An Empirical History of the United States Postal Savings System

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Abstract

Using novel data sets on postal savings depositor behavior and bank location, we provide a history of the United States Postal Savings System by measuring how depositor behavior changed over time, in response to economic shocks, and the presence of commercial banks. We show that the system went through three distinct phases: pre-1929 Crash, Great Depression until WWII, and WWII through the end of the program. The characteristics of depositors changed over time, from non-farming immigrant populations in the early years towards broad nationwide use of the system from the mid-1930's. Throughout the history of the system, depositors changed their behavior during negative economic shocks, relying more heavily on postal savings, especially for short-term deposits. Finally, postal savings deposits decreased with the establishment of national banks during the early years of the system, indicating that postal savings was at least a partial substitute for commercial banks.

Keywords: Postal Service, Banking

1 Introduction

The United States Postal Savings System was a mainstay at post offices nationwide from 1911 to 1966. The program offered a federally insured savings alternative for people who

*Any opinions and conclusions expressed herein are those of the authors and do not necessarily represent the views of the U.S. Census Bureau.

were either unable or unwilling to use traditional banks. Even after FDIC was established in 1933, postal savings remained popular, reaching a peak in 1947 of over $3 billion dollars in deposits. Despite its us and longevity, the postal savings system has been largely ignored by the economics literature. This paper uses a new, post office-level data set on postal savings deposits to provide an overview of the system.

The relatively small literature on postal savings includes historical and empirical analysis. The historical literature provides anecdotal evidence on how the system was used. Kemmerer (1917) focused on the early years of the system and the demographic makeup of depositors. Sissman (1936) and Sissman (1938) focus on the role of postal savings during the late 1920's and early 1930's, including the change in relationship between postal and traditional banks in the early years of the Great Depression. Schewe (1971) provides a thorough historical account of the establishment of the system and aggregate trends in deposits over the system's lifetime.

The empirical literature tends to focus on specific aspects or effects of postal savings banks. Kuwayama (2000) compares the U.S. and Japanese systems using national and state-level data to measure the correlation between postal deposits, interest rates, and security of investments offered by banks. She finds that lower interest rates and more bank failures are associated with greater deposits during the 1911-1935 period but that only interest rates are statistically significant after 1936.

O'Hara and Easley (1979) focus on the impact of postal savings on the savings and loan market around the Great Depression. The authors argue that postal savings banks hurt savings and loan institutions by removing funds from the standard banking system. They also show that states with low levels of redeposits of postal savings funds into local banks saw higher rates of bank failure.

Davidson and Ramirez (2016) use postal savings banks as a measure of "money under the mattress" to test the effect of deposit insurance on depositor behavior. They show that postal savings deposits were higher in places without deposit insurance and that depositors gravitated towards postal savings banks after commercial bank failures.

The previous literature provides bits and pieces of the history of postal savings banks, but does not provide a unified and comprehensive examination of: (1) who used postal savings banks, (2) why they used postal savings banks, and (3) whether postal savings banks were only useful in areas without banks. To answer these questions, we collected post-office level depositor data and state-level data on deposits, withdrawals and reinvestment from 1911 through 1961. We also link the postal savings data to city-level information on

bank location and county-level information on demographic and economic characteristics.

The data show that people's use of postal savings changed throughout its history. In the early years of the program, and especially during times of financial crisis, depositors relied on postal savings for relatively short-term savings, suggesting that they used postal savings as a replacement for banks during spells of distress. In later years, depositors began to hold deposits for a much longer time, accumulating interest rather than withdrawing. While postal deposits were relatively low and short-term before 1929, they became much larger and more long-term afterwards. When interest rates dropped in the 1940's, the prescribed 2 percent interest rate offered at postal savings banks had a relative advantage over commercial banks or even securities.[1]

Using county-level data, we find that postal savings was heavily used by foreign-born people and was less popular in farming communities and large cities before 1930. Interestingly, the results virtually disappear looking after the Great Depression. By 1936, the association between demographic characteristics and postal savings weakens considerably, as well as the negative correlation between farming communities and postal savings. Urbanization still matters to some extent, but the effect is much smaller than for early period.

At the city-level, we find that the presence of a commercial bank, especially if it is a national bank, leads to a decrease in postal savings deposits. The presence of a statewide deposit insurance program also detracted from postal savings deposits. These results indicate that postal savings offered a banking alternative to those who either lacked access to banks or distrusted them. However, the evidence also indicates that people in places with many banks still used postal savings.

2 Legislative History

The United States Postal Savings System allowed anyone to deposit money in any post office that was designated a postal savings depository. The program was designed to encourage thrift among people who either did not have large sums or distrusted the existing banking system. Offices accepted deposits as small as $1, and allowed people to convert their balances into bonds, two things traditional banks were not eager to do.

Postal savings had existed for years in other countries before it was installed in the

[1]Indeed, commercial banks even refused to take the redeposits of postal savings banks because they demanded too much interest.

U.S. In 1861, the United Kingdom established the first postal savings bank, with deposits initially limited to £30 a year and accounts capped at £120 (Hamilton, 1902). Deposits earned relatively low interest rates, so as not to compete with traditional banks (Cottrell, 1985). The system was popular, with 11 of the 21.9 million Britons holding accounts totaling $781 million in 1908 (National Monetary Commission, 1910). Across the world, many systems were established with the same characteristics as the U.K. system, notably low interest rates and investment of funds in government bonds.[2] The profitability of these systems was often highlighted by lawmakers in support of the establishment of a U.S. system. In fact, John A. Creswell, the Postmaster General under President Ulysses S. Grant, advocated for a postal savings bank in his 1871 and 1872 Annual Reports as a way to fund the construction of telegraph lines (Post Office Department, a, 1871,1872) .

The Panic of 1873 re-framed the discussion of postal savings to the potential security offered by the system. In his 1873 report, Creswell emphasized the safety of postal savings deposits, and offered the system as a solution to people hiding their money, instead of depositing in banks (Post Office Department, a, 1837) (1873). In his 1873 Annual Message to Congress, Grant advocated his Postmaster's plan, saying "...and especially do I urge favorable action by Congress on the important recommendations of the Postmaster-General for the establishment of United States postal savings depositories."

Instability in the banking sector continued to be a central argument for supporters of postal savings. In 1878, Rep. Thomas J. Tipton (R-IL) articulated the need for safety:

> "By the establishment of postal savings the people all over the country will be afforded an opportunity to invest their savings with assurance that the principal will be returned with a small interest...The failure of savings banks and consequent loss, especially to the poorer class, makes the demand greater than ever before....They simply desire a safe depository of their small earnings until the accumulation shall enable them to purchase a lot of ground on which in time they can build a home for themselves and their families."[3]

The other major selling point of postal savings was the belief that it would increase money in circulation. Postmaster General James Gary, in an interview with the Los Angeles Times, asked,

[2]Postal savings was especially popular in British colonies, from the Bahamas, to Sierra Leone and Ceylon.

[3]Congressional Record. 3/11/1878. Page 1680

> "Have you ever thought what a dead thing money is when it is not in use? It is the deadest thing in the universe. There are many millions of such dead money in the country. It is hoarded away in stockings, buried under the hearthstones, tucked away behind the rafters and planted here and there in the earth, because the owners have no faith in private savings institutions. They have faith in the government, and they would bring the money out and deposit it in the postal savings banks."

He also repeated a common number, that about $350,000,000 would be drawn into circulation by postal savings. The only people who would be hurt by postal savings, he argued, are owners of "grogg shops and tobacco stores."[4]

The nation's banking sector consistently opposed postal savings. Bankers had considerable political clout and were well organized, especially after the establishment of the American Banking Association (ABA) in 1875.[5] They worried that postal savings would siphon money out of communities, especially if deposited funds were invested in government bonds. In his 1907 criticism of postal savings proposals, Director of the Mint George Roberts quoted the London *Banker's Magazine*: "The branches of the Post-Office Savings-Bank convey all the savings of the district which they receive straight up to the central office in London...it is thus removed from the district in which it originates."[6]

Other critics argued that postal savings (or any federal bank) would be unconstitutional, since the Constitution does not articulate a role for the Federal government in setting up banks. The most convenient solution to this issue was to use postal savings to manage government debt, as was done in other countries. However, since the United States did not have permanent debt, a postal savings system could have quickly exhausted the existing supply of bonds. As a 1908 newspaper editorial noted, "the chief objection now advanced against the scheme is the fear that proper investment could not be found for the funds, and that as a result a vast sum would congest in the hands of the Government upon which it could pay no reward to the depositors, and thus it would become a source of danger."[7]

Over the decades, dozens of petitions were filed to Congress by charitable organizations

[4] Los Angeles Times (1897)

[5] In later years, the ABA only seemed to support postal savings as the lesser of two evils when presented with deposit insurance. During the 1908 ABA convention, the focus was on the opposition to deposit insurance. While the ABA continued its formal opposition to postal savings, their platform offered support of urban postal banks, provided it meant that deposit insurance was not passed.

