

---

# Differences in Sources of Credit by Sector: An Exploration of Bankruptcy Records from Mississippi, 1929-1936

---

Enterprising America Conference, December 2013

Mary Hansen, American University

11/20/2013

From the end of the Civil War through the Great Depression there was a convergence of interest rates and rates of return between banks across regions of the United States. Rates of return between sectors of the economy, however, did not converge. The reasons why rates of return did converge have not been adequately explored, primarily because of a lack of micro-level data on the sources of credit that have the potential to move capital between regions and between sectors. This paper exploits newly-collected, highly-detailed data on sources of credit drawn from documents filed by a sample of petitioners for bankruptcy in the 1930s. The bankruptcy documents reveal that manufacturers had both fewer long-distance creditors and fewer financial intermediaries as creditors than either merchants or farmers. While financial intermediaries appear to actively moved capital from low to high rates of return within the agricultural and distribution sectors, they do not appear to have been active—even as late as the 1930s—in moving capital between sectors.

**Acknowledgements:** Funding for the bankruptcy case file sample for Mississippi came from an American University Faculty Research Support Grant and a Mellon Grant from the AU College of Arts and Sciences. Computing resources were provided through an NSF Major Research Instrumentation Program Grant (BCS-1039497). Thanks to the staff at the Atlanta Regional Branch of the National Archives for their enthusiasm and patience. Thanks also to Rebecca Warlow and Mary Rephlo in NARA administration for facilitating the project. Research assistance from Megan Fasules and Jess Chen has been essential. A complete list of research assistants and funders for the national sample of bankruptcy case files is available on the project home page (<http://www.american.edu/cas/economics/bankrupt/>).

# Differences in Sources of Credit by Sector: A View from Bankruptcy Records, Mississippi 1929-1936

Mary Eschelbach Hansen, American University

## Introduction

Within a single market economists expect inputs to flow freely to their highest-value use. With free-flowing inputs, (risk-adjusted) rates of return should converge across geographic regions and across sectors of the economy. Banks and other financial intermediaries are thought to be the primary conduits for the flow of the key input of capital between regions and sectors.

An extensive literature documents the development of interregional banking (Davis 1965, James 1976, Sylla 1969, see also Binder and Brown 1991). Moreover, innovators in financial markets in the late nineteenth and early twentieth centuries—firms such as investment companies (Carroso 1970), trust companies (Neal 1971), commercial paper houses (Davis 1965), mortgage lenders (Snowden 1995), and small loan companies (Guinnane, Curruthers, and Lee 2011)—aimed directly to connect creditors in low-rate financial centers of the East and North to a borrowers in the South and West.

Yet apparently free-flowing capital through financial institutions did not eliminate differences in rates of return between sectors. Atack, Bateman, and Weiss (1982) show that the rate of return in manufacturing was as much as double the rate of return in agriculture in 1860. Early tax records reveal that convergence in rates of return between sectors had not yet been achieved in the late 1920s (Epstein and Clark 1934).

Why didn't the integration of financial markets bring enough capital into manufacturing firms to equalize interest rates? As a first step towards answering this question, I document the sources of credit of manufacturers, farmers, merchants, and individual consumers in Mississippi during the period 1929 to 1936. I use data on thousands of debt obligations recorded in the court records of 780 debtors who appeared in bankruptcy proceedings. Under the Bankruptcy Act of 1898, debtors were required to submit to the court a complete and detailed listing of their debts. The forms from the court asked for the name of each creditor, the location of each creditor, the purpose of the debt, and the year the debt was contracted. As a result, the data used here are the first to allow a mapping of the sources of credit utilized by consumers and by different types of businesses.

I show that manufacturers had few financial intermediaries among their creditors. Most of the creditors of manufacturers were private individuals and commercial businesses. Moreover, very few of the creditors of manufacturers were more than one county away. Merchants and farmers had more banks as creditors and more long-distance creditors than did manufacturers. In sum, while financial intermediaries appear to have actively moved capital from areas of low to high rates of return *within* the agriculture and distribution sectors, they did not bring much capital into the manufacturing sector.

## Rates of Return, Financial Market Integration, and Firm Finance

The current paper is at the intersection of the literature on rates of return by sector, the literature on firm finance, and the literature on the integration of capital markets. From studies of rates of return, it is known that manufacturers enjoyed higher returns on capital than farmers or miners as late as 1928, but it is not known whether firms in the different sectors had access to the same sources of credit. From studies of firm finance, it is known that start-ups relied heavily on personal connections for funds, but the financing of improvements and expansion in established firms, and firms in established or traditional industries, has been less thoroughly studied. From studies of integration in the banking sector, it is known that banks moved capital across regions, but how extensively banks and other financial institutions lent to firms in the various sectors, as well as to individuals, is not known. This paper bridges these literatures through an examination of all of the sources of credit of firms in all sectors and individuals in many occupations.

Atack, Bateman, and Weiss (1982) use data from samples of the 1850, 1860, and 1870 manuscript censuses of manufacture to compute the ratio of net earnings to gross assets for each firm or farm. They produce conservative estimates by assuming that the firm makes annual investment sufficient for capital replacement. They compare these rates in manufacturing to rates of return in agriculture (Bateman and Atack 1979) and in transportation (Atack et al 1975, Mercer 1970). Their basic findings are reproduced in table 1. The rate of return in manufacturing enterprises was 1.6 times the rate in agriculture in the east, 2.9 times the rate in the west, and 2.5 times the rate in the south. Rates of return across regions within sectors also varied, but by much less. The rate of return on capital in mainline transportation was similar to rates in agriculture, while the rate of return to steamboating on

**Table 1. Rates of Return by Sector in the 19<sup>th</sup> Century**

	1850	1860	1870
<u>Manufacturing</u>			
East	21.4	21.8	30.6
West	32.7	27.9	26.4
South	25.3	26.1	31.3
<u>Agriculture</u>			
East		13.2	
West		9.6	
South		10.6	
<u>Transportation</u>			
Steamboat, Trunk River	8.5		
Steamboat, Tributary River	24.1		
Central Pacific RR	14.4		

*Source:* Atack, Bateman, and Weiss (1982), page 153.

treachorous tributary rivers was closer to the rate of return in manufacturing. They further demonstrate that higher returns per unit of risk—defined as the difference between a firm’s rate of return and the estimated riskless rate divided by the standard deviation of rates—persisted for very small manufacturing firms in all regions, for middle sized firms in the south, and for firms of all sizes in the east. Finally, they show that investment between census years did not flow towards those excess returns. They conclude that gaps in the rates of return between sectors were caused by differences in northern and southern attitudes towards risk and “the difficulties of small enterprises, particularly sole proprietorships, in obtaining external financing” (p. 150).

Though it is not possible to extend the Atack-Bateman-Weiss methodology into the twentieth century because of the loss to fire of relevant manuscript census data, early tax records provide similar information. Epstein and Clark (1934) compute the ratio of net income to capitalization in 3,144

incorporated firms in 1928. The firms are divided into four sectors: manufacturing, trading, financial and mining. They are further divided into industry groups: 73 groups in manufacturing, 22 in trade, 5 in finance, and 6 in mining. Because all of the firms in the Epstein-Clark study were incorporated, they are likely larger and better connected than the typical firm in the sample used by Atack, Bateman and Weiss. Nonetheless rates of return in 1928 averaged across groups in 1928 were 7.6 percent in mining, 10.3 percent in finance, 10.6 percent in wholesale and retail trades, and 12.1 percent in manufacturing (Epstein and Clark 1934). In 1928 the rate of return in manufacturing was 1.6 times the rate in mining; the ratio of rates of return in these two sectors is just as large as the difference between the rates in eastern manufacturing and agriculture had been 70 years earlier.

As Atack, Bateman, and Weiss note (pp. 150-151), evidence of persistent differences in rates of return between sectors is surprising in light of evidence that capital moved ever more easily as the economy developed in the late nineteenth and early twentieth centuries. Many of the contours of continued convergence in capital markets after the Civil War are clear (key citations include Davis (1965), James (1976), and Sylla (1969), also see the summary of the literature in Binder and Brown (1991)). Although recent work by Jaremski and Rousseau (2012) shows that the National Bank Acts of 1863 and 1864 likely resulted in a redistribution of bank capital away from rural areas and towards industrial areas in the Old Northwest, it is also likely that the resurgence of state-chartered banking spurred by the Gold Standard Act of 1900 and by changes in state banking regulations likely jolted financial markets towards more complete integration (Choi and Dupont 2007). The telegraph and telephone enhanced long-distance monitoring of distant borrowers by banks, which supported increased competition between banks (Rousseau 1998). Though some places may have been left out,<sup>1</sup> in 1915 almost 30 percent of the loans of eastern reserve city banks were made interregionally (U.S. Comptroller of the Currency 1915, pp. 18-19).

