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## Commentary

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England's stock market crash and banking panic of 1825 provide a fascinating story that is considerably relevant to today's policy issues. The story has resonance for three reasons: (1) The crisis was probably the first example of an emerging market-induced financial crisis. (2) It offers an early lesson on the importance of timely lender-of-last-resort intervention by the monetary authorities. (3) It provides valuable insights on the role of information in credit markets, as Larry Neal emphasizes in his paper.

### WHAT HAPPENED IN 1815?

At the end of the Napoleonic wars in 1815, the Bank of England began following the deflationary policies required to restore specie convertibility at the pre-1797 suspension parity, leading to successful resumption in 1821. Following resumption, the British economy began a period of rapid expansion, characterized by both an export boom and an investment boom. The opening up of the newly independent states of Latin America stimulated a boom in exports. At the same time, important infrastructure projects (e.g., gas lighting, canals, and railroads) stimulated investment expenditures. The sale of stocks to finance these ventures, in addition to gold and silver mines (some real, some fictitious) in Latin America, and sovereign government debt (initially European and later Latin American) propelled a stock market boom. The Bank of England's easy monetary policy fueled the stock market boom and economic expansion. The Bank was also flush with high gold reserves amassed in the drive to resumption. These aided the British government in servicing and converting some

of its debt to lower yield issues. The increase in the Bank of England notes and deposits in turn served to increase the British monetary base. The country banks then freely issued notes to finance both economic activity and stock market speculation. The stock market boom became a bubble as investors bid up the prices of real and imaginary stocks (e.g., bonds from the imaginary South American Republic of Poyais). Asymmetric information led to adverse selection, and legitimate firms found it more difficult to obtain finance, except at premium rates. Banks infected with the euphoria let down their guard and made risky loans.

As always happens, the bubble burst. It is unclear what caused the April 1825 collapse, but the Bank of England had in March sold a very large block of Exchequer bills, presumably to "contract the circulation" (Clapham 1945). The Bank in succeeding months continued to follow a cautious policy. The collapse of stock prices triggered commercial failures. By autumn (a season of normal financial stress), a number of country banks also failed. When several important London banks failed (e.g., Henry Thornton's bank), a full-fledged panic ensued in early December. The Bank of England then reversed its discount policy and began acting as a lender of last resort. The Bank was saved at the last minute from suspension of convertibility by gold flows from France. However, although the Bank's discount policies were very liberal, it acted too late to prevent massive bank failures, contraction of loans, and a serious recession in early 1826. The English crisis then spread to Europe and also to Latin America, prompting a general default on its sovereign debt.

In the aftermath of the crisis, blame was placed on the country banks for fueling the stock market boom and on the Bank of England for not policing them. Neal views several institutional changes that began in 1826 (e.g., creating branches

for the Bank of England, permitting joint stock banks of issue beyond a 65-mile radius of London, and prohibiting small-denomination country banknotes) as setting the stage for a new financial order in the nineteenth century.

Neal's presentation of the tale, which differs somewhat from my rendition, is convincing, but parts of his story are not clear. Neal views the deflation of 1815-20 as unnecessary. To back up this view, he would need to make the type of purchasing power parity calculations that Officer (1981) did for the United States after the Civil War. Also, it is not clear from Neal's narrative exactly what triggered the crash. Neal's rendition of the story is similar to the Minsky (1977) and Kindleberger (1978) version or the Diamond and Dybvig (1983) view, which asserts that no identifiable trigger exists, and the crash may have been a random event such as a sunspot. It is also not clear why Neal devotes several pages to co-integration tests on the yields of the three funds traded on the London market. Does the break in co-integration shown between consols, East Indian, and Bank of England stock tell us that the environment for private sector enterprises has become more risky? Finally, his emphasis on the legislation that followed the crisis may be only a sideshow. I believe 1825 was just a preview for a number of other crises to occur in the next 40 years.

### NEAL'S LIST OF "USUAL SUSPECTS"

Neal discusses at great length the list of "usual suspects" as possible causes of the crisis: Latin American debt issues, country banknote issues, and the Bank of England. He dismisses the first two as causal factors and attaches more weight to the third factor.

Speculation in Latin American debt cannot explain the collapse of the stock market bubble because, Neal argues, "the sums risked were relatively small and the risks generally appreciated even by an inexperienced British public." Neal bases this conclusion on the experience of the

Rothchilds and the Barings. However, if these key players were not unduly exposed, surely others were because they bought the stock on the expectation of further appreciation and had less accurate information than did the Barings and Rothchilds. The highly speculative Latin mining stocks and sovereign bonds made up a very significant fraction of the shares issued.

The country banks also could not be blamed, Neal argues. Data from two failed banks show that note holders were willing to hold onto their notes for long periods and were eventually largely compensated for their losses. These facts suggest that country banks were victims of circumstances and not contributors to the crisis. I agree with Neal when he proposes that the country banks could not have issued their notes in a vacuum, and that the key determinant of the growth of their liabilities was rapid expansion of the monetary base. But the country banks were surely an exacerbating factor because of their inherent weak structure, which in turn was related to the regulations that governed their operations. The prohibition on joint stock banking outside of London, the limit of six on the number of bank partners, and their unit banking character constrained the size of country banks. Also, their ability to diversify risk made country banks prone to easy failure in the face of big shocks.

Neal is correct that the Bank of England is the main culprit. Expansionary monetary policy fueled the boom, tight money ended it, and the Bank acted as lender of last resort too late to prevent massive bank failures from creating real economic distress.

The value added of this paper is not so much the retelling of the sordid (thrilling) tale but the author's emphasis on the role of information at every stage of the cycle. The lending boom in the upswing was rife with poor information, adverse selection, and careless surveillance, as is the case today in Latin America and Southeast Asia. More information on why some country banks were sound and others were not would be of value, as would information

on the role of the Bank of England in surveillance and supervision.

## TWO RELATED THEMES

I conclude my comments by focusing on two themes that underlie the paper but that Neal does not analyze: the macroeconomic background and generality of the crisis, and the lessons for the lender-of-last-resort function.

### *The Macroeconomic Background*

The 1825 crisis is of more than antiquarian interest because it was a global event, and because it contained many elements of the crises that occurred during the subsequent century.

The crisis contained three unifying forces that occurred in most of the historic crises: (1) monetary shocks; (2) price-level variability and financial distress; (3) real shocks.