[6] Roberts (1907)

[7] Sacramento Record-Union (1898)

advocating for the establishment of postal savings. For example, a petition with over 600,000 signatures collected by a single paper (The Chicago Record) was presented to Congress in 1898.[8] Between the 1873 and 1910, 46 bills establishing postal savings were proposed to the House of Representatives, while 26 were proposed to the Senate. Of these, 48 were proposed by Republicans, 15 Democrats and 9 by Populists or Independents (Schewe, 1971, Pg. 36). None went to a vote before 1910.

The Panic of 1907 again increased calls for banking reform, and the election of William Howard Taft the follwoing year increased the likelihood of the establishment of postal savings. Taft not only supported postal savings, but was also the governor of the Philippines when the postal savings bank was established there in 1906 (Schewe, 1971, Pg. 59). Upon entering office, Taft immediately began pressuring Congress to establish the program.

The Postal Savings bill was passed on June 9, 1910. The final vote was 195 to 102 in the House of Representatives, and 59 to 52 in the Senate.[9] Though the vote was mostly along party lines (with Republicans supporting and Democrats opposing), regional variation in support was also apparent. Democrats in New England, East North Central, and Mountain states were more likely to support postal savings than those from other states. Only one Senator, a Democrat from Oregon, broke with party lines to support postal savings.

The final structure of the program shows that legislators walked a tightrope to maintain broad support. To appease bankers, most postal deposits were to be re-deposited in local state and national banks, interest rates were kept low (2%) and balances were limited to $500.[10] To appease those who worried that the program was unconstitutional, some portion of postal savings deposits were invested in national debt and depositors could convert their deposits into bonds, thus placing it under the purview of the federal government.

3 How Was Postal Savings Used Throughout the Years?

The first postal savings offices were established on January 3, 1911, and the system was rolled out over the next two years. Figure 1 shows the overall pattern of deposits over time. From the beginning of the program through 1930, about half a million depositors collectively held between $50 and $300 million at postal savings depositories. The program

[8] Columbus Republican (1898)

[9] Congressional Record, 61 Cong. 2 Session,m XLV Part 7. pp 7585-7590, 7700-7702

[10] Qualifying banks were eligible to accept postal savings deposits, and initially paid 2.25% interest, which was increased to 2.5% in 1934. When interest rates dropped in the mid-1930's, banks started refusing postal savings deposits, which were then invested in bonds.

experienced its first nationwide surge in popularity in 1931-1933. A second (and final) surge in popularity occurred in the 1940's. The popularity of program peaked in 1948, and slowly declined until it was finally ended in 1966.

Based on the aggregate data, there were three distinct periods of postal savings banks: 1911-1929, 1930-1941, and 1942-1966. In the rest of this section, we dive deeper into the dynamics and fluctuations of each period.

3.1 A Slow Start: 1911-1929

Between 1911 and 1929, postal savings deposits were relatively small compared to state and national systems, but still represented a sizable amount of money. In 1916, $86 million was deposited in postal savings, while state and national banks had $12 billion in deposits.[11]

Figure 2 shows the regional breakdown of postal savings through 1930. The West had the highest per-capita balance until 1916, when deposits in the Northeast spiked. The popularity of the program increased in most states through the 1920's, especially in the years leading up to the Great Depression, but the Northeast experienced a steady decline in deposits until, in 1930, it had only half the per-capita deposits that Western states saw. Overall, significant variation between regions indicates that postal savings responded to region-specific shocks.

Given the low marginal costs of providing the service, the post office offered the service at 13,000 post offices by 1913. However, many offices saw no deposits. Seventy percent of 4th class post offices had either $0 or $1 on deposit in 1914. In 1914, 2,473 offices were removed from the list of depositories (Post Office Department, b, 1914), and the Post Office established a review policy to evaluate offices for their inclusion in the list of depositories (Schewe, 1971, Pg 103).

Postal savings did appear to fill existing geographic gaps in banking services. In 1913, the average depository was 3.66 kilometers from the nearest state bank, and 10 kilometers from the nearest national bank. By 1919, this distance had dropped to 2.99 kilometers for state banks, and 9.32 for national banks. In the Northeast, postal savings depositories were closer to the nearest national bank (about 3.5 km), than the nearest state bank (7-8 km). In the West, the distance to the nearest state bank was between 3 and 4.5 km, but the nearest national bank was an average of about 15 km away.

Despite the relative ubiquity of postal savings depositories, the inconvenient structure

[11] Treasury Department (1917)

of the system likely contributed to the low take-up of the program.The initial $500 per-person limit on deposit balances was on such feature. It was often targeted by people who wanted to see an expanded role for postal savings. Of the 525,000 depositors in 1915, 30,000 had reached the $500 limit of their deposits.[12] According to one local postmaster, "...if the limit were raised from $500 to $1,000 for each depositor, it would increase deposits, as I have had several that would not deposit because they could not deposit over $500."[13] This cap was increased to $1,000 in 1916, and $2,500 in 1918. Following the 1916 increase deposits increased by an average of 44%, though deposits only grew by 14% following the 1918 increase, suggesting the limit was less of an issue after 1916, and especially after 1918.[14]

The structure of interest payments also lessened the attractiveness of deposits. The 2% simple interest rate was only credited annually, with the clock starting in the first full month following deposit. This meant that if a person were to deposit an amount on August 4, 1913, they would not earn any interest if they withdrew the money before September 1, 1914. This increased the opportunity cost of short-term deposits invested in postal savings was later changed. Beginning on Jan 1, 1922, people could earn interest monthly on deposits that were transferred to Treasury Savings Bonds, and on Jan 1, 1924, interest began to be credited on a quarterly basis (Schewe, 1971, Pg. 150).[15]

The data from the Annual Reports on the Operations of the Postal Savings System indicate that depositors often used postal savings for short-term liquidity, rather than as the long-term savings tool designers of the program envisioned. Since deposits could be redeemed for bonds, which paid 2.5% interest, long-term depositors would make more money with bonds. However, bonds never gained popularity in the period for which the data was reported (1912-1935). In any one year, less than 2% of deposits were converted to bonds. Most depositors were willing to forgo higher interest payments in exchange for liquidity.

The volume of deposits and withdrawals, shown in Figure 3, also suggests a significant amount of short-term holdings. Through the mid 1930's, the sum of total withdrawals and deposits was more than 130% of the balance held within the system. This indicates significant within-year movement of money into and out of the system, and that year-end

[12]Congressional Record, 64th Congress, 1 Sess (1915), LIII, Part 1, p. 615

[13]Dockery (1916), Pg 44

[14]Between 1913 and 1920, the average annual growth of the system was 24% in nominal dollars.

[15]The reported values in our dataset do not include accrued interest.

snapshots understate the total amount of money that passed through the system. This is especially true in times of distress, as seen in the increase of volume following the 1920-1921 depression and the 1929 Stock Market Crash.

Postal savings was also affected by state deposit insurance laws. Over this period, 8 states imposed some kind of deposit insurance systems. Three states, (Mississippi, North Dakota, South Dakota) implemented deposit insurance after the start of postal savings. In the year following the implementation of deposit insurance, postal savings deposits in these states grew 16.5% more slowly than in other states. The discontinuation of deposit insurance was correlated with even stronger changes in postal savings. All states with deposit insurance discontinued the program at some point by 1930 (beginning with Washington's system ending in 1921, and ending with the termination of Nebraska's system in 1930). The year after deposit insurance ended, postal savings deposits in these states grew 50% faster than in other states. The effects were especially strong in the states where deposit insurance was compulsory, where postal savings grew 100% faster in the year following the end of deposit insurance regimes. Davidson and Ramirez (2016) provide a thorough study of the relationship between postal savings and deposit insurance.

3.2 A Sudden Shift: 1930-1941

The 1929 Crash and ensuing run on commercial banks coincided with a sudden rise in postal savings banks. Between 1930 and 1934, the amount on deposit increased by almost 700%, from $175 million, to almost $1.2 billion.[16] The rise was particularly large in Midwestern states, with per-capita deposits increasing 10-fold. The exact dynamics of how postal savings operated during the crash, and how the existence of the system may have affected banking outcomes remains to be examined, but at the time this surge in deposits was seen as a flight-to-quality:

> "While banks were failing all over the country and a veritable avalanche of funds came out of other banks, it was the Postal Savings System that salvaged much of the money withdrawn by the frightened and the timid."[17]

Looking just at the balance in postal savings understates the increased reliance on the program in the early 1930's, as it does not include within-year depositor activity. As Figure 3

[16] Postmaster General Walter F. Brown advocated for raising the cap on deposits from $2,500 to $5,000, as he believed that frightened money was being kept out of circulation.

