and Charles B. Dodson²⁵

Abstract

Comparisons of Farm Service Agency direct and guaranteed farm loans made from fiscal 2000 through fiscal 2003 shows that differences in performance measure between the two delivery systems are substantial, but that those differences appear to be consistent with differences in program objectives. Direct loans made during these years had higher delinquency, restructuring, and loss rates than guaranteed loans made. In addition, when loan repayments occur, they occur more quickly in direct loans than in guaranteed loans. Despite the differences, most loan performance measures for both delivery systems continue to show significant improvement from historical highs set in the 1980s and 1990s.

Keywords: Federal credit programs, Farm Service Agency farm loan programs, farm loan performance, guaranteed farm loans, direct farm loans, loan delinquency.

²⁵ Authors are Agricultural Economists with the Farm Service Agency in Washington D.C.

Comparing the Loan Performance of Direct and Guaranteed Farm Service Agency Loans

by

By Steven R. Koenig and Charles B. Dodson

Introduction

Until 20 years ago, USDA involvement in farm credit markets had been primarily made through loans which are made and serviced directly by USDA. With the passage of the Rural Development Act of 1972, USDA was given authority to guarantee farm loans made and serviced by commercial lenders (GAO 1989). The first guarantees of commercial farm loans were issued in fiscal 1974, but it was not until fiscal 1984 that guaranteed lending became a significant delivery system of subsidized credit to family farms unable to obtain commercial credit and reasonable rates and terms. The increase in guaranteed lending reflected a government-wide effort to shift Federal lending activity from direct lending programs to guaranteed lending programs (Collender and Koenig). In the five fiscal years beginning in 2000, an average of \$3.5 billion per year in farm loans have been supplied by USDA's Farm Service Agency, 73 percent of which came through loan guarantees (figure 1).

The policy shift occurred during a period of severe financial stress in the farm economy which had not been felt since the Great Depression (Stam, et. al.). An inability to service debts that had accumulated during the 1970s caused farm defaults to swell, particularly in the Midwest, by the mid-1980s. Farm asset values, which had risen sharply for nearly a decade, plummeted as farm and farm lender failures mounted. USDA borrowers were particularly vulnerable to the economic downturn and were especially vulnerable to failure. USDA farm loans, then administered by the Farmers Home Administration (FmHA), served as a major financial safety net for farm borrowers, by assisting farmers in the restructuring of their debts (GAO, May 1986).

The stress inflicted upon USDA's direct loan portfolio during the 1980s took an extended period to be resolved and complicated comparisons of the performance between of the two delivery systems until recent years.²⁶ Also, recent lending policies and lending activities have been relatively stable, making loan performance measures more comparable. Finally, the farm economy and farm financial conditions have been strong over the last 5 years (USDA, ERS).

FSA farm loan programs are intended as temporary sources of credit to those applicants who cannot obtain needed credit from commercial lenders, but nonetheless can demonstrate repayment ability. A primary objective is to assist these high-risk farm businesses in becoming successful ongoing concerns. But remaining in business requires timely loan repayment. Loans that fail to perform according to the original terms of the

²⁶ Recent improvements in data systems have also improved the ability to assess loan performance.

contract are considered to be in default or nonperforming loans.²⁷ Loan delinquency, restructuring, and loss rates are measures commonly used to assess loan portfolio performance.

Given that the mission of FSA's farm loan programs is serve high risk borrowers, the occurrence of nonperforming loans in both delivery systems would be expected to exceed industry standards. Delinquency, restructuring, and loss rates close to that of commercial lender levels would suggest that these programs are serving a clientele that might qualify for commercial credit. Yet, high default and loss rates could indicate that the programs may be serving a clientele incapable of becoming financially successful businesses even with credit subsidies. Because guarantee lenders must shoulder some loss and seek to minimize loan servicing costs, guaranteed borrowers on average would be expected to be more creditworthy than direct program borrowers and hence are expected to experience lower default rates than direct loan borrowers.²⁸

In this paper, we compare the performance of direct and guaranteed loans, focusing on loans made from fiscal 2000 through fiscal 2003. The performance of operating loans (OL) and farm ownership (FO) loans, as well as direct emergency loans (EM) are measured. FO loans help farmers purchase or improve farm real estate or, in the case of guaranteed loans, refinance existing debts. OL loans are used to finance annual production expenses, chattel, family living expenses, and certain existing indebtedness. EM loans help farmers recover from natural disasters, such as droughts or floods, by providing loans for annual production expenses or to replace or repair damaged capital items.²⁹

Historical Loan Performance Trends

Underwriting standards, lending program objectives and regulations have changed over time and these factors have greatly affected past loan performance. In general, underwriting standards were tightened in the 1990s after a period of laxer lending standards and broader lending objectives. Economic circumstances also greatly influence loan performance and the affect of the 1980s farm financial crisis on loan performance measures is clearly visible in historical loan performance data (GAO, January 1986).

