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Interbank Payments Relationships in the Antebellum United States: Evidence From Pennsylvania*

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In the United States prior to the Civil War, banks played an important role in the country's payments system. They issued notes, which were the largest component of currency in circulation. They discounted promissory notes and bills of exchange that their customers acquired as payment for the provision of goods and services. They also guaranteed payments transactions.[1] In these ways, banks provided for their customers' needs to make and receive payments and to settle debts.

Banks did not play their role in the country's payments system in isolation from each other, however. The desire of a bank's customers to make payments to people and businesses who were customers of other banks meant that banks had to deal with other banks in the normal course of business. This is shown in contemporary bank balance sheets. These balance sheets contain three items that pertain specifically to interbank relationships. Banks held "notes (bills) of other banks" and had amounts "due from (by) other banks" as assets. They had amounts "due to other banks" as liabilities.

Virtually every bank had positive amounts of at least one of these items on its balance sheet at all times; the vast majority of banks had positive amounts of all three. (See Weber 1999.) Further, the magnitudes of these interbank balance sheet items were large. The aggregate amounts of these three items for all U.S. banks, along with the total amount of bank assets and capital, are presented in Table 1 for selected years between 1840 and 1856. The table shows that in those years between 11 and 19.5 percent of the total note circulation of banks was held by other banks. Amounts due from other banks were, roughly, between 7 and 8.5 percent of total bank assets, roughly the same order of magnitude as banks' holdings of specie, making this the second or third largest item on the asset side of banks' balance sheets. Amounts due to other banks were, roughly, between 10 and 14.5 percent of banks' total liabilities and were banks' third largest liability after circulation and deposits.[2]

While qualitative discussions of U.S. interbank relationships exist in contemporary sources such as the work of

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[1]For example, the practice of certifying checks was widespread during this period. See the discussion in Gibbons 1858, especially chap. 5.

[2]Nominal gross national product (GNP) is also presented in Table 1 in order to facilitate comparison with magnitudes today. The comparison holds in all years presented except for 1840, which is an outlier due to the changes in bank structure and regulation that occurred around that time. Generally, in the 1840s and 1850s compared to today, circulation was about the same fraction of GNP, bank assets were about half the fraction of GNP, and bank capital was about twice the fraction of GNP.

Table 1

Interbank Statistics for All Banks in the Antebellum United States

Selected Years, 1840–56

	Interbank Assets and Liabilities ($ mil.)			Shares of Totals (%)			Totals ($ mil.)		
Year	Notes of Other Banks	Due From Other Banks	Due to Other Banks	Notes of Other Banks/ Circulation	"Due Froms"/ Assets	"Due tos"/ Liabilities	Total Assets	Total Capital	U.S. Nominal GNP
1840	22.7	48.6	45.9	19.47	7.14	14.48	680.5	363.6	1,360
1845	12.0	29.6	26.3	13.39	6.82	11.54	433.9	206.0	1,453
1851	17.2	50.7	46.4	11.08	8.49	12.56	597.2	227.8	2,175
1856	24.8	62.6	52.7	12.67	7.11	9.83	880.0	343.9	3,272

Source: Weber 1999, U.S. Bureau of the Census 1975

Gibbons (1858), not much is known quantitatively about such relationships anywhere in the country during the antebellum period.[3] A major reason is that on most extant bank balance sheets for the antebellum period, only the total amounts of "notes of other banks," "due from other banks," and "due to other banks" are listed. These interbank balance sheet items are not disaggregated by the individual debtor or creditor bank. While the existence of these items on bank balance sheets documents the existence of interbank relationships, the balance sheets do not provide much quantitative information about the nature of such relationships.

I have discovered some disaggregated 19th century data on interbank balance sheet items for banks in one state, Pennsylvania. That state's contemporary legislative documents include, for a sample of Pennsylvania banks, the amounts "due from other banks" by individual debtor bank during the period from 1851 to 1859. (All of these data are available on my Web site, Weber 1999.) The purpose of this study is to document several major quantitative facts about the nature of interbank relationships that appear in these disaggregated data. Facts about the interbank relationships of country banks (banks outside of Philadelphia and Pittsburgh) with other banks are documented separately from those of financial center banks with other banks. Such a division seems natural, because the payments needs of bank customers residing outside financial centers likely were different from the needs of those residing in financial centers.

Specifically, I document three facts about the interbank relationships of country banks. First, these country banks dealt almost exclusively with banks in financial centers. Second, country banks typically had a financial relationship that involved substantial amounts of funds and was highly stable through time with a single bank in a particular financial center or, at most, a single bank in each of two financial centers. I interpret this as implying that this relationship was in the nature of a correspondent banking relationship. Third, the locations of country banks' correspondents appear to be consistent with likely trade patterns at the time, particularly railroad and canal linkages.

Because of these railroad and canal linkages, many Pennsylvania country banks had correspondent banks in Philadelphia. I document three facts about Philadelphia

[3]One exception is the clearing arrangements for banknotes in New England due to banks' acceptance of the notes of other banks. These arrangements have been the subject of extensive study and debate. Banknote-clearing in that part of the country was done by the Suffolk Banking System, which existed from 1825 to 1858. (See the discussions in Whitney 1878, Trivoli 1979, and Rolnick, Smith, and Weber 1998.) Under that system, the Suffolk Bank provided for net clearing of banknotes at par for banks that maintained a non–interest-bearing deposit of specie with it or provided for their notes to be redeemed at par at another Boston bank. The Suffolk Bank also provided overdraft facilities for banks which had deposits temporarily below the required amount. Virtually all banks in New England were part of the Suffolk Banking System from the mid-1830s until the late 1850s. Not much is known about note-clearing arrangements outside of New England.

banks. Two of these facts are about the Philadelphia correspondent banking market. First, this market was not highly concentrated, and entry was easy. And second, Philadelphia banks did not specialize by geographical area in providing correspondent banking services to country banks. My third fact about banks in Philadelphia is that, unlike country banks, Philadelphia banks did not establish correspondent-type banking relationships with banks in other financial centers. Nonetheless, they did have financial dealings with banks in those centers as well as with a large number of other banks outside of Pennsylvania, located primarily in Delaware, Maryland, New Jersey, Virginia, and the District of Columbia.

