The Impact of Financial Inclusion on Minorities: Evidence from the Freedman's Savings Bank

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Abstract

A recent study, Stein and Yannelis (2020), argues that the Freedman's Savings Bank, which collected deposits from recently freed enslaved people during the Reconstruction era, had large positive effects on its depositors' wealth and education. Using additional data, we empirically reject the assumptions of the study's identification strategy. Following an alternative methodology that addresses these concerns, we find no evidence of any positive effects. In contrast, our findings support a predatory view of the Freedman's Savings Bank: the negative effects of the large fraud and abuse of trust at the bank led to significant losses for Black depositors.

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"(The bank ...) has been the Black man's cow, but the white man's milk."

Frederick Douglass, 1874

"Not even ten additional years of slavery could have done so much to throttle the thrift of the freedmen as the mismanagement and bankruptcy of the series of savings banks chartered by the Nation for their especial aid."

W.E.B. Du Bois, 1903

1 Introduction

The effects of access to basic financial services on various outcomes such as employment, income, wealth and education have been extensively explored in the household finance and development economics literature (Ashraf et al. 2006; Agarwal et al. 2017; Schaner 2018). However, little is known about whether facilitating access to formal financial institutions for minorities affects their economic and social integration. In countries where financial services and products are central to any economic interactions, having access to formal financial institutions might foster wealth and other long-term outcomes. However, if minority populations are not part of the management and ownership of these formal financial institutions, we might worry that financial inclusion might be the vector of additional discriminations, and in the worst scenario, exploitation.[1] Can fostering access to formal financial institutions have a detrimental impact on minorities? Is there a context in which this risk is particularly heightened?

We address these questions by studying the history of the Freedman's Savings Bank, one of the first formal institutions collecting deposits from African Americans. A recent study, Stein and Yannelis (2020), henceforth the study, argues that

[1]This is one of the reasons why Black community leaders have been advocating for Black-owned banking since the Reconstruction. On April 3, 1968, Martin Luther King Jr. enjoined his followers to pull their money "out of the banks downtown" and deposit it in a Black-owned bank.

the institution – a savings bank collecting deposits from recently freed enslaved people – had strong positive effects on the education, income and wealth of the freedmen within less than five years.[2] The Freedman's Savings Bank was established in 1865 at the end of the Civil War. The bank was initially chartered as a simple savings bank that did not extend credit, with the primary objective of pooling the savings of former Black Union soldiers. Within 7 years of its formation, the bank opened 37 branches across 17 states and the District of Columbia and collected deposits from more than 100,000 households. However, this rapid development was largely fostered by false claims regarding the bank's promised returns, the state guarantee and the use of the deposit funds. Within a few years, the bank began issuing large speculative loans to white businessmen. The pervasive fraud and mismanagement at the bank lead to its collapse in 1874 with subsequent losses for the depositors. Figure 1 displays a timeline of the key events in the history of the Freedman's Savings Bank.[3]

INSERT FIGURE 1 HERE

We first collect additional historical data at the county level and show that the key assumption of the study's identification strategy is not verified empirically. The validity of the two instruments the study exploits – the presence of a branch of the Freedman's Savings Bank in a county, which we refer to as "branch county" henceforth, and the distance to a branch county – requires the branch location to be exogenous to freedmen's access to education and wealth.[4] We test this assumption

[2]According to the study, the Freedman's Savings Bank lead to an increase in the probability to attend school by 14 percentage points, to be literate by 13-19 percentage points, and to work by 3-6 percentage points. These magnitudes correspond to multiplying the probability to attend school, 3.9% in the sample on average, by 4, to be literate by 2 and to work by 1.1 (Tables 2 and 7).

[3]For historical facts on the Freedman's Savings Bank, we largely rely on senate and congressional reports, including U.S. Senate. 42nd Congress, 3rd Session (1873); U.S. Senate. 43rd Congress, 2nd Session (1874); U.S. Senate. 43rd Congress 1st Session (1874); U.S. Senate. 44th Congress, 1st Session (1876); U.S. Senate. 46th Congress 2nd Session (1880), Fleming (1927); Osthaus (1976)'s books on the bank, along with other historical archives and newspapers as cited in the text.

[4]The study's first-stage equation is $A_i = \alpha_t + \alpha_c + \zeta_1 B_i + \zeta_2 M_i^B + \gamma_2 X_i + \epsilon_i$, where A_i is an indicator of whether an individual has an account, α_t is a vector of fixed effects for the branch opening year, α_c is an indicator for metropolitan area, B_i is an indicator for whether the individual is located in a county with a branch, M_i^B is the distance to the nearest branch, and X_i includes a set of demographic characteristics. B_i and M_i^B are the two instruments the study uses simultaneously for holding an account.

using county-level historical data from school reports, army troop locations and the 1860 census to identify the ex-ante characteristics of branch counties prior to the development of the bank. Branches were located in counties with a relatively high presence of schools for freedmen, which implies that the distance to the branch is correlated with the distance to schools, a high literacy rate ex-ante, a high presence of Black Union army veterans – who had some initial capital to invest, the bounty money, as opposed to the freedmen just released from slavery –, and high indicators of wealth and economic development in 1860. We supplement our analysis with evidence from the history literature suggesting that branches were not only located where the army and schools were, but that both the army and schools were directly collecting deposits from veteran soldiers and schoolchildren, suggesting some potential reverse causality issues. Taken together, the evidence suggests that the necessary assumption for the study's instrument to be valid is not verified.

In a second step, we revisit the study's findings on the short run effects of the Freedman's Savings Bank at the individual level by merging depositors' information with the 1870 US census data. The strategy used to link the two datasets is crucial to correctly identify depositors, as historical data often include non-unique names and are prone to transcription errors. While the source for the depositors' information is the same as in the study, i.e. the registers of signatures of the Freedman's Savings Bank, we develop our own methodology to identify depositors in the US population. First, we merge the registers of signatures of the Freedman's Savings Bank with the 1870 *full* census, instead of using the 1% sample with Black oversample as in the study.[5] We also exploit a larger set of information from the registers of signatures than in the study to identify depositors in the 1870 US census, using not only names, race and location, but also five other variables, which include the account opening year, age, father and mother first name initials

[5]One important limitation the study faces when using the 1% Black oversample, even in the scenario where the two historical datasets are perfectly matched, is that one should not be able to identify more than 5% of the 13,072 Black depositors who are listed in the bank registers and opened an account before 1870. This would represent around 650 individuals.

and place of birth.[6,7] Finally, we follow the recent literature in economic history and adopt the matching algorithm in Abramitzky et al. (2020) to link the two historical datasets.[8]

Our results are the following. We show that ex-ante, before opening an account, depositors differ significantly from the rest of the population. To do so, we restrict the sample to depositors who opened an account after 1870 and compare their characteristics in 1870 to the rest of the Black population. We find that depositors are ex-ante 6 percentage points, or 25%, more likely to be literate, and are close to twice as rich. If we consider demographic characteristics, 20% of depositors are children. Among school-aged children, 32% attend school before opening an account, versus 12% for the control group. This stylized fact is consistent with the Freedman's Savings Bank actively collecting deposits from schoolchildren through its strong connections with the Freedmen's Bureau and American Missionary Association (AMA)'s schools.

Evidence from the individual-level dataset also confirms that the location of bank branches is not exogenous to access to wealth and education. Black households that are living closer to a branch are more likely to be literate, have a higher income and a higher wealth even when they do not hold a bank account. While spillover effects or false negatives might be driving this result, we observe the same patterns when considering white households only.

To further investigate the effects on the education and wealth outcomes of the Freedman's Savings Bank, we develop an alternative empirical strategy that exploits the staggered opening dates of bank accounts *within branch*. Under the assumption that, within depositors, the account opening year does not correlate

[6]As opposed to the study, we also link only depositors to the 1870 census, and not their relatives, as information for relatives is sparse and they might not even be part of the depositor's household. For example, 7% of the relatives are indicated as dead in the bank registers, and 1.2% were not born prior to 1870. We also do not use all combinations of first names and last names for the depositors and their relatives as in the study, as it could potentially inflate the number of false positives.

[7]The study does not consider the account opening year in the main analysis, even while only 25% of the individuals identified as depositors have an account opened before 1870.

[8]When we replicate the study's methodology, we find that 90% of the individuals who are identified as depositors in 1870 in the 1% Black oversample have an age, place of birth, mother's or father's initials or status that do not match the depositor's information from the registers of signatures.

with individual characteristics *ex-ante*, had the Freedman's Savings Bank any short run effects, depositors who opened an account *before 1870* should have a higher wealth and education in 1870 than depositors who opened an account *after 1870*. We first show that the assumption is verified in the data: the account opening year does not correlate with depositors' characteristics ex-ante. Second, we compare the education and wealth in 1870 of depositors who opened a bank account *before 1870* to the ones who opened an account *after 1870* and find no significant differences. Therefore, we find no evidence of any short run effects of the Freedman's Savings Bank in the census data, which is consistent with the facts that the Freedman's Savings Bank was not providing credit to the African Americans, not paying interests in many instances and that these populations were also saving money through other informal channels.

In a third step, we exploit both archives and the history literature to show how the bank's marketing campaign may explain its large success in collecting deposits, which may seem paradoxical in the absence of short run effects. Bank officials actively marketed the bank through multiple channels, including newspapers and schools, making multiple false promises. From the creation of the Freedman's Savings Bank, the freedmen were led to believe that the deposits were guaranteed by the United States government, while the only power of Congress over the bank was the right to inspect its books. Depositors were also promised 6% interest on their deposits, while the bank rarely paid interest, and never to the extent of 6%. Finally, while official reports always stressed the conservatism of the company's financial transactions, the bank started using the deposit funds to make large speculative loans to white businessmen as early as 1869, violating the bank's charter in many instances.

Finally, we show that the failure of the Freedman's Savings Bank led to depositor losses that have rarely been matched in the banking history of the United States. To do so, we manually collect information on depositor losses from all the failures of federally chartered banks from 1863 to 1933, the year of the creation of the Federal Deposit Insurance Corporation. We find that, even compared to commercial banks, very few failures led to such high losses for depositors: the bank

ranks in the top quintile of federally-chartered bank failures in the magnitudes of losses to depositors. On average, depositors at the Freedman's Savings Bank recouped only 20% of their deposits at the date of the failure in present value terms. The massive losses, the pervasive fraud mostly benefiting white businessmen, as well as the abuse of trust may explain the consensus among historians that the collapse of the Freedman's Savings Bank deeply affected the trust of Black Americans in the federal government and financial institutions in the long run. Hence, Du Bois wrote in 1903 that the Freedman's Savings Bank "not only ruine[d] thousands of colored men, but taught to thousands more a lesson of distrust which it will take them years to unlearn."

This paper cautions on the risk of overlooking the institutional details in empirical analyses, potentially leading to wrong inference. The risks might be more acute when exploiting historical data, as information asymmetries are higher. For example, the study concludes that "(...) the collapse of the bank and loss of deposits *may* have had adverse effects on African Americans," and that "(..) the possibility that the collapse of the Freedman's Savings Bank had measurable effects (...) is consistent with (...) the large, positive short run effects of financial inclusion that we estimate in this paper," suggesting that the fraud, abuse of trust and depositor losses alone might not be enough to durably alter the trust of African American in financial institutions. Similarly, there is historical evidence that the introducing quote from Frederick Douglass in the study was from a time when he was entirely misled about the situation of the institution, along with the rest of the freedmen.[9]

Second, this paper contributes to the literature on the benefits of financial inclusion, suggesting possible adverse effects for minorities. Evidence on whether saving money at a bank as opposed to saving cash at home can benefit households is mixed (Prina 2015; Brune et al. 2016; Dupas et al. 2018). Possible advantages of formal savings is safety from theft, reduced impulse spending or family and friend pressure (Dupas and Robinson 2013; Karlan et al. 2014; Brune et al. 2016).

[9]For example, Douglass writes on March 10, 1870 in his journal the New Era that "The condition of the Company is highly prosperous" while the company was operating in deficit since its creation in 1865 (Douglass 1870).

However, one also has to take into account the implications of delegating the management of the savings to formal financial institutions. Information asymmetries within financial institutions create risks of rent extraction, which are risks that racial minorities may be particularly vulnerable to. This can lead to transfers of wealth from discriminated populations to other more privileged groups.

Third, this paper complements the abundant history literature on the Freedman's Savings Bank by empirically documenting the contrast between a lack of measurable positive short run effects on the education and wealth of the freedmen and the magnitude of the losses for depositors, in light of the history of bank failures in the United States.

Finally, this paper also adds to the literature on minority-owned banks. After the failure of the Freedman's Savings Bank, between 1888 and 1934, 134 Black-owned banks were formed mostly in Southern states (Okonkwo 2003). While racial minorities might suffer less from discrimination in these institutions, minority-owned banks face the challenge of serving a clientele with liquidity constraints or less stable income profiles in low-income neighborhoods, in an environment where they might also be discriminated against as institutions. For example, the costs of funding on markets may be higher for minority-owned banks, hence only shifting the underlying problem to a higher institutional level rather than addressing it.[10]

In Section 2, we provide historical background on the formation of the Freedman's Savings Bank and collect additional data at the county level to investigate empirically the drivers of branch locations. In Section 3, we further investigate the short run effects of the Freedman's Savings Bank on individual outcomes by linking the 1870 full census with the bank's registers of signatures. Section 4 exploits historical archives to show how the marketing campaign and false promises might explain the bank's success in collecting deposits in the absence of any short run effects. Finally, Section 5 puts the magnitude of the depositor losses in perspective with the history of banking failures. Section 6 concludes.

[10]For example, Dougal et al. (2019) document a similar effect for Black colleges.

2 The Genesis of the Freedman's Savings Bank, its Development and the Drivers of Branch Locations

On March 3, 1865, in the aftermath of the Civil War, Congress chartered the Freedman's Savings Bank to collect deposits from the African American population just released from slavery. By 1874, before its collapse, the bank had opened 37 branches across 17 states and the District of Columbia, as well as close to 100,000 accounts. Table IA.1 in the Online Appendix provides information on each of these branches. Figure 2 plots the outstanding amount of deposits and number of new accounts opened at the Freedman's Savings Bank from 1865 to 1874.

INSERT FIGURE 2 HERE

The study's identification strategy relies on the assumption that the location of bank branches is exogenous to the freedmen's access to education and wealth. While the study restricts itself to an individual-level analysis using only a subsample of 1870 US census data, we empirically test this assumption using ex-ante county-level characteristics. We exploit historical datasets and archives, as well as the existing history literature on the Freedman's Savings Bank to investigate its genesis, the drivers of its development and of the locations of its branches. Taken together, the evidence suggests that this assumption of the study is not valid.

2.1 The Genesis of the Bank: The Soldiers' Money

In the aftermath of the Civil War, army wages were one of the most important sources of wealth for the freedmen just released from slavery. Here, we explore the study's assumption that the branch location is not related to the role of the freedmen as soldiers in the Civil War.

Historical Background

The army pay received by Black Union soldiers who served during and immediately after the Civil War was both at the origin of the creation of the Freedman's

Savings Bank and one of the main drivers of its development. These funds represented a significant source of wealth for populations just released from slavery.

The Freedman's Savings Bank was initially created on the model of two military savings banks founded during the Civil War for Black soldiers. The objective of these military banks was to provide Black Union soldiers with the capacity to save their "pay and bounty moneys" (U.S. Senate. 46th Congress 2nd Session 1880). The military governor General Saxton created the first military savings bank directed towards Black soldiers on August 1864 in Beaufort, South Carolina, while General Benjamin Butler established a similar bank in Norfolk, Virginia in the Fall of 1864 (Fleming 1927; Osthaus 1976). The founder of the Freedman's Savings Bank, John Alvord, saw an opportunity to develop the first bank that would cater to the Black population at a national scale, using the cash windfall from Black soldiers to start accumulating deposits.

