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ECONOMIC IMPACT OF NORTH DAKOTA LAWS THAT PERMIT DELAYED OR PARTIAL REPAYMENT OF AGRICULTURAL DEBT - JULY 1, 1986

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Highlights

As of July 1, 1986, 13.5 percent of the debt owed by North Dakota farmers to agricultural lenders in the state was delinquent ($466 million). This is in addition to the $342 million of debt that was restructured for either ongoing or terminating operations between January 1, 1985, and July 1, 1986. Geographically, the level of delinquent loans is highest in the Red River Valley, the southeast, and oil-producing counties of North Dakota. These estimates are based on a survey of all private agricultural lenders in North Dakota.

Various state laws designed to protect debtors, some of which are unique to North Dakota, delay lenders from collecting and disposing of collateral securing these loans. The total economic impact of these laws on creditors is estimated to be $172.2 million statewide--$23.9 million due to collection delays before acquisition, $62.2 million due to delays after acquisition, and $60.4 million due to concessions associated with negotiated settlements whereby lenders attempt to avoid legal proceedings. Also included in this amount is $25.7 million that creditors cannot collect due to the lack of deficiency judgments.

These laws also have an economic impact on both nondelinquent and delinquent borrowers. The resulting economic impact to nondelinquent farm borrowers is in the form of higher interest rates (143 basis points) and lower capital availability. To maintain profit margins and living standards as interest rates rise, nondelinquent borrowers must assume riskier investments and methods of production--increasing the likelihood of their default and placing the remainder of the creditor's portfolio at risk. Repayment delays were not found to change the long-run financial viability of delinquent borrowers. These borrowers do, however, temporarily benefit from a delay in repayment as long as the rate of return to farm assets exceeds the rate of interest on debt.

The results of the analysis lead to several conclusions.

- *North Dakota statutory laws which delay or permit partial repayment of indebtedness have an economic impact.*

- *The economic impact of statutory laws affecting credit is not always in the form of increased collection delays--creditors often concede more in negotiated settlements since their initial bargaining position is weakened.*

- *Nondelinquent borrowers and other customers of credit institutions are impacted through higher fees and interest rates as well as reduced credit availability.*

- *The economic impact upon a delinquent borrower is opposite and not necessarily equal to the economic impact upon the creditor or nondelinquent borrowers.*

- *Delay in repayment is most beneficial to borrowers if the earnings that arise during the delay exceed the level of forgone interest.*

- *Legislation that permits partial repayment of obligations benefits defaulting borrowers.*

- *The impact on society is negligible as long as the productivity of delinquent borrowers does not differ significantly from that of farmers who purchase the collateral.*

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A consequence of North Dakota's generally depressed farm economy has been an increased number of delinquent loans and expanded application of debtor/creditor law. North Dakota's debtor/creditor laws that define the rights and limitations of credit institutions after default by a debtor are similar to those of other states. However, North Dakota statutes also include several unique provisions. For example, the "anti-deficiency judgment" statute limits the amount a creditor may collect after foreclosing a real estate mortgage that does not satisfy the debt. Consequently, borrowers fulfill their obligation with only a partial repayment. Another law is the "confiscatory price" statute that grants state courts additional discretionary authority to delay legal proceedings such as a foreclosure.

Political pressure to further limit the rights of creditors during times of economic recession and numerous foreclosures is not without precedent. Alston (1984) notes farm foreclosures were high throughout the 1920s and 1930s due in large part to farmers' having to make mortgage payments fixed in nominal dollars while their earnings were declining. In response, many state legislatures sought to aid farmers by enacting laws that protected delinquent borrowers.

Legislative proposals during the 1980s to protect debtors often call for voluntary or mandatory foreclosure moratoriums, programs that reduce interest rates, efforts to delay collection by creditors, extensions of due dates for payments, or reductions in the amount of indebtedness. For example, Minnesota enacted a law in early 1986 that redefines and generally restricts the legal remedies of creditors by requiring mediation, altering redemption procedures, establishing a procedure for division of crops being grown on foreclosed land, and increasing the homestead exemption (Minnesota Statutes 1986, Chap 398). Another example is the recently enacted Chapter 12 of the Bankruptcy Code (P.L. 99-958), which allows borrowers to reduce their repayment obligation to the value of the collateral securing the debt.

Regardless of the details of such programs, the result is either a postponement of the debtor's scheduled payments or a reduction in the amount owed. The economic impact upon delinquent borrowers from a delay in repayment or a decrease in the amount owed may or may not be sufficient to permit financial recovery of the business. The correlative impact on credit institutions is a decrease in income and the value of their assets without an

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offsetting reduction in costs or liabilities. The institutions respond by adjusting their fees and interest rates, as well as altering the level and kind of services they provide. Consequently, their customers are impacted by a combination of rising charges, reduced financial services, and lower capital availability. These implications are recognized, but few studies have quantified the concessions granted to delinquent borrowers and the resulting economic impacts on lenders and nondelinquent borrowers.

This report (1) describes the economic impact of North Dakota laws that permit delayed or partial repayment of agricultural loans and (2) estimates the costs and benefits incurred by creditors and borrowers. A model which quantifies each of the financial transfers was developed to assess these economic impacts. Data used to estimate the model were collected from a survey of financial institutions that offer intermediate- and long-term credit to North Dakota farmers. The methodology was used to analyze current laws, but it also can be extended to evaluate proposed legislation. Only existing state law was analyzed because details of legislative proposals are unknown and vary considerably. The emphasis of this study was from a historical perspective --estimating the economic impacts of statutory law as of July 1, 1986.

There are five parts to this report. The first is a review of state laws that permit delayed or partial repayment of debt obligations. The second part describes a model for estimating the economic impact of these laws. The third section details the economic costs to credit institutions as estimated by the model. The fourth part discusses the economic impact on borrowers and consequences for future lending standards. The final section briefly reviews some implications for legislation that delays or permits partial debt repayment.

State Laws that Influence Timing of Debt Repayment

Creditors have several alternatives when a debtor defaults on a loan payment. Renegotiating terms of the loan or taking no action are two alternatives for a creditor. A third alternative is to commence legal action to collect the unpaid obligation. The procedure for enforcing a loan obligation is set forth in state law and varies depending on whether the creditor is secured or unsecured and whether the collateral is personal property or real property. This section overviews North Dakota's legal procedure for enforcing secured debts. The emphasis is upon secured debt because the laws being analyzed have minimal implications for unsecured obligations. Therefore, the process of collecting an unsecured debt is explained only to the extent it is necessary for an understanding of how secured obligations are enforced.

Creditors are not necessarily limited to a single legal procedure when enforcing a lien upon personal property. One procedure a creditor can follow is to foreclose the lien with a process similar to foreclosure of a real estate mortgage. An alternative is to use the "self-help" remedies set forth in Article 9 of the Uniform Commercial Code. The "self-help" remedies are generally considered less expensive as well as more expedient and usually are followed rather than foreclosure. Both alternatives are discussed in this section. Foreclosure of personal property is explained as part of the discussion on real estate foreclosure, while the Article 9 remedies are addressed in a separate section. The process of foreclosing a lien on personal property and real estate is explained first.

The length of time between default and when a creditor receives the proceeds from the sale of the collateral is a major consideration in analyzing the economic impact of state legislation. The following section will not only explain the legal procedure undertaken but also note the time requirements that are specified in the law. Some of the time requirements apply to all legal actions, but others are relevant only to legal actions involving enforcement of an indebtedness.

Foreclosure

The initial step for a creditor seeking foreclosure is to commence a lawsuit on the basis that terms of a note have been violated by failure of the debtor to complete payments in a timely manner. A creditor commences suit by filing a summons and complaint at the county courthouse and delivering a copy of the filing to the debtor. North Dakota law requires, however, that a creditor provide a "Notice of Intent to Foreclose" to the debtor before a summons and complaint to foreclose a mortgage on real estate can be filed (North Dakota Century Code (N.D.C.C.) 32-19-20). Such notice is not required before filing suit to foreclose a lien upon personal property.

A "Notice of Intent to Foreclose" upon real property has to be provided 30 to 90 days before the lawsuit is commenced. Content of the notice must include a legal description of the real estate; the date and amount of the mortgage; the amount owed to the creditor for principal, interest, and property taxes; and a statement that foreclosure proceedings will be commenced if the amount due is not paid within 30 days. Requiring creditors to provide a "Notice of Intent to Foreclose" is an example of North Dakota law that only pertains to lawsuits involving mortgage foreclosures and extends the time between default and collection of the proceeds by a creditor.

A debtor has 20 days after commencement of the foreclosure action to answer the complaint (N.D.R.Civ.P. 12(a)). Common practice is for the creditor to also file a motion requesting a summary judgment, which means the judge is to enter a decision in the creditor's favor without a trial. Summary judgments will be granted after a hearing on the motion and a finding that "there is no genuine issue as to any material fact" (N.D.R.Civ.P. 56(c)). Generally, summary judgments are granted in foreclosure actions because there is no question as to the debtor's obligation and that it was not fulfilled.

A judgment or court decision in favor of a creditor (whether rendered as a summary judgment or after a trial) is to be accompanied by an order for the encumbered property to be sold (N.D.C.C. 32-19-06). A court ordered sale of real estate involves the judge issuing a writ of execution instructing the sheriff to levy upon the property and conduct a sale (N.D.C.C. Chapter 28-21, sections 04, 06, and 09). The writ of execution cannot be issued by the judge until 10 days have passed since entry of the judgment (N.D.R.Civ.P. 62(a)). However, a sheriff may levy upon personal property after receiving a certified copy of the judgment rather than waiting for the judge to issue a writ of execution (N.D.C.C. 28-21-05.1).

A sheriff levies upon real property by filing a notice with the register of deeds in the county where the land is located. Personal property capable of manual delivery is levied upon when the sheriff takes possession of it (N.D.C.C. 28-21-08). The property is sold at public auction after advertisement (N.D.C.C. 28-23-07). Sale of real property must be advertised once a week for three weeks with the last publication at least 10 days before sale (N.D.C.C. 28-23-04) whereas a sale of personal property has to be advertised once a week for two weeks (N.D.C.C. 28-23-01). Proceeds from the sale are used to pay selling costs and the foreclosed mortgage or security interest, with any remaining proceeds paid to the debtor (N.D.C.C. 28-23-11).

Self-Help Remedies of Article 9

The alternative procedure for enforcing a security interest in personal property is for the creditor to repossess it. Possession of the property can be accomplished without a legal action as long as the seizure will not breach the peace (N.D.C.C. 41-09-49). A "Claim and Delivery" action must be brought in court, however, if the property cannot be possessed without breaching the peace (N.D.C.C. 32-07). This legal action involves a court's ordering the sheriff to seize the encumbered property and place it in the possession of the creditor. Once possession is attained, the creditor may propose to retain the property in full satisfaction or sell the property in a commercially reasonable manner (N.D.C.C. 41-09-51(2) and N.D.C.C. 41-09-50(3)). A debtor is entitled to be notified as to a sale or the creditor's intent to retain the property. The law permits a debtor to object to an intent to retain the property in full satisfaction and demand that it be sold instead (N.D.C.C. 41-09-51(2)). Proceeds from a sale are dispersed in a manner similar to that following a foreclosure sale.

Four Complicating Principles

The preceding sections presented an overview of enforcing a real estate mortgage or a security interest in personal property. However, North Dakota has additional statutes which further define the rights and limitations of creditors and borrowers under foreclosure. This section explains the impact several of these statutes have upon the foreclosure process. The following list specifies the popular name of each statute and impact of applying the law.

1. Confiscatory price statute	Increases the uncertainty as to whether a summary judgment for foreclosure will be granted

2. Deficiency judgment statute	Defines and limits the remedies for creditors if the proceeds from a foreclosure sale are not sufficient to fully repay the debt
3. Exempt property statute	Specifies which property of the debtor cannot be seized to satisfy an obligation
4. Rights of redemption	Sets forth the process by which a debtor may reacquire the foreclosed property

Each law adds complexity and some uncertainty to enforcing a mortgage or security interest. The statutes are presented in the order in which they are likely to arise during an enforcement action.

Confiscatory Price Statute

A previous section explained that a summary judgment will be granted if there are no issues as to material facts. A disagreement as to (1) the amount owed, (2) whether there has been a default, or (3) whether the debtor has a legal defense explaining why the payment is not due at this time are some issues that prevent a court from granting summary judgment. Generally the first two issues are not disputed, but recently debtors have been raising the third issue by relying on a statute enacted during the depression of the 1930s. This statute is commonly referred to as the "confiscatory price defense" and grants state courts additional discretionary authority if the price of farm products is less than the cost of production or if a foreclosure would have the effect of confiscating a debtor's property (N.D.C.C. 28-29-04 and is reproduced in Appendix A). The added authority permits the court to extend the time for completion of a foreclosure.