Finally, I document that Pittsburgh banks had interbank relationships that had features similar to those of both country banks and Philadelphia banks. Like country banks, Pittsburgh banks, for the most part, used correspondent banks located in both Philadelphia and New York. Like Philadelphia banks, Pittsburgh banks also dealt with a large number of other banks outside of Pennsylvania. These were located primarily in Indiana, Kentucky, Louisiana, Missouri, Ohio, and Tennessee.

These facts have several implications for how banks, especially banks during the antebellum period, should be studied. First, the facts imply that models of banking should explicitly take account of the role that banks play in facilitating interregional payments between agents. Given that neither banknotes nor deposits (typically) paid interest during this period, it is hard to explain why they were valued unless they served as media of exchange.

In many current models of banking, bank liabilities do not play any payments role. For example, in the Diamond and Dybvig (1983) type of banking models, in which banks provide agents with insurance against the possibility that they want to consume early, agents are not permitted to trade their claims to bank assets. Some exceptions are the pairwise matching and spatial separation models of banking. In these models, circulating bank liabilities permit transactions to occur that could not occur in the absence of banks. (See, for example, the pairwise matching models of Cavalcanti, Erosa, and Temzelides 1999 and Cavalcanti and Wallace 1999 and the spatial separation models of Champ, Smith, and Williamson 1996; Martin, Monnet, and Weber 2000; and Bullard and Smith 2003.)

Second, the facts in this study imply that banks endogenously establish direct asset and liability linkages with other banks in order to facilitate interregional payments. This is not a feature of current models of banking. Such linkages imply a way in which the failure of a major correspondent bank could affect economic activity outside its immediate area. The failure of a correspondent bank would disrupt the payments arrangements that its respondent banks had in place for their customers. Economic activity outside the immediate area of the major correspondent bank would be disrupted until its respondents were able to restore the necessary ties to a financial center bank.[4]

The facts in this study also suggest a puzzle in the correspondent banking market in Philadelphia. There seem to be economies of scale in the provision of correspondent banking services, implying that a single bank should have been the provider of these services, much as the Suffolk Bank was the single provider of note-clearing services for New England banks during this same period. Yet, the majority of Philadelphia banks acted as correspondents to country banks. The puzzle is why there were many correspondents instead of one. What considerations led to this outcome? I suggest here that private information may be one.

The Data

The 19th century microdata I have discovered include disaggregated balance sheet items for most Pennsylvania banks in 1851–59, but not for all items for all banks in all years. In particular, for 1851–57, "due froms" are available on a debtor-bank-by-debtor-bank basis for a reasonably large subset of banks. For a somewhat smaller subset of banks, "due tos" are also available on a creditor-bank-by-creditor-bank basis. For 1858 and 1859, debtor-bank-by-debtor-bank breakdowns of "due froms" are available for virtually every Pennsylvania bank in existence. Almost no creditor-bank-by-creditor-bank information on "due tos" exists for these years, however. (And no bank-by-bank breakdown of banks' holdings of bills of other banks is available for 1851–59.) Because the most information is available on "due froms," I concentrate this study on that balance sheet item.

Thus, the basic data set consists of the amounts due by individual debtor bank to each Pennsylvania bank in the sample for each of the years 1851–59.[5] Insolvent debtor

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[4]The legal sanction of the pyramiding of reserves under the National Banking System is generally thought to be a major contributor to the contagion of panics during this period. (See Wicker 2000.) The facts in this study imply that country banks would have held large balances with banks in financial centers even if these balances had not been counted as reserves.

[5]Bank-by-bank data on "due froms" and "due tos" are also available for 1842. I omit this observation from the sample since it appears to be an outlier compared to the 1850s.

Table 2

The Pennsylvania Data Set

Number of Pennsylvania Banks and Their Interbank Relationships, 1851–59

	Banks in Pennsylvania		Relationships per Pennsylvania Bank				Debtor Banks			
Year	With "Due From" Data	In Existence	Average	Median	Low	High	Total	In Pennsylvania	Outside of Pennsylvania	Debtor Bank States
1851	21	48	11.7	11.0	3	29	119	50	69	18
1852	25	48	13.6	12.0	3	37	149	49	100	15
1853	26	49	14.3	12.0	3	36	158	51	107	19
1854	25	49	13.3	11.0	2	44	154	55	99	19
1855	31	57	13.7	11.0	2	49	184	61	123	21
1856	36	57	14.1	11.5	4	42	227	77	150	23
1857	50	67	14.0	12.5	1	50	289	86	203	27
1858	77	78	12.4	11.0	2	41	321	102	219	24
1859	79	81	13.6	11.0	1	53	333	113	220	25
1851–59	—	—	13.4	11.0	1	53	542	144	398	28

Source: Weber 1999

banks are omitted from the data set since such observations did not involve relationships between active banks. Such banks appear in the data only for the years 1858 and 1859. The final data set consists of 1,934 observations, where an observation is an amount due from a debtor bank to a creditor bank. All data are from around the first of November. Although in some years information is available for other times of the year, I choose to use November data because November was the time in each year for which the most banks reported "due froms" on an individual debtor bank basis.[6]

The number of banks for which disaggregated information on "due froms" is available by year is given in Table 2, along with the total number of banks in existence in Pennsylvania in each year. These numbers show that for 1858 and 1859, disaggregated information on amounts due from other banks is available for all but two banks. For the other years, the information is available for approximately half of the banks in existence at that time. The existence of virtually complete information on "due froms" for 1858 and 1859 provides a benchmark against which to check how representative is the earlier information, which is based on only a sample of the bank population.

Some information on the extensiveness of interbank relationships for all Pennsylvania banks during this period is also presented in Table 2. The table shows that Pennsylvania banks had relationships with large numbers of other banks.[7] The average number of other banks from which a bank had amounts due was, roughly, between 12 and 14; the median number was approximately 11 or 12. The range was between 1 and 53. These numbers are relatively constant over time and, except for the upper end of the range of the number of debtor banks, do not appear to be affected by the fact that the early observations are for only

[6] Having data all taken from around the same time of year could cause a bias in the results if there was some seasonality to the nature or extent of interbank relationships. Another problem with the choice of November is that U.S. banks were suspended in November 1857, and that suspension could have distorted normal interbank relationships. Nonetheless, I think that the advantages of having the additional data outweigh the potential problems with the timing choice for the data.