Between 1865 and 1868, the army money was largely driving the location of the bank branches. In 1865, when the Freedman's Savings Banks opened its first branches, two of them resulted from the transfer of the Beaufort and Norfolk military savings institutions.[11] It was mostly the presence of Black troops that led to the creation of a branch in Savannah (Georgia), in Baltimore (Maryland) and in Jacksonville (Florida), which was a relatively small city in 1866 (Osthaus 1976).

The army money was also dominating the collection of deposits. John Alvord even tried to get the soldiers' pay directly channelled from the Treasury to the Freedman's Savings Bank (Osthaus 1976). While this plan did not succeed, bank cashiers were working directly as disbursing officers for the army in at least 9 branches, giving them a good opportunity to promote the bank to the Black soldiers and collect their savings. More generally, bank officials made strong efforts to be present whenever and wherever the soldiers received money. For example, the army Major Anson M. Sperry, who created the Houston branch in Texas in 1866, traveled to every encampment of Black soldiers in Texas to collect their money.[12] In total, Perry was able to collect $120,000 through this effort. Hence, Osthaus

[11] In July 1865, the Norfolk bank was transferred to the Freedmen's Savings Bank, the balance of deposits being at that time $7,890, belonging to 180 depositors. The Beaufort bank was transferred in December of the same year. This bank paid over $170,000 (Douglass 1870).

[12] Perry also established a Bureau-sponsored school system.

writes: "It would be no exaggeration to say that the very survival of the company in its first year was due to these deposits" (Osthaus 1976).

The army pay and bounty money represented a large amount of money for the freedmen, as well as one of their main sources of wealth: this population, just released from slavery, was property-less. While the Black Union soldiers were paid little, many managed to accumulate one or two hundred dollars, or even more. In addition, soldiers continued to receive additional funds that were owed by the United States government over the 1865-1870 period, and even as late as 1880, $510,000 in unclaimed money remained outstanding (Osthaus 1976). This represented a significant source of deposits for the bank in its early years.

Data and Empirical Evidence

To investigate empirically whether the army money was driving the location of the bank branches, we gather historical data from several sources.

We start by building a sample of US counties by identifying all the 37 counties where a branch was located from the archives of the Freedman's Savings Bank, henceforth the "branch counties." We then add the 375 "non-branch counties" that are located within 50 miles of a branch county but do not include a branch. We identify these counties using the NBER's County Distance Database, which provides all the counties that are within 50 miles of each US county.[13] Because the NBER distance database uses current county FIPS codes only, we manually adjust the county FIPS code to reflect the US county composition in 1860.

In a second step, we collect information on the location of Black troops in 1865-1866 from Downs and Nesbit (2015)'s dataset. In the South, during the Reconstruction, army troops occupied several regions in order to legitimize the end of slavery and establish the presence of the federal government. Downs and Nesbit (2015) use monthly data from manuscripts of the National Archives to identify where the army was present, the number of troops in these locations and the types of troops, i.e. colored troops and cavalry, from May 1865 to December 1880. We compute the average monthly troop population in each county from May

[13] `https://www.nber.org/research/data/county-distance-database`

1865 to December 1866.

Table 2, which provides summary statistics across branch and non-branch counties, indicates that around 22,000 soldiers and 6,000 Black soldiers were present in branch counties, versus around 1,300 and 300, respectively, in non-branch counties.

INSERT TABLE 2 HERE

The graph in the top left corner of Figure 4 plots the average number of Black soldiers as a function of the distance to a branch county. Black soldiers were mostly located in branch counties or counties less than 10 miles from a branch county.

INSERT FIGURE 4 HERE

To confirm this non-conditional evidence, we test the following regression at the county level:

$$BlackTroops_{i,1865} = \alpha \times Distance\,to\,BranchCounty_i + \beta Log(Population_i) + \eta_j BranchArea_j + \epsilon_i \quad (1)$$

where $BlackTroops_{i,1865}$ indicates the average number of Black soldiers in the county over the 1865-1866 period, $Distance\,to\,BranchCounty_i$ is the distance to the closest branch county and $BranchArea_j$ are "branch area" fixed effects. For a given branch, the branch area includes the branch county and the non-branch counties that are within 50 miles of the branch county. Standard errors are clustered at the branch area level.

Column 1 in Table 3 also summarizes this result. We observe that the number of Black soldiers decreases with the distance to the branch county, even after controlling for the county population and branch area fixed effects.

INSERT TABLE 3 HERE

These results are consistent with the historical literature on the expansion of the Freedman's Savings Bank in its early days. Among the freedmen, soldiers and veteran soldiers had significant windfalls of cash. Hence, they were explicitly targeted by the bank officials to foster the bank's accumulation of deposits. This

is not consistent with the assumption that the location of bank branches is not correlated with the ex-ante wealth of the freedmen.

2.2 The Bank, the Freedmen's Bureau and the American Missionary Association

One important assumption of the study is that the location of bank branches is unrelated to the freedmen's access to education or the distance to schools.

From its creation, the Freedman's Savings Bank was deeply connected with both the Freedmen's Bureau and the American Missionary Association (AMA). Altogether these three institutions, while independent in their legal structure, were so close that the Freedman's Savings Bank's successful expansion cannot be separated from the schooling efforts, the role in channelling the army funds, the broad support to the freedmen and the prestige of the Bureau and the AMA.

Historical Background

The Freedmen's Bureau was established by Congress on March 3, 1865, the same day as the Freedman's Savings Bank. The Bureau's list of responsibilities was large, ranging from channelling the army wages to the Black soldiers to providing provisions, clothing, shelter, and education to the freedmen, through legalizing marriages and reuniting families following the abolition of slavery. One of the most successful of the Bureau's functions was the establishment of schools. Almost 115,000 pupils attended over 2,000 Bureau schools, which were taught by over 2,500 teachers (Lieberman 1994). In parallel and in cooperation with the schooling effort of the Bureau, the AMA, which was the largest missionary association in the South, was also working on developing an educational program in these states.

The management of the Freedman's Savings Bank was connected to the Bureau and the AMA at the highest level. John Alvord, the founder of the bank, was a close friend of both the founder of the Bureau, General O.O Howard and the executive secretary of the AMA, Reverand George Whipple.[14] When put in charge

[14]Having travelled together during the Civil War within General William T. Sherman's lines, Howard and Alvord shared a similar philanthropic motive and continuously coordinated their

of the Freedmen's Bureau, Howard appointed Alvord "General Superintendent of Education" (Parker 1954; Gilbert 1972; Vaughn 1974; Butchart 1980; Davis 2003). While Howard declined to take official roles at the Freedman's Savings Bank, because of his numerous activities, Alvord continuously tried to obtain his support and include him in the main management decisions (Osthaus 1976). Whipple, the AMA's corresponding secretary and a congressional minister like Alvord, actively helped to found and organize the Freedman's Savings Bank and was a bank trustee throughout its existence (Osthaus 1976). Table 1 lists the main personalities that played a major role in the history of the Freedman's Savings Bank and their role in other organizations.

INSERT TABLE 1 HERE

The cooperation of the Freedman's Savings Bank with the Freedmen's Bureau intensified from 1867 in response to the difficulties the bank was facing. As soldiers were demobilized and the collection of army money was decreasing, the bank started to struggle so much that the board was considering its closure. To ensure the bank's survival, Alvord thought that a closer collaboration with the Bureau would decrease administrative expenses and facilitate the collection of deposits. As early as 1866, the bank and the Bureau started sharing locations, personnel and finances. The Bureau even came to provide free advertising, travel expenses and other funds that were vital to the Freedman's Savings Bank. Finally, to further utilize the Bureau's support, the Freedman's Savings Bank moved its headquarters from New York to Washington DC. As a result, starting from 1867, the Freedman's Savings Bank, the Bureau and the AMA were so deeply connected that it was difficult to distinguish between the three institutions.

Beyond the fact that the Freedman's Savings Bank was sharing locations with the Bureau – which suggests at least some confounding factors when investigating the relationship between the distance to a branch county and access to education and wealth – the bank was levering up its connections with the Bureau and the AMA schools to collect deposits, suggesting reverse causality issues. By 1869,

efforts in the South after the Civil War.

John Alvord, the founder of the bank and also the General Superintendent of Education at the Bureau, had close to 3,000 teachers under his supervision. The Freedman's Savings Bank was hiring teachers, principals and superintendents of schools as cashiers in at least twelve branches (Osthaus 1976). Bank pamphlets and literature were widely distributed in schools by the Bureau or the AMA, and teachers were strongly encouraged to promote the Freedman's Savings Bank. These efforts resulted in schoolchildren and their families opening bank accounts.

The Freedman's Savings Bank also exploited its connection with the Bureau to keep collecting the soldiers' wages. For instance, General George Balloch, the chief disbursing officer, was serving as a bank trustee. The bank also often offered its network to help in the distribution of the money, while bank cashiers often served as Bureau disbursing officers (Osthaus 1976).

Data and Empirical Evidence

We empirically investigate the relationship between the location of bank branches, the location of the Bureau offices and the distance to Bureau schools the following way.

We first collect data on Bureau office location from the dataset of the "Mapping the Freedmen's Bureau" project (Carrier and Walton-Raji 2014). As this dataset is not a comprehensive collection of field office locations, we supplement it with the National Archives and Record Administration's state-level records of the field offices of the Bureau, available through the Freedmen's Bureau Preservation Project. Records of the Martinsburg, West Virginia bureau agent is from Kennedy-Nolle (2015). The Freedmen's Bureau and its agents had an extensive network across the South, and we identify over 400 of these Bureau locations.

Second, we collect information on the Freedmen's Bureau school locations by exploiting the reports from the Freedmen's Bureau schools. We exploit the digitized records of the 1869-1870 school reports, since during this period teachers were reporting to the Bureau using a standardized form. Our dataset encompasses the following states for which the reports are available: Alabama, District of Columbia, Georgia, North Carolina, Tennessee, Texas and Virginia. We use

the Amazon Mechanical Turk platform to transcribe every report by at least two different people. We then match each report to a county and create an indicator variable equal to one for counties with at least one Bureau school.[15] We also create a variable that indicates the distance to a school county, i.e. to the closest county that includes a Freedmen's Bureau school.

Table 2 indicates that a Bureau office is present in almost all branch counties, while this is the case in only 41% of the non-branch counties. In addition, 86% of the branch counties have at least one Bureau school, versus 41% for non-branch counties.

In a second step, we plot the average distance to a Freedmen's Bureau school across counties as a function of their distance to the closest branch county. The graph in the right corner of Figure 4 shows that the distance to a Freedmen's Bureau school is positively correlated with the distance to a branch county.

To confirm these unconditional results, we run regressions of distance to branch county on two indicator dummies as dependent variables: one indicating whether there is a Freedmen's Bureau office in the county and one whether there is a Bureau school.

Columns 2 and 3 in Table 3 provide the results. We observe that the distance to a branch county is negatively correlated with both the presence of a Bureau office and a Bureau school.

These results confirm that the study's assumption that the distance to a branch is exogenous to the freedmen's access to education is not verified empirically. While the study mentions this endogeneity issue and attempts to address it in a robustness test in appendix A.7, the test relies on an assumption that is at odds with the historical archives. The study tests whether the coefficient varies after excluding five branches from the main sample, on the basis that these branches were not located in the same county as a Bureau office. However, the National Archives and Record Administration's state-level records of the field offices of the Bureau indicate that three out of five of these branches did share a location with a Bureau

[15] School reports in digital format can be found from the Smithsonian Online Virtual Archives: `https://sova.si.edu/record/NMAAHC.FB`.

office: Baltimore, Little Rock, and Salisbury.[16] And in a fourth, Andersonville, there was a Bureau office located less than 12 miles away, in Americus.[17]

2.3 The Expansion of the Freedman's Savings Bank: Characteristics of Black American Populations

While we have shown that the location of bank branches is related to the presence of Black army soldiers and access to Bureau schools and offices, it is important to test whether it correlates also with other individual characteristics to identify other potential sources of endogeneity.

Historical Background

In the aftermath of the Civil War, the South was mostly rural – only 10% of the population was living in urban areas (Hakim 2012) – agricultural, 84% of the population worked in agriculture, and unbanked – only two other banks had a couple of branches in the South. Therefore, the decision whether or not to open a branch was largely driven by the socio-economic characteristics of the local populations, the bank officials explicitly referring to the "amount of capital and colored population," their prosperity, occupations and real estate ownership in reference to branch opening decisions (Osthaus 1976).

More precisely, when considering branch applications, the bank officials were considering whether the branches would be successful or not in paying their expenses. Hence, some applications – the locations the study considers as "planned" in their analysis – were turned down because "the Agency Committee felt that the proposed branches could not pay their expenses" (Osthaus 1976).

Data and Empirical Evidence

We test whether the location of the bank's branches was correlated with the ex-ante characteristics of the local populations using county-level data from the 1860

[16] See `https://nmaahc.si.edu/object/sova_nmaahc.fb.m1906`, `https://nmaahc.si.edu/object/sova_nmaahc.fb.m1901` and `https://www.archives.gov/files/research/microfilm/m1909.pdf`.

[17] See `https://www.archives.gov/files/research/microfilm/m1903.pdf`.

Census. County-level variables have been aggregated by Integrated Public Use Microdata Series (IPUMS) and cover several demographic, social and economic variables of interest.

The maps in Panels A and B of Figure 3 show the location of the 37 branches of the Freedman's Savings Bank across US counties, as well as the county wealth per capita and population density, respectively. The maps suggest that the bank branches were located in wealthier counties with a higher population density.

INSERT FIGURE 3 HERE

Summary statistics in Table 2 confirm that ex-ante, in 1860, branch counties have a higher population and are more urban. These counties also generate more wealth, as measured by farm value per acre, manufacturing output per capita, manufacturing wages per capita and real and personal estate wealth per capita. They are also more likely to have railroad connections or water transportation, which are indicators of the level of economic infrastructures.

We confirm these non-conditional factors by testing Equation 1 with the following dependent variables: the county population, a dummy indicating an urban county, the average farm value per acre, per capita manufacturing output and wealth, as well as dummies indicating water or rail connections.

Columns 4 to 10 in Table 3 provide the results. The presence of branch is correlated with population density, wealth and economic development. This result suggests that the necessary assumption for the study's instrument to be valid, that branch location is exogenous to the ex-ante county characteristics, is not verified empirically.

In a second step, we test whether counties from which branch applications were denied differ from branch counties. Indeed, the study includes as an instrument a dummy indicating whether the branch was opened before 1870 or not, including counties with "denied branches." To do so, we test the following equation on the sample of branch counties only and adding the following 15 counties where a branch has been denied, as indicated in Osthaus (1976):[18]

[18]These branch locations are Selma, Alabama, Albany, Andersonville and Columbus, Georgia,

$$CountyCharacteristic_{i,1860} = \alpha \times \mathbb{1}_{\text{Denied Branch}} + \eta_j State_j + \epsilon_i, \quad (2)$$

where $\mathbb{1}_{\text{Denied Branch}}$ indicates a county where a branch has been denied.

INSERT TABLE 4 HERE

Panel A in Table 4 displays the results. We observe that counties where a branch has been denied are significantly different from branch counties in many dimensions.