[17] Rep. Emmanuel Celler (N.Y.). Congressional Record, December 9, 1913, pg. 235

shows, the ratio of the sum of withdrawals and deposits to the end-of-year balance spiked in the early 1930's and, despite a gradual decrease, remained relatively high throughout the decade. This indicates that depositors were increasingly relying on postal savings for short-term savings during times of financial distress. This theory is further supported by the jump in short-term deposits during the panic in the early 1920's.

Figure 4 shows the regional trends in deposits, and indicates that the rise in postal savings during the early 1930's was greatest in places that were hit the hardest by the Depression. Rosenbloom and Sundstrom (1999) show that the drop in employment growth between 1929 and 1933 was smallest in New England and South Atlantic states, and largest in Mountain and East South Central states. By 1933, people in the Mountain and Southeast states held about \$15/capita on deposit, while New England and South Atlantic states had one-third as much on deposit. While deposits in all states grew after the 1929 Crash, they grew most in states that experienced a more severe depression.

With the establishment of the FDIC in 1934, the rapid rise of postal savings halted, but depositors did not abandon the system. Since the FDIC only insured the first \$2,500 in 1934, and \$5,000 from 1935-1950, depositors may have used postal savings as a way to insure some of their excess deposits over those limits. Along with the establishment of deposit insurance, several reforms to postal savings changed the program significantly. In 1935, the free transfer of deposits between post-offices was suspended, and the postmaster began emphasizing the sale of bonds over the promotion of postal savings. Postal savings bonds were discontinued entirely, and the sale of savings bonds was placed under the direction of the post office.

Only the Midwest continued to see postal savings deposits increase in the years immediately following the establishment of the FDIC. Driven by growth in Kansas, Wisconsin, Indiana, Illinois and the Dakotas, the Midwest saw per-capita deposits rise 23% between 1933 and 1940, while the rest of the country averaged a 10% decrease over the same period. These increases in the Midwest may have been due the disproportionately high rate of bank failures. Between 1934 and 1939, Wisconsin and North and South Dakota alone accounted for more than one-fifth of all FDIC bank failures.

After the establishment of the FDIC, regional variation in deposits decreased considerably. As seen in Figure 2, the early years of postal savings saw significant regional variation in deposit trends. However, by the mid 1930's, regions are moving along similar trends. The forces affecting the behavior of depositors were now occurring primary at a national level.

This period saw the end of redepositing postal savings funds in local banks. Designated banks began to refuse postal savings funds, finding the 2.5% interest requirement too costly (Friedman and Schwartz, 1970). This trend began in the Midwest; by 1935, where re-deposits in banks were only 55% of total postal deposits, while in other regions, it was near 100%. By 1939, only 5% of postal savings was re-deposited, with the South redepositing the most (11%).

3.3 Rise and Fall: 1942-1966

The 1940's saw the largest levels of postal savings in the history of the program. Figure 5 shows the regional breakdown. As during the 1929-1941 period, regional trends were very similar, with a crest in the late 1940's followed by a prolonged decline through the remaining years of the program. But while the boom in the early 1930's followed a slew of bank failures, bank deposits were much safer by the 1940's. Instead, the inflexible interest rates of the postal savings system, which did not drop along with banks and bond interest rates, made postal deposits particularly appealing. The late 1940's saw extremely low interest market rates. The prime rate was 2% or lower from 1940-1948, and high-grade municipal bond rates were generally near or below 2% from 1943 to 1947. The 2% offered by postal savings was high in comparison.

Monthly data shows that postal savings deposits move strongly with interest rates. Figure 6 shows the monthly percentage change in postal savings deposits alongside the interest rates of an index of yields of high-grade municipal bonds, from 1940 until the Post Office stopped reporting monthly data in 1957.[18] Periods of higher (lower) yields coincide with decreases (increases) in postal savings. The period of sustained growth of postal savings starting in 1942 also saw consistently low interest rates for municipal bonds. Overall, the negative correlation between the growth of postal savings and municipal interest rates is strong, about -0.64.

During this spike of deposits during the 1940's, postal savings deposits were not being re-deposited into local banks in any meaningful numbers (less than $10 million of more than $2 billion in total deposits). Local banks were not willing to pay the 2.5% required interest rate, and the war left the federal government in need of a great amount of financing.

When interest rates rose again in the late 1940's, growth in the postal savings system

[18] We express this as the difference between this index rate and the 2% postal savings interest rate. Therefore, a negative value means a lower interest rate than postal savings.

slowed, and when those rates passed 2%, deposits began flowing out of postal savings. As rates continued to rise during the 1950's, the flow of money out of postal savings quickened. By the mid-1950's, when interest rates on municipal bonds were over 3%, postal savings deposits were decreasing by 1-2% a month. Though interest rates were also high during the rapid growth of postal savings during the early 1930's, postal deposits maintained the advantage of security through federal insurance. Now lacking either the advantage of security or a higher interest rate, the postal savings system experienced a rapid decline. The wide spread use of cars increased access to banks, and immigration had been restricted for many years, removing one core group of postal savings constituents.

By 1952, bills were being introduced to Congress for the abolition of the program. In 1955, the Congressional Accounting Office recommended its termination, arguing that the expansion and increased security of other savings opportunities made postal savings obsolete.[19] Postmaster General Arthur Summerfield made the same recommendation in 1957. Several bills were proposed to Congress before a final bill to end the program was passed in 1965 and signed into law in 1966. However, even in it's final years, the program was holding more money than at any time in its first decade. In real dollar terms, the amount on deposit in 1965 was 25% more than 1918, the peak of the pre-Depression years.

4 Who Used Postal Savings?

4.1 Demographics

While state-level data provide an overview of the entire history of postal savings, it cannot tell us about what demographic characteristics were most associated with postal savings, and how bank proximity affected demand for postal savings. These questions are important for several reasons; first, they help us understand who used the program, and follow changes in demographic trends of users over time. Second, they help us understand the role of postal savings within a larger banking system.

Anecdotal evidence provides numerous hypotheses for what groups were most attracted to the program. Many stories empathizing immigrants' heavy use of the system are told by people who've written about postal savings. Statistics support this do exist1915, the only year for which nativity data on depositors was gathered, the nationwide average for deposits was $0.6 per person. However, the average for Russian-born people was $7.31 per

[19] Pittsburgh Press (1955)

person, while it was $6.48 for Italian-born people, $5.32 for Hungarian-born, and $4.54 for Austrian born. Many immigrants were coming from countries with postal banking systems. They also may have distrusted of state, national, and private banks. Immigrant banks were often predatory, and were hit particularly hard by the Panic of 1907:

> "There is scarcely a community in the country with an immigrant population of any proportions which has not its record of immigrant-bank failures....Occasionally a national, state, or savings bank closes its doors, but it is seldom the case that the bank's depositors lose any considerable amount by the failure....Upon the failure of an irresponsible immigrant banker, however, there are seldom any funds or resources to which the creditor may have recourse."[20]

Mining towns, which often contained large numbers of foreign-born workers, also saw a high concentration of postal deposits. In 1913, the 10 top cities in terms of deposits per-capita were mining towns. While the popularity of postal savings in mining communities was influenced by their foreign-born populations, it may have also been a result of geographic isolation. Places with limited access to banks may have had higher demand for postal savings.

We know very little about the rural/urban makeup of depositors from the existing history. Rural bankers initially worried that postal savings would draw money out of rural communities, but no existing analysis attempts to determine if postal savings was more popular in rural communities or urban centers. Farmers may appreciate the convenience of postal savings, or they may be more likely to put excess funds to better use, such as by investing in land or equipment.

All of the existing analysis of who used postal savings is limited by the use of aggregate data. The dominant narrative, that postal savings was favored by immigrants in mining town in the West, may be accurate for the early 1910's, but what of laster years, especially after changes in the banking sector? By looking at several years throughout the life of the postal savings system, we estimate how much of the cross-sectional variation can be explained by variation in key demographic and economic measures at each point in time. We chose the years 1919, 1929, and 1936.[21] We regress the log of total county-level deposits on: log of population, demographic characteristics, and the number of state and national

[20] Immigration Commision (1916)

[21] 1919 and 1929 are years in which census information was collected and 1936 was the final year in which the FDIC collected bank data.

banks, using the following OLS model:

$$Ln(Deposits)_c = \beta_0 + \beta_1 NatBank_c + \beta_2 StateBank_c + \boldsymbol{\beta X_c} + \gamma_s + \epsilon_c \quad (1)$$

where $Ln(Deposits)_c$ are the natural log of deposits in a county c; $StateBank_c$ and $NatBank_c$ are the number of state and national banks, respectively; γ_s are state fixed effects; and $\boldsymbol{X_c}$ is a vector of demographic and economic characteristics: the log of population; percent of population living in towns with populations above 2,500; percent of population living in towns with populations above 25,000; the percent of the population that is literate (for 1930 and before); the percent of the population that is male; percent of males that are of voting age (21+); percent of population that is white and foreign-born; percent of population that is black; the percent of acreage in a county that is farmland; a measure of the value of farmland (which differs across census years).