In order for the interregional integration of the banking system to effectively close the gap between manufacturing rates of return and returns in other sectors, financial institutions would need to directly invest in manufacturing enterprises across some distance, or manufacturing enterprises would need to tap into the resources of local financial institutions who themselves received funds from distant depositors or investors.<sup>2</sup> Existing micro studies of the sources of credit to manufacturing firms describe relations between manufacturers and financial institutions as insular and local (Cull et al 2006;

---

<sup>1</sup> Dispersion remained between non-reserve cities at the turn of the 20<sup>th</sup> century (Smiley 1975). Otherwise unexplained regional differences in bank profits persisted into the 1900s (Sullivan 2007), and local shocks far from New York dominated disturbances to regional interest rates until after WWII (Landon-Lane and Rockoff 2007). Rural areas may have been relatively disconnected: A network of banks was still forming around San Francisco (Odell 1999) and rural banks in the late 1800s had lower rates of return than urban banks (Keehn 1980), quite possibly because of high rates of bank failures in predominantly rural places (Rockoff 1977). The South was not fully integrated into the national system as late as the 1970s (Osborne 1988).

<sup>2</sup> The focus here is on bank finance rather than equity finance. See Neal and Davis (2007) for a discussion of the roles of bank versus equity finance in the Second Industrial Revolution.

Lamoreaux 1994; Lamoreaux, Levenstein, and Sokoloff 2006).<sup>3</sup> For example, private funding was more important than funding through financial institutions to inventors in Cleveland in the early twentieth century. Private funding was secured by persuading colleagues, friends, and family of the potential profitability of new inventions, such as new types of lighting fixtures (Lamoreaux, Levenstein, and Sokoloff 2006; see also Levenstein 2013).

It is not known whether the sources of credit of these innovative firms in emerging industries differed substantially from the sources of credit of established firms or firms more traditional industries, such as lumber milling. Similarly—despite the importance of trade credit to the economy, the innovations of mortgage lending, and the growth of the consumer credit market mentioned in the introduction—the sources of credit of manufacturers have never been systematically compared to the sources of credit of merchants or farmers, and the sources of credit of businesses have never been compared to the sources of credit of individual consumers. Here I exploit previously unused records describing the sources of credit of businesses and consumers: documents filed in the federal district courts pursuant to petitions for bankruptcy.

### **New Data from Bankruptcy Case Files**

From 1898 (when the first permanent bankruptcy law was passed) through 1939, nearly 1.3 million petitions for bankruptcy protection were filed; 38 percent were cases in which the petitioner had primarily business debt (DOJ, various years).<sup>4</sup> Although the bankruptcy statute required only that the files from certain bankruptcy cases be held permanently (railroad and municipal cases, for example), relatively few files have been destroyed or lost. The court's file for each case contains detailed information on the assets, debts, incomes, and pre-filing experiences of filers, as well as information on how the case progressed through court. The case files are a rich source of long-run, micro-level data on the balance sheets of business and households.

The documents used here are from a sample of 780 cases filed in the federal district courts in Mississippi from 1929 through 1936. The Mississippi sample constitutes a pilot project for a national sample of the

---

<sup>3</sup> For example, Lamoreaux, Levenstein, and Sokoloff (2006, page 7) note that manufacturing firms in Ohio did not use the Cleveland Stock Exchange to raise capital: the listings were mainly useful to local brokers who from time to time had small lots of these securities to offer the public.”

<sup>4</sup> The Constitution reserves for Congress the power to enact of bankruptcy law. There were three temporary laws temporary passed in the nineteenth century. The first permanent law was passed in 1898. There has been little work using any of the files. Exceptions are studies by Gross, Newman, and Campbell (1996), who consider bankruptcy among women in the nineteenth century, and Balleisen (2001), who considers antebellum commercial bankruptcy. Hansen and Hansen (2007) describe how business cases became a less important part of the bankruptcy case load after the Depression.

bankruptcy case files from 1898 through the phase-in of the electronic court records system around the year 2000.<sup>5</sup> The Appendix contains information about the sample and its representativeness.

The data used here come from three documents: the petition that starts the case, the summary of debts and assets, and the detailed schedules of debts. The petition and other documents contain the name of the debtor, which may be the name of a person, a business, or both. From the name of the debtor we infer whether the case was a business case or a consumer case. For example, a debtor name of “James Smith” indicates that the debts were consumer debts; “Smith’s Store, a Corporation” indicates that the debts were entirely business debts; and “James Smith doing business as Smith’s Store” indicates that the business was not incorporated and that the debts were mainly, but not exclusively, business debts.<sup>6</sup> Table 2 gives the distribution of business and consumer cases in the sample. Business debtors are 59 percent of the sample; non-business debtors are 40 percent. Additionally, there were five municipal entities (four drainage districts and one town) comprising 0.6 percent of the sample, and one railway (railway bankruptcy was governed under separate bankruptcy rules).

The ratio of business to consumer bankruptcy in the sample is consistent with what we know about the use of the bankruptcy law from other sources.<sup>7</sup> The published statistics show that two-thirds of those appearing in court under the bankruptcy law in Mississippi between 1929 and 1936 had business or professional debt (US DOJ, various years). In fact, consumer bankruptcy was much less common in the 1920s and 1930s than it is today (Hansen and Hansen 2007). Moreover, the rate of consumer bankruptcy in Mississippi was just 5 per 100,000 in the 1920s and 1930s, compared to about 17 per 100,000 nationally. This indicates that state laws governing collection from consumers, such as garnishment law, were viewed by many as relatively toothless. Creditors may have been slow to pursue Mississippi state remedies against individuals because action would not result in a quick collection to ease their own liquidity problems. As a result, debtors in Mississippi were unlikely to rush to federal bankruptcy court. In states with toothless collection laws, the bankruptcy rate was not much affected by the Great Depression (Hansen and Hansen 2012).

To categorize the occupation of consumer debtors and the sector in which business debtors operated, I use information on the petition and related documents. The distribution of observations across occupations and sectors is also shown in table 2. Consumer debtors include skilled and unskilled blue collar workers (13.6 percent of the sample), white collar workers (6.8 percent), and farmers (6.5 percent). Merchants both wholesale and retail, were the largest group (30 percent of the sample). Professionals (4.9 percent) and manufacturers (3.5 percent) were smaller fractions of debtors in the

---

<sup>5</sup> Depression-era Mississippi was chosen for a pilot project because of the possibility of using the natural experiment identified in Richardson and Troost to explore the impact of bank bailouts on the real economy; see Hansen (2012). A second pilot project collected post World War II case files from Maryland.

<sup>6</sup> Additional information for some cases was obtained from the extant docket sheets and from the *Dun & Bradstreet Reference Book of American Business*.

<sup>7</sup> A slightly lower percentage (55 percent) of the debtors listed in the extant docket books were business debtors. There are two reasons for the small difference. The first is that the division court at Aberdeen served a considerable number of individuals and farmers, but the sample omits Aberdeen as discussed in the appendix. The second reason is that the purpose of the two sources differs: the docket books serve only to summarize and serve as a quick reference for the status of the case, while the case files contain more detail about the debtors.

sample. Insufficient information was available to categorize the occupations of 34.7 percent of the debtors in sample. Despite the loss of this information, the proportions of merchants, manufacturers, professionals, and farmers that were identified in the sample of cases are similar to the proportions reported in the published statistics of cases closed for Mississippi. Merchants dominate bankruptcy filings before World War II, and merchants were a larger share of bankruptcy filers in Mississippi than they were nationwide, likely reflecting Mississippi’s position at the southern end of a major waterway (DOJ, various years).

Among the 27 manufacturers, 10 milled lumber or made lumber-related materials such as veneer and plywood boxes. Five were food and beverage makers, and three were foundries or machine works. Eight firms were sole representatives of their industries. Examples are a neon sign maker, a headlight manufacturer (“Holliday Life-Saving Headlight Co.”), a brick maker, and a suspender manufacturer.

