

2024 Farm Bankruptcies Highlight Worsening Farm Credit

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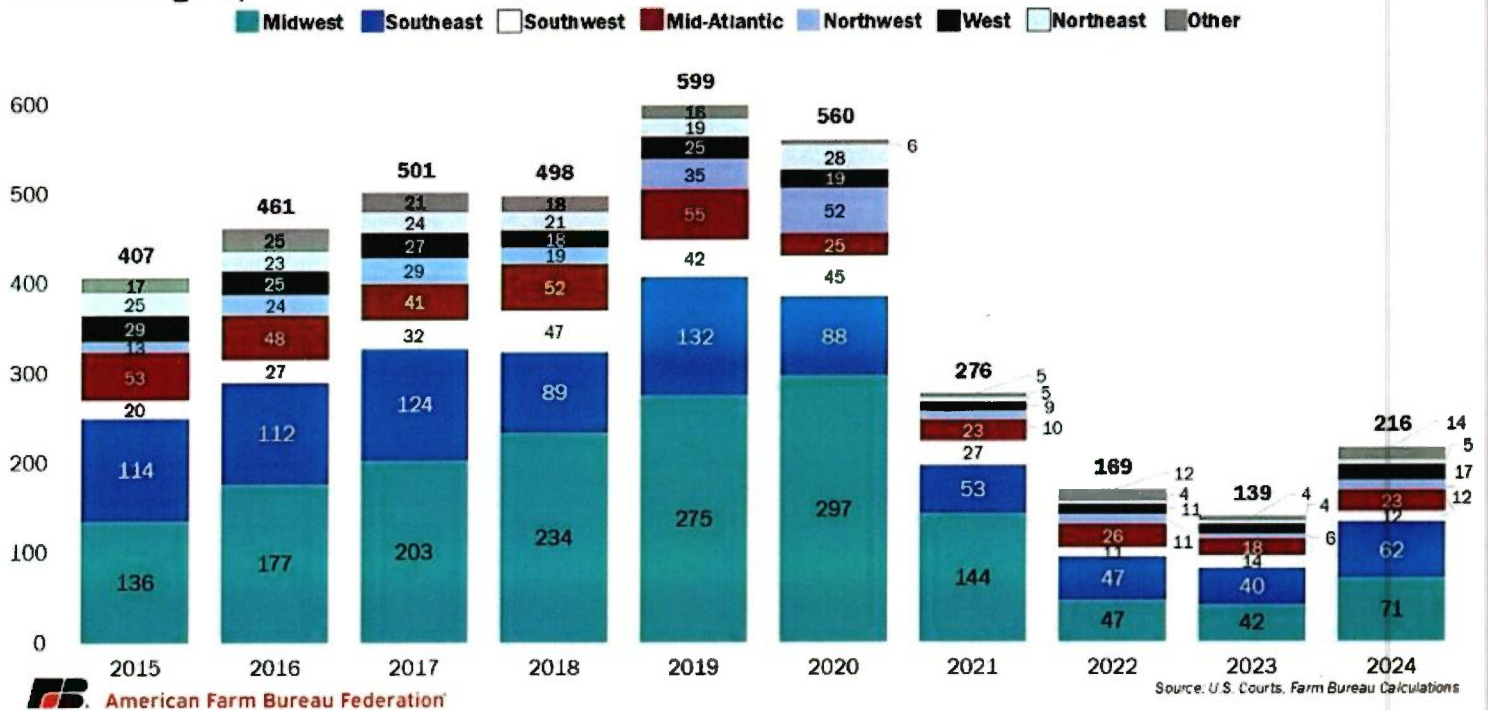
An indicator of farm financial health across the country, Chapter 12 bankruptcy provides farmers and ranchers with increased flexibility for paying off debt, and is used when all other options have been exhausted. AFBF Market Intel reports have long followed annual filings of Chapter 12 farm bankruptcies, through good and bad years for the farm economy.

Unfortunately, as we look ahead to another year of declining farm receipts, particularly in crop markets, we can look back to 2024 and see the impacts of that drop in income in the increase in the number of farms filing for bankruptcy.

The U.S. Courts reports that 216 farm bankruptcies were filed in 2024, up 55% from 2023. This is still 64% lower than the all-time high of 599 filings in 2019. However, 2024 is the end of a four-year downward trend in bankruptcies, which appears to mark a turning point in long-term farm financial health.

Calendar Year Chapter 12 Farm Bankruptcies By Region

2024 Filings Up 55% from 2023, Down 64% from 2019



Farm Bankruptcies by Region

All but one region had increases in Chapter 12 bankruptcy filings last year. Bankruptcy filings in territories and states outside the contiguous 48 states – designated “Other” by the U.S. Courts – more than tripled in 2024, hitting a five-year high of 14 bankruptcies. However, this is still lower than any year between 2007 and 2019.

Chapter 12 bankruptcies filed in the Northwest doubled from 2023 to 2024. With 12 filings, they tied the Southwest for the region with the second fewest filings. The Southwest was the only region with a decrease in filings (down 14% from 2023) after being the only region to increase in [Chapter 12 filings in 2023](#). After experiencing significant droughts and [weather-related losses](#) in the Southwest in 2023, all states except Utah had lower [weather losses in 2024](#).

All other regions – Southeast, West, Northeast, Mid-Atlantic and Midwest – had double-digit increases in filings from 2023 to 2024. The number of filings in each of these regions varies drastically. The Northeast had a 25% increase to five Chapter 12 filings in 2024, one more than in 2023. The Midwest had a 69% increase in 2024 to 71 filings. The Southeast followed closely behind with 62 filings, a 55% increase.

As Row Crop Revenue Declines, Farm Bankruptcies Rise in Certain Regions

Row crop markets have experienced sharp decreases in cash receipts for three years, with expected further declines of over 4% and 6% in corn and soybean receipts, respectively, in 2025. Cotton had a nearly 24% decrease in cash receipts in 2024 but is the only major row crop forecast to post an increase in cash receipts in 2025. Chapter 12 bankruptcies lag declines in farm income as farms must exhaust their ability to pay back debt before filing. It is likely that the downward trend in net farm market returns, combined with even longer-term declines in government payments [in 2024](#) due to an outdated farm bill, drove more farmers in the Grain Belt and South to their last resort of farm bankruptcy in 2024.

2024 Chapter 12 Farm Bankruptcies By Region

Region	Filings	Year-over-Year Change*
Mid-Atlantic Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia & West Virginia	23	+28%
Midwest Iowa, Illinois, Indiana, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota & Wisconsin	71	+69%
Northeast Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island & Vermont	5	+25%
Northwest Idaho, Montana, Oregon, Washington & Wyoming	12	+100%
Other Alaska, Guam, Hawaii, Puerto Rico, the District of Columbia & the Virgin Islands	14	+250%
Southeast Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina & Tennessee	62	+55%
Southwest Arizona, Colorado, New Mexico, Oklahoma, Texas & Utah	12	-14%
West California & Nevada	17	+55%

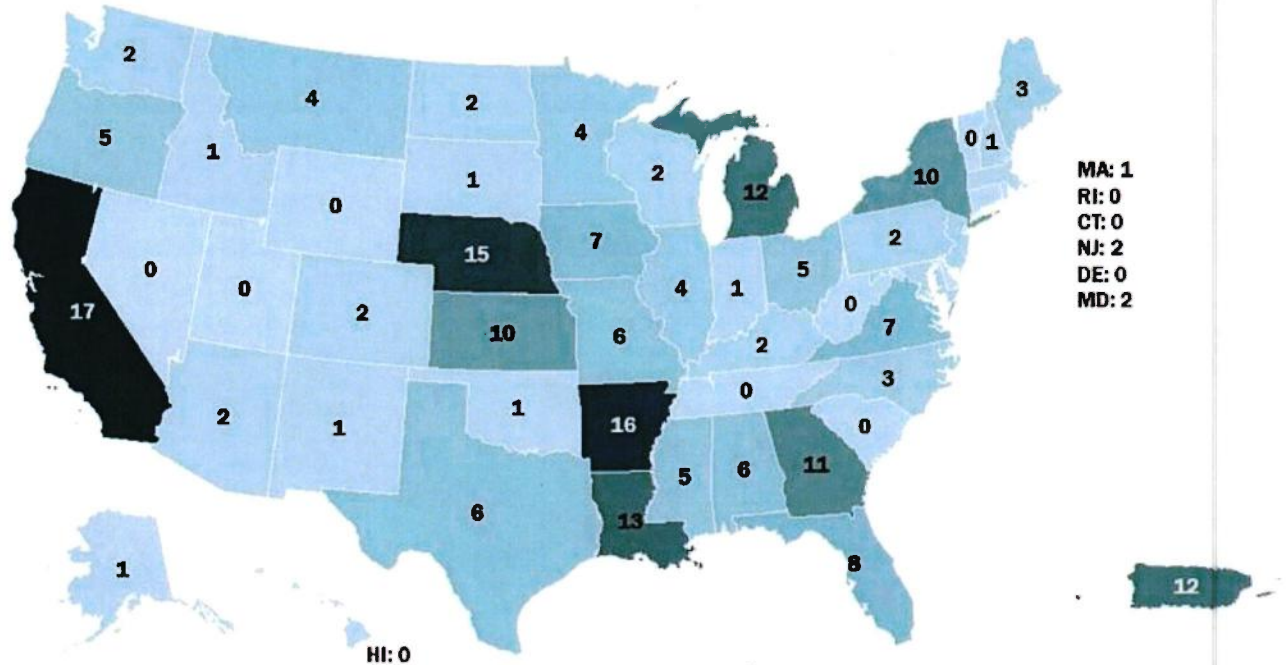
* 12-Month Period Ending in Dec 2024 Relative to 12-Month Period Ending in Dec 2023
 Source: U.S. Courts; Farm Bureau Calculations

Chapter 12 Bankruptcies by State

On a state level, the total number of bankruptcies widely varies. Thirteen states/territories had no bankruptcies, while California had the most at 17.

Chapter 12 Farm Bankruptcies in 2024

Chapter 12 Farm Bankruptcies, January 2024 Through December 2024



 American Farm Bureau Federation

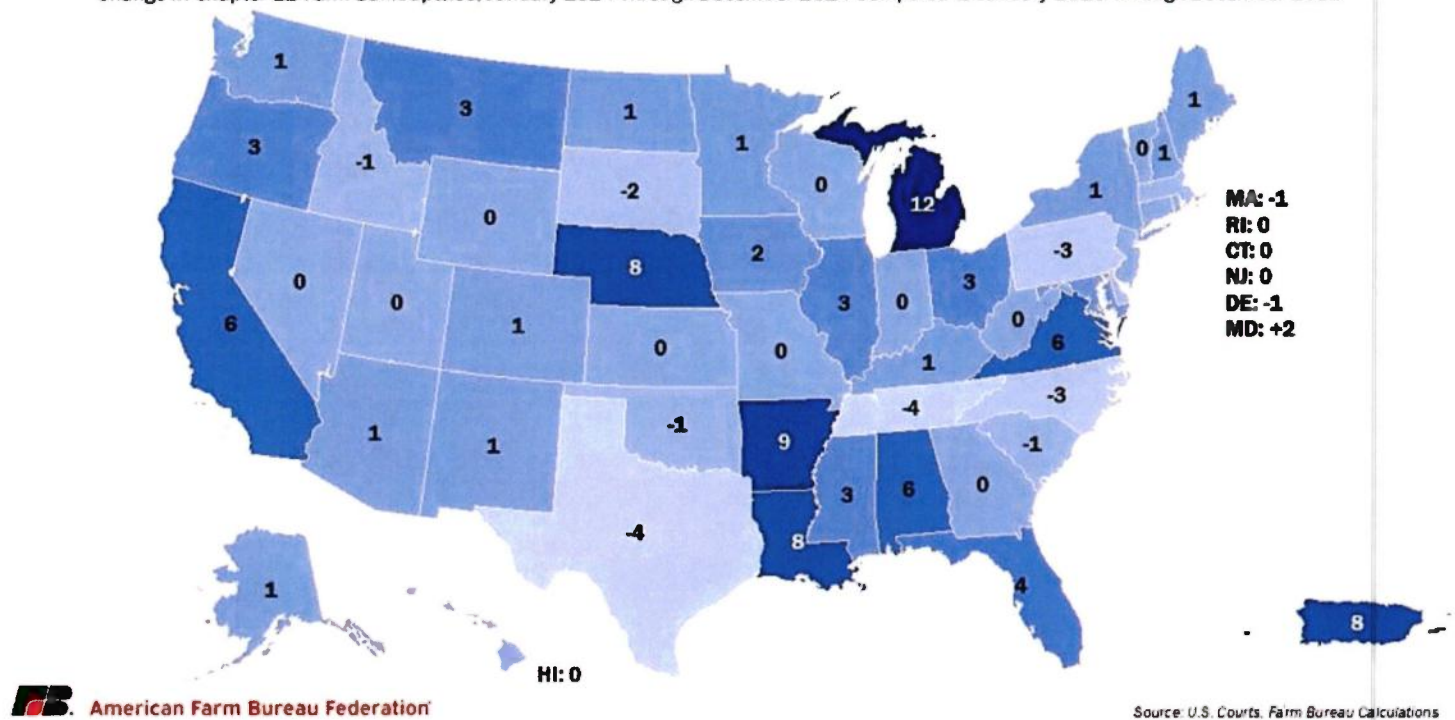
Source: U.S. Courts, Farm Bureau Calculations

The states and territories that had no filings in 2024 differ from 2023. In 2024, 14 states and territories had zero filings. Seven states went from having no filings in 2023 to at least one in 2024. Washington, D.C., had its first farm bankruptcy filing in the 21st century, and the first instance in the same time frame that Tennessee has not had a filing.

Only 10 states had a decrease in filings in 2024. Pennsylvania and North Carolina tied for the largest decrease in filings, three less than 2023, for both to have three filings in 2024.

Year-Over-Year Change in Chapter 12 Farm Bankruptcies

Change in Chapter 12 Farm Bankruptcies, January 2024 Through December 2024 Compared to January 2023 Through December 2023



Twenty-eight states and territories had an increase in filings in 2024, nine more than last year. Michigan had the largest increase in filings with 12 cases, up from zero in 2023. Eight other states and territories had double-digit filings in 2024: California (17), Nebraska (15), Kansas (10), Arkansas (16), Louisiana (13), Puerto Rico (12), Georgia (11) and New York (10).

A Struggling Farm Economy

Net farm income in 2024 reached a four-year low, decreasing nearly 24% in just two years. Lowered revenues and above-average production costs continue to squeeze farmers and ranchers on both sides of the balance sheet, threatening farm liquidity – their ability to pay off their financial obligations. As such, farm operating loans continue to surge to cover expenses.

According to the Kansas City Federal Reserve, non-real estate farm loans at commercial banks rose 25% from the end of 2023 to 2024. At the same time, interest rates on agricultural loans remain at decade-high levels. Interest expenses rose nearly 4% in 2024 to over \$29.5 billion, closely following a 4% increase in farm debt in 2024. Farm debt is expected to continue to increase in 2025 to nearly \$562 billion. As farms continue to carry larger debt loads without increasing net cash revenue, they also experience worsening credit. Loans across farm country, including real estate, production and agribusiness loans, increased in “less than acceptable” loan ratings, signifying a larger share of loans at risk of

nonpayment. Loans facing serious risk of default in the Seventh District of the Federal Reserve, which covers much of the Midwest, rose to the highest level since 2020. Fortunately, farm delinquency rates remained under 1% in 2024.