[7] I am using the term *banks* here to include bank branches, private banks, and savings institutions. For this reason, the number of banks in Pennsylvania with which Pennsylvania banks had "due froms" could be larger than the total number of banks in existence in Pennsylvania, as can be seen in Table 2.

a subset of banks. Further, in the aggregate, the number of other banks from which Pennsylvania banks had amounts due ranged from 119 in 1851, the year with the smallest sample of banks, to 333 in 1859, the year with the largest sample of banks. Taking all nine years together, Pennsylvania banks had amounts due from 542 banks.

Given this large number of debtor banks, it is obvious that Pennsylvania banks had to have relationships with banks outside the state as well as banks within the state. Table 2 also shows that, except for 1851, Pennsylvania banks had amounts due from at least twice as many banks outside of the state as from those inside it and that this ratio of out-state banks to in-state banks grew over time. Further, these non-Pennsylvania banks were located in a large number of other states. Overall, Pennsylvania banks had amounts due from banks in 28 of the other 33 states (including the District of Columbia as a state) in the union in November 1859.

At this point, I divide the sample of banks into three classes—country banks, Philadelphia banks, and Pittsburgh banks—and provide facts about the interbank relationships of each of these classes of banks. I divide banks this way for two reasons. First, because the needs of the customers of each of these classes of banks might be different for reasons that have to do with location, the structure of interbank relationships might be different as well. Second, differences in the characteristics of these banks might have affected how they interacted with other banks. Specifically, country banks were generally small, had relationships with only a few other banks, and were creditors to other banks. Philadelphia banks were the opposite of country banks. They were generally large, had relationships with a large number of other banks, and were net debtors to other banks. Pittsburgh banks had some of the characteristics of Philadelphia banks and some of country banks. Like Philadelphia banks, Pittsburgh banks were large and had relationships with a large number of other banks. Pittsburgh banks were like country banks in that they were net creditors to other banks.

The Financial Relationships of Country Banks . . .

There are 53 country banks in the sample.[8] Most were located in what could roughly be called the southeastern quadrant of the state. In addition, several banks were located around Pittsburgh and several along the northern and northeastern border with New York.

Again, I document here three major facts about the relationship between Pennsylvania country banks and other banks. The first is that these relationships were almost exclusively with banks in nearby financial centers—Philadelphia, New York, Baltimore, or Pittsburgh.[9] The second is that these relationships involved substantial amounts of funds and were long-lasting and stable relationships with a single bank in a particular financial center—or, at most, with a single bank in each of two financial centers—suggesting that the financial center banks served as correspondents for the country banks. The third fact is that the locations of country banks' correspondents appear to be consistent with what likely were trade patterns, particularly railroad and canal linkages.

The first fact, that the financial relationships that Pennsylvania country banks had with other banks were almost exclusively with banks in financial centers, is shown in Table 3. This table shows that in every year covered by the sample, the amounts due from banks in financial centers were about 80 percent or more of country banks' total "due froms." Further, the amount due country banks from financial center banks was large both in dollar value (between \$28,000 and \$72,000 per country bank, on average) and as a percentage of total assets (between 7 and 12 percent).

Given the large number of country banks in the sample, I want to determine whether these results were common to most country banks or were skewed by the balance sheets of just a few banks. To do so, I examine amounts due from banks in one of the four financial centers as a percentage of total "due froms" for each country bank for each year. For 46 of the 53 banks in the sample, the amount due from banks in the four financial centers is almost always above 50 percent in all years with data available, and in the vast majority of cases it is 80 percent or more of the total in all of those years.[10] Thus, I conclude that the results were common to most banks, yielding my first fact.

[8] I drop three country banks—the Central Bank of Pennsylvania, the Pittston Bank, and the Bank of Phoenixville—from the sample at this point. I have information on these banks for only a single year, and I want to consider long-term types of interbank relationships. Also, the Erie City Bank in Erie was reorganized as the Bank of Commerce in 1856. The structure of its "due froms" after the reorganization was different from that before the reorganization. Thus, I treat it as if it were two banks.

[9] In terms of population in 1860, New York (813,669), Philadelphia (565,529), and Baltimore (212,418) were the first, second, and fourth largest cities in the United States. Pittsburgh (49,221) was only the seventeenth largest, but I include it as a financial center because of its size relative to surrounding towns and because of its strategic location. (These population data are from the U.S. Census Bureau and are available at http://www.census.gov/population/documentation/twps0027/tab09.txt.)

[10] The percentages by bank and by year are shown in the Appendix. The seven banks which did not exhibit this characteristic are the Jersey Shore Bank, the Lebanon

Table 3

Interbank Relationships of Pennsylvania Country Banks . . .

1851–59

	Financial Center* "Due Froms"		
	% of Country Bank		Average $ per
Year	"Due Froms"	Assets	Country Bank
1851	78.9	7.3	30,487
1852	87.0	11.5	69,009
1853	83.5	11.8	71,972
1854	81.2	11.6	68,606
1855	79.7	11.9	49,037
1856	80.3	11.8	64,458
1857	79.9	9.9	37,515
1858	81.8	11.4	36,358
1859	77.3	8.9	28,195

*The financial centers in these years were New York, Philadelphia, Baltimore, and Pittsburgh.

Source: Weber 1999

My second fact is that a country bank typically had substantial financial relationships with banks in, at most, two financial centers, that it dealt primarily with a single bank per financial center, and that this relationship was long-lasting and stable. To establish this fact, I first disaggregate the percentage of "due froms" by debtor bank for each of the 46 country banks with large amounts due from banks in financial centers identified above.[11] I find that 36 of these banks had substantial amounts due from banks in only one of the four financial centers (although for two of these country banks, the location of the related bank shifted between financial centers). Another 9 banks had substantial amounts due from banks located in two financial centers. Only one bank out of the 46 had large amounts due from banks located in three financial centers. Further, for all but one bank, the amounts due it from banks in a particular financial center were owed almost entirely by a single bank in that city.

Next I examine the duration of these relationships. For each of the 46 country banks that had substantial amounts due from a single bank in a particular financial center, I determine whether this financial center bank remained the same over the entire sample period.[12] I find that 36 of these banks had substantial amounts due from the same financial center bank over the entire sample period. Moreover, this is true for each of the country banks that had substantial amounts due from banks in more than one financial center. Additionally, the 10 banks that switched financial center banks over the sample period made only one change; they did not make multiple changes. Thus, I conclude that these substantial financial relationships between a country bank and a financial center bank were long-lasting and stable.