**Table 2. Summary of Debtors and Debts in the Sample**

	Number of Debtors	Percent	Number of Debts*	Average Size of Individual Debts (1929\$) *		Number of Debts*	Average Size of Individual Debts (1929\$)*
<u>Type of Debtor</u>					<u>Debts Owed by Type of Creditor**</u>		
Consumer Debtor	311	40.0	4158	2,398	Unknown	1,571	754
Business Debtor	463	59.0	17850	611	Private person	3,528	1,682
Municipal Entity	5	0.6	16	72	Commercial business	16,118	429
Railway	1	0.1	n/a	n/a	Financial institution	729	9,360
Total	780	100.0	22,024	948	Public entity	70	191
					Civic association	8	1,764
					Total	22,024	948
<u>Occupation or Type of Business of Debtor</u>					<u>Debts Owed by Reason for Debt*</u>		
Not Known	269	34.7	7,485	1,306	Unknown (missing or invalid data)	3,666	1,843
Unskilled blue collar***	37	4.7	479	1,400	Wages owed	560	228
Skilled blue collar	69	8.9	915	199	Taxes	350	592
Unskilled white collar	37	4.7	437	766	Domestic support	20	226
Skilled white collar	16	2.1	192	637	Total priority debt	436	1,197
Merchant	239	30.6	9,606	422	Car (vehicle, accessories, repair)	486	350
Manufacturer	27	3.5	1,781	1,286	Home (property, rent)	538	5,079
Professional	34	4.4	733	1,724	Household goods	5,506	339
Farmer	52	6.7	396	5,539	Inventory	3,435	342
Total	780	100.0	22,024	948	Miscellaneous (verbatim response)	4,552	1,113
					Adverse judgements/ legal settlement	379	1,190
					Utilities	691	697
					Household appliances	104	459
					Fixtures and machinery	67	1,181
					Food	194	323
					Farm related debt	33	2,343
					Loans or losses in financial markets	23	2,067
					Interest	51	1,813
					Attorney & court fees	67	2,592
					Medical	411	123
					Insurance	113	3,619
					Fees for other prof. services	140	648
					Total	22,024	948

\*Includes only observations for which amount of debt is reported.

\*\* An observation is one debt obligation which represents a debtor-creditor pair.

\*\*\*There is an extreme outlier in the “unskilled blue collar” category. It is a mortgage note issued by a private person.

### Schedule A. (3)

Creditors Whose Claims Are Unsecured.

N. B.—When the name and residence (or either) of any drawer, maker, and indorser, or holder of any bill or note, etc., are unknown, the fact must be stated and also the name and residence of the last holder known to the debtor. The debt due to each creditor must be stated in full, and any claim by way of set-off stated in the schedule of property. This sheet must be signed by the bankrupt at the end of the statement.

Names and residences of Creditors. If Residence Unknown, that fact must be stated	When and Where Contracted.	Nature and consideration of the debt, and whether any judgment, bond, bill of exchange, promissory note, etc., and whether contract- ed as a partner or joint contractor with any other person; and if so, with whom?	Amount
Ozark Pencil Co., St. Louis, Mo.	8/21/31 Drew, Miss.	Goods purchased open acct. individually	\$18 70
Panno & Bossetts Inc. New Orleans, La.	3-5 to 10-14-31 Drew, Miss.	Goods purchased open Acct individually	41 30
Plough Chemical Co., Memphis, Tenn.	10-14-30 to 9-14- 31; Drew, Miss.	Goods purchased open Acct individually	66 16
Procter & Gamble Dist. Co., Memphis, Tenn.	Aug. 8, 1931 Memphis, Tenn.	Goods purchased open Acct individually	26 20
Rudolph Jacobs & Co. Cincinnati, Ohio	April 21, 1931 Drew, Miss.	Goods purchased open account individually	73 15
Rigo Mfg. Co., Nashville, Tenn.	April, 1930 to July, 1931. Drew, Miss.	Goods purchased open account individually	53 30
Standard Oil Co.	July 7th. to Oct. 3d. 1931; Drew, Miss.	Goods purchased open account individually	46 75
Standard Candy Co., Nashville, Tenn.	Sept. 17., 1931 Drew, Miss.	Goods purchased open account individually	53 79
Taylor Paper Co., Memphis, Tenn.	Aug. 4 to Sept. 23 1931; Drew, Miss.	Goods purchased open account individually	52 61
Yale University Press New York, N.Y.	Feb. 27, 1930 Drew, Miss.	Goods purchased open account individually	20 00
Miss. Power & Lt. Co. Drew, Miss.	Aug. Sept & Oct. 1931; Drew, Miss.	Light & Power for store individually	75 00
Sou. Bell Tel & Tel Co Drew, Miss.	Sept & Oct. 1931 Drew, Miss.	Telephone for store individually	3 50
Miller & Hart, Chicago, Ill.	Aug. 3, 1931 Drew, Miss.	Goods purchased open account individually	23 14
J.O. Lampkin, Receiver Drew, Miss.	December 1930 Drew, Miss.	Note due on demand individually endorsed by S.M. Ruscoe	\$1,000 00
Burroughs Adding Mach. Co., Jackson, Miss.	June 1931 Drew, Miss.	Work on adding machine individually	2 50
Drew Insurance Agency Drew, Miss.	Sept. 1931 Drew, Miss.	Insurance on stock & fixtures; individually	11 92
C.C. Hay Drug Co., Como, Miss.	1930 Drew, Miss.	Goods purchased open account individually	12 36
Bob Cap Co., St. Louis Mo.	1931 Drew, Miss.	Goods purchased open account individually	5 63
TOTAL			

*M. Ruscoe*  
Petitioner

Figure 1. Detailed Schedule of Debts

Source: MS Northern District Clarksdale Division 1932 Accession 54A0463 Box 72x Case No. 1410



Particularly important to the current paper are the detailed descriptions of debts provided on the documents titled “Schedule A-1” through “Schedule A-4.” The first two schedules give priority debts (mainly taxes and wages owed) and secured debts. The last of the debt schedules lists liabilities on notes discounted; few debtors have any of these liabilities. Most debts owed are listed on Schedule A-3, which describes the unsecured non-priority debts owed. Almost all debts that can be discharged through the bankruptcy proceeding are listed on these schedules. Figure 1 shows the first page of Schedule A-3 for a debtor from Clarksdale, Mississippi, whose case commenced in 1932. The debtor was the sole proprietor of a retail store.

On this schedule, as on the other debt schedules, the creditor’s name is given. The nature of the debt is described in the third column. Debts listed on the Schedule A-3 and shown in Figure 1 include stock purchased on account; store fixtures purchased on credit, utility bills, and endorsed notes. Similar schedules for consumer debtors show personal loans from financial institutions and from personal acquaintances, doctor’s bills, local open accounts, legal judgments, and the like. The detailed schedules in the railroad case were not available.

Using the names of creditors and the information on the nature of the debt, creditors were categorized into the following types: private persons, commercial businesses, financial institutions, public entities and civic associations. A creditor was coded as a commercial business if the creditor’s name is a business name (such as a wholesale or retail store or manufacturer) or the creditor is associated with a debt in the nature of inventory or household goods. Financial institutions included banks, trust companies, building and loans, consumer loan or “small loan” companies, and the like. Federal land banks are treated as financial institutions. Public entities are primarily governments to which taxes are owed and court offices through which payments on judgments are made. Civic organizations include churches and fraternal organizations. The distribution of debts owed by type of creditor is shown in the top right panel of table 2. It was not possible to identify the creditor for 1,571 of debts (7 percent); just over 3,500 debts (16 percent) were owed to private persons; 16,000 debts (73 percent) were owed to commercial businesses, 729 debts (3 percent) were owed to financial institutions, and a small number of debts were owed to public entities and civic associations.

The distribution of debts across the various reasons for debt is shown in the right panel of table 2. It was not possible to determine the reason for 3,666 debts (17 percent). Twenty-one percent of debts were described only as “Miscellaneous.” Of clearly identified debts, the largest number financed the purchase of household goods (but not appliances) and inventory. Debt related to vehicle purchase or maintenance and debts for mortgage or rent were each just over two percent of debts.

Individual debts averaged \$948 (in 1929 dollars); the standard deviation is \$15,303. The largest debt recorded in the sample is \$1.5 million. Debts as small as \$0.10 are reported. The distribution of debts owed is heavily left-skewed: 10 percent are less than \$10; the median is \$68, the 99<sup>th</sup> percentile is \$11,880.