Bankruptcy filing may not always be a solution for farms facing financial hardship. While ad hoc assistance is expected to buoy net farm income through 2025, long-term trends continue to dampen farm financials, particularly credit conditions. Nearly 2% of farmers will be unable to qualify in 2025 for the loans they received in 2024, according to the Federal Reserve Bank of Chicago. In previous years, farmers and ranchers supported their credit with continuously increasing farmland values, but those increases have slowed. The Federal Reserve Bank of Chicago's estimates show farmland values in their district declining 1% in 2024 due to lower crop values. As farms lose options to support continued borrowing and use up their limited working capital, many farms may close before reaching the point of bankruptcy.

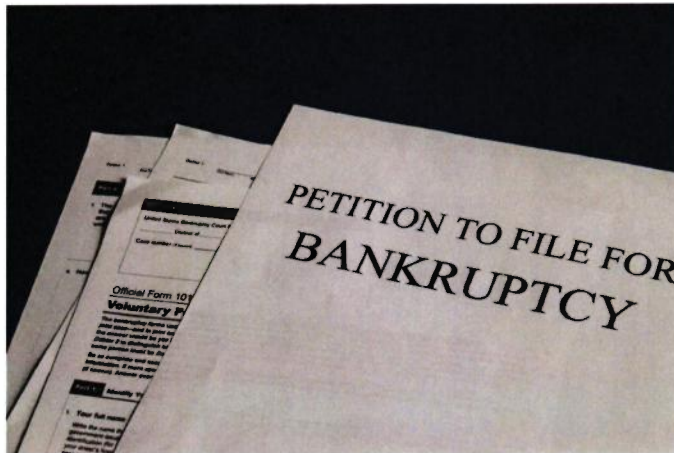
Conclusion

Increasing Chapter 12 bankruptcy filings provide a glimpse into the long-term conditions in farm country. Farmers and ranchers filing for bankruptcy have exhausted all other resources for covering their debt and expenses, and as the farm economy continues to be squeezed by decreased receipts and increased expenses, farm financials will be strained.

As we enter the start of another planting season, many farmers are surely making tough decisions on how to finance their operations. With all these factors in mind, they are also still waiting on the *ad hoc* economic and disaster aid from the American Relief Act of 2025 to be dispersed to sustain their short-term operations. Long-term, these worsening credit conditions highlight the calls for updated support for farmers as we enter the third year of farm bill negotiations.



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Bankruptcy on the Farm: A Look at the Chapter 12 Option

(<https://nationalaglawcenter.org/bankruptcy-on-the-farm-a-look-at-the-chapter-12-option/>)

🏠 Categorized Bankruptcy (<https://nationalaglawcenter.org/category/bankruptcy/>), Micah Brown (<https://nationalaglawcenter.org/category/author/micah-brown/>), Taxation (<https://nationalaglawcenter.org/category/taxation-2/>)

Financial conditions during the past few years have been harsh for agricultural producers. Low commodity prices and extreme weather conditions have decreased income for many farmers, making it more difficult for farmers to repay their loan debt. For this reason, **there has been a recent surge in farm bankruptcies** (<https://www.reuters.com/article/us-usa-farms-bankruptcy/us-farm-bankruptcies-hit-an-eight-year-high-court-data-idUSKBN1ZT2YE>). Deciding whether to file for bankruptcy is not an easy decision to make, but there are **alternatives to bankruptcy** (<https://nationalaglawcenter.org/wp-content/uploads/assets/articles/bankruptcy/Assessing-bankruptcy-option.pdf>). However, these alternatives are not always available. Filing for bankruptcy may be the only opportunity for a farmer who is greatly in debt to recover. Because of the current market slump and ongoing pandemic, understanding which type of bankruptcy proceeding for an agricultural producer is ever more important.

Bankruptcy Background

Bankruptcy is governed by federal law. Title 11 of the United States Code contains the Bankruptcy Code which provides the provisions for case administration, creditor claims, debtor's estate, and bankruptcy relief. The chapters of the Code containing debtor-relief provisions are specifically designed for particular types of debtors or different outcomes for debtors.

In general, bankruptcy provides an opportunity for an individual or business to either liquidate assets or reorganize debts. Chapter 7 of the Code provides the process for liquidation bankruptcy. Under liquidation bankruptcy, also referred to as "straight bankruptcy," a debtor will turn over all assets to a bankruptcy trustee who distributes cash from the disposition of the assets to creditors, and obtains a discharge from the debts for the debtor. If a debtor prefers rehabilitation or reorganization of their debts, they will file for bankruptcy under Chapters 11, 12, or 13, depending on what type of debtor they are. For this type of bankruptcy, a debtor will retain their assets and develop a plan to repay creditors.

Both types of proceedings seek to provide a debtor with a fresh start, but the outcomes largely differ. Therefore, a farmer-debtor committed to filing for bankruptcy must determine what their goals are for during and after the bankruptcy process. For a more in-depth discussion on the background of bankruptcy and the types of proceedings, visit the Center's **Bankruptcy Overview** (<https://nationalaglawcenter.org/overview/bankruptcy/>).

Chapter 12 Background

Bankruptcy law provides a unique type of proceeding directly tailored to agricultural producers. In 1986, Congress responded to the financial crisis challenging farmers throughout the 1980s by enacting a temporary section of the Bankruptcy Code specifically applicable to farmers known as Chapter 12. Since then, many changes have been made to Chapter 12. A significant change to the chapter came in 2005 when Congress passed the Bankruptcy Abuse Prevention and Consumer Protection Act. This piece of legislation made Chapter 12 a permanent part of the Code, and also extended eligibility to fishermen. Recently, the enactment of the Family Farmer Relief Act of 2019 increased the Chapter 12 operating debt cap from \$4,153,150 to \$10 million, meaning farmers with debts not exceeding \$10 million are eligible to file for Chapter 12 bankruptcy.

In creating Chapter 12, Congress sought to provide a framework that would enable a farmer to successfully reorganize their finances so they could repay all or part of their debts while also keeping the farm operation in business. Chapter 12 may be a desirable course, but the farmer or farm business must meet the eligibility requirements. In general, Chapter 12 is available to a "family farmer" with "regular annual income." 11 U.S.C. § 101(19). A "family farmer" includes not just an individual debtor, but also an individual and their spouse, corporations, cooperatives, and partnerships. The Code sets forth specific eligibility requirements for the different types of petitioners.

To qualify for Chapter 12 bankruptcy, individual petitioners must satisfy a four-part eligibility test: (1) they are engaged in a **farming operation** (https://www.law.cornell.edu/definitions/uscode.php?width=840&height=800&iframe=true&def_id=11-USC-1049145805-71778017&term_occur=999&term_src=title:11:chapter:1:section:101); (2) their debts do not exceed \$10 million; (3) no less than fifty percent of their debts arise from farming; (4) and more than fifty percent of their income comes from farming for the taxable year preceding filing or in each of the second and third taxable years preceding filing. 11 U.S.C § 101(18)(A).

Corporations, cooperatives, and partnerships are also subject to an eligibility test, but six requirements must be met: (1) at least fifty percent of stock or equity is held by one family and its relatives; (2) those family members conduct the farming operation; (3) have at least eighty percent of the family's assets relate to the farming operation; (4) the family's debts do not exceed \$10 million; (5) more than fifty percent of the family's debts arise from the farming operation; (6) and if the debtor is a corporation issuing stocks, the stocks cannot be publicly traded. 11 U.S.C. § 101(18)(B).

Advantages of Chapter 12

A debtor who meets the Chapter 12 eligibility requirements is not immediately required to file under that chapter. Most likely a debtor that is eligible to file under Chapter 12 will also be eligible to file under Chapters 7, 11, and 13. Depending on the debtor's situation, one of those chapters may better serve their bankruptcy goals. However, unlike other bankruptcy chapters, Chapter 12 was created to protect farmer interests.

One situation in which a family farmer may prefer a Chapter 12 proceeding over another type of bankruptcy is when the goal is to continue the farming operation. Although chapters 11 and 13 allow the debtor to continue their business operations, Chapter 7 does not. A Chapter 7 filing will cause an immediate stop to all farming activity and each of the farmer's assets will be liquidated. This type of bankruptcy is the quickest and least expensive, and for a farmer interested in discontinuing their farming operation, Chapter 7 will satisfy that objective. However, for a debtor intending to continue the farming operation, Chapter 12 is the more appropriate type of bankruptcy.

When it comes to repaying creditors, Chapter 12 may better serve a farmer's goals because it provides a farmer with far more flexibility and control over reorganization of their debts than other types of bankruptcy. When a debtor files for reorganization bankruptcy, they are required to propose a plan for how their creditors will be repaid. A Chapter 12 filing grants a farmer the ability to consider past production expenses, income, and future plans to make their repayment plan practical. Debtors in Chapter 13 are individuals "whose income is sufficiently stable and regular," and the payment plans usually require monthly payments. 11 U.S.C. § 101(30). Because of the nature of the farming industry, many farmers would have difficulty making regular monthly payments to creditors. Thus, Chapter 12 will likely be more useful because it allows farmers to propose a repayment plan with seasonal payments that coincides with harvesting and marketing of the farmer's commodities, unlike the other chapters of bankruptcy.

Another reason a farmer may prefer to initiate a Chapter 12 proceeding over another type of bankruptcy is to sell assets. Debtors in bankruptcy often seek to sell assets for the purpose of funding their business operations. However, the Bankruptcy Code requires Chapter 11 and 13 debtors to meet strict standards in order to properly sell assets. The Code requires these debtors sell property "free and clear" of liens. 11 U.S.C. § 363(f). Meanwhile, a farmer in Chapter 12 is not restricted to these requirements if the farmer is selling "farmland or farm equipment." Being able to sell these assets free and clear of liens enables farmers to pay down their debts and end the bankruptcy process successfully.

Additionally, Chapter 12 provides tax advantages for farmers selling assets. A Chapter 11 debtor is required to pay any capital gains produced by a sale of assets. This tax will be treated as a priority claim, which means the debtor must pay the full amount of the claim. However, for farmers in Chapter 12, tax claims arising from "the sale . . . of any property used in the debtor's farming operation" are treated as unsecured claims instead of priority claims. 11

U.S.C. § 1232(a). Unsecured claims in bankruptcy are claims that may not have to be paid in full or at all. This is a great advantage for a farmer under Chapter 12 because the income from the sale will not be restricted to repay a tax claim.

One last advantage of Chapter 12 over Chapters 11 or 13 is that Chapter 12 debtors may modify any secured loan through a legal principle called “cramdown.” Cramdown is where the debtor pays the present market value of the property rather than the amount owed on the loan. For example, if a debtor owes \$40,000 on a loan and the underlying asset for the loan is worth \$25,000, the debtor can reduce the loan debt to the present market value of \$25,000. Though cramdown is available in Chapters 11 and 13, the Bankruptcy Code has limited a debtor’s ability to use cramdown on the mortgage of their principal residence. However, this restriction does not exist in Chapter 12. Thus, a Chapter 12 farmer-debtor can use cramdown to have the principal balance of the mortgage reduced to the current value of the property. Using cramdown on a mortgage can be significant for a farmer that lives on the same land they farm.

To read about the entire Chapter 12 bankruptcy process, click [here](https://nationalaglawcenter.org/wp-content/uploads/assets/articles/bankruptcy/Overview-of-Bankruptcy-Law.pdf) (<https://nationalaglawcenter.org/wp-content/uploads/assets/articles/bankruptcy/Overview-of-Bankruptcy-Law.pdf>).

To read Chapter 12 of the Bankruptcy Code, click [here](https://www.law.cornell.edu/uscode/text/11/chapter-12) (<https://www.law.cornell.edu/uscode/text/11/chapter-12>).


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Litigator's Perspective

BY J. DAVID KREKELER

Why Might Farmers Be Choosing Subchapter V?

Farm bankruptcy filings under chapter 12 have been declining over the last several years. Wisconsin led the nation in chapter 12 reorganization case filings in 2017, 2018 and 2020. The filings over the last five years have been the lowest since chapter 12 was made permanent in 2005, with only four cases filed in 2023 and only two as of November 2024.¹ The trends have been the same nationally (Exhibit 1 shows the number of chapter 12 cases filed in 2017-24). While farm reorganizations have declined, filings under subchapter V have dramatically increased, as illustrated in Exhibit 2.

There are a lot of possible reasons for this decline, and it is almost certainly due to no single factor. For example, the total number of U.S. farms has dropped by nearly 150,000 since 2017.

Farmers saw record-breaking income in 2022, but that dropped precipitously from 2023-24. Land values have continued to increase, providing farmers with more collateral and more equity cushion, as well as the ability to stave off a bankruptcy filing for a longer period of time.

However, the numbers also suggest that more farmers might be seeking subchapter V relief, thus lowering the numbers for chapter 12. While farm bankruptcies have been dropping, the number of subchapter V cases has grown steadily. A compari-

son of the costs and benefits of these two forms of relief reveals some good reasons as to why some farmers are among the small businesses taking advantage of subchapter V.

Factors Favoring Subchapter V Trustee Assistance

Subchapter V trustees may assist in getting a plan confirmed. Section 1183(b)(7) of the Bankruptcy Code provides that the trustee is to facilitate the development of a consensual reorganization plan.

The handbook for subchapter V trustees directs the trustee to discuss a proposed plan with the debtor and the debtor's principal creditors. It specifically states that the trustee should be proactive in promoting and facilitating planned negotiations. It also points out that the trustee may even participate in plan negotiations. Chapter 12 trustees rarely perform such a function.

Status Conference

A status conference is required to be held by the court within 60 days after the order for relief.² The debtor is required to file a report at least 14 days prior to the conference, and this report is to detail the debtor's efforts to attain a consensual plan.³

Some might say that these requirements make subchapter V less attractive, but in many respects, this early requirement to work on a plan is beneficial to the debtor. It better prepares the debtor to meet the 90-day deadline for filing a plan. While chapter 12 debtors could certainly do this on their own, these requirements ensure that progress is being made, and progress is good for the debtor.

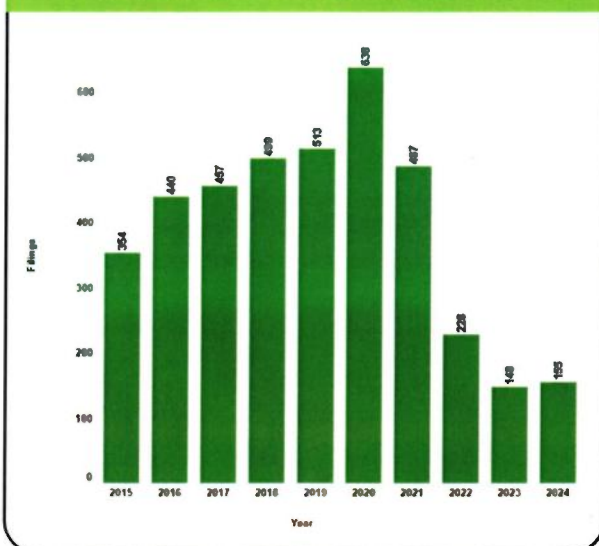


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David Krekeler is the founder of Krekeler Law, SC in Madison, Wis. He also serves as a receiver in both supplemental and chapter 12 proceedings, and he is a member of both the Bankruptcy, Insolvency and Creditors' Rights Section of the Wisconsin State Bar and the Western District Bankruptcy Bar.

