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Examination of Farm Bankruptcy Debtors and Their Creditors

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EXAMINATION OF
FARM BANKRUPTCY
DEBTORS AND THEIR CREDITORS

by
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and
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Economics Department
Research Report 87-6

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Abstract

Agricultural financial conditions and farm reorganization options have been analyzed extensively by agricultural economists, but analysis of actual reorganization bankruptcy filings has not been completed. This study contains analysis of 219 Chapter 11 farm filings in South Dakota from 1980-1985 and documents financially related characteristics of these producers and their secured, impaired and unsecured creditors. Discriminant analysis is used to examine the predictive value of initial filing data on eventual court disposition of farm Chapter 11 cases.

Major provisions of Federal Bankruptcy Chapter 11 and 12 are compared, South Dakota agricultural lenders' reactions concerning impacts of Chapter 12 on credit management practices, cost and availability of agricultural credit is documented.

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EXAMINATION OF FARM REORGANIZATION
BANKRUPTCY DEBTORS AND THEIR CREDITORS

I. INTRODUCTION

Farm Financial Stress and Bankruptcy

Farm financial stress in the 1980's has greatly increased and caused substantial asset and debt restructuring by farm businesses and debt writedowns by agricultural lenders. Distribution of financial losses between farm debtors and their creditors may be determined by voluntary negotiation or by the legal processes of foreclosure or bankruptcy.

During the 1980's, the incidence of farm bankruptcies has greatly increased. In South Dakota, a state of 35,000 farms and ranches, the number of farm bankruptcy filings increased from 36 in 1980-81 to 241 in 1984 and to 564 in 1986. Another 405 farm bankruptcy filings have already occurred from January 1 - June 17, 1987 (Table 1).

Bankruptcy may involve formal reorganization under Chapter 11, 12 or 13 or liquidation under Chapter 7 of the Federal bankruptcy statutes. Formal reorganization, if successful, is a legal process for debtor(s) to reorganize their business to satisfy creditors and continue operations. If formal reorganization is not successful, the business is usually liquidated. Formal liquidation (Chapter 7) is a legal process to terminate the business and provide payment to creditors based on established priorities provided in Federal statutes (Edelman, 1985; Harl, 1985). Since 1980, a majority of farm bankruptcy filings have been reorganization filings. Before December 1986 most farm reorganization bankruptcies were filed under Chapter 11. Since December, most reorganization bankruptcies have been filed under the new Chapter 12 farm reorganization petition (Table 1).

Farm bankruptcies are a major indicator of financial stress but the actual number of farm reorganization and liquidations is considerably higher

Table 1. Number of Farm Bankruptcy Filings in South Dakota.

| Year | Farm Bankruptcy Filings | | | | |
|-------------------------------|-------------------------|--------------------|------------------|-----------------|----|
| | Total | Bankruptcy Chapter | | | |
| | | 7 | 11 | 12 | 13 |
| 1980-81 | 37 | | 17 ^a | - | |
| 1982 | 129 | | 76 ^a | - | |
| 1983 | 189 | | 96 ^a | - | |
| 1984 | 241 | | 131 ^a | - | |
| 1985 | 338 | 148 | 163 | - | 27 |
| 1986 | 564 | 173 | 271 | 59 ^b | 61 |
| 2 Jan.-June 1987 ^c | 405 | 74 | 39 | 276 | 16 |

Source: Federal Bankruptcy Court Records - Sioux Falls.

^a Estimated number of Chapter 11 filings based on examination of individual filings. Detailed records of farm bankruptcy filings by Chapter of Federal Bankruptcy code are not available for 1981-1984.

^b Chapter 12 bankruptcy filings from November 26, 1986 through December 31, 1986. Chapter 12 farm reorganization bankruptcy was added to Federal Bankruptcy statutes and became effective on November 26, 1986.

^c January 1 - June 17, 1987.

than the number of bankruptcies. Results from the 1985 SDSU Agricultural Lender survey indicated 81 of every 1,000 South Dakota farm and ranch borrowers had major financial reorganization, partial or total liquidation of their farm business during 1985. Of these, about 15% are bankruptcy filings, 9% are foreclosure actions and 76% are informal negotiations between producers and their creditors (Schmiesing, 1986). Bankruptcy is a last resort option of farmers and ranchers and represents the "tip of the iceberg" concerning the magnitude of farm financial stress.

In January 1987, South Dakota agricultural lenders reported that many borrowers were in weak financial condition, but the farm finance situation was stabilizing and showing possible signs of improvement. Twenty-one percent of borrowers were classified as "weak" or "inferior" credit risks compared to 25.2% of borrowers the previous year. Approximately 20% increased total debt in 1986 while nearly 41% were able to reduce their total debt and 39% held their total debt constant. An estimated 76 of every 1,000 South Dakota farm and ranch borrowers had major financial reorganization, partial or total liquidation of their farm business in 1986 (Schmiesing, 1987).

Despite modest improvement in the farm finance situation for 1986 and 1987, the number of farm bankruptcies continued to increase in 1986 and 1987. This is primarily due to the fact that bankruptcy is a lagging indicator (last resort option) of farm financial stress. Bankruptcy filings were not common place until 1983 even though substantial farm financial stress occurred by 1981. Reorganization bankruptcy chapters were often selected because it gave agricultural-debtors a chance to remain in business as farmers or ranchers.

Purpose of Study

Considerable discussion has been directed towards the use of reorganization bankruptcy by farmers (Suter, 1983). An analysis of actual reorganization bankruptcy filings has not occurred. This study provides baseline information to reduce this knowledge gap. It also contains information on agricultural lender responses to the addition of Chapter 12 to Federal bankruptcy statutes. The purpose (objectives) of this study are to:

- (1) Compare the major provisions of reorganization bankruptcy statutes (Chapter 11, 12, 13) applicable to farmer-debtors.
- (2) Examine the major characteristics of farm applicants filing for Chapter 11 reorganization bankruptcy.
- (3) Examine the major characteristics of their secured and unsecured creditors.
- (4) Determine whether information contained on initial bankruptcy filing schedules has predictive value on eventual court action.
- (5) Assess agricultural lenders initial responses to Chapter 12 farm reorganization bankruptcy.

This report is organized into the following sections (associated study objectives are enclosed in parentheses).

- II. Farm Reorganization Bankruptcies: An Overview (1)
- III. Examination of Chapter 11 Farm Filings (2)
- IV. Major Characteristics of Secured and Unsecured Creditors (3)
- V. Discriminant Analysis of Initial Chapter 11 Filing Data (4)
- VI. Agricultural Lender Responses to Chapter 12 (5)
- VII. Summary, Conclusions and Implications

The major data sources for objectives 2, 3 and 4 are initial filing of Chapter 11 reorganization petitions from January 1980-October 1985 available from the Federal Bankruptcy Court of Sioux Falls, South Dakota. A component

of the SDSU Agricultural lender survey completed in January 1987 is used to assess lender initial responses to Chapter 12 (Schmiesing, 1987).

II. FARM REORGANIZATION BANKRUPTCY: AN OVERVIEW

Federal Bankruptcy Chapters 7, 11, 12 and 13 are presently available to farmers and ranchers. Chapter 7 involves liquidation of the farming operation, while the remaining bankruptcy chapters involve business reorganization plans. A farmer filing a Chapter 13 bankruptcy must be a proprietorship with a total secured debt of \$350,000 or less and a total unsecured debt of \$100,000 or less. Relatively few South Dakota farm bankruptcies (less than 10%) are filed under Chapter 13.

A Chapter 11 reorganization bankruptcy is available to individuals, partnerships, and corporations of all debt sizes in most industries. Briefly, this process is initiated by the filing of a Chapter 11 bankruptcy petition, which contains initial filings schedules prepared by the farmer(s) and his/her attorney. After the initial filing, a reorganization plan must be submitted within 120 days and the judge has 140 days to take action on the reorganization plans. Time extensions are common. Creditors are typically divided into classes (fully secured, impaired and unsecured) and each class has specific voting rights on the proposed reorganization plan. The three potential outcomes of a Chapter 11 bankruptcy filing are (1) a confirmed reorganization plan, (2) the Chapter 11 filing is converted to Chapter 7, and (3) dismissal.

Chapter 12 of the Federal bankruptcy statutes was signed by President Reagan on October 27, 1986 and went into effect on November 26, 1986. The Congressional intent of this chapter is to assist family farmers in their efforts to reorganize their farming operations and to reduce difficulties farmers experienced in reorganizing under Chapter 11 and 13.

Chapter 12 is limited to a qualifying farmer (individual/family, partnership and family farm corporation) with no more than \$1,500,000 of debt and 80-100% of total debt in the farm business (Table 2). Since Chapter 12 has been in effect, a major shift has occurred in the type of bankruptcy filed by farmers/ranchers in South Dakota.

Chapter 12 filings have replaced most potential reorganization filings under Chapter 11 or 13 (Table 1). It appears that South Dakota producers and their attorneys have determined Chapter 12 is more conducive to their reorganization attempts. However, from the debtors viewpoint, the success of bankruptcy reorganization is ultimately based on the number and proportion of confirmed reorganization plans that actually work.

Major Differences between Chapter 11 and 12 Bankruptcy

Chapter 12 bankruptcy is limited to qualifying farmers and ranchers with no more than \$1,500,000 of total debt while Chapter 11 is available to all farmers and ranchers and to business firms in most industries.

While Chapter 11 is a permanent part of the bankruptcy code, Chapter 12 has a sunset provision. Unless Congress legislates an extension of Chapter 12, this bankruptcy chapter will expire in November, 1993. The existence of the sunset provision is based on the viewpoints (1) that high levels of financial stress in agriculture will be temporary and (2) a desire to review the effectiveness of these provisions. Also, many agricultural creditors did not want Chapter 12 to become a permanent part of the bankruptcy code.