The individual debts owed by farmers were the largest of any occupational or business group. Similarly, the average debts owed by consumers are high compared to businesses because consumers money to

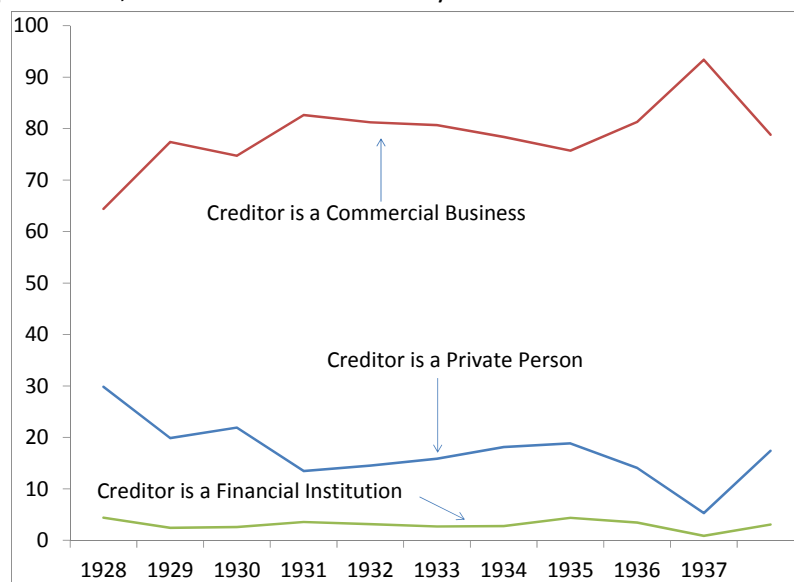
relatively few creditor but tended to have a small number of large debts. In contrast, businesses—especially merchants—owed a large number of creditors but owed each creditor a relatively small amount.

The location of each creditor is noted so that the court can alert the creditor and publish an announcement in the local newspaper; this information is used in the final section below to identify interregional lending. The date when the debt was contracted is also to be reported on the schedule, although this information is not always included. The level of detail on the schedules provides much more information about the importance of different types of debt instruments, about the uses of credit, and about the geographic extent of credit markets than any other data currently available.

### Caveats

Of course, this initial investigation of the sources of credit has shortcomings. Timing is the first concern. Because the pilot project focuses on the Depression, it is possible that the failure of banks during the credit crises of the 1930s creates a bias against finding banks as creditors in the sample. Figure 2 shows that this unlikely to be a major concern: The percentage of all debts owed to financial institutions varied little over the period of the sample. In fact, it was lowest in calendar year 1929 before the start of the

Depression and at one of its higher points in 1935. (Only one case in the sample is from the fourth quarter of 1929.) The biggest change over time in the composition of creditors came from a decline in the number of private individuals, which was offset by an increase in the number of commercial businesses. A second reason that timing may have minimal impact on the results is that 70 percent of the sample comes from courts the southern part of Mississippi, where there were fewer bank failures (Richardson and Troost 2009).



**Figure 2. Percent of Debts Owed to Types of Creditors by Year of Filing**

The source of the records may also be a concern. Are there biases associated with looking only at the sources of credit of debtors who wind up defaulting and using the federal bankruptcy law? Is bankruptcy randomly distributed across businesses and consumers? In the current paper, for example, there might be a concern that bankrupts were bad credit risks, they may be among the least likely to have bank credit compared to unobserved non-filers. The existing literature on bankruptcy is not informative on this issue. Correlates of the decision to file have mainly been studied using the Panel

Study of Income Dynamics (for example, Fay, Hurst and White 2002), which (a) has only about 250 observations of filers for bankruptcy, (b) only separates mortgage debt from other debt, and (c) observes filers in the 1980s, at which time consumers were more like to be home-owners who took advantage of the option to restructure debt through Chapter 13. Cross-sectional studies, both historical and modern, emphasize that much of the spatial variation in bankruptcy rates is explained by variation in state collection law (Hansen and Hansen, 2012; Lefgren and McIntyre 2009). Though strategic use of the bankruptcy law has been posited for modern consumers (Fay, Hurst and White 2002), observers during the 1930s attributed most consumer bankruptcies to bad luck: consumers file for bankruptcy mainly because they experience events such as job loss, medical problems, and automobile accidents (see Hansen and Hansen 2012).

The correlates of bankruptcy filing among businesses have mainly been studied for modern publicly-traded corporations. These studies, mostly of small samples in one sector, over short time horizons, and using data from company annual reports, tend to search for critical balance sheet ratios to predict bankruptcy in a one-year time horizon. For firms outside the financial sector, univariate models have nearly as much predictive power as more complicated models (Aziz and Dar 2006), suggesting little that would help us to understand selection biases in the distribution of types of creditors, types of debt, or the distance to creditors in the current sample.

In summarizing the state of the literature on bankruptcy among modern unincorporated small business, Berryman (1993) concludes that “although a great deal of work has been done...there is not really an overriding theme” (Berryman 1993). During the 1920s and 1930s, the growth of credit markets, state laws, and personal proxies for social capital appear to best explain cross-sectional differences in business filing rates but the explanatory power of the model is low (Hansen and Hansen 2008). Finally, I have argued elsewhere that the debtors in the sample who filed in 1930 and 1931 were in unexpectedly good financial position and may have sought bankruptcy protection only because creditors tried to collect unexpectedly in response to their own liquidity problems (Hansen 2012). It is possible that models that any biases to exist in typical times might be minimized in the sample.<sup>8</sup>

A third concern may stem from the fact that the sample is taken from a southern state. It may be that debtors in the South were less likely than debtors in other states to have interregional connections because the South was slow to integrate (Osborne 1988). But the court records indicate that Mississippi merchants and farmers did have interregional connections, and there is no reason to believe that these connections could not have been extended to nearby manufacturing concerns if both the manufacturers and creditors had so desired. Future work will utilize samples from courts in a random sample of courts from across the country. The next samples to come on-line will be from courts in St. Louis and Kansas

---

<sup>8</sup> A promising approach that I am currently pursuing is to consider the propagation of bankruptcy through supply chains (Hua, Sun, and Zu 2011). Richardson and Guo (2013) argue that bank failure may cause bankruptcy of wholesale traders because of the structure of trade credit. Likewise, the failure of wholesaler—or even threats to the liquidity of upstream firms may initiate streams of bankruptcy. Support for this position comes from the fact that the percent of cases in the sample that were brought by creditors (though small) rose from 4.8 percent before the major credit crisis of 1930 to 7.7 percent after the crisis.

City; mapping the sources of credit for firms and individuals in these courts will give a clearer view of sources of credit around cities.

## Who Borrowed from Whom?

This section uses the sample of bankruptcy cases to answer the first of the questions posed in the introduction: *Who borrowed from whom?* Specifically, it considers (1) the relative importance of financial institutions in consumer credit and farm mortgage markets and (2) the sources of credit for manufacturing firms compared to other businesses and to farmers. The next section considers the distances between the sample debtors and their creditors.

### *Consumers and Farmers*

Short term credit was traditionally extended to farmers and consumers to by local retail merchants, who in turn received trade credit from middlemen up the distribution chain (see Richardson and Gou (n.d.) for a succinct description of the commercial credit cycle). During the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, additional sources of credit opened up to consumers and farmers. Eastern and European banks and life insurance companies contracted with mortgage companies who provided local monitoring of farm mortgages (Beveridge 1985, Snowden 1995). In urban markets, interstate chains of small loan lenders extended unsecured debt through local agencies. These chains grew quickly over the first decades of the 20<sup>th</sup> century, especially in states that passed uniform small loan laws (Easterly 2009, Guinnane et al 2011). Installment loans became an important source of secured credit for consumers (Olney 1999).

Table 5 shows the cross tabulation of the amount of the debts owed, by type of creditor, for non-business debtors in the sample. The prevalence of the various types of creditors to non-business debtors are consistent with patterns for all debtors as noted in the previous section. Commercial businesses were owed 60 percent of debts, private persons were owed 30 percent of debts, and financial institutions were owed about 7 percent of debts. However, the debts owed to financial institutions were larger than the debts owed to private persons and more than five times the size of debts owed to commercial businesses. Debts owed by non-business debtors to financial institutions averaged \$3,414, at a time when nominal GDP per capita was about \$600. Individual transactions between debtors and commercial businesses were just 8 percent of total debts, while a single transaction with financial institution averaged 23 percent of debt owed by non-business debtors.

Three-quarters of debts owed to financial institutions were owed to traditional banks, trusts, and building and loans, and one quarter were owed to small loan companies. Unskilled blue collar workers and farmers without any other kind of business debts, were the most likely to borrow from a small loan company. Table 6 compares the debts owed to banks and small loan companies by non-business debtors. As expected, the size of the debts owed to banks (\$2850 on average, in 1929 dollars) was more than five times the size of the debts owed to small loan companies (\$125 on average). Table 12 also breaks down the debts owed to the different types of financial institutions by reasons for the debt. Fifty-two percent of debts owed to banks and 58 percent of debts owed to small loan companies are labeled as “miscellaneous” in the bankruptcy documents, indicating that these debts were taken on to consolidate other debt or to pay on-going living expenses. Loans for real estate or housing were more

likely to come from banks than small loan companies, but to (re)finance purchases of vehicles, household goods, and household appliances, or repairs of these items, debtors regularly obtained loans from small loan companies.

