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Insights from Newly Digitized Banking Data, 1867-1904

Stephan Luck and Sergio Correia

Resources.		Liabilities.	
United States currency in circulation.....	\$9,242,168.89	Capital stock paid in	\$1,000,000.00
State deposits.....	1,016.65	Surplus funds.....	1,000,000.00
Loans and mortgages.....	50,000.00	Other undivided profits.....	562,364.12
Reserve agents.....		National bank notes outstanding.....	
Notes and fixtures.....	400,000.00	State bank notes outstanding.....	
Land and taxes paid.....	200,000.00	Dividends unpaid.....	1,000.00
	50,803.80	Individual deposits.....	24,815,562.40
Cash items.....	235,830.10	United States deposits.....	
Working notes.....	5,160,289.74	Deposits of U. S. disbursement officers.....	
Notes.....	69,548.00	Due to other national banks.....	1,484,411.28
Due to.....	100.38	Due to State banks and bankers.....	35,052.60
	1,353,740.00	Notes and bills re-discounted.....	
Of deposit.....	35,000.00	Bills payable.....	
Reservor.....		Total.....	18,898,390.28
	18,898,390.28		

[Call reports](#)—regulatory filings in which commercial banks report their assets, liabilities, income, and other information—are one of the most-used data sources in banking and finance. Though call reports were collected as far back as 1867, the underlying data are only easily accessible for the recent past: the mid-1980s onward in the case of the [FDIC's FFIEC call reports](#). To help researchers look farther back in time, we've begun creating a complete digital record of this "missing" call report data; this data release covers 1867 through 1904, the bulk of the National Banking Era. Here, we describe the digitization process and highlight some of the interesting features of that era from a research perspective.

Source Material

The original source of call report data is the Office of the Comptroller of the Currency (OCC), which published national banks' balance sheets in its Annual Report to Congress (see the exhibit below for an example of such a balance sheet).

While not as detailed as contemporary regulatory filings such as the FDIC's call report or the Federal Reserve's Y-9C, the OCC's call report is surprisingly granular. For instance, on the asset side, the call report asked banks to report how many outstanding loans and discounts were made, how much cash and governments bonds they are holding, and how much credit is provided to other banks on the interbank market. On the liability side, the call report documents how much equity shareholders have invested in the bank, how much deposit funding the bank has raised, and the amount of bank notes issued by the bank. The OCC's call report also documented each bank's location, president, and cashier and assigned a unique charter number to each bank, enabling us to construct a panel.

The Balance Sheet of National City Bank

REPORT OF THE COMPTROLLER OF THE CURRENCY. 251

NEW YORK.

National City Bank, New York.

MOSES TAYLOR, *President.*

No. 1461.

DAVID PALMER, *Cashier.*

Resources.		Liabilities.	
Loans and discounts	\$9,242,168 99	Capital stock paid in	\$1,000,000 00
Overdrafts	1,016 05	Surplus fund	1,000,000 00
U. S. bonds to secure circulation	50,000 00	Other undivided profits	562,364 18
U. S. bonds to secure deposits		National bank notes outstanding	
U. S. bonds on hand		State bank notes outstanding	
Other stocks, bonds, and mortgages		Dividends unpaid	1,005 00
Due from approved reserve agents		Individual deposits	14,815,557 10
Due from other banks and bankers	490,787 01	United States deposits	
Real estate, furniture, and fixtures	203,000 00	Deposits of U. S. disbursing officers	
Current expenses and taxes paid	56,803 99	Due to other national banks	1,484,411 98
Premiums paid		Due to State banks and bankers	35,052 00
Checks and other cash items	235,936 10	Notes and bills re-discounted	
Exchanges for clearing-house	5,160,289 74	Bills payable	
Bills of other banks	69,548 00		
Fractional currency	100 38		
Specie	3,353,740 00		
Legal-tender notes	35,000 00		
U. S. certificates of deposit			
Due from U. S. Treasurer			
Total	18,898,390 26	Total	18,898,390 26

Source: Office of the Comptroller of the Currency, Annual Report to Congress (1880).