My interpretation of my finding that a country bank had substantial amounts due from the same bank in a given financial center over a number of years is that this indicates a correspondent banking relationship between the country bank and this particular financial center bank. That is, in exchange for a deposit, which was likely initially made in specie and appeared on the country bank's books as a "due from," the financial center correspondent agreed to provide various financial services to the respondent country bank. Further, the fact that I find this to be the case for 87 percent (46 out of 53) of the country banks in my sample indicates that this was a very general financial relationship for country banks to establish.

Such correspondent banking relationships with banks in a financial center make sense if local merchants were buying goods from wholesalers or manufacturers in the financial center because of the payments services that a correspondent bank could offer directly to the bank and could enable a bank to offer to its customers. One service would be to allow the country bank or its customers to draw upon the financial center correspondent to make payments to suppliers or to settle debts with creditors.

Another service, very likely, was to redeem the notes of the bank at par, certainly in terms of the notes of the

Bank, the Shamokin Bank, the Union Bank of Reading, the York Bank, and the York County Bank, all of which had significant amounts due from other Pennsylvania country banks, and the Bank of Middletown, which had significant amounts due from a nonbank located in Harrisburg.

Even though the percentage of amounts due from banks in financial centers is smaller than this criterion for the Bank of Crawford County and the Bank of New Castle/Lawrence County, I include them in this count. The reason is discussed at the end of this section.

[11]The Bank of New Castle/Lawrence County is omitted from this count, because it switched the number and location of its large "due froms" in each year it appeared in the sample.

[12]There is one caveat. The Bank of Pennsylvania, from which several country banks were due large amounts, closed in 1857. As a result, no country bank could have continued to have amounts due from that bank after that time. Thus, it is reasonable to consider banks that had significant amounts due from the Bank of Pennsylvania up to 1857 and then from another Philadelphia bank after that time as having amounts due from the same bank over the entire period.

financial center bank and perhaps even in terms of specie. This suggests at a minimum that notes of banks outside of Philadelphia were carried to that city and likely circulated there. Having a correspondent provide note redemption service would have promoted the circulation of a bank's notes. With a redemption agent in a financial center, the notes of a country bank would have been accepted at a smaller discount in that financial center than might have been the case otherwise. This provided a bank with another medium of exchange that it could provide to its customers, which meant that the bank could get more notes in circulation or that its notes would stay in circulation longer or both.

Additional evidence corroborates my interpretation that large amounts due from a single bank in a financial center over a long period indicate that a country bank had a correspondent banking relationship with that financial center bank. A monthly publication of the 19th century, *Van Court's Counterfeit Detector, and Bank Note List* (*Van Court's*), contains a table of "Country Bank Notes at par in Philadelphia" with a list of the Philadelphia banks at which the notes were redeemed. For the period from 1851 to 1858, the list includes 29 Pennsylvania country banks. My identification of the correspondent bank using the information from "due froms" agrees with the *Van Court's* list for 26 country banks. Three banks, the Lebanon Bank, the Stroudsburg Bank, and the Wyoming Bank at Wilkesbarre, appear on the *Van Court's* list, but I do not identify them as having a Philadelphia correspondent. The amounts due these 3 banks from the Philadelphia bank listed as redeeming their notes in Philadelphia are very small. In addition, 7 banks that I identify as having a Philadelphia correspondent do not appear on the *Van Court's* list. In all cases but one, I identify these banks as also having a correspondent banking relationship with a bank in another financial center. These banks may have arranged to have their notes redeemed at par in that other location. Or the nature of the correspondent services provided by the Philadelphia bank may not have included note redemption. Or perhaps I have misidentified them. Finally, 17 banks that I do not classify as having a Philadelphia correspondent also do not appear on the *Van Court's* list.

The *Van Court's* list also corroborates the "due from" evidence that country banks' correspondent banking relationships tended to be long term. The *Van Court's* table lists not only Pennsylvania country banks, but also some New Jersey and Delaware country banks. In total, 40 banks appear in the table for two or more years. Only 5 banks switched the Philadelphia bank at which their notes were redeemed,[13] and none of those 5 switched redemption banks more than once.

If one of the major functions of banks during the period was facilitating payments and settling debts, then the choice of correspondents should have been governed by the direction of trade. The third fact I establish is that this was in fact the case. It is reasonable to argue that trade direction during this period would have been determined to a large extent by railroad and canal linkages. I establish this third fact by showing that the location of a country bank's correspondent was highly correlated with the location of a major terminus of the railroad line running through the town in which the bank was located.

I determine the location of railroads in Pennsylvania during this period using "Barringtons New and Reliable Railroad Map and Shippers & Travellers Guide of Pennsylvania," published in 1860 (and available online at http://hdl.loc.gov/loc.gmd/g3821p.rr002950). I then plot on this map the location of each country bank, identified by the location of its correspondents, in Philadelphia and other financial centers. The result is shown in the accompanying map. With the exception of two banks in the far southwestern part of the state and banks in Erie (in the upper northwestern corner of the state), all of the banks with correspondents in Philadelphia were located on railroad lines that had Philadelphia as their terminus or on railroad lines that connected directly to these lines.[14] Two of the banks with correspondents solely in New York City were located in towns in the northwestern part of the state that had railroads that connected to the New York & Erie Rail Road, which had a terminus in New York City. The third bank, Honesdale, located in the northeast, was located on a canal (not shown on the map) that connected to Kingston, New York, on the Hudson River. The banks that had correspondents in both Philadelphia and New York were located primarily along the eastern border of the state, and the map shows that the railroads running through their towns connected to both financial centers. Further, the bank with a correspondent solely in Baltimore was located on a railroad line that connected directly to that city.

The regularity is less pronounced for country banks with correspondents in Pittsburgh, however. As the map

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[13] Again, I must note the Bank of Pennsylvania caveat.

[14] Examples are the Pennsylvania Rail Road, the Philadelphia & Reading Rail Road, and the Philadelphia, Germantown & Norristown Rail Road; examples of the latter are the Sunbury & Erie Rail Road and the Lehigh Valley Rail Road.