**Table 5. Amount of Debt (1929\$) and Importance of Sources of Credit, Consumers and Farmers Only**

		Private Person	Com- mercial Business	Financial Inst- itution	Public Entity	Civic Assoc- iation	Total
Amount of Debt (1929\$)	Mean	2576	638	3414	5124	6	1497
	St. Dev.	17834	5838	7307	12436	0	11110
This Debts as Percent of All Debt	Mean	0.12	0.08	0.23	0.24	0.02	0.10
	St. Dev.	0.30	0.33	0.26	0.27	0.00	0.32
Number of Debts		563	1157	132	37	1	1890

Note: An observation is one debt obligation which represents a debtor-creditor pair.

**Table 6. Debts Owed to Banks and Small Loan Companies, Consumers and Farmers Only**

	Percent of Obligations to		Amount of Debt (1929\$)	
	Banks	Small Loan Co.	Banks	Small Loan Co.
Miscellaneous (Unknown)	0.52	0.58	2850	125
Housing & Real Estate	0.33	0.04	3231	1015
Adverse Judgements	0.03	0.08	777	121
Attorney or Court Fees	0.03	0.02	649	16
Loans for Financial Mkt Trans.	0.03		1043	
Insurance	0.02		966	
Household Goods	0.02	0.08	385	41
Other Farm Related Debt	0.01		1212	
Interest	0.01	0.02	3336	9785
Vehicles & Related Expenses	0.01	0.16	4620	996
Household Appliances		0.02		207
Total	1.00	1.00	2717	486

Note: An observation is one debt obligation which represents a debtor-creditor pair.

Though the growth of small loan companies can be seen in the bankruptcy data, direct lending to farms in Mississippi from a distance by private farm mortgage banks cannot. About 6 in 10 farmers in the sample owed debts to financial institutions. Two-thirds of loans made to farmers by financial institutions were at distances of less than 100 miles. Most loans to farmers came from local (within-county) banks; if a connection existed to long-distance mortgage markets. Though about one-third of loans made to farmers were at distances of 100 miles, nearly all (81 percent) were loans from the

Federal Land Bank of New Orleans. Nevertheless, the next sections show that long distance credit relationships were more common for farmers than for manufacturers.

### *Manufacturers*

In the manufacturing sector, funds were needed by all types of firms to invest in capital equipment (Atack, Bateman, and Margo 2005; James 1983) and by firms in emerging industries such as chemicals and electric components and appliances to finance research and development (Lamoreaux, Levenstein and Sokoloff 2006). Retained earnings were the primary source of ongoing funding for investment among already-successful firms. It is well-known that firms in the 19<sup>th</sup> century seeking external finance from banks for capital purchases often needed a personal connection (Lamoreaux 1994).

It would seem that improvements in standards of accounting and disclosure by borrowers might have increased banks' confidence in loans to "outsiders" (Rousseau 2011). By 1900, subscribers to the R.G. Dun & Co. credit reports had access to basic information on the credit-worthiness of a million potential borrowers from across the United States (Sylla 2002). At an aggregate level, technological improvements are associated with real growth. Yet in their study of industrial Cleveland, Lamoreaux, Levenstein and Sokoloff (2006) find that family, friends, and insiders from related industries contributed more capital to the startup and growth efforts of the successful inventors and firms that they study.

Similarly, in the Mississippi sample, all manufacturers listed at least one private person among their creditors, but only half of manufacturers listed financial institutions among their creditors. Table 7 shows the average size of debt obligations to each type of creditor and the relative importance of the types of creditors to different types of business debtors and to farm debtors. The number of transactions between manufacturers and financial institutions is small compared with the number of transactions between merchants and financial institutions. Just 42 of 265 debts owed to financial institutions (16 percent) were found in the case files of manufacturers. Of the 42 loans between manufacturers and financial institutions in the sample, only five were made for mortgages on buildings or land. Moreover, this may overstate manufacturing mortgage debt financed by banks because the debtors may be sole proprietors and the mortgages may be for personal residences rather than business structures. Just one loan to a manufacturer—albeit the largest one, for about \$21,000—was made for the purpose of purchasing equipment.

Where we do see a role for bank finance among manufacturers in the sample, it is in the provision of short-term credit. Of the 42 loans between manufacturers and financial intuitions, about three-quarters were described as financing "miscellaneous" debts, indicating that the loans covered shortfalls in current operating expenses or facilitated the consolidation of other debts. Two were made to finance the purchase of inventory. Though this was not the traditional role of banks, whose primary function was to facilitate trade credit in a system where manufacturers were more likely to be the creditors of banks than borrowers from them (Richardson and Guo 2013), it was also evident in Cleveland, where financial institutions grew alongside manufacturing firms (Lamoreaux, Levenstein and Sokoloff 2006).

**Table 7. Debts Owed by Business and Farm Debtors (1929 dollars)**

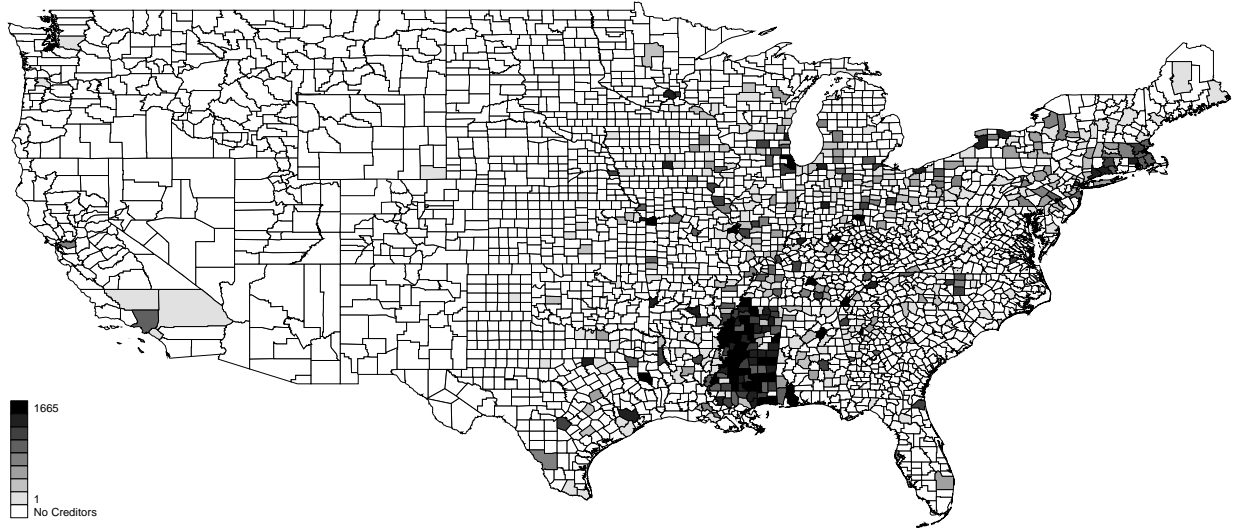
		Private Person	Com- mercial Business	Financial Inst- itution	Public Entity	Civic Assoc- iation	Total
Merchant	Mean	1209	224	2877	1654	3155	398
	St. Dev.	8819	1107	4902	3585	6230	3264
	Percent of Total	0.06	0.04	0.13	0.10	0.22	0.04
	N	976	7427	180	35	4	8622
Manufacturer	Mean	1519	524	12475	1921	23	1161
	St. Dev.	13225	2840	31275	5900	4	9544
	Percent of Total	0.02	0.01	0.14	0.05	0.00	0.02
	N	604	1102	42	18	2	1768
Professional	Mean	2438	1187	6574	5340	13	1815
	St. Dev.	8693	6600	13000	8135	3	7680
	Percent of Total	0.06	0.03	0.12	0.06	0.00	0.05
	N	180	536	39	12	2	769
Farmers	Mean	1989	2530	1714	10473		2701
	St. Dev.	4884	4953	975	8712		5372
	Percent of Total	0.09	0.09	0.35	0.27		0.12
	N	34	17	4	4		59
Total	Mean	1452	321	4925	2876	1586	627
	St. Dev.	10451	2158	14319	5887	4410	5189
	Percent of Total	0.04	0.03	0.13	0.09	0.11	0.04
	N	1794	9082	265	69	8	11218

Note: An observation is one debt obligation which represents a debtor-creditor pair.

The absolute size of loans to manufacturers by banks was large: more than \$12,000 per loan compared to about \$6500 per loan to professionals, \$2900 per loan to merchants, and \$1700 per loan to farmers. However, the importance of individual transactions with banks, relative to the total of all debts owed, was about the same for merchants, manufacturers and professionals. Each transaction was just 12 to 14 percent of total debts. In contrast, the average debt owed by a farmer to a financial institution was 35 percent of the farmer's total debt.