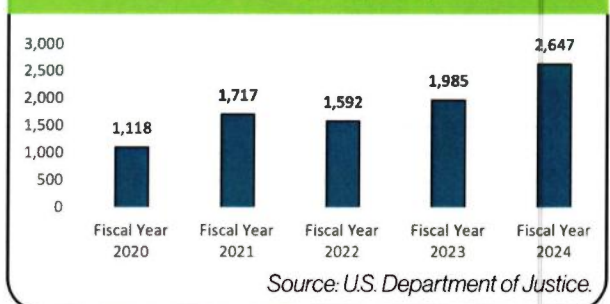
1 During this same period, since 2020, the author's firm has filed four farm cases under chapter 11, and two of those were under subchapter V.

Exhibit 1: Chapter 12 Cases Filed During the 12-Month Periods Ending March 31



2 § 1188(a).
3 § 1188(c).

Exhibit 2: Chapter 11 Subchapter V Statistical Summary Through Sept. 30, 2024

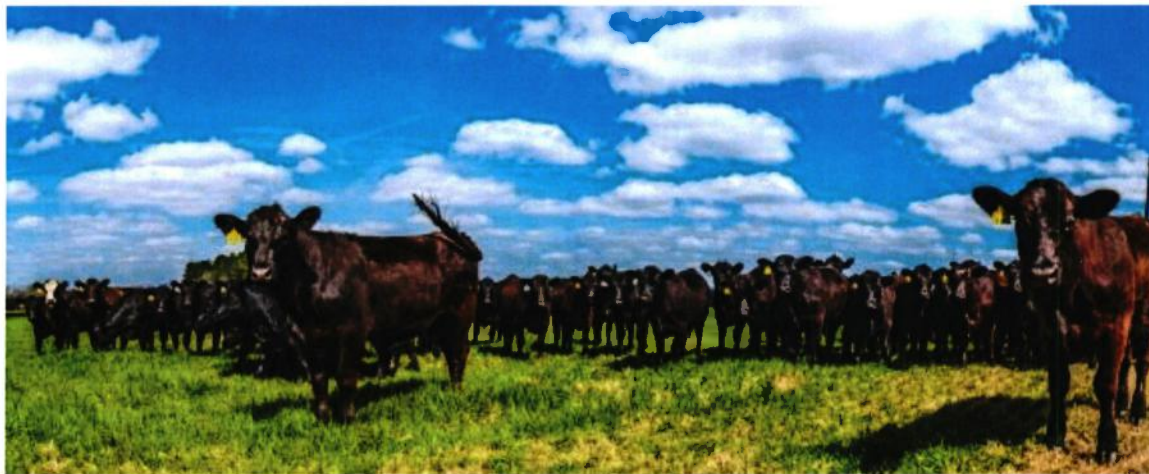


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Center for Agricultural Law and Taxation

A Review of Farm Bankruptcy

📅 October 1, 2020 | 👤 Kristine A. Tidgren



Overview

The founders of our country believed that debtors should have an opportunity for a fresh start. The Constitution authorizes Congress to create bankruptcy laws. U.S. Const. Art. I, Sect. 8. The U.S. Supreme Court has stated, “Bankruptcy gives to the honest but unfortunate debtor...a new opportunity in life and a clear field for future effort, unhampered by the pressure and discouragement of preexisting debt.” *Local Loan Co. v. Hunt*, 292 U.S. 234, 244 (1934). This fresh start occurs through a “bankruptcy discharge,” which generally releases debtors from personal liability for certain debts, preventing creditors from collecting those debts in the future.

The current Bankruptcy Code (enacted in 1978) created six different types of bankruptcy cases. These bankruptcy provisions are usually referenced by the number of the Chapter in the Code where they are found.

- Chapter 7 – Liquidation
- Chapter 9 - Municipalities
- Chapter 11 – Business Reorganization
- Chapter 12 – Family Farmer Reorganization
- Chapter 13 – Individuals with Regular Income
- Chapter 15 – Cross-Border Insolvency

In 2019, Congress passed the Small Business Reorganization Act, which provides a new option for small businesses wishing to reorganize. This new provision, Subchapter V of Chapter 11, is available only to small business debtors with no more than \$2,725,625 in debt. The CARES Act temporarily expanded this limit to \$7,500,000.

Although Chapter 12 is specifically designed for the family farmer, farmers may file for bankruptcy relief under Chapters 7, 11, 12, or 13. Each provision has advantages and limitations.

Initiating a Case

A voluntary bankruptcy case is commenced by filing a petition with the bankruptcy court. The filing of the petition constitutes an “order of relief.” 11 U.S.C. § 301.

Automatic Stay

Although the provisions of the different chapters are very different, they all share the protection of an “automatic stay.” At the time a bankruptcy petition is filed, the automatic stay temporarily halts lawsuits, foreclosures, garnishments, and creditor collection activities. The length and application of the stay vary according to the type of bankruptcy. Because of the automatic stay, the bankruptcy court generally oversees tax claims, tax determinations, and tax discharges in bankruptcy.

Chapter 7

Chapter 7 is a liquidation bankruptcy. This means that the farmer is getting out of business. The debtor initiates this relief by filing a petition, including a schedule of assets and liabilities, a schedule of income and expenses, a statement of financial affairs, and a schedule of contracts and unexpired leases. This filing creates an “estate” comprising all of the debtor’s property. In a Chapter 7 action, the court appoints a trustee to collect the debtor’s non-exempt assets, reduce some to cash, and make distributions to creditors as provided in the Code. Secured creditors generally retain the benefit of their security interests in particular collateral. An unsecured creditor, upon making a proof of claim, receives payment under Chapter 7 only if proceeds from assets not pledged to secured creditors are available to sell. Then, unsecured creditors generally collect on a pro-rata basis in relation to the amount of their claims, as compared to the overall debt. But first, the trustee must pay the cost of administration and priority unsecured claims, such as child support and tax debt.

Individuals, partnerships, and corporations (with some exceptions) can file for Chapter 7 bankruptcy protection, but only individuals can receive a discharge, releasing them from personal liability for certain dischargeable debts. Some debts, such as child support, are not dischargeable in bankruptcy. Likewise, only individual debtors are allowed to keep assets considered “exempt” under either the Bankruptcy Code and state law. 11 U.S.C. § 522. The Bankruptcy Code allows states to replace federal exemptions with their own. In some

jurisdictions, the individual debtor may choose between the federal exemptions or the state law exemptions. Some of the federal bankruptcy exemptions include:

- Automobile (\$4,000 in equity in one vehicle)
- Child Support and Alimony
- Health Aids
- Implements, books, and tools of the trade up to \$2,525.
- Jewelry (up to \$1,700)
- Personal Injury Settlement up to \$25,150
- Animals, crops, clothing, appliances and furnishings, books, household goods, and musical instruments (up to \$625 per item or \$13,400 total)
- Pensions and IRAs up to \$1,362,800
- Homestead (\$25,150 in equity)

The States of Illinois and Iowa (see, e.g., Iowa Code § 627.6; Iowa Code §§ 499A.18, 561.2, 561.16) provide their own state exemptions. Wisconsin applies the federal exemptions.

Corporations or partnerships liquidating under Chapter 7 must distribute all of their assets to creditors. Corporations are terminated after a Chapter 7 liquidation. General partners remain personally liable for the unpaid debt of a partnership after a liquidation.

The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 prohibits debtors from discharging debt under Chapter 7 if they have the “means” or income to make payments over a period of time to creditors. These debtors must instead file for Chapter 13 relief. Chapter 13 is generally designed for the discharge of consumer debt, not business debt.

In a Chapter 7 bankruptcy, the secured creditor is generally entitled to retrieve non-exempt collateral, unless the debtor chooses to redeem or reaffirm the debt. Debtors typically have 30 days from the filing of the petition to make this declaration. Secured creditors are not entitled to the value of the collateral in excess of the debt owed.

The primary advantages of a Chapter 7 liquidation bankruptcy are that it is relatively inexpensive, and it generally requires only 90 days from filing to discharge.

Chapter 11

Chapter 11 of the Bankruptcy Code allows business debtors to reorganize their debt and continue operating their business. It is not well designed for a farming business because of its “absolute priority” rule (described below), its administrative complexity, and its expense. It is, however, the only bankruptcy reorganization option for a farming business with debt exceeding \$10 million.

A Chapter 11 petition may be filed by individuals, partnerships, and corporations, with certain exceptions. Along with the petition, the debtor must file schedules of assets and liabilities, a schedule of current income and expenditures, a schedule of executory contracts and unexpired leases, and a statement of financial affairs. Chapter 11 has no debt limit.

In a Chapter 11 case, the “debtor in possession” acts as a fiduciary, responsible for accounting for property, examining and objecting to claims, and filing information reports. A United States trustee supervises the administration of the case. The trustee, for example, conducts a meeting of the creditors. A creditors’ committee ensures fair representation to the unsecured creditors. The debtor has 120 days after the filing of the petition to file a reorganization plan, and 180 to have the plan “accepted” by the creditors. The court can extend these deadlines if necessary. Creditors have the right to reject a plan. To be confirmed, at least one class of impaired creditors must accept the plan.

Any party in interest may file an objection to confirming the plan. The court will hold a confirmation hearing, after which the court must find that the plan is:

- **Feasible**
 - The court must find that confirmation is not likely to be followed by liquidation or the need for another reorganization.
- Proposed in good faith
- In the best interest of creditors
- Providing **adequate protection** payments to secured creditors if the stay, use, sale, or lease of assets under the bankruptcy will result in a decrease in the value of the collateral
- Providing that claims and interests are designated in classes (i.e., secured, unsecured with priority, unsecured, etc.)
- Providing that any classes of claims or interests that are impaired or unimpaired under the plan are specified
- Providing that the debtor may not receive or retain any property under the plan unless claims of the impaired dissenting classes of unsecured creditors are paid in full (or the debtor contributes new value). An impaired class of creditors accepts a plan only if it is approved by two-thirds in amount and a majority in number of the holders of claims who cast votes.
 - In other words, the plan must provide for the payment of all debt unless the creditors agree otherwise. (**absolute priority**)
- Otherwise in compliance with the Bankruptcy Code

The Court has a “mandatory independent duty” to determine whether the plan conforms to these requirements. The confirmation of the plan discharges the debtor from debts that arose before the date of the confirmation. Once the plan is confirmed, the debtor must make payments and is contractually bound by the plan of reorganization. Confirmation vests the property of the estate in the debtor. The automatic stay is

lifted, and any default after confirmation means that creditors can use state law remedies to collect. Once the estate has been fully administered, a final decree closing the estate is entered.

Chapter 11 can provide longer payment schedules, including 15 to 30 years for real estate and three to seven years for machinery. Interest rates are generally two percent greater than the yield on U.S. Treasury notes or bonds. After filing, the debtor must seek approval of the court to obtain additional secured debt. Similarly, the use of cash collateral is not allowed absent approval of creditors or the court. The court requires monthly reports, and the trustee fees are paid by the debtor. Chapter 11 provides no specific time period for making repayments under the confirmed plan. The feasibility requirement, however, limits the length to one that is reasonable. For many smaller business debtors, the period is three to five years.

Chapter 12

Originally enacted in 1986 to provide temporary relief for “family farmers,” Congress made Chapter 12 permanent in 2005. Chapter 12 was created during the farm crisis of the 1980s because Chapter 11 was unworkable for these debtors. Most significantly, the absolute priority rule of Chapter 11 prevented farm debtors from retaining any equity interest in their farm over the objection of unsecured creditors, unless those creditors were paid in full. It was also administratively burdensome and costly. In most cases, financially distressed farmers had no choice but to liquidate. Since the inception of the Chapter 12 bankruptcy, Congress has provided debtors with favorable tax treatment to allow them to downsize and remain in business. This special tax provision is discussed more thoroughly below.

Eligibility - Individuals

A Chapter 12 case may be filed by a “family farmer or family fisherman with regular annual income.” [i] 11 U.S.C. § 109(f). To qualify as a “family farmer” eligible for Chapter 12 bankruptcy, the following requirements must be met:

- Must be engaged in farming operations at the time of filing.
 - Does not generally include former farmers or those who are engaged in farm-related businesses or lease-only activities, but off-farm income can be used to make payments. *In re Williams*, No. 15-11023, 2016 Bankr. LEXIS 1804 (W.D. Ky.).
- Farmer's debts cannot exceed **\$10,000,000 (adjusted every three years)**.
 - The original debt limit was \$1,500,000, which was raised to \$3,237,000 in 2005. By 2019, inflation had increased the limit to \$4,411,400, but this amount kept some otherwise “family farmers” from qualifying for Chapter 12 protection. On August 23, 2019, the Family Farmer Relief Act of 2019 went into effect. This law increased the amount of debt a “family farmer” may have to \$10,000,000.
 - Fifty percent of this index-adjusted debt must arise from the farming operation.
 - The home mortgage is included only if it secures the farm debt.

- Must have earned more than half of gross income from farming in year prior (or in each of the 2nd and 3rd years prior to the filing).
 - Gross income, evidenced on line 9 of Schedule F should be used (not gross receipts). Tax return is prima facie evidence.

11 U.S.C. § 101(18).

Eligibility - Entities

Corporations or partnerships, including LLCs, are eligible for file for Chapter 12 bankruptcy protection if:

- More than 50 percent of the outstanding stock or equity is held by one family, or by one family and the relatives of the members of such family (relative is interpreted broadly);
- The family or such relatives must conduct the farming operation;
- At least 80 percent of the value of its assets consists of assets related to the farming operation;
- The total indebtedness cannot exceed **\$10,000,000** (less for a commercial fishing operation);
- At least 50 percent of its aggregate non-contingent, liquidated debts on the date the case is filed, arise out of the farming operation owned or operated by such corporation or such partnership; and
 - **Residential debt exclusion can count if a shareholder or partner lives in the house, even if they are not involved in the farming operation.**
- No stock is publicly traded

Chapter 12 Commencement

To initiate a Chapter 12, the debtor files a petition including a schedule of assets and liabilities, a schedule of current income and expenses, a schedule of executory contracts and unexpired leases, and a statement of financial affairs. Husbands and wives may file joint or individual petitions. Upon filing, the automatic stay begins, and a trustee is appointed to oversee the case. The clerk provides notice of the proceeding to all creditors listed in the paperwork filed by the debtor.

The Proposed Plan

The debtor must file a plan within 90 days of the bankruptcy petition (unless the court extends the deadline). The plan payment period is generally three years unless the court approves a longer plan “for cause.” 11 U.S.C. § 1222(c). The longer period is required if the plan does not propose to pay 100 percent of child support or alimony claims. In that case, the five-year plan must propose to spend all of the debtor’s disposable income.