Finally, we test the same equation where the independent variable is a dummy indicating whether a branch has been denied or built after 1870, which corresponds to the second instrument used in the study. Panel B in Table 4 indicates that counties with late or denied branches have a lower population and wealth than branch counties.

3 The Short Run Effects of the Freedman's Savings Bank: Identification Strategy and Results

This section revisits the study's data construction methodology and identification strategy to investigate the short run effects of the Freedman's Savings Bank. The study first constructs a dataset that identifies depositors in the 1870 census 1% Black oversample. Second, the study compares the depositors' characteristics to the rest of the population living within 50 miles of a branch, instrumenting for holding an account with branch location variables.

Using the same source of data for the depositors' information but our own methodology to identify depositors in the US population, we show empirically that the two main assumptions of the study's identification strategy – that the methodology they adopt to identify depositors does not bias their analysis and that the branch location is exogenous to the freedmen's access to education and wealth – are not consistent with the data.

New Madrid, Missouri, Jackson, Mississipi, Charlotte and Salisbury, North Carolina, Columbia, South Carolina, Cincinnati, Ohio, Harrisburg, Pennsylvania, Galveston and Sherman, Texas, and Charlottesville and Lexington, Virginia.

Then, we exploit a different identification strategy based on the staggered opening dates of the accounts within branch and find no evidence of any positive effects of the Freedman's Savings Bank.

3.1 Data

One important goal when linking historical datasets is to minimize type I errors, or "false positives". In the current empirical setting, the objective would be to minimize the probability that an individual is identified as a depositor in 1870 if the individual does not hold a bank account at the Freedman's Savings Bank at this date.

We identify several characteristics in the study's data construction methodology that mechanically generate a large number of false positives. First, the study only exploits depositors' information on first name, last name, race and location to link with the census data, while this information is often not unique. Second, the study identifies as depositors in 1870 those who opened an account *after* 1870 as part of the main analysis, which correspond to up to 75% of the accounts available in the registers. Third, the study considers as depositors not only the account holders but also their relatives, whether they are part of the household or not, and uses all combinations of depositor and relative names to define depositors for each account record.

Another concern with the study's methodology is that it only exploits the 1% Black oversample of the 1870 US census. As a result, even if we assume that it identifies depositors perfectly, a maximum of 4-5% of the Black depositors should be identified, raising concerns of economic significance.

To address these concerns, we follow our own methodology to build a dataset at the individual level.

3.1.1 Depositors' Information

As in the study, the source for the depositors' information are the registers of signatures of the Freedman's Savings Bank. The registers cover 28 branches from 1865 to 1874 and include the first names, last names and race of the depositors

at each of these branches. We access the digitized registers data through Familysearch.org.[19] The digitized registers have 498,144 entries corresponding to 93,605 distinct account numbers.

We depart from the study by exploiting a larger set of information from the registers of signatures, with the objective of more accurately identifying depositors in the census data. For most of the depositors, the registers of signatures also contain detailed information on the account opening date, the age and the place of birth, as well as the first names and last names of relatives. Then, we build our dataset the following way.

First, we drop accounts that are held by organizations, such as churches and various community societies (0.25%). We also drop accounts for which all the information, except the account identifier, is missing.[20] Finally, we drop accounts held by individuals who died before 1870 or were born after 1870, as the objective is to merge the data with the 1870 Census.

Second, we standardize the information on age, place of birth and names. For age, we drop alphabetical characters to convert the information into a number and compute the age in 1870. For place of birth, we convert county- or city-level information into state-level information. Concerning first names and last names, we standardize the information by dropping middle names or titles, removing any non-alphabetic characters, and accounting for common misspelling and first names, following the methodology of Abramitzky et al. (2020). The objective is to correct for transcription errors to the extent possible.

Third, we exploit the information on the identities of relatives to create four variables indicating the first and last names of a depositor's father and mother when available.

Finally, we keep only observations on depositors as most of the information on relatives is missing, and relatives might not be even part of the depositor's household. For example, 7% of the relatives are indicated as dead at the opening date of the account.

[19] `https://www.familysearch.org/search/collection/1417695`

[20] We also identify as distinct those accounts that have identical identifiers but different depositor identities, locations and opening dates.

After having dropped duplicates in terms of names, age, location and place of birth, we arrive at a dataset with information on 74,181 depositors who opened an account across 27 branches over the 1865-1874 period.[21]

Table 5 provides summary statistics on the final sample of 74,181 depositors. We observe that 75% of the accounts are opened in 1870 or after. These are accounts that the study does not exclude when identifying depositors in the 1870 1% Black oversample. Therefore, the study's inference on who they identify as "depositors" in 1870 may not accurately reflect the effects on the actual depositors as of that date.

In addition, up to 25% of the depositors are less than 18 years old, which is consistent with schoolteachers actively promoting the Freedman's Savings Bank to their students. This confirms that omitting this potential channel could also bias the results.

INSERT TABLE 5 HERE

3.1.2 1870 Census Data

One important limitation the study faces when using the 1% Black oversample, even in the scenario where the two historical datasets are perfectly matched, is that one should not be able to identify more than 4-5% of the 13,072 Black depositors who are listed in the bank registers and opened an account before 1870. This would represent around 650 individuals.

To address this concern, we use the 1870 US *full* census, which over 38 million individuals and around 7.8 million households, to build a dataset that includes all individuals living within 50 miles of one of the 27 Freedman's Savings Bank branches available in the registers of signatures. We arrive at a sample of 7,772,291 individuals and 1,589,673 households.

For each individual, we keep information on the first name, last name, age, race, county location and place of birth. When available, we create variables indicating the father's and mother's first names using the information on the relationship to

[21] After cleaning the account holder data, no observations remain from the Philadelphia branch and hence the analysis is conducted on the remaining 27 branches.

the household head. We also create a variable indicating the closest Freedman's Savings Bank branch. Finally, we standardize first names and last names using the same procedure as for the depositors' data (Abramitzky et al. 2020).

3.2 Matching Algorithm

The study's matching methodology, which consists of 1) matching not only the depositors but also all their relatives, whether they are part of the household or not, 2) for a given account, matching all the possible combinations of first names and last names of the depositor and its relatives, 3) using only the location, names and race as matching variables, 4) keeping all potential matches and 5) exploiting a 1% sample of the census instead of the full census, mechanically generates a significant amount of false positives. Therefore, we follow the recent literature in economic history to build our own matching algorithm using the full 1870 census data (Abramitzky et al. 2012, 2014, 2019).

For each of the 74,181 depositors, we first identify all the potential matches in the 1870 census. The objective when defining the potential matches is to minimize the risk of false negatives. To do so, we use the initials of the first and last names to partially address transcription errors, race and the branch area. 64,895 depositors have at least one potential match, and these depositors have 11 possible matches on average.

Second, for each pair of potential matches, we keep only potential matches:

1. with a relatively small distance between first and last names using the Jaro-Winkler score (Nix and Qian 2015; Mill and Stein 2016; Pérez 2017; Feigenbaum 2018; Pérez 2019). The Jaro-Winkler score ranges from 0 to 1, with 0 corresponding to two identical strings and 1 to two strings with no common characters. We keep observations with Jaro-Winkler score in the first and last names lower than or equal to 0.12, following Abramitzky et al. (2020).

2. within the -5 or + 5 same age band,

3. with the same place of birth and

4. with the same initial for the mother and father first names

when the information is available in the registers. We arrive at 24,661 depositors with at least one potential match. The sample attrition likely reflects the high mobility of the freedmen across counties and states in the Reconstruction era, as well as transcription errors.

Third, for each potential match, we compute a score roughly corresponding to the probability of having a "true match." We estimate these probabilities using the distribution of names in the total population and the Expectation-Maximization (EM) algorithm of Abramitzky et al. (2020). Abramitzky et al. (2019) provides the rationale and intuition for this estimation.

Fourth, for all potential matches, we consider as a unique "true match" a record in the census satisfying the following three conditions:

1. The highest probability of being a true match out of all potential matches of each depositor,

2. a sufficiently high probability of being a true match,

3. a match for which the second-best match is unlikely, i.e. the match score of the next best match is below a threshold.

We arrive at 22,699 account holders with one true match. Hence, we identify 31% of the account holders in the census data with a high level of confidence.

Finally, we drop from our final dataset observations that are potential matches, to ensure that false negatives are not biasing our results. After dropping white individuals, we arrive at a final dataset that includes close to 2 million individuals, versus 27,000 individuals in the study, among which around 20,241 or 1% have deposited money at the Freedman's Savings Bank over the 1865-1874 period. Table 6 provides summary statistics on the final dataset.

INSERT TABLE 6 HERE

3.3 Testing The Study's Two Main Assumptions

3.3.1 False Positives and Individual Characteristics

The first assumption of the study's identification strategy is that the methodology it uses to identify depositors cannot bias the results. We test this assumption in three steps.

First, we replicate the study's methodology to identify depositors in the 1% Black oversample. After restricting the 1% Black oversample to individuals classified as Black, who live in the South and within 50 miles of a branch or planned branch as defined in the study, we arrive at a dataset that includes 36,194 individuals.[22] When following the same steps as described in the study, we identify 5,689 "depositors" in this final sample, which corresponds approximately to the same ratio as in the study (15.5% versus 14.4%), but to a much higher ratio than the one we obtain using our matching algorithm on the same dataset (2.37%).

Second, we exploit the additional information available in the registers of signatures on the depositors' age, place of birth, father's and mother's initials and status. We find that, among these individuals identified as depositors when using the study's methodology, only 567, or 10%, have an age, place of birth, status, and father's and mother's initials that match.[23] Therefore, we identify close to 90% of false positive in the study's final sample by exploiting additional information from the registers of signatures.

Third, we test whether the probability of false positive correlates with the individual's wealth and education in 1870. Because the study merges only by names, race and location, keeping all potential matches and all combinations of first and last names within the relatives is likely to generate a large number of false positives within populations with similar names. However, last names often correlate with socio-economic characteristics and locations. We test this assumption by plotting the average probabilities of false positives as a function of distance to school and

[22] The study's dataset includes 27,247 individuals. Possible explanations for the larger number of observations in our datasets are the following. First, as opposed to the study, we do not restrict the sample to households with at least one member that has a potential matchable name (see page 16 in the study). Second, we have also used correspondence tables to better identify county FIPS codes across periods.

[23] As in our algorithm, we use a -5 or + 5 age band and do not consider relatives as depositors.

county population in Figure 5. We find that the probability of false positives is higher in counties close to a Bureau school or that are more populated.

INSERT FIGURE 5 HERE

Second, we test the following equation:

$$Individual\,Characteristic_{i,1870} = \alpha + \beta\,\mathbb{1}_{False\ Positive} + \varepsilon_i, \tag{3}$$

where the dummy $\mathbb{1}_{False\ Positive}$ indicates non-account holders that are identified as depositors in the study.

INSERT TABLE 7 HERE

Table 7 displays the results. The individuals that the study's methodology identifies as depositors, whose information does not match with the registers of signatures, are more likely to work (Column 2), have a higher income score (Column 3) and wealth. The children are also more likely to attend school (Column 6).

These results confirm that the study's data construction methodology identifies few individuals as depositors in the census data with information on age, place of birth and relatives that correctly matches the information from the registers of signatures. The probability of false positives correlates with wealth and education, which could potentially bias the results of the study's analysis.

3.3.2 Branch Location and Household Characteristics

The study uses branch location variables to instrument for holding a bank account and hence address the concern that depositors might differ ex-ante from non-depositors.

We first use our individual-level dataset to confirm that depositors differ from the rest of the population ex-ante. Table 6 provides summary statistics on the total sample, i.e., Black individuals living less than 50 miles from one of the 27 branch counties, on the subsample of depositors and on the 81% of depositors who opened an account after 1870. Depositors are much more likely to live in an urban

area, to be literate, work and have a higher income score. Among depositors, 20% are children, and among the children, 32% attend school in 1870, versus 12% in the rest of the population. All these discrepancies are statistically significant.

We further investigate how depositors differ from the rest of the population ex-ante by looking at the 1870 characteristics of depositors who opened an account *after 1870*. We test the following model:

$$Individual\,Characteristic_{i,1870} = \alpha + \beta\,\mathbb{1}_{Late\ Depositor} + \eta\,x_i + County_i + \varepsilon_i, \quad (4)$$

where the dummy $\mathbb{1}_{Late\ Depositor}$ indicates depositors who opened an account after 1870, x_i includes a vector of the following individual characteristics: age, an urban area dummy, household size and gender, and $County_i$ are county fixed effects. For Columns 1 to 4, we also control for relationship to household head.

INSERT TABLE 8 HERE

Results in Table 8 confirm that depositors are ex-ante more likely to be literate, to work and have a higher wealth and income score, even after controlling for county fixed effects. Therefore, there is a need to address the endogeneity issue when investigating the short run effects of the Freedman's Savings Bank.

The study addresses the endogeneity issue using branch locations to instrument for holding a bank account, with the underlying assumption that the location of bank branches is exogenous to the characteristics of the local populations. We test this assumption the following way: we collapse our database at the household level, exclude households with one depositor or more, and restrict to branches where the registers of signatures are expected to be complete until 1870.[24] We then estimate the following specification:

$$Household\,Outcome_{i,1870} = \alpha + \Sigma_{j=0}^{j=4}\beta_j \mathbb{1}_{j\times 10 \leq Distance \leq (j+1)\times 10} + \eta\,x_i + Branch_i + \varepsilon_i, \quad (5)$$

[24] We consider that the registers of signatures are likely to be complete when they cover the total period of existence of the branch from its creation to 1870.

where $\mathbb{1}_{j\times 10 \leq Distance \leq (j+1)\times 10}$ indicates whether the county is located less than 10 miles from a branch county, between 10 and 20 miles from a branch county, etc., $Branch_i$ are branch area fixed effects, and x_i is a vector of household controls that include household size, and the age and gender of the household head.

Panel A of Figure 6 plots estimate of the coefficient β_j. We observe that households that do not hold a bank account are more likely to have kids that attend school and have a higher income when they live closer to a branch. Figure 1 of the Online Appendix includes the same figure for household literacy.

INSERT FIGURE 6 HERE

One concern with this identification is that the negative correlation between school attendance/income and distance to a branch could be driven by spillover effects within Black populations or false negatives. For example, one might consider that depositing money at the Freedman's Savings Bank could have effects that are so large that depositors start consuming and investing more, allowing their peers to get richer too.[25] We also know that there are transcription errors in historical datasets and that the registers of the bank might not be fully complete and so the effects might be driven by depositors that are not identified as such in our final dataset.

We address this concern by estimating the same model on the sample of white households only, as these populations were in most states not depositing money at the Freedman's Savings Bank and segregated from Black populations. Here, again, the distance to the branch county is negatively correlated with school attendance and income score.

Combined, these results suggest that the study's primary identification assumption, that the branch location is exogenous to household characteristics, does not hold empirically.

Finally, we also investigate the study's alternative empirical strategy that uses the 1868 US congressional election results. The study uses both county Republican total votes and share of Republican votes to instrument for account holding.

[25]One limitation to this concern, however, is that in most cases the bank was not granting credit to Black Americans.

This requires the assumption that Republican support is not correlated with unobservable factors that would correlated with the freedmen's access to wealth and education. In Figures 2 and 3 and Table IA.2 in the Online Appendix, we show that Republican votes are not exogenous to ex-ante county characteristics and household characteristics using county electoral data from Clubb and Zingale (2006), 1860 county-level data and individual data from the 1870 US census.