Our results, presented in Table 1, confirm some of the anecdotal evidence about postal savings through 1929. The system was heavily used by foreign-born people[22], and was unpopular in farming communities. These regressions also show that large cities relied on postal savings less. This finding conflicts with the normal narrative, which told that urban areas (especially those with large immigrant communities) saw especially heavy postal savings use. However, when controlling for population, the rural and large urban areas saw less postal savings use than smaller cities (those with between 2,500 and 25,000 residents). Finally, economic measures (percent of farmland that's improved and the land value) show that wealthier farming communities consistently used postal savings less than less affluent ones.

By 1936, the association between demographic characteristics and postal savings weakens considerably. The association between foreign-born people and postal savings decreases, and the negative correlation between farming communities and postal savings disappears. At the same time, a negative relationship between postal savings and percent of a county's population that is black appears. These trends likely reflect the rise of postal savings in the Midwest (see Figure 4). Overall, the variable explain less of the variation in postal savings, as seen in the R-Squared, which drops from 0.646 to 0.449. However, one persistent indicator of postal savings deposits is land value. In all years, the percent of farmland improved and land value per acre are strongly correlated with lower levels of deposits.

[22]The coefficient on percent foreign-born becomes much larger if percent of males who are of voting age is dropped from the regressions.

4.2 Distance to Banks

While county-level data allows us to compare numerous demographic characteristics to postal savings usage, it is unsuitable to examine the impact of banks of postal savings deposits. The number of banks in a county is a coarse measure of banking access when most individuals would not have traveled to another city for banking services. Using town-level data, we estimate the effect of bank proximity on postal savings deposits.

Using a full nationwide dataset of state and national banking data for 1913 and 1919, we geocoded postal savings depositories and banks.[23] We then measured the distance to the nearest state and national bank.

The 1913-1919 period saw a steady increase in the number of banks, making this period well-suited to study the extent to which people were willing to substitute postal savings with traditional banking. Between 1913 and 1919, about 12% of the sample saw the nearest state bank move by more than 1 km between 1913 and 1919, and 14% of the sample saw the nearest national bank move by that much. In later years (at least through the mid-1930's) variation in the number of banks came from financial crises, so we would be capturing a flight-to-quality. By the late 1940's the number of banks was fairly stable, and we lack enough variation to estimate any effects.

We first present cross-sectional relationship between bank distance and postal savings use by estimating the following OLS model:

$$Ln(Deposits)_i = \beta_0 + \beta_1 NatBank_i + \beta_2 StateBank_i + \boldsymbol{\beta X_c} + \gamma_s + \epsilon_i \tag{2}$$

where $Ln(Deposits)_i$ is the natral log of deposits at the town level i; $NatBank_i$ is a dummy variable taking on the value of one if there is a national bank with in a specified distance of the post office with deposits, $StateBank_i$ is a similar dummy variable for state banks; $\boldsymbol{X_c}$ is a vector of Census demographic characteristics described above; and γ_s are state fixed effects.[24]

The relationship between postal savings deposits and presence of a bank is positive and has an inverted-U shape. Tables 2 and 3 show the above equation estimated for thresholds of one kilometer, and every 5 kilometers out to a distance of 25 kilometers.[25] The size of

[23] Postal savings depositories are only included if they had at least $1 in deposits in any year from 1913 to 1919. We also exclude any offices that were established after 1913.

[24] Due to the presence of state fixed effects we cannot test the impact of deposit insurance here.

[25] A person on foot could make a round trip of up to about 8 km in a day. Longer distances would entail an overnight stay.

the coefficient is the largest when there is a bank located within 5 km. Figures 7 and 8 show more detail on this smaller range. This inverted-U shape suggest that selection in the location of banks—banks locate where people demand savings vehicles—but that people are more likely to use postal savings when they are in an area that demands savings vehicles, but not in a town with its own bank.

To explore this further we use a first-difference specification to control for unobserved place characteristics associated with both bank location and postal deposits:

$$\Delta Ln(Deposits)_{i,t} = \beta_1 \Delta NatBank_{i,t} + \beta_2 \Delta StateBank_{i,t} + \boldsymbol{\beta \Delta X_{c,t}} + \gamma_s + \epsilon_{i,t} \quad (3)$$

Where $\Delta Ln(Deposits)_i$ is the change in the natural log of postal deposits at office i between 1913 and 1919; $\boldsymbol{X_c}$ is a vector of Census demographic characteristics as above; and γ_s are state fixed effects.[26] As above $NatBank_i$ and $StateBank_i$ are dummy variables equal to 1 if there is a bank within a a specified distance, and 0 otherwise. Therefore $\Delta NatBank_{i,t}$ ($\Delta StateBank_{i,t}$) is equal to 1 if a community does not have a bank nearby in 1913, but does have one by 1919 (and -1 if the opposite it true). A negative coefficient means that banks cause a decrease in postal savings, which is consistent with the hypothesis that postal savings serves as a substitute for banking in places that do not have close access to banking. Rather than using a single arbitrary cutoff, we estimate the model using a variety of cutoffs to show the distances at which banks affect postal savings.

The results, shown in Table 4, indicate that gaining a bank, especially a national bank, led to a significant decrease in postal savings deposits. When using a 1 kilometer cutoff, gaining a national bank is associated with a 33% drop in postal savings deposits. This estimate is significant at the 5% level. For state banks, a bank is associated with a 21% drop, and this estimate is significant at the 10% level. The effect of gaining or losing a bank declines as we move our distance threshold out. As seen in Figure 9, between 2 and 6 kilometers the estimated impact of having a national banks is fairly consistent, between a 30% and 37% drop in postal savings deposits, while state banks are associated with a drop of between and 10% and 20%. While the estimates for national banks are always significant at the 5% level, and sometimes at the 1% level, estimates for state banks are never significant at the 5% level. At 10 km and after, we find no significant effect.[27] A

[26] We impute values for 1913 by assuming linear changes in demographic variables, and use the 1920 census for 1919 values.

[27] We would still expect a small effect, since some communities that gain a bank within 10 km also gain a bank within 1 km.

bank that is 10 km away is not accessible for everyday usage, so gaining a bank within that range will be of little use.

The decay in the coefficient as we expand the radius also supports our identification strategy. Any unobserved shocks likely have spatial auto-correlation, meaning that any omitted variable bias in a regression using 1 km as the threshold would likely bias a regression using 10 km. But since we observe the effect of banks on postal savings dropping as we move the threshold further away, the confounding, unobserved shock would need to be unique to very small areas (less than 10 km) to be driving our results.

The fact that national banks have a much larger negative effect on postal deposits should not be surprising. National banks were generally larger, more regulated, and less likely to fail than state banks. Moreover, national banks were required to join the Federal Reserve in 1914 which allowed them to access nation-wide check clearing and the discount window. To the extent that individuals put deposits in postal savings accounts due to their government guarantee, they might have been more likely to trust those same deposits to a national bank rather than a state bank.

Our results are not being driven by bank closures. We verify this by eliminating the few instances where a community loses a bank. The coefficient on bank proximity for national banks becomes even stronger, indicating that depositors are especially reactive to the establishment of a bank. If we attempt to instead identify only off of bank closures (by instead dropping places that gained banks) the coefficient is closer to 0, though still negative and not significant at the 10% level. This could be due to the small number of bank failures, or due to the fact that depositors were not always paid in full following bank liquidations, leaving them less money to deposit into postal savings.

The effect of bank proximity also differed in states with deposit insurance. We test this by interacting the independent variable of interest with a dummy variable equal to 1 if a state had deposit insurance.[28] As seen in Table 5, the coefficient on the interaction term indicates that the effect of having a bank nearby was significantly closer to 0 in states with deposit insurance.[29] One way to interpret this result is that the desire for a safe deposit dominates the desire for convenience. However, it might be that limited number of states with deposit insurance don't allow for prices estimation of this effect, paralytically

[28]For this analysis, we dropped MS, ND, and SD, as they had changes in the deposit insurance regimes over this period.

[29]A regression using only states with deposit insurance confirms this estimate. Gaining a bank is associated with only a 2% drop in postal savings deposits, with a p-statistic of 0.945.

as their demographics don't predict that postal savings would have been heavily used in the 1910s.[30]

Finally, Table 6 shows the effects of bank proximity by region.[31] The effect is largest in the Northeast, where having a national bank near is associated with about a 50% drop, and smallest in the Midwest, where a 25% statistically insignificant drop is seen.[32] In the Midwest, the effect of state banks is especially large, resulting in a 25% drop in postal savings. In southern western states, only national banks are associated with a decrease in deposits, while the coefficients on state bank proximity is positive (though not significantly different than zero).