Within a Chapter 11 bankruptcy, creditors can veto the debtor's reorganization plan and under some circumstances, propose an alternative reorganization plan. Chapter 12 only permits the producer to file a reorganization plan and creditors cannot veto the plan. This is a major shift of power

Table 2. Comparison of Chapter 11 and 12 Reorganization Bankruptcy

| Item | Description |
|---------------------------------|--|
| a. Eligibility | Chapter 11 is available to sole proprietor, partnership and corporate business firms in most industries, including farming and ranching. Chapter 12 is limited to farms and ranches with total debt not exceeding \$1,500,000 and 80-100% of debt is from the farm business. A majority of gross income must be from the farm business. Farm corporations or partnerships must have greater than 80% of assets in farming and a majority of outstanding stock or equity is held by related persons with at least one farming or ranching |
| b. Permanency of law: | Chapter 11 is a permanent section of the bankruptcy code, while Chapter 12 has a sunset provision. Unless Congress legislates an extension, Chapter 12 will sunset in November, 1993. |
| c. Creditor veto: | Creditors may veto a Chapter 11 plan, while Chapter 12 does not permit a creditor veto if the reorganization plan meets specified conditions. |
| d. Plan proposals | Under Chapter 11 creditors may propose an alternative plan to the producer's plan. Only the debtor may propose a reorganization plan if Chapter 12 is filed. |
| e. Plan filing and confirmation | Chapter 12 debtors have only 90 days to file a plan versus 120 days for Chapter 11. Also, the Chapter 12 confirmation hearing must be held within 45 days. |
| f. Trustee | Generally, Chapter 11 bankruptcy does not require a trustee. Chapter 12 and 13 require a trustee with fees being determined by the court. The fee levels are not to exceed 10% of the initial \$450,000 of payments and not to exceed 3% there after. |
| g. Adequate protection | Chapter 12 provides debtors an additional method to provide adequate protection to secured creditors, i.e., fair rental value of land. |

from the creditor to the debtor. The confirmation of Chapter 12 will generally occur if:

- 1) all the requirements of Chapter 12 are met,
- 2) all required fees are paid,
- 3) the plan has been proposed in good faith,
- 4) unsecured creditors receive at least as much as they would in a Chapter 7 liquidation and
- 5) the court believes the debtor will be able to comply with the plan and complete all payments required by the plan." (Tilley, p. 23)

Since Chapter 12 prohibits creditor vetoes of the debtor's plan and reduces likelihood of initial liquidation, lenders have greater incentive to voluntarily negotiate principal and interest writedowns and debt rescheduling.

Chapter 12 legislation also provides for a more rapid processing of bankruptcy filings. After the initial filing, Chapter 12 debtors have only 90 days to file a plan versus 120 days under Chapter 11. Also, Chapter 12 confirmation hearings must be held within 45 days after the reorganization plan is filed. From the creditors' perspective this faster process implies a shorter time of exposure to decreased security values and places time pressure on the producer and their attorney to develop a reorganization plan. A debtor's advantage is the ability to obtain a reorganization plan to implement rapidly.

"Adequate protection" for secured creditors is required in a reorganization bankruptcy. In Chapter 11 or 13, cash payment or additional liens are required if security values decline during the bankruptcy process. In Chapter 12, fair rental value of the land was added as a method of providing adequate security (Tilley, 1987).

Unlike Chapter 11, a court trustee will be appointed for a Chapter 12 debtor. The fees received by the trustee will be determined by the court. However, maximum trustee fees are specified in the chapter. The fee levels are not to exceed 10% of the initial \$450,000 of payments and not to exceed

3% thereafter. Actual amount of trustee fees approved will probably have a major impact on the ability of producers to develop successful and profitable reorganization plans.

Chapter 12 has made major alternations in the relative rights of creditors and debtors. However, the perception that Chapter 12 was entirely directed towards protecting the debtors at the expense of creditors would, even with a preliminary analysis, appear to be incorrect. Creditors are going to have to seriously evaluate whether alternative plans other than liquidation are feasible. Farmers operating small farms are going to have to carefully evaluate implications of legal and trustee fees to the potential profitability of their operation.

III. EXAMINATION OF CHAPTER 11 FARM FILINGS IN SOUTH DAKOTA, 1980-1985

An examination of Chapter 11 farm filings was conducted to obtain a profile of Chapter 11 farmer-debtors and their creditors. It is an attempt to develop a statistical profile of a major segment of farm debtors in severe financial difficulty who attempt to remain in farming or ranching. This information provides insights into farm bankruptcies that will hopefully be useful to attorneys, lenders, agribusiness people, farmers, economists, and public policymakers.

Data Sources and Limitations

The principal data source for examination of farmer-debtor and creditor characteristics are the initial filing schedules for Chapter 11 reorganization bankruptcy. The filing schedules used were filed at the Federal Bankruptcy Court in Sioux Falls and represent filings for the entire state of South Dakota. The schedules contain detailed listings of the debtor's property, debts, secured and unsecured creditors, estimated value of secured claims and related information on business/personal characteristics.

Approximately one-half of the farm Chapter 11 filings from January 1980-October 1985 were randomly selected within two strata -- total debt and time of filing. The distribution of Chapter 11 filings selected is shown in Table 3.

Initial filings (including amended creditors listing of claims and secured assets) provides a financial "snapshot" of the farm business prior to the proposed reorganization plan. The initial filings do not have sufficient information to determine: (1) the specific causes of the farmer-debtors financial difficulties; (2) the dynamics of farmer-attorney- creditor negotiations and (3) the eventual success of the proposed reorganization plans.

Table 3. Distribution of Farmer-Debtor Chapter 11 Filings Selected by Total Debt and Time of Filing.

| Total Debt (\$1000) | Time of Filing | | | Total |
|------------------------|--|------|-------------------|-------|
| | 1980-83 | 1984 | 1985 ^a | |
| | -----number of filings selected ^b ----- | | | |
| ≤ 500 | 40 | 26 | 30 | 96 |
| 501-1000 | 31 | 22 | 32 | 85 |
| 1001-1500 | 11 | 8 | 3 | 22 |
| 1501-9999 ^b | 7 | 2 | 7 | 16 |
| Total | 89 | 58 | 72 | 219 |

Source: Compiled from Federal Bankruptcy Court Record, Sioux Falls, South Dakota.

^a January - October 1985

^b Chapter 11 farm filings exceeding \$10,000,000 of total debt were excluded because of their unusual size and industrial corporation characteristics. Two filings were excluded because of these restrictions. Highest total debt among selected filings was less than \$6,000,000.

However, information on the financial structure and conditions of these farm firms and the relative position of their creditors is provided. Although reported asset values may be less reliable,¹ the expectation would be that data presented on debt levels is fairly accurate.

Chapter 11 Farm Debtor Characteristics

Farm reorganization bankruptcies are filed by farmers of all experience and age levels. The average (mean) number of years filers have operated a farm or ranch was 20 years; the median was 18 years. Nearly 28% have been farm/ranching as adults for over 30 years, while 29% have only farmed 2-10 years. One-fifth of those filing began farming/ranching before 1950 while one-fourth started farming in 1975 or later (Table 4).

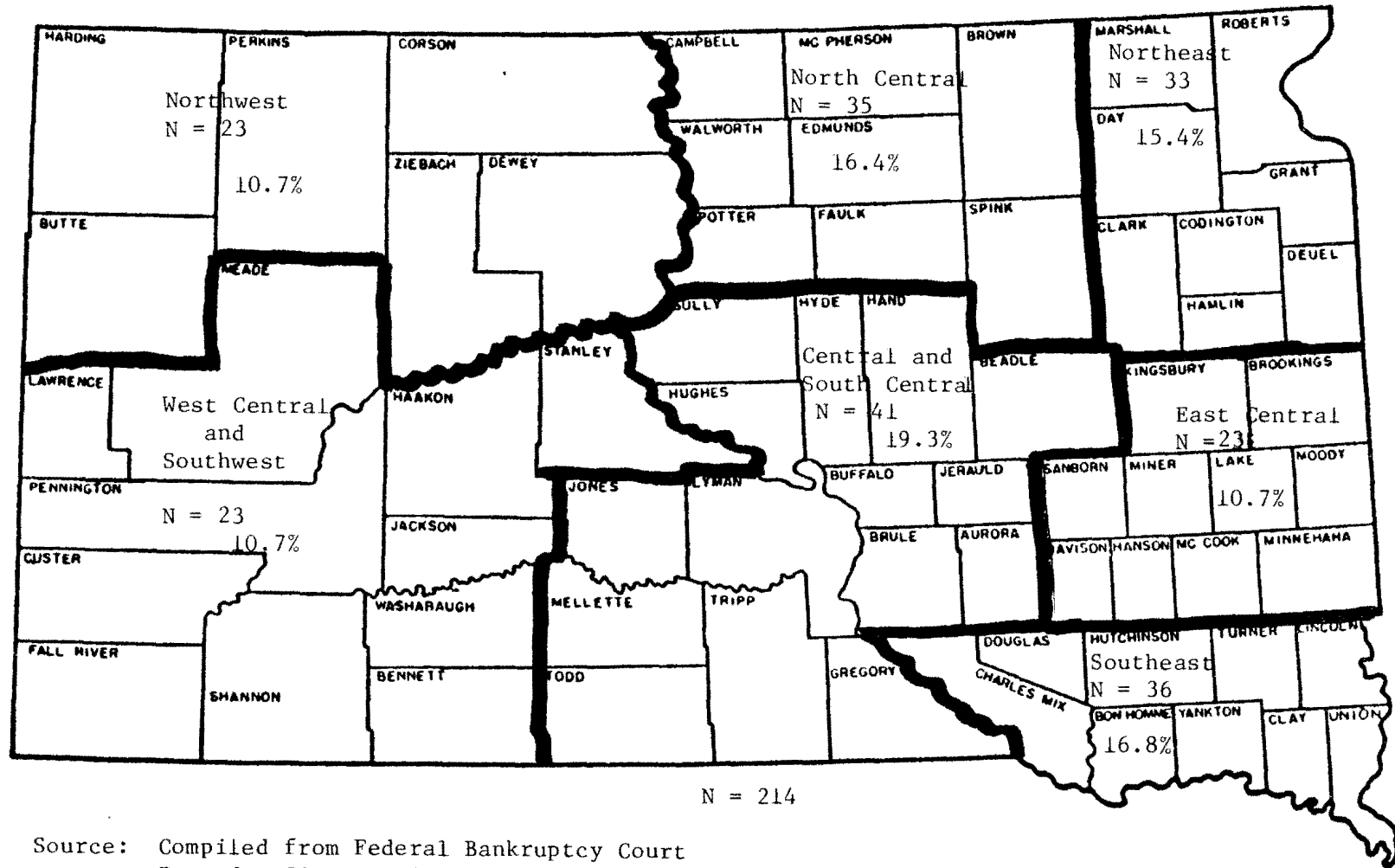
Farmers and ranchers from every region (and most counties) of South Dakota have filed Chapter 11 bankruptcy. Approximately 43% of farmers filing are located in eastern regions of South Dakota, compared to 36% in central South Dakota and 21% from western South Dakota (Figure 1). The concentration of Chapter 11 filings, relative to total farm numbers, is higher in western and central South Dakota compared to eastern regions of South Dakota. The proportion of total farm numbers in these regions are eastern - 55%, central - 29% and western South Dakota - 16% (Janssen and Edelman, 1983).

The probable explanation of higher rates of bankruptcy filings in central and western South Dakota are: (1) greater dependence on livestock and (2) low dependence on off-farm income.

The distribution of farm business legal organizations among filers is relatively close to that for all South Dakota farmers. Eighty-nine percent of the filers were organized as sole proprietorships, 9 percent as

¹Asset values used in Bankruptcy Court to evaluate proposed reorganization plans are established in later valuation hearings. Valuations are based on appraisals submitted by debtors-creditors attorneys and the discretion of the Bankruptcy Judge.