An FSA loan is considered to be delinquent when a scheduled payment of at least \$1 is past due for over 30 days. Prior to 1988 a loan was considered delinquent if a payment of \$10 was more than 15 days past due. FSA reports the dollar amount of delinquent principal and interest payments. The delinquency rate on direct loans rose very sharply in the 1980s, especially for emergency loans, which dominated FmHA total lending activity

²⁷ Commercial lenders generally define nonperforming loans to include all nonaccrual loans, accruing loans 90 days or more past due in payment, loans in foreclosure or bankruptcy, and loans restructured after delinquency. Delinquent volume is reported as the total amount of outstanding principal on the loan.

²⁸ FSA guarantees the lenders repayment of 90 percent of principal and certain interest owed and 95 percent in the case of certain beginning farmer loans.

²⁹ For more information on FSA loan programs see: <http://www.fsa.usda.gov/dafl/default.htm>, accessed February 2, 2006.

in the late-1970s to early-1980s (figure 2).³⁰ The delinquency rate on EM loans rose the most, reaching 60 percent by fiscal 1989 and not tending down until fiscal 1996. Delinquency rates on direct OL and FO loans rose less and by the end of fiscal 2004 had returned to rates closer to those that prevailed prior to the farm financial crisis.

Guaranteed OL and FO lending volume did not become significant until fiscal 1984 and the performance of these loans was less affected by the economic circumstances of the 1980s. As a result, delinquency rates on guaranteed FO loans rose only modestly in the 1980s and have trended down to around a 1 percent in recent years (figure 3). The trend on guaranteed OL delinquency rates has done just the opposite over the last 20 years, rising from the 1 percent range to the 3 percent range.

In the mid-1980s, loan loss and write-off rates on direct and guaranteed FO and OL loans rose rapidly from very low levels prior to the farm financial crisis (figure 4).³¹ After the financial crises ended, guaranteed loss rates quickly retreated because commercial lenders generally acted more quickly to resolve loan repayments problems. By the early 1990s, loss rates on guaranteed FO loans had dropped below 0.5 percent and guaranteed OL loss rates below 2 percent. Direct loss rates declined more slowly and by the late-1990s direct OL loss rates had bottomed out in the 4 percent range, while direct FO rates trended down to just 1.5 percent.

The decline in direct and guaranteed FO loan loss rates has been greatly influenced by rising farmland values. Farm real estate values per acre rose 80 percent from January 1, 1995 to January 1, 2005, which greatly minimized the likelihood of losses on farm real estate loans (USDA, NASS).

Loss rates on direct EM loans, which are the most risky FSA loan group, have experienced the highest loss rates among existing loan programs. Older EM loans were made under relatively lax underwriting standards. Recent loans have been made under stricter standards. As a result, new lending volume as well as delinquency and loss rates have been declining. In fiscal 2004, new EM lending volume totaled just \$27 million.

Recent Loan Performance Measures

To compare loan program performance of the direct and guaranteed loan delivery systems under relatively constant program policies and economic conditions, loan performance measures for loans obligated in each fiscal year from 2000 through 2003 under each program were examined. The loan repayment performance of these loan cohorts was then evaluated using 3 measures of loan delinquency: 30-day delinquency,

³⁰ From fiscal 1978 to fiscal 1981, an economic emergency loan program also provided \$6.6 billion in direct or guaranteed loans (mostly direct) to farmers experiencing shortages of credit from regular sources or who were experiencing a cost price squeeze in their farming operations. This program experienced high delinquency and loss rates in the following years.

³¹ Loss rate is defined as principal and interest losses recorded during a fiscal years as a percentage of loan principal outstanding at the beginning of the fiscal year.