5 Conclusion

Throughout its history, the United States Postal Savings System served several different functions. For the first several decades of service, at least up to the establishment of the FDIC, demand for postal savings was associated with the access (or lack thereof) to safe banking opportunities. Gaining a bank nearby significantly decreased the amount deposited in postal savings, as did the establishment of state deposit insurance systems. Additionally, postal savings was especially popular for foreign-born populations, who were purportedly distrustful of commercial banks.

Though postal savings deposits decreased when banks moved into an area, the effect is small enough that other factors were also driving deposits. Using the point estimates found in Table 4 if every post office gained a national bank within 1 km, total postal savings deposits would decrease by about 10%. This change is small compared to the changes in deposits when state deposit insurance programs were put in place (about a 16% decrease) or when those programs were dissolved (50% increase). This suggests that both desires for both convenience and proximity influenced postal savings deposits, but that the desire for safety was especially strong.[33].

In later years, especially once the probability of bank failures became diminishingly

[30]The states with deposit insurance fore this period were: Texas, Oklahoma, Kansas, and Nebraska. Washington had a voluntary deposit insurance system.

[31]For convenience, we measure proximity to a bank at 5 km, though are results are robust to alternate measures up to 8 km.

[32]Though the Northeast experiences the strongest marginal effect the significance of our results remain if Northeast states are dropped.

[33]This is also supported by the positive interaction between bank proximity and deposit insurance. When deposit insurance was in place, convenience did not seem to matter

small, the appeal of postal savings depended primarily on the interest rates offered by other savings mechanisms. Though the 2% return offered by postal savings was relatively low in 1911 when the system was established, by the 1940's, it was higher than most bond interest rates with no corresponding increase in risk. Postal savings became more popular in the Midwest and the West, and in farming communities.

This history also raises several questions to be answered through further research. Did postal savings increase the amount of money in circulation, or simply draw money that would have otherwise been in banks? How did the re-deposit mechanism affect banks, both during times of crisis, and in later years of the program when high interest rates made the practice of re-depositing impracticable for banks? Finally, the evidence provided here suggests that postal savings offered a safe haven for scared deposits, especially before the establishment of the FDIC. A full study of the role of postal savings during the Great Depression could yield valuable insights.