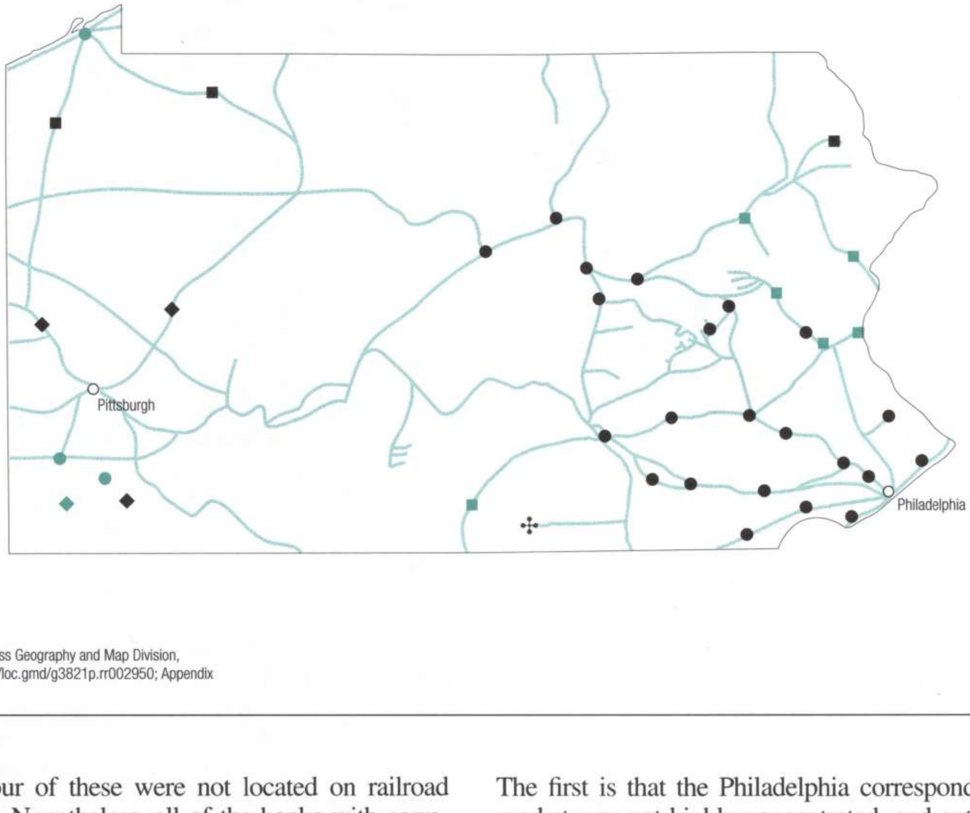
Correlation of Trade Routes and Country Bank Correspondents in 19th Century Pennsylvania

Location of Each Pennsylvania Country Bank, Identified by Location of Its Correspondents in 1851–59

Correspondent Location:

	Both
● Philadelphia	
■ New York	■ New York & Philadelphia
◆ Pittsburgh	● Philadelphia & Pittsburgh
✣ Baltimore	◆ Pittsburgh & Baltimore

——— Railroad Line



Sources: Library of Congress Geography and Map Division, http://hdl.loc.gov/loc.gmd/g3821p.rr002950; Appendix

also shows, four of these were not located on railroad lines or canals. Nonetheless, all of the banks with correspondent relationships with Pittsburgh banks were located near that financial center in the southwestern part of Pennsylvania.[15]

. . . Philadelphia Banks . . .

During the period under consideration, 20 banks existed in Philadelphia.[16] I want to establish three facts about these banks. In the preceding section, I established that Philadelphia banks served as correspondent banks for a large number of country banks. The first two facts I want to establish here concern the organization of this market. The first is that the Philadelphia correspondent banking market was not highly concentrated, and entry was easy. The second is that Philadelphia banks do not appear to

[15]The "due froms" of two banks—the Bank of Crawford County in Mercer (northeastern corner of the state) and the Erie County Bank, which became the Bank of Commerce in Erie—bear mentioning. Both of these banks had a sizable fraction of their "due froms" with banks in Wisconsin—the Bank of Eau Claire and the Bank of Montello in the case of the Bank of Crawford County and the Fox River Bank in Green Bay in the case of the Erie County Bank. I surmise, but have no evidence to support, that these banks had entered into agreements with these other banks to attempt to get each other's notes into circulation, perhaps a kind of wildcat banking scheme.

[16]One unfortunate aspect of the sample is that I have no information on the amounts due from other banks to the Bank of Pennsylvania, a large Philadelphia bank that failed in 1857.

have specialized by geographic region in their provision of correspondent banking services. My third fact about Philadelphia banks is that they themselves did not have correspondents, not even with the larger financial center of New York.

Evidence that the Philadelphia correspondent banking market was not highly concentrated comes both from the "due from" information and from the table in *Van Court's* mentioned above. The "due from" information indicates that 12 out of the 20 Philadelphia banks that existed during this period served as correspondents for at least one Pennsylvania country bank. Further, according to the "due from" information, 33 Pennsylvania country banks had correspondents in Philadelphia, and at no time did any individual Philadelphia bank serve as the correspondent for more than 7 country banks. On the *Van Court's* list of Philadelphia banks redeeming notes of country banks in Pennsylvania, New Jersey, and Delaware, 13 Philadelphia banks are listed. (The additional bank is the Southwark Bank, which only redeemed the notes of some Delaware country banks.) The largest number of country banks for which an individual Philadelphia bank redeemed notes was 13 out of 52 country banks on the list. This occurred on the list of December 1858. In all other years, the fraction of the market held by any single Philadelphia bank was smaller than 20 percent. In general, the Philadelphia banks that acted as correspondent banks tended to be the larger and more well established, in terms of length of time in business.

The evidence supports, albeit weakly, the conclusion that entry into the Philadelphia correspondent banking market was easy. Between 1855 and 1858, five new banks were established in Philadelphia. *Van Court's* list shows that two of these acted as the note redemption bank for Pennsylvania country banks and that a third acted as the note redemption bank for a New Jersey country bank. The evidence also shows that those three banks entered the market by acting as a correspondent for a newly formed country bank or for a bank that had to change correspondent due to the failure of the Bank of Pennsylvania rather than by attracting a bank away from its current correspondent.

The second fact about the Philadelphia correspondent banking market is that there was no geographical specialization in the market in the sense that no Philadelphia bank's respondents were located in the same area. To establish this, I determined the location of the respondents of the six Philadelphia banks with the largest number of correspondent banks. Although there are a couple of cases in which two correspondent banks of the same respondent were located close to each other, in general, a Philadelphia bank's respondent banks were geographically dispersed. The correspondent banks on the *Van Court's* list show the same geographical dispersion of respondents (with the exception of the Southwark Bank, mentioned above, which specialized in Delaware banks).