90-day delinquency, and lifetime delinquency. These delinquency measures were calculated by dollar volume of loans and by number of loans made. In addition, principal and interest loss rates and loan restructuring rates were evaluated.

30-day delinquency

A 30-day delinquency rate was estimated by averaging month end delinquency rates for each loan cohort from the time of obligation until September 30, 2004. Calculating annual average delinquency rates minimizes distortions in performances caused by seasonal factors. Direct loan delinquency rates tend to be more seasonal with rates peaking early in the calendar year because the majority of loans have annual payments due at the first of the year. Guaranteed loan delinquency rates are less seasonal because loan contracts are set by hundreds of participating lenders and hence are less uniform.

Whether measured by loan numbers or outstanding principal, the average 30-day delinquency rate for the direct cohorts greatly exceeds that for guaranteed cohorts (table 1). For all direct loans originated in fiscal year 2000, which have the greatest longevity, the average monthly 30-day delinquency rate on September 30, 2004 was 13 percent, while for all guaranteed loans the rate was just 4.4 percent. Much of the overall loan performance differential is due to differences in OL loan performance. Direct OL delinquency rates are over 3 times greater than those of guaranteed OL loans, whereas direct and guarantee FO rates are more similar. Some of the superior performance of FO loans may be a consequence of rising land values which created real estate equity. In order to protect their farmland equity, farm borrowers often give priority to repaying FO loans when cash flows are tight.

As expected, the 30-day delinquency rate is lower for newer loan cohorts regardless of delivery mechanisms.³² Yet, compared to guaranteed loans, direct loans become delinquent much quicker. The quicker occurrence of repayment problems in the direct program occurs because direct program borrowers typically have tighter cash flow margins and therefore experience repayment shortfalls sooner.

90-Day Delinquency Rates

A shortcoming in using 30-day delinquency rates to measure loan performance is it includes repayment problems that might arise from an over-sight on the part of the borrower or from temporary cash shortfalls rather than more serious financial distress. Alternatively, using a 90-day delinquency rate, which most commercial lenders have adopted, provides a more meaningful picture of serious financial distress within a loan portfolio. Using the same methodology as used for the 30-day calculations, 90-day average delinquency rates were found to be somewhat lower, but had the same overall patterns as with the 30-day analysis.³³ The 90-day delinquency rates averaged 10 percent for direct loans, as opposed to 2.6 percent for guaranteed loans (table 2).

³² Data for other farm lenders show similar delinquency distributions by the age of the loan.

³³ The guaranteed loan data base does not explicitly include information on 90-day delinquencies. Instead, 90-day guaranteed loan delinquencies were estimated using lender reports. Every 90 days, FSA requires

Under the 90-day measure ratio of the relative performances of the two delivery systems narrowed somewhat among loans issued in fiscal 2000. Some of the differences may be due to reporting methodology between direct and guaranteed loans. The delinquency rates for guaranteed OL and FO were very similar for loans made in fiscal 2000.

Lifetime Delinquency Rates

Lifetime delinquency rates were calculated to show the share of cohort loans that had become delinquent for at least one 90-day period from the time of obligation until September 30, 2004. This delinquency measure was intended to provide information on how likely an individual loan will have a repayment problem that will likely need a loan servicing action. As with other measures, direct loans were found to be more likely than were guaranteed loans to become 90-days delinquent at least once over the life of the loan. The lifetime 90-day delinquency rate for direct loans made in fiscal 2000 was 38.2 percent, compared to just 9 percent for guaranteed loans (table 3). As with other delinquency measures, direct FO loans were least likely and EM loans most likely to have a lifetime delinquency.

Examining lifetime 90-day delinquency rates across cohort years again reveals that direct loans encountered delinquency much quicker than guaranteed loans. For loans originated in fiscal 2003, 13 percent had already become 90-day delinquent at least once by the end of fiscal 2004. This compared to a lifetime delinquency rate of just 0.8 percent for guaranteed loans obligated in fiscal 2003. Lifetime delinquency rates for direct OL for fiscal 2000, 2001, and 2002 were similar, with about 1 out of every 3 loans obligated experiencing a 90-day delinquency within 2 years of loan origination. Direct FO loans showed a more constant increase in lifetime delinquency rates as the loan aged.