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6 Figures and Tables

Figure 1: National use of the Postal Savings System

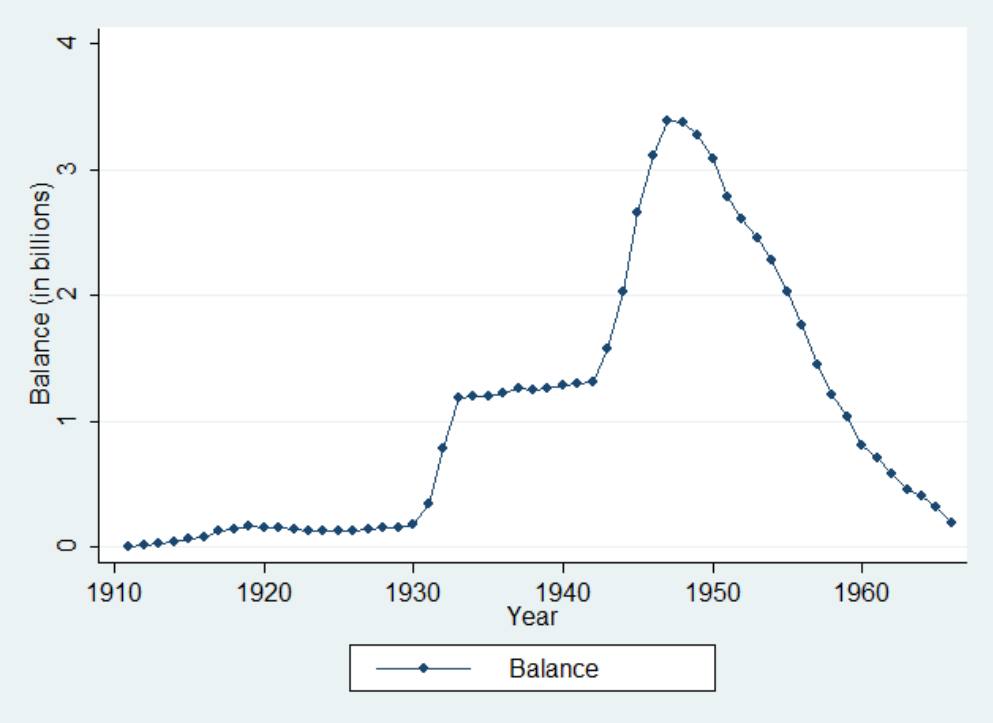

Figure 2: Deposits per Capita by Region 1913-1930

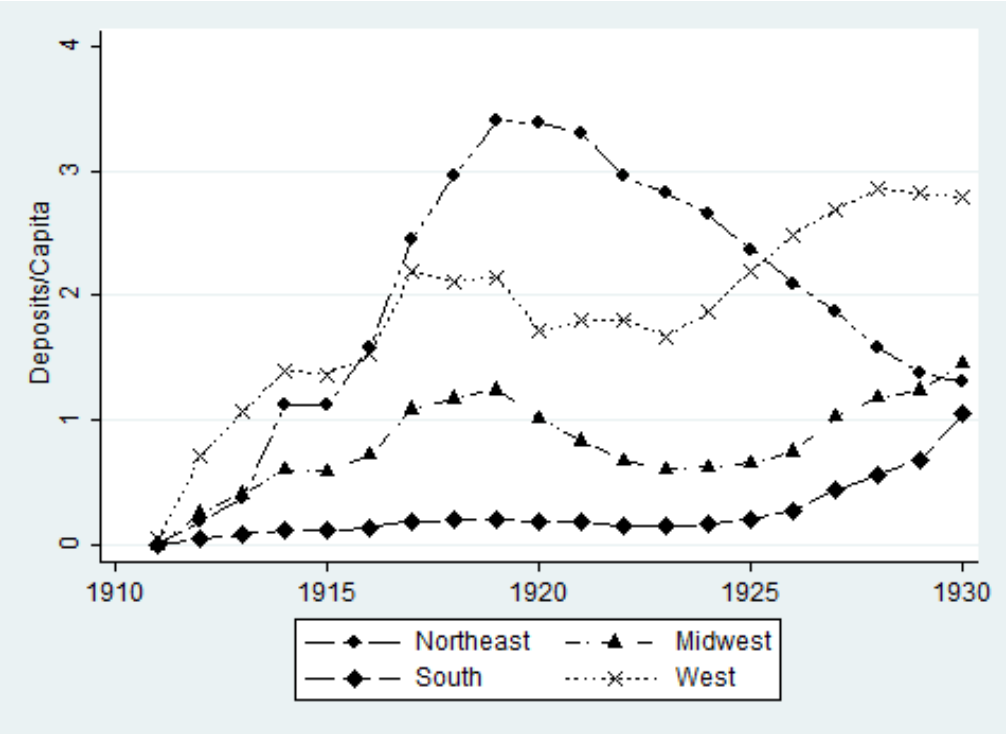

Figure 3: Yearly Activity in the Postal Savings System

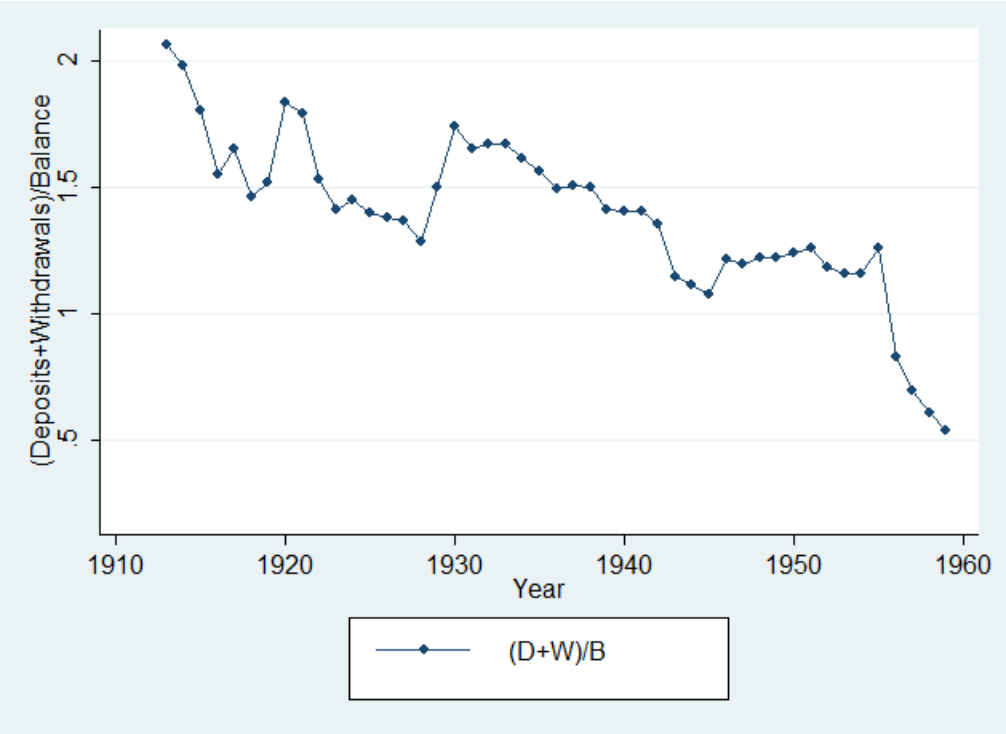

Figure 4: Deposits per Capita by Region 1930-1940

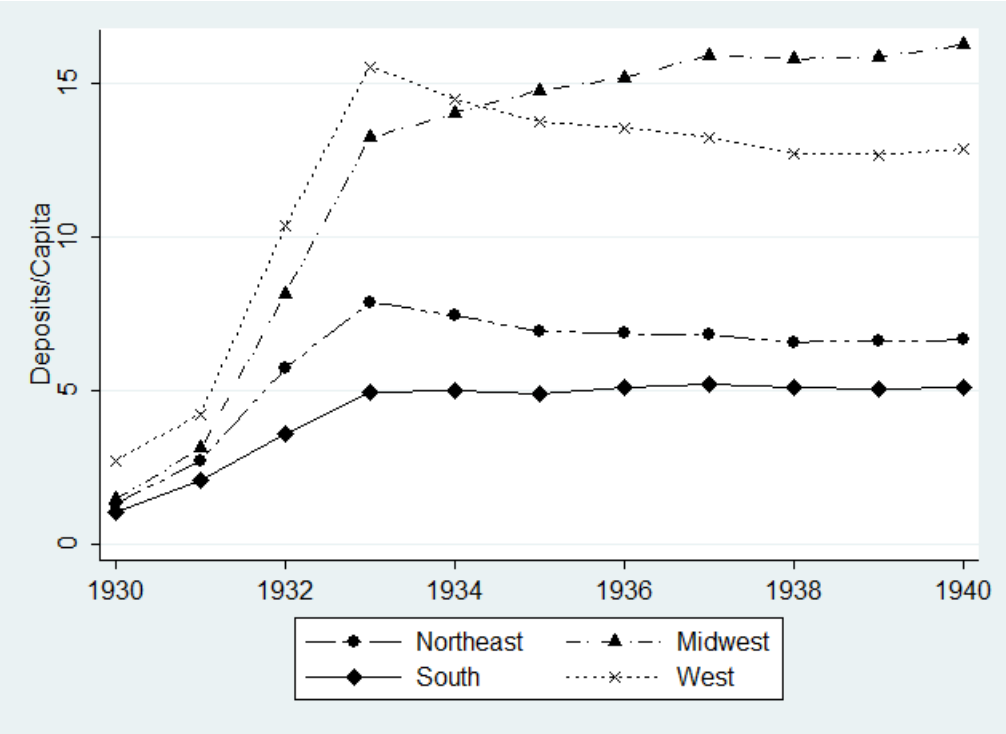

Figure 5: Deposits per Capita by Region 1940-1966

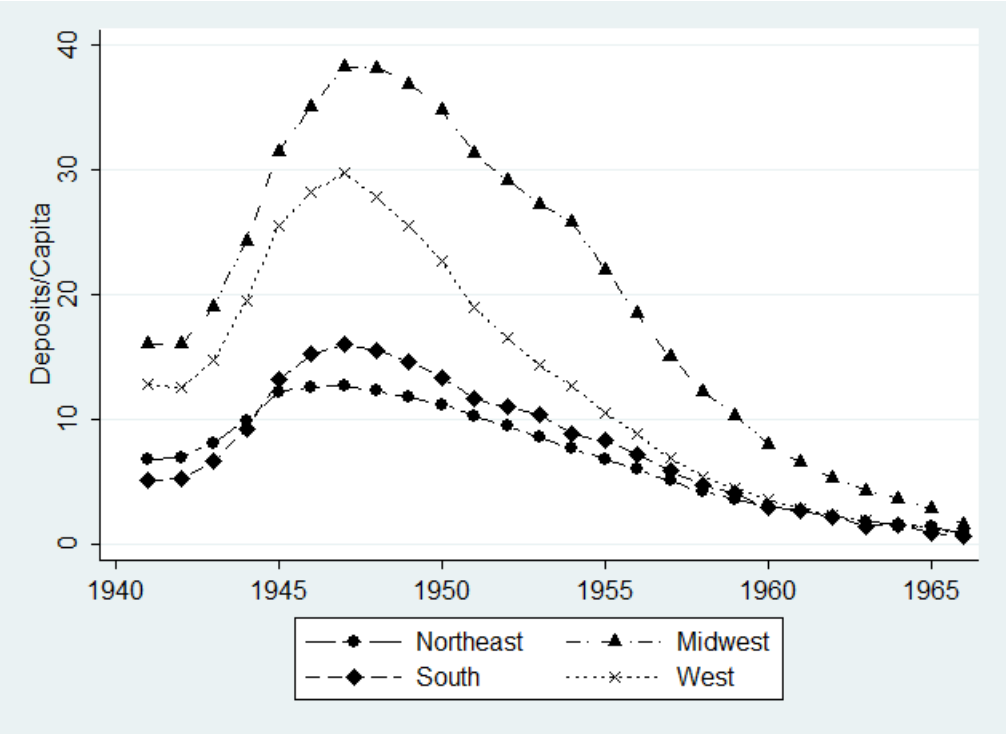

Figure 6: Use of the Postal Savings System and Bond Prices

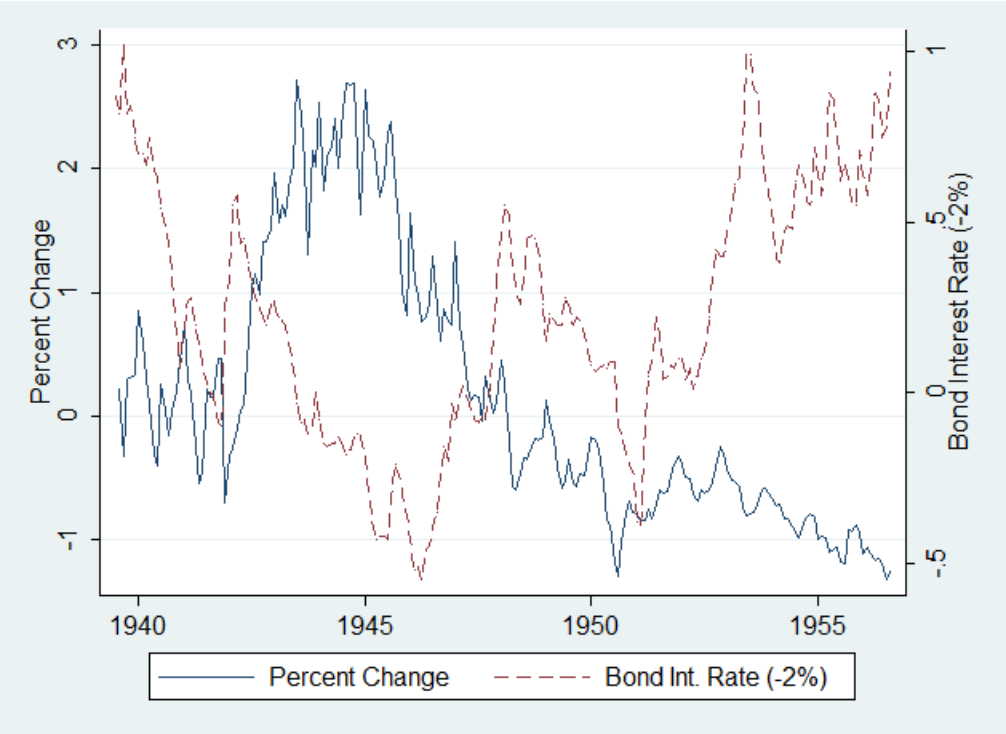

Figure 7

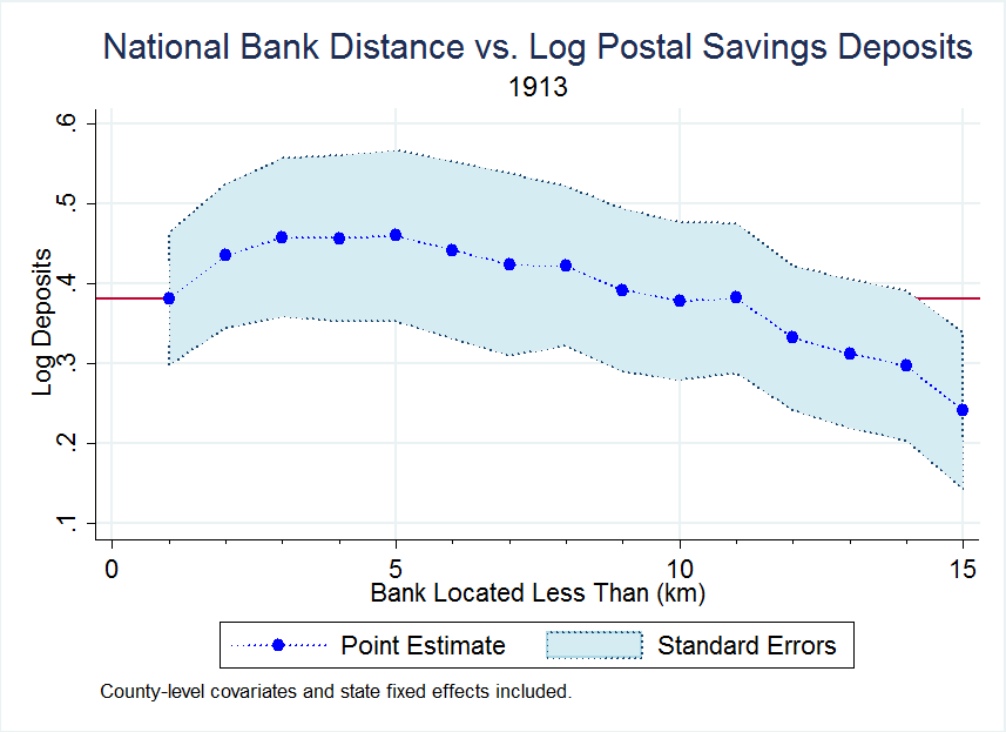
National Bank Distance vs. Log Postal Savings Deposits
1913
Log Deposits
.1
.2
.3
.4
.5
.6
0
5
10
15
Bank Located Less Than (km)
Point Estimate
Standard Errors
County-level covariates and state fixed effects included.

Figure 8

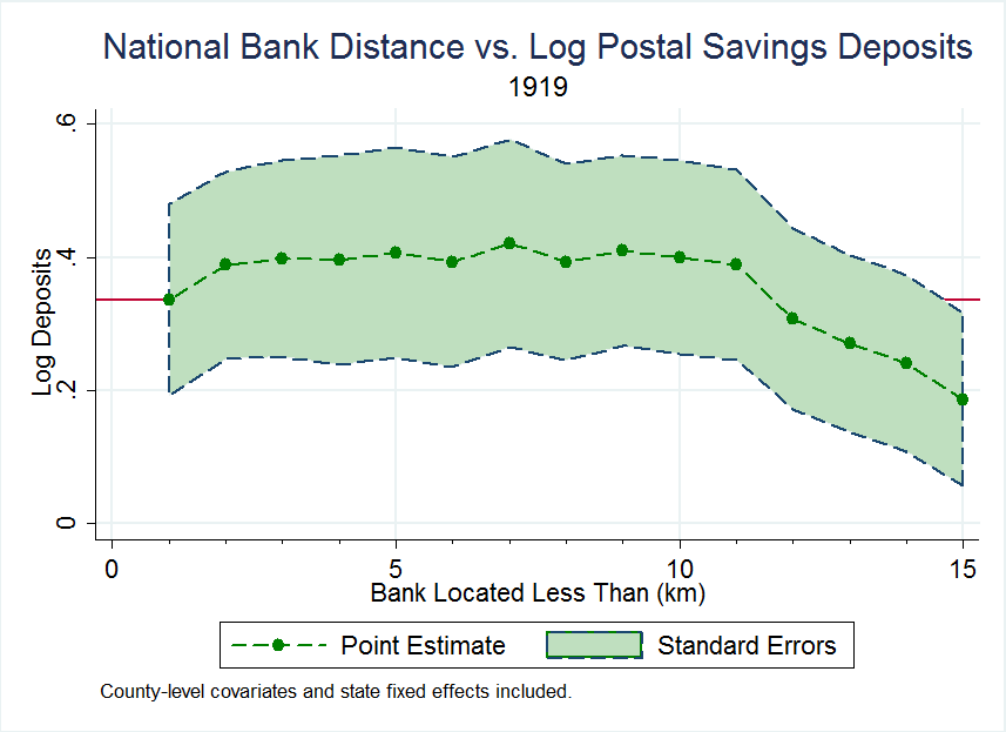
National Bank Distance vs. Log Postal Savings Deposits
1919
Log Deposits
0
.2
.4
.6
0
5
10
15
Bank Located Less Than (km)
Point Estimate
Standard Errors
County-level covariates and state fixed effects included.

Figure 9

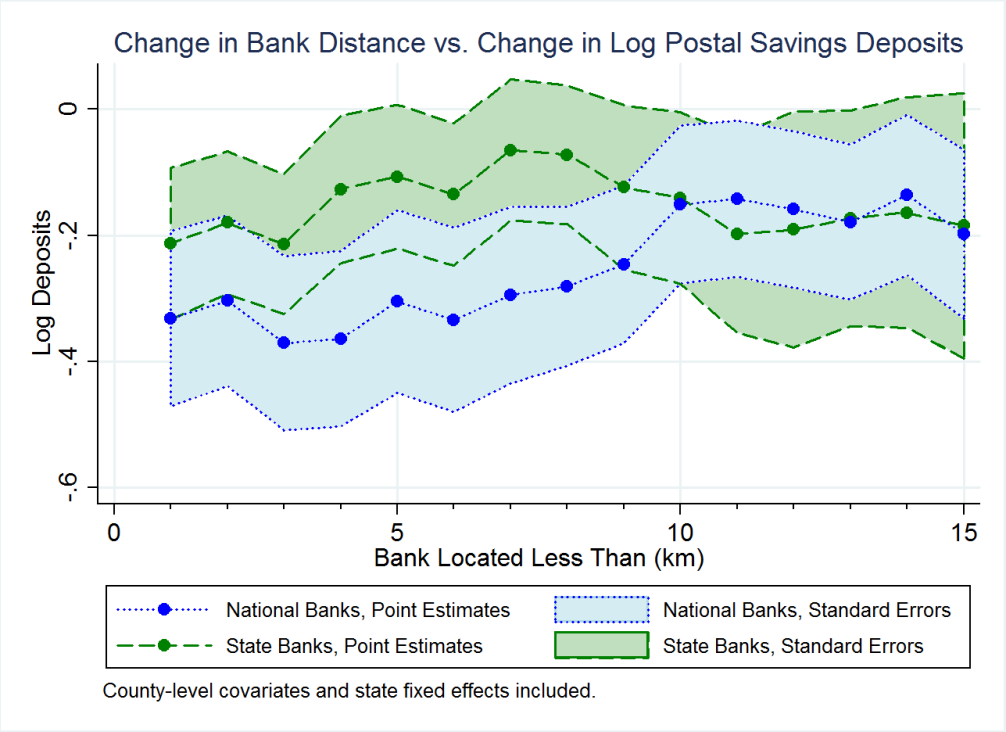
Change in Bank Distance vs. Change in Log Postal Savings Deposits
Log Deposits
0
-.2
-.4
-.6
0
5
10
15
Bank Located Less Than (km)
National Banks, Point Estimates
National Banks, Standard Errors
State Banks, Point Estimates
State Banks, Standard Errors
County-level covariates and state fixed effects included.

Table 1: Cross-Section Regressions

VARIABLES	(1) 1913 Log PS Depo	(2) 1919 Log PS Depo	(3) 1929 Log PS Depo	(4) 1936 Log PS Depo	(5) 1940 Log PS Depo