The statute, as currently written and interpreted, does not resolve all the issues that may arise. First, there is a question as to the statute's constitutionality. This issue has not been addressed by the state supreme court even though the court has decided several cases in which the defense was raised. A second question is the uncertainty as to what conditions must be met in order for the statute to be triggered. For example, application of the law is complicated by issues such as determining cost of production and price of farm products.

A third uncertainty is how courts may exercise their authority if it is determined that the law has been triggered. The statute empowers judges to extend the time for filing, stay entry of a judgment, defer term of the court, or delay signing of orders. Duration of these extensions is not explicitly specified but instead is limited by language such as "in the best interest of the litigants" or "advisable and just." A fourth unresolved question is what may be required of a debtor during the period of delay. Certainly interest on the debt will continue to accrue, but the law does not clarify whether interest or some other payment will be required during the period of delayed repayment.

One consequence of a debtor's raising this defense is that a summary judgment may not be granted (Federal Land Bank v. Halverson, 392 N.W.2d 77 (N.D. 1986)). Instead, a trial must be held and a determination made as to whether the conditions exist for triggering the statute. The additional time needed for conducting a trial may add several months to almost a year to the time until a foreclosure is ordered by the court. A second consequence would be the additional time involved if a court determines that the statute has been triggered, especially if the judge uses the added discretion to further extend the time for payment, which likely would be the case.

Anti-deficiency Judgment Law

The explanation in a preceding section described disposition of proceeds received from a foreclosure sale. Cost of conducting the sale are paid first, and the foreclosed obligation paid second. The explanation, however, did not mention the general rule that a creditor may continue to pursue a debtor if the sale proceeds are inadequate to fully pay the outstanding obligation.

A deficiency judgment is the legal procedure for seeking an additional payment if sale of the collateral did not generate sufficient revenue to pay the entire debt. The actual process for securing a deficiency judgment requires the creditor to return to court and request a second judgment stating that the debt was not fully paid by proceeds from the sale of the encumbered property. The amount of a deficiency judgment generally is the difference between the amount of debt and the amount the creditor received from the foreclosure sale.

Notes secured by personal or real property are entitled to deficiency judgments. The legal process for attaining a deficiency judgment in North Dakota following foreclosure of a real property mortgage, however, is so restrictive that there has not been one in recent years. Consequently, this procedure generally is referred to as the "anti-deficiency judgment" statute (N.D.C.C. 32-19-06).

North Dakota initially prohibited deficiency judgments following a real estate mortgage foreclosure in 1933. This prohibition was re-emphasized by legislation in 1937 after a supreme court decision defined an exception to the 1933 law. The total prohibition continued until 1951 when the legislature again amended the law to allow deficiency judgments if the statutory requirements were met. This amendment was enacted in response to the Federal Land Bank's refusal to extend credit if a deficiency judgment could not be sought following foreclosure of a real estate mortgage.

The first requirement of the North Dakota statute is that a creditor must state in the summons and complaint that a deficiency judgment will be sought if the sale proceeds are not sufficient to repay the debt. The second requirement is that a separate legal action to attain a deficiency judgment be brought within 90 days after the foreclosure sale. The third requirement is that a jury determine the fair market value of the foreclosed property.

The law provides that a deficiency judgment cannot be granted unless the fair value of the foreclosed property as determined by the jury is less than the amount owed the creditor. The statute also limits the amount of a deficiency judgment to the difference between the amount of debt and the property's fair value. Consequently, North Dakota law limits a deficiency judgment following foreclosure of a real estate mortgage to the lesser of:

1. the amount of debt minus the amount the creditor received from the sale, and

2. the amount of debt minus the fair value of the property as determined by the jury.

A result of the law is that deficiency judgments following foreclosure of a real estate mortgage are seldom sought. This appears to be due to both the cost of a jury trial and the likelihood that the fair value of the property will be determined to be greater than the amount of proceeds from the foreclosure sale.

By comparison, creditors may seek a deficiency judgment following the enforcement of a security interest in personal property (N.D.C.C. 41-09-50(2)) without a jury determination of the property's fair value. Creditors that have a lien upon both personal and real property usually enforce the security agreement against the personal property first and then seek any remaining amount from the land. This sequence of enforcement allows creditors to maximize their collection before the limitation of the "anti-deficiency judgment" law applies.

A deficiency is enforced by having a judgment recorded and a writ of execution issued ordering the sheriff to seize property, as described above. This time the sheriff will levy upon any property belonging to the debtor since the property encumbered by the creditor has already been foreclosed. There is a limit, however. The sheriff may not seize property of the debtor that is considered exempt under state law.

North Dakota Exemptions

The purpose of exempting property from seizure for payment of debt is to leave the indebted person with sufficient resources to survive and financially rebuild. The major exemption provided in North Dakota law is the homestead (N.D.C.C. 47-18-01), which is defined as a person's dwelling house and the land upon which it is situated, with a value not in excess of $80,000. The homestead can be levied upon and sold if the debt that is being foreclosed encumbers it. Therefore, a homestead often is not a meaningful protection since farm land mortgages usually encumber the farmstead and house as well as the unimproved agricultural land.

Other property that is exempt under state law includes family pictures, a sitting place in a house of worship, burial plots, family Bible and books not to exceed $100 in value, the family's clothing, and one year's supply of provisions for the debtor and family, including fuel (N.D.C.C. 28-22-02). Insurance covering these items also is exempt. The law includes the homestead (as explained in the preceding paragraph) but permits a trailer or mobile home to be substituted for a homestead. These items are referred to as absolute exemptions.

The head of a household also may exempt crops from 160 acres except for production costs (N.D.C.C. 28-22-02(8)). An alternative for the head of a household is to exempt personal property up to a value of $5,000 rather than the crops from 160 acres (N.D.C.C. 28-22-03). Another alternative is to select books and instruments up to $1,500 in value, household furnishings up to $1,000 in value, livestock and implements not exceeding $4,500 in value, and tools of the trade or books of a profession up to a value of $1,000 (N.D.C.C. 28-22-04).

A single person does not have the alternatives mentioned in the preceding paragraph but instead may exempt personal property with a value of $2,500 (N.D.C.C. 22-28-05) in addition to the absolute exemptions.

Residents may claim $7,500 rather than a homestead (N.D.C.C. 28-22-03.1). This alternative translates into $15,000 for a married couple living in the state since each is a resident. Each resident also may exempt a vehicle up to $1,200 in value, cash value of life insurance not to exceed $4,000, and the right to receive limited payments from specified pension programs and certain legal actions.

The purpose of identifying exempt property is to estimate the value of property a creditor cannot seize regardless of laws which delay repayment or reduce the amount of debt. Only nonexempt property is considered in estimating the economic impact of a delay or reduction in repayment. This study assumes that (1) the homestead will be claimed unless it is encumbered and (2) the other exemptions will approximate $20,000.

Right of Redemption

Debtors are not without legal rights or protection after a foreclosure. A major privilege is the debtor's right of redemption, which permits the debtor to reacquire ownership of foreclosed property by paying the amount that was bid at the sale, regardless who was the successful buyer. The right to redeem real estate that has been foreclosed generally is one year in North Dakota (N.D.C.C. 28-24-02). In addition, a debtor has the right to possess the property and retain all earnings, profits, and rents that accrue during the redemption period; that is, a debtor is permitted to use the land for one more year after the foreclosure sale (N.D.C.C. 28-24-11). This privilege does not require the debtor to pay any costs, such as property taxes, during that year and is not conditioned on the debtor's exercising the right to redeem before the period lapse.

North Dakota law provides that the right of redemption may only be six months from the time of filing the summons and complaint (N.D.C.C. 32-19.1). This shorter period is available if no more than 40 acres are subject to the mortgage, the debtor agreed to the shorter term when the mortgage was executed, and more than two-thirds of the original indebtedness remains unpaid. The redemption period is one year from the time of filing the lawsuit if less than two-thirds of the debt is outstanding.

Redemption period for personal property expires upon the foreclosure sale or after the debtor fails to object to a creditor's intent to retain the property in full satisfaction (N.D.C.C. 41-09-52).

Right of redemption is another law that permits a delay in repayment; a buyer at the sheriff sale does not have use of the property until one year later. Even though state law provides for the creditor to be paid as soon as the court approves the sale and disbursement of the proceeds (N.D.C.C. 28-23-13), the creditor seldom receives any benefits during the redemption period because the creditor usually is the buyer at the sale. Practically no one bids at a foreclosure sale except the creditor which means the purchasing institution will not have access to sell or lease the land until a year after the sale.

The delay in a creditor's acquiring control over the property is not solely due to the redemption law. Instead, the delay results from a combination of the right to redeem and the lack of buyers. Regardless of whether the redemption right is the reason for the lack of bidders, the practical consequence is that the debtor's right to redeem delays payment for most farmland foreclosures until, at least, one year after the sale.

Economic Impact of Delayed and Partial Repayment

This section explains the model for estimating the economic impact of laws that delay or permit partial repayment of indebtedness. Computing the impact of delayed repayment will be addressed first, followed by a discussion of the procedure for estimating the impact of partial repayment. The last topic in this section is an explanation of a model used to estimate the implications for future credit availability due to the economic impacts of such laws. The model will not estimate the legal costs to either borrowers or lenders of determining whether the law is relevant. Similarly, the model does not include the lender's administrative costs of servicing debt for which repayment has been delayed.

Impact of Delayed Repayment

Both a delinquent borrower and the creditor are impacted by a law which permits delayed repayment of a debt obligation. The economic impact can be defined as the change in wealth of the person as a result of the law. The type of impact is similar (but opposite) for both parties although the magnitude will differ slightly depending on each parties'opportunity cost of capital. The economic impact upon a creditor will be explained first.

The economic impact to creditors depends on several variables. These include (1) gross uncollected interest (which is the amount of income that could have been earned had the payment not been delayed), (2) the amount of income that is actually received as a consequence of the additional time, (3) the cost of maintaining the property during the delay, (4) change in the amount a creditor is repaid due to changes in the value of collateral, and (5) change in the value of acquired property before liquidation. Formula 1 illustrates the relationships between the variables. Each variable is discussed in more detail in the following paragraphs.

$$\text{ECONIMP} = \text{GUI} - \text{AR} + \text{MAIN} + \text{REP} + \text{ACQPROP} \tag{1}$$

where

ECONIMP = economic impact due to laws which delay repayment
GUI = gross uncollected interest
AR = amount of interest and other income a creditor receives during the delay
MAIN = maintenance cost
REP = change in amount of repayment as a consequence of a delay in foreclosure
ACQPROP = change in value of acquired property during a delay in liquidation

Delays in repayment can be categorized as (1) those which arise during the foreclosure procedure and postpone the creditor's taking control of the collateral, and (2) delays in reselling the property after a creditor has acquired ownership through foreclosure or voluntary conveyance by the borrower. The distinction is necessary for two reasons. The first reason is that some laws (such as the "confiscatory price" statute) postpone foreclosure whereas other laws (such as the borrower's right to redeem) limit and thereby delay a credit institution's opportunity to sell the property once it acquires ownership. The second reason for the distinction is that the value of some variables used to estimate economic impacts varies depending on when the delay occurs during the enforcement procedure. The amount received by the creditor during the delay is an example of such a variable, and this will be more fully explained in the section which discusses that variable.

Gross Uncollected Interest (GUI)

Gross uncollected interest is the amount of income that could have been earned had the law not delayed repayment. Factors which influence the amount of gross uncollected interest are (1) collectible proceeds (which is the dollar value of property or cash that would have been received by the creditor had the delay not been implemented) (2) the rate at which income would be earned had the debt been paid, and (3) the duration of the delay. Formula 2 illustrates the relation among these factors.

$$\begin{aligned}\text{Gross uncollected interest} = {} & \text{collectible proceeds} \\ & \times \text{interest rate for new loans} \\ & \times \text{duration of the delay}\end{aligned} \tag{2}$$

Collectible proceeds depends on whether the debt is secured and the type of property used as collateral. Accordingly, indebtedness can be categorized as (1) debt secured by land or real property, (2) debt secured by chattel or personal property, (3) debt secured by both real and personal property, and (4) unsecured debt.

The *collectible proceeds* for debt secured by land is the lesser of (1) the amount of debt or (2) the value of the collateral. This reflects North Dakota's "anti-deficiency judgment" law, which, for all practical purposes, eliminates any deficiency judgment following a real estate mortgage foreclosure.