Loan Restructuring Rates

As expected with higher levels of nonperforming loans, direct loans were more likely to have their original loan terms changed under a loan servicing option. Direct loans that are 90-days or more delinquent are eligible for primary loan servicing options as described under 7 CFR 1951.907.³⁴ These options may include deferring or rescheduling principal and interest payments, consolidating loans, writing off principal and interest through net-recovery buyouts and debt write downs, and easements. While guaranteed loans may also be restructured in similar ways, such decisions are dictated by the lender servicing the loan. Still, over half of all 90-day delinquent guaranteed loans made in fiscal 2000 were restructured even though CFR 1951 rules did not apply to these loans. By comparison over two-thirds of direct loans 90-day or more delinquent made in fiscal 2000 had received restructuring as outlined in 7 CFR 1951 by the end of fiscal 2004.

lenders with guaranteed loans outstanding to file a loan status report. Lenders are then required to file monthly follow-up reports on those loans identified as 30 days delinquent in the lender status report.

³⁴ Borrowers who were not 90 days delinquent may request primary loan servicing if they meet the criteria for being financially stressed as described under 7 CFR 1951.909(c).

The share of loans that received at least one loan servicing option between the original obligation date of the loan and September 30, 2004 was calculated for each yearly loan cohort. Among direct loans obligated in fiscal 2000, 21.5 percent had been restructured at least once by the end of fiscal 2004, but only 5.2 percent of guaranteed loans obligated in that year had been restructured by the end of fiscal 2004 (table 4). As expected, because OL and EM loans tend to be less creditworthy and have higher delinquency rates, restructuring activity was greater for these loans as opposed to FO loans.

Loan Write-Off and Loss Rates

The rate of principal and accrued interest not repaid on loans (liquidations, write-offs and write-downs) was calculated for each cohort as a percent of the original loan obligation amount. Despite the high percentage of loans that ultimately become delinquent for 30 or 90 days, the loss rate on direct and guarantee loans was found to be comparatively low and quite similar. For loans originated in fiscal 2000, 1.8 percent of direct loan obligation volume had been written-off by the end of fiscal 2004, whereas just 0.7 percent of guarantee volume had been lost (table 5). Not surprisingly, the loss rates for FO loans were very small and about the same between the two delivery systems. Rapidly rising farmland values during the study period kept nearly all of these loans well collateralized during the study period.

In general, the loss rates for all the loan cohorts were low because the study period loans were relatively young and restructuring activities such as loan deferrals, reamortizations, and payment rescheduling likely kept loan losses minimal. In general, loss rates on new loans tend to be minimal in the first year or two and then rise to a peak before falling back as the loan ages. With fiscal 2000 being the oldest cohort of loans in the study, it is possible that loss rates by fiscal 2004 had not peaked for these loans and hence higher loss rates for both delivery systems might rise in coming years. This of course would be amplified if farm asset values were to decline in subsequent years.

Summary

Beginning in fiscal 1984, USDA loan guarantees became the primary delivery mechanism for providing subsidized federal credit to farm borrowers unable to obtain credit at reasonable rates and terms. Over the last decade, roughly 85 percent of total farm ownership credit and 70 percent of total operating lending has been delivered through Farm Service Agency guaranteed farm loan programs. While the two delivery systems deliver similar types of credit, they tend to serve somewhat different clientele and hence differences in loan performance measures are to be expected. The direct program tends to serve borrowers that are less creditworthy and hence are of greater risk to default than borrowers receiving guaranteed commercial loans. Moreover, as directed by statute, a higher percentage of direct lending goes to small and new farming operations, as well as to groups deemed to be socially disadvantaged.

In general, delinquency, restructuring, and loss rates for direct and guaranteed loans alike have trended lower from the peaks of the 1980s farm financial crisis. Direct program delinquency and loss rates are much higher than guaranteed rates and have been slower to come down. Comparison of the performance measures for direct and guaranteed loans made in fiscal 2000 through fiscal 2003 shows that substantial differences remained at the end of fiscal 2004. These loans were made under relatively constant program policies and economic conditions making comparisons more meaningful. Direct loans made during these years had higher delinquency, restructuring, and loss rates than guaranteed loans made during the period. In addition, when loan repayment problems occur, they were found to occur much quicker in the direct loan programs.