Chapter 12 offers a number of favorable tax and non-tax related provisions to debtors. The most helpful non-tax provision of Chapter 12 is the abrogation of the **absolute priority** rule. Instead of requiring debtors to

repay *all* debt, Chapter 12 requires that unsecured creditors must receive as much as they would in a Chapter 7 liquidation. Additional non-tax *requirements* of a Chapter 12 plan include:

- Net disposable income must be paid to the trustee for distribution to unsecured creditors until discharge. 11 U.S.C. § 1222(a)(1).
- The plan must provide for full payment, in deferred cash payments, of all priority claims under 11 U.S.C. § 507, unless the holder of the claim agrees to accept less favorable treatment, 11 U.S.C. § 1222(a)(2).
- The plan must provide the same treatment for each class of claim or interest within a particular class unless the holder of claim or class agrees to less favorable treatment, 11 U.S.C. § 1222(a)(3).

In addition to these requirements, the Chapter 12 plan *may* include these provisions:

- The plan may treat claims for a consumer debt of the debtor where the debtor is a co-obligor differently than other unsecured claims, 11 U.S.C. § 1222(b)(1).
- The plan may modify the rights of holders of secured claims, including the rights of residential mortgage lenders, 11 U.S.C. § 1222(b)(2);
 - Contracts for repayment of secured debt can be extended or re-amortized (15 to 30 years for real estate or three to seven years for machinery). Interest paid on secured claims is typically two percent above the yield on a U.S. Treasury note or bond. *Till v. SCS Credit Corp.*, 541 U.S. 465 (2004).
- The plan may provide for the curing or waiving of any default, 11 U.S.C. § 1222(b)(3);
- The plan may provide for payments on any unsecured claim to be made concurrently with payments on any secured claim or other unsecured claim, 11 U.S.C. § 1222(b)(4);
- The plan may permit the debtor to assume, reject or assign any executory contract of unexpired lease of the debtor to the extent permitted by 11 U.S.C. § 365 and to the extent not previously rejected by the debtor, 11 U.S.C. § 1222(b)(6);
- The plan may provide for payment from either property of the estate or other property of the debtor, 11 U.S.C. § 1222(b)(7);
- The plan may provide for the sale of all or any part of the property of the estate or the distribution of all or any part of the property of the estate among those having an interest in the property, 11 U.S.C. § 1222(b)(8); and
- The plan may provide for the payment of allowed secured claims for a discretionary period—including beyond the period of the plan for making payments to the trustee, as determined by the debtor, 11 U.S.C. § 1222(b)(9).

Operation of the Farm During Pendency of the Case

The debtor will continue to operate the farm as provided in 11 U.S.C. § 1203. As a fiduciary of the bankruptcy estate, the debtor must pay all taxes owed to the IRS and state taxing authorities. The debtor may also engage in the following activities:

- Dispose of property in the estate in the ordinary course of business without notice and a hearing.
 - This means that the debtor can use proceeds from sales of grain, livestock, and milk not pledged to a secured creditor for living expenses and for continued farming activities.
- The debtor may obtain unsecured credit in the ordinary course of business, and the debt will be allowable as an administrative expense under 11 U.S.C. § 503(b)(1).
- The Chapter 12 trustee may sell machinery or farmland or farm equipment free and clear of any interest of an entity other than the estate under circumstances other than those permitted by 11 U.S.C. § 363(f), the latter of which is available to the debtor.
 - This provision is unique to chapter 12 cases and allows for the right sizing of farming operations prior to the proposal of a chapter 12 plan.

The debtor, however, must receive court approval for the following:

- Using, selling or leasing property in the non-ordinary course of business. This includes the sale or purchase of machinery or livestock or real property. 11 U.S.C. § 363(c).
- Using cash collateral. If the cash collateral is used, **adequate protection** must be provided.
- To acquire secured or priority debt. 11 U.S.C. §1206.

Plan Confirmation

Within 45 days of the debtor filing the plan, the court will hold a confirmation hearing to ensure that the requirements of the Code are met. To be confirmed, the debtor bears the burden to show that the plan must meet the following requirements set forth in 11 U.S.C. § 1225:

- The plan was proposed in good faith.
- All fees and costs are paid.
- The plan meets the “best interest of the creditors test,” meaning that the property to be distributed to pay unsecured claims is equal to or greater than the amount that would be paid on each claim in a Chapter 7 case.
- The plan must provide for the secured creditor in one of three ways: (1) through a consensual agreement with the debtor, (2) by surrendering the collateral to the creditor, or (3) by allowing the secured creditor to retain the lien and receive the present value of the secured portion of its claim.
 - Adequate protection must be provided to secured creditors to protect the value of their interest in the collateral retained by the debtor. 11 U.S.C. § 1205(b)(1)–(3).
- The plan must be “feasible,” meaning that the debtor will be able to make all required payments.
- The debtor must be current on post-petition domestic support obligations.
- If an unsecured claim holder or the trustee objects, the plan will be confirmed if:
 - The plan devotes all disposable income to making payments under the plan,

- The value of the property to be distributed under the plan is not less than the debtor's disposable income, or
- The property to be distributed under the plan on account of an unsecured claim has a value, as of the effective date of the plan, not less than the amount of the claim.

With rare exception, confirmation of the Chapter 12 plan vests all property of the estate in the debtor. 11 U.S.C. § 1227(b). This property will be free and clear of any claim or interest of any creditor provided for in the plan. 11 U.S.C. § 1227(c).

Once the plan is confirmed, the trustee distributes funds to creditors according to the terms of the plan. The debtor must provide the trustee with a monthly report. The Chapter 12 debtor receives a discharge only after all of the plan payments are made. Debt such as alimony or child support is not dischargeable. Rarely, the debtor may receive a "hardship" discharge for extraordinary circumstances, even if all payments are not made. A standard discharge under 11 U.S.C. § 1228(a) covers all debts of the debtor provided for by the plan, with the exception of secured debts to be paid beyond the plan term and any debts specifically excepted from discharge under 11 U.S.C. § 523(a).

Taxation in Bankruptcy

A separate taxable bankruptcy estate is created when an individual seeks Chapter 7 or Chapter 11 bankruptcy protection. In these cases, the trustee files a Form 1041 on behalf of the estate. At the conclusion of the proceedings, the debtor takes over any remaining tax attributes, including those that first arose during the administration of the bankruptcy estate.

No separate taxable bankruptcy estate is created in Chapter 12 or when a corporation or partnership seeks bankruptcy protection. In a Chapter 12 bankruptcy, the debtor continues to file the same federal income tax returns that were filed prior to the bankruptcy petition, Form 1040 or 1040-SR, U.S. Individual Income Tax Return. The debtors report all income received during the entire year and deduct all allowable expenses. Debt canceled due to the debtor's bankruptcy is not included in income. I.R.C. § 108(A)(1)(a). To the extent the debtor has any losses, credits, or basis in property that were previously reduced as a result of canceled debt, these reductions must be included on the debtor's return.

Tax Claims

Tax liens are secured claims. Federal tax liens arise at the time the tax is *assessed* and attach to all the taxpayer's property, as well as the taxpayer's after-acquired property. The lien continues until the tax and related penalties and interest are paid. Because the IRS may enforce its lien even if the tax debt is discharged, bankruptcy should be filed *before* the IRS files its lien.

In a bankruptcy, federal tax claims secured by a federal tax lien that are valid against the bankruptcy trustee are usually satisfied first. After that, unsecured federal tax claims generally must compete with other unsecured claims. Whether they are paid will depend upon their assigned priority. 11 U.S.C. § 507. Outside of Chapter 12, most tax claims are **priority** unsecured claims. Unsecured claims without a priority status are satisfied last. A special rule impacts tax claims secured with perfected tax liens in a Chapter 7 case. 11 U.S.C. 724(b). These claims are satisfied after unsecured priority seven claims (including administrative expenses and domestic support claims) and just before unsecured priority eight claims (priority unsecured tax claims).

Creditors (including the IRS) must file a proof of claim with the bankruptcy court. A claim for taxes can be either a claim secured by a perfected tax lien or an unsecured claim. Perfected liens generally pass through bankruptcy proceedings unaffected, even if the debtor's personal liability for the debt is discharged.

Chapter 11 plans will not be confirmed if the IRS or state taxing authority holding an unsecured priority tax claim objects to the plan *unless* the plan provides that the holder will receive regular installment payments in cash:

- In an amount equal to the allowed amount of the claim;
- over a period no longer than five years from the date of the petition; and
- in a manner no less favorable than the most favored nonpriority unsecured claim

If the IRS makes a special request, the court will not confirm a reorganization plan if the principal purpose of the reorganization plan was the avoidance of taxes. 11 U.S.C. 1129(d). This provision does not apply to Chapter 12.

Special Chapter 12 Tax Rule

A key change implemented by the BAPCPA was the addition of 11 U.S.C. § 1222(a)(2)(A). This provision retained the requirement that a Chapter 12 must provide for full payment of § 507 priority unsecured claims, but stated that claims owed to a governmental unit that arose as a result of the “sale, transfer, exchange, or other disposition of a farm asset used in the debtor’s farming operation” were treated as **general unsecured claims subject to discharge**.

Stripping these claims of their priority was intended to allow Chapter 12 confirmations that otherwise would be denied because of large capital gain or depreciation recapture arising from the sale of farm assets. Before this rule, if a farmer sold assets in an effort to raise cash to allow the farming operation to continue, the tax bill generated by the sale subsumed a good part of the proceeds and robbed the debtor of the cash needed to make payments under a plan. The plan would fail because it would not be feasible.

Although helpful, 11 U.S.C. § 1222(a)(2)(A) led to a split in the circuits regarding whether the rule applied to prepetition *and* post-petition sales. Ultimately, the United States Supreme Court sided with the Ninth Circuit

and ruled that the special rule applied only to prepetition sales. *Hall v. U.S.*, 132 S. Ct. 1882 (2012). The 5-4 decision made it nearly impossible for farmers to discharge in a Chapter 12 bankruptcy capital gains tax or depreciation recapture income arising due to the sale of property *after* the filing of the petition. This prevented debtors from right-sizing once the bankruptcy petition was filed.

On October 26, 2017, The Family Farmer Bankruptcy Clarification Act of 2017 fixed this problem by creating new 11 U.S.C. § 1232. The provision states:

- Any unsecured claim of a governmental unit against the debtor or the estate that arises before the filing of the petition, or that arises after the filing of the petition and before the debtor's discharge under section 1228, as a result of the sale, transfer, exchange, or other disposition of any property used in the debtor's farming operation—
 - shall be treated as an unsecured claim arising before the date on which the petition is filed;
 - shall not be entitled to priority under section 507;
 - shall be provided for under a plan; and
 - shall be discharged in accordance with section 1228.

In other words, if a debtor sells property after the Chapter 12 has been filed, the special priority-stripping rule applies to the gain in the same way as if the assets were sold *before* the filing. By treating tax claims as general unsecured claims, farmers can retain more property necessary to continue their farming operation rather than being forced to sell it to pay off tax liability.

Which Claims Qualify?

There remains some debate among courts as to what claims (beyond those arising from capital gain from the sale of a farming asset) are impacted by the priority-stripping provisions of § 1222 (now § 1232). Courts often apply a five-factor test in making this determination: The claim arose (1) as a result of (2) the sale, transfer, exchange, or other disposition (3) of any property (4) used in (5) the debtor's farming operation. Courts have found this to include income from the sale of crops and livestock, *Knudson v IRS*, 581 F.3d 696 (8th Cir. 2009), a partnership interest in a farming operation, *Hemann*, 2013 WL 1385404 (Bankr. N.D. Iowa 2013), and crop insurance proceeds, *In re Pedersen*, 593 B.R. 785 (Bankr. N.D. Iowa 2018). In a pre-2017 case, a Kansas court found that the provision did not apply to crop insurance proceeds. *In re Keith*, case No. 10-12997, 2013 WL 3467315 (Bankr. D. Kan. Jul.8, 2013).

In determining the amount of the claim that is stripped of its priority, the Eighth Circuit has allowed what's been called the "marginal method" of calculation. No court has rejected this method. Under the marginal method, the tax professional prepares a traditional and a pro forma return. The traditional return is the actual return for the year at issue. It is the only return that will be filed. The pro forma return is calculated *without* the income from the sale of the farm property.

The difference between the tax due on these two returns is the amount that is *deprioritized* under § 1232. This amount is reported to the court in the proposed plan.

Considerations Before Filing Chapter 12

Chapter 12 provides the following key advantages:

- Deprioritization of tax claims, allowing farm property to be sold to restructure the business in a more efficient way.
- Debtor may retain the asset, even though the unsecured creditors do not receive full payment for their claims, as long as all disposable income is paid out during the plan period. There is no absolute priority rule.
- The debtor may reduce the balance of secured claims to the value of the collateral, including the claim against the debtor's house.
- The automatic stay applies to co-debtors on consumer debts as well.
- Payment terms on secured debt can be stretched out, re-amortized, and the interest rate adjusted.
- Payments may be made on a monthly, yearly, or other basis, depending upon the income stream of the farm.
- The process is efficient and economical.

Limitations of Chapter 12

For most debtors, the most challenging Chapter 12 requirement is feasibility. Debtors who have been unable to continue their operation because of financial impairment may be hard pressed to show that they will be able to make the required plan payments. In recent history less than 50 percent of Chapter 12 plans have been successfully completed through discharge. That could change given recent changes to the Code detailed above.

In the 1980s, Chapter 12 was able to restructure debt payments with much lower interest rates. Today's low interest rates generally remove this benefit; however, debtors may be able to generate cash if they sell assets to right-size the farm. This is made possible by the special Chapter 12 tax provisions.

Required Analysis

When determining whether to file a Chapter 12 bankruptcy, a debtor must consider:

- Feasibility as determined through cash flow projections,
- The liquidation value of the assets, to show that the unsecured creditors would receive as much under the plan as in liquidation, and
- The timing of the filing with respect to the sale of assets, tax attributes such as NOLs, and other considerations.

Discharge of Debt Income

Sometimes outside of bankruptcy lenders will forgive some or all of a financially distressed taxpayer's debt. Generally, if a creditor forgives debt for any reason other than for making a gift to the debtor, the income is included in the taxpayer's income as cancellation of debt income (CODI). The same rule applies to repossessed property. The taxpayer will be deemed to have sold the repossessed property at its fair market value to the lender. The difference between the FMV and the debt owed is CODI, potentially subject to income tax. In the case of depreciated equipment, the taxpayer will also owe ordinary income tax for the I.R.C. § 1245 recapture in the year of repossession.

A number of exceptions, however, apply to this rule. I.R.C. § 108(a)(1) provides that gross income generally does not include CODI if any of the following apply:

- The cancellation takes place in a bankruptcy case
- The cancellation takes place when the debtor is insolvent
- The canceled debt is a "qualified farm debt"
- The canceled debt is a qualified real property business debt (in the case of a tax-payer other than a C corporation)
- The canceled debt is qualified principal residence indebtedness which is discharged before 2018

Qualified Farm Indebtedness

Farmers can exclude CODI from gross income if it is qualified farm debt owed to a qualified person. This exclusion applies only if the farmer was solvent when the debt was canceled or, if insolvent, it applies only to the extent the canceled debt is more than the amount by which the debtor was insolvent. Debt is qualified farm debt if both the following requirements are met: (1) It was incurred directly in operating a farming business and (2) at least 50 percent of gross receipts for the last three years preceding the year of debt cancellation were from the farming business.

A qualified person is a person actively and regularly engaged in the business of lending money. A qualified person includes any federal, state, or local government, or any of their agencies or subdivisions. The USDA is a qualified person. A qualified person does not include a related person, a person who receives a fee from the taxpayer's investment in the property, or a person from whom the taxpayer acquired the property.