Collectible proceeds for debt that is secured by chattel is the lesser of (1) the amount of debt or (2) the value of the collateral plus the collectible deficiency. The definition of collectible deficiency is the amount a creditor can collect from a borrower after adjusting for other indebtedness and statutory exemptions. The amount of the collectible deficiency is never less than zero and depends on whether the creditor is assumed to be the first or last creditor paid. The estimated impact of a law that delays repayment will be greater if the creditor is assumed to be paid first. Both assumptions can be conceptualized in formulas as follows:

Collectible deficiency if the creditor is last to be paid = (3)
(land value - land debt - $80,000)*
+ current assets + intermediate assets - current debt - intermediate debt
- $20,000

Collectible deficiency if creditor is first to be paid = (4)
(land value - land debt - $80,000)*
+ current assets + intermediate assets - debt secured by current assets - debt secured by intermediate assets
- $20,000

The values $80,000 and $20,000 represent the borrower's personal exemptions, as explained in a preceding section. These formulas also are based on two additional assumptions. The first assumption is that any equity in the land is converted to homestead property. A corollary to this assumption is that equity in personal property will not be used to reduce the land mortgage in order to maximize the homestead exemption. This limitation is incorporated into the formula by not allowing the total in parentheses marked with an asterisk (*) to be less than zero. A second assumption is that the value of chattel a creditor acquires will equal the reduction in the debt; therefore, the borrower's equity in intermediate and current assets is the same before and after the creditor reacquires the security.

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*Amount in parentheses will be the calculated total or zero, whichever is greater.

More data are necessary to estimate the collectible deficiency when the creditor is assumed the first to be paid. Accordingly, the second assumption (that is, the creditor is the last to be paid) has been accepted for this study. This assumption was slightly modified by further assuming the debtor would be the last one to collect from the chattel but would be the first creditor to collect a deficiency from any nonexempt equity in the land.

Collectible deficiency = (5)
(land value - land debt - \$80,000)*
+ (current assets + intermediate assets - debt secured by current assets - debt secured by intermediate assets)*
- \$20,000

Collectible proceeds for debt secured by both real and personal property would be the lesser of (1) the amount of debt and 2) value of the security. This reflects the practice explained in a previous section that liens on personal property are enforced first, with the real property mortgages subsequently foreclosed.

The *collectible proceeds* when the debt is unsecured is the lesser of (1) the amount of debt and (2) the collectible deficiency as described in the preceding paragraph.

The second factor is the opportunity cost of the collectible proceeds. The opportunity cost of these funds is assumed to be the interest rate on new loans. This investment alternative represents the most profitable use of the collectible proceeds.

Duration of the delay is the third factor affecting estimation of gross uncollected interest. Estimating the economic impact of a particular law initially requires that the length of the delay attributable to that law be determined. Conceptually, this is the difference between the time of repayment when the law is applied and when repayment would occur if the law was not in affect. The difference in time of repayment, however, is not easily observed nor exactly measured. An alternative to having creditors and borrowers speculate as to when repayment would have occurred had the law been different is to use the length of delinquency as a proxy for the duration of the delay.

Interest and Other Income Received during the Delay (AR)

The second variable for estimating economic impact of a delay in repayment is the amount of income the creditor receives during the delay. This income benefits creditors and, therefore, enters formula 1 as a negative value to partially offset the amount of gross uncollected interest.

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*Amount in parentheses will be the calculated total or zero, whichever is greater.

The amount of income will vary depending on whether the law postpones foreclosure or delays resale after the creditor has ownership. If the law being analyzed postpones foreclosure, the amount of income will be the interest that accrues during the delay and is actually paid by the borrower to the creditor. By comparison, the amount of income a creditor receives during a delay in reselling the property will usually reflect the opportunity to lease the collateral until a sale is arranged. The opportunity to lease acquired property will primarily depend on the time of the year the creditor receives ownership. It also must be recognized that North Dakota's redemption law eliminates the creditor's right to lease the land for the first year after foreclosure.

Maintenance Cost (MAIN)

The third variable is the amount that has to be paid during the delay to maintain the value of the security. Real estate taxes are the most substantial maintenance cost incurred by financial institutions even though property insurance premiums and repairs occasionally are paid by a creditor. This study assumes maintenance costs are directly related to the duration of the delay.

Change in Amount of Repayment (REP)

The purpose of the fourth variable is to account for any change in the amount a creditor is repaid as a consequence of an increase or decrease in the value of the collateral that occurs during the delay before foreclosure. For example, the amount a creditor is repaid will decrease as a result of a law which delays repayment if the value of the security decreases during that delay and thereby renders the creditor undersecured.

Change in the amount repaid is the collectible proceeds at the inception of the delay minus the total of the collectible proceeds at termination of the delay plus payment from the borrower to the creditor during the delay.

$$\begin{aligned} \text{REP} = {} & \text{Collectible proceeds at inception of delay} \\ & - (\text{Collectible proceeds at termination of delay} \\ & \quad + \text{principal paid during the delay}) \end{aligned} \tag{6}$$

The definition of collectible proceeds is identical to that described in a previous section and continues to depend on the type of property securing the obligation. Those definitions not only account for value of the collateral (collectible deficiency) but also reflect whether creditors generally are undersecured or fully secured.

Change in Value of Acquired Property (ACQPROP)

The fifth variable in estimating the economic impact is change in market value of acquired property that occurs during a delay in liquidation. This impact can be calculated as the difference between the market value of the property at the time it would have been sold and its value at the time it is actually sold. The rate of change in market value and the duration of the delay are two major factors. Change in the value of acquired property can be based on reported increases or decreases in the value of agricultural property, in general.

Negotiated Settlements

An alternative to foreclosing a delinquent loan is for the parties to resolve the delinquency through negotiations. By agreeing, the parties accept a compromise rather than face litigation and its associated monetary costs, time demands, and uncertainty. Creditors who agree to reduce the amount of principal or accrued interest owed and lower interest rates on the remaining balance decrease the value of their loan obligation. From a lender's perspective, it is the amount a creditor is willing to concede in an attempt to entice the borrower to voluntarily abandon use of delays provided by the law. By comparison, borrowers who provide additional collateral improve the position of the creditor while adversely affecting their own.

Consequently, settlements are a factor in estimating the economic impact of a law because the compromises reached change under alternative laws which establish the parties' initial bargaining positions and the parameters for their negotiations. However, the amount forsaken through negotiations is the economic impact for settled loans whereas the formula described above is the impact for delinquent loans that remain outstanding. Combining the economic impact of negotiated settlements and the economic impact of delayed foreclosure does not double count since the two loan groups are mutually exclusive. The primary difference between these two groups is that delinquent loans must be determined as of a particular point in time, whereas extent of negotiated settlements can be determined only by observing a period of time.

It is difficult to identify which law affects the level of negotiations because several factors influence each party's bargaining positions. These include (1) the portion of a debt that is uncollectible because the borrower has a negative net worth, and (2) laws (such as the "anti-deficiency judgment" and exemptions statutes) that shelter assets from the reach of creditors. Consequently, even creditors are reluctant to apportion their concessions among the various laws.

The economic impact of negotiations is estimated as the difference between the present value of the loan prior to settlement and the present value of the obligation after settlement. The appropriate discount rate is the interest rate of the loan at inception of the delay.

Alterations to Reflect the Borrower's Perspective

Collectible proceeds and duration of the delay are the same for the borrower and creditor. The opportunity cost for a delinquent borrower, however, is not the rate of interest being charged on new loans, but instead is the rate of return the borrower earns by using the property that otherwise would have been paid to the creditor. The rate of return a borrower generates will vary depending on the time of the year and the stage of the production season when the delay is implemented. Initiating a delay in foreclosures at the beginning of the planting season and extending it through harvest will be the most advantageous to borrowers since this will maximize their opportunity to earn a return on the asset and minimize the interest cost that will accrue.

A borrower is adversely impacted if the amount paid as "interest during the delay" exceeds the amount earned during that time. The amount of interest actually paid to the creditor will depend on whether the earnings have been encumbered by another creditor and whether borrowers convert the earnings into a form that is inaccessible to creditors, such as exempt property.

The amount of maintenance costs a borrower is willing to incur depends on whether that person holds any hope of realistically satisfying the debt obligation. Without this expectation, the borrower would have little incentive to provide long-term maintenance.

The economic impact upon a borrower as a result of negotiating a settlement should be equal but opposite the impact upon the creditor. The difficulty of estimating this amount is the same from a borrower's perspective as it is from the creditor's. A change in the value of collateral will benefit a borrower only to the extent a borrower's net worth is increased.

Impact on Others

Nondelinquent borrowers and other customers of a financial institution also are affected by laws which delay repayment. These customers are impacted whenever the institution raises interest rates on loans as well as other service fees in an effort to recover lost revenue. The limit on fee and interest rate increases will be determined by the level of competition the institution faces and regulations. Most institutions are reluctant to reduce interest rates paid on savings because depositors can readily shift their resources to institutions offering higher returns.

Society, in general, is impacted if rates of return earned differ between existing borrowers who are delinquent and farm operators who eventually acquire the foreclosed property. However, most research investigating whether the rate of return on assets varies with the level of indebtedness has not substantiated any consistent difference (Plaxico 1986; Leistritz 1987). Consequently, the impact on society is not likely to be significant regardless of who controls the property's usage.

Impact of Partial Repayment

The second type of statute being investigated permits partial repayment of debt. This section describes a model for estimating the economic impact of such laws. Primary focus will be upon North Dakota's "anti-deficiency judgment" statute, which applies only to real estate.

The impact of the law that permits partial repayment is the difference between the amount a creditor would be able to collect in the absence of the law and the amount the creditor receives under the law. Deficiency judgments following foreclosure of real estate mortgages are, for all practical purposes, not available in North Dakota even though the law sets forth a procedure for attaining one. The statute's economic impact is equal but opposite for creditors and debtors.

The amount a creditor would collect in the absence of a limit on deficiency judgments would be the lesser of (1) the amount of debt, or (2) the value of the land plus the nonexempt equity (or what has been defined as the "collectible deficiency"). This assumes the credit institution is the last to collect its loan.

The amount a creditor collects in North Dakota as a result of the limit on deficiency judgments is the lesser of (1) the amount of debt, or (2) the value of the security. Consequently, undersecured creditors are impacted by the law, and the amount of their impact is the lesser of (1) the collectible deficiency or (2) debt minus the value of the security. The value of all personal and real properties that secures a debt is included in the computation because the practice (as mentioned above) is to enforce the security interest against encumbered personal property first and then foreclose the real estate mortgage.

Future Credit Availability

Credit institutions must generate revenue sufficient to pay all costs if they are to exist in the long term. This implies that a lender will adjust the rate of interest charged to borrowers and the fees assessed for other services to compensate for the economic impact of state laws that permit partial or delayed repayment of indebtedness. This section describes a loan pricing model for estimating the interest rate adjustment necessary to compensate for the impact of state laws that permit delayed repayment.

A financial institution must cover all expenses in order to exist in the long run. However, if revenue exceeds costs, the resulting economic profit will encourage others to enter the industry. Total receipts, therefore, are presumed to equal total costs (formula 7).

Total receipts = (1-d) LY + d DY
Total costs = I + L + O + E - S - F

and

$$(1-d)\ LY + d\ DY = I + L + O + E - S - F \tag{7}$$

where

LY = loan volume times rate of income from loans not in default
DY = loan volume times rate of income from loans in default
d = percent of loan volume in default
I = interest costs
L = provision for loan losses
O = operating expenses
E = earnings for building reserves
S = security income
F = service fees and other income

Total receipts consist of interest income (LY) from borrowers who have not defaulted (1-d) and other income (DY) from the proportion of borrowers who have defaulted (d). Any income collected from borrowers after default is included in DY, but often that value is zero. Total costs include interest costs (I) and administrative costs (L, O, E) adjusted for other income (S, F). Repayment delays represent temporary shortfalls in revenue and may be capitalized if more than one year is involved. The earnings' increment necessary to accumulate additional reserves to meet these shortfalls is represented by a increase in E.

Solving (7) algebraically for the level of revenue necessary to support total costs yields

$$(1-d)\ LY = I + L + O + E - S - F - (d\ DY) \tag{8}$$

$$LY = \frac{1}{1-d}\ (I + L + O + E - S - F - (d\ DY)) \tag{9}$$

Removing the parentheses and multiplying the numerator of each term by (1 - d + d) and rearranging provides:

$$LY = \underbrace{\boxed{I}}_{\substack{\text{interest}\\ \text{cost}\\ (i)}} + \underbrace{\boxed{L + O + E - S - F - DY}}_{\substack{\text{administrative}\\ \text{costs}\\ (a)}} + \underbrace{\boxed{\frac{d}{1-d}\ (I + L + O + E - S - F - DY)}}_{\substack{\text{risk}\\ \text{premium}\\ (r)}} \tag{10}$$

Dividing both sides by the level of outstanding balances provides an estimate of the interest rate necessary to cover all costs. As shown in equation 10, the interest rate consists of three components--an interest cost (i), an adjustment for administrative costs (a), and a risk premium (r), which depends on the level of defaults (Lee and Baker n.d.). Borrower default causes the creditor to incur (1) acquisition interest costs and (2) associated administrative costs. A rise in the default rate significantly increases credit costs as a result of the relationship $\frac{d}{1-d}$.