Figure 1. Regional Location of South Dakota Farm Debtors Filing Chapter 11 Bankruptcy.



Source: Compiled from Federal Bankruptcy Court Records, Sioux Falls, South Dakota

Regions are based on Crop Reporting Districts. Regional (county) location not reported on 5 of 219 filings.

N = number of filings.
% = percent of 214 filings.

Table 4. Distribution of Chapter 11 Farm Filings by Number of Years Involved and Time Period Started Farming.

| <u>Number of Years Farming/Ranching</u> | <u>Chapter 11 Filings</u> | | <u>Year Started Farming/Ranching</u> | <u>Chapter 11 Filings</u> | |
|---|-------------------------------|------------|--|-------------------------------|----------|
| | <u>N</u> | <u>%</u> | | <u>N</u> | <u>%</u> |
| 2-5 | 19 | 9.6 | Before 1950 | 41 | 20.7 |
| 6-10 | 39 | 19.7 | 1950-1959 | 32 | 16.2 |
| 11-15 | 32 | 16.2 | 1960-1969 | 40 | 20.2 |
| 16-20 | 20 | 10.0 | 1970-1974 | 37 | 18.7 |
| 21-30 | 33 | 16.7 | 1975 or later | 48 | 24.2 |
| 31-40 | 42 | 21.2 | | | |
| 41 or more | <u>13</u> | <u>6.6</u> | | | |
| Total ^a | 198 | 100.0 | Total | 198 | 100.0 |

Source: Compiled from Federal Bankruptcy Court Records, Sioux Falls, South Dakota.

^aInformation not available for both items from 21 of 219 Chapter 11 filings from January 1980 - October 1985.

corporations and 2 percent as partnerships. The proportion of proprietorships (75%) is considerably lower for farms with the highest total debts (Table 5). Approximately 78% of sole proprietorship filings were listed as husband-wife filings.

Ninety-five percent of the debtors have not previously filed for bankruptcy and 42% are involved in various lawsuits at the time of filing. Bankruptcy is a "new" experience for most filers, while the incidence of lawsuits is one of several reasons why farmers may file for protection from creditors under Chapter 11 (Table 5).

Forty-two percent of debtors filing Chapter 11 reported income from sources other than the farm business. The incidence of other income was highest for those with total debt of less than \$500,000.

Past due local property taxes were owed by 51% of those filing (Table 5). Federal income taxes are overdue by 14% of those filing. Overdue taxes averaged \$5,280. The higher incidence of local property taxes primarily reflects stability of ad valorem taxes levied on real estate regardless of current income levels. Tax liens take precedence over positions of secured and unsecured creditors in bankruptcy and eventual tax recovery should be fairly high.

Financial Characteristics of Chapter 11 Farm Filers

Average total debt at time of filing was \$720,700 with \$662,200 of that amount being secured debt and the remainder being unsecured. The total amount of debt outstanding for the 219 filers was \$157.8 million. Nearly 83% of those filing reported total debt of \$1.0 million or less and 10% reported total debt of \$1.0 - 1.5 million. Only 7.3% of the filers had more than \$1.5 million of debt, but these filers held 24.7 percent of total debt. Because

Table 5. Major Financial Characteristics of Farm Reorganization Bankruptcy Filings in South Dakota, 1980-1985, by Overall, Size of Total debt, Debt-to-Asset Ratio and Time of Filing.

| Major Characteristics | Overall | Size of Total Debt in Thousands | | | |
|--|-----------|---------------------------------|------------------|-------------------|-----------|
| | | <\$500 | \$501- \$1000 | \$1001- \$1500 | >\$1500 |
| A. Sample Size | | | | | |
| 1. Number | 219 | 96 | 85 | 22 | 16 |
| 2. Percent of total | 100.0% | 43.8% | 38.9% | 10.0% | 7.3% |
| B. Average number of years in farming | 21 | 20 | 23 | 21 | 18 |
| C. Sole proprietorship (percent of incidence) | 89% | 90% | 91% | 91% | 75% |
| D. Other lawsuits (Percent of incidence) | 42% | 38% | 48% | 32% | 37% |
| E. Other income | 45% | 51% | 43% | 41% | 19% |
| F. Taxes owed to local government (percent of incidence) | 51% | 48% | 55% | 45% | 50% |
| G. Total debt (\$1000) | \$157,824 | \$32,011 | \$60,980 | \$25,936 | \$38,897 |
| Percent of total debt | 100.0% | 20.3% | 38.6% | 16.4% | 24.7% |
| H. Average per debtor in thousands of dollars | | | | | |
| 1. Grain inventory | \$ 30.9 | \$ 10.7 | \$ 28.9 | \$ 75.2 | \$ 101.3 |
| 2. Livestock | 88.9 | 39.1 | 69.5 | 228.9 | 298.7 |
| 3. Machinery | 63.0 | 40.3 | 59.0 | 83.3 | 192.7 |
| 4. Real estate | 371.4 | 200.0 | 342.1 | 666.3 | 1,149.9 |
| 5. Other property | 63.5 | 29.4 | 65.4 | 91.3 | 220.6 |
| 6. Total property ^a | 617.7 | 319.5 | 564.9 | 1,145.1 | 1,963.1 |
| 7. Total debt ^b | 720.7 | 333.5 | 719.3 | 1,178.9 | 2,431.1 |
| 8. Secured debt | \$662.2 | \$300.7 | \$671.3 | \$1,017.3 | \$2,293.5 |
| 9. Unsecured debt | 55.5 | 28.9 | 48.0 | 151.2 | 123.7 |
| I. Average number of creditors | | | | | |
| 1. Secured ^c | 5.7 | 4.8 | 5.9 | 7.1 | 8.0 |
| 2. Unsecured | 9.0 | 9.1 | 8.6 | 10.6 | 8.2 |

Table 5. Continued

| Major Characteristics | Time of Filing | | | Debt to Asset Ratio | | | |
|--|----------------|----------|----------|---------------------|-----------|-----------|----------|
| | 1980-1983 | 1984 | 1985 | <0.70 | 0.70-0.99 | 1.00-1.99 | ≥2.00 |
| A. Sample Size | | | | | | | |
| 1. Number | 89 | 58 | 72 | 35 | 34 | 94 | 56 |
| 2. Percent of total | 40.6% | 26.5% | 32.9% | 16.0% | 15.5% | 42.9% | 25.6% |
| B. Average number of years in farming | 18 | 24 | 21 | 23 | 23 | 20 | 19 |
| C. Sole proprietorship (percent of incidence) | 88% | 93% | 87% | 86% | 86% | 89% | 91% |
| D. Other lawsuits (percent of incidence) | 42% | 28% | 53% | 35% | 42% | 45% | 41% |
| E. Other Income | 40% | 43% | 54% | 40% | 50% | 39% | 54% |
| F. Taxes owed to local government (percent of incidence) | 48% | 52% | 53% | 51% | 47% | 45% | 62% |
| G. Total debt (\$1000) | \$66,067 | \$38,009 | \$53,748 | \$ 21,853 | \$23,328 | \$64,177 | \$48,466 |
| 1. Percent of total debt | 41.9% | 24.1% | 34.0% | 13.0% | 14.8% | 40.7% | 30.7% |
| H. Average per debtor in thousands of dollars | | | | | | | |
| 1. Grain inventory | \$ 35.0 | \$ 26.6 | \$ 29.1 | \$ 64.3 | \$ 29.5 | \$ 26.4 | \$ 18.4 |
| 2. Livestock | 124.6 | 64.7 | 64.3 | 126.7 | 156.3 | 77.1 | 44.3 |
| 3. Machinery | 66.9 | 51.9 | 67.2 | 83.3 | 81.2 | 61.3 | 42.2 |
| 4. Real Estate | 446.2 | 377.7 | 273.9 | 775.7 | 486.7 | 288.9 | 187.1 |
| 5. Other property | 79.3 | 48.5 | 56.1 | 166.8 | 56.6 | 45.9 | 32.7 |
| 6. Total property ^a | 752.0 | 569.4 | 490.6 | 1,216.8 | 810.3 | 499.6 | 324.7 |
| 7. Total debt ^b | 742.3 | 655.3 | 746.5 | 624.4 | 686.1 | 682.7 | 859.6 |
| 8. Secured debt | 665.2 | 601.2 | 705.5 | 585.4 | 654.9 | 627.8 | 770.3 |
| 9. Unsecured debt | 71.0 | 50.1 | 40.6 | 32.8 | 26.1 | 54.5 | 89.3 |
| I. Average number of creditors | | | | | | | |
| 1. Secured ^c | 6.0 | 5.5 | 5.5 | 5.1 | 5.9 | 6.0 | 5.5 |
| 2. Unsecured | 9.7 | 9.3 | 7.9 | 6.4 | 8.6 | 9.5 | 9.9 |

Table 5. Footnotes

Source: Compiled from initial filing data for Chapter 11 farm bankruptcy, 1980-1985, Federal Bankruptcy Court, Sioux Falls, South Dakota.

^aTotal property includes grain inventory, livestock, farm machinery, real estate and all other tangible property owned by the debtor.

^bTotal debt may be slightly greater than the reported sum of secured debt and unsecured debt. The difference is the amount of taxes owed to Federal, state and local governments.

^cAll secured debt excluding overdue taxes.

^dThe debt-to-asset ratio is the ratio of total debt to total property values reported.

their debt level exceeds the \$1.5 million debt limit specified by Chapter 12, this category of filers would still need to use Chapter 11.

An average of 14.7 creditors (5.7 secured creditors and 9 unsecured creditors) were listed by those filing under Chapter 11. The number of creditors varied between 2-50 creditors. Analysis of variance by time period or by total debt class were conducted for this variable.² Significant differences in the means were tested using the Waller-Duncan k-ratio t-test (SAS User Guide; Statistics, 1985). The term "significant" refers to a statistically significant difference in means for this and other variables at $p = 0.05$. The number of secured creditors was positively and significantly related to the amount of total debt but was not significantly related to the time of filing.

Secured debt is a mortgage or security interest held by a creditor. This creditor has a lien on the debtors property and has priority in bankruptcy over an unsecured creditor. Unsecured debts are often accounts receivables held by merchants and agribusiness suppliers or unsecured loans made by individuals or financial institutions.

Approximately 92% of total debt is held by secured creditors. The ratio of secured debt to total debt is significantly lower for those filing in earlier years (1980-83) and for those with the highest debt/asset ratios (>2.0). This finding is related to greater frequency of unsecured credit extension by agricultural lenders and agribusinesses in the late 1970's and early 1980's. Accounts receivable policies of agribusiness suppliers were much less stringent in that time period.

²The analysis of variance (using the SAS General Linear Model) procedure was used to examine the main effect means for number of creditors, total property, ratio of real estate to total property, ratio of secured debt to total debt and other characteristics by size of total debt, debt-to-asset ratio and time of filing. Findings that are statistically significant are reported in the appropriate section of text.