The difference in performance measures between direct and guaranteed farm ownership loans was less than that between direct and guaranteed operating loans. The lower incidences of nonperformance among farm ownership loans can at least partially be attributed to substantial increases in farmland values during the 2000 to 2004 period. This likely aided debt restructuring for these loans when cash flow shortfalls occurred. Direct emergency loans were found to have the poorest loan performance measures.

References

Collender, R. N. and S. R. Koenig. "The Role of Federal Credit Programs" in *Financing Agriculture into the Twenty-first Century*, Duncan, M. and Stam, J, editors. Westview Press, Boulder CO (1998) pp. 135-162.

Stam, J.M., S. Koenig, H. Gale, S. Bentley. *An Analysis of Farm Financial Stress, Farm Exits, and Public Sector Assistance for the Farm Sector in the 1980's*. Agricultural Economics Report No. 645, Washington, DC: U.S. Dept. of Agriculture, Economic Research Service (April 1991).

U.S. General Accounting Office. *Farmers Home Administration: Implications of the Shift From Direct to Guaranteed Farm Loans*. GAO/RCED-89-86 (September 1989).

U.S. General Accounting Office. *Farmers Home Administration: An Overview of Farmer Program Debt, Delinquencies, and Loan Losses*. GAO/RCED-86-57BR (January 1986).

U.S. General Accounting Office. *Farmers Home Administration: Debt Restructuring Activities During the 1984-85 Farm Credit Crisis*. GAO/RCED-86-148BR (May 1986).

United States Department of Agriculture. *Agricultural Income and Finance Outlook, AIS-83*, Economic Research Service (November 2005).

United States Department of Agriculture. *Land Values and Cash Rents, Sp Sy (05)*, National Agricultural Statistics Service (August 2005).

Table 1. Average 30-day delinquency rates by program and obligation year, fiscal 2000-03. /1

Program	Fiscal year of obligation			
	2000	2001	2002	2003
Percent of loans having a delinquent payment				
Total direct	13.0	12.2	10.9	5.3
FO	6.2	5.5	4.0	2.2
OL	14.7	13.6	11.9	5.7
EM	14.5	15.8	13.5	5.8
Total guaranteed	4.4	2.6	2.0	0.6
FO	3.9	2.0	1.4	0.4
OL	4.6	2.9	2.2	0.7
Percent of outstanding principal having a delinquent payment				
Total direct	13.1	12.7	10.3	4.8
FO	6.7	6.4	4.2	2.4
OL	16.2	15.0	12.5	5.3
EM	17.8	18.5	14.5	5.8
Total guaranteed	4.4	2.9	2.0	0.7
FO	3.9	2.2	1.4	0.5
OL	4.7	3.4	2.6	1.0

/1 Monthly averages as September 30, 2004.

Source: FSA Farm Loan Program data.

Table 2. Average 90-day delinquency rate by program and obligation year, fiscal 2000-03. /1

Program	Fiscal year of obligation			
	2000	2001	2002	2003
Percent of loans having a delinquent payment				
Total direct	10.0	9.6	7.9	3.1
FO	5.1	4.3	2.7	1.1
OL	11.7	10.6	8.6	3.2
EM	9.3	13.4	10.4	3.9
Total guaranteed	2.6	1.4	0.9	0.2
FO	2.4	1.1	0.6	0.1
OL	2.7	1.6	1.1	0.2

/1 Monthly averages calculated as of September 30, 2004.

Source: FSA Farm Loan Program data.

Table 3. Lifetime delinquency rates by program and obligation year, fiscal 2000-03. /1

Program	Fiscal year of obligation			
	2000	2001	2002	2003
90-day lifetime loan delinquency rates				
Total Direct	38.2	35.5	31.8	13.2
FO	30.0	25.4	16.8	5.5
OL	37.9	35.1	32.1	13.6
EM	46.8	53.4	49.5	17.6
Total Guaranteed	9.0	6.2	4.3	0.8
FO	8.4	5.0	2.7	0.5
OL	9.2	6.7	4.9	0.9

/1 Averages calculated as of September 30, 2004.

Source: FSA Farm Loan Program data.