There also are nonprice impacts on future borrowers, which often affect the quantity of credit available. A rise in the price of credit (as determined by equation 10) to a level above the market rate forces the lender to ration credit to only selected borrowers if they are to control default levels and remain competitive. The consequence is reduced credit availability.

Lenders consider diverse credit standards in evaluating a borrower when credit availability tightens. These standards relate to the debtor's liquidity, leverage, profitability, collateral, tenure, repayment ability, and repayment history. Creditors use these standards to implement new policies when rationing credit to only high quality borrowers. The model developed provides an indication as to what some of these standards may be in the future.

This section described the various models needed to estimate the economic impact upon creditors and borrowers when law permits delayed and partial repayment. The next section details the data collection process employed in this study and the results of the analysis.

Economic Impact on Credit Institutions

Two survey instruments were developed to elicit the information necessary for estimation of the model discussed in the previous section. The first survey (survey 1) requested specific information about each delinquent loan as of July 1, 1986, held by financial institutions that loan money to North Dakota farmers for purchases of chattel or real estate (Appendix B). Data from this survey were used to estimate the total amount of delinquent debt in the state and to appraise the current status of each delinquent loan and the borrower's financial condition. The second survey (survey 2) solicited general information about each financial institution's capital structure, operating costs, and lending practices. This instrument also gathered information about debt restructuring and negotiated settlements (Appendix C).

The surveys were distributed September 5, 1986, to 180 federal, state, and independently chartered banks, 4 regional Farm Credit Services (FCS) offices, 3 savings and loans, the credit divisions of 10 full- and short-line manufacturers of farm machinery, and 11 credit unions. Initially, 63 institutions responded to the survey (Table 1). These consisted of 57 banks, 4 FCS offices, 1 savings and loan, and 1 machinery manufacturer. The data provided information on 2,086 delinquent loans.

A follow-up telephone survey was conducted to statistically test whether non-responding banks had a different level of delinquent loans than banks that had responded. Seventeen banks that had not responded to the surveys were randomly selected and contacted to answer the questions of an abbreviated survey 2 (Appendix D).

TABLE 1. CHARACTERISTICS OF RESPONDING FINANCIAL INSTITUTIONS

Institutional Type	Number of Responses	Delinquent Loans
Banks	57	--
Farm Credit Services	4	--
Savings and loans	1	--
Machinery manufacturers	1	--
Total	63	2,086[a]

[a]Number of delinquent loans reported by category is not provided in order to not disclose confidential information.

Results of the tests are shown in Table 2. The absolute value of the z-statistic must exceed 2.32 (large sample test of mean differences) in order for a difference to be considered statistically significant at the 5 percent confidence level. The total delinquent loan volume, agricultural loan volume, and delinquent agricultural loan volume were not significantly different for both groups. Any variation in responses would be due solely to sampling. Thus, the sample of reporting banks can be considered representative of all banks in the state.

State-level estimates are derived by adjusting the lenders' survey responses for missing observations and extrapolating to the state level. For example, agricultural loan volume of responding banks, savings and loans, and machinery manufacturers (BSLMM) was obtained from only 41 of the 59 institutions. The

TABLE 2. SIGNIFICANT DIFFERENCES BETWEEN RESPONDING AND NONRESPONDING BANKS,

Variable	Responding Banks		Follow-up Survey		Z-Test Statistic
	Mean	Std. Dev.	Mean	Std. Dev.	
	percent				
Total Delinquent loan volume	6.45	4.02	4.29	3.94	1.99
Agricultural loan volume	36.81	26.22	48.44	33.74	-1.31
Delinquent agricultural loan volume	6.69	9.51	9.10	16.71	- .57

aggregate loan volume representative of BSLMM was indexed upward by a factor of 59/41. Using this method, aggregate agricultural loan volume of all institutions in the sample was $2.035 billion. Latest USDA data show total agricultural debt held by lenders in North Dakota as $3.442 billion (Table 3). This amount excludes Farmers Home Administration, Commodity Credit Corporation, and 40 percent of individual and other debt since these institutions were not surveyed. The aggregate loan volume of the institutions in the sample divided by this number equals 1.6914 and is defined as the survey's expansion factor. In other words,

TABLE 3. AMOUNT OF AGRICULTURAL DEBT HELD BY ALL NORTH DAKOTA LENDERS, SURVEYED LENDERS, AND RESPONDING LENDERS

	Agricultural Debt Held by All North Dakota[a] Lenders	Agricultural Debt Surveyed (Population)	Agricultural Debt Reported By Responding Lenders
Real Estate Debt	million dollars		
Federal Land Bank	1,358	1,358	--[d]
Farmers Home Administration	353	--[b]	--[b]
Life Insurance Companies	61	61	--[d]
Banks	100	100	--[d]
Individuals and others	537	215[c]	--[d]
	2,409	1,734	
Non-Real Estate Debt			
Banks	960	960	--[d]
Production Credit Association	612	612	--[d]
FICB	26	26	--[d]
Farmers Home Administration	558	--[b]	--[b]
Individuals and others	276	110[c]	--[d]
Commodity Credit Corporation	902	--[b]	--[b]
	3,334	1,708	
GRAND TOTAL	5,743	3,442	2,035
Expansion Factor		1.6914	

[a]United States Department of Agriculture. 1986. Economic Indicators of the Farm Sector--State Financial Summary, 1984. Economic Research Service, ECIFS 4-5, Washington, D.C.
[b]Not included in this study.
[c]40% is assumed held by other lenders.
[d]Data are not available due to disclosure requirements.

this sample represents 59.1 percent of the debt held by these agricultural lenders in North Dakota. When extrapolating the results of the survey to the state-level, all responses are multiplied by the expansion factor.

Delinquent Agricultural Loans

Total delinquent agricultural loan volume in North Dakota as of July 1, 1986, was $466.1 million or 13.5 percent of the state's agricultural loan volume. Figure 1 illustrates the distribution of delinquent agricultural loan volume by county. The Red River Valley, four counties in the southeast, two counties along the western border and several counties in the midsection of the state have the most delinquent agricultural debt in absolute dollar amounts.

Total delinquent agricultural debt for each county, however, does not consider the size of the county, nor the value and productivity of the farm assets by county. To place the amount of delinquent agricultural loans on a relative basis, the amount of delinquent debt is divided by each county's average farm

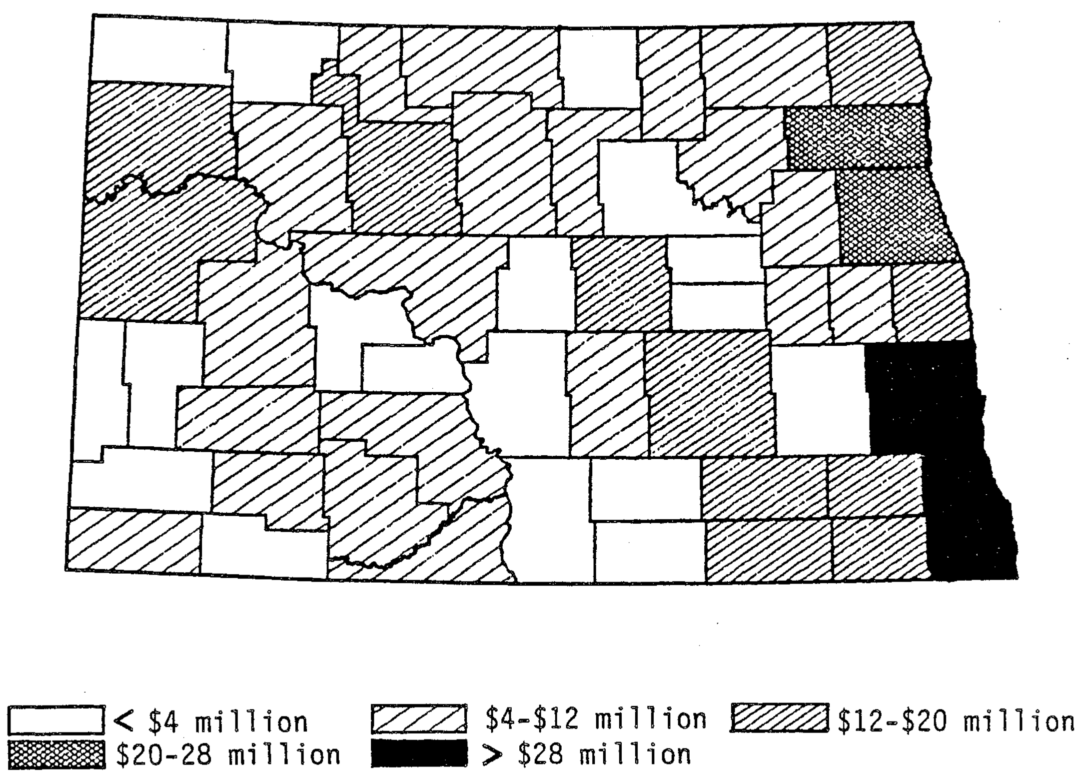

Figure 1. Estimated Delinquent Agricultural Loan Volume By North Dakota Counties, July 1, 1986

income from 1982-1984 (Census). Average farm income by county was used because total debt statistics by North Dakota counties were unavailable. Figure 2 illustrates that the ratio of delinquent agricultural debt to agricultural income is the highest in the oil-producing counties of the west central portion of the state, the southeast corner, and several counties along the southern edge of North Dakota. The high ratios in these areas are likely due to low income (several years of adverse growing conditions during the 1980s) or increased financial leverage.

One fourth of the delinquent agricultural loans were less than $37,500; half were less than $83,620; and 90 percent were less than $292,260 (Figure 3). Most of the loans were secured by real estate (Figure 4).

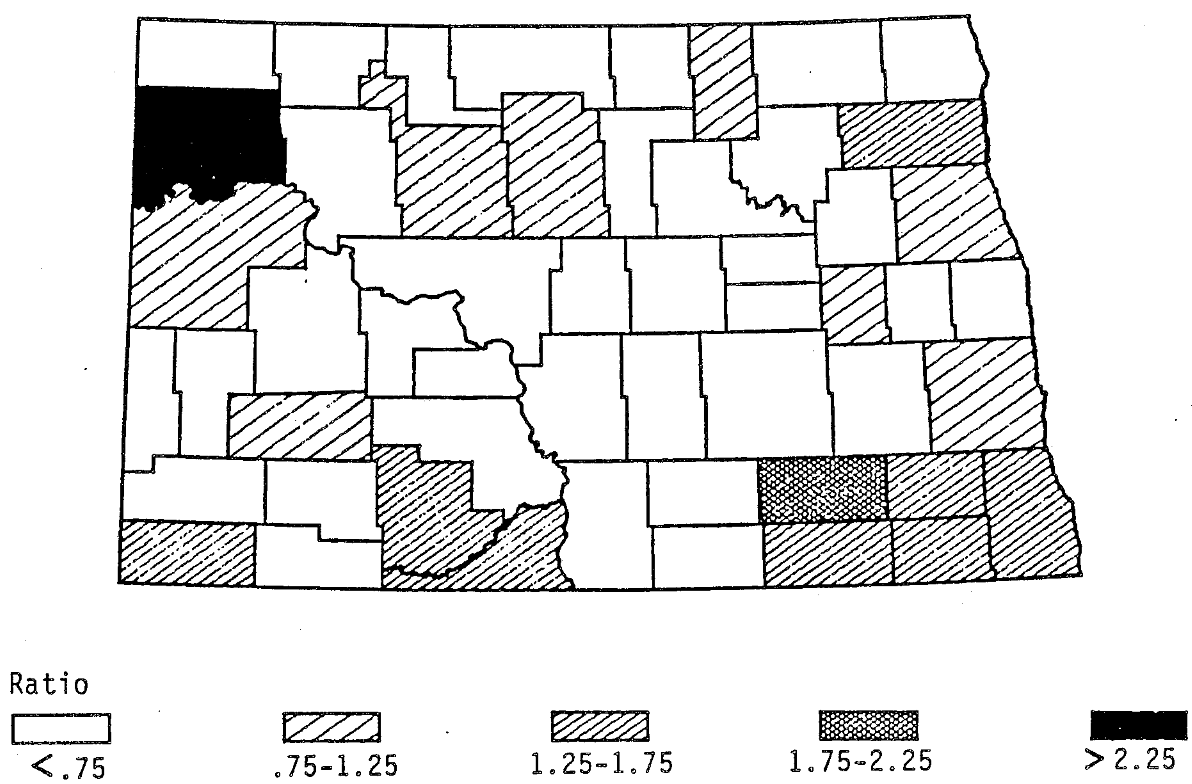

Figure 2. Ratio of Delinquent Agricultural Loan Volume to Farm Income by North Dakota Counties, July 1, 1986