Average total property value reported at time of filing was \$617,700. Sixty percent of reported property value was in farm real estate (including the house). The remaining asset categories were the following percent of total property value: livestock (14.4%), grain and other farm inventories (5%), machinery and equipment (10.2%), and other personal or financial assets (10.3%). The dollar amount and ratio of livestock inventory to total property values was highest for filers during 1980-83 and for those with total debts exceeding \$1.0 million.

Total reported property values were significantly related to time of filing--average total property values in 1984 were significantly lower than those reported in 1983 and significantly higher than those reported in 1985. Declining real estate values per farm explain most of this decline (\$273,900 in 1985 versus \$446,200 from 1980-1983). Another contributing factor was a higher incidence of livestock farms and ranches in the 1980-1983 filing period.

Trends in reported real estate values conform closely to other published data on South Dakota farm real estate value and sale price trends. Farmland values statewide did not change much between 1980-1982. Farmland prices declined at accelerated rates in all regions of the state from 1983 to 1985 (Farm Credit Banks of Omaha, 1984 and 1986; USDA Agricultural Resources, 1986).

Average asset size of farm debtor Chapter 11 filers is substantially greater than total assets per farm reported for all South Dakota farms. The average property value per farm filing was 40 to 70 percent greater than average farm asset values reported in the South Dakota farm sector balance sheets for 1980-1984 (USDA, Economic Indicators, 1987). Actual asset value differences per year between farm Chapter 11 filers and all South Dakota

farms is even greater because the value of rented farmland is included in the USDA farm finance statistics and is not included in Federal Bankruptcy court filings. However, the distribution of asset values by type of property was similar between Chapter 11 filers and all South Dakota farmers.

Based on the debt and property (asset) values reported, most farm filers were insolvent at the time they filed for Chapter 11 bankruptcy. Over two-thirds (68.5%) reported total debts exceeding estimated property values and 25.6% reported total debts exceeding twice the total asset values reported (Table 5). The proportion of filers reporting insolvency (debt/asset ratio greater than 1.0) in 1985 (77%) was significantly greater than the proportion reporting insolvency (59%) in the 1980-1983 filing period.

According to a Federal Bankruptcy Court official, there is a general tendency to under report asset values in initial filings, while reported debt levels are usually accurate. It was not possible for this study to confirm or reject this perception of bias or its magnitude.

Average total debt increased as the estimated debt/asset ratio increased, while reported total property values significantly declined. For example, filers with debt/asset ratios of less than 0.7 reported average total assets of \$1,216,800 while filers with debt/asset ratio exceeding 2.0 reported total assets averaging \$324,700.

If filers are insolvent, this may suggest that proposed reorganization plans are not likely to be workable, even if confirmed. However, initial filings do not contain information to accurately estimate debt-income ratios, debt servicing ratios and other important cash flow measures of financial stress. This is the major weakness in using initial filing financial data for analysis of this type.

Chapter 11 Farm Filers Qualified for Chapter 12

Chapter 12 reorganization bankruptcy is limited to farms and ranchers with (1) less than \$1,500,000 of total debt and 80-100% of debt from the farm/ranch business and (2) 50-100% of gross income from farming or ranching. Additional requirements for farm partnerships or corporations are (1) 50-100% of equity must be held by related persons and (2) 80% of assets are related to farming.

Based on total debt criteria, 93% of farm Chapter 11 filers in the sample would have qualified for Chapter 12 reorganization bankruptcy if it had been available from 1980-1985. These producers held 75% of total debt among Chapter 11 filers (Table 5).

Almost all of the debtor-filers with total debts of \$1,500,000 or less would meet the 80% farm debt test. It is probable (but cannot be determined from available data) that most would meet the gross income test. Farm partnerships or corporations that met the total debt and farm debt test usually met the 80% farm asset test.

These findings suggest that Chapter 12 requirements can handle most South Dakota farm bankruptcy reorganization filings. The major shift of reorganization bankruptcy filings to Chapter 12 since passage of this statute confirms that this is the case. However solvent farm filers qualifying for Chapter 12 may still find it advantageous to use Chapter 11. In Chapter 12 cases where the debtor is solvent, debt writedowns are restricted.

Chapter 11 Farm Filers Qualified for Chapter 13

Chapter 13 reorganization bankruptcy is limited to individuals/proprietorships with less than \$350,000 of secured debt and less than \$100,000 of unsecured debt. Chapter 13 also has several operating rules and restrictions that make it less desirable than Chapter 11 or 12 for many

eligible producers even though it is less expensive (see Section II). For these reasons, some farm debtors eligible for Chapter 13 may file under Chapter 11.

We examined the incidence and characteristics of Chapter 11 filers that also qualified for Chapter 13. Twenty-two percent of Chapter 11 filers holding 8% of total debt in the sample would have qualified for Chapter 13 (Table 6). Compared to all Chapter 11 filings, Chapter 13 qualifiers had (1) significantly less years of farm experience (16 vs. 21), (2) lower incidence of past due taxes to local government (33% vs. 51%), (3) lower proportion of reported insolvency (58% vs. 69%), and (4) lower numbers of secured creditors (4.4 vs. 5.5). The distribution of assets was similar except that machinery values were a higher percentage while grain and inventories were lower. Almost 90% of total debt is held by secured creditors.

Filing Time, Expense and Disposition

Almost half (48.6%) of Chapter 11 cases were filed from January - April. The remainder were almost evenly distributed throughout the other 8 months (Table 7).

The amount of time required to obtain a confirmed plan and amount of legal fees are two major factors to be considered by farmers filing for a Chapter 11 bankruptcy. Seventeen months was the average amount of time from filing to final disposition, i.e. confirmed, dismissed or converted. One-third of the cases were handled within a 12 month period while one-fifth were in process more than two years (Table 7).

Larger, more complex cases had significantly longer time periods from filing to disposition. A significant direct relationship existed between amount of time from filing to disposition and both the amount of total debt and the number of secured creditors. This finding may be important to those

Table 6. Selected Characteristics of Farm Chapter 11 Filings which Qualify for Chapter 13 Bankruptcy^a

| Characteristic | | Characteristic | |
|--|-----|--|---------|
| Total number | 48 | Total debt (\$1000) = | \$12505 |
| Percent of Chapter 11 filings ^b | 22% | Percent of debt held by farm Chapter 11 filings ^b | 8% |
| Average number of years in farming | 16 | <u>Average per debtor (\$1000)</u> | |
| | | Grain/inventory | \$ 7.4 |
| | | Livestock | 29.0 |
| Other lawsuits (percent of incidence) ^c | 40% | Machinery | 34.6 |
| | | Real estate | 153.8 |
| | | Other property | 25.8 |
| Taxes owed to local government (percent of incidence) ^c | 33% | Total property | \$250.6 |
| | | Total debt ^d | 260.5 |
| <u>Year of Filing^c:</u> | | | |
| 1980-83 | 44% | Secured debt ^d | \$233.4 |
| 1984 | 31% | Unsecured debt ^d | 22.8 |
| 1985 | 25% | | |
| Debt/asset ratio ^c | | Average number of creditors | |
| <1.0 (solvent) = | 42% | Secured | 4.4 |
| ≥1.0 (insolvent) = | 58% | Unsecured | 9.5 |

Source: Compiled from initial filing data for Chapter 11 farm bankruptcy, 1980-85, Federal Bankruptcy Court, Sioux Falls, South Dakota.

^aChapter 13 qualifications are proprietorships with less than \$350,000 of secured debt and less than \$100,000 of unsecured debt.

^bPercent of 219 filings and \$157.8 million of debt included in the sample.

^cPercent of 48 filers qualifying for Chapter 13.

^dTotal debt includes secured debt, unsecured debt and past due taxes.

Table 7. Filing Times and Length of Time for Disposition of Farm Chapter 11 Case.

| <u>Month of Filing</u> | <u>Chapter 11 Filings</u> | | <u>Number of Months From Filing To Disposition^a</u> | <u>Chapter 11 Filings</u> | |
|------------------------|---------------------------|-------------|--|---------------------------|-------------|
| | <u>N</u> | <u>%</u> | | <u>N</u> | <u>%</u> |
| January-February | 50 | 22.8 | | | |
| March-April | 57 | 26.0 | 1-12 | 51 | 33.3 |
| May-June | 31 | 14.2 | 13-18 | 44 | 28.8 |
| July-August | 25 | 11.4 | 19-24 | 28 | 18.3 |
| September-October | 28 | 12.8 | Over 24 | <u>30</u> | <u>19.6</u> |
| November-December | <u>28</u> | <u>12.8</u> | Subtotal | 153 | 100.0 |
| Total | 219 | 100.0 | Cases in process | 66 ^b | |

Source: Compiled from Federal Bankruptcy Court records, Sioux Falls, South Dakota.

^aNumber of months from filing to final disposition of case by the Federal Bankruptcy Court. The proposed reorganization plan may be confirmed, the case may be dismissed or the case may be converted to Chapter 7.

^bNumber of cases where final action has not been taken as of September, 1986. Most of these cases were filed in 1984 or 1985.

farm firms (with total debts exceeding \$1,500,000) that still need to use Chapter 11.

The average cash expense per filing was \$4800 in initial attorney fees and court filing fees, with \$75 - \$80 per hour typically charged for subsequent legal actions.

IV. MAJOR CHARACTERISTICS OF SECURED AND UNSECURED CREDITORS

Distribution of Secured Creditors

Almost 92% of total debt or \$145.7 million was secured³ by real estate or chattel. The average filer owed \$662,900 to 5.7 secured creditors. Overall, commercial banks and the Farm Credit System held 51% of secured credit volume, Federal credit agencies (FmHA, CCC, SBA) held another 29.4%, individuals held 10.3%, and the remainder was held by insurance companies and agribusiness suppliers (Table 8).

Commercial banks were listed by more debtors (80.8%) than any other type of secured creditor. The average amount of debt owed to one or more commercial banks was \$241,900 per debtor and \$145,100 per bank listed. Commercial banks were 23.7% of listed secured creditors and held 29.9% of the secured credit volume.

Federal government agencies were secured creditors for a majority of the debtors. Farmers Home Administration (FmHA) loans averaged \$249,200 and were listed as a secured creditor by 65.3% of the filers. Not all of the farmers experiencing financial stress have borrowed capital from FmHA. Other Federal credit agencies (primarily CCC) had secured loans averaging \$42,900 and were listed by 55% of Chapter 11 filers.

The Farm Credit System agencies, Federal Land Bank (FLB) and Production Credit Association (PCA), were also major creditors and held 21.1% of the total secured debt. The Federal Land Bank held an average loan volume of \$154,300 per debtor on 43.4% of the filings. Only 18.7% listed the Production Credit Associations as a secured creditor, but the average indebtedness (\$380,500) was the highest of any creditor group. Insurance

³ Represents all debt where lender has a security interest filed (financing statement, mortgages or contract for deed). At time of filing, the debt may be fully secured or partially secured (impaired) by the current value of assets secured.