Reducing Tax Attributes

Generally, if a taxpayer is able to exclude canceled debt from income under one of the exclusions noted above, they must reduce the following tax attributes (certain credits and carryovers, losses and carryovers, basis of assets, etc.) (but not below zero) by the amount of the canceled debt excluded.

- NOLs and NOL carryovers for year of discharge
- Net capital loss and capital loss carryovers for year of discharge
- Passive activity loss carryovers from year of discharge
- Three times the sum of the following:
 - General business credit carryover
 - Minimum tax credit available as of the following tax year
 - Foreign tax credit carryover to or from the year of discharge and
 - Passive activity credit carryover from year of discharge

[i] Although this provision also protects family fisherman, this article only discusses farmers.

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INTRODUCTION TO CHAPTER 12 PRACTICE

MODERATOR- JAN M. SENSENICH, CHAPTER 12 TRUSTEE, DISTRICT OF VERMONT

NICHOLAS HAHN, GODFREY & KAHN, SC, GREEN BAY, WI

BRITTANY S. OGDEN, QUARLES & BRADY, MADISON, WI



HISTORY OF CHAPTER 12 BANKRUPTCY

- The farm crisis of the late 1980s gave birth to chapter 12 of the Bankruptcy Code.
- Falling land values and grain prices combined with soaring interest rates and tightening credit gave rise to one of the worst farm crises of the 20th century.
- Farmers responded by driving their tractors to Washington, D.C.
- Congress responded in 1986 by giving farmers a reorganization tool of unprecedented power and efficiency, and in 2005 made chapter 12 a permanent part of the Bankruptcy Code



THE NEW FARM CRISIS



DOWNWARD CYCLE IN FARMING

- Farming income reached high levels in 2010-2011.
- But from 2012-2016 farming income fell 34 percent, more than \$50 billion, after adjusting for inflation.
- Farm-sector debt has reached levels near the peak levels of the late 1970s and early 1980s.
- Rising interest rates coupled with reduced income and increased debt suggests that some farmers might not be able to repay debt in future years.



THE NEW FARM CRISIS



FEDERAL RESERVE WARNING

- In November 2018 the Federal Reserve Bank of Minneapolis warned of rising Chapter 12 bankruptcies, used by family farmers to restructure debt.
 - “Over the 12 months ending in June 2018, 84 farm operations in Ninth District states had filed for chapter 12 bankruptcy protection—more than twice the level seen in June 2014.”
 - The Fed said that the strain of low commodity prices compounded by recent tariffs “is starting to show up not just in bottom-line profitability, but in simple viability.”
 - Obtained at <https://www.minneapolisfed.org/publications/fedgazette/chapter-12-bankruptcies-on-the-rise-in-the-ninth-district>.



CHAPTER 12: SIMPLER AND MORE POWERFUL THAN EITHER CHAPTER 11 OR 13

- Chapter 12 and 13 similarities
 - ✓ Usually administered by standing trustee.
 - ✓ Proceeds under trustee supervision until completion of the plan.
 - ✓ Can restructure secured debts using the *In re Till* interest rate.
 - ✓ Debtor receives a discharge upon completion of the plan.



CHAPTER 12: SIMPLER AND MORE POWERFUL THAN EITHER CHAPTER 11 OR 13

- Chapter 12 Advantages over chapter 13

- ✓ Tax advantages: § 1232 allows a deprioritization of taxes due on the sale of assets as part of a confirmed plan, allowing farmers to “right-size” their operations and avoid large capital gains taxes that would otherwise be due.
- ✓ Can modify mortgages on principal residences by bifurcating undersecured claims under § 506 of the Bankruptcy Code, adjusting interest rates, and even re-amortizing mortgage loans beyond a 30-year period.
 - Compare 1222(b)(2) to 1322(b)(2):
 - 1222(b)(2) “the plan may--modify the rights of holders of secured claims, or of holders of unsecured claims, or leave unaffected the rights of holders of any class of claims.”
 - 1322(b)(2) “the plan may--modify the rights of holders of secured claims, other than a claim secured only by a security interest in real property that is the debtor’s principal residence, or of holders of unsecured claims, or leave unaffected the rights of holders of any class of claims;



CHAPTER 12: SIMPLER AND MORE POWERFUL THAN EITHER CHAPTER 11 OR 13

- Chapter 12 Advantages over chapter 13
 - ✓ Can modify secured debts with much greater flexibility. Compare 1225(a)(5) to 1325(a)(5):

REQUIREMENTS	CHAPTER 12	CHAPTER 13
Secured creditor options: accepts plan, cram down or surrender	Yes	Yes
Hanging paragraph with 910 and 365 day restrictions on cram down	No	Yes
Distributed through plan via equal monthly amounts	No	Yes
Monthly amounts must be enough to provide adequate protection	No	Yes
Lienholder retains lien until PMT in full or discharge	No	Yes



CHAPTER 12: SIMPLER AND MORE POWERFUL THAN EITHER CHAPTER 11 OR 13

- Chapter 12 Advantages over chapter 13
 - ✓ Plan is not due until 90 days after the case is filed.
 - ✓ Plan payments not due until after confirmation.
 - ✓ Plan payments can be structured around farm's cash flow cycles.
 - ✓ Confirmation must occur within a specific time frame.
 - ✓ Concluded no later than 45 days after the filing of the plan. See 11 U.S. Code § 1224.



CHAPTER 12: SIMPLER AND MORE POWERFUL THAN EITHER CHAPTER 11 OR 13

- Chapter 12 Advantages over chapter 13 BIG POINTS SUMMARY
 - Chapter 12 allows the repayment of secured creditors, if appropriate, over a period longer than the life of the chapter 12 plan even though the original indebtedness is not so amortized.
 - See 11 U.S.C. § 1222(b)(9)
 - Chapter 12 allows modification of the rights of holders of security interests in all real and personal property without regard to its residential nature, so that secured creditors collateralized by the farmstead can be reamortized without the need for cure of default.



ELIGIBILITY

Eligibility



- Pursuant to § 109 (f), “Only a family farmer or family fisherman with regular annual income may be a debtor under chapter 12 of this title.”
- Farming: Activities involving the tillage of soil and raising of crops, raising of livestock or poultry, or livestock products in an unmanufactured state



TESTS FOR ELIGIBILITY

FAMILY FARMER (INDIVIDUAL)

- Debts are not over \$4,153,150 (as of 2018);
- At least 50 percent of debt is farm-related debt (not including home mortgage, unless the mortgage is a farm mortgage); and
- More than 50 percent of the debtor's income is from farming (measured by the previous tax year or the two tax years before the previous tax year)

FAMILY FARMER (CORPORATION)

- At least 50 percent of shares owned by one family or by one family and farming relatives;
- More than 80 percent of the value of the corporate assets consists of assets related to farming;
- Debts are not over \$4,153,150 (as of 2018);
- At least 50 percent of debt is farm-related debt; and
- Corporation is not publicly traded;



TESTS FOR ELIGIBILITY

FAMILY FISHERMAN

- Debts are not over \$1,924,550.00 (as of 2018);
- Must consist of commercial fishing operation.
- Similar to requirements for Family Farmers.



ELIGIBILITY

Eligibility



- Definitions found at:
 - “Family farmer” in § 101(18),
 - “Family fisherman” in § 101(19A),
 - “Family farmer with regular annual income” in § 101(19),
 - “Family fisherman with regular annual income” in § 101(19B),
 - “Farming operation” in § 101(21).



DIFFERENT TYPES OF CHAPTER 12 PLANS

- Traditional reorganization

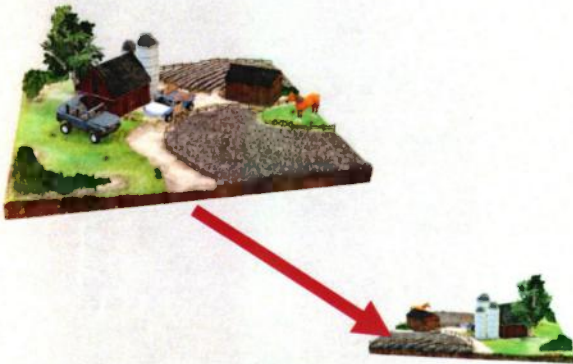


- Goals:
 - Preserve farm's nature and scale
 - Reduce debt service
 - Increase efficiency
 - Return to profitability
- Need stems from a specific event that disrupts finances
- Questions
 - Is the farm still viable with reorganization?
 - What is production cost vs market price?



DIFFERENT TYPES OF CHAPTER 12 PLANS

- Downsizing and conversion



- Goals:
 - Reduce scale of operation
 - Converting to a different or more diverse production base
 - E.g. Dairy farm to a crop farm
 - Return to profitability
- Carefully assess resources of the farm and what changes can reduce debt and increase profitability.
- Questions
 - Will the surrender of unnecessary equipment, land or livestock increase profitability?
 - Will changing from a strictly wholesale market (like milk) to a more diversified market (like a farmer's market) be effective?



DIFFERENT TYPES OF CHAPTER 12 PLANS

- Sale



- Goals:
 - Save the home but sell farmland, property, livestock
 - Debtor maintains control over marketing and sale
 - Take advantage of special tax rules on capital gains
- Debtor no longer wishes to work the farm
- Question
 - Will the plan be better than a liquidation in a chapter 7?



THE MOST POWERFUL — YET MOST UNDERUTILIZED — CHAPTER OF THE CODE

- According to the 2012 census of agriculture, there were approximately 2 million farms in the U.S., yet for the 12-month period ending Sept. 30, 2018, only 468 chapter 12 cases were filed.
- Why?
 - Many farmers and fisherman don't know chapter 12 exists.
 - Most bankruptcy attorneys tend to avoid chapter 12 and try to shoehorn the case into a 7 or 13.



THE MOST POWERFUL — YET MOST UNDERUTILIZED — CHAPTER OF THE CODE

- If you can do a chapter 13 you can also file a chapter 12.
- Discuss chapter 12 options with local FFA or other groups to get the word out that there are options for farmers and fishermen.
- Attorneys fees may be significantly higher than found in chapter 7 or 13 cases.



Financial Stress and Farm Bankruptcies in U.S. Agriculture

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Financial Stress and Farm Bankruptcies in U.S. Agriculture

Abstract

Purpose: We evaluate farm financial stress within the U.S. over the past twenty years and the agricultural and economic factors which have impacted farm businesses. We further evaluate the effect of the 2005 Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) on farm financial stress. In particular, Chapter 12 bankruptcies -- which can only be filed by farmers -- were only a temporary measure until BAPCPA made Chapter 12 a permanent fixture in bankruptcy law.

Design: We utilize filings of Chapter 12 bankruptcies from 1997 until 2016 as a proxy for farm financial stress. Panel fixed effects models are used to determine relevant factors affecting financial stress for farmers from agricultural and macroeconomic perspectives. Further, models incorporating pre- and post-BAPCPA regimes are utilized.

Findings: We find that macroeconomic factors (interest and unemployment rates) are strong predictors of farm bankruptcies for farms while agricultural land values are the only consistent strong predictor among the agricultural factors. When evaluating the post-BAPCPA regime, only agricultural land values continue to be a significant predictor of farm bankruptcies. Our findings also indicate a dynamic relationship with agricultural land values, where current year values are negatively related but previous year land values are positively related to bankruptcies.

Value: We provide an analysis of the post-BAPCPA regime on farm bankruptcies that has not been evaluated within the literature yet. Further, our findings illuminate discussion on a potentially dynamic relationship with financial stress and agricultural land values.

Keywords: farm bankruptcies, financial stress

JEL Codes: Q14

Introduction

The increased widespread financial stress from the farm crisis of the 1980's required policy intervention from Congress, which enacted legislation to mitigate the damages to the agricultural sector. This crisis was partially due to a rapid rise in farmland values -- largely purchased on credit -- followed by a sudden drop in values coupled with high interest rates, easy access to credit, and plummeting net farm incomes. Many farmers experienced financial stress, i.e. they struggled to generate enough cash flow to meet their debt service payments. Prior options of bankruptcy for farms generally required the liquidation of their farmland, a depressed asset at the time, which would result in cessation of operation. With the passage of the Family Farmer Bankruptcy Act of 1986, Chapter 12 bankruptcy became the preferable option for family farms as it helped ease financial stress and allowed for continued operation of their farm following a debt restructuring plan. Chapter 12 was originally set to expire in October 1993 but Congress extended the expiration date eleven times (Harl, 2006). In 2005, the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) amended Chapter 12 bankruptcy to be a permanent option, allowed for higher debt limits, and implemented less strict income requirements than before.

Trends in declining net farm income, increasing debt use, and stagnating land values are projected to continue beyond 2017 and pose a problem to the agricultural sector (Patrick et al., 2016). These factors place financial stress on farms, which may or may not be able to sustain these levels of stress (Briggeman, 2010). The current trends follows a period of rapid appreciation of land values and net farm incomes, which parallels the 1980's farm crisis. While the farm sector debt-to-asset ratio peaked above 20% in 1985, debt-to-asset ratios have not been above 15% since 1995 which helps illustrate that the magnitude of financial stress today is not as severe as the 1980's farm crisis (Ellinger et al., 2016). One critical difference between the 1980's farm crisis and the current economic climate of the agricultural sector is a farm's ability to seek financial relief through Chapter 12 bankruptcy. The option to file for Chapter 12 bankruptcy changes the farmer-lender relationship with the legal consensus being that the relationship favors the farmer and that this relationship strengthened with passage of BAPCPA (Bromley, 1987; Flaccus and Dixon, 1988; Harl, 2006). While the existence of Chapter 12 bankruptcy affects this farmer-lender relationship, the bankruptcy filing rate for farms has been used as a proxy for

financial stress over periods in which bankruptcy laws have not substantially changed (Dixon et al., 2004; Stam et al., 1991).

We provide a quantitative approach to examining factors that affect the financial stress of the agricultural economy with particular interest in the post-BAPCPA climate. Using Chapter 12 bankruptcy filing rates from 1997 to 2016 as our proxy for financial stress, we use panel fixed-effects models to evaluate how macroeconomic factors and farm financial sector performance affects farm bankruptcy rates across the United States and the extent to which, if any, BAPCPA has impacted the agricultural sector. Our study utilizes the Agricultural Resource Management Survey (ARMS) to provide regional level estimates of variables which are hypothesized to affect the agricultural sector of the economy. We contribute to the literature by providing a recent analysis of Chapter 12 bankruptcies and the first evaluation of how BAPCPA affects a farm's financial standing. To our knowledge, the most recent econometric analysis utilizing Chapter 12 bankruptcies is Dixon et al. (2004) which uses state-level filing rates from 1986 to 2002.

Our findings indicate that macroeconomic factors (interest rates and unemployment rates) have strong, positive influence over farm bankruptcy filing rates while measures of the regional agricultural economy do not appear to have a significant effect except for agricultural land values. The agricultural land values indicate a potentially dynamic relationship as current year values are negatively related to farm bankruptcies but lagged values are positively related to farm bankruptcies. Further, we evaluate the effects of BAPCPA -- which made Chapter 12 a permanent fixture in bankruptcy law and increased debt limits and coverage for farmers. Our findings indicate that there is not a significant rise (or fall) in farm bankruptcies post-BAPCPA when controlling for agricultural and macroeconomic factors. However, there does appear to be a regime shift in the relationship between farm bankruptcies post-BAPCPA with respect to the interest and unemployment rates that would suggest these rates are no longer predictive indicators of farm bankruptcies post-BAPCPA. The result for agricultural land values remains post-BAPCPA, although their magnitudes are lessened.