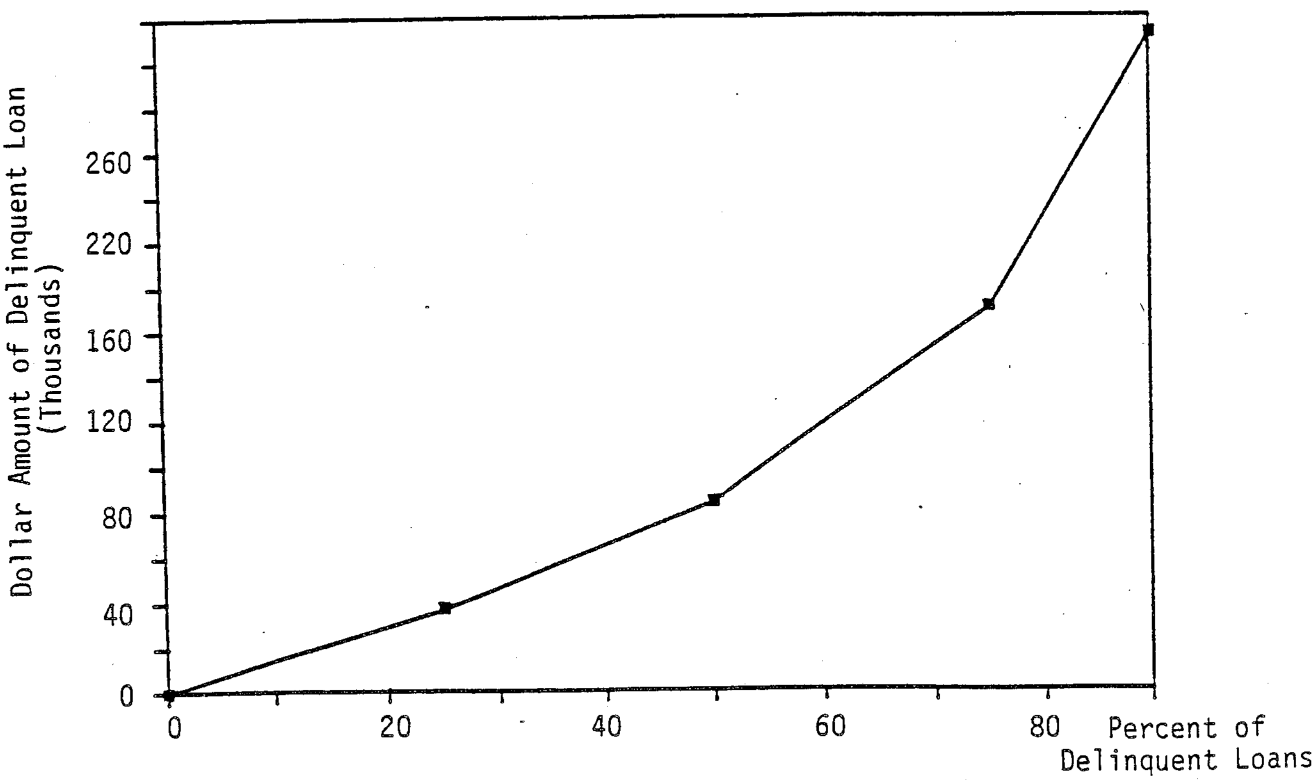

Figure 3. Cumulative Distribtuion of Delinquent Agricultural Loans By Size, July 1, 1986

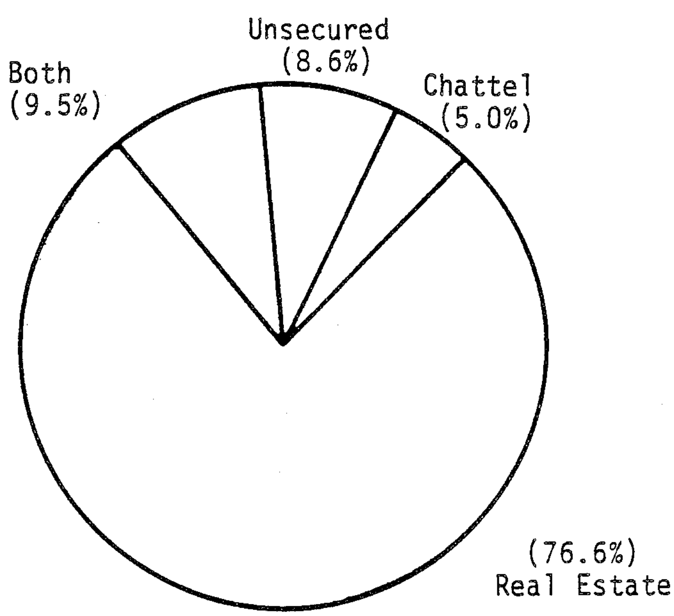

Figure 4. Types of Property Securing Delinquent Agricultural Loans in North Dakota

Impact of Delayed Repayment

The economic impact of delayed repayment on lenders is a combination of gross uncollected interest (GUI), income received by the credit institution (AR), maintenance costs (MAIN), losses on the sale of collateral due to decreased values, and costs of negotiated settlements (Table 4). Procedures for estimating each cost are described in the following paragraphs. The estimated impact of delayed foreclosure is explained first.

TABLE 4. ECONOMIC IMPACT ON CREDITORS FROM DELAYED AND PARTIAL REPAYMENT BASED ON DELINQUENT LOANS AS OF JULY 1, 1986 AND NEGOTIATED SETTLEMENTS FROM JANUARY 1, 1985 TO JULY 1, 1986

	---- million dollars ----	
Impact From Delayed Repayment		
Before Acquisition[a]		
Interest accrued	22.8	
Interest paid	(.8)	
Maintenance costs	1.9	
Loss on collateral value	--[d]	
Total impact before acquisition		23.9
After Acquisition[b]		
Loss of income	43.0	
Rentals received	(18.1)	
Maintenance costs	3.9	
Loss on collateral value	33.4	
Total impact after acquisition		62.2
Other[c]		
Negotiated settlements		60.4
Impact from partial repayment:		
Anti-deficiency judgment		25.7
Total economic impact of partial and delayed repayment		172.2

[a]Average loan delinquency is six months.
[b]Retained ownership for 14 months.
[c]Based on settlements negotiated between January 1, 1985 and July 1, 1986.
[d]Inconclusive data.

Impact of Delayed Foreclosure

Gross uncollected interest is the amount of delinquent loan volume lenders could have collected multiplied by the average interest rate on the debt and the duration of the delay. The amount collectible was defined in a previous section to be the lesser of (1) the outstanding delinquent principal and (2) the proceeds from sale of the collateral adjusted for amounts exempt from legal process. Collectible principal for each of the 2,086 delinquent loans was estimated from information obtained in survey 1 as to the likely proceeds from sale of securing property, unencumbered assets, and exemptions. These amounts were adjusted for missing values, summed, and expanded to the state level. Lenders could realistically collect $423.5 million of the $466.1 million loan volume delinquent on July 1, 1986.

An average interest rate on delinquent debt of 9.94 percent was estimated by dividing interest paid on farm mortgage debt by the amount of real estate debt outstanding for 1984, both of which are reported for North Dakota by USDA. An average interest rate of 10.45 percent also was estimated from lender's financial statements (Table 5). However, commercial bank lenders considered only 36.5 percent of their loan volume to be agricultural which may impact their average interest rate. Therefore, the latter rate is not considered.

The average length of time each loan was reported delinquent in survey 1 was .54 years. Multiplying the amount lenders could collect ($423.5 million) by the average interest rate (9.94%) and the duration of delay (.54 years) yields $22.8 million, which is an estimate of gross uncollected interest. However, 3.1% of the borrowers continued to make $0.8 million in interest payments on

TABLE 5. CONSOLIDATED INCOME STATEMENT OF SURVEYED NORTH DAKOTA LENDERS[a]

	Million Dollars
Revenue	
Interest income	359.6
Investment income	132.5
Fed funds income	20.5
Other income	25.3
Total	537.9
Expenses	
Interest	370.7
Loan loss	169.9
Other	102.9
Total	643.5
Net Income	-105.6
Loan Balance	3442.0
Average interest rate (%)	10.45

[a]Based on lenders' most recent financial statements.

their delinquent loans. Subtracting this amount from gross uncollected interest results in $22.0 million of net uncollected interest by July 1, 1986 for delinquent loans as of that date.

Lenders also are impacted by maintenance costs and changes in value of the collateral from the time of default until the obligation is brought current or the collateral is acquired. As explained in a preceeding section, maintenance costs include insurance, property taxes, and repairs. In survey 1, lenders were asked to estimate annual maintenance costs for each delinquent loan before foreclosure. At the state level, annual maintenance costs on collateral are calculated to be $3.5 million. Adjusting this estimate to reflect the .54 years average delinquency reported as of July 1, 1986, results in maintenance costs of $1.9 million dollars. Data to estimate the economic impact of changes in the value of the collateral were inconclusive.

Impact of Delayed Liquidation

Loss of income also arises because lenders are not able to immediately liquidate collateral after it is acquired in satisfaction of the indebtedness. Loss of income is estimated as the amount the property will sell for multiplied by the lender's interest rate on new loans and the length of time the property is held. This procedure is similar to that described in the preceding paragraphs for estimating the economic impact of delay before the creditor acquires the collateral. Lenders report holding chattel for 2 months and land for 14 months after acquisition. Loss of income after acquisition was estimated as $43 million.

The loss of income is reduced, however, to the extent the lender derives income from the property during the ownership period. This income will generally be rentals. Although 63.9 percent of the acquired collateral generated some income during the time the creditor owned it (Figure 5), the amount of income received was equivalent to only 42 percent of one year's rental. This occurs because property is acquired by creditors throughout the year--some of which cannot be rented until the following year. Land that is not rented continues to tie up the lenders' capital in nonperforming assets. The lack of revenue from the nonperforming assets reduces lenders' income and forces them to increase income from other assets (i.e., interest rates on loans to nondelinquent farm borrowers).

The 42 percent of one year's rental was calculated as a weighted average of lenders' responses to survey 2 (0 = no income, .5 = some income, and 1 = more than one years' income from acquired property). Lenders are estimated to receive $18.1 million in rental revenues during the period they own acquired collateral. This estimate is based on the assumption that land rents equal interest on collateral. The cost to lenders of acquiring property that cannot be rented is $24.9 million ($43 million - $18.1 million).

Lenders, as owners of the acquired property, are responsible for maintaining and insuring the property as well as paying taxes. Maintenance costs after

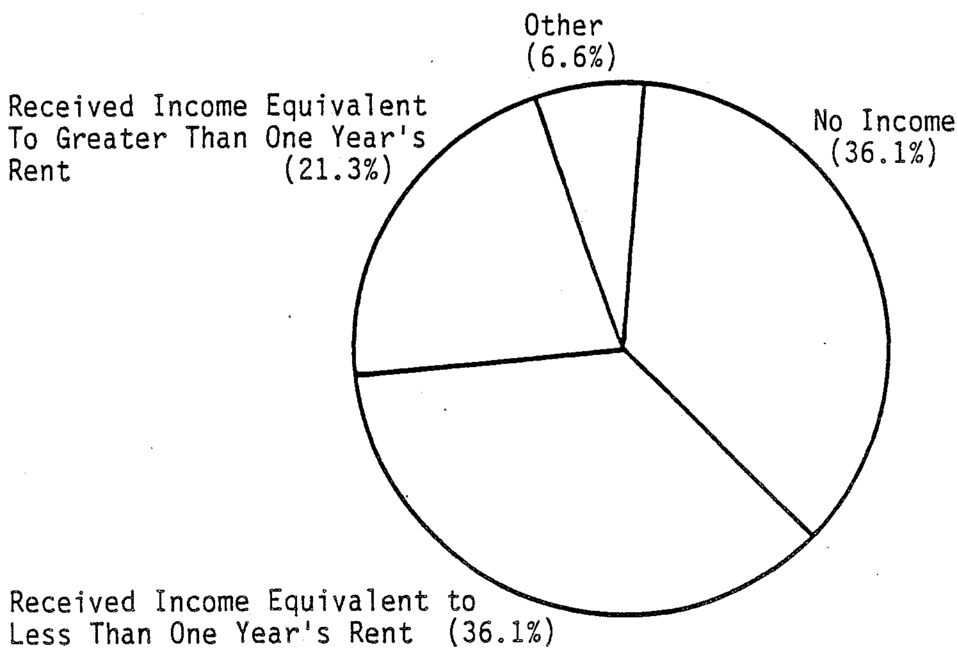

Figure 5. Lenders Reporting Income Received From Acquired Property

acquisition will accrue at the same rate before the collateral is acquired, which is estimated to be $3.5 million per year. Adjusting this amount to reflect the average time creditors own acquired property results in an estimated maintenance cost of $3.9 million.