Table 8. Distribution of Secured Creditors by Incidence of Farm Debtors, Average Dollar Amount, Total Secured and Impaired Credit Volume.

| Type of Secured Creditor | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|--|--|--|--|--|---|
| | Percent of Debtors Listing One or More Secured Creditors ^a | Average Amount Owed by Each Debtor ^b (\$1000) | Average Amount Owed to Each Creditor ^c (\$1000) | Average Amount Owed to Each Creditor as Percent of Total Debt ^d | Number of Secured Creditors ^d | Proportion of Total Secured Creditor Volume ^d | Proportion of Total Impaired Credit Volume ^d |
| A. Commercial banks | 80.8% | \$241.9 | \$145.1 | 21.8 | 23.7% | 29.9% | 34.7% |
| B. Farmers Home Administration | 65.3% | \$249.2 | \$249.2 | 35.3 | 12.6% | 24.1% | 28.8% |
| C. Other government agencies (SBA, CCC) | 55.2% | \$ 52.9 | \$ 40.3 | 5.0 | 12.8% | 4.5% | 2.5% |
| D. Individuals | 43.8% | \$154.2 | \$ 86.1 | 10.0 | 13.8% | 10.3% | 8.7% |
| E. Federal Land Bank | 43.4% | \$154.7 | \$154.7 | 20.8 | 7.7% | 10.2% | 4.8% |
| F. Farm implement dealers | 32.9% | \$ 25.3 | \$ 19.4 | 2.2 | 7.5% | 1.3% | 1.2% |
| G. Farm machinery finance companies | 29.7% | \$ 38.8 | \$ 23.5 | 2.8 | 8.6% | 1.8% | 1.9% |
| H. Production Credit Association | 18.7% | \$380.5 | \$380.5 | 52.9 | 3.4% | 10.9% | 12.5% |
| I. Insurance companies | 9.6% | \$327.4 | \$327.4 | 31.3 | 1.7% | 4.8% | 3.6% |
| J. Other farm suppliers | 9.1% | \$ 25.3 | \$ 17.4 | 2.7 | 2.3% | 0.4% | 0.3% |
| K. All other | 26.9% | \$ 25.5 | \$ 20.6 | 3.0 | 5.9% | 1.0% | 1.0% |

Source: Compiled from initial filing data for Chapter 11 farm bankruptcy, Federal Bankruptcy Court, Sioux Falls, South Dakota.

^aPercent of 219 debtors, where many debtors listed more than one bank or individual or other specified type of secured creditor.

^bAverage dollar amount reported is per debtor owing money to one or more secured creditors by type.

^cAverage dollar amount owed to each creditor by type of secured creditor. The average number of creditors by type of secured creditor can be found by dividing amounts owed in Column (2) by Column (3).

Example: Average for Commercial banks = $\$241.9/145.1 = 1.67$ Commercial banks listed per debtor listing any Commercial bank.

^dPercent of 1,246 secured creditors and \$143.2 million of secured credit volume and estimated \$84.4 million of impaired secured credit volume.

companies were unsecured creditors to only 9.6% of the debtor filers, but the average loan amount was the second highest--\$327,400.

Individuals were listed one or more times as secured creditors by 43.8% of the filers. The average amount owed per debtor was \$154,200 and the average amount of secured claim per individual creditor was \$86,100. Installment contracts for deed were the primary situation where individuals were listed as a creditor. Individuals held 10.3% of the secured credit volume.

Agribusiness firms and all other secured creditors comprised 24.3% of the total number of secured creditors, and held 4.5% of secured credit volume. Farm machinery dealers, farm machinery finance companies and all other businesses were each listed one or more times as secured creditors by 27-33% of debtor filers. The average amount of secured debt per debtor (\$25,300 to \$38,000) and per creditor (\$19,400-\$23,500) was much lower than amounts listed for individuals or financial institutions.

The average amount owed to each secured creditor as a percent of total debt (column 4, Table 8) is a rough measure of (1) relative dependence of debtors to a specific creditor or (2) average degree of creditor involvement in debt financing a farm operation.

Production Credit Associations were listed as a secured creditor by only 18.7% of debtor-filers but, if listed, provided an average of 52.9% of the total debt capital of these farmer-borrowers.

Farmers Home Administration and insurance companies provided an average of 35.3% and 31.3% of total debt capital to their respective borrowers in this sample. Federal Land Banks provided an average of 20.8% of total debt capital to debtor-filers listing FLB as a secured creditor.

Debtors obtaining credit from commercial banks or from individuals frequently listed more than one bank or more than one individual. Each commercial bank listed, provided an average of 21.8% of total debt capital to their debtor-filers; individuals provided an average of 10%. All other secured creditors provided, on an average, less than 6%.

Distribution of secured credit volume by type of creditor was related to the amount of total debt held by debtor-filers. Overall, 25.3% of \$145.0 million of secured debt was held by those with \$1,500,000 or more of total debt while 19.9% was held by debtor-filers with less than \$500,000 of total debt (Table 9).

More than 30% of secured debt loaned by individuals, companies, Production Credit Associations, farm machinery dealers and finance companies were to the high debt (<\$1,500,000) producers. In contrast, less than 16% of secured debt held by Federal Land Bank or Farmers Home Administration were loans to high debt producers.

More than 30% of secured debt loaned by Farmers Home Administration were to the lower-debt producers with less than \$500,000 of total debt. In contrast, insurance companies and individuals had the lowest proportion of secured loans (6.4% and 12.2%) with this debt class of producers.

Commercial banks distribution of secured debt by producer debt size category was similar to the overall distribution.

In almost all cases the average amount of debt by type of secured creditor increased as total debt of filers increased. Among financial institutions, Farmers Home Administration had the highest average secured credit (\$169,600) to lower debt producers and one of the lower average amounts of credit (\$368,800) to highest-debt filers.

Table 9. Distribution of Secured Credit Volume by Type of Secured Creditor and Size of Total Debt per Filing.

| Type of Secured Credit | Amount Owed (\$1000) | Size of Total Debt in Thousands | | | | |
|--|----------------------|---------------------------------|----------|------------|-------------|----------|
| | | Overall | <\$500 | \$500-1000 | \$1001-1500 | >\$1500 |
| All Secured Creditors ^a | Average ^b | \$ 662.2 | \$ 300.7 | \$671.3 | \$1017.3 | \$2293.5 |
| | Total ^c | \$145008 | \$28872 | \$57060 | \$22380 | \$36696 |
| | Percent ^d | 100% | 19.9% | 39.4% | 15.4% | 25.3% |
| Commercial Banks | Average ^b | \$ 241.9 | \$ 101.3 | \$248.6 | \$340.1 | \$832.6 |
| | Total ^c | \$42814 | \$7696 | \$16659 | \$6802 | \$11657 |
| | Percent ^d | 100.0% | 18.0% | 38.9% | 15.9% | 27.2% |
| Farmers Home Administration | Average | \$ 249.2 | \$ 169.6 | \$290.0 | \$342.9 | \$368.8 |
| | Total | \$35636 | \$10852 | \$14504 | \$5486 | \$4794 |
| | Percent | 100.0% | 30.5% | 40.7% | 15.4% | 13.4% |
| Other Government Agencies | Average | \$ 52.9 | \$ 18.2 | \$ 50.1 | \$ 57.9 | \$194.9 |
| | Total | \$6400 | \$853 | \$2455 | \$753 | \$2339 |
| | Percent | 100.0% | 13.3% | 38.4% | 11.8% | 36.5% |
| Individuals | Average | \$ 154.2 | \$ 64.5 | \$124.8 | \$219.3 | \$472.3 |
| | Total | \$14807 | \$1806 | \$5866 | \$2412 | \$4723 |
| | Percent | 100.0% | 12.2% | 39.6% | 16.3% | 31.9% |
| Federal Land Bank | Average | \$ 154.3 | \$ 81.8 | \$191.4 | \$217.6 | \$283.5 |
| | Total | \$14661 | \$3355 | \$7080 | \$1958 | \$2267 |
| | Percent | 100.0% | 22.9% | 48.3% | 13.3% | 15.5% |
| Farm Implement Dealers | Average | \$ 25.3 | \$ 10.4 | \$ 24.5 | \$ 19.1 | \$ 84.9 |
| | Total | \$1823 | \$280 | \$711 | \$153 | \$679 |
| | Percent | 100.0% | 15.4% | 39.0% | 8.4% | 37.2% |
| Farm Machinery Finance Companies | Average | \$ 38.8 | \$ 21.3 | \$ 26.9 | \$ 35.3 | \$228.9 |
| | Total | \$2520 | \$405 | \$916 | \$283 | \$916 |
| | Percent | 100.0% | 16.1% | 36.3% | 11.3% | 36.3% |
| Production Credit Association | Average | \$ 380.5 | \$168.6 | \$321.2 | \$471.6 | \$1744.8 |
| | Total | \$15600 | \$2697 | \$5782 | \$1887 | \$5234 |
| | Percent | 100.0% | 17.3% | 37.1% | 12.1% | 33.5% |
| Insurance Companies | Average | \$ 327.4 | \$ 146.4 | \$139.5 | \$310.1 | \$ 907.7 |
| | Total | \$ 6876 | \$ 439 | \$1255 | \$1551 | \$3631 |
| | Percent | 100.0% | 6.4% | 18.2% | 22.6% | 52.8% |
| Other Farm Suppliers and Other Secured Creditors | Average | \$ 25.5 | \$ 12.6 | \$ 38.5 | \$ 37.5 | \$ 20.4 |
| | Total | \$2012 | \$453 | \$1157 | \$300 | \$102 |
| | Percent | 100.0% | 22.5% | 57.5% | 14.9% | 5.1% |

Source: Compiled from initial filing data for Chapter 11 bankruptcy, Federal Bankruptcy Court, Sioux Falls, South Dakota.

^aTotal debt owed to all secured creditors (\$145,008,000) slightly exceeds the sum of total debt by type of secured creditor (\$143,149,000). The difference is the amount of secured debt listed that could not be identified by type of creditor.

Average secured debt by size of total debt for all secured creditors is the same as shown in row H-8 of Table 5.

^bAverage amount of debt owed by type of secured creditor. Overall average by creditor is same as shown in Column 2 of Table 8.

^cTotal amount of debt owed by type of secured creditors.

^dPercent of total debt by type of secured creditor.

Fully Secured and Impaired Creditors

An important issue for secured creditors is whether their secured claim is impaired or fully secured. An impaired creditor is a secured creditor whose market value of security is less than loan volume outstanding. By contrast, a fully secured creditor has a positive security (collateral) margin. In a reorganization plan, interests of secured creditors are fully protected only to the market value of their security interest.

