## Banking Panics, the 'Derangement' of the Domestic Exchanges, and the Origins of Central Banking in the United States, 1893 to 1914

John A. James Department of Economics University of Virginia James McAndrews Federal Reserve Bank of New York David F. Weiman Department of Economics Barnard College

The plight of the Eurozone throws into sharp relief the unusual durability of the U.S. common currency region prior to the founding of the Federal Reserve and the New Deal Fiscal Revolution. Established under the National Banking Acts (1863 to 1865), this common currency union weathered frequent minor panics as well as recurrent severe financial crises in 1873, 1884, 1893, and 1907. In light of this record of macroeconomic instability, few contemporary economic historians have even asked why peripheral regions in the postbellum U.S. did not clamor for monetary secession.

A closer inspection of the 1893 and 1907 panics tells a rather different story, revealing the slim bases of the U.S. monetary union under the National Banking System. During these two episodes (and the 1873 panic), banks throughout the country, but notably in New York and regional money centers, "suspended payments" partially or completely. In other words, they refused to redeem their convertible deposit liabilities on demand for the face value equivalent of good funds, whether legal tender money or its equivalent in national bank notes. Their decisions, often under the auspices of the local clearinghouse, effectively severed the 1-to-1 peg between bank deposits and the U.S. monetary standard, as evidenced by the emergence of a currency premium—a floating exchange rate between bank deposits and good funds—in regional money centers.

Local clearinghouses often took a further step towards monetary autonomy and created a local common currency, the clearing-house loan certificate. Initially designed to serve as a truly "inside money," loan certificates were issued in large denominations to member banks and only circulated within the clearing-house for the settlement of interbank accounts. In the 1907 panic, however, clearing-houses across the country issued small denomination loan certificates, which member banks could pay out to their deposit customers. While of questionable legality, these credit moneys, both large and small, relieved local monetary pressures such as the cash demands for payrolls. They could not however substitute for a national monetary standard to mediate interregional trade. Consequently, these patently local solutions to the banking crises had significant real consequences, especially as banks hoarded balances of national money to satisfy their business customers' interregional transactions demands.

The widespread disintegration of the U.S. monetary system in the wake of the 1907, but not the 1893, panic is rather surprising. By a number of measures, the Great Depression of the 1890s was more severe than the sharp but brief recession of 1907-08. The 1907 was more disruptive monetarily, because after 1893 the nation's deposit banks became more tightly integrated into a hierarchical payments network ultimately centered on New York. Consistent with contemporary criticisms of a "pyramid" scheme, country banks held increasing shares of their reserves with a regional correspondent, which in turn reallocated their reserves from vault cash to bankers' balances in New York. The greater spatial concentration of reserves in money centers enhanced the efficiency of the interbank payments system during normal times, as well as its systemic

vulnerabilities during financial crises in money centers, notably New York. Effectively institutionalizing the local clearing-house solution, the Aldrich-Vreeland Act could not remedy these design flaws, as evidenced by a more nuanced reading of the Treasury Secretary McAdoo's intervention on the eve of World War I.

We analyze the impact of banking crises in New York on the national payments system through the lens of the domestic exchange market, where banks in regional centers bought and sold New York funds. Daily data from major regional financial centers allow us to chart the effects of the panic and subsequent cash restriction (in New York) across cities. In turn we show that the degree of disruption to domestic exchange markets in regional financial centers over this period was increasingly a function of their place or centrality in intercity correspondent networks rather than local conditions. Banks in reserve cities with larger holdings of bankers' balances from country banks relative to individual deposits experienced greater strains in 1907. Banks reliance on local versus correspondent deposits also systematically influenced the extent and composition of clearinghouses' monetary interventions. As further corroborating evidence we reexamine the averted panic of 1914 in which McAdoo's preemptive monetary policy, more akin to Federal Reserve open market operations than to strict application of Aldrich-Vreeland, flooded New York banks with liquidity and prevented a reoccurrence of the old pattern.