During the time creditors hold the property, there is potential for either appreciation or depreciation of the collateral's value (Figure 6). Responses to survey 2 suggest collateral held by lenders has, on average, decreased 7.1 percent annually while lenders owned it. Considering a collectible loan volume of $423.5 million, the impact of declining market values is $33.4 million during the approximately 14 months lenders own the property.

Negotiated Settlements

The final cost of repayment delays is related to negotiated settlements. Lenders may negotiate a settlement for either an ongoing operation or as part of terminating the operation in order to avoid the usual costs of foreclosure. The amount of delinquent debt restructured for ongoing operations in North

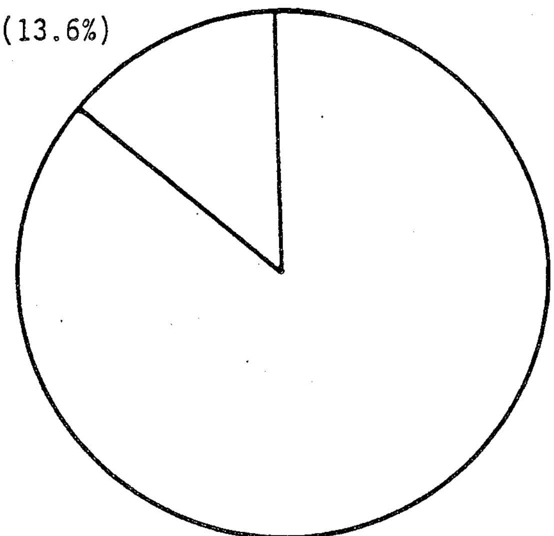

Figure 6. North Dakota Lender Expectations for Farmland Price Changes During 1987

Dakota between January 1, 1985, and July 1, 1986, was reported by lenders to be $162.1 million. During the same 18-month period, lenders negotiated on $179.6 million of delinquent debt for purposes of termination (Table 6). Analysis of settlements by institution (after adjusting for size) show a positive correlation between size of the institution and the amount of loan volume negotiated. The level of negotiation could not be related to the profitability of the institution.

Terms of negotiated settlements for the period from January 1, 1985 to July 1, 1986 also were elicited. Average values shown were calculated by weighting each lenders' response by the amount of debt they have settled. Thus, the responses of lenders who negotiated larger delinquent loan volumes were counted more heavily.

The cost to lenders of writing off principal equals the volume of debt negotiated multiplied by the frequency with which principal is written off and by the amount of principal that is typically written off. Lenders wrote off

TABLE 6. FREQUENCY, AMOUNT, AND ECONOMIC IMPACT OF NEGOTIATED SETTLEMENTS ON DELINQUENT AGRICULTURAL LOANS IN NORTH DAKOTA, JANUARY 1, 1985 TO JULY 1, 1986

Term	Volume Restructured	Frequency of Occurrence	Amount Negotiated	Economic Impact
	million dollars	------ percent -------		million dollars
Restructured for ongoing operation:				
Principal written off		14.71	4.03	1.0
Accrued interest written off		23.50	18.12	.4
Interest reduction (basis pts)		30.81	300	12.1
Additional collateral		65.70	--	--[a]
Total	162.1			13.5
Settled for termination or workout of operation:				
Principal written off		59.48	23.42	25.0
Accrued interest written off		59.20	70.92	4.1
Interest reduction (basis pts)		38.03	325	17.9
Additional collateral		14.97	--	--[a]
Total	179.6			47.0

[a]Inconclusive data.

principal in 14.7 percent of the settlements for ongoing operations and 59.5 percent of the settlements for terminating operations. The amount written off was 4.03 percent for ongoing operations and 23.42 percent for terminating operations. The cost to lenders of principal written off through negotiated settlements approximates $1.0 million ($162.1 million x .1471 x .0403) for ongoing operations and $25.0 million ($162.1 million x .595 x .2342) for terminating farm businesses.

Accrued interest also was written off by lenders 23.5 and 59.2 percent of the time for ongoing and terminating operations, respectively. Lenders provided data in survey 1 that enabled estimation of the amount of outstanding accrued interest. Interest on loan volume secured with real estate was, on average, 0.55 years delinquent and for chattel, 0.43 years. Again these average estimates were weighted according to the magnitude of the delinquent loan. The interest rate applied to the loan volume was the average USDA rate charged on all outstanding real estate debt.

The cost to lenders of writing off accrued interest was calculated by multiplying the level of debt that was settled through negotiation by the average interest rate, the average length of delay weighted by the various types of property, the frequency with which accrued interest was written off, and the portion of accrued interest written off. The cost to lenders of writing off accrued interest was $0.4 and $4.1 million for ongoing and terminating settlements, respectively.

The final cost of negotiated settlements relates to interest rate reductions on the remainder of the loan's life. The cost equals the present value of the difference between the original rate and the negotiated rate. This is a cost because it represents either a cash shortfall or an opportunity cost to the creditor. Lenders expect to offer 11.1 percent and 9.0 percent interest on chattel and real estate loans, respectively, in 1987. Lenders, on average, reduced interest rates on restructured debt by 300 and 325 basis points for ongoing and terminating operations, respectively. For the analysis, it was assumed repayment periods for chattel and real estate loans in North Dakota were 5 and 30 years, respectively. Further, it was assumed that delinquent borrowers were halfway through their repayment schedule. Thus, the present value of annuity factor used to capitalize the conceded interest was based on 2.5 and 15 years depending on the type of property securing the loan.

The cost to lenders of interest rate reductions was calculated by multiplying the volume of debt negotiated by the frequency with which lenders reduced interest rates, the amount of interest rate reduction (basis points/100), and the present value of the annuity factor. For ongoing operations, lenders conceded $12.1 million of interest on the outstanding loan balance and $17.9 million for terminating operations.

Borrowers provided additional collateral as part of 65.7 percent of the negotiated settlements for ongoing operations. Additional collateral was provided in less than 15 percent of the settlements for terminating operations. Creditors benefit from the additional collateral because their level of security has been increased. The survey data were inconclusive, however, as to the dollar impact of the added security.

Impact of Partial Repayment

The anti-deficiency law primarily impacts undersecured mortgage holders. For each undersecured delinquent loan, the value of the collectible deficiency was calculated. The lesser of this value and the amount of the debt was defined as the impact of the law which permits only partial repayment of the delinquent loan. The total amount for all undersecured delinquent loans is the economic impact of the law at the state level and was estimated to be $25.7 million (Table 4).

Other Impacts

The previous section focused on the impacts upon creditors. This section reviews the type of impact that delayed or partial repayment will have on both delinquent and nondelinquent borrowers. Criteria for future agricultural lending also are discussed in this section.

Economic Impact on Delinquent Borrowers

The effects of delayed repayment on delinquent borrowers was examined by projecting the financial situations for two representative cash crop farms in North Dakota from 1987 to 1990 under two scenarios. The representative farms were developed by Watt, Johnson, and Ali (1986) and are based on annual farm business summaries compiled under the North Dakota Vocational Agriculture Farm Business Management Program (Gullickson and Holkup 1984). The first scenario develops a baseline for comparison whereas the second scenario assumes interest and principal payments are deferred in 1987. The representative farms reflect the East Central and Red River Valley areas of North Dakota (Figure 7). The financial structure of the farms was adjusted to reflect the indebtedness of the 2,086 delinquent borrowers in survey 1. Adjustments also were made in the unallocated production costs to reflect farm size of delinquent borrowers. A simulation model developed by Schnitkey, Barry, and Ellinger (1986) was used in this study. This model consists of a set of computerized coordinated financial statements.

The East Central farm used in the analysis involves 2,855 acres planted to wheat (both continuous and fallow), barley, and sunflowers. The Valley farm consists of 1,385 acres planted to wheat (both continuous and fallow), barley, and sugar beets. The East Central farm rents 1,640 acres on a share rent basis whereas the Valley farm cash rents 290 acres for $54 per acre.

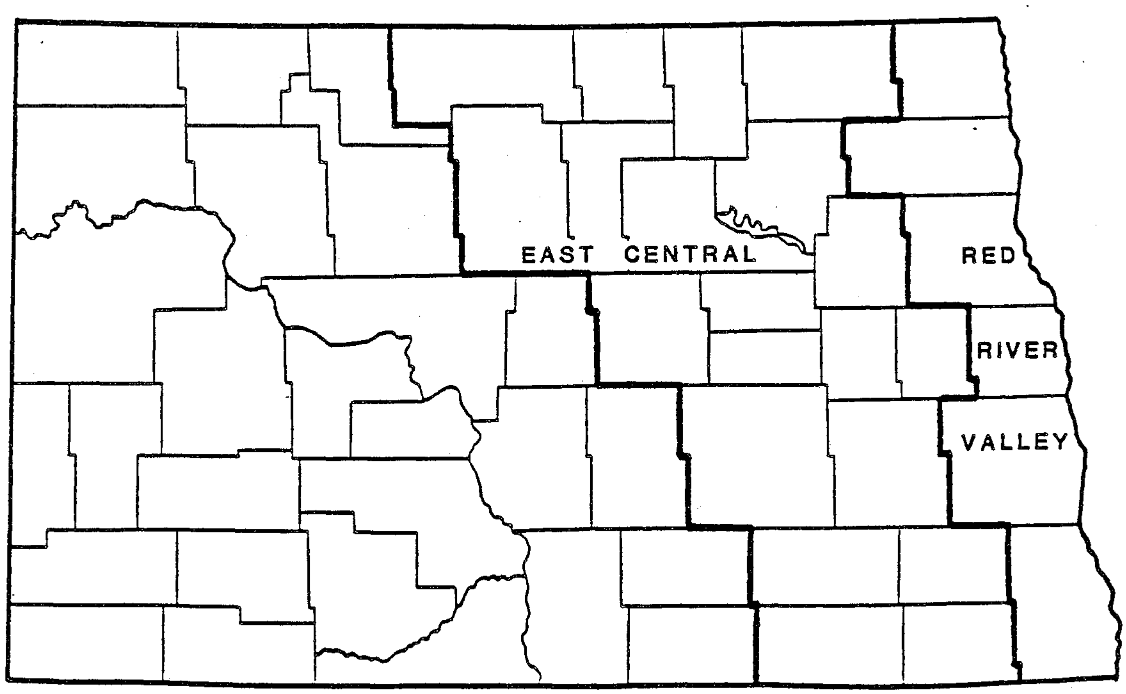

Figure 7. East Central and Red River Valley Areas of North Dakota

Crop production costs reflect averages of farmers in the area (Johnson et al. 1986) and are assumed to increase by the rate of inflation over the analysis period (Chase Econometrics 1986). Interest rates on current, intermediate- and long-term debt in 1987 are based on lenders' expectations requested in survey 2 and adjusted in later years based on Chase Econometrics projections.

Crop yields for the Valley farm are assumed to be constant at 45.7 bushels per acre for continuous wheat, 47.0 bushels per acre for wheat after fallow, 69.3 bushels per acre for barley, and 17 tons per acre for sugar beets. Yields for the East Central farm are 27.0 bushels per acre for continuous wheat, 31.8 bushels per acre for wheat after fallow, 49.0 bushels per acre for barley, and 10.7 hundredweight per acre for sunflowers. Commodity prices shown in Table 7 are consensus estimates of researchers at midwestern land grant universities (Barry 1986). All farms are assumed to participate in government farm programs. Base yields are assumed to equal production yields. Results from the simulation of farm operations are shown in Table 8 for the Valley farm and Table 9 for the East Central farm. The data clearly show that delinquent farmers benefit from repayment delays if the rate of return on farm assets is greater than the cost of debt and are worse off if the cost of debt exceeds the rate of return to farm assets.

The financial viability of the Valley farm improves over the forecast period under both scenarios. Substantial declines in net worth occur during 1987-88; however, an improvement is shown in the latter two years. Net income declines over the period but remains positive due chiefly to profitable levels of sugar beet prices. As expected, the one-year deferral of principal and interest improves the financial well-being of the firm.

Prospects for the East Central farm are less favorable. Net income, net worth, and cashflow all deteriorate over the period. The primary difference between this farm and the Valley farm is the replacement of sugar beets with sunflowers whose price is depressed. A one-year deferral of interest and principal provides temporary relief during 1987 but does not alter the long-run prospects of the farm.