Digitization Process

We compiled the data by combining optical character recognition (OCR) techniques with modern layout separation techniques to identify the elements of a table. (See our [research paper](#) for more on how to collect historical data using OCR.) Ultimately, we created a data set containing more than 110,000 annual national bank balance sheets for more than 7,000 unique national banks, covering the years 1867 to 1904. The quality of the data is quite high. The accuracy can be tested by checking whether the sum of all assets is equal to the sum of all liabilities, which occurs in more than 99 percent of all bank-year observations.

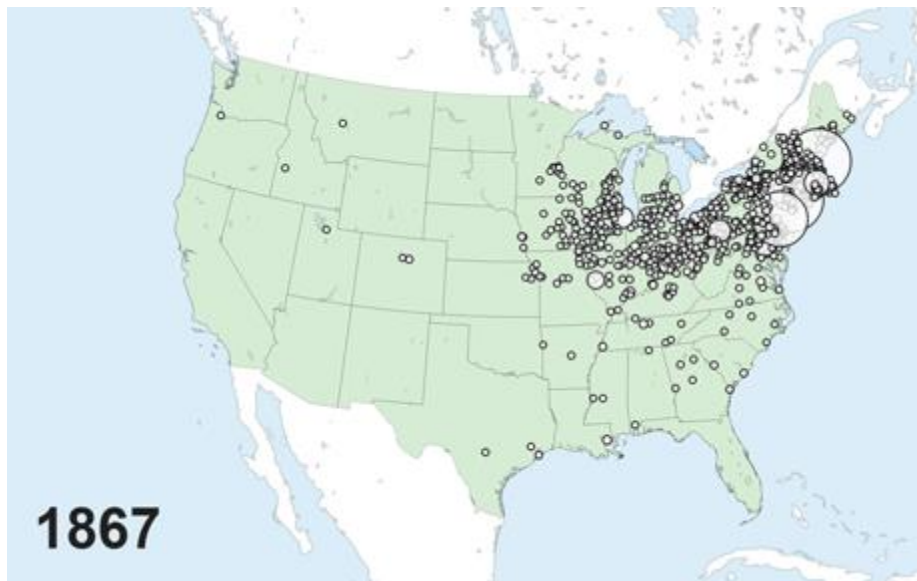
In addition, we augmented the data set with several additional variables. To track banks across time, we created a unique bank identifier containing each bank's original charter number, as charter numbers sometimes changed on charter renewal. We documented when a bank goes out of business using additional information from the OCC, and distinguished between types of closures, such as receiverships and voluntarily liquidations. Further, we collected information on the location of each bank, recording the relevant city, state, and geographic coordinates.

What Can We Learn from the National Banking Era?

How can this historical data help researchers expand their understanding of banking and financial intermediation?

The National Banking Era, which spans the period between the Civil War and the founding of the Federal Reserve System (roughly 1863 to 1913), is an exciting laboratory for empirical banking research. The end of the 19th century was an important phase in world history, with globalization, the modern corporation, and economic growth all taking off at the same time. This was also a period of fast growth and rapid westward expansion for the U.S. banking system, as shown in the animated map below.

Growth of National Banks across Space and Time



Source: Office of the Comptroller of the Currency, Annual Report to Congress (1867-1904).

Unlike modern banks, national banks were able to issue bank notes, but they otherwise operated much as banks do today, taking deposits and making loans. The regulatory regime of the period, however, was decidedly different. For instance, banks' geographic footprint was heavily restricted, mostly confining them to the local market, and bank capital requirements posed a barrier to entry for potential competitors rather than a restriction on leverage for incumbent firms. [In previous research](#), we exploited both of these regulatory peculiarities to shed light on classic questions regarding the effects of banking competition.

Sharing the Data

This post marks the public release of [this data set](#). Our current digitization starts in 1867, the first year in which full balance sheets were included in the Report to Congress, and stops in 1904, the last year before a change in the format of the report.

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