Table 4. Lifetime loan restructuring rates, by program and year of obligation, fiscal 2000-03. /1

Program	Fiscal year of obligation			
	2000	2001	2002	2003
	Percent of loans			
All Direct	21.5	18.4	14.8	0.8
FO	12.9	8.8	4.9	0.5
OL	21.6	19.7	15.7	0.8
EM	28.2	25.5	17.0	1.0
All Guaranteed	5.2	3.4	2.7	0.7
FO	4.4	2.5	1.9	0.4
OL	5.4	4.3	3.0	0.9

/1 Calculated as of September 30, 2004. Includes all loan restructuring activities, including those under primary loan servicing options.

Source: FSA Farm Loan Program data.

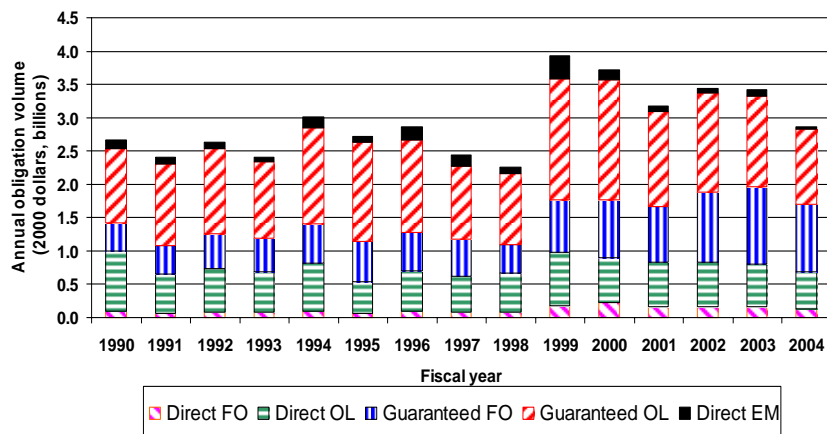
Table 5. Lifetime write-offs and loss settlements by cohort group, fiscal 2000-03. /1

Program	Fiscal year of obligation			
	2000	2001	2002	2003
Dollar amount of losses as a percentage of obligation volume				
Lifetime				
Total Direct	1.8	1.3	0.7	0.0
FO	0.4	0.2	0.0	0.0
OL	2.5	1.6	0.9	0.0
EM	2.2	2.2	0.0	0.0
Total Guaranteed	0.7	0.3	0.1	0.2
FO	0.3	0.3	0.0	0.0
OL	0.8	0.4	0.2	0.2
Loans experiencing losses as a percent of loans disbursed				
Lifetime				
Total Direct	2.5	1.7	0.9	0.0
FO	0.6	0.3	0.1	0.0
OL	2.6	1.8	0.9	0.0
EM	3.8	3.4	0.0	0.0
All guaranteed	1.9	0.9	0.4	0.1
FO	0.9	0.4	0.1	0.0
OL	2.2	1.1	0.5	0.1

/1 Calculated as September 30, 2004. Includes loan principal and interest losses, but excludes write-downs and write-offs associated with primary loan servicing actions, which were infrequently used during the study period.

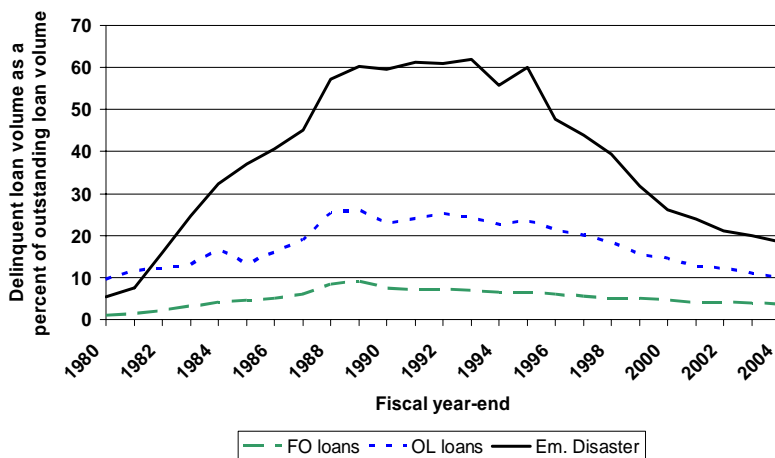
Source: FSA Database.

Figure 1. Annual FSA loan obligation volume, fiscal 1990 - 2004.