All secured creditors were classified as impaired or fully secured based on the estimated market value of their security interest to the amount of debt claimed. Preliminary estimates indicate nearly one-half of the secured creditors holding 58% of secured credit volume were impaired creditors (Table 10). Commercial banks, FmHA and PCA had significantly higher proportion of impaired credit volume than total secured credit volume (Table 8).

Overall, the average debt per impaired creditor (\$152,000) was considerably greater than average debt held by fully secured creditors (\$85,000). This relationship also held by most types of secured creditors (Table 10). For impaired creditors, the average (mean) ratio of their security interest was 52% of their debt claim. Fully secured creditors (except for PCA, farm machinery dealers and farm machinery finance companies) averaged 2:1 collateral/debt ratios (Table 10).

It should be noted that estimates of impaired creditor and fully secured creditor characteristics are based on initial filing data which is prior to asset valuation hearings. Estimated value of security interest (collateral) on initial filing is provided by the debtor-filer, not the creditor. Creditors with security interests in the same property were separated into first, second and third lien holders based on information filed. Each

Table 10. Distribution of Fully Secured and Impaired Creditors by Total Secured Credit Volume, Volume per Creditor and Security Ratio.

| Type of Secured Creditor | Secured Credit Volume | | | Average Debt per Creditor | | Ratio of Security Interest (Collateral) to Debt | |
|--|-----------------------|----------------------------|-----------------------|----------------------------|-----------------------|---|-----------------------|
| | Total | Fully Secured ^b | Impaired ^b | Fully Secured ^c | Impaired ^c | Fully Secured ^c | Impaired ^c |
| -----Thousands of Dollars----- | | | | | | | |
| Commercial Bank | \$42814 | \$13475 | \$29339 | \$ 74.3 | \$157.9 | 2.14 | 0.48 |
| Farmers Home Administration | \$35636 | \$11344 | \$24292 | \$175.3 | \$270.3 | 2.31 | 0.48 |
| Other Government Agencies | \$ 6400 | \$ 4322 | \$ 2078 | \$ 41.3 | \$ 30.1 | 2.08 | 0.56 |
| Individuals | \$14807 | \$ 7483 | \$ 7324 | \$ 59.3 | \$167.3 | 2.32 | 0.52 |
| Federal Land Bank | \$14661 | \$10610 | \$ 4051 | \$134.5 | \$190.3 | 3.05 | 0.62 |
| Farm Implement Dealer | \$ 1823 | \$ 816 | \$ 1007 | \$ 12.1 | \$ 31.1 | 1.61 | 0.56 |
| Farm Machinery Finance Company | \$ 2520 | \$ 877 | \$ 1643 | \$ 15.5 | \$ 36.3 | 1.43 | 0.65 |
| Production Credit Association | \$15600 | \$ 5062 | \$10538 | \$407.0 | \$385.1 | 1.30 | 0.63 |
| Insurance Companies | \$ 6876 | \$ 3847 | \$ 3029 | \$309.2 | \$548.1 | 2.07 | 0.55 |
| Other Farm Suppliers and Secured Creditors | \$ 2012 | \$ 891 | \$ 1121 | \$ 10.7 | \$ 15.6 | 2.10 | 0.62 |
| Total ^a | \$143149 | \$58727 | \$84422 | \$ 85.0 | \$152.0 | 2.27 | 0.52 |

Source: Compiled from initial filing data for Chapter 11 bankruptcy, Federal Bankruptcy Court, Sioux Falls, South Dakota.

^aTotal debt for 1246 secured creditors that could be identified.

^bFully secured and impaired debt volume is estimated for each type of creditor by (1) estimating the value of each creditors security interest based on initial filing data supplied by the debtor. For 20% of the creditors the value of their security interest (collateral) could not be estimated from available data. The ratio of fully secured to impaired credit volume calculated from known cases was prorated among the cases where this information was not available.

^cAverage debt per creditor and ratio of security interest (collateral) to total debt is calculated from cases where creditors could be classified as fully secured or impaired.

lienholders value of security interest was established based on established priority of their debt claim.

Another limitation is that information for 20% of the 1246 secured creditors was not sufficient to estimate the market value of secured claim. Since these creditors were scattered across a majority of filings and across all creditor types, it was assumed that the ratio of fully secured and impaired credit was the same as that ratio calculated for the other 80%.

Despite these limitations, we believe the following findings would hold even if improved information were available:

- (1) A majority of secured debt volume is impaired.
- (2) Average debt per impaired creditor is substantially greater than average debt per fully secured creditor.

Unsecured Creditors

About 8 percent of total debt in the sample (\$12.0 million) was held by unsecured creditors or \$12.0 million. Ninety-one percent of debtor filers owed debts to one or more unsecured creditor(s). The average total amount of unsecured debt owed was \$60,000 split among 9.8 creditors (Table 11).

Mainstreet businesses were the major unsecured creditors. Most of these creditors were located in rural towns or regional trade centers closest to the debtors home address.

An average of 4.5 unsecured farm suppliers were collectively owed \$21,000 by 79% of debtor-filers. A majority of the filers also owed debt to unsecured machinery dealers, auto repair shops, retail merchants and retail service business. Nearly one quarter reported debts to builders and contractors or to doctors, dentists or hospitals. Average amounts owed to these types of unsecured creditors was less than \$6000.

Unsecured loans made by individuals were reported by 47% of filers. The average amount per debtor was \$24,700 and the average number of unsecured

Table 11. Distribution of Unsecured Creditors by Incidence of Farm Debtor, Average Dollar Amount and Number of Creditors.

| Type of Unsecured Creditor | Percent of Debtors Listing One or More Creditor(s) ^a | Average Amount Owed to These Creditors ^b | Average Number of Creditors ^b |
|--|---|---|--|
| A. Any unsecured creditor | 91% | \$60,000 | 9.8 |
| B. Farm suppliers except for implement dealers | 79% | \$21,000 | 4.5 |
| C. Machinery and auto shops | 56% | \$ 5,800 | 2.2 |
| D. Retail merchants and service | 53% | \$ 3,300 | 2.2 |
| E. Financial Institutions | 48% | \$40,200 | 1.7 |
| F. Individuals and estates | 47% | \$24,700 | 2.4 |
| G. Hospital, doctor and dentist | 24% | \$ 1,500 | 2.4 |
| H. Builders and contractors | 23% | \$ 4,800 | 1.5 |

Source: Compiled from initial filing data for Chapter 11 farm bankruptcy, 1980-1985. Federal Bankruptcy Court, Sioux Falls, South Dakota.

^aPercent of 219 debtors.

^bAverage dollar amount and average number of creditors is calculated per debtor owing money to one or more unsecured creditors by type.

individual loans per debtor was 2.4. Nearly 48% of debtors reported unsecured loans from financial institutions which averaged \$40,200 per debtor.

Examination of incidence by type of unsecured creditor indicated no statistically significant differences ($p = 0.05$) by debtors time of filing, size of total debt or debt/asset category.

V. DISCRIMINANT ANALYSIS OF CHAPTER 11 INITIAL FILING DATA

The initial Chapter 11 filing schedules contain a significant amount of financial structure data on the filers. Discriminant analysis was used to determine whether this information could be used to predict the eventual disposition of a Chapter 11 filing i.e., debtor's reorganization plan is confirmed or not confirmed. Discriminant analysis has previously been used to classify agricultural loans based on the financial and management characteristics of the borrower (Dunn and Frey, 1976; Hardy and Weed, 1980; Johnson and Hagan, 1973).

A stepwise procedure was used to select a subset of variables to be used in a linear discriminant model (SAS, 1985). The dependent variable in the discriminant function analysis was the case's disposition. Ten variables measuring management experience, the financial structure of the farm, the degree of lender impairment, number of secured and unsecured creditors, debt levels, and farm size were used in the initial analysis. Whether a variable was retained in the model was based on a F-test from an analysis of covariance. Only cases filed from 1980 to 1983 were used to estimate the discriminant functions.

Chapter 11 files with confirmed plans (compared to those with plans not confirmed) were expected to have:

- (1) fewer creditors and impaired creditors,
- (2) lower total debts and lower debt/asset ratios,
- (3) lower debt levels per creditor,
- (4) higher proportion of farm production assets (livestock, machinery and grain inventories), and
- (5) greater number of years involved in farming.

These expectations were based on conversations with Federal Bankruptcy Court officials and the assumption that less complex cases would more likely be

confirmed. It was recognized that critical information on debt/income ratios, debt servicing ratios and other cash flow measures are not included in the initial filing data.

Only four variables were retained in the discriminant model: total debt outstanding at the time of filing, the ratio of total debt to total assets, the percentage of total assets being grain, livestock and machinery inventory, and the percentage of total assets being real estate (Table 12). The coefficients were positive for the four variables. This would imply a farm with a large outstanding debt, a high debt to asset ratio and high proportion of total assets in the farming operation had a greater probability of having a confirmed plan. The model's F (4,61) value of 2.56 and was significant ($p = 0.04$).

Because of the high costs associated with Chapter 11, a useful model should have the ability to identify those cases which have a high potential for not being confirmed. By correctly identifying those cases which were not confirmed, such a model would enable producers to identify whether they had a high probability of failure.

The model performed slightly better for the out-of sample period than for the in-sample period. During the 1980-83 period, the model correctly classified 62% of all cases. Seventy-six percent of the confirmed plans and 49% of the not confirmed plans were classified correctly (Table 13). For the out-of-sample period, 1984-1985, 64% of the cases were correctly classified. Again the model more accurately forecasted confirmed plans compared to unconfirmed reorganization plans.

These preliminary results indicate that the initial filings do not contain sufficient information to adequately forecast the disposition of a Chapter 11 filing. Institutional factors such as the law firm retained, the

Table 12. Mean Values and Statistical Significance of Variables Included in the Discriminant Function for Confirmed and Not Confirmed Reorganization Plans, Sioux Falls Bankruptcy Court, 1980-1985.

| Variables Included | Action Taken (1980-83) | | Partial R-squared | F-Test | Significance ^a Level |
|--|------------------------|---------------|-------------------|--------|---------------------------------|
| | Confirmed | Not Confirmed | | | |
| Total debt outstanding (\$1,000) | \$909.5 | \$570.4 | .039 | 2.47 | 0.12 |
| Total debt to total assets | 2.19 | 1.94 | .034 | 2.17 | 0.15 |
| Grain, livestock & machinery inventory to total assets | 32.0% | 32.7% | .052 | 3.33 | 0.07 |
| Real estate assets to total assets | 59.8% | 48.1% | .093 | 6.28 | 0.02 |

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| Variables Excluded | Confirmed | Not Confirmed |
|--|-----------|---------------|
| Number of years farming | 16.8 | 17.9 |
| Number of creditors | 15.0 | 15.6 |
| Number of impaired creditors | 2.4 | 2.2 |
| <u>Impaired creditors</u> | | |
| Secured creditors | 0.41 | 0.41 |
| Average debt per secured creditor (\$1000) | \$159.8 | \$105.2 |
| Average debt per unsecured creditor (\$1000) | \$ 5.2 | \$ 17.6 |

^aThe stepwise selection procedure of the STEPDISC-SAS procedure was used to select independent variables. Variables were included in the model if the level of significance is 15%. The Wilks lambda likelihood ratio criterion is used.