3.4 Alternative Identification Strategy

In an attempt to address the issues that the study's identification strategy raises, we develop an alternative identification strategy that exploits the account opening year.

Under the assumptions that 1) the Freedman's Savings Bank had any positive effects on households' wealth and education and 2) within branch, the account opening year is not positively correlated with ex-ante wealth and education, households that opened an account *before 1870* should be richer and more educated in 1870 than those that opened an account *after 1870*.

Before testing this prediction, we first verify whether the second assumption – that the account opening year does not correlate positively with the depositors' ex-ante characteristics – is valid. To do so, we use our household-level dataset and restrict the sample to depositors who opened an account after 1870, i.e., in 1871, 1872 or 1873. Then, we test the following equation:

$$Household\,Outcome_{i,1870} = \alpha + \beta OpenYear_i + \eta\, x_i + County_i + \varepsilon_i, \qquad (6)$$

where $OpenYear_i$ indicates the opening year of the account, $County_i$ is a vector of county fixed effects and x_i a vector of household characteristics that include the age of household head and the size of the household. Panel A in Table 9 provides the results : the account opening year is negatively but not significantly correlated with households' wealth or income.

INSERT TABLE 9

In a second step, to test the prediction, we estimate the following specification *within the sample of depositors*:

$$Household\,Outcome_{i,1870} = \alpha + \Sigma_{j=-3}^{j=3} \beta_j \mathbb{1}_{OpenYear=1870-j} + \eta\, x_i + Branch_i + \varepsilon_i, \quad (7)$$

where $\mathbb{1}_{OpenYear=1870-j}$ is a dummy equal to 1 for account opened in 1870 when $j = 0$, in 1869 when $j = 1$, in 1868 when $j = 2$, etc. Figure 7 plots the beta coefficients. In the presence of any positive effects, we would expect the β coefficient to increase when j is higher. However, we do not observe any significant differences in household outcomes across depositors.

INSERT FIGURE 7 HERE

Panel B in Table 9 provides the results for a larger set of household outcomes that we regress on a dummy for opening the account before 1870. The model also includes county fixed effects, the household size and age of the head. Again, we find no evidence of any positive effects on households' characteristics.

4 The Bank Marketing: Abuse of Trust and False Promises

In what follows, we exploit both historical archives and the existing literature to describe how the weaknesses of the bank's charter induced some governance issues, which, coupled with pervasive discrimination, led bank officials to make false promises when marketing the bank to the freedmen. The active promotion of these false promises regarding the government guarantee, interest payments and the use of the deposit funds, may explain the large success of the bank in collecting deposits even in the absence of any positive short run effects.

4.1 The Weaknesses of the Bank's Charter

Weaknesses in the charter of the bank rapidly led to governance issues, mismanagement and fraud.

First, when the bill establishing the bank was passed, the Freedman's Savings Bank ended up under the supervision of the Congress, which proved to be very limited and influenced by political considerations. This is in contrast to both other savings banks, which were supervised by states, and national banks, which were regulated by the Office of the Comptroller of the Currency.[26] While the Senate added an amendment stipulating that the location of the bank be "in Washington city, District of Columbia," to put it under the jurisdiction of this state, this amendment slipped from the enrolled bill and was finally ignored.

Second, trustees had no financial or legal incentives to govern the bank. At the bank's creation, all fifty original trustees were white, and none of them resided in Washington, the city in which the bank was supposedly located (Osthaus 1976). The act of incorporation neither required any direct investment in the bank from the trustees, nor did it include any penal clauses to bind their acts (U.S. Senate. 46th Congress 2nd Session 1880). As a result, most trustees had little to no involvement with the bank, with some never attending any meeting, some accepting the positions provided that they had no duties, and others even saying that they had never agreed to be involved. One of the original trustees, Edward Harwood of Cincinnati, even tried repeatedly to have his resignation accepted, with little success (Osthaus 1976).

Third, the charter was ambiguous about the allocation of the deposit funds. While two-thirds of the deposits were initially required to be invested in government securities only, the remaining available funds did not have any clear restrictions for their use (U.S. Senate. 46th Congress 2nd Session 1880). Hence, Section 6 of the charter declared that :"available funds may be kept by the trustees to meet current payments of the corporation, and may by them be left on deposit at interest or otherwise, or in such available form as the trustees may direct" (U.S.

[26]The National Bank Act of 1863 established a system of national banks chartered by the federal government and created the Office of the Comptroller of the Currency as part of the United States Department of the Treasury to regulate them.

Senate. 38rd Congress, 2nd Session 1865). This ambiguity gave room for discretion on part of the bank officials in the management of the funds.

Fourth, the conditions for the approval of the investment decisions of the funds were not restrictive: only the affirmative votes of nine trustees, 18% of the entire group of fifty, were required (Osthaus 1976).

Finally, with dozens of branches scattered across the South it was practically impossible to secure efficiency and accountability. Not until 1872 did an adequate system of daily branch reports start, while inspections were still very infrequent (U.S. Senate. 46th Congress 2nd Session 1880). It was also impossible to control the excessive operating costs, which increased with the proliferation of branches in the 1870s and the cessation of assistance from the Freedmen's Bureau. At each branch, the Freedman's Savings Bank had to pay for salaries, rent or purchase of property as well as furnishings. Up to fifteen branches spent more than they earned (U.S. Senate. 46th Congress 2nd Session 1880).

Another structural issue at the Freedman's Savings Bank was the personnel. Paying wages often below the one of a schoolteacher, the bank had difficulties hiring skilled workers. In addition, the bank was also mostly hiring men with missionary rather than banking or accounting credentials in order to foster the collection of deposits (New York Sun, April 30 1874). The untrained cashiers, who often doubled as Freedmen's Bureau, AMA or government employees, were overworked.[27]

4.2 Marketing and False Promises

4.2.1 Marketing Channels and Materials

The Freedman's Savings Bank took part in an extensive marketing campaign to solicit deposits, using various materials and channels.

From 1869 to 1872, the bank officials distributed a free newspaper, the *Na-*

[27]Sperry provides an excellent example of the limitation of the bank personnel. While he was well-intentioned and actively collecting deposit, he was lacking qualifications. When he attempted to balance the books at Washington, he found a $600 shortage, while the national bank examiners assessed the deficiency to amount to $40,000 a few months later (U.S. Senate. 43rd Congress, 2nd Session 1874). Sperry usually certified the balances as "correct, E & O. E.", standing for "Errors and Omissions Expected" (Osthaus 1976).

tional Savings Bank, with a circulation of around 15,000 copies per month (Osthaus 1976). In 1869, they published a book on the history of the bank entitled *Savings Banks: Their Origin, Progress and Utility, with a History of the National Savings Bank for Colored People*. Bank pamphlets were also widely distributed in branches, schools and Bureau offices. Additionally, bank officials were also giving talks at public meetings at branches, churches, beneficial societies and other local organizations to proclaim the benefits of savings accounts and solicit more depositors (Osthaus 1976).

The Freedman's Savings Bank targeted the Black communities through multiple venues, including schools and churches. The bank largely employed teachers to distribute the bank's marketing material in Bureau offices and AMA's schools. Children studying at these schools, and their parents, were strongly encouraged by these teachers to set up accounts at the bank. Public meetings were often held in churches (Osthaus 1976).

4.2.2 The Government Guarantee

From the creation of the Freedman's Savings Bank, the freedmen were led to believe that the deposits were guaranteed by the United States government, while the only power of Congress over the bank was the right to inspect its books if it wished, which it did not (U.S. Senate. 46th Congress 2nd Session 1880; Osthaus 1976).[28]

Many facts could make the freedmen believe that the Freedman's Savings Bank, a private entity, was in fact part of the Freedmen's Bureau, a federal agency. Some deposit books included the famous statement of Howard, the head of the Bureau, that he welcomed the bank as an auxiliary of the Bureau (Osthaus 1976). The bank and the Bureau were assuming a similar appearance. Hence, Alvord wrote in a letter: "Here at the Hd Qrs., we look very much like one concern – a number of Bureau Officers occupying the back room of our Bank."[29] The War Department, through General Howard, allowed bank representatives to solicit deposits dressed

[28] See for example Howard's testimony before the Bruce Senate Committee (U.S. Senate. 46th Congress 2nd Session 1880).

[29] Alvord's letter to Harris, May 19, 1867 (Osthaus 1976).

in army uniforms. Bank officials associated the bank and the Treasury by harping on the proximity of the two buildings (Gilbert 1972).

The marketing material of the Freedman's Savings Bank was often directly implying that the federal government was supporting it. This can be observed from the imagery of the deposit books, such as the one displayed in Figure 8. The cover page includes a picture of Lincoln suggesting that the freedmen's deposits were under his protection, as well as the portraits of five federal officials who played a crucial role both during the Civil War and later in the government affairs, but who were not part of the management of the bank. Deposit books also often contained legends such as the "Government of the United States has made this bank perfectly safe" (Gilbert 1972). The bank was distributing cards, circulars and pamphlets promoting the Freedman's Savings Bank as "Abraham Lincoln's Gift to the Colored People, his signature to the Bill one of the last acts of life. He gave *emancipation*, and then this Savings Bank. Your *freedom* and *prosperity* were in his heart united" (Osthaus 1976).

INSERT FIGURE 8 HERE

In some instances, the marketing material even explicitly conveyed the misleading message that the federal government was fully guaranteeing the deposits. "Unless utter destruction sweep the nation out of existence," the bank will be good (Bank Pamphlet, 1872, Osthaus (1976)). On the bank's monthly newspaper, the *National Savings Bank*, it was written, about that bank, that "it is safe, it cannot fail, for it is founded on the United States Government." A passbook even indicated that the government "had made this bank perfectly safe." A journal article published in the *Semi-Weekly Louisianan* declared that "there is no possibility of loss, for the reason that the government of the United States is responsible for every dollar deposited." Frequently, the Freedman's Savings Bank was called the "National Savings Bank" as suggested by the title of its newspaper.

The false claims about the government guarantee led the Office of the Comptroller of the Currency and other officials to plead for the full reimbursement of the depositors after the failure (U.S. Senate. 46th Congress 2nd Session 1880). Hence,

Emerson W. Keyes, who was known for being the banking expert at this time, wrote in 1878 that "until this wrong is wiped out by full and ample restitution, let the reputed friends of this loyal and down-trodden race, blush at the evidence of their humanity as seen in contrast with a policy which laid no claim to such virtue!" (Keyes 1878).

4.2.3 Interest Payments

Depositors were also promised 6% interest on their deposits, an amount the study claims would have affected the freedmen's education or wealth.[30] In fact, the Freedman's Savings Bank rarely paid interest, and never to the extent of 6%. Table IA.3 in the Online Appendix summarizes the interest payments made by the bank. While a 6% interest rate was promised to depositors, the table shows that actual interest paid on deposits was just a fraction of this amount. In 1866, the bank had stopped paying interests all together as it faced several financial losses and implemented some austerity measures (Osthaus 1976).

4.2.4 Use and Mismanagement of Funds

Concerning the use of funds, the bank officials violated the charter in numerous illegal actions, misleading the depositors on the safety of their deposits.

When the bank was incorporated in 1865, the charter stated that at least two-thirds of the deposit funds should be invested in cash or government securities only. However, from 1865 to 1867, the Freedman's Savings Bank's financial conditions quickly deteriorated: the large distance across small branches made it excessively costly to operate, as officers had established branches in distant locations without regards to expenses. In addition, the main source of deposits, the soldiers' wages, was drying up as troops were discharged.[31] As early as January 1867, the bank was struggling for survival so much that it failed to pay any interest and the trustees were considering its closure (Osthaus 1976).

[30] In section 1.1.2, the study states "deposits of greater than five cents (worth approximately 75 cents in 2018 dollars) were accepted, with 6% annual interest paid on deposits of more than one dollar."

[31] As Osthaus (1976) writes: "the Freedman's Bank had many of the problems of a financial empire but few of the benefits of security, efficiency or prestige."

Facing poor financial prospects, to ensure the survival of the bank, bank officials undertook a dramatic turn in the development strategy of the bank. Looking for a closer cooperation with both the Bureau and financiers in Washington, they moved the headquarters to the capital city. In parallel, and partly as a consequence, the composition of the board largely changed. While the original trustees were mostly philanthropists and conservative businessmen, the new trustees were mostly army men, politicians and speculative businessmen (Osthaus 1976).

In practice, by the late 1860s, control of the Freedman's Savings Bank had shifted to the hands of mostly three individuals: Henry Cooke, William S. Huntington and the actuary D. L. Eaton, who controlled the bank's finances between 1867 and 1872. The three of them had close connections with Jay Cooke, Henry Cooke's brother, and with his investment bank Jay Cooke and Company, which invested massively in railroad construction, among other speculative businesses. Henry Cooke and Huntington were also president and cashier of the First National Bank of Washington, respectively, which was partly owned by Jay Cooke (see Table 1). In January 1870, Cooke, Huntington and Eaton agreed that the Finance Committee, which was in charge of the investment decisions and often met at the Washington office of Jay Cooke and Company, should directly invest the bank's funds before getting the board's approval. Over the next years, the "proposed loans" submitted to the board were loans that had already been made (U.S. Senate. 46th Congress 2nd Session 1880).

In search of new sources of revenues, in 1869, the bank's trustees requested Congress to change the charter to legalize a more liberal investment policy. However, before getting any Congress approval, the bank began to invest its fund in the government-guaranteed bonds of the Union Pacific and Central Railroads as early as in February 1869, and early in 1870 began to make loans on Washington real estate (Osthaus 1976). On May 2, 1870, Congress finally passed a bill that permitted using the deposit funds to make loans on real estate securities under some restrictions.[32] To limit the risks, only half of the deposit funds could be used

[32]A claim the study makes is that the Freedman's Savings Bank made loans to depositors. It should be noted that these loans, which were few, were made *after* 1870, which is the period the study measures the outcomes and effects on. In addition, only a fraction of the branches engaged in lending to the freedmen. Loans were largely issued by the Washington headquarters to

for real estate loans, and these loans were to be secured by mortgages that were double the value of the loan (U.S. Congress. 41st Congress, 2nd Session 1871).[33] In addition, a minor provision to the 1870 amendment also gave the bank the possibility to buy real estate.

After the charter's amendment and until February 1872, the bank's Finance Committee engaged even more aggressively in speculative investments, violating the bank's charter in multiple instances to make massive speculative loans to white businessmen. They offered real estate loans where the value of the mortgage was far below twice the value of the loan, as required by the charter's amendment. They also used the available funds, which were supposed to stay available for operation costs, to make loans on stocks and bonds of diverse companies or individuals. In 1871, Henry Cooke deposited most of the cash of the Freedman's Savings Bank at the First National Bank for only 5% interest, while the bank was promising 6% interest for their depositors. Cooke and Huntington also transferred poorly performing securities of the First National Bank to the Freedman's Savings Bank, the latter serving as a "dumping ground" for these claims (Osthaus 1976). There were also clear conflicts of interests in the Finance Committee's loan policy. For example, the Finance Committee authorized loans to companies in which its members were materially involved, such as the Seneca Stone Company. The bank extended several loans that totaled over $75,000 to the company, secured by the company worthless bonds, a transaction on which the bank lost $62,000 (U.S. Senate. 44th Congress, 1st Session 1876). They also borrowed funds for their personal use. For example, Huntington took a loan to negotiate a rent relief. Overall, many of the loans the Freedman's Savings Bank made were non-performing, with little to no interest payments being made (U.S. Senate. 43rd Congress, 2nd Session 1874). Table IA.4 in the Online Appendix provides a summary of some of the largest

white businessmen. Collateral requirements were also significantly more constraining on Black applications. An example of these double standards was the difficulty that the Independent Baptist Church of Lexington, a Black church, had when trying to borrow $4,600. While the bank made several loans to whites on little or no security, this church was required to put up the entire church property (valued at $20,000) and the properties of several church members as collateral (Osthaus 1976).