# of State Banks	-0.0242***	-0.0222*	-0.0314***	-0.0584***	-
	(0.00818)	(0.0124)	(0.0102)	(0.0204)	
# of Nat. Banks	-0.00815	-0.00645	0.00753	-0.0276	-
	(0.0108)	(0.0208)	(0.0270)	(0.0222)	
Log(Population)	1.927***	2.195***	2.451***	1.942***	1.714***
	(0.117)	(0.158)	(0.165)	(0.182)	(0.141)
Percent Urban	0.0120***	0.0358***	0.0425***	0.0332***	0.0345***
	(0.00361)	(0.00483)	(0.00382)	(0.00385)	(0.00394)
Percent Urban 25K+	-0.0237***	-0.0269***	-0.0403***	-0.0299***	-0.0281***
	(0.00281)	(0.00484)	(0.00464)	(0.00437)	(0.00385)
Literacy Rate	0.0477***	0.0393**	0.0456**	-	-
	(0.0136)	(0.0195)	(0.0170)		
Percent Male	-0.0633	0.0359	-0.0214	-0.147**	-0.191***
	(0.0383)	(0.0708)	(0.0750)	(0.0674)	(0.0652)
Percent Voting Age (of Males)	0.165***	0.188***	0.175***	0.162***	0.190***
	(0.0165)	(0.0196)	(0.0335)	(0.0434)	(0.0469)
Percent White FB	0.0367***	0.0747***	0.0968***	0.0379*	0.0226
	(0.0104)	(0.0192)	(0.0307)	(0.0203)	(0.0194)
Percent Black	-0.00131	-0.000843	0.00118	-0.0231***	-0.0224***
	(0.00723)	(0.0102)	(0.00818)	(0.00774)	(0.00776)
Percent Farmland	-0.00838***	-0.00926*	-0.0142***	0.00287	0.00217
	(0.00295)	(0.00511)	(0.00513)	(0.00287)	(0.00286)
Percent of Farmland Improved	-0.00515	-0.0143***	-	-	-
	(0.00431)	(0.00484)			
Log Land Value Per Acre	-	-	-0.576***	-0.131**	-0.101**
			(0.116)	(0.0513)	(0.0396)
Constant	-22.07***	-31.83***	-29.34***	-7.673	-3.161
	(2.38)	(4.215)	(4.108)	(4.683)	(3.889)
		State fixed effects absorbed.			
Observations	2681	2681	2668	2,668	2,689
R-squared	0.63	0.646	0.517	0.449	0.446

Standard errors clustered by state in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Appendix Table 7 shows all years without the banking variables.