Table 13. Contingency Table of Predicted and Actual Classification of Chapter 11 Bankruptcy Filings, Sioux Falls Bankruptcy Court, 1980-1985.

| Actual Disposition of the Chapter 11 Filer ^a | Predicted Disposition | | Totals |
|--|-----------------------|------------------|-----------|
| | Confirmed | Not Confirmed | |
| In-Sample Period: 1980-1983 | | | |
| A. Confirmed | 22 | 7 | 29 |
| B. Not confirmed | <u>18</u> | <u>19</u> | <u>37</u> |
| C. Totals | 40 | 26 | 66 |
| Out-of Sample Period: 1984-1985 | | | |
| A. Confirmed | 26 | 8 | 34 |
| B. Not confirmed | <u>12</u> | <u>9</u> | <u>21</u> |
| C. Totals | 38 | 17 | 55 |

^a Classification of Chapter 11 bankruptcy filings is limited to cases where (1) proposed reorganization plans have been confirmed or not confirmed, and (2) data was available for each of the 10 proposed explanatory variables.

judicial interpretation of specific situations, the objectives of the parties involved, and personalities may dominate the process rather than the economics associated with the financial structure of the firm.

VI. AGRICULTURAL LENDERS' REACTIONS TO CHAPTER 12 BANKRUPTCY

Federal bankruptcy Chapter 12, farm reorganization bankruptcy, became law on November 27, 1986 and was designed to overcome some of the major difficulties farm debtors were having in their reorganization attempts under Chapter 11 or 13. However, many producers and agribusinesses are concerned about how Chapter 12 will affect the cost and availability of agricultural credit. Is agricultural credit going to become more expensive for all producers or only for those producers representing a greater credit risk? Will the availability of agricultural credit become more restrictive?

This section provides insights into the probable impact of Chapter 12 on the cost and availability of agricultural credit in South Dakota for producers in various credit risk classes. Survey responses of senior agricultural loan officers at South Dakota banks are analyzed to identify the impacts of Chapter 12 on credit availability and cost. Survey responses before and after the effective date for Chapter 12 are analyzed to determine whether the availability and cost of agricultural credit has changed between the two time periods.

Data Set Used in Analysis

The data used in the analysis is based on two surveys conducted of senior agricultural loan officers at South Dakota banks. The first survey was conducted in November of 1985 and had a 48% response rate (Table 14.). The second survey was conducted in January of 1987 and had a 56% response rate. Response rates from different types of banks was fairly uniform between the surveys. Because of survey confidentiality restrictions, paired

Table 14. South Dakota Banker Response Rate to the 1987
and 1985 Agricultural Lender Survey.

| Description | January 1987 Survey | November 1985 Survey |
|-------------------------------------|---------------------------|----------------------------|
| 1. Total Number of surveys returned | 146 | 126 |
| A. Branch banks | 29 | 29 |
| B. Multibank affiliates | 28 | 29 |
| C. Independent banks | 89 | 68 |
| 2. Number of banks surveyed | 260 | 265 |
| 3. Response rate | 56% | 48% |

comparisons of survey responses between years for specific loan officers or banks were not possible. Nonetheless, the high response rate and similar distribution of banks in each survey lend support to validity of comparisons.

Lender Perceptions of Chapter 12

The agricultural loan officers indicated Chapter 12 was or will be affecting their bank's lending practices. Eighty-eight percent of respondent loan officers indicated that Chapter 12 had or was going to cause changes in their financial institutions lending practices (Table 15). Although a significantly higher proportion of the multibank affiliates indicated "no change" in their lending practices, 75% of these loan officers indicated lending practices had or will change. If stricter credit standards were enforced prior to Chapter 12, this would result in the bank management being less likely to change their lending practices in response to Chapter 12.

Loan officers were requested to answer four true and false questions about the impact of Chapter 12 on the interest rate spread between deposit and loan rates for agricultural loans (Table 15). The percentages reported are the proportion of banks responding to the questions rather than the percentage of the total sample. Only 13% indicated no changes in the interest rate spread. Fifty-eight percent indicated interest rate spreads would increase for all agricultural borrowers with no significant differences between bank types. Forty-eight percent indicated that interest rate spreads would increase more for longer term loans. Finally, 85% indicated the spread would increase more for higher risk agricultural loans.

Most (70-75%) respondent loan officers were of the opinion that the existence of Chapter 12 has or will reduce the availability of credit for farm operating loan and farm real estate loans. Forty-six percent of bank loan

Table 15: South Dakota Banker Responses to Questions Concerning Implications of Chapter 12 on Their Lending Activities.^a

| | | | |
|--|--------------|------------------|------------------|
| 1. Will or has your institution altered its lending practices in response to Chapter 12 Bankruptcy provisions? ^b | | | |
| Yes: | 128 (88%) | No: 17 (12%) | Missing Data: 1 |
| 2. What has happened or will happen to the interest rate spread between deposit and loan rates for agricultural loans because of Chapter 12? | | | |
| A. There will be NO CHANGES in the interest rate spread. ^b | | | |
| Yes: | 18 (12%) | No: 116 (88%) | Missing Data: 12 |
| B. The spread will INCREASE for ALL agricultural loans. | | | |
| Yes: | 78 (58%) | No: 57 (42%) | Missing Data: 11 |
| C. The spread will INCREASE more for agricultural loans with terms longer than one year. | | | |
| Yes: | 61 (48%) | No: 65 (52%) | Missing Data: 20 |
| D. The spread will INCREASE MORE for riskier agricultural loans than less risky customers? | | | |
| Yes: | 113 (85%) | No: 20 (15%) | Missing Data: 13 |

Source: 1987 SDSU Agricultural Lender Survey

^aThe numbers reported behind the indicated responses are the number of banks responding as indicated. The percent of the total number of banks responding to the question is indicated in the parentheses.

^bFor questions 1 and 2-A, the responses for the different bank types were significantly different at the $P = .05$ level of significance. The significance value for the Chi-square test with two degrees of freedom was 5.99. The Chi-square values were the following: question 1 (8.72), question 2-A (8.87), question 2-B (3.44), question 2-C (1.04), and question 2-D (2.17).

officers indicated plans exist to expand their use of Farmers Home Administration loan guarantees (Table 16).

Interest Rate Structure and Availability of Agricultural Credit

Senior agricultural loan officers responses to 1987 survey questions about Chapter 12 indicated interest rate spread would increase for all agricultural loans and increase even further for high risk agricultural customers and for intermediate term or long term agricultural loans (Table 16). Since the 1985 and 1987 SDSU Agricultural Lender Surveys obtained data on interest rates and availability of credit, we examined how and whether lenders had altered the cost and availability of credit between survey period. The November 1985 survey provided information prior to Chapter 12 and the January 1987 survey was conducted after the effective date for Chapter 12. The comparison between surveys obtained answers to two basic questions: (1) Have differential interest rate structures on agricultural loans changed between periods, and (2) Has the availability of credit to "new" agricultural customers changed.

To analyze the interest rate structures, the loan officers were requested to report the annual percentage rate (APR) charged on farm operating loans. Five risk class levels of agricultural loans were specified (Schmiesing et al., 1985). Only survey responses reporting APRs for all five risk classes were analyzed. The dependent variable in the regression model was the APR charged for a specific risk class. Regression models were estimated for the three types of bank organizations.

The three independent variables were based on credit risk class and the survey year of the survey. The risk classes were assigned the following numerical values: superior (0), good (1), average (2), weak (3), and inferior (4). The risk class (RC) regression coefficient indicates the rate

Table 16. South Dakota Banker Responses to Questions Concerning the Impact of Chapter 12 on Availability of Farm Operating Loans, Farm Capital Loans and FmHA Loan Guarantee

| Type of Change | Farm Operating Loans ^a | Farm Capital Loans ^a | FmHA Loan Guarantees ^a |
|------------------|-----------------------------------|---------------------------------|-----------------------------------|
| | -----percent of respondents----- | | |
| Greatly increase | 1% | 1% | 5% |
| Increase | 2 | 2 | 41 |
| No change | 28 | 22 | 49 |
| Decrease | 62 | 55 | 2 |
| Greatly decrease | 7 | 20 | 3 |
| Total | 100% | 100% | 100% |
| N = | 146 | 139 | 142 |

Source: 1987 SDSU Agricultural Lender Survey

^aThe questions asked were the following: (1) "In your opinion what will be the impact of Chapter 12 on the availability of credit for agricultural loans from your institution" and (2) "Because of Chapter 12 do you plan to expand your use of FmHA loan guarantees." No significant differences existed among bank types and the response given. The Chi-square statistic for $p = .05$ and 8 degrees of freedom is 15.51. The calculated Chi-square statistics were: farm operating loans (11.26), farm capital loans (7.33) and FmHA loan guarantee (8.42).

at which the APR increases with a change in risk classification. An binary intercept variable (BI) was coded as "one" for observations from the 1987 survey and zero for observations from the 1985 survey. This binary variable (BI) indicates whether the APR for the superior risk class changed between the two surveys. The third independent variable was a binary slope variable (BS). The slope binary variable was zero for all observations from the 1985 survey and the value of the risk class variable for the 1987 observations. This variable indicates whether the rate at which the APRs increased changed between 1985 and 1987.

Two limitations are inherent in this approach. First, lending institutions may have altered their risk category definitions between the two periods. Also, cardinal differences between risk categories are assumed.

Interest Rate Structure

Although the loan officers indicated a tendency towards increasing the interest rates for higher risk customers, the differential interest rate structures do not support this contention. For all three types of banks, the slope binary (BS) variables were insignificant. The rate at which the interest rates increased did not change between 1985 and 1987. If lenders redefined their risk categories between periods, this type of shift can not be identified based on this data. Borrowers could be terminated earlier and moved into higher risk classes more rapidly. Rather than altering the interest rate structure, bankers may have concentrated on redefinition of risk classes. However, weak and inferior customer interest rates have not increased significantly relative to better credit risks.

All three banks significantly reduced the interest rates being charged to their superior customers: branch banks (-1.18%), multibank affiliates (-1.48%) and independent banks (-1.80%). Also, those banks with the highest

interest rates for superior credit risks had the largest decline. For example, the superior customer average interest rate rate charged by independent banks dropped from 12.48% to 10.68% or (12.48% minus 1.80%). This leveling of interest rates charged would appear to indicate that all types of banks are having to compete more aggressively for superior credit risk customers (Table 17).