TABLE 7. COMMODITY PRICES USED TO PROJECT FINANCIAL SITUATIONS OF NORTH DAKOTA CASH GRAIN FARMS

Commodity	1987	1988	1989	1990
Wheat ($/bu.)	2.61	2.53	2.41	2.41
Barley ($/bu.)	1.67	1.62	1.64	1.64
Sunflower ($/cwt.)	8.26	8.47	8.58	8.58
Sugar beets ($/ton)	35.78	35.78	35.78	35.78

SOURCE: Barry, Peter J. 1986. Financial Stress in Agriculture: Policy and Financial Consequences for Farmers. AE-4621. Urbana-Champaign: University of Illinois, Department of Agricultural Economics.

TABLE 8. IMPACT OF DEFERRED INTEREST AND PRINCIPAL SCENARIO ON A RED RIVER VALLEY FARM IN NORTH DAKOTA FOR YEARS 1987 TO 1991

Item	1987/88	1988/89	1989/90	1990/91
	---- Base Scenario ----			
Beginning net worth	$515,387	$425,687	$391,424	$394,317
Ending net worth	425,687	391,424	394,317	394,738
Change in net worth	-89,700	-34,263	2,893	421
Net Income	59,605	47,645	39,173	31,480
Interest payment	82,341	78,108	79,153	79,472
Cash flow	-1,729	-19,262	-33,307	-46,573
Debt-to-asset ratio	.6217	.6310	.6218	.6163
Return on equity	.1157	.1159	.1001	.0798
	---- Deferred Interest and Principal Scenario ----			
Beginning net worth	$524,575	$486,511	$460,139	$469,801
Ending net worth	486,511	460,139	469,801	477,041
Change in net worth	-38,064	-26,372	9,622	7,240
Net income	111,241	55,536	45,943	38,298
Interest payment	0	62,565	68,883	68,308
Cash flow	112,574	-11,371	-26,537	-39,755
Debt-to-asset ratio	.5765	.5654	.5481	.5342
Return on equity	.3121	.1142	.0998	.0815

The long-run viability of these farms is only partially determined by capital costs and repayment rates. Other important factors are commodity prices, enterprise selections, production costs, management skills, and public policy. Both of the example farms benefit financially from a one-year deferral of principal and interest. However, the deferral does not alter the long-run prospects of each farm.

TABLE 9. IMPACT OF DEFERRED INTEREST AND PRINCIPAL SCENARIO ON AN EAST CENTRAL NORTH DAKOTA FARM FOR YEARS 1987 TO 1991

Item	1987/88	1988/89	1989/90	1990/91
	Base Scenario			
Beginning net worth	$173,454	$ 67,200	$-20,585	$-96,953
Ending net worth	67,200	-20,585	-96,953	-186,581
Change in net worth	-106,254	-87,785	-76,368	-89,628
Net Income	-3,816	-29,497	-47,991	-65,158
Interest payment	75,024	79,051	89,232	99,915
Cash flow	-71,882	-101,624	-124,179	-145,407
Debt-to-asset ratio	.9184	1.0263	1.1260	1.2453
Return on equity	-.0220	-.4389	--[a]	--[a]
	Deferred Interest and Principal Scenario			
Beginning net worth	$180,010	$118,880	$ 44,758	$-21,514
Ending net worth	118,880	44,758	-21,542	-99,711
Change in net worth	-61,130	-74,122	-66,300	-78,197
Net income	41,307	-15,834	-37,923	-53,700
Interest payment	0	63,691	79,543	88,817
Cash flow	42,287	-87,961	-114,111	-133,949
Debt-to-asset ratio	.8549	.9424	1.0282	1.1319
Return on equity	.2295	-.1332	-.8473	--[a]

[a]Earning a negative net income from a negative net worth is an undefined return on equity.

This section summarized the economic impact a deferral or partial repayment has upon delinquent borrowers. Generally, delinquent borrowers benefit but not sufficiently to alter the course of their farm business in the future. The next section is a discussion of who shares the cost of the adverse impacts imposed upon creditors.

Economic Impact on Nondelinquent Borrowers

The economic impact of delayed and partial repayment to farm borrowers who are not delinquent is in the form of higher average interest rates and lower credit availability. Financial institutions, like other private businesses, operate for profit. To the extent losses are incurred, lenders must raise interest rates on their remaining loans in order to cover expenses and administrative costs associated with foreclosure.

The survey elicited information on all delinquent loans as of July 1, 1986, and negotiated settlements since January 1, 1985. Even after the data have been annualized to adjust for differing time periods, it is difficult to estimate the magnitude lenders have to increase interest rates to their nondelinquent borrowers. The complication arises in part because the total economic impact consists of both a delayed collection of interest on which borrowers have defaulted and partial repayment of principal (loss of lenders' assets). The first impact is static in nature whereas the second is dynamic since asset losses affect the profitability of lenders over more than a single period.

The loan pricing model developed in a previous section only evaluates static impacts arising from loan defaults. The model assumes lenders ultimately collect the original loan principal and only incur costs associated with collection delays. Based on the data from Table 5 and assuming a 13.5 percent default rate, interest rates to nondelinquent North Dakota farm borrowers are calculated to be 146 basis points above the rate lenders could offer if they did not have loan defaults.

The full economic impact (including both dynamic and static effects) can be approximated by dividing the total economic impact of both partial and delayed repayment by the level of outstanding agricultural loan volume in North Dakota. This method estimated that lending rates to farm borrowers were 500 basis points above normal if all of the additional costs associated with partial and delayed repayment of delinquent loans were passed on during the period they were incurred. However, lenders more than likely increased rates (or failed to lower rates) once indications of problem loans surfaced. Lenders also may continue to charge higher rates for a period of time in the future until their equity capital is restored. Therefore, as lenders spread their costs over more than one year, the full dynamic impact on farm lending rates would be less. For example, lending rates would be 143 basis points above normal each year if lenders capitalized the additional costs over a period of four years at a discount rate of 10 percent. This simplistic evaluation is deficient because the administrative costs associated with partial repayment are not accounted for.

In the future, lenders might increase interest rates to all new farm borrowers in order to compensate themselves for loan losses. This form of protection is likely to occur only if all farm loans have an equal probability of becoming delinquent. More than likely, lenders will increase interest rates on loans to farmers who are most likely to default. Computerized credit-checking services may help lenders identify borrowers with a history of loan defaults.

Higher interest rates to farm borrowers is only one consequence of delayed or partial repayment. The other consequence is in the form of lower capital availability when lenders either ration credit or curtail lending activities. This action occurs because lenders can only raise interest rates so far before they begin to lose market share, attract riskier customers (adverse selection), and indirectly alter the behavior of existing customers who are forced to adopt riskier investments.

Higher interest rates may attract customers with riskier portfolios because these customers perceive the lender as projecting a low probability of repayment. In other words, customers borrow at high interest rates because they expect to default. Likewise, borrowers, who have sound intentions of repaying, are induced to undertake riskier investments with lower probabilities of success but higher payoffs when successful. These borrowers assume riskier investments or methods of production in order to pay higher prices for credit and maintain their level of income and standard of living. As the variability of borrowers' income increases, lenders' portfolios are also placed in increased jeopardy.

Another impact is a less efficient capital market. One attribute of an efficient capital market is reliable access to credit when needed. Lenders that begin to ration credit reduce the overall capital availability and thereby hinder the market's efficiency.

Data to quantitatively estimate these relationships were not elicited in the survey, but theory suggests that increased delinquencies affect the behavior of both existing and new farm borrowers in a manner that reduces the overall availability of capital. This logic is consistent with Alston (1984) who estimated that new farm mortgages issued by private lenders declined by 30 percent nationwide after the Great Depression (1932-34).

Future Lending Standards

Lending standards will likely change in the future as a result of the past stressful period. One lesson that can be learned from this period relates to the deficiencies of both equity and cashflow lending. Lenders who continue to originate loans simply because borrowers have "paper equity" or can meet scheduled payments of interest and principal will not survive. More emphasis must be placed on the profitability of investments (from the borrowers' perspective) in addition to the timing of cash inflows and expenses. As prudent investment decisions on the part of borrowers increase their net worth, lenders will find their financial base strengthened. The variability of commodity prices as well as macroeconomic and farm policies will likely continue to remain high in the future. Lenders consequently need to increase their use of sensitivity analyses in order to evaluate the profitability and net present value of investments under a variety of alternative assumptions and price scenarios.

Farm operations that continue to grow in response to technical change will experience an increased demand for capital. These demands may exceed the capacity of local and even regional service centers. In addition, these borrowers will be very price sensitive, patronizing lenders who extend the lowest-priced credit regardless of other services offered. Due to their capital requirements, these borrowers will be subjected to many of the credit evaluation standards nonagricultural borrowers already face.

The remaining farmers will demand a broad range of financial services and borrow at premium rates. The additional cost of credit will have a negligible impact on their farm business since their relative amount of borrowing is small. For many of these borrowers, farming will only be a part-time occupation. Their various activities will limit the amount of time they can expend shopping for low-cost financial services, such as insurance and tax preparation.

The evaluation of the borrower as an individual will likely change in the future also. In the past, a person's character was an important factor in credit analysis. As financial institutions continue to increase in size, this factor becomes less significant as more loans are based on quantitative economic criteria. However, an individual's management ability will likely become more important in the future. For example, the ability of farmers to quickly adopt new technology to their own operations will be a crucial determinant of firm survivability especially as the agriculture sector continues to rapidly evolve in response to technical developments.

Finally, credit institutions also will respond. If laws adversely affecting lenders are not repealed, specialized departments will be created and staffed by persons knowledgeable in maintenance of acquired property and negotiated settlements. Most agricultural lenders have little experience in these areas. Further, the skills of loan officers will develop as they become proficient users of credit scoring methods and quantitative judges of loan applications.

Implications for Legislation

The emphasis of this study has been from a historical perspective--estimating the economic impacts of statutory law as of July 1, 1986. A number of researchable issues require further study. These are issues that could not be estimated with available data or were new questions raised by the study's findings. Since the prospects for a recovery in the farm sector remain unchanged until the next harvest, North Dakota legislators will likely draft legislative proposals in 1987 to further protect the rights of delinquent farm borrowers. Further, the specific provisions of such proposals are unknown at the present, making it difficult to estimate their economic impact. In this section, we qualitatively discuss these researchable issues so public policymakers can make the best decisions possible.

This study did not attempt to analyze the economic impact of a law that prevents the enforcement of any delinquent debt. Arguably, no borrowers will service their debt during the effective period of such a delay. At expiration of the period of nonenforcement, borrowers that are determined and capable of servicing their obligations will likely do so, but financial institutions are not likely to recover the earning opportunity that occurred during the delay.

Proposals to permit a delay in repayment will not benefit borrowers if the interest which accrues during the delay exceeds the amount of income the borrower will earn by continuing to hold the property for that time. For example, a delay in foreclosing real estate mortgages during the winter months will not assist farmers because a crop is not growing on the land even though the interest on the debt steadily mounts. Furthermore, any legal action to terminate the accrual of interest will most likely be unconstitutional (impairment of contract). Similarly, a law delaying enforcement of debt over the duration of a growing season must be coupled with a payment of rent or interest that accrues during that time; otherwise, the effort also will fail to pass constitutional scrutiny (Home Building & Loan Ass'n v. Blaisdell, 290 U.S. 398 (1934)).

This research effort did not include an attempt to estimate the magnitude nor the impact of borrowers who deliberately default on land payments. Persons owing debt in excess of the land's current value can force the financial institution to "buy" the land for the amount of the debt. This is accomplished by intentionally defaulting knowing that (1) the foreclosure process and redemption period will permit the borrower to farm the land at least one more crop season and (2) the "anti-deficiency judgment law" will prevent the creditor from reaching any other equity the borrower may possess.

Any attempts to further restrict the amount a borrower must pay to fulfill an existing obligation will violate the Constitution by impairing existing contracts. Those efforts can only arise within the jurisdiction of bankruptcy as mandated by the federal Constitution.

The costs of a deferral are borne entirely by lenders and other patrons of the financial institution. But, both of these parties also are experiencing financial difficulty at the present time. Therefore, policymakers should consider transferring some or all of the cost of supporting delinquent borrowers to the public sector rather than forcing lenders and the remaining farm borrowers, who may be on the verge of financial difficulty themselves, to solely bear these costs. These issues and others continue to warrant further research and thorough analysis.

Appendix A

"Confiscatory Price Statute"
North Dakota Century Code 28-29

North Dakota's "Confiscatory Price Statute"

N.D. Cent. Code 28-29-04. Power of courts when prices are confiscatory.--Until the price of farm products produced in this state shall rise to a point to equal at least the cost of production, in comparison with the price of other commodities in general, entering into the business of agriculture, the supreme court of this state and all district and county courts in this state shall have power, when it is deemed for the best interests of litigants, to extend the time for serving and filing all papers requisite and necessary for the final determination of any cause. Any such court, in like manner, may stay the entry of judgment or the issuance of execution thereon, or may defer the signing of any order for judgment, or may defer terms of court, whenever in the judgment of the court the strictly legal procedure in any cause will confiscate or tend to confiscate the property of any litigant by forcing the sale of agricultural products upon a ruinous market.