Table 2: 1913

Dependant Variable Log Postal Savings Deposits						
	(1)	(2)	(3)	(4)	(5)	(6)
Threshold	< 1 km	< 5 km	< 10 km	< 15 km	< 20 km	< 25 km
Nat Bank Dummy	0.381***	0.460***	0.378***	0.241**	0.140	0.0873
	(0.0829)	(0.107)	(0.0987)	(0.0986)	(0.0926)	(0.0908)
State Bank Dummy	-0.0208	0.0220	-0.208***	-0.347***	-0.495***	-0.406**
	(0.0875)	(0.0768)	(0.0733)	(0.0937)	(0.124)	(0.153)
County level controls not shown, state fixed effects absorbed.						
Observations	8,275	8,275	8,275	8,275	8,275	8,275
R-squared	0.352	0.353	0.352	0.350	0.350	0.349

Standard errors clustered by state in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

See Figure 7 for more details.

Table 3: 1919

Dependant Variable Log Postal Savings Deposits						
	(1)	(2)	(3)	(4)	(5)	(6)
Threshold	< 1 km	< 5 km	< 10 km	< 15 km	< 20 km	< 25 km
Nat Bank Dummy	0.336**	0.407**	0.400***	0.186	0.0529	0.00275
	(0.144)	(0.158)	(0.146)	(0.130)	(0.131)	(0.129)
State Bank Dummy	0.308***	0.353***	0.180	0.0472	-0.0342	-0.0722
	(0.0951)	(0.0981)	(0.134)	(0.130)	(0.154)	(0.232)
County level controls not shown, state fixed effects absorbed.						
Observations	8,275	8,275	8,275	8,275	8,275	8,275
R-squared	0.451	0.452	0.451	0.449	0.449	0.449

Standard errors clustered by state in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

See Figure 8 for more details.

Table 4

Dependant Variable Δ Log Postal Savings Deposits						
	(1)	(2)	(3)	(4)	(5)	(6)
	Δ <	Δ <	Δ <	Δ <	Δ <	Δ <
Threshold	1 km	5 km	10 km	15 km	20 km	25 km
Δ Nat. Banks	-0.332**	-0.305**	-0.151	-0.198	-0.0464	0.107
	(0.139)	(0.145)	(0.125)	(0.134)	(0.168)	(0.202)
Δ State Banks	-0.213*	-0.107	-0.141	-0.185	0.123	-0.0915
	(0.120)	(0.114)	(0.136)	(0.210)	(0.330)	(0.365)
County level controls not shown, state fixed effects absorbed.						
Observations	8,275	8,275	8,275	8,275	8,275	8,275
R-squared	0.140	0.140	0.139	0.139	0.139	0.139

Standard errors clustered by state in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

See Figure 9 for more details.

Table 5: Differential Effects

VARIABLES	(1) $\Delta <$ 1 km	(2) $\Delta <$ 5 km	(3) $\Delta <$ 10 km	(4) $\Delta <$ 15 km	(5) $\Delta <$ 20 km	(6) $\Delta <$ 25 km
Δ Nat. Banks*No Deposit Insurance	-0.450***	-0.415**	-0.206	-0.290*	-0.00703	0.107
	(0.161)	(0.170)	(0.152)	(0.148)	(0.160)	(0.216)
Δ Nat. Banks*Deposit Insurance	-0.0155	-0.0825	-0.171	-0.326**	-0.429	-0.192
	(0.242)	(0.220)	(0.168)	(0.158)	(0.362)	(0.378)
Δ State Banks*No Deposit Insurance	-0.291**	-0.162	-0.216	-0.260	0.0434	-0.149
	(0.132)	(0.125)	(0.146)	(0.231)	(0.353)	(0.400)
Δ State Banks*Deposit Insurance	0.141	0.166	0.267	0.249	0.747***	0.387*
	(0.151)	(0.165)	(0.172)	(0.189)	(0.182)	(0.230)
County level controls not shown, state fixed effects absorbed.						
Observations	7,910	7,910	7,910	7,910	7,910	7,910
R-squared	0.142	0.141	0.141	0.141	0.140	0.140

Standard errors clustered by state in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Note: ND, SD, MS omitted.

Table 6: Effects By Region

VARIABLES	(1) $\Delta <$ 5 km Northeast	(2) $\Delta <$ 5 km Midwest	(3) $\Delta <$ 5 km South	(4) $\Delta <$ 5 km West
Δ Nat. Banks	-0.507*	-0.246	-0.286	-0.308
	(0.229)	(0.233)	(0.322)	(0.238)
Δ State Banks	0.0638	-0.454***	0.0412	0.174
	(0.163)	(0.135)	(0.207)	(0.324)
County level controls not shown, state fixed effects absorbed.				
Observations	1,656	3,651	1,908	1,059
R-squared	0.175	0.073	0.060	0.061

Standard errors clustered by state in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Means

	Northeast	Midwest	South	West
Nat Bank Dist 1913	5.098	11.68	16.30	22.08
	(8.343)	(13.84)	(19.18)	(31.40)
Nat Bank Dist 1919	4.953	11.11	14.02	19.69
	(8.162)	(13.18)	(16.44)	(32.03)

Table 7: Appendix Cross-Section Regressions

VARIABLES	(1) 1913 Log PS Depo	(2) 1919 Log PS Depo	(3) 1929 Log PS Depo	(4) 1936 Log PS Depo	(5) 1940 Log PS Depo
Log(Population)	1.783***	1.932***	2.261***	1.765***	1.714***
	(0.125)	(0.152)	(0.162)	(0.150)	(0.141)
Percent Urban	0.0127***	0.0375***	0.0436***	0.0351***	0.0345***
	(0.00409)	(0.00500)	(0.00362)	(0.00400)	(0.00394)
Percent Urban 25K+	-0.0247***	-0.0255***	-0.0369***	-0.0303***	-0.0281***
	(0.00280)	(0.00510)	(0.00670)	(0.00440)	(0.00385)
Literacy Rate	0.0479***	0.0367*	0.0487***	-	-
	(0.0126)	(0.0191)	(0.0176)		
Percent Male	-0.0519	0.0415	-0.0149	-0.138**	-0.191***
	(0.0385)	(0.0713)	(0.0764)	(0.0662)	(0.0652)
Percent Voting Age (of Males)	0.164***	0.191***	0.164***	0.150***	0.190***
	(0.0156)	(0.0193)	(0.0341)	(0.0410)	(0.0469)
Percent White FB	0.0358***	0.0714***	0.0844***	0.0305	0.0226
	(0.00974)	(0.0177)	(0.0296)	(0.0204)	(0.0194)
Percent Black	-0.000605	-0.000669	0.00319	-0.0231***	-0.0224***
	(0.00701)	(0.0104)	(0.00870)	(0.00758)	(0.00776)
Percent Farmland	-0.00838***	-0.00971*	-0.0148***	0.00271	0.00217
	(0.00283)	(0.00512)	(0.00499)	(0.00294)	(0.00286)
Percent of Farmland Improved	-0.00448	-0.0136**	-	-	-
	(0.00461)	(0.00518)			
Log Land Value Per Acre	-	-	-0.531***	-0.144***	-0.101**
			(0.107)	(0.0521)	(0.0396)
Constant	-21.41***	-29.64***	-27.69***	-6.164	-3.161
	(2.521)	(4.311)	(3.929)	(4.394)	(3.889)
		State fixed effects absorbed.			
Observations		2703	2,693	2,683	2,689
R-squared		0.645	0.515	0.448	0.446

Standard errors clustered by state in parentheses.
*** p<0.01, ** p<0.05, * p<0.1