Bankruptcy Overview

Modern day bankruptcy began with the Bankruptcy Reform Act of 1978. The Act consolidated the previous Chapters X and XI to form the modern day Chapter 11 bankruptcy, commonly referred to as the reorganization plan. This act further encouraged Chapter 13 bankruptcy (the wage earner's plan) over the Chapter 7 (liquidation) under the assumption that a Chapter 13 plan would pay more towards creditors and debtors would emerge with better credit afterwards. Previously all states recorded the primary occupation of the filer, but this practice abruptly ended for most states with the 1978 Act thus limiting the ability to effectively track bankruptcies for farmers after 1978.

These particular Chapters (7, 11, and 13) have largely remained the same in terms of their intended targets, although specifics associated with these Chapters have varied over time. Chapter 7 is the liquidation of a filer's nonexempt assets where the proceeds of such assets are used to pay holders of claims (creditors) in accordance with the provisions of the Bankruptcy Code. Chapter 7 is the most common form of bankruptcy across both business and personal filings with 64.3% and 70.0% of total filed respectively since 1996. Chapter 11 is a reorganization plan for a debtor that allows the filer to continue operations subject to its major creditors' approval of said plan. The filing fees are highest for this option and the most complex of all options since it requires approval of multiple creditors. Chapter 11 is generally used by large corporations and the majority of its filings are by businesses (with businesses representing 88.9% of all Chapter 11 filings since 1996), although individuals are permitted to file for Chapter 11. Chapter 13 allows for the restructuring of debts of the filer to be paid out to creditors over a period of time -- generally three to five years although this has varied -- subject to the filer having a regular stream of income, their level of income, and a limit on their amount of debt. Chapter 13 is predominantly filed by individuals, although there are also businesses which file for Chapter 13.

The Family Farmer Bankruptcy Act of 1986 marked the largest change in bankruptcy law for farmers as a new Chapter in the bankruptcy code was created -- Chapter 12 which was modeled after Chapter 13 -- and gave farmers four options for filing for bankruptcy. The Act was meant as a temporary measure for Congress to provide financial relief for farmers during the

1980s farm crisis¹ and represented a shift from the previous farm-lender friendly towards farm-debtor friendly (White, 1987). While after the 1978 Act the recording of primary occupation for a filer was generally ended by most states, North Dakota maintained records of primary occupation of filers for all Chapters. Smith (1987) notes that from 1974 to 1980, farm related bankruptcies accounted for only 3.1% of all bankruptcies in North Dakota but increased to 11.0% between 1981 and 1987. The peak of farming bankruptcies in North Dakota reached 46.6 bankruptcies filed per 10,000 farms in 1987. The rise indicated financial stress within the farming economy and was symptomatic of the need for a new form of bankruptcy designed for farmers.

To qualify for a Chapter 12 filing, a family farmer must pass the debt and income tests. The initial debt test stated that aggregate debts could not exceed \$1,500,000 and at least 80% of debt arises from a farming operation. The income test required that the farmer receive more than 50% of their gross income from farming operations in the preceding tax year. If the tests are passed, a farmer can submit a Chapter 12 plan which could reduce the amount of secured claims to the value of the underlying collateral and pay those claims over three to five years (Dull, 1986). Filing for bankruptcy may reduce the amount owed, extend the payment period, and/or lower the interest rate on existing loans due to the write down of secured debt if the current fair market value is less than the original loan value. O'Neill (2006) lays out the procedures for filing a Chapter 12 bankruptcy.

A farm in financial stress might not file for Chapter 12 bankruptcy if they cannot pass the debt or income tests, or if they are unaware that Chapter 12 is an option for their family business. Under these scenarios, a farm then has Chapters 7, 11, and 13 available to them. Matthews et al. (1992) studied all farm bankruptcies in Missouri from 1987--89 and found that the majority of

¹ Farm real estate values were high, farm products brought relatively good prices, interest rates were high, and farms tended to be highly leveraged. Shortly thereafter, the bubble burst on the farm economy, with farm product prices dropping sharply and real estate values tumbling but with interest rates remaining high and credit becoming increasingly hard to obtain. Many farms faced significant financial difficulty.

filings were Chapter 7, although Chapter 12 did make up 44% of the filings. While farms may file for other Chapters of bankruptcy -- and thus we do not have a completely measured value for farm bankruptcies -- only farms can file for Chapter 12 which serves as a lower-bound estimate for the total number of farm bankruptcies.

Chapter 12 was originally set to expire in October of 1993, but it was subsequently extended by Congress eleven times (Harl, 2006). Chapter 12 became a permanent fixture in bankruptcy law and its coverage expanded with the passage of the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) of 2005. The 2005 Act increased coverage of Chapter 12 to include family fisherman, who were subject to the same debt and income tests from the 1986 Act. For family farmers, the percentage of debt arising from farming operations requirement decreased from at least 80% to at least 50% and the debt limit increased from \$1,500,000 to \$3,237,000. The debt limit is adjusted for inflation every three years with the limit at \$4,031,575 in 2016. The income test, which previously required at least 50% of gross income via farming operation in the preceding tax year, was relaxed so that this test could be satisfied if the 2nd and 3rd prior tax years had at least 50% of gross income through the farming operation (O'Neill, 2006).

While there are clearly different regimes in bankruptcy law, figure 1 displays the historical trends for farmer bankruptcies as well as the farming population. Prior to 1979, all farm bankruptcies are tracked as all chapters of bankruptcy filing required the debtor list their primary occupation. Changes in reporting make it infeasible to track every debtor's occupation since 1979 and thus there is a gap in historical bankruptcy rates until 1986 when Chapter 12 serves as a proxy for farm bankruptcies. Because farmers have multiple options to file for bankruptcy, the Chapter 12 bankruptcy rate is a lower bound estimate of financial stress. Research from Dixon et al. (2004) indicates the 1987 bankruptcy filings are a result of pent-up demand that likely resulted from farmers anticipating government policy action from the 1980s farm crisis.

Previous Economic Research

Research on farm bankruptcies is sparse within agricultural economics. Legal scholars have indicated that the immediate effects of Chapter 12, and its subsequent broadening of scope

with BAPCPA, transfers wealth from creditors to debtors. The initial effect is that more debtors now have the ability to write down a larger portion of their debt to repay over a longer period of time and at a lower interest rate (Bromley, 1987; Dull, 1986; White, 1987). The short-term benefit to the debtors may not translate to a positive long-term outlook as creditors may leave the market or adapt their loan policies to reduce the risk associated with the creditor (Barry and Lee, 1983; Rucker and Alston, 1987; Jensen, 1989). While legal analyses point out a tilted relationship towards debtors in the short run, a long run analysis is needed to determine the welfare implications of BAPCPA on the farm economy.

One of the first studies to directly evaluate farm bankruptcies is Shepard and Collins (1982), which uses national US farm bankruptcy data from 1910 until 1978 (omitting 1940 -- 46 due to World War 2). Their results indicate that non-agricultural bankruptcy rates, real net farm income, farm debt-to-asset ratio, and average farm acreage affect farm bankruptcy rates while they fail to find evidence that government support payments affect farm bankruptcy rates. Their results cannot be extrapolated to a regional conclusion due to limitations of time-series data, which leaves the possibility that variations in government payments across the US may have an aggregate null effect but is a significant predictor in farm bankruptcies.

The most similar analysis on Chapter 12 filing rates to this paper is from Dixon et al. (2004) which uses a state-panel model from 1987 to 2000 with USDA-ARMS data to determine factors affecting Chapter 12 filing rates. They find unemployment rate to be a positive predictor of farm bankruptcies, that several measures of the ability to pay current liabilities (debt-to-asset, debt-servicing ratio, and net farm income), farm characteristics (proportion of revenues from crops, off-farm work, and real value of farmland and buildings), and that government payments are significant predictors in filing rates for a given state over this time period. This analysis was largely confirmed through Stam et al. (2003) and Stam and Dixon (2004) at differing levels of analysis although throughout this time period, Chapter 12 was a temporary policy which is an important change which calls for an extension of their panel model to after the 2005 BAPCPA.

Data Description

We use data on aggregate bankruptcy filings which are publicly available from the US Courts website the Judicial Business publication F-2 Table of bankruptcy filings for every district starting in 1996 at the annual level for each government fiscal year.² In addition, their Bankruptcy Filings publication provides quarterly level filings of all bankruptcy Chapters for each district starting with the quarter ending on 31 March 2001. Figure 2 plots the quarterly number of business bankruptcy filings from 2001 to 2016 where the vertical striped line indicates the quarter when BAPCPA began applying to bankruptcy filings, which is the quarter ending on December 30th of 2005.

Figure 2 displays the effects of the passage of BAPCPA across all types of bankruptcies: personal (non-business), business, and farm bankruptcies (Chapter 12). It is clear that BAPCPA reduced the number of bankruptcy filings for businesses and non-businesses across the United States. It is not as clear that farms had a similarly pronounced decline in filing rates after the passage of BAPCPA because the pre-BAPCPA regime does not exhibit a clear trend in farm bankruptcies.

Although there is substantial temporal variation of farm bankruptcy rates, a regional inspection of farm bankruptcy rates highlights another important aspect of the farm economy (Figure 3). Business and personal bankruptcy filings are public records and every bankruptcy is filed to a district court based on either the business location or primary filer's residence. There are ninety-four district courts across the United States, of which none of these district courts cross state boundaries. Each state has at least one district and at most four districts. There is variation of law, policies, and judge tendencies across circuits, states, and districts although none of the lower courts can overstep their jurisdiction affords them from the higher courts (Chang and Schoar, 2006).

² The US government's fiscal year begins the fourth quarter of the calendar year that starts on October 1. By example, the Judicial Business F-2 data begins with the twelve-month period prior to 30 September 1997 and represents the 1997 fiscal year.

Factors Affecting Bankruptcy

While a bankruptcy filing is an individual occurrence which represents a series of events that led to a poor financial position for a farm, our data on bankruptcies is aggregated and not at the farm level. Instead, we utilize regional variables which act as proxies for the financial conditions that the average farm faces. Our two regional aggregations are state and district level. We group these variables into agricultural factors and macroeconomic factors in order to distinguish the degree to which policy makers could affect farm bankruptcy rates. Our dependent variable is the Chapter 12 filings for a region divided by the number of farms within the region for that year multiplied by 10,000 for ease of interpretation. We use the USDA Agricultural Resource Management Survey (ARMS) to estimate the number of farms in a region. Table 1 contains summary statistics for all variables in the analysis and all financial values are converted to real 2015 dollars using the GDP deflator to account for inflationary issues.

Agricultural Factors

ARMS is a comprehensive survey on financial characteristics on farms across the US that is conducted by the Economic Research Service (ERS) and National Agricultural Statistics Service (NASS) beginning in 1996. ARMS is a non-random annual survey sent to approximately 30,000 farms in the US, although this varies across years. The survey utilizes a multi-phase, multi-frame, stratified, probability-weighted sampling design. The USDA selects farms into ARMS with the goal of constructing a nationally representative population of farms. Part of the survey design of ARMS is that certain variables are calibrated to match official state level estimates (e.g. acreage, number of farms, total harvest, etc.).

We utilize ARMS to calculate regional values for average acreage per farm, average farm assets, average net farm income, average government payments received, average debt-to-asset ratio, average working capital to expense ratio, average debt servicing ratio, and average share of household off-farm income to total income. Each of these statistics are evaluated at the region's weighted median value where the weights are provided by NASS and account for the farm's probability of selection into the survey and are calibrated to match other official USDA estimates. We choose median values to minimize the impact of outlier farms since we are

interested in the financial standing of what an average farm faces.³ We supplement our ARMS data with the June Area survey, conducted by USDA-NASS, to obtain estimates of the value of an acre of agricultural land since this is not found in ARMS.

The ARMS weights are not designed to represent a smaller geographical scale than the state level. If within-state sampling for ARMS approximates a random sample conditioned on the use of survey weights, then creating district-level estimates of agricultural conditions is a justified method with the added note that there is an inherent loss of precision for these measurements.⁴ However, if there is within-state correlation in ARMS observations that is not accounted for with the survey weights, then it is not clear what district-level estimates of the calculated statistics represent. If this is the case, then it is appropriate to use state level estimates of the statistics from ARMS in an analysis. We do not have enough information on the sampling procedures of ARMS from 1996 to 2015 to determine if there is within-state bias with the ARMS observations. We therefore utilize state level ARMS estimates as a robustness check on the assumption that within-state sampling for ARMS approximates a random sample.

In addition to utilizing state level values, we also leverage the sampling design of ARMS for more precise district level values. ARMS consistently over-samples 15 core states.⁵ Because ARMS over-samples these states, it is more likely that the sampling scheme within districts of

³ As a referee suggested, the tails of the distribution for farmers may be of interest for an analysis on financial stress since that may better represent a farmer at the margin of filing for bankruptcy. We leave this for further research.

⁴ This loss of precision can also be thought of as measurement error for some of the independent variables. This would lead to attenuation bias where the estimated coefficients in a regression would be biased towards 0. The implication here is that one would find fewer significant coefficient estimates than a sample with no-measurement error.

⁵ Core states in ARMS are chosen due to their high values of agricultural production, they are: Arkansas, California, Florida, Georgia, Illinois, Iowa, Indiana, Kansas, Minnesota, Missouri, Nebraska, North Carolina, Texas, Washington, and Wisconsin.

these states more closely resembles a random sampling and should reflect more precise estimates of our agricultural variables of interest. This subset of the United States reflects the majority of agricultural production, which can alleviate issues involved with the modifiable areal unit problem that may arise due to the arbitrary distinction of the political boundaries for states.

Macroeconomic Factors

The Federal Deposit Insurance Corporation (FDIC) provides Reports of Condition and Income (Call Reports) and Uniform Bank Performance Reports (UBPRs) for FDIC-insured institutions. These data provide total loan amounts for an institution and further break this down by agricultural production loans and include the value of delinquent loans. We calculate annual state level values of agricultural and non-agricultural loan delinquency rates by aggregating bank level data for each state and for each year. The resulting value indicates a yearly measure of both agricultural and non-agricultural delinquency rates of all FDIC financial institutions within a state.⁶ We utilize both the current and lagged values of these variables as Briggeman, Gunderson, and Gloy (2009) indicates that financial stress has a build-up effect and may be leading indicators of bankruptcies.

Annual data on one-year and ten-year treasury constant maturity rates are acquired from the Federal Reserve Economic Data (FRED) that is maintained by the Federal Reserve Bank of St. Louis. The one-year rates proxy the cost of financing short-term projects for a farm while the ten-year rates approximate the cost for long-term projects (Schmitkey, 2016).

The Bureau of Labor Statistics provides annual level values of employment and unemployment for each county through their Local Area Unemployment Statistics program. We aggregate these county level values to the regional level and calculate each region's

⁶ Financial institutions in FDIC call reports only report at the headquarter level for an institution. This may be problematic for large national banks which make loans across many states. As sensitivity analysis, we remove the top 100 banks as measured through total value of assets to compute state level agricultural delinquency rates. Results are unaffected as the two measures are highly correlated (0.999).

unemployment rate to create a macroeconomic variable that also has regional variation. We consider this a macroeconomic variable because it is mainly affected by factors outside of the agricultural sector.