28-29-05. Courts may delay orders in foreclosures.--Whenever any foreclosure proceeding is pending in any court in this state and the amount of debt is less than the value of the property involved, and when any order for judgment will have the force and effect of depriving a defendant of his home and confiscating his property, the court may construe further proceedings to be unconscionable, and may delay the signing of such order to such time as it shall deem it advisable and just to enter the same.

28-29-06. Public policy.--Any court mentioned in section 28-29-04 may take judicial notice of the situation of producers and laborers when prices of farm products are confiscatory, and upon the ground of public policy may do all things necessary to be done lawfully to carry out the provisions of sections 28-29-04 and 28-29-05.

Appendix B

Survey 1

1986 Agricultural Creditors Survey
Department of Agricultural Economics
North Dakota State University

North Dakota has several statutes defining rights and limitations of credit institutions after default by a debtor. Two such laws are the anti-deficiency judgment statute which limits deficiency judgments after foreclosure of a real estate mortgage and the confiscatory price law which grants the state courts additional discretionary authority to delay legal proceedings such as foreclosure. A study is being conducted to determine the economic impact on agricultural creditors and borrowers of statutes which permit delayed or partial repayment of loans. A secondary objective is to investigate the effects of the statutes on availability of credit and its cost in the future.

Two types of information are requested, and, for your convenience, two survey instruments have been developed. The first survey requests specific information about each delinquent loan in order to better understand the state of agricultural debt currently in default. The second survey solicits general information about your financial institution's capital structure, operating costs, and lending policies. Any information provided to the Department of Agricultural Economics will be strictly confidential and only summaries of the collected data will be published.

Some financial institutions may find it more convenient to provide the data by means of a computer. Please contact the Department of Agricultural Economics if you are interested in an electronic transfer of information. The departmental phone number is 237-7441, and the principal investigators are Dr. Cole R. Gustafson and David M. Saxowsky.

Please read all instructions and questions carefully. If you have any questions while answering these surveys, please contact either principal investigator.

Please return completed surveys by Wednesday, October 15, 1986.

SURVEY 1

Loans Currently Delinquent

Please provide the following information for each delinquent loan used for agricultural purposes in North Dakota (regardless of collateral) that your institution had as of July 1, 1986, or a later date if it is more convenient in completing the survey. Only two delinquent loans can be reported per sheet; therefore, enclosed are several copies of Survey 1. Please make additional copies as necessary to report all delinquent agricultural loans.

	Loan 1	Loan 2
1. What is the principal amount of this delinquent loan?	$__________	$__________
2. Is the debtor current on interest payments for this loan? (circle one)	Y N	Y N
3. What is the total amount of delinquent principal and interest?	$__________	$__________
4. How many months has this loan been in default?	______Months	______Months
5. What is the type of property securing this loan? (check one)	____chattel ____real estate ____both	____chattel ____real estate ____both
6. Does this loan impose a mortgage on the debtor's homestead? (circle one)	Y N	Y N
7. What is likely to be the amount of proceeds from sale of real estate securing the loan, net of selling costs and settlement of priority claims?	$__________	$__________
8. What is likely to be the amount of proceeds from sale of chattel property securing the loan, net of selling costs and settlement of priority claims?	$__________	$__________
9. In which county (or counties) is the collateral located?	__________ __________ __________	__________ __________ __________

	Loan 1	Loan 2
10. What are the annual maintenance costs incurred by your firm on this collateral (for example, insurance and advanced or unpaid property taxes on real estate)?	$________	$________
11. Has your firm initiated a legal procedure to enforce the security interest or mortgage on this collateral? (circle one)	Y N	Y N

Answer Questions 12 to 18 based on the last creditor-accepted balance sheet you have for the debtor.

	Loan 1	Loan 2
12. What is the total value of the debtor's current assets (cash, livestock for sale, stored grains, inventories)?	$________	$________
13. What is the total value of the debtor's intermediate assets (equipment, machinery, breeding livestock)?	$________	$________
14. What is the total value of the debtor's long-term assets (land, buildings)?	$________	$________
15. What is the total amount of the debtor's current liabilities (payable within one year)?	$________	$________
16. What is the total amount of the debtor's intermediate liabilities (payable in one to ten years)?	$________	$________
17. What is the total amount of the debtor's long-term liabilities (payable in more than ten years)?	$________	$________
18. What is the date of this financial information? (month and year; example: December 1985)	________	________

END OF SURVEY 1;
PLEASE CONTINUE AND COMPLETE SURVEY 2.

Apendix C

Survey 2

SURVEY 2

Information About the Financial Institution

A. Information on Acquired Property

1. What is the number of months your firm typically has owned chattel after acquiring it at a foreclosure sale or by means of a voluntary deed?
_______________ months

2. What is the number of months your firm typically has owned land after acquiring it after a redemption period or by means of a voluntary deed?
_______________ months

3. During the period of ownership after the redemption period, what is the annual gross income your firm typically receives from the land? (check one)

________no income
________some income but less than the equivalent of one year's rent
________equivalent of one or more year's rent
________other (specify)______________________________________

4. This question asks you to recall those delinquent agricultural loans your firm had since January 1985 but that are no longer outstanding because the borrower paid the debt, refinanced with another lender, or liquidated the farm. What percent of the dollar amount of these former loans typically was recovered?
_______________%

B. Financial Characteristics

5. Please attach to this survey form a copy of your institution's financial statements (income statement and balance sheet) for the most recent fiscal year. If your firm is a subsidiary of a larger institution, please provide the requested data for your credit unit only. Please include both agricultural and nonagricultural credit operations.

6. Type of institution (check one)

________Bank
________FCS
________Credit Union
________Savings & Loan
________Insurance Company
________Farm Implement Manufacturer
________Other (specify) ______________________________________

7. What percent of total loan volume (total mature and unmatured principal) is delinquent at this time? __________%

8. What percent of your loan volume (total mature and unmatured principal) is for agricultural purposes? __________%

9. What percent of your agricultural loan volume (total mature and unmatured principal) is delinquent at this time? __________%

SURVEY 2 (CONT.)

C. Negotiations with Delinquent Borrowers

Often a financial institution negotiates a settlement with a delinquent borrower in order to avoid the cost and delay of initiating a legal proceeding such as foreclosure. The terms of settlement may vary depending on whether the purpose is to restructure the debt of an ongoing operation or settle the obligations of a farm ceasing operation. Please answer the portions of the following questions that are relevant to your firm with respect to agricultural loans.

		Restructured for Ongoing Operation	Settled for Termination or Workout of Operation
10.	What is the dollar volume (total mature and unmatured principal) of agricultural loans that your institution has negotiated a settlement on since January 1985 in order to prevent or correct a delinquency?	$__________	$__________

If your answer to Question 10 is NONE, skip the remainder of Question 10 and go to Section D.

		Restructured for Ongoing Operation	Settled for Termination or Workout of Operation
10a.	What percent of these settlements involved a write-down of principal? If zero, SKIP Question 10b.	__________%	__________%
10b.	What portion of the principal was typically written off?	__________%	__________%
10c.	What percent of these settlements involved a write-down of accrued interest? If zero, SKIP Question 10d.	__________%	__________%
10d.	What portion of the accrued interest was typically written off?	__________%	__________%
10e.	What percent of these settlements involved reducing the interest rate for remaining term? If zero, SKIP Question 10f.	__________%	__________%
10f.	What was the typical reduction in the interest rate?	__________%	__________%
10g.	What percent of these settlements involved extending the repayment period? If zero, SKIP Question 10h.	__________%	__________%

SURVEY 2 (CONT.)

	Restructured for Ongoing Operation	Settled for Termination or Workout of Operation
10h. How much time was typically added to the repayment period? (Answer in terms of either months or years.)	______Years ______Months	______Years ______Months
10i. What percent of these settlements involved the borrower providing additional collateral to secure the loan? If zero, SKIP Question 10j.	________%	________%
10j. After additional collateral is provided, what percent of the renegotiated loan was typically considered secured?	________%	________%

D. Policies and Attitudes

Questions 11 to 14 ask you to look to the future by thinking about the remainder of 1986 and 1987. Please answer these questions based on your professional insights and expectations.

	Restructured for Ongoing Operation	Settled for Termination or Workout of Operation
11. What is the dollar volume (total mature and unmatured principal) of agricultural loans that your institution expects to negotiate a settlement on during the remainder of 1986 and the first six months of 1987 in order to prevent or correct a delinquency?	$________	$________

12. What percent of your agricultural loan volume do you expect to become delinquent for the first time during the remainder of 1986 and the first six months of 1987?

________%

13. What lending rates do you expect to offer for agricultural loans during the remainder of 1986 and the first six months of 1987, or check the appropriate blank if you do not offer a type of financing:

a. operating loans ________% Do not offer operating loans ______
b. chattel loans ________% Do not offer chattel loans ______
c. real estate loans ________% Do not offer real estate loans ______

SURVEY 2 (CONT.)

14. What change in land values do you expect during 1987 (check one and indicate the percent change you expect)?

    a. __________ decrease by __________ percent
    b. __________ will not change
    c. __________ increase by __________ percent

15. You have finished the surveys and we thank you for your cooperation. May we contact you if we have questions about these surveys?

    Yes_____ No_____

    Respondent's Name ____________________

    Institution's Name ____________________

    Phone Number ____________________

Please send:

a. The completed surveys, and
b. a copy of your institution's financial statements (as requested in Question 5) to the address below. Due to the various size of annual reports, we request that you furnish the envelope and postage; we also suggest that you clip and use the bottom portion of this page as a mailing label.

Department of Agricultural Economics
Survey of Ag Creditors
Box 5636
North Dakota State University
Fargo, ND 58105

Appendix D

Follow-up Telephone Survey

Follow-up Phone Survey of Banks

1. What percent of your loan volume (total mature and unmatured principal) is for agricultural purposes? _________%

2. What percent of total loan volume (total mature and unmatured principal) is delinquent at this time? _________%

3. What percent of your agricultural loan volume (total mature and unmatured principal) is delinquent at this time? _________%

Often a financial institution negotiates a settlement with a delinquent borrower in order to avoid the cost and delay of initiating a legal proceeding such as foreclosure.

	Restructured for Ongoing Operation	Settled for Termination or Workout of Operation
4. What is the dollar volume (total mature and unmatured principal) of agricultural loans that your institution has negotiated a settlement on since January 1985 in order to prevent or correct a delinquency?	$__________	$__________

If your answer to Question 4 is NONE, skip the remainder of Question 4 and go to Question 5.

	Restructured for Ongoing Operation	Settled for Termination or Workout of Operation
4a. What percent of these settlements involved a write-down of principal? If zero, SKIP Question 4b.	_________%	_________%
4b. What portion of the principal was typically written off?	_________%	_________%
4c. What percent of these settlements involved a write-down of accrued interest? If zero, SKIP Question 4d.	_________%	_________%
4d. What portion of the accrued interest was typically written off?	_________%	_________%
4e. What percent of these settlements involved reducing the interest rate for remaining term? If zero, SKIP Question 4f.	_________%	_________%

	Restructured for Ongoing Operation	Settled for Termination or Workout of Operation
4f. What was the typical reduction in the interest rate?	______%	______%
4g. What percent of these settlements involved extending the repayment period? If zero, SKIP Question 4h.	______%	______%
4h. How much time was typically added to the repayment period? (Answer in terms of either months or years.)	______Years ______Months	______Years ______Months
4i. What percent of these settlements involved the borrower providing additional collateral to secure the loan? If zero, SKIP Question 4j.	______%	______%
4j. After additional collateral is provided, what percent of the renegotiated loan was typically considered secured?	______%	______%

The last two questions ask you to look to the future by thinking about the remainder of 1986 and 1987. Please answer these questions based on your professional insights and expectations.

	Restructured for Ongoing Operation	Settled for Termination or Workout of Operation
5. What is the dollar volume (total mature and unmatured principal) of agricultural loans that your institution expects to negotiate a settlement on during the remainder of 1986 and the first six months of 1987 in order to prevent or correct a delinquency?	$______	$______

6. What percent of your agricultural loan volume do you expect to become delinquent for the first time during the remainder of 1986 and the first six months of 1987?

______%

You have finished the survey and we thank you for your cooperation. May we contact you if we have questions about this survey?

Yes_____ No_____

Respondent's Name ______________________________

Institution's Name ______________________________

Phone Number ______________________________

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