### Who Borrowed at Long Distances?

There are 13,622 debts for which the location between the debtor and creditor can be calculated and the amount of the debt is reported. (Distances are estimated using county centroids.) The distance across which the average debt is owed is 133 miles; the maximum distance between a debtor and one of his creditors in the sample is 1,927 miles. Figure 3 maps the locations of the creditors in the sample.



**Figure 3. Geographic Distribution of Creditors**

Table 8 summarizes the debts owed to creditors within the county, out of the county but within the state, and out of state. Half of debts are owed to creditors located in the same county as the debtor. Debts owed to out-of-state creditors tend to be smaller than debts owed to in-state creditors, although the standard deviations are large at all distances, including creditors as far as Massachusetts and the District of Columbia. The importance of freshwater and saltwater port cities as hubs for transactions made on credit is clear from the clustering of shaded areas along the Mississippi and the eastern and western seaboard in figure 3. Twenty-nine percent of all debts recorded in the sample are owed to creditors more than 100 miles away from the debtor. In fact, the average of these long-distance creditors was about 400 miles away from the debtor. Again, the largest debts were owed to nearby creditors, but substantial sums were owed to creditors more than 100 miles distant.

**Table 8. Summary Statistics of Distance between Debtors and Creditors**

	Average Size of Individual Debts (1929\$)*	Std. Dev.	Number of Debts*	Percent of Debts
<i>Creditor is</i>				
In County of Debtor	804	7,376	6,778	50%
Out of County, but in MS	805	3,938	2,873	21%
Out of State	628	4,216	3,971	29%
Total	753	5,960	13,622	100%
<i>Distance</i>				
Within 100 Miles of Debtor	780	6,439	9,716	71%
More than 100 Miles	685	4,556	3,906	29%
Total	753	5,960	13,622	100%

Note: An observation is one debt obligation which represents a debtor-creditor pair.

Table 9 gives the average distance between debtors and their creditors and the percent of debts owed in which the debtor and creditor are more than 100 miles apart. The left panel shows these statistics for types of debtors; the right panel shows the statistics by type of creditors and reason for the debt. The creditors of consumers were on average 59 miles away, and only 14 percent of the debts owed by consumers were owed to creditors more than 100 miles away. Average distance between creditors and debtors is higher for consumer debtors in skilled occupations than for those in unskilled occupations.



Among debts owed by all types of businesses, the average distance between debtors and their creditors was 152 miles; almost one-third of debts of businesses were owed to creditors more than 100 miles distant. Across types of businesses, the average distance between merchants and their creditors was 163 miles—twice the average distance between manufacturers and their creditors. Additionally, 34 percent of the creditors of merchants, but just 20 percent of the creditors of manufacturers, were more than 100 miles away. Looking only at these averages, manufacturers have credit networks that are similar in geographic scope to the networks of professionals and farmers.

The creditors of municipal entities were farthest from the debtors, and municipal entities had the largest share of creditors (almost 43 percent) more than 100 miles away. However, complete information is available for only seven debts of municipals.

**Table 9. Distance between Debtors and Creditors**

	Average Miles to Creditor	Percent More than 100 Miles	Number of Debts		Average Miles to Creditor	Percent More than 100 Miles	Number of Debts
<u>Type of Debtor</u>				<u>Debts Owed by Type of Creditor**</u>			
Consumer Debtor	59	14.3	3,124	Unkown	47	11.1	270
Business Debtor	152	32.4	10,404	Private person	43	10.6	2,422
Municipal Entity	295	42.8	7	Commercial business	158	33.7	10,183
Railway	n/a	n/a	n/a	Financial institution	58	17.7	605
Total	130	28.2	13,535	Public entity	33	4.0	49
				Civic association	63	14.3	6
				Total	130	28.2	13,535
<u>Occupation or Type of Business of Debtor</u>				<u>Debts Owed by Reason for Debt*</u>			
Not Known	141	30.4	4,307	Unknown (missing or invalid data)	166	34.2	2,250
Unskilled blue collar	19	3.9	381	Wages owed	9	0.0	19
Skilled blue collar	25	7.2	812	Taxes	12	0.0	2
Unskilled white collar	47	16.6	352	Car (vehicle, accessories, repair)	29	7.1	402
Skilled white collar	52	11.0	162	Home (property, rent)	59	16.8	453
Merchant	163	34.4	5,998	Household goods	161	34.2	3,341
Manufacturer	83	19.9	670	Inventory	200	45.1	2,083
Professional	81	19.7	590	Miscellaneous (verbatim response)	90	19.9	3,230
Farmer	88	19.0	263	Adverse judgements/ legal settlement	107	21.2	269
Total	130	28.2	13,535	Utilities	24	5.4	536
				Household appliances	53	14.6	89
				Fixtures and machinery	169	31.7	41
				Food	30	6.2	161
				Farm related debt	116	15.8	19
				Loans or losses in financial markets	78	33.3	19
				Interest	117	26.5	34
				Attorney & court fees	79	19.6	56
				Medical	22	9.1	338
				Insurance	225	25.0	82
				Fees for other prof. services	88	18.0	111
				Total	130	28.2	13,535

Note: An observation is one debt obligation which represents a debtor-creditor pair.

Looking at the right-hand panel of table 9, it is evident that that credit extended by private businesses, banks, and civic institutions tends to be to debtors who are nearby, while credit is extended by commercial business over much greater distances. Credit for insurance policies and inventory is extended at more than 200 miles distance on average. Other reasons for long-distance debt include

household goods, legal judgments or settlements, fixtures and machinery for businesses, farm-related debt (including debt for equipment and fertilizer but not including mortgages). Just over 45 percent of debts owed for inventory are owed to creditors more than 100 miles distant, while such long-distance debt comprised 34 percent of debts for household goods, 21 percent for legal settlements, 27 percent of debts owed for fixtures and equipment, and 16 percent of non-mortgage farm debt.

Table 10 shows the cumulative amount owed by individual debtors to long-distance creditors, broken down by occupation of the debtor. Again we see that long-distance credit transactions are dominated by merchants. A total of 16 manufacturers owed at least one creditor more than 100 miles distant. The average number of long-distance creditors of manufacturers was about 8. The total debt owed to long-distance creditors by manufacturers was about \$8,400, but that was just 18 percent of those manufacturer's total debts. The debts owed by 26 farmers to long-distance creditors were larger and more importance, but smaller in number. Three times more blue and white collar workers owed long-distance creditors, but their debts were, naturally, smaller in size and number. However, the long-distance debts to individuals were a larger percent of total debt than the long-distance debts of manufacturers.

---

**Table 10. Cumulative Debt Owed to Creditors at Least 100 Miles from Debtor**

---

	Number of Creditors		Cumulative Owed (1929\$)		Percent of All Debt		Number of Debtors
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	
Unskilled Blue Collar	1.6	0.8	10,161	22,070	0.31	0.33	10
Skilled Blue Collar	2.8	2.0	1,378	3,384	0.35	0.32	19
Unskilled White Collar	3.3	4.1	3,004	6,307	0.36	0.29	19
Skilled White Collar	1.7	1.3	1,602	2,329	0.21	0.35	7
Merchant	11.6	12.3	3,708	9,923	0.23	0.25	172
Manufacturer	7.9	7.2	8,415	17,573	0.18	0.20	16
Professional	5.3	4.3	16,453	25,873	0.23	0.29	25
Farmer	1.7	0.9	27,823	56,377	0.39	0.32	26

---

*Note:* One observation per debtor.

---

If we limit our attention to debts owed to *financial institutions* at least 100 miles distant from the debtor, there is an even greater difference in long distance lending by occupation: 42 percent of all long-distance obligations to financial institutions were non-business debt. At long distances, less than one percent of obligations (one debt) to a financial institution was owed by a manufacturer, while 38 percent were owed by merchants and 17 percent from farmers.

Table 11 shows OLS regressions to summarize the relative importance of financial institutions and long-distance creditors to debtors in different occupations and types of business. The dependent variable in the first regression is the percent of total debts owed to financial institutions. Controls include the natural logarithm of the value of total assets and local court fixed effects that proxy for distance to the

Mississippi and the Gulf. Manufacturers owed statistically significantly less to financial institutions than unskilled blue collar workers, and they are the only group for which the coefficient is statistically different from zero. In the second regression the dependent variable is the percent owed to creditors more than 100 miles away from the debtor and the controls are the same as in column (1). Long-distance creditors are more important for merchants than for any other group of debtors.