A possible reason for the lack of geographical specialization in this market is that country banks near each other would have been competing for business. Thus, they would not have wanted to share a correspondent which could possibly divulge their private information to a competitor.

Given that Pennsylvania country banks had correspondent relationships with banks in large financial centers, I checked whether Philadelphia banks had the same type of relationships with banks in New York, the largest financial center of the country. The third fact I establish about Philadelphia banks is that they did not. This is shown in Table 4. The percentage of "due froms" that Philadelphia banks held from New York City banks is smaller than 5 percent in all years except 1857 and 1858. The evidence is even stronger on a bank-by-bank basis. In almost all cases, individual Philadelphia banks had nothing due from banks in New York City.

A possible interpretation of this fact is that there was little trade or financial linkage between the two cities. This does not seem plausible. Further, it is refuted by some limited evidence I have on the amounts that Philadelphia banks owed to other banks (that is, "due tos" by creditor bank). For the Bank of the Northern Liberties, I have "due tos" by creditor bank for 1851 and 1853–57. This bank owed $20,000 or more to the American Exchange Bank in New York City in every year except 1853, when that bank owed it $18,000. My "due to" evidence for the Bank of Penn Township is for 1856 and 1857. In each year, this bank owed large amounts ($35,000 and $12,000 for 1856 and 1857, respectively) to the Chemical Bank in New York City. Lastly, I have "due to" evidence for the Bank of Commerce for 1857. It owed over $15,000 to the Manhattan Bank in that year.

Thus, my interpretation of the evidence is that there were financial linkages between New York and Philadelphia, but that the nature of interbank relationships between banks in the two cities was not of the correspondent-respondent type as were those between Philadelphia banks and Pennsylvania country banks. Instead, it was the case

Table 4

. . . And of Banks in Philadelphia . . .

1851–59

Year	% of Philadelphia Banks' "Due Froms" From Debtor Banks: In Philadelphia	Elsewhere in Pennsylvania & in Nearby States*	In New York City	Average per Philadelphia Bank: Number of Interbank Relationships	"Due From" $ per Debtor Bank
1851	38.6	38.2	.0	20.5	3,439
1852	54.5	22.9	.0	21.8	5,264
1853	37.6	38.5	4.5	23.0	4,677
1854	37.8	47.4	.0	23.8	3,473
1855	36.8	43.2	.3	26.0	2,924
1856	3.8	70.8	2.1	19.8	1,662
1857	22.4	38.9	16.4	21.3	2,667
1858	12.1	52.3	11.0	19.5	2,636
1859	.1	80.6	2.0	24.2	2,058

*Locations of debtor banks outside Pennsylvania include Delaware, Maryland, New Jersey, Virginia, and the District of Columbia.
Source: Weber 1999

that checks and drafts on large, well-established Philadelphia banks were acceptable as means of payment in New York City.

Although New York banks were not debtors to Philadelphia banks, this is not the case for banks in general. Table 4 also shows that Philadelphia banks had substantial amounts due from other banks. In general, Philadelphia banks had amounts due from each of a large number of banks (20 or more) mostly located in nearby states, but the amount owed per debtor bank was small, never much above $5,000 and usually on the order of $2,500 per debtor bank.[17]

. . . And Pittsburgh Banks

Finally, I consider Pittsburgh banks. There are seven in the sample, but of these, only three—the Bank of Pittsburgh, the Exchange Bank of Pittsburgh, and the Merchants & Manufacturers Bank of Pittsburgh—were in existence in 1851.[18] In terms of their relationships with other banks in 1851–59, Pittsburgh banks look like Pennsylvania country banks in their dealings with banks in financial centers and like Philadelphia banks in their dealings with other banks.

The relationships that Pittsburgh banks had with banks in financial centers involved substantial amounts of funds, both as a percentage of their total "due froms" and in absolute value. This is shown in Table 5. Except for 1857, which appears to be an anomaly, possibly due to the panic that year, and 1859, 60 percent or more of Pittsburgh banks' "due froms" were from banks in financial centers. Further, the average amount of these "due froms" was large. When the "due froms" are examined on an individual bank basis, Pittsburgh banks, at least the larger and

[17]The pattern of Philadelphia banks' relationships with other banks does not appear to have been stable over time, however. Instead, there appears to be a shift in the pattern. Between 1851 and 1855, Philadelphia banks had a substantial percentage (between 36 and 55 percent) of "due froms" with other Philadelphia banks. Beginning in 1856, however, this percentage fell and was about 23 percent or smaller after that point. This is shown in Table 4. From the table, it appears that the decrease in the amounts due from Philadelphia banks was compensated for by an increase in the amounts due from banks in neighboring states. This shift is actually more pronounced in the data on individual banks. My guess is that a change in interbank clearing among Philadelphia banks occurred at this time, but I have not yet discovered what it was. This shift cannot have been due to the establishment of a clearinghouse in Philadelphia, because that did not occur until 1858.

[18]The Mechanics Bank of Pittsburgh started business in 1855 and the Iron City Bank in 1857. The Citizens Deposit Bank of Pittsburgh, basically a savings bank, converted to the Citizens Bank of Pittsburgh in 1857. Further, I include the Allegheny Bank as a Pittsburgh bank through the entire period since it moved to Pittsburgh in 1858, after beginning business in Allegheny in 1857.

Table 5

... And in Pittsburgh

1851–59

	Pittsburgh Banks' "Due Froms" From Banks				
	In Financial Centers*		Elsewhere		
Year	% of All "Due Froms"	Average $ per Debtor Bank	Average Number of Debtor Banks	Average $ per Debtor Bank	% From Banks in Western States**
1851	61.6	97,327	22.0	2,757	27.1
1852	86.5	253,437	27.5	1,441	9.9
1853	60.0	110,849	27.5	2,688	30.9
1854	81.8	136,456	16.0	1,904	11.9
1855	78.9	130,915	11.7	2,994	18.7
1856	68.5	100,911	16.7	2,788	30.3
1857	29.6	13,880	16.3	2,025	60.9
1858	77.2	65,707	13.1	1,474	10.7
1859	48.3	12,531	10.7	1,252	42.7

*The financial centers in these years were New York, Philadelphia, Baltimore, and Pittsburgh.