[33]There was some opposition from senators on the principles of sound banking. These senators were concerned that real estate speculation had been the cause of failure for many banks and that depositors could not monitor the bank properly.

non-performing loans made by the bank.

The construction of the bank's new headquarters in Washington DC itself reflected the risky, if not fraudulent, investment strategy of the bank. Sperry said in his testimony before the Senate Committee : "(I)t was an illegal and unjustifiable extravagance(...) In other words, I damned it from its foundation stone up. I have nothing to say of the motives of the men who built it. I date from that the decadence of the Bank. The outlay in the way of books and some current expenses was greater than it ought to have been" (U.S. Senate. 44th Congress, 1st Session 1876). In addition, the contractor of the Freedman's Savings Bank building, Robert I. Fleming, received more than $224,000 in the form of loans by the bank (U.S. Senate. 43rd Congress, 2nd Session 1874).

In February 1872, Cooke and Huntington finally resigned after the other trustees started questioning the investment policy of the Finance Committee (Osthaus 1976). During the proceedings before Congress concerning the collapse of the bank, the investigation committee recommended to indict Henry Cooke among others: "...so gross a fraud and conspiracy to defraud, that, in the opinion of your committee, everyone of the survivors in the transaction, viz, Henry D. Cooke, Lewis Clephane, Hallet Kilbourn, and John O. Evans, should be indicted, tried, and punished to the extent of the law," (U.S. Senate. 44th Congress, 1st Session 1876). However, ultimately, none were held responsible.

Until 1873, the bank officials never publicly disclosed the real composition of the bank's assets and its financial performance. On the opposite, in contrast to the actual standing of the bank, official reports always stressed the conservatism of the investment decisions: that loans had been restricted to small amounts, that only a small percentage of loans had been approved and that the value of the collateral was always substantially greater than the loan amount (Osthaus 1976). While the bank operated with a deficit during most of its nine-year history, in the New Era, March 31 1870, Douglass, wrote that "the condition of the Company is highly prosperous."

5 The Bank's Failure and the Depositors' Losses

In this section, we show that the collapse of the Freedman's Savings Bank stands out as one of the worst instances of bank failure in the banking history of the United States for depositors.

5.1 The 1873 Panic and the Bank Failure

On September 18, 1873, the failure of the banking firm Jay Cooke and Company, which was investing massively in railroads, led to a severe financial panic in New York. On September 20th, the New York Stock Exchange closed for the first time in history. The panic resulted in the bankruptcy of several railroad companies and financial institutions.

The Freedman's Savings Bank was particularly affected. The bank's close ties with Jay Cooke and Company, even if somewhat severed after the resignation of Henry Cooke and Huntington from the Finance Committee in 1872, generated a crisis of confidence spurred by rumors of the bank's losses. Just following the failure of Jay Cooke and Company in September 1873, heavy runs forced the bank not only to sell its United States government securities but also to borrow from other banks (Osthaus 1976).[34] While these initial runs lasted only a few days, the bank officials announced that 60 days' notice would be required to withdraw money in the future. The decision further dampened the confidence of the depositors. Overall, this crisis of confidence resulted in a loss of over $1,000,000 in deposits from mid-September in 1873 to the closing of the bank in July 1874 (U.S. Senate. 43rd Congress, 2nd Session 1874).

Following the panic, the trustees decided to reform the bank. They reduced expenses by firing higher-paid cashiers and assistant cashiers and adopted a more conservative lending policy, issuing much fewer loans than before during this period. The most visible part of the reform was the changes in personnel, leading

[34]In February 1874, the bank had pledged $50,000 8% bonds of the District of Columbia as security for a $25,000 loan from the Hide and Leather National Bank of Boston. In May 1874, the bank took an additional loan of $33,500 from the National Metropolitan Bank of Washington DC and pledged a real estate note and bonds of the District of Columbia as collateral (Creswell et al. 1874).

to a greater Black representation in the bank leadership. Hence, in March 1874, the trustees decided to depose the president, John Alvord, and elect Frederick Douglass as president. In March 1874, Douglass accepted to serve as the president but quickly realized that the freedmen's deposits were not safely invested (Osthaus 1976).

The bank ultimately closed on July 2, 1874. In March 1874, while the financial situation of the bank was slowly improving, the publication of a report from the Office of the Comptroller of the Currency generated a new episode of panic among depositors. Runs occurred in most branches, including Washington, New York and Charleston in April and May 1874. Bank officials tried to reassure depositors by sending public statements to branch cities, but with no success. By mid-May, Douglass, in an effort to prevent depositors from further losses, informed senators that he considered the bank insolvent (Osthaus 1976).

After the closure, in July 1874, the Congress and the trustees of the Freedman's Savings Bank selected three commissioners to close the bank's affairs. They found that the value of the assets was much lower than what was registered in the books of the bank as of July 1874. According to the books, the cash and government securities amounted to only $49,000, or less than 2% of the total liabilities. Table IA.5 in the Online Appendix shows the balance sheet of the bank at the time of the failure, in July 1874. Liabilities exceeded assets by almost $200,000, and deposits represented 98% of these outstanding liabilities. At this point in time, the Freedman's Savings Bank had already sold a significant share of its United States government securities to pay back deposits during the initial runs on the bank.

5.2 Data

To better understand the magnitude of the failure of the Freedman's Savings Bank and its effects on depositors, we collect data on the Freedman's Savings Bank and all the other federally chartered banks that failed from the Civil War up to 1933, the year of the creation of the Federal Deposit Insurance Corporation (FDIC).

While these other federally chartered banks were commercial banks, which implies that, in contrast with the Freedman's Savings Bank, the investment of the

depositors' funds in risky loans was at least partly consistent with their charter, we use them as a benchmark in our analysis for the following reasons. As the Freedman's Savings Bank, these banks were chartered federally, operated at a national scale and were of comparable size in their business. Other savings banks and financial institutions during this time operated at smaller scales, with greater geographic restrictions on their operations, and faced different regulatory conditions. These failures also potentially led to significant losses to depositors until the creation of the FDIC in 1933. Finally, we have access to detailed data on the impact of their failures, as opposed to savings banks' failures.

Data on the failure of the Freedman's Savings Bank come from historical archives. We obtain the amount repaid to depositors from the 1883 Annual Report of the Commissioners, which contains a summary of each of the dividends, as well as the amount and number of claims paid at each branch (U.S. Senate. 53rd Congress 2nd Session 1883). The total amount owed to depositors, $2,833,251, is from U.S. Senate. 43rd Congress, 2nd Session (1874).

We obtain data on the failures of all federally chartered banks from 1863 to 1933 from the annual reports of the Office of the Comptroller of the Currency on National Banks. These reports were published from 1863 through to 1980 and are available from the Federal Reserve Archival System for Economic Research (FRASER). Specifically, for each bank that failed and were marked as closed by the Office of the Comptroller of the Currency by 1933, we extract the bank name, failure date, amount owed to depositors, % repaid and length of the repayment period. To select a sample more comparable to the Freedman's Savings Bank, we only consider those failed banks that had proved claims of over 1,000,000 current dollars.

To quantify the amounts owed to depositors at the time of the banks' failure, we calculate it as a percent of GDP. We use historical GDP figures of the United States from the Maddison Project Database 2020.[35]

The final sample contains 70 failed federally chartered banks along with the Freedman's Savings Bank. The first bank failure in this sample occurred in 1867,

[35] `https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2020`.

and the last in 1931. We focus our attention on two measures: the total value of claims due to depositors at the time of failure, as well as the percent of these claims that were never recovered. Table 10 shows the summary statistics: across these 71 bank failures, the average total amount owed to depositors at the time of failure as a percent of GDP is .0004% and the average percent of claims never recovered is 26%, while for the Freedman's Savings Bank these numbers are .0013% and 55%, respectively

5.3 Results

The failure of the Freedman's Savings Bank was among the largest in magnitude in the history of bank failures in the US in terms of both measures we consider: the magnitude of amount due to depositors at the time of failure as a percent of GDP and the extent of their final losses.

The first graph in Figure 9 plots the distribution of the total claims that were owed to depositors by the federally chartered banks at the date of their respective failure as a percent of GDP in the year they failed. Relative to these banks, the Freedman's Savings Bank owed a large amount to its depositors: the bank ranks in the 95^{th} percentile of amount due to depositors as a percent of GDP in this sample of 71 bank failures. Only two other banks had larger claims at the time of their failure.

In addition, the repayments to the depositors of the Freedman's Savings Bank were staggered over a long period of time, nine years, and in small amounts. Table 11 lists the dividends paid to depositors over the years. Depositors were paid on five dividend dates until 1883, the first dividend of 20% being paid only in late 1875 (Columns 1 and 2). Column 3 is the present value of the percentage repaid, to the date of the failure, using the 10-year Treasury rate (Shiller 1989) as the discount rate. Columns 4 and 5 list the number and percentage of claims paid during the five payment dates, where the total number of initial claims is 61,131. At each repayment date, less than 50% of the depositors received a dividend. In the final column, we calculate the present value of the average repayment per depositor. On average, in total, when taking into account the time value of money

and the share of depositors who did not receive any dividends, depositors recovered only 20% of their deposits at the date of the failure. This number contrasts with the ratio of 60% that is often cited in the literature, which is in aggregate and which does not take into account the time value of money in a period where interest rates were high.

INSERT TABLE 11 HERE

The second graph in Figure 9 plots the distribution of the present value of the percentage of aggregate deposits that were left unpaid at the date of the failure of the federally chartered banks. We take into account the length of the repayment period for each bank and assume that the repayments are staggered over this period in the same way as the for the Freedman's Savings Bank. We use the 10-year Treasury rate to discount the repayment at the date of the failure (Shiller 1989). The Freedman's Savings Bank ranks in the top quintile of failed federally chartered banks with the highest rate of unrecovered deposits (65%).

INSERT FIGURE 9 HERE

Therefore, the failure of the Freedman's Savings Bank stands out even among these national banks, which were federally chartered *commercial* banks, and hence supposed to be riskier than a simple savings bank. The Freedman's Savings Bank's mandate, as laid out in its initial charter, was to invest only in government securities. In addition, while data are not available on the failures of savings banks at this time, there is a consensus among historians that they were few and led to only small losses for depositors (Keyes 1878; Osthaus 1976).

6 Concluding Remarks

This paper shows how financial inclusion can be detrimental to minorities through the lens of the Freedman's Savings Bank. In contrast to the claims of Stein and Yannelis (2020), this paper identifies no positive effects in the short run on the education and wealth of the depositors. On the contrary, the bank's marketing

campaign, centered on false promises, and fraud may have dampened the trust of the Black populations in financial institutions. We show that the failure of the Freedman's Savings Bank led to depositors' losses that have rarely been matched in the banking history of the United States.

This paper cautions on the risk of overlooking the institutional details in empirical analyses, potentially leading to incorrect inference. On the surface, the Freedman's Savings Bank may be seen as an institution meant to serve the newly freed African American population to assist them in accumulating funds. However, its operations and business were ultimately directed by white officials whose incentives were poorly aligned with those of the depositors. As a result of this friction, the bank further amplified racial inequalities and was yet another obstacle for the depositors, many of whom lost a significant portion of their wealth during its collapse.

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A Figures

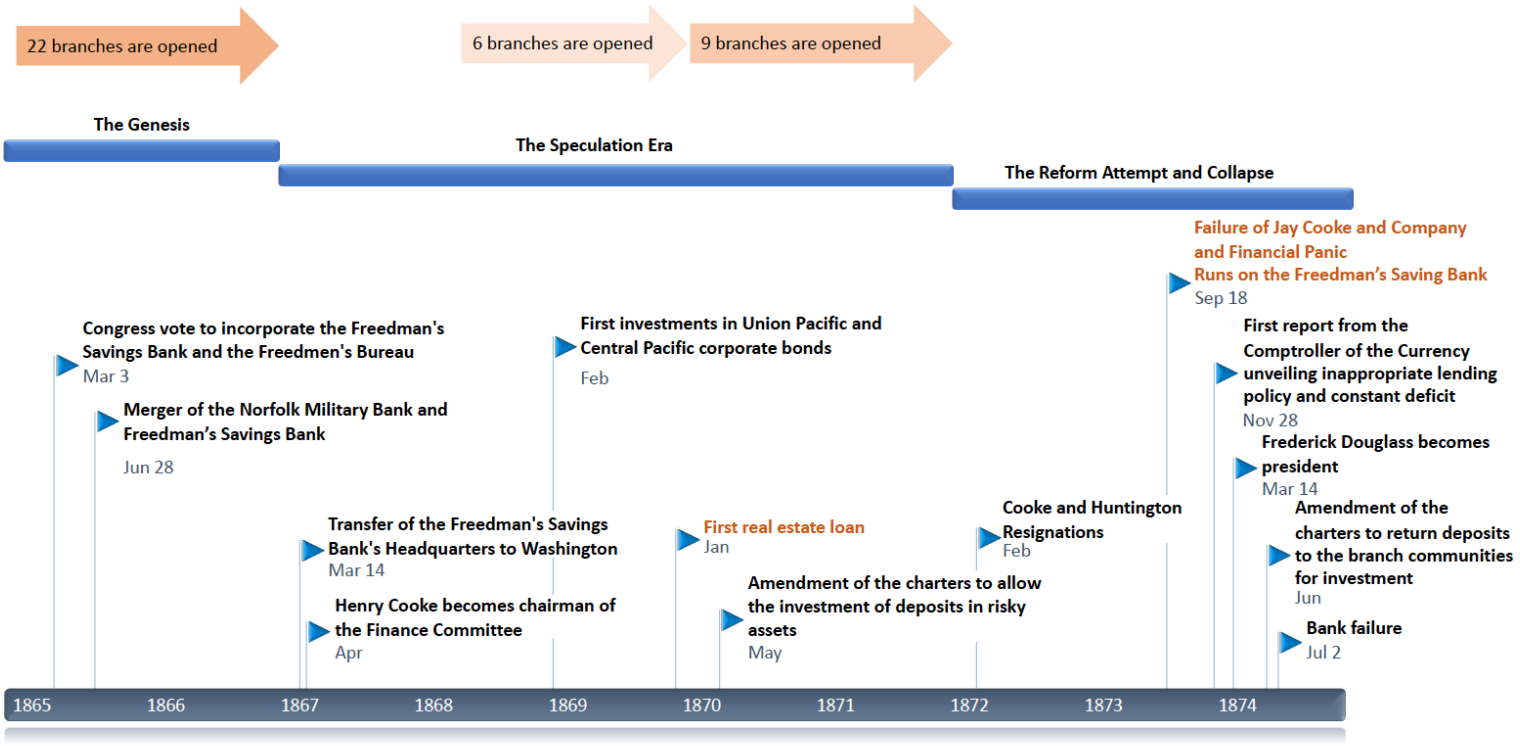


Figure 1: Timeline of the Freedman's Savings Bank

This timeline plots the main events in the history of the Freedman's Savings Bank. The Freedman's Savings Bank was chartered in March 1865 and failed in July, 1874. We consider three periods in the life of the Freedman's Savings Bank. (1) The genesis: from 1865 to 1866, the bank was created on the model of the first military banks for Black Union soldiers by white founders. These founders were also active in the Freedmen's Bureau and the AMA. (2) The speculation era: 1867 was a turning point in the history of the Freedman's Savings Bank. The headquarters were transferred to Washington, there was a large turnover of trustees and politicians and financiers took over the leadership. They started using bank deposits to make speculative investments in real estate and corporate bonds as early as 1869. (3) The reform attempt and collapse: in 1872, some trustees challenged the investment decisions of the Finance Committee, whose main members resigned. New trustees were appointed in an attempt to reform the bank while the constant deficit and the speculative investments become public. In July, 1874 the bank failed. Depositors received only 20% of their deposits back on average in net present value terms when considering the number of claims.