And finally, we utilize the bankruptcy filings data and the Census Bureau's County Business Patterns (CBP) data to calculate the bankruptcy filing rate for non-agricultural businesses at the district level. CBP provides data on the number of establishments at the county level and further breaks this down by industry classification. We use the total business filings of Chapter 7, 11, and 13 for each region and divide this by the non-agricultural establishments in the region as another way to proxy for financial health of the region unrelated to agriculture.

Panel Models

Previous econometric models for analyzing Chapter 12 (Shepard and Collins 1982; Dixon et al 2004; Stam and Dixon 2004) generally use the filing rates for a particular region to correct for differences in farming population across time and space. We follow this convention and adopt a linear panel model as our baseline for understanding farm bankruptcies:

$$y_{it} = \alpha + \alpha_i + \beta_1 BAPCPA_t + \beta_2 X_t + \beta_3 X_{it} + \beta_4 AG_{it-1} + \varepsilon_{it}$$

Where i denotes the region (district or state) and t denotes the time period. The dependent variable, y_{it} , is the number of bankruptcies divided by the number of farms (as measured through ARMS) which is meant to proxy financial stress for farms. There is substantial regional and temporal variation in the variable, which helps motivate the choice of explanatory variables we use to better examine the factors affecting financial stress. Further, because of the sampling design of ARMS we subset our data for each of these regressions to only the core states (with the highest values of agricultural production) to reduce potential sampling design errors.

The α parameter is an overall constant for the model; α_i is a regional fixed effect used to control for unobservable fixed effects which are time invariant; $BAPCPA_t$ is a dummy variable taking the value of 1 for the post-BAPCPA period aiming to test if BAPCPA has a significant effect on farm bankruptcy rates as well as its transitory and permanent effects; X_t is a set of macroeconomic controls which affect farm bankruptcy rates; X_{it} are non-agricultural control

variables related to the macro-economy which vary across time and regions; and AG_{it-1} are agricultural related variables which proxy a region's farm financial climate. See the preceding section on data for details on the covariates in each set.

The agricultural variables are lagged one year, meaning that the bankruptcy filings across October 1996 to September 1997 are explained by ARMS observation for 1996, which explain farm financial characteristics from January 1996 to December 1996. Lagging the agricultural variables by one year is done for three reasons: income for a particular year is anticipated toward the end of the year when a farmer may decide to file for bankruptcy, , lumpiness in farm incomes imply that the previous year's income is a better proxy of the capital stock of a farm, and it produces a better fit. And finally, because Davies (1996) indicates the dynamic relationship of agricultural land values over time we include current year and previous year values for agricultural land to further examine these effects.

Of additional focus is BAPCPA and its potential impact on the agricultural sector's financial performance as well as its transitory and permanent effects. In the above specification, the coefficient β_1 will show any mean difference in the filing rates for farms after the passage of BAPCPA in 2005, controlling for agricultural and macroeconomic factors. This is one way to evaluate how BAPCPA affected farms and can be interpreted as the overall long-run effect of BAPCPA's effect on bankruptcies since pre-2005 Chapter 12 was only a temporary policy. However, there may be a myriad of effects that BAPCPA had on farms affecting the bankruptcy filing rate both positively and negatively, which may result in an aggregate null effect. To check for this possibility, we interact the $BAPCPA_t$ variable with each of the other control variables to further evaluate how BAPCPA may have had other effects on farms as follows:

$$y_{it} = \tilde{\alpha} + \tilde{\alpha}_i + \tilde{\beta}_1 BAPCPA_t + \tilde{\beta}_2 X_t + \tilde{\beta}_3 X_{it} + \tilde{\beta}_4 AG_{it-1} + \gamma_2 BAPCPA_t \times X_t + \gamma_3 BAPCPA_t \times X_{it} + \gamma_4 BAPCPA_t \times AG_{it-1} + \tilde{\varepsilon}_{it}$$

The interaction coefficients, we denote as γ , reflect the change in a marginal effect due to Chapter 12 becoming a permanent bankruptcy option due to BAPCPA. If the transitory and permanent effects of a particular variable are identical -- and assuming pre-BAPCPA represents only the transitory effects and post-BAPCPA the permanent effects-- this would lead to a null finding in the interaction coefficient. Or in other words, there would be no change in the marginal effect of X on Y across regimes and so there would be no change due to BAPCPA

occurring (ie $\beta_2 = \widetilde{\beta}_2$). This change from temporary to permanent coincides with increases of debt limits and relaxing of income requirements for Chapter 12 filings, which confounds the interpretation of the BAPCPA coefficient. While we largely interpret the effects of BAPCPA to the change to a permanent option, it may be that the filing requirement changes contribute to this effect.

Results

Table 2 provides regression results for the first panel model with districts in the first column, districts from only the core states in the second column, state level variables in the third column and state level variables for only the core states in the fourth column. Across all models, restricting the analysis to only the core states from ARMS improves the fit of the models per the adjusted r-squared. The sharp increase from a negative adjusted r-squared from the model using all districts to adjusted r-squared above 0.12 using only the districts within the core states suggests that the ARMS sampling design has a poor fit for proper inference at regional levels below the state. However, this assertion is tempered by the increase in model fit from the state level regressions which restricts the sample to only the core states.

The only significant predictor of farm bankruptcies across all four specifications is the lagged value of agricultural land which has a negative relationship with bankruptcy rates. The current value of agricultural land is negatively associated with bankruptcy rates across all regressions and statistically significant for all but the state level regression. This relationship of near term negative association but lagged positive association is a similar result to Davies (1996) which posits that the relationship between agricultural land value and financial stress may evolve dynamically due to differing managerial strategies under times of rising or falling land values. Since our data are not at the farm level, we are unable to comment on managerial strategies that farmers use but can acknowledge that these results appear to highlight a potentially dynamic relationship between agricultural land values and farm bankruptcies.

If one ignores the district level model using data from all states on the basis that ARMS may not accurately define the farm conditions at the district level, then the one-year constant maturity interest rate and regional unemployment rate are positive and significantly related to

farm bankruptcies. The one-year interest rate is positively associated with bankruptcy rates, which is an intuitive result that increasing the cost of near-term borrowing will have adverse effects on farms' ability to repay current debts. However, the ten-year constant maturity interest rate is negatively associated with bankruptcy rates and statistically significant with the core states subset, which indicates that farms become less likely to file for bankruptcy as long-term debt costs rise.⁷ The one-year interest rate approached a zero bound during 2009 to 2014 while the ten-year interest rates continued a gradual decline, which may further explain these results.

We view the positive association between regional unemployment rates and bankruptcy rates as reflecting the local labor market conditions which proxy for regional economic performance and find this result intuitive and clear. As local economies fare worse, the likelihood of a farm experiencing these effects increases which would then result in higher levels of economic stress. A one percentage point increase in the unemployment rate leads to 0.366 more farm bankruptcies per 10,000 farms at the district level and 0.46 at the state level for the core states subset, which is almost a 13% increase in bankruptcies. In our sample, the unemployment rate ranges from 2.06% to 14.9% with a standard deviation of 1.9%.

The delinquency rates, which are for consumer loans and agricultural loans for the current and lagged period, have mixed results across the specifications. The agricultural delinquency rates do not appear to have a significant relationship with the agricultural bankruptcy rate with the exception of the current value at the state level showing a positive relationship. The consumer delinquency rate has consistent signs across both the current (negative) and lagged (positive) values, although the statistical significance is mixed.

Among the null findings consistent across the district and state level regressions of Table 2 are for the non-agricultural bankruptcies, government payments, and working capital to expense ratio. Our finding that the non-agricultural bankruptcy rates do not affect farm

⁷ Models with only the one-year or ten-year interest rates did not impact coefficient estimates for other variables, however the included interest rate coefficient is a positive and statistically significant value for either one-year or ten-year. This result is likely due to omitted variable bias and highlights their dynamic relationship.

bankruptcy rates is in conflict with the results of Shepard and Collins (1982). However, their analysis is based on time-series data at the national level while we are able to exploit cross-sectional variation in our panel setting. This result appears to indicate independence of the financial stress in the agricultural sector to that in the rest of the economy, controlling for interest rates and unemployment rates, which is of policy importance for those concerned with farm bankruptcies.

While only two variables have consistent insignificant effects across all specifications, the majority of the agricultural variables are null findings within these regressions with the exception of agricultural land variables. We emphasize that our agricultural measures are at the regional level and not at the farm level, therefore these results may be due to data limitations. While it may be the case that government payments, for example, are a strong predictor that a particular farm will file for bankruptcy, it is not the case that these regional indicators have predictive power for bankruptcy rates. While this result may seem unexpected, we find this to be helpful for policymakers in terms of targeting particular areas of the farm economy to alleviate financial stress. Targeting regional agricultural factors may not result in improvements in the financial stress levels of farms insofar as financial stress is measured through bankruptcies. Our findings show that fewer agricultural variables have significant impacts on bankruptcy rates than agricultural factors such as debt-to-asset ratio, net farm income per farm, and proportion of government payments to total net farm income found to have significant impacts in Dixon et al. (2004).

An additional emphasis with Table 2 is that Chapter 12 has been both a temporary and a permanent measure across the years of interest. This is problematic for disentangling transitory and permanent effects from having a chapter of bankruptcy available to farmers. To the extent that the passage of BAPCPA signals the change from transitory effects to permanent, we turn to interacting all covariates with the post-BAPCPA dummy to evaluate which variables may have disproportionate transitory and permanent effects. The results are only presented for the core states subset due to the better fit of models.

BAPCPA Results

Table 3 presents the results of the models which also interact the passage of BAPCPA with the main variables of interest. The first and third columns represent the non-interacted effects of each variable, which would be the transitory effects of Chapter 12. The second and fourth columns are the interaction terms of the main variables with the post-BAPCPA dummy, which represent the permanent effects of farmer bankruptcy post-BAPCPA. A Wald test that the interaction terms are not jointly different from zero is strongly rejected across both the district and state level regressions, which would indicate that there are both transitory and permanent effects due to Chapter 12 legislation that can be identified.

In the previous results for the models without interaction terms, the variables which have consistently significant impacts on bankruptcy rates are the one-year interest rate, unemployment rate, and agricultural land values. Evaluating these variables from the pre- and post-BAPCPA context illustrates that the one-year interest rate and unemployment rate have had inverse impacts as both are positively related to bankruptcy rates prior to BAPCPA yet negatively related post-BAPCPA. Their aggregate effects are both positive in model 1, which captures a mixture of the transitory and permanent effects. The post-BAPCPA effects (which can be calculated as $\tilde{\beta} + \gamma$) across the interest rates and unemployment rates do not significantly differ from 0 for either the districts or state regressions (we use an F-Test for the $\tilde{\beta} + \gamma = 0$ restriction for each of the independent variables and all F statistics are less than 1.6). Of interest, the post-2005 period experienced elevated unemployment rates and the Federal Funds Rate pushed interest rates towards the zero bound while much of the farming economy fared well with high net farm incomes. However, the mechanism for interest and unemployment rates no longer having a statistically significant effect on farm bankruptcies post-BAPCPA cannot be identified within our model and is beyond the scope of this paper.

Across both specifications in Table 3, the agricultural land value coefficients have the same sign for both district and state level regressions based on the BAPCPA interaction. The pre-BAPCPA regime coefficients are not significantly different from zero -- with the exception of current value based on the district level -- while the post-BAPCPA ($\tilde{\beta} + \gamma$) effects are all statistically significant (all F statistics are greater than 5.2). Further, a potentially dynamic

relationship between the current land values (negative association) and the lagged land values (positive association) is exhibited on bankruptcy rates as seen in Table 2 across pre- and post-BAPCPA periods. The coefficients are of similar magnitudes yet in opposite directions, which would suggest that stagnant land values from year-to-year would have a null effect on the bankruptcy rate. A further implication that a rise in lagged land values along with a fall in current land values would put upward pressure on bankruptcy rates. This dynamic relationship merits more research into modelling how land values changes over time affect the farm bankruptcy rate.

Conclusion

This article examines the factors which affect the financial stress of a farm as well as addressing a new question: how does BAPCPA affect farm's financial stress? Using Chapter 12 bankruptcy filings from 1997 to 2016, we find that it is largely macroeconomic factors (interest rates and unemployment rate) which affect the financial position of farms although land values appear to also affect farm bankruptcy rates among the agricultural factors. From a policy perspective, our findings show that policy makers which aim to improve agricultural indicators (debt-to-asset ratio, working capital to expense ratio, government payments, etc.) as a way to alleviate financial stress should not expect to see a corresponding drop in farm bankruptcies. However, our results are only at the state and district level and do not extend to the farm level, whereby there may be specific farms which may have financial stress lessened due to a change in one of the agricultural indicators that we could not find evidence for an association with bankruptcy filing rates.

Our results also indicate that agricultural land values are highly related to bankruptcy filing rates and that this relationship is dynamic. Our models only use a current and lagged value, but it may be the case that there is a more complex relationship with the two than we posit. Further research is merited in evaluating how the land values, which make up over 80% of a farm's equity, can affect a farm's likelihood of filing for bankruptcy. It appears the relationship is dynamic in that a rise and fall of land values in consecutive periods indicates increased bankruptcies due to the positive and negative coefficients, respectively.

Our model fits appear to indicate that regional ARMS analysis may not be appropriate below the state level unless the core states are utilized. The sampling design of ARMS is complex and does not necessarily conform to the political boundaries of counties. Therefore, there should be caution for analysts when attempting to utilize ARMS for sub-state regional issues.

There does appear to be a regime shift in the relationship between farm bankruptcies post-BAPCPA with respect to the interest and unemployment rates that suggests these rates are no longer predictive indicators of farm bankruptcies post-BAPCPA. The result for agricultural land value remains post-BAPCPA, although its magnitudes are lessened. However, many of the predictors have in both periods indicating that farmers are likely taking advantage of Chapter 12 regardless of its status as temporary or permanent. Making farmers aware of Chapter 12 helps them to increase their options in reducing financial stress for their farms.

As the farm sector has recently experienced downturn with declining farm incomes and land values, it is important to note a concern that financial distress and bankruptcy rates will be on the rise. A prolonged period of low commodity prices and falling land values may increase the distress of very indebted farmers who may have taken on more debt to expand their operations. Bankruptcies seem to be a lagging indicator of financial stress and indeed there has been a small uptick in bankruptcy rates in the last quarter of 2016. However, the farm sector seems to still have strong equity positions which mitigates the effects of the current downturn so farm bankruptcy rates are still near historic lows.