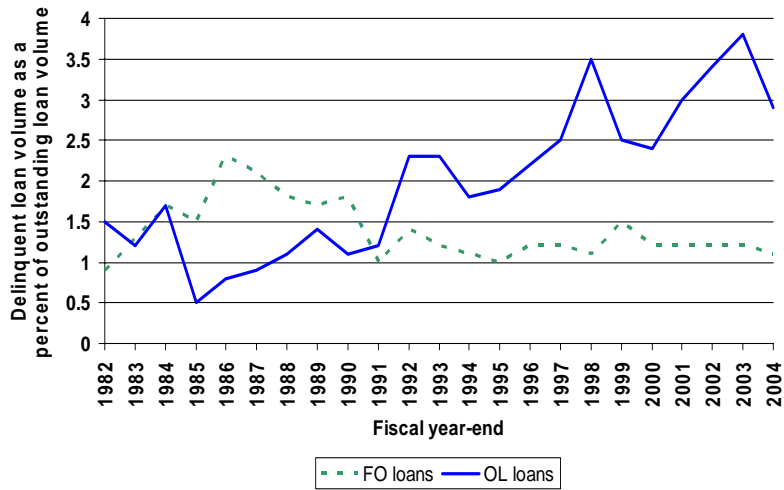
Source: FmHA and FSA Report Code 205, various years.

Figure 2. Direct loan delinquent payment rates, fiscal 1980 – 2004.



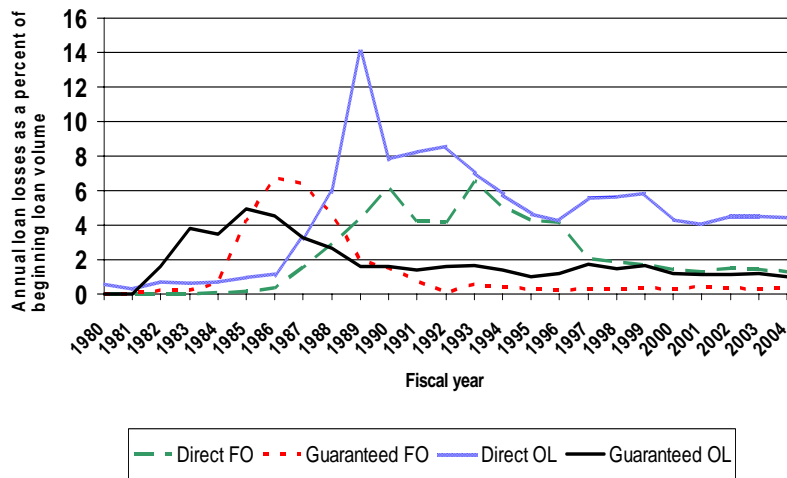
Source: FmHA and FSA Report Code 616, various years.

Figure 3. Guaranteed loan delinquent payment rates, fiscal 1982 – 2004.



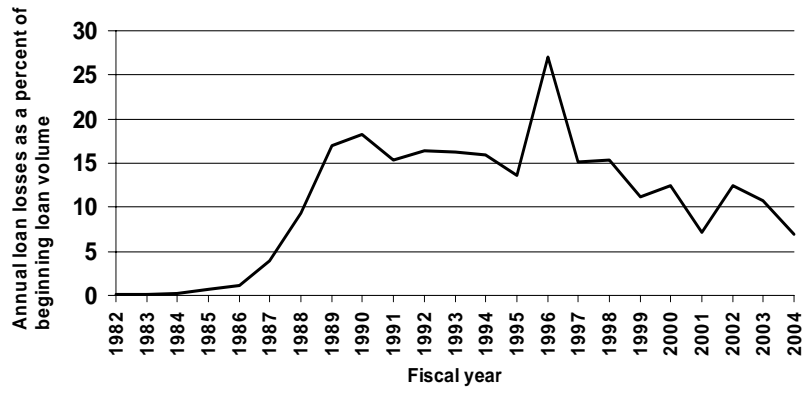
Source: FmHA and FSA Report Code 4067, various years.

Figure 4. Annual FSA loan program loss rates, fiscal 1980 – 2004.



Source: Unpublished FmHA and FSA data.

Figure 5. Annual emergency disaster loan loss rates, fiscal 1982 – 2004.



Source: Unpublished FmHA and FSA data.