***Western states* include Indiana, Kentucky, Louisiana, Missouri, Ohio, and Tennessee.

Source: Weber 1999

more established ones, had relationships that looked like correspondent banking relationships with banks in New York City and Philadelphia. That is, their relationships involved substantial amounts and were long-lasting, stable ones with a single bank in each of these cities. Moreover, with only one exception, no two Pittsburgh banks had the same correspondent bank in Philadelphia and New York City. As I hypothesized for country banks, the reason for this could be that the banks would have been competing for business; thus, they would not have wanted to share a correspondent which could possibly divulge their private information to a competitor.

In terms of their dealings with banks outside of New York City and Philadelphia, Pittsburgh banks look more like Philadelphia banks than country banks. That is, they dealt with large numbers of banks, and the amount due per debtor bank was relatively small. This is also shown in Table 5. On average, Pittsburgh banks had amounts due from between 10 and 20 banks outside of financial centers, the same order of magnitude as Philadelphia banks. However, the average of each "due from" per debtor was between only $1,200 and $3,000, about half that of Philadelphia banks. Pittsburgh banks' dealings with other banks also appear to be consistent with likely trade patterns. The Ohio and Mississippi rivers of what was then the western United States were a major trade route, and as shown in Table 5, the majority of Pittsburgh banks' dealings with banks outside financial centers was with banks located in cities and towns along this route (banks in western states).

Conclusion

This study examines the interbank relationships of Pennsylvania state banks using a previously unknown micro data set on "due froms" on an individual debtor-bank-by-debtor-bank basis over the period from 1851 to 1859. The general conclusion is that these relationships were structured to accommodate the needs of bank customers to make and receive payments and to settle debts. Customers of Pennsylvania country banks needed to make payments in financial centers and to receive payments from people and businesses in the surrounding area. Hence, country banks had a correspondent banking relationship with a bank in one or more financial centers and accepted obligations drawn on banks nearby. Philadelphia banks had both other banks and people and businesses as customers. Philadelphia banks acted as correspondents for their bank customers and accepted obligations drawn on banks in Pennsylvania and neighboring states along the major trade routes. Pittsburgh banks had customers very much like those of country banks. Thus, Pittsburgh banks had correspondent banking relationships with banks in New York City and Philadelphia. Also, like Philadelphia banks, they accepted obligations drawn on many banks along trade routes.

This study covers only one state for a period of only nine years. A natural question is, How general are the results? Unfortunately, I have not yet been able to find comparable data for other states or time periods. However, some evidence suggests that the results are general for banks throughout the country in the antebellum period. The evidence deals with two specific questions: Did country banks generally have correspondents in major financial centers? And were other correspondent banking markets not highly concentrated? My answers are yes and maybe.

Four pieces of 19th century evidence suggest that U.S. country banks generally had correspondent banking relationships with banks in financial centers. First, in some bank statements for the late 1820s and early 1830s, some banks in New Jersey list the banks from which they have amounts due. These "due froms" are generally from a single bank in New York City, and it is the same bank over time. Also, in some statements for Vermont banks, there is a special category for funds due from banks in Troy and Albany, New York. Second, the *Van Court's* list mentioned above lists country banks in Delaware and New Jersey. Third, two other 19th century periodicals include lists consistent with correspondent banking relationships. In *Day's New-York Bank Note List, Counterfeit Detector and Price Current* (*Day's*) of December 2, 1834, a "List of Country Bank Paper Redeemable in this City" includes 42 country banks in the states of New York, Connecticut, and New Jersey that had their notes redeemed in New York City. And *Thompson's Bank Note and Commercial Reporter* (*Thompson's*) of December 19, 1857, contains a list of 64 country banks in New York and New Jersey that had their notes redeemed at par in New York City. Finally, there are the words of A. B. Johnson, the president of the Ontario Branch Bank in Utica, N.Y. (Johnson 1857, p. 26; emphasis added):

> The selling of drafts on New York becomes . . . one of the regular sources of profit to country banks, as well as of convenience to men of business; *and every country bank keeps funds there,* and keeps funds in Albany, Boston, or other places, for the purpose of selling drafts thereon at a premium, when the business of its vicinity makes drafts on such places desirable.

With regard to other correspondent banking markets, there is some evidence that the results may be general. In *Day's,* 13 New York City banks are listed as redemption agents for at least one country bank, and no single bank redeemed the notes of more than 9 of the 42 banks listed. In *Thompson's,* 23 New York City banks are listed as redemption agents for at least one country bank, and no single bank redeemed the notes of more than 7 of the 64 banks listed. However, nearly all note-clearing in New England was done by the Suffolk Bank in Boston. While this might suggest that the correspondent banking market in Boston was concentrated, it could also be the case that New England country banks used several Boston correspondents, all of which cleared notes through Suffolk. Determining which interpretation is correct is worth further research.

An anomaly in the data also appears worthy of further research. In the panic year 1857, Pittsburgh banks markedly decreased the amounts due from Philadelphia and New York City banks, in both percentage and dollar terms. The contrast of 1857 with other years stands out especially in the data for the Bank of Pittsburgh and the Exchange Bank of Pittsburgh. In 1856 and 1858, the Bank of Pittsburgh had $129,882.47 and $155,547.86, respectively, due from the Bank of Commerce in New York City. In 1857, it had only $2,355.96 due from that bank. In 1856 and 1858, the Exchange Bank of Pittsburgh had $42,083.03 and $50,356.03, respectively, due from the Bank of America in New York City. In 1857, it had nothing due from that bank. For the Exchange Bank of Pittsburgh, the same pattern holds for the amounts it had due from the Western Bank of Philadelphia. As yet, I have no explanation for this behavior during a panic period. However, neither the "due froms" for Philadelphia banks nor those for Pennsylvania country banks exhibit such behavior.