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Tables

Table 1 Descriptive Statistics for 1997-2015

	State		District		Source
	Mean	Standard Deviation	Mean	Standard Deviation	
Farm Bankruptcy Rate (per 10,000 Farms)	2.904	3.868	3.609	15.283	Table F-2
Non-Ag Bankruptcy Rate (per 10,000 establishments)	54.55	61.65	53.233	51.321	Table F-2 and CBP
Consumer Delinquency Rate	2.50%	1.79%	---	---	FDIC Call Reports
Agricultural Delinquency Rate	2.49%	2.59%	---	---	FDIC Call Reports
Unemployment Rate	5.60%	1.95%	5.82%	1.99%	Bureau of Labor Statistics
Value of Agricultural Land (per acre)	\$3,638	\$3,302	---	---	USDA June Area Survey
Acreage of Operation (per farm)	124	138	112	117	ARMS
Total Assets (per farm)	\$517,012	\$247,971	\$546,003	\$956,450	ARMS
Net Farm Income (per farm)	\$5,320	\$7,132	\$8,923	\$105,316	ARMS
Share of Government Payments to Gross Cash Farm Income (per farm)	1.23%	3.51%	1.30%	4.07%	ARMS
Debt-to-Asset Ratio (in percent)	1.257	3.117	1.325	3.42	ARMS
Working Capital to Expense (in percent)	38.46	45.86	43.52	79.37	ARMS
Debt Service Ratio (in percent)	0.559	4.716	1.118	16.364	ARMS
Ratio of Household Off-Farm Income to Total Income (in percent)	0.986	0.139	1.02	1.8	ARMS
Share of Farmers with Bachelor's Degree	25.20%	11.00%	25.00%	13.40%	ARMS
1-year Interest Rate	2.46%	2.20%	---	---	FRFD
10-year Interest Rate	3.97%	1.47%	---	---	FRED

Note: Farm values are the mean of the region of interest where each region's value is based on a median estimate of the variable from ARMS. Further, interest rates do not vary by region and represent the mean and standard deviation from 1997 to 2015.

Table 2 Panel Data Models for Farm Bankruptcy Rates

Farm Bankruptcy Rates per 10,000 Farms	District Level ^a		State Level ^a	
	All States	Core States	All States	Core States
Post-BAPCPA Dummy	-1.059 (1.198)	-0.834* (0.440)	-0.388 (0.437)	-0.408 (0.312)
1-year Interest Rate	0.274 (0.259)	0.780*** (0.236)	0.483*** (0.117)	0.541*** (0.104)
10-year Interest Rate	-0.612 (0.514)	-0.849*** (0.322)	-0.313 (0.239)	-0.512** (0.205)
Non-Ag Bankruptcy Rate (per 10,000 establishments)	0.001 (0.004)	0.004 (0.006)	0.0002 (0.002)	-0.006 (0.007)
Consumer Delinquency Rate	-0.923*** (0.307)	-0.179 (0.169)	-0.499*** (0.141)	-0.282 (0.198)
Lagged Consumer Delinquency Rate	0.896** (0.443)	0.277 (0.233)	0.294*** (0.095)	0.165 (0.208)
Agricultural Delinquency Rate	0.389 (0.341)	-0.094 (0.375)	0.142** (0.067)	0.367*** (0.117)
Lagged Agricultural Delinquency Rate	-0.576 (0.424)	0.113 (0.377)	-0.107 (0.081)	-0.189 (0.254)
Unemployment Rate	0.303 (0.193)	0.366** (0.155)	0.580*** (0.140)	0.460** (0.204)
Value of Agricultural Land (per acre) (\$1,000s)	-2.331*** (0.848)	-2.157*** (0.588)	-1.721 (1.058)	-1.400** (0.633)
Lagged Agricultural Land Value (\$1,000s)	2.151*** (0.831)	2.076*** (0.473)	1.868* (0.999)	1.744*** (0.469)
Acreage of Operation	0.009 (0.006)	0.007** (0.003)	0.005 (0.001)	0.010*** (0.002)
Total Assets (\$100,000s)	0.468*** (0.081)	0.314 (0.311)	-0.165 (0.139)	-0.493*** (0.109)
Net Farm Income (\$100,000s)	-2.494*** (0.563)	-3.933 (3.234)	-2.584 (2.836)	-1.270 (5.349)
Share of Government Payments to Gross Cash Farm Income from	0.017 (0.048)	-0.033 (0.065)	-0.077 (0.051)	-0.055 (0.057)
Debt-to-Asset Ratio	-0.006 (0.233)	0.358 (0.271)	0.176** (0.084)	-0.003 (0.062)
Working Capital	-0.015 (0.010)	0.004 (0.005)	0.003 (0.005)	0.004 (0.003)
Debt Service Ratio	-0.024 (0.030)	-0.002 (0.007)	-0.003 (0.038)	-0.073** (0.029)

Ratio of Household Off-Farm Income	-0.291***	3.064	-1.314	3.820*
to Total Income	(0.106)	(2.547)	(1.744)	(2.205)
Share of Farmers with Bachelor's Degree	-0.070	0.081**	0.008	-0.033
	(0.059)	(0.034)	(0.015)	(0.025)
Number of Observations	1740	700	960	300
Adjusted R-Squared	-0.015528	0.12822	0.11169	0.28585

Notes: All standard errors are clustered at the state level. * indicates significance at the 0.1 level, ** indicates significance at the 0.05 level, and *** indicates significance at the 0.01 level.

^a District-level models aggregate data at the district level, while state level models aggregate data at the state level.

^b Either all states were used in the estimation or only the 15 core states with highest value of agricultural production.

Table 3 Panel Data Models for Farm Bankruptcy Rates with Interaction Terms

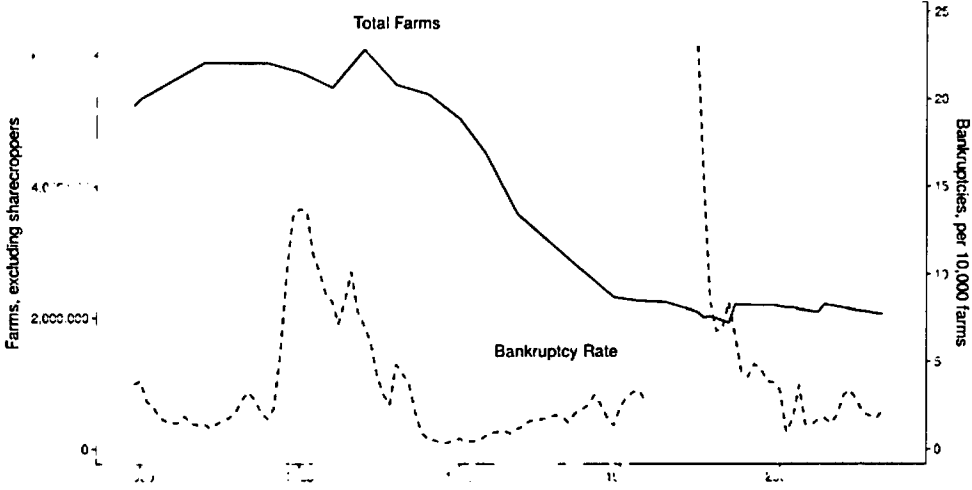
	District Level, Core States		State Level, Core States	
	Main Variables	Interaction Terms with Post-BAPCA Dummy	Main Variables	Interaction Terms with Post-BAPCA Dummy
Post-BAPCPA Dummy	9.142 (9.993)	---	2.570 (5.262)	---
1-year Interest Rate	0.455* (0.237)	-0.477 (0.461)	0.609*** (0.222)	-0.418 (0.355)
10-year Interest Rate	-0.206 (0.653)	-0.122 (0.861)	-0.661*** (0.248)	0.376 (0.511)
Non-Ag Bankruptcy Rate (per 10,000 establishments)	-0.006 (0.009)	0.043** (0.020)	-0.008 (0.008)	0.007 (0.013)
Consumer Delinquency Rate	0.149 (0.703)	-0.495 (0.783)	-0.657 (0.549)	0.479 (0.510)
Lagged Consumer Delinquency Rate	-0.753 (0.619)	0.957 (0.669)	-0.453 (0.433)	0.661* (0.351)
Agricultural Delinquency Rate	-1.301 (1.297)	1.516 (1.357)	0.082 (0.333)	0.381 (0.352)
Lagged Agricultural Delinquency Rate	0.452 (0.663)	-0.531 (0.809)	0.027 (0.323)	-0.297 (0.344)
Unemployment Rate	0.667* (0.369)	-0.759** (0.375)	1.062*** (0.403)	-0.967** (0.457)
Value of Agricultural Land (per acre) (\$1,000s)	-2.119*** (0.760)	0.386 (1.110)	-1.468 (0.738)	-0.121 (1.004)
Lagged Agricultural Land Value (\$1,000s)	1.307 (0.905)	0.074 (1.206)	1.443 (0.970)	0.145 (1.323)
Acreage of Operation	0.005 (0.004)	-0.010** (0.005)	0.011*** (0.003)	-0.010 (0.007)
Total Assets (\$100,000s)	0.307 (0.360)	-0.034 (0.294)	-0.642*** (0.111)	0.430*** (0.161)
Net Farm Income (\$100,000s)	-4.065 (4.458)	1.268 (5.549)	1.332 (6.531)	-4.055 (7.840)
Share of Government Payments to Gross Cash Farm Income	-0.014 (0.086)	0.114 (0.126)	-0.034 (0.074)	0.115 (0.109)
Debt-to-Asset Ratio	0.362 (0.271)	-0.290** (0.147)	0.033 (0.058)	-0.573*** (0.186)
Working Capital	-0.001	0.005	-0.004	0.006

	(0.009)	(0.008)	(0.006)	(0.008)
Debt Service Ratio	-0.005	0.022	-0.060***	0.204
	(0.009)	(0.078)	(0.022)	(0.131)
Ratio of Household Off-Farm Income	3.302	-5.192	5.597*	-1.173
to Total Income	(2.760)	(5.979)	(3.324)	(5.453)
Share of Farmers with Bachelor's Degree	0.124**	-0.110*	-0.021	-0.002
	(0.051)	(0.061)	(0.026)	(0.027)
Number of Observations	700	---	300	---
Adjusted R-Squared	0.15638	---	0.32811	---

Notes: All standard errors are clustered at the state level. * indicates significance at the 0.1 level, ** indicates significance at the 0.05 level, and *** indicates significance at the 0.01 level.

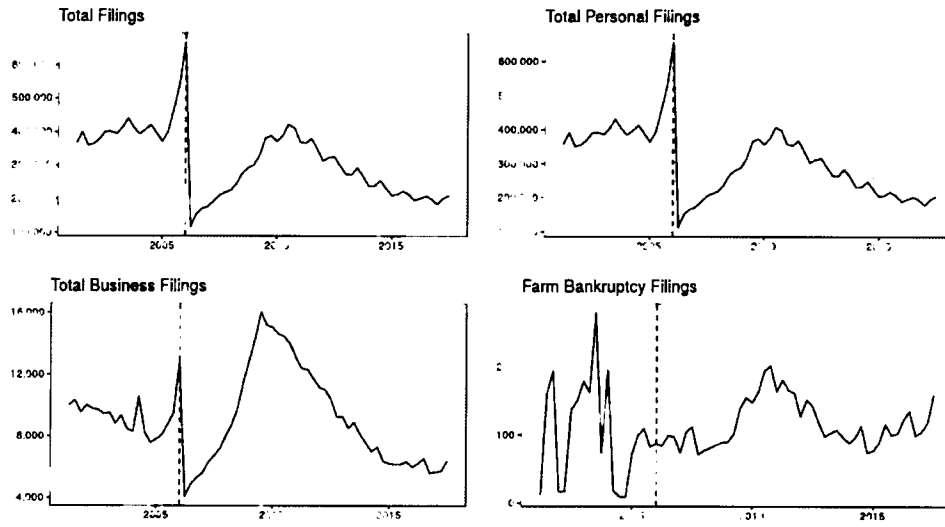
Figures

Figure 1 Historical Farm Bankruptcies



Source: Data prior to 2003 from Stam and Dixon (2002); from 2003 onward from Judicial Publications Table F-2 and USDA-NASS.

Figure 2 Bankruptcy Filings: Total, Total Personal, Total Business, and Farm Bankruptcies

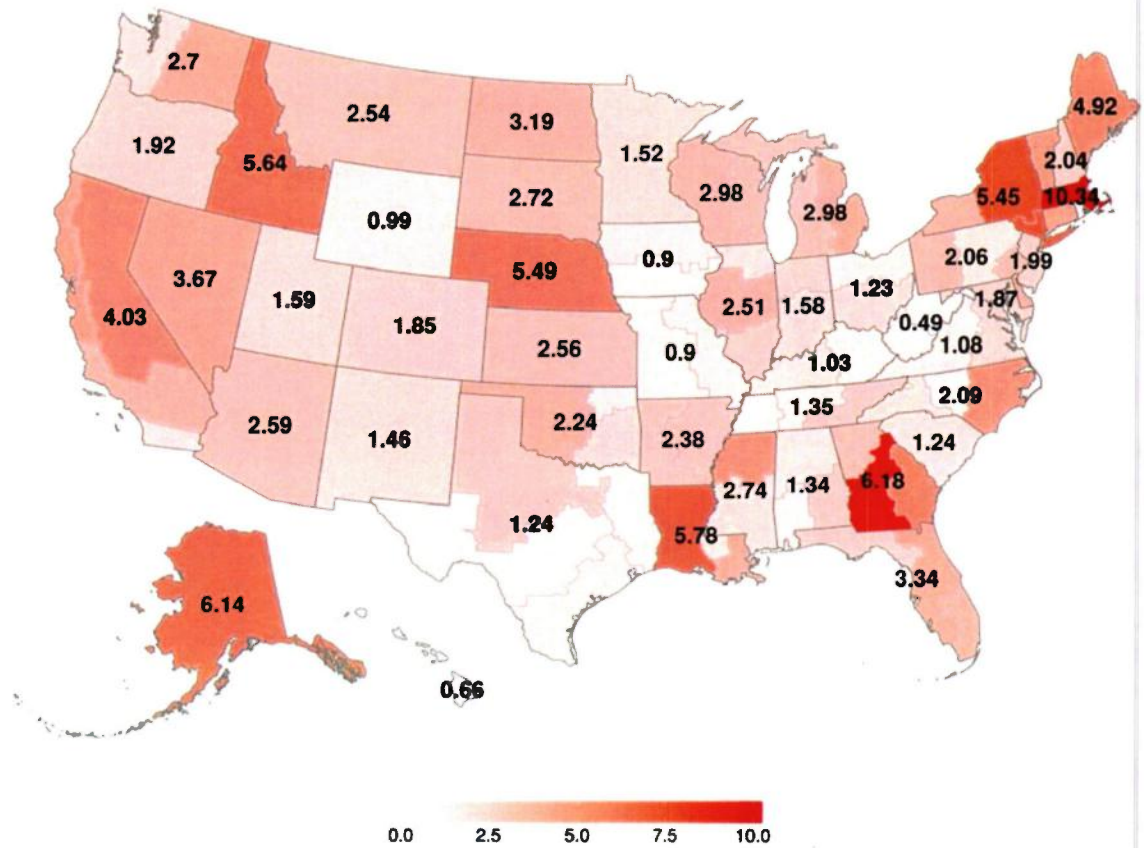


Note: Red vertically dashed line indicates the enactment of BAPCPA, which was the quarter ending on December 30th 2005.

Source: Judicial Business publications Table F-2

Figure 3 Farm Bankruptcy Rates by State and District

Farm Bankruptcies filed per 10,000 farms
Annualized across 1997 to 2016: 2.33



Note: Bankruptcy rates are shown as a number for each state while shading indicates bankruptcy rate at the district level.