**Table 11. Importance of Financial Institutions and Long-Distance Creditors**

	<i>Dependent Variable</i>			
	(1) Percent Owed to Financial Institutions	(2) Percent Owed at Distance>100		
Skilled blue collar	0.01 (5.52)	6.96 (4.96)		
Unskilled white collar	-1.37 (7.60)	21.82 (6.86) **		
Skilled white collar	9.74 (7.33)	4.61 (10.67)		
Merchant	-10.48 (8.49)	19.09 (7.91) **		
Manufacturer	-13.66 (5.75) **	13.64 (11.80)		
Professional	-1.60 (3.20)	10.73 (7.11)		
Farmer	23.36 (4.32)	18.87 (10.20)		
Ln(Assets)	2.45 (0.92) **	1.21 (1.14)		
Constant	60.12 8.55 **	0.95 7.47		
Court fixed effect?	yes	yes		
n	402	371		
R-Squared	0.19	0.08		
<i>Descriptive Statistics:</i>				
	Mean	St. Dev.	Mean	St. Dev.
Mean of Dep. Variable	16.0	25.3	23.2	30.1
Mean Assets (1929\$)	12,943	86,007	9,247	23,511
Percent Merchants	4.9		4.4	

*Notes:* One observation per debtor. Omitted occupation: unskilled blue collar. Standard errors in parenthesis; standard errors are clustered. The number of observations in model (2) is lower because of missing location information.

## Conclusions

Detailed data from the new sample of court documents from bankruptcy proceedings in Mississippi confirm the importance of the interregional network of trade credit. Despite the disruptions of the Depression, during the 1929-1936 period merchants in Mississippi continued to rely on creditors more than 100 miles distant for the inventory and fixtures. These creditors were mainly other businesses, but also included some financial institutions.

The sample also demonstrates that the innovative financial firms that aimed to meet demand of farmers and consumers for credit had made inroads into the deep South by the 1930s. Farmers had loans from both local and non-local banks; federal land banks were important non-local sources of credit. Consumer loans from financial institutions were also relatively common and included a significant number made through small loan lenders.

In contrast, as late as the late 1920s and early 1930s, manufacturers in Mississippi were unlikely to have credit from banks or other financial institutions. Although the manufacturers in Mississippi were mostly in well-established industries, their sources of credit were similar to the sources of credit of start-ups in industrial Cleveland in the preceding decades. The credit that was extended to them came in small amounts from private persons and other businesses. Thus, this study adds to the evidence that banks seldom brought capital into manufacturing, which helps to explain why rates of return in manufacturing fell so slowly.

This is not to say, of course, that banks are unimportant for economic growth or stabilization. Though in the Mississippi example bank lending did not mainly support the local economy by funneling capital directly into production, it did support the local economy by facilitating the movement of goods to where they commanded the highest prices and by financing purchases by consumers. Sufficient consumer demand and efficient, widespread distribution are needed by manufacturers who hope to take advantage of the economies of scale of modern industrial techniques and the spillovers associated with regional specialization. In order to support economic growth and development, it may be better to take a balanced approach that takes into account the interrelationships between production, distribution, and consumption than to take a narrowly-focused, production-oriented approach.

The 1898 Bankruptcy Act that generated the data used here was the brainchild of wholesalers and other trade “credit men” who sought to distribute goods more widely, but found individual state laws giving in-state creditors preference in collections to be a major barrier to interstate operations (Hansen 1998). One of the areas for further research using the national sample is to explore whether the introduction of the Bankruptcy Act resulted in more inter-state credit connections within the distribution sector.

## References

- Atack, Jeremy, Fred Bateman, and Thomas Weiss. 1982. "Risk, the rate of return and the pattern of investment in nineteenth century American manufacturing." *Southern Economic Journal*: 150-163.
- Atack, Jeremy, Erik F. Haites, James Mak, and Gary M. Walton. 1975. "The profitability of steamboating on western rivers." *The Business History Review* (1975): 346-354.
- Aziz, M. Adnan, and Humayon A. Dar. 2006. "Predicting corporate bankruptcy: where we stand?." *Corporate Governance* 6, no. 1: 18-33.
- Balleisen, Edward J. 2001. *Navigating failure: bankruptcy and commercial society in antebellum America*. Univ of North Carolina Press.
- Bateman, Fred, and Jeremy Atack. 1979. "The profitability of northern agriculture in 1860 [USA]." *Research in Economic History* 4.
- Berryman, Joyce E. 1993. "Small business failure and bankruptcy: What progress has been made in a decade?." *Small Enterprise Research* 2, no. 1-2: 5-27.
- Beveridge, Andrew A. 1985. "Local lending practice: Borrowers in a small northeastern industrial city, 1832-1915." *Journal of Economic History* 45, no. 2: 393-403.
- Binder, John J., and David T. Brown. 1991. "Bank rates of return and entry restrictions, 1869–1914." *The Journal of Economic History* 51, no. 1: 47-66.
- Coelho, Philip RP, and James F. Shepherd. 1974. "Differences in regional prices: The United States, 1851-1880." *The Journal of Economic History* 34, no. 3: 551-591.
- Cull, Robert, Lance E. Davis, Naomi R. Lamoreaux, and Jean-Laurent Rosenthal. 2006. "Historical financing of small-and medium-size enterprises." *Journal of Banking & Finance* 30, no. 11: 3017-3042.
- Davis, Lance E. 1965. "The investment market, 1870-1914: The evolution of a national market." *The Journal of Economic History* 25, no. 3: 355-399.
- Easterly, Michael. 2009. "Your job is your credit: Creating a market for loans to salaried employees in New York City, 1885–1920." *Enterprise and Society* 10, no. 4: 651-660.
- Epstein, Ralph C. and Florence M. Clark. 1934. *Industrial profits in the United States*. NBER. Available: <http://www.nber.org/books/epst34-1> (last accessed October 17, 2013).
- Guinnane, Timothy, Bruce Carruthers and Yoonseok Lee. 2011. "Bringing honest capital to poor borrowers: The passage of the Uniform Small Loan Law." *Journal of Interdisciplinary History* 42, no. 3: 393-418.
- Gross, Karen, Marie Stefanini Newman, and Denise Campbell. 1996. "Ladies in red: Learning from America's first female bankrupts." *American Journal of Legal History* 40, no. 1: 1-40.
- Haines, Michael R. 1989. "A state and local consumer price index for the United States in 1890." *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 22, no. 3: 97-105.

Hansen, Bradley. 1998. "Commercial associations and the creation of a national economy: The demand for federal bankruptcy law." *Business History Review* 72, no. 1: 86-113.

Hansen, Bradley A., and Mary Eschelbach Hansen. 2007. "The role of path dependence in the development of US bankruptcy law." *Journal of Institutional Economics* 3, no. 2: 203-225.

Hansen, Bradley A., and Mary Eschelbach Hansen. "Religion, social capital and business bankruptcy in the United States, 1921–1932." *Business History* 50, no. 6 (2008): 714-727.

Hansen, Mary Eschelbach. 2012. "Financial system liquidity and bankruptcy, 1929-1931." Manuscript presented at the Economic History Association Meetings.

Hua, Zhongsheng, Yanhong Sun, and Xiaoyan Xu. 2011. "Operational causes of bankruptcy propagation in supply chain." *Decision Support Systems* 51, no. 3: 671-681.

James, John A. 1976. "The development of the national money market, 1893-1911." *Journal of Economic History* 36, no. 4: 878-897.

James, John A. 1983. "Structural change in American manufacturing, 1850-1890." *Journal of Economic History* 43, no. 2: 433-459.

Jaremski, Matthew, and Peter L. Rousseau. 2012. "Banks, free banks, and US economic growth." *Economic Inquiry* 51, no. 2: 1603-21.

Keehn, Richard H. 1980. "Market power and bank lending: Some evidence from Wisconsin, 1870-1900." *Journal of Economic History* 40, no. 1: 45-52.

Landon-Lane, John, and Hugh Rockoff. 2007. "The origin and diffusion of shocks to regional interest rates in the United States, 1880–2002." *Explorations in Economic History* 44, no. 3: 487-500.

Lamoreaux, Naomi R. 1996. *Insider lending: Banks, personal connections, and economic development in industrial New England*. Cambridge University Press.

Lamoreaux, Naomi R., Margaret Levenstein, and Kenneth L. Sokoloff. 2006. "Mobilizing venture capital during the second industrial revolution: Cleveland, Ohio, 1870-1920." *Capitalism and Society* 1, no. 3: Article 5.

Lefgren, Lars, and Frank McIntyre. 2009. "Explaining the Puzzle of Cross-State Differences in Bankruptcy Rates." *Journal of Law and Economics* 52, no. 2: 367-393.

Levenstein, Margaret. 2013. "Networks of capital and midwestern industrialization: Cleveland, Ohio 1880-1914." Manuscript, University of Michigan. Available: <http://www-personal.umich.edu/~maggiel/Networks%20of%20Capital%20and%20Midwestern%20Industrialization.pdf> (last accessed November 14, 2013).