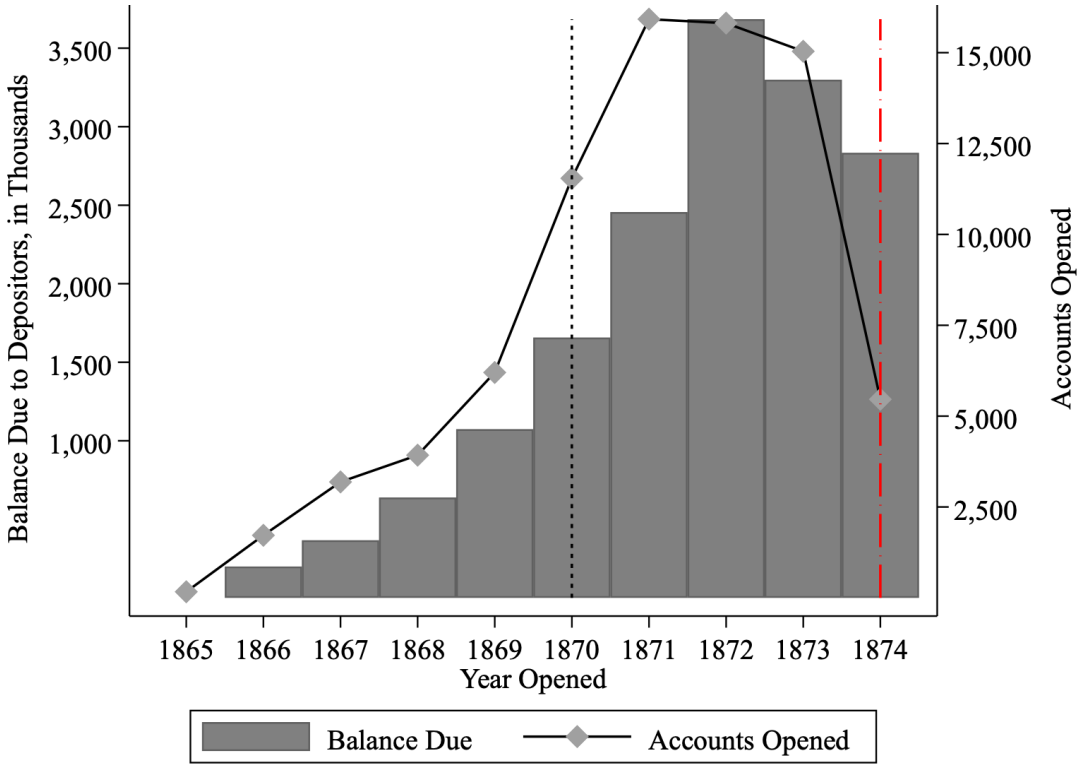
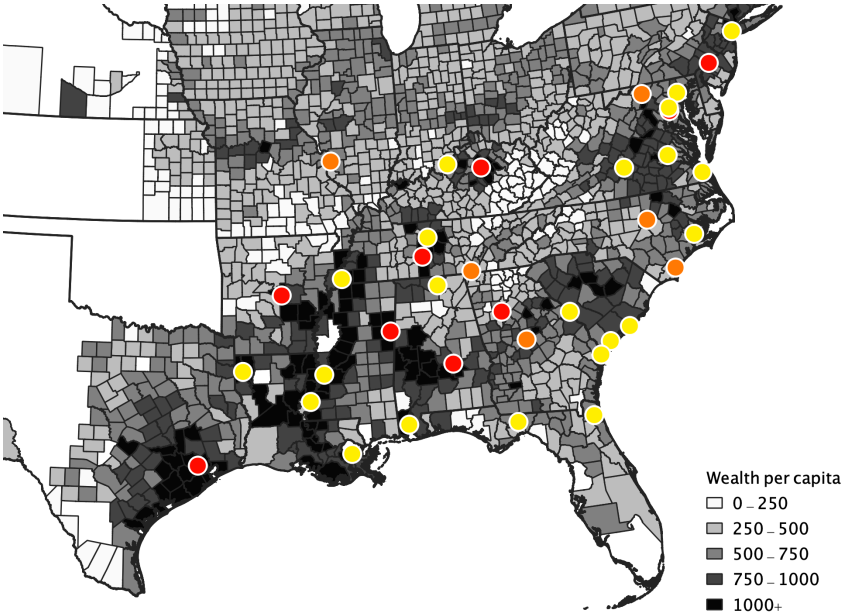


Figure 2: New Accounts Opened and Outstanding Amount of Deposits at the Freedman's Savings Bank from 1865 to 1874

This figure plots the number of accounts opened each year (right axis) and the outstanding amount of deposits at the bank (left axis). The sample of accounts is restricted to the ones available in the bank registers and excludes institutional accounts. The outstanding amounts of deposits are from the Report of the Select Committee to Investigate the Freedman's Savings and Trust Company (U.S. Senate. 46th Congress 2nd Session 1880). The vertical red line indicates the date of the bank failure. The vertical dotted line indicates the year of the census data the study (Stein and Yannelis 2020) exploits to investigate the short run effects of the bank.

Panel A. Branch Locations and Wealth Per Capita



Panel B. Branch Locations and Population Density

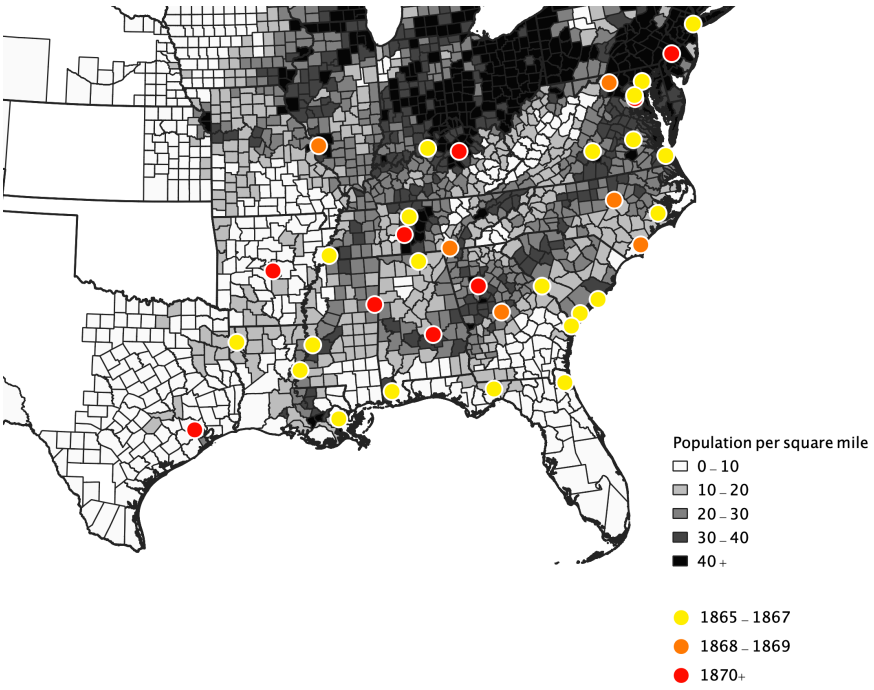


Figure 3: Freedman's Savings Bank: Branch Locations and 1860 County Characteristics

The maps in Panel A and B display the location of the Freedman's Savings Bank branches, as well as county wealth per capita and population density, respectively. Population density is calculated as the population per square mile in each county. Wealth per capita is calculated as the combined value of real estate and personal estate divided by the population in each county. Yellow, orange and red dots refer to branches that opened between 1865 and 1867, between 1868 and 1869, and after 1870, respectively.

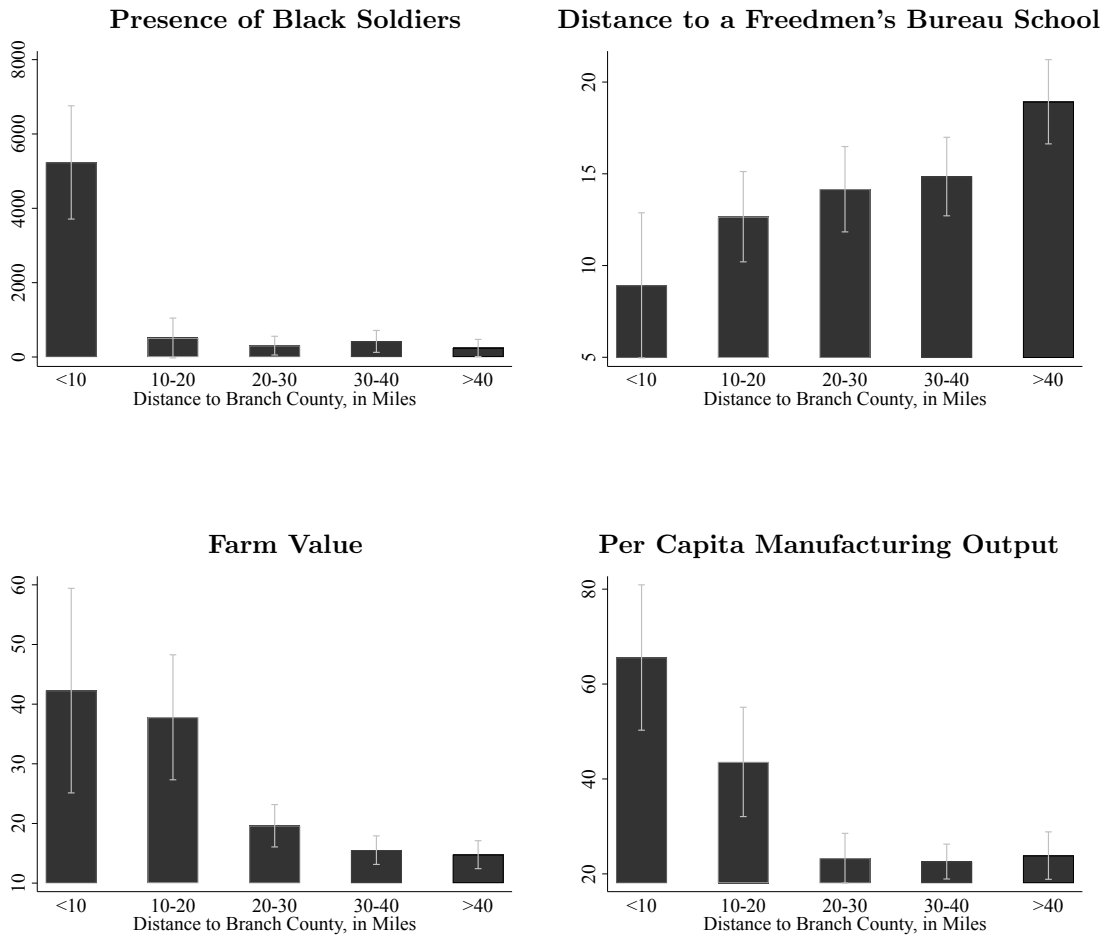


Figure 4: County Characteristics and Distance to Branch County

These figures show the average number of Black soldiers in 1865-1866, county distance to a Freedmen's Bureau School, farm value per acre and manufacturing output per capita as a function of the county distance to a branch county. The distance to a branch county is zero if the county includes a branch. The sample includes the 412 counties that are either within 50 miles of a branch county or include a branch. Army data are from the archives of the United States Army (Downs and Nesbit 2015). Freedmen Bureau school information is from the 1869 school reports. Manufacturing data are from the US census of manufactures, 1860. Demographic data are from the US census of population, 1860. Confidence intervals are at the 95% level.

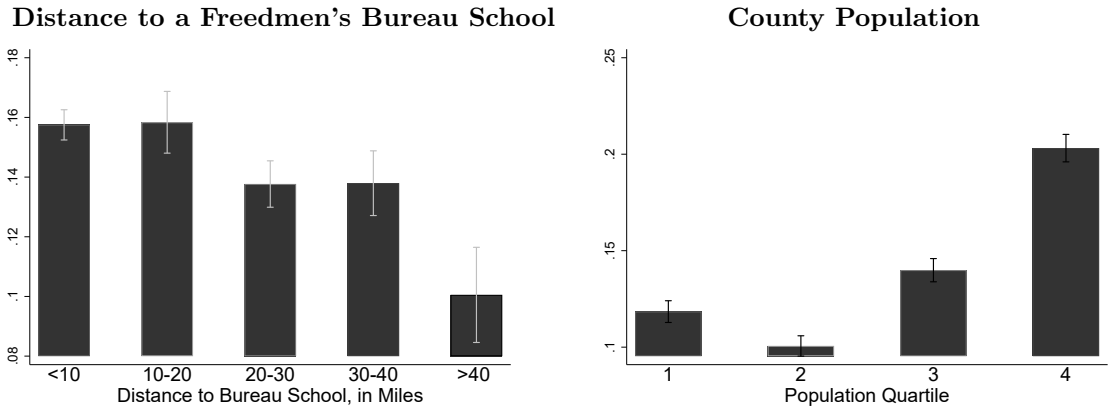


Figure 5: False Positive and County Characteristics

These figures show the share of false positive across county characteristics. False positives refer to those "depositors" identified using the study's methodology in the 1% Black oversample for whom information from the 1870 census does not match data from the bank registers. Confidence intervals are at the 95% level.