Finally, independent banks have a significantly lower interest rate spread between rates charged to their superior customers and highest risk customers. The independent bankers may be using a pricing strategy, whereby the superior credit risk borrower receives a competitive rate but not the lowest available rate. However, the borrower is not confronted with as rapid of rate increases if their risk classification changes. Therefore, a producer selecting the "lowest" interest rate available have to accept the risk of more rapid increases in their interest.

Credit Access

The senior agricultural loan officers were requested to indicate which credit risk categories they were accepting as "new" customers for farm operating loans. The intent of the question was to estimate how easily producers of a specific risk category could move between banks to obtain operating credit.

Those producers being ranked as an "average" or below credit risk generally lack the ability to obtain credit from a bank other than their current lender (Table 18). "Weak" or "inferior" credit risks were not acceptable as new customers to any of the banks in either period.

Between the two survey periods, lenders in all bank types had an increased willingness to lend operating capital to "superior" credit risks. "Good" credit risks had an improved alternative credit access with branch and

Table 17. Regression Analysis of Possible Changes in the Structure of Differential Interest Rates for South Dakota Banks between January 1987 and November 1985.

| OLS Equations | F-Test | Observation | R ² |
|---|--------|-------------|----------------|
| 1. Branch Banks APR = 11.88 - 1.18 BI + .72 RC - .03 BS (.12)*(.17)* (.05)* (.07) | 185.85 | 210 | 0.73 |
| 2. Multibank Affiliates APR = 11.96 - 1.48 BI + .69 RC - .04 BS (.13)*(.19)* (.06)* (.08) | 177.82 | 225 | 0.71 |
| 3. Independent Banks APR = 12.28 - 1.80 BI + .50 RC + .03 BS (.09)*(.12)* (.04)* (.05) | 391.72 | 435 | 0.73 |

^aStandard errors of the coefficients are presented in parentheses. All of the equations are significant at the p = .05 level of significance and significant coefficients are indicated by *.

Table 18. Frequency of Lender Restrictions on Acceptance of New Farm Operating Loans by South Dakota Banks, January 1987 and November 1985.

| Risk Classification of New Loan Customer | Type of Bank | | | | | |
|--|--|-----------|---------------------|-----------|-------------|-----------|
| | Branch | | Multibank Affiliate | | Independent | |
| | Jan. 1987 | Nov. 1985 | Jan. 1987 | Nov. 1985 | Jan. 1987 | Nov. 1985 |
| | -----percent of bank respondents----- -----accepting new loan ^{a, b} ----- | | | | | |
| Superior | 97 | 34 | 100 | 90 | 99 | 91 |
| Good | 72 | 48 | 82 | 41 | 62 | 69 |
| Average | 14 | 14 | 32 | 14 | 17 | 12 |
| Weak | 0 | 0 | 0 | 0 | 0 | 0 |
| Inferior | 0 | 0 | 0 | 0 | 0 | 0 |
| | -----number of respondents----- | | | | | |
| N = | 29 | 29 | 28 | 29 | 87 | 68 |

Source: 1985 and 1987 SDSU Agricultural Lender Surveys

^aThe percent figures for the risk categories indicates the percent of the number of banks of specific type responding to the credit access question.

^bThe 1987 survey response was significantly different from the 1985 survey response in terms of the proportion answering the credit access question in the affirmative. The significance value for the normalized value for a binomial distribution was $P = .05$.

and multibank affiliates. On November 1, 1985, the Food Security Act of 1985 had not yet passed and considerable uncertainty existed concerning the eventual price and income support mechanisms of the Federal Commodity programs. Given this uncertainty, loan officers would be very uncertain about producer profitability independent of the producer's risk classification.

Chapter 12 does not initially appear to have caused a major reduction of alternative credit access for "superior" or "good" credit risks. Producers in financial difficulty had extremely limited alternative credit access before Chapter 12. The unidentified issue is the lending policies of banks toward poorer credit risks. Analysis of the 1987 survey responses appears to indicate that credit access will become more restrictive for those with lower credit quality.

VIII. SUMMARY, CONCLUSIONS AND IMPLICATIONS

During the 1980's, the incidence of farm bankruptcies has greatly increased. In South Dakota, a state of 35,000 farms and ranches, the number of farm bankruptcy filings has increased from 37 in 1980-81 to 564 in 1986. Since 1980, a majority of farm bankruptcy filings have been reorganization filings - mostly Chapter 11 filings before December 1986 and Chapter 12 filings since then.

Purpose of Study and Data Sources

Considerable agricultural economic research has been conducted concerning the level of financial stress and reorganization options, but analysis of actual reorganization bankruptcy filings has not occurred. This study provides information on characteristics of farm applicants filing Chapter 11 reorganization bankruptcy and major characteristics of their secured and unsecured creditors. The predictive value of initial filing data on eventual court action (reorganization plan is confirmed or not confirmed) is also examined. This study also examines agricultural lenders responses to the addition of Chapter 12 to Federal Bankruptcy statutes.

The major data sources are (1) initial filing data on nearly half (219) of farm Chapter 11 bankruptcy filings in South Dakota from January 1980 - October 1985 and (2) 1985 and 1987 survey of South Dakota agricultural lenders.

Major Findings - Farm Reorganization Bankruptcies

Bankruptcy is selected by 15-20% of South Dakota producers experiencing major financial reorganization, partial liquidation or total liquidation of their business. A majority of South Dakota farm bankruptcy filings are reorganization filings.

Farm Debtors Filing Chapter 11

Based on initial filing data for Chapter 11 bankruptcy, filers were found to have a median experience level of 18 years in farming or ranching. Thirty-four percent had operated their farm or ranch for 10 years or less, while 25% were in business for more than 30 years. Only 5% had been involved in a prior bankruptcy, but 42% were involved in one or more pending lawsuits at time of filing.

The type of business organization among filers was close to that of all farmers with 89% being sole proprietor, 2% in partnerships and 9% were incorporated.

On average, farm filers had total assets of \$617,700 with 60% of total asset values in real estate, 30% in grain, livestock and machinery inventory, and 10% in other assets. Total debt averaged \$720,700 with 92% of this debt held by secured creditors. Over two-thirds (69%) of the farm businesses were insolvent (negative net worth) at time of filing.

About 7% of Chapter 11 farm filings have total debts exceeding \$1,500,000 and cannot qualify for Chapter 12. These larger farm debtors had 25% of total debt in the sample. Another 10% had total debts between \$1.0 - 1.5 million, 39% had total debts of \$0.5 - 1.0 million and 44% had total debts of less than \$500,000.

Secured and Unsecured Creditors

Each filing was found to involve an average of 15 creditors - 6 secured creditors and 9 unsecured creditors. Secured creditors held 92% of total debt but an estimated 58% of this debt was impaired where the amount of debt exceeded the value of security interest (collateral). Nearly one-half of the secured creditors were impaired and their average (mean) ratio of security interest to debt claim is 52%.

Commercial banks, Farmers Home Administration and Farm Credit System creditors (Federal Land Bank and Production Credit Association) held 75% of the secured debt and 81% of impaired credit volume. Individuals, insurance companies and agribusiness firms were the other major secured creditors.

Commercial banks were listed by more debtors (81%) than any other type of secured creditor. The average amount of debt owed to one or more commercial banks was \$241,900 per debtor and \$145,100 per bank listed. Farmers Home Administration loans averaging \$249,200 were listed by 65% of filers. Federal Land Bank was listed by 43% of debtors, and average amount of debt listed was \$154,300. Less than 19% listed Production Credit Association as a secured creditor, but average indebtedness (\$380,500) was the highest of any creditor group.

Ninety-one percent of debtor filers owed unsecured creditors. The average total amount of unsecured debt owed was \$60,000 split among 9.8 creditors. Local and regional agribusinesses, financial institutions and retail businesses were the major unsecured creditors.

Reorganization Plan

A discriminant function analysis was used to determine whether information contained on the initial bankruptcy filing could be used to forecast whether a reorganization plan would be eventually confirmed. Producers with large total debt levels, higher debt to asset ratios, higher grain, livestock and machinery inventory to total asset ratios, and higher farm real estate to total asset ratios were found to be more likely to eventually have confirmed plans. Although the discriminant model was statistically significant and was able to identify those filers that eventually had a confirmed plan, the model lacked an ability to determine which filings did not result in a reorganization plan.

Lender Responses to Chapter 12

Chapter 12 bankruptcy represents an additional loan risk to agricultural lenders. The majority of senior loan officers plan to alter their agricultural lending policies. Changes in lending policies alter the availability, cost and conditions under which agricultural capital will become available to producers. Among strategies employed by banks are increased use of FmHA loan guarantees, increased interest rate spreads to agricultural borrowers, and restrictions in access to credit.

This research indicates there has been no major change in the rate at which differential interest rates increased as the riskiness of the loan increased. However, the redefinition of credit risk categories may imply that a producer may experience more rapid interest rate increases as their financial condition deteriorates.

For producers with "superior" or "good" credit ratings, access to an alternative banker has not declined because of Chapter 12.

Implications and Further Research

Farm reorganization bankruptcy is a relatively time consuming and costly process for producers and their creditors. Costs incurred by participants include: (1) court costs and attorney fees, (2) trustee fees for Chapter 12 confirmed reorganization plan (3) time consumed by debtor, creditors and attorneys in bankruptcy process relative to value of their time in other activities and (4) nonrecoverable debt losses incurred by impaired and unsecured creditors. Additional costs may also be incurred by many other debtors who face tighter credit restrictions, higher interest rates and possibly greater chance of refusal of additional credit requested.

Reorganization bankruptcy alters the distribution of rights between debtors and creditors, relative to foreclosure or mediation or voluntary

reorganization/liquidation options. However, an empirical comparison of various costs incurred by participants and distribution of creditor and debtor losses in reorganization bankruptcy relative to other reorganization options has not been completed. Consequently, we do not know the magnitude of net social costs associated with reorganization bankruptcy or other institutional arrangements.

Farm bankruptcy is a lagging indicator of farm financial stress but only 15-20% of producers experiencing major financial reorganization or liquidation of their business are using this process. A profile of debtor/creditor characteristics of participants using each process in different states would provide valuable socio-economic information for public policymakers, lenders and other decisionmakers.

The dangers of collateral based lending practices are magnified by Chapter 12 provisions permitting debt writedowns to current values of security interest. This standard codifies the practical outcomes of many financial reorganization plans initially proposed in Chapter 11 plans or in voluntary plans. If this standard is adopted in future bankruptcy legislation, State/Federal credit legislation, and becomes prevailing industry practice, credit standards may be permanently changed. At a minimum, lenders will need to focus more heavily on past profitability and earned net worth trends and future income projections using alternative price/cost scenarios.

Finally, information is lacking on the characteristics of proposed bankruptcy reorganization plans that have been confirmed and are working. Financial simulation analysis of confirmed plan under alternative economic scenarios may provide valuable information to debtors, creditors and Federal bankruptcy judges.

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