Mercer, Lloyd J. 1970. "Rates of return for land-grant railroads: The central pacific system." *The Journal of Economic History* 30, no. 3: 602-626.

Neal, Larry. 1971. "Trust companies and financial innovation, 1897-1914." *The Business History Review*: 35-51.

Neal, Larry, and Lance E. Davis. 2007. "Why Did Finance Capitalism and the Second Industrial Revolution Arise in the 1890s?" In *Financing Innovation in the United States, 1870 to the Present*, edited by Naomi R Lamoreaux, and Kenneth L Sokoloff. The MIT Press, 2007. University Press Scholarship Online, 2013. doi: 10.7551/mitpress/9780262122894.003.0004.

Odell, Kerry A. 1989. "The integration of regional and interregional capital markets: evidence from the pacific coast, 1883-1913." *Journal of Economic History* 49, no. 2: 297-310.

Olney, Martha L. 1999. "Avoiding default: The role of credit in the consumption collapse of 1930." *The Quarterly Journal of Economics* 114, no. 1: 319-335.

Osborne, Dale K. 1988. "Competition and geographical integration in commercial bank lending." *Journal of Banking & Finance* 12, no. 1: 85-103.

Richardson, Gary, and Michael Gou. 2013. "Bank failures trigger firm bankruptcies." Working paper, University of California-Irvine. Available <http://emlab.berkeley.edu/~webfac/cromer/richardson.pdf> (last accessed October 21, 2013).

Richardson, Gary, and William Troost. 2009. "Monetary intervention mitigated banking panics during the Great Depression: Quasi-experimental evidence from a Federal Reserve district border, 1929–1933." *Journal of Political Economy* 117, no. 6: 1031-1073.

Rockoff, Hugh. 1977. "Regional interest rates and bank failures, 1870–1914." *Explorations in Economic History* 14, no. 1: 90-95.

Rousseau, Peter L. 1998. "The permanent effects of innovation on financial depth: Theory and US historical evidence from unobservable components models." *Journal of Monetary Economics* 42, no. 2: 387-425.

Rousseau, Peter L. 2011. "The market for bank stocks and the rise of deposit banking in New York City, 1866–1897." *Journal of Economic History* 71, no. 4: 976-1005.

Smiley, Gene. 1975. "Interest rate movement in the United States, 1888-1913." *Journal of Economic History* 35, no. 3: 591-620.

Snowden, Kenneth. 1995. "The evolution of interregional mortgage lending channels, 1870-1940: The life insurance-mortgage company connection." In Lamoreaux, Naomi R., and Daniel MG Raff, eds. *Coordination and information: historical perspectives on the organization of enterprise*. University of Chicago Press: 209-256

Sullivan, Richard J. 2009. "Regulatory changes and the development of the US banking market, 1870-1914: A study of the profit rates and risk in national banks." Atack, Jeremy, and Larry Neal, eds. *The origins and development of financial markets and institutions: from the seventeenth century to the present*. Cambridge University Press, 2009: 262-293.

Sylla, Richard. 1969. "Federal policy, banking market structure, and capital mobilization in the United States, 1863-1913." *The Journal of Economic History* 29, no. 4: 657-686.

Sylla, Richard. 2002. "An historical primer on the business of credit rating." In Levich, Richard M., Giovanni Majnoni, and Carmen M. Reinhart, eds. *Ratings, rating agencies and the global financial system*. Springer: pp. 19-40.

U.S. Department of Justice. Various years. *Annual Report of the Attorney General*. Washington, DC: GPO.

## Appendix: Description of the Sample

More than 34 million businesses and consumers have used the federal bankruptcy law since the first permanent law was passed in 1898. The national sample of bankruptcy cases will consist of all cases in a one percent random sample of boxes drawn from the permanent collection of the National Archives.<sup>9</sup> The Mississippi pilot contains an oversample to ensure a large enough number of observations for stand-alone analysis; the sample used here contains one box of records selected at random for each year. If the selected box contained fewer than five cases, the next box was also selected.

For this time period in Mississippi, the boxes mostly contained consecutive case numbers; that is, the cases were boxed in the chronological order in which the cases were commenced. The sample for each division court is therefore clustered in time, but the overall sample contains observations of cases filed in most months.

Table A1 describes the overall size of the sample and provides comparisons to the totals in the extant docket sheets and published statistics of the Federal District Courts. The extant dockets include data on 64 percent of cases filed in the two federal court districts of Mississippi. Slightly more docket books have survived for the Southern District. The sample of case files represents 20 percent of all cases reported in the *Annual Report of the Attorney General*. The sample for the courts in the Northern District is 15 percent of cases; the sample for the Southern District is 22 percent of all cases.

There were six division (that is, local) courts in the two federal court districts in Mississippi (see figure A1 for a map). Table A2 shows the distribution of the 780 cases in the sample across the six division courts. The largest portion of the sample, 25 percent, comes from the court at Jackson. Four of the other courts each contribute 14 to 16 percent to the sample. Only one case in the sample comes from the court at Aberdeen. The Clerk of the Court at Aberdeen interfiled bankruptcy cases with civil and criminal cases. Except for one large case that



Figure A1. Map of Mississippi with District Border and Court Locations

<sup>9</sup> There are more than one million cubic feet of bankruptcy case files currently in the permanent collection of the National Archives. Additionally, approximately two million cubic feet of relatively recent case files are stored in the regional Federal Records Centers. Ownership of these records is being transferred from the Administrative Office of the U.S. Courts to NARA. A three percent random sample of boxes will be added to the Archives' collection.



was boxed separately, it was not feasible to separate the bankruptcy cases from the other cases filed in Aberdeen.

Table A3 shows the overlapping periods covered by the extant docket books and the sample of cases for each division court. The shading represents the quarters for which docket sheets are available. The number in each cell gives the size of the sample for the quarter. As noted above, it was not feasible to collect a sample of case files for Aberdeen. Docket books for Aberdeen survived, however, as did docket books for Jackson, Oxford and Vicksburg. Most docket books for Biloxi, Clarksdale, and Meridian, however, do not survive.

**Table A1. Sample Size Compared to Extant Dockets and Published Statistics**

	Published Cases Filed			Extant Dockets			Sample		
	North	South	Total	North	South	Total	North	South	Total
							2	11	13
1929	125	273	398	135	301	436	39	89	128
1930	132	308	440	131	321	452	42	77	119
1931	139	376	515	102	362	464	24	67	91
1932	217	454	671	122	225	347	16	35	51
1933	227	414	641	80	168	248	34	56	90
1934	333	333	521	55	142	197	8	38	46
1935	105	210	315	106	107	213	23	85	108
1936	163	207	370	15	102	117	33	100	133
1937	143	178	321				0	1	1
Total	1584	2753	4192	746	1,728	2,474	221	559	780
Dockets as % of Published (1929-36)				52%	67%	64%			
Sample as % of Published (1929-36)							15%	22%	20%

Sources: Published--United States Department of Justice, Annual Reports of the Attorney General of the United States, various years.

**Table A2. Distribution of Sample across Division Courts**

	Aberdeen	Biloxi	Clarksdale	Jackson	Meridian	Oxford	Vicksburg	Total
1928						2	11	13
1929		17	20	31	31	19	10	128
1930		24	23	23	16	19	14	119
1931		14	14	26	11	10	16	91
1932	1	2	0	10	6	15	17	51
1933		13	16	23	10	18	10	90
1934		9			7	8	22	46
1935		25	19	39	15	4	6	108
1936		18	18	42	23	15	17	133
1937							1	1
Total	1	122	110	194	119	110	124	780
Percent	0%	16%	14%	25%	15%	14%	16%	100%

**Table A3. Cases in Sample Compared to Coverage of Extant Docket Books by Quarter**

Note: Shaded areas indicate quarters covered by surviving docket books; numbers describe the size of the sample for the quarter.

Year	'28		1929				1930				1931				1932					
Quarter	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Aberdeen																		1		
Biloxi			9	8			14	4	5	1	11	2	1					2		
Clarksdale			19			1	6	9	4	4			1	13						
Jackson			25	6			2	1		20	25	1					7	1	1	1
Meridian			12	18	1			1	15			10	1	6						
Oxford		2	8	6	5			6	8	5			1	9			5	4	6	
Vicksburg	2	9	10							14	1	1	6	8	16		1			
Year	1933				1934				1935				1936				'37			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1			
Aberdeen																				
Biloxi			8	5				9	10	3	5	7	3	6	4	5				
Clarksdale			15	1				9	4	5	1	18								
Jackson			23						6	16	16	1	16	21	5					
Meridian		9	1		7			0	1	4	7	3	15	5	1	2				
Oxford		10		8		2	3	3			1	3	4	6	2	3				
Vicksburg		1	8	1		5	3	14	5		1		4	6	4	3				