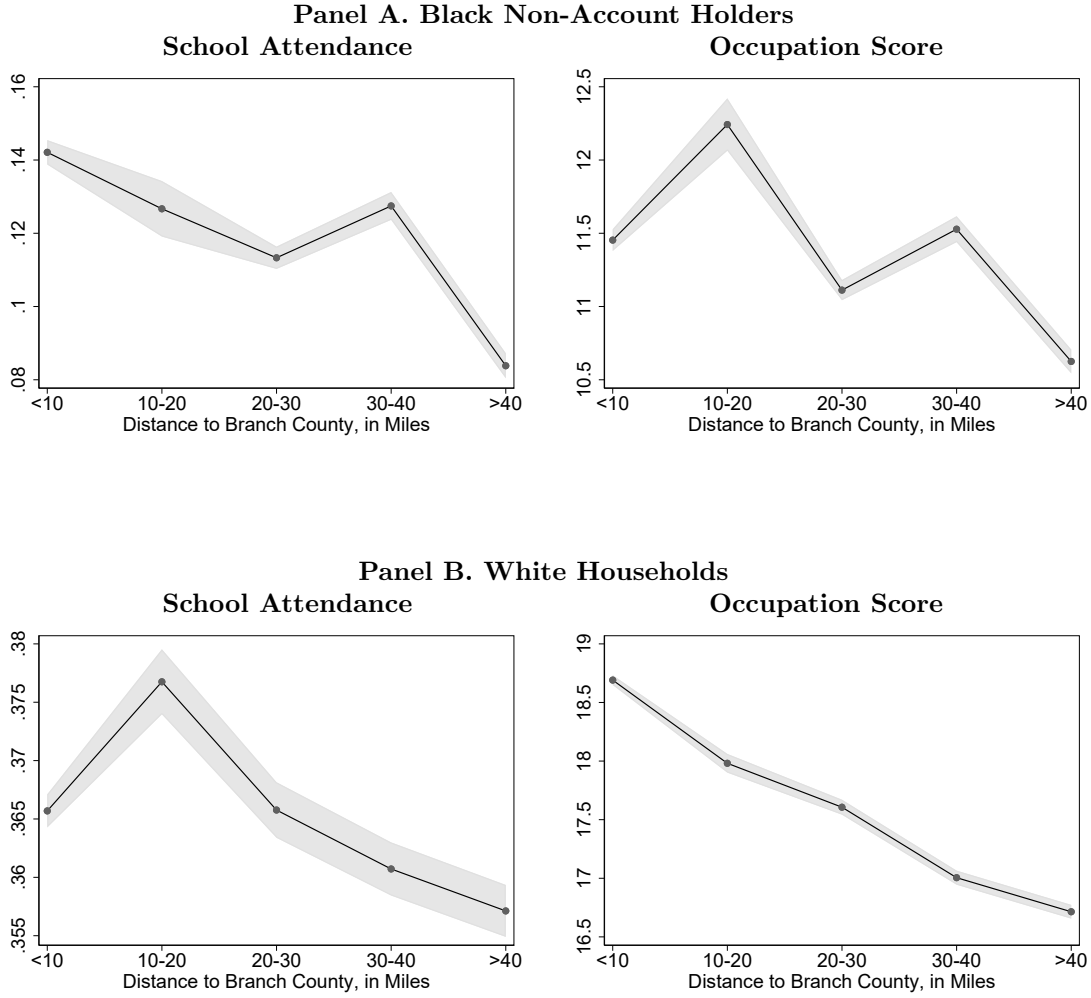


Figure 6: Household Characteristics and Distance to Branch County

These figures show school attendance and occupation score as a function of the households' distance to a branch county. The lines plot the coefficient estimates β_j from the following specification: $Household\,Outcome_{i,1870} = \alpha + \Sigma_{j=0}^{j=4} \beta_j \mathbb{1}_{j\times 10 \leq Distance \leq (j+1)\times 10} + \eta\, x_i + Branch_i + \varepsilon_i$, where $\mathbb{1}_{j\times 10 \leq Distance \leq (j+1)\times 10}$ indicates which distance bracket a county is located in. The model includes branch area fixed effects, urban area fixed effects and household controls including household size and the age of the household head. The distance to a branch county is zero if the county includes a branch. Panel A includes Black households living less than 50 miles of a Branch and who do not hold an account at the Freedman's Savings Bank. Panel B includes white households living less than 50 miles of a branch. Data are from the US census of population, 1870. Confidence intervals are at the 95% level.

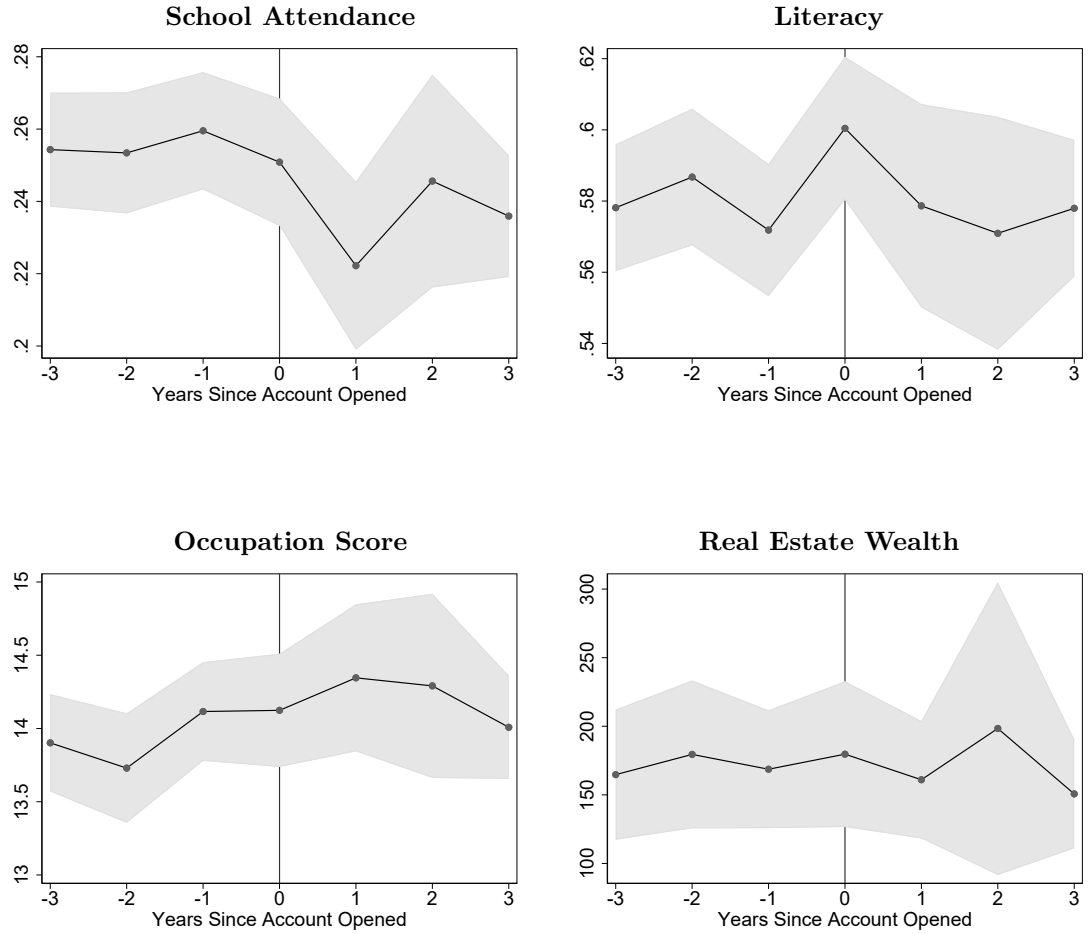


Figure 7: Account Holding and Household Outcomes

These figures show various households' 1870 outcomes as a function of the number of years before/after one member of the household opens an account at the Freedman's Savings Bank. The lines plot the β_j coefficients from the following specification: $Household\,Outcome_{i,1870} = \alpha + \Sigma_{j=-3}^{j=3}\beta_j \mathbb{1}_{OpenYear=1870-j} + \eta\, x_i + Branch_i + \varepsilon_i$. $\mathbb{1}_{OpenYear=1870-j}$ is an indicator equal to 1 in 1870 when $j = 0$, in 1869 when $j = 1$, in 1868 when $j = 2$, etc. The model includes branch area fixed effects and household controls including household size and the age and gender of the household head. The sample is restricted to depositors only. The vertical line indicates households that opened an account exactly in 1870. On the left side are accounts opened 1, 2 or 3 years before. On the right side are accounts opened 1, 2 or 3 years after. Confidence intervals are at the 95% level.

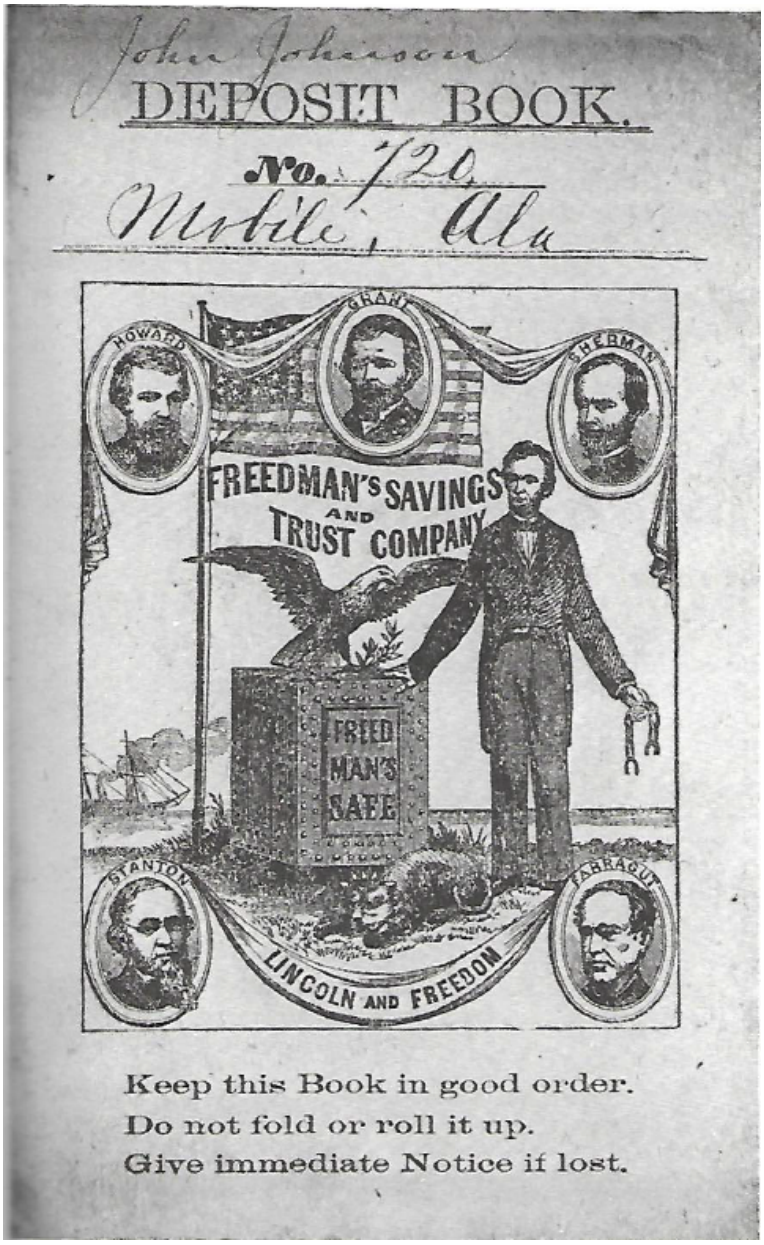


Figure 8: Deposit book from Freedman's Savings Bank.

Avery Research Center for African American History and Culture, College of Charleston, Charleston, SC, image e1526402912464 (circa 1867).

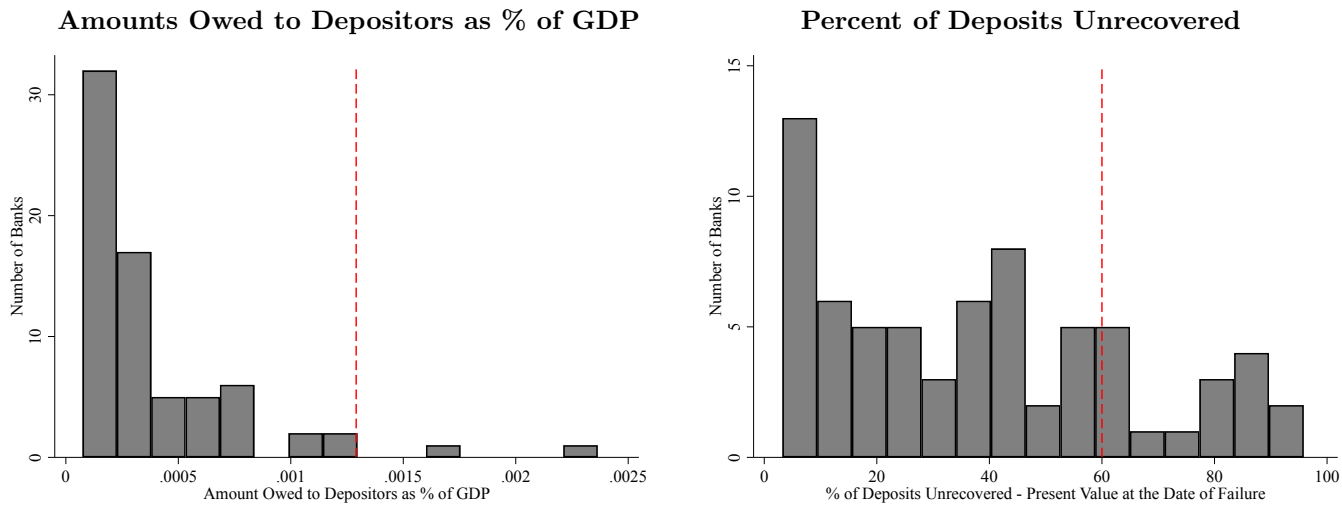


Figure 9: National Bank Failures (1863 - 1933)

These figures plots the histogram of the amount of deposit losses as a percent of GDP at the time of failure and the present value of the percent of deposit unrecovered across failed National Banks over the 1863 to 1933 period, until the creation of the FDIC. The red line shows the values for the Freedman's Savings Bank.

B Tables

Table 1: Main Figures

Name	Dates	Institution	Role
		The Genesis: 1865 - 1867	
John Alvord (1807-1880)	1865	FSB	Founder and Corresponding Secretary
	1865	Bureau	Superintendant of Schools
William A. Booth	1865	FSB	President
		American Tract Society [36]	President
Mahlon T. Hewitt (1808-1874)	1865	FSB	Vice-President
	1866	FSB	President
George Whipple	1846	AMA	Secretary
		FSB	Trustee
		The Speculation Era: 1867 - 1872	
Henry D. Cooke (1825-1881)		First National Bank	President
	1867	FSB	Chairman of the Finance Committee
D. L. Eaton	1865	FSB	Actuary
		American Building Block Co.	Head
George W. Balloch (1845-1902)	1865	Bureau	Chief Disbursing Officer
	1867	FSB	Trustee
		Board of Public Works	Superintendent of Streets
William S. Huntington		First National Bank	Cashier
		Metropolis Paving Company	Treasurer
	1867	FSB	Member of the Finance Committee
		Jay Cooke and Company	Employee
		Seneca Stone Company	Incorporator
Lewis Clephane (1825-1897)	1867	FSB	Finance Committee Member
		Metropolis Paving Company	President
		Seal Lock Company	President
		Board of Public Works	Contractor
Charles W. Hayden (1870-1937)		Seneca Stone Company	Treasurer
General Eliphalet Whittlesey (1821-1909)		Freedmen's Bureau	Adjustant General
		FSB	Bank Trustee
		American Building Block Company	Member
Colonel A.P. Ketchum	1870	FSB	Trustee
		Freedmen's Bureau	Aid to the Commissioner
		The Reform Attempt and the Collapse: 1872 - 1874	
Anson M. Sperry	1865	FSB	Trustee
	1870	FSB	Inspector
Frederik Douglass (1818-1895)	1865	FSB	Trustee
	1870	Freedman's Savings Bank	Inspector
John Mercer Langston (1829-1897)	1872	FSB	Trustee and Member of the Finance Committee
	1874	FSB	Chairman of the Finance Committee
Charles B. Purvis (1842 - 1929)	1874	FSB	Vice-President

This table lists the main personalities that played a role in the development of the Freedman's Savings Bank (FSB) as well as their role in other philanthropic, political or business organizations, such as the American Missionary Association (AMA).