Appendix
Amounts Due Pennsylvania Country Banks From Financial Center Banks

Percentages of Each Pennsylvania Country Bank's Total "Due Froms" That Are From Banks in New York, Philadelphia, Baltimore, or Pittsburgh, 1851–59

	% of "Due Froms" From Financial Center Banks in Each Year									
Pennsylvania Country Bank	1851	1852	1853	1854	1855	1856	1857	1858	1859	Location of Correspondent Bank
Allentown Bank	—	—	—	—	*	81.7	49.5	80.1	39.7	Philadelphia, New York
Anthracite Bank of Tamaqua	—	—	—	—	94.1	90.4	65.3	83.6	90.5	Philadelphia
Bank of Beaver County	—	—	—	—	—	—	—	100.0	100.0	Pittsburgh
Bank of Catasauqua	—	—	—	—	—	—	40.6	96.5	91.9	Philadelphia
Bank of Chambersburg	53.8	98.7	97.1	88.2	94.1	90.0	93.3	84.8	75.8	Philadelphia, New York, Baltimore
Bank of Chester County	*	*	*	*	*	*	*	82.3	59.3	Philadelphia
Bank of Chester Valley	—	—	—	—	—	—	48.1	90.6	90.5	Philadelphia
Bank of Crawford County	—	—	—	—	—	—	—	49.4	36.4	New York
Bank of Danville	88.8	95.6	85.7	92.6	62.1	87.0	87.5	78.0	68.1	Philadelphia
Bank of Delaware County	98.7	99.1	99.8	88.7	100.0	100.0	100.0	96.0	91.4	Philadelphia
Bank of Fayette County	—	—	—	—	—	—	—	73.1	91.0	Pittsburgh
Bank of Germantown	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Philadelphia
Bank of Gettysburg	*	*	*	*	*	70.3	88.8	96.7	81.1	Baltimore
Bank of New Castle/Lawrence County	—	—	—	—	79.2	*	*	58.5	63.4	†
Bank of Middletown	*	*	*	*	*	*	*	19.2	33.0	**
Bank of Montgomery County	84.1	100.0	68.1	80.1	97.4	88.7	89.1	98.3	92.2	Philadelphia
Bank of Northumberland	*	*	*	*	*	88.1	82.3	68.4	78.0	Philadelphia
Bank of Pottstown	—	—	—	—	—	—	99.6	93.5	83.2	Philadelphia
Columbia Bank (& Bridge Co.)	79.5	*	*	*	*	*	*	96.5	94.2	Philadelphia
Doylestown Bank of Bucks County	*	*	*	*	*	*	42.9	81.3	63.3	Philadelphia
Easton Bank	*	14.4	95.7	81.8	63.5	54.1	83.7	81.9	57.6	Philadelphia, New York
Erie City Bank	*	*	86.8	93.1	68.2	45.4	—	—	—	New York
Bank of Commerce, Erie	—	—	—	—	—	—	—	72.8	73.4	Philadelphia, New York
Farmers' & Dovers' Bank of Waynesburg	8.7	*	*	*	*	*	*	70.5	77.9	Philadelphia, Baltimore
Farmers' & Mechanics' Bank of Easton	*	84.5	81.0	90.1	80.4	26.8	63.1	63.6	37.7	Philadelphia, New York
Farmers' Bank of Bucks County	44.3	86.0	88.5	83.1	71.4	95.9	95.8	99.2	83.7	Philadelphia
Farmers' Bank of Lancaster	*	79.7	90.5	90.4	94.2	70.7	93.2	87.7	94.1	Philadelphia
Farmers' Bank of Reading	*	*	*	*	*	*	*	69.6	55.8	Philadelphia
Farmers' Bank of Schuylkill County	*	*	*	*	*	*	*	88.9	82.4	Philadelphia
Franklin Bank of Washington	71.9	80.4	52.8	72.4	99.8	98.5	82.7	97.9	99.7	Philadelphia, Pittsburgh
Harrisburg Bank	*	89.0	82.0	65.8	60.4	76.1	86.0	86.1	70.7	Philadelphia
Honesdale Bank	99.2	100.0	99.3	100.0	99.6	98.7	100.0	100.0	100.0	New York
Jersey Shore Bank	—	—	—	—	—	—	—	68.6	26.0	**
Kittanning Bank	—	—	—	—	—	—	100.0	100.0	100.0	Pittsburgh
Lancaster Trading Co./Lancaster Bank	4.3	86.1	94.4	*	*	—	—	—	—	Philadelphia

*Bank existed during this year, but no report is available.

**Bank had such a small % of "due froms" from financial center banks that it probably did not have a correspondent relationship.

† Bank shifted financial centers.

Source: Weber 1999

Pennsylvania Country Bank	% of "Due Froms" From Financial Center Banks in Each Year									Location of Correspondent Bank
	1851	1852	1853	1854	1855	1856	1857	1858	1859	
Lancaster County Bank	39.0	47.4	91.8	87.9	89.2	66.2	86.9	69.8	69.0	Philadelphia
Lebanon Bank	45.0	2.4	57.7	68.4	*	*	*	57.9	2.0	Philadelphia
Lebanon Valley Bank	—	—	—	—	—	—	—	62.9	53.0	Philadelphia
Lewisburg Bank	—	—	—	—	—	—	27.3	89.4	73.8	Philadelphia
Lock Haven Bank	—	—	—	—	94.2	83.4	88.3	97.2	93.1	Philadelphia
Mauch Chunk Bank	—	—	—	—	*	*	*	77.7	89.0	Philadelphia, New York
Miners' Bank of Pottsville	88.6	97.2	97.1	91.8	94.4	95.0	89.2	91.6	65.5	Philadelphia
Monongahela Bank of Brownsville	33.8	80.1	75.3	77.6	87.1	87.5	63.1	85.0	85.6	Philadelphia, Pittsburgh
Octoraro Bank	—	—	—	—	—	—	—	99.3	91.5	Philadelphia
Shamokin Bank	—	—	—	—	—	—	—	70.8	.0	**
Stroudsburg Bank	—	—	—	—	—	—	100.0	100.0	98.6	Philadelphia, New York
Tioga County Bank	—	—	—	—	—	—	98.1	98.0	100.0	†
Union Bank of Reading	—	—	—	—	—	—	—	88.0	20.9	**
Warren County Bank	—	—	—	—	94.8	89.0	90.4	83.0	58.4	New York
West Branch Bank	*	*	*	*	*	*	*	63.0	85.4	Philadelphia
Wyoming Bank at Wilkesbarre	94.7	93.1	65.2	85.3	40.4	56.1	75.4	97.9	97.6	Philadelphia, New York
York Bank	*	72.5	28.3	13.2	39.0	62.6	55.0	27.0	26.6	**
York County Bank	*	*	*	*	*	*	53.1	28.1	3.3	**

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