Table 2: County-Level Summary Statistics

	Branch Counties *N=37*		**Non-Branch Counties** *N=375*		**Mean Difference**	
	Mean **(1)**	**Sd** **(2)**	**Mean** **(3)**	**Sd** **(4)**	**Unconditional** **(5)**	**Conditional** **(6)**
Military Presence in 1865-1866						
# of Soldiers	22,199	17,470	1,315	4,139	20,884***	21,227***
					(7.25)	(7.52)
# of Black Soldiers	5,800	5,824	346	1,726	5,454***	5,357***
					(5.67)	(6.11)
Freedmen Bureau Activities in 1866						
Presence of a Bureau Office	0.95		0.41		0.53***	0.50***
					(11.71)	(11.01)
Presence of a Bureau School	0.86		0.41		0.45***	0.45***
					(5.51)	(4.58)
1860 Demographics						
Total Population	52,292	63,162	15,499	16,788	36,792***	36,913***
					(3.48)	(3.89)
Urban Area Dummy	0.86		0.12		0.74***	0.78***
					(12.48)	(13.22)
Metropolitan Area Dummy	0.27		0.01		0.26***	0.24***
					(3.50)	(3.27)
White Literacy Rate (1850)	0.96		0.95		0.02**	0.01**
					(2.42)	(2.30)
1860 Economic Activity						
Farm Value	31.54	51.64	20.57	28.04	10.97	15.20***
					(1.27)	(2.79)
Per Capita Manufacturing Output	61.84	57.38	26.92	33.98	34.92***	43.47***
					(3.59)	(5.47)
Per Capita Manufacturing Wages	11.41	9.53	4.64	6.43	6.77***	8.22***
					(4.17)	(6.35)
Per Capita Real Estate Wealth	463.80	235.18	312.93	175.94	150.87***	168.67***
					(3.75)	(4.95)
Per Capita Personal Estate Wealth	526.02	249.37	386.24	196.17	139.78***	109.29***
					(3.27)	(3.61)
1860 Infrastructure						
Rail (Dummy)	0.81		0.46		0.35***	0.41***
					(4.94)	(6.44)
Water (Dummy)	0.76		0.55		0.21***	0.21***
					(2.76)	(3.30)

Columns 1 and 3 report unconditional means of county characteristics in the 37 branch and the 375 non-branch counties, respectively, with standard deviations in Columns 2 and 4. Columns 5 and 6 report the difference between the means, unconditionally in Column 5 and conditional on state fixed effects in Column 6, with t-statistics in parentheses below. In Column 6, standard errors are clustered at the branch area level. Army data are from the archives of the United States Army (Downs and Nesbit 2015). Freedmen Bureau's Schools information is from the 1869 school reports. Manufacturing data are from the US Census of Manufactures, 1860. Demographic data are from the US Census of Population, 1860, except the literacy rate, which is from the 1850 US census.

Table 3: Distance to Closest Branch County and Ex-ante County Characteristics

				1860						
	# Black Soldiers (log)	**Bureau Office (Dummy)**	**Bureau School (Dummy)**	**Population**	**Urban**	**Farm Value**	**Pc Manuf. Output**	**Pc Wealth**	**Rail**	**Water**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
Distance to branch county	-0.070***	-0.004***	-0.007**	-608.17***	-0.008***	-0.365**	-0.561***	-4.485***	-0.006***	-0.005**
	(0.012)	(0.001)	(0.002)	(158.247)	(0.001)	(0.156)	(0.089)	(1.374)	(0.002)	(0.002)
Branch Area FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log(population)	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	Yes
Observations	409	409	222	409	409	409	375	409	409	409
R^2	0.437	0.332	0.230	0.369	0.512	0.672	0.556	0.517	0.341	0.436

This table displays OLS regression coefficients of ex-ante county characteristics on the distance to the closest branch county. The sample includes the 412 counties that are either within 50 miles of one of the 37 branches of the Freedman's Savings Bank or include a branch. In Column 1, the dependent variable is the log of the average number of Black soldiers present in the county over the years 1865-1866. Data are from the archives of the United States Army (Downs and Nesbit 2015). Freedmen Bureau's Schools information is from the 1869 school reports. Manufacturing data are from the US Census of Manufactures, 1860. Demographic data are from the US census of population, 1860, except the literacy rate, which is from the 1850 US census. Standard errors are clustered at the branch area level and displayed below their coefficient of interest. *, **, and *** represent statistical significance at the 10%, 5%, and 1% confidence levels, respectively.

Table 4: Denied/Late Branches and 1860 County Characteristics

				1860						
	# Black Soldiers	Bureau Office	Bureau School	Population	Urban	Farm Value	Pc Manuf. Output	Pc Wealth	Rail	Water
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A										
$\mathbb{1}_{\text{Denied Branch}}$	-3,823**	-0.76***	-0.23	-28,791**	-0.53***	-13.07	-38.42***	-0.55	-0.22	-0.11
	(1,515)	(0.12)	(0.19)	(12,323)	(0.15)	(9.23)	(13.75)	(85.35)	(0.17)	(0.15)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	46	46	32	46	46	46	46	46	46	46
R^2	0.613	0.825	0.250	0.519	0.466	0.696	0.565	0.442	0.177	0.218
Panel B										
$\mathbb{1}_{\text{Denied or Late Branch}}$	-6,015***	-0.53***	-0.16	-23,255**	-0.34**	-2.81	-36.86***	-17.78	-0.19	-0.48***
	(1,319)	(0.12)	(0.17)	(9,232)	(0.14)	(3.79)	(12.68)	(91.32)	(0.15)	(0.14)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	46	46	32	46	46	46	46	46	46	46
R^2	0.746	0.579	0.224	0.497	0.333	0.673	0.564	0.442	0.166	0.434

This table displays OLS regression coefficients of county characteristics in 1860 on a dummy indicating whether a branch was denied in the county in Panel A, or whether a branch was built after 1870 or denied in Panel B. County wealth refers to the sum of real estate value and personal estate value. The sample includes all the 37 branch counties, as well as the 15 counties where a branch was denied. Robust standard errors are displayed below their coefficient of interest. *, **, and *** represent statistical significance at the 10%, 5%, and 1% confidence levels, respectively.

Table 5: Depositors' Summary Statistics: Freedman's Bank Registers of Signatures

	N=74,181				
	Mean (1)	**p25 (2)**	**p50 (3)**	**p75 (4)**	**% Non-Missing (5)**
Account Characteristics					
Branch (Frequency, in %)					100%
Savannah, GA	11.0				
Washington, D.C.	10.9				
Charleston, SC	8.3				
Richmond, VA	8.1				
Baltimore, MD	6.9				
New York City, NY	6.5				
Vicksburg, MS	6.5				
Memphis, TN	6.1				
Louisville, KY	5.7				
Augusta, GA	4.6				
New Orleans, LA	4.5				
Atlanta, GA	4.4				
Beaufort, SC	3.0				
Nashville, TN	2.3				
Tallahassee, FL	1.8				
Norfolk, VA	1.8				
Mobile, AL	1.7				
Huntsville, AL	1.6				
Little Rock, AR	1.3				
Shreveport, LA	1.1				
Columbus, MS	1.0				
Natchez, MS	0.7				
St. Louis, MO	0.2				
Lynchburg, VA	0.1				
New Bern, NC	0.0				
Wilmington, NC	0.0				
Raleigh, NC	0.0				
Account Opening Year	1871	1870	1871	1873	93%
Depositor Characteristics					
Black	91%				100%
Age	27	18	24	35	100%
Place of Birth (Frequency, in %)					68%
Virginia	21.7				
Georgia	15.6				
South Carolina	15.0				
Kentucky	6.9				
Louisiana	6.5				
Maryland	6.3				
Mississippi	6.0				
Tennessee	5.4				
New York	3.5				
North Carolina	3.3				
Others	10.0				
Father's first name					54%
Mother's first name					59%

This table provides summary statistics on the depositors identified in our final sample from the Freedman's Savings Bank's registers of signatures.

Table 6: Individual-Level Summary Statistics: 1870 Full Census

	Total Excluding Depositors *N=1,992,282 %=98.99*		**Depositors** *N=20,241 %=1.01*		**Depositors Opened after 1870** *N=16,423 %= 0.82*		**Mean Difference**	
	Mean (1)	**Sd (2)**	**Mean (3)**	**Sd (4)**	**Mean (5)**	**Sd (6)**	**3 vs 1 (7)**	**5 vs 1 (8)**
Demographics								
Age	22.25	17.83	26.73	15.40	26.21	15.06	4.60***	3.96***
							(42.22)	(33.50)
Child (%)	40		20		20		-21***	-20***
							(-72.83)	(-63.50)
Female (%)	52		34		35		-18***	-16***
							(-52.22)	(-43.08)
HH Size	6.29	3.16	6.25	3.53	6.25	3.51	-0.04*	-0.04
							(-1.73)	(-1.62)
In Urban Area (%)	18		48		47		30***	29***
							(83.89)	(74.56)
Education								
Adults								
% Literate	24		36		42		11***	11***
							(30.41)	(26.29)
School-Aged Children								
% Literate	22		41		42		19***	19***
							(20.74)	(19.33)
% Schooled	12		32		32		20***	20***
							(22.82)	(20.90)
Income and Wealth (Adults Only)								
Works %	56		68		67		12***	11***
							(32.32)	(26.33)
Income Score	7.16	7.51	10.48	9.42	10.23	9.33	3.32***	3.07***
							(44.71)	(37.52)
Real Estate Wealth	34.13	1,686	70.40	1,010	70.03	1,093	36.27***	35.90***
							(4.49)	(3.71)

Columns 1, 3 and 5 report unconditional means of individual characteristics in the samples of non-account holders, depositors, and "late" depositors, respectively. Standard deviations are displayed in Columns 2, 4 and 6. The total sample includes all 1870 census observations of Black individuals that live less than 50 miles of one of the 27 branches of the registers. Columns 7 and 8 report the difference between the means and t-statistics are included in brackets.

Table 7: Study's Methodology to Identify Depositors - False Positives and 1870 Characteristics

Sample	**Adults**				**School-Age Children**	
	Literacy	**Works**	**Income Score**	**Wealth**	**Literacy**	**Schooled**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
$\mathbb{1}_{\text{False Positive}}$	0.07	0.05**	0.92***	24.88*	0.06	0.03*
	(0.04)	(0.02)	(0.32)	(13.71)	(0.09)	(0.02)
Observations	20,911	20,911	20,911	20,911	8,390	8,390
R^2	0.000	0.000	0.001	0.000	0.000	0.001

This table displays OLS regression coefficients of individual characteristics in 1870. $\mathbb{1}_{\text{False Positive}}$ indicates individuals the study identifies as depositors in the 1% Black oversample but whose characteristics do not match the information in the registers of signatures. In Columns 1 to 4, the sample includes all census observations from the 1% Black oversample that are Black, adults, and live within 50 miles of one of the 27 branches included in the registers. In Columns 5 and 6 the sample is restricted to school-age children only. Standard errors are clustered at the branch level and displayed below their coefficient of interest. *, **, and *** represent statistical significance at the 10%, 5%, and 1% confidence levels, respectively.

Table 8: Depositors' Ex-ante Characteristics

Sample	Adults				School-Age Children	
	Literacy (1)	**Works** (2)	**Income Score** (3)	**Wealth** (4)	**Literacy** (5)	**Schooled** (6)
$\mathbb{1}_{\text{Depositor}}$	0.06***	0.03***	1.12***	24.70	0.06***	0.07***
	(0.01)	(0.01)	(0.14)	(15.39)	(0.01)	(0.01)
Controls						
County Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Household Size	Yes	Yes	Yes	Yes	Yes	Yes
Age	Yes	Yes	Yes	Yes	Yes	Yes
Gender	Yes	Yes	Yes	Yes	Yes	Yes
Urban Area	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,208,202	1,208,202	1,208,202	1,208,202	479,642	479,642
R^2	0.208	0.367	0.396	0.002	0.229	0.198

This table displays OLS regression coefficients of individuals' characteristics in 1870. $\mathbb{1}_{\text{Depositors}}$ indicates individuals who opened an account in 1870 or after. In Columns 1 to 4, the sample includes all census observations that are Black, adults and live within 50 miles of one of the 27 branches included in the registers, excluding depositors who opened their account before 1870. Columns 1 to 4 also control for relationship to household head. In Columns 5 and 6 the sample is restricted to school-age children only. Standard errors are clustered at the county level and displayed below their coefficient of interest. *, **, and *** represent statistical significance at the 10%, 5%, and 1% confidence levels, respectively.

Table 9: Account Holding and Household Outcomes

	Works		Income Score		Wealth		Schooled Children	
	Head	Any	Head	Total	Head	Total	Any	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Panel A: Depositors with Account Open Year>1870							
OpenYear	-0.01	-0.01	-0.13	-0.51*	-4.84	-7.55	-0.00	-0.01
	(0.01)	(0.00)	(0.15)	(0.26)	(11.71)	(11.97)	(0.01)	(0.01)
Controls								
County Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household Size	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Head Age	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,368	7,368	7,368	7,368	7,368	7,368	5,439	5,439
R^2	0.089	0.131	0.146	0.299	0.031	0.036	0.227	0.228
	Panel B: All Depositors							
$\mathbb{1}_{\text{OpenYear}<1870}$	0.02	0.00	0.40	-0.38	-0.68	-2.30	-0.01	-0.00
	(0.01)	(0.01)	(0.26)	(0.49)	(18.76)	(23.46)	(0.01)	(0.03)
Controls								
County Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household Size	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Head Age	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13,623	13,623	13,623	13,623	13,623	13,623	10,161	10,161
R^2	0.072	0.116	0.143	0.278	0.038	0.042	0.216	0.220

This table displays OLS regression coefficients of household characteristics in 1870. In Panel A, the sample is restricted to households holding an account opened after 1870. *OpenYear* indicates the account open year. In Panel B, the sample is restricted to all households holding an account. $\mathbb{1}_{\text{OpenYear}<1870}$ indicates individuals who opened an account before 1870. Standard errors are clustered at the branch level and displayed below their coefficient of interest. *, **, and *** represent statistical significance at the 10%, 5%, and 1% confidence levels, respectively.

Table 10: Bank Failures Summary Statistics

	N=71						
	Mean	**p10**	**p25**	**p50**	**p75**	**p90**	***Freedman's Savings Bank***
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Total Claims, Thousands of Current Dollars	2,202	1,113	1,342	1,796	2,601	3,332	*2,833*
Total Claims, Thousands of Constant Dollars	2,383	940	1,139	1,785	2,733	3,648	*2,833*
Claims as a % of GDP	0.0004	0.0001	0.0001	0.0003	0.0005	0.0008	*0.0013*
Year of Failure	1905	1877	1891	1907	1923	1927	*1874*
Years From Failure to Closure	8	1	4	7	10	15	*9*
% of Deposits Unrecovered	26.25	0.00	0.00	17.55	42.09	74.30	*45.00*
% of Deposits Unrecovered, PV	**37.69**	**4.12**	**13.18**	**35.40**	**56.04**	**80.06**	***58.98***

This table provides summary statistics on the database of bank failures collected from the annual reports of the Comptroller of Currency from 1863 to 1933. Constant dollars refer to total claims in terms of 1874 dollars, the year the Freedman's Savings Bank failed.

Table 11: Repayments to Depositors

Payment Date	**% of the Claimed Deposit Amount**	**Present Value in 1874**	**Actual No. of Claims Paid**	**Percentage of Claims Paid (n=61,131)**	**Average % Present Value in 1874**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
November 1, 1875	20	18.63	29,996	49.07	9.14
March 20, 1878	10	8.20	26,069	42.64	3.50
September 1, 1880	10	7.20	23,280	38.08	2.74
June 1, 1882	15	9.84	21,527	35.21	3.46
May 12, 1883	7	4.37	18,774	30.71	1.34
Total		**48.24**			**20.19**

Payment date, % of the claimed deposit amount, actual no. of claims paid are extracted from page 12 of the Report of the Commissioner, 1883. The 1874 present value is computed using the 10-year Treasury rate of that period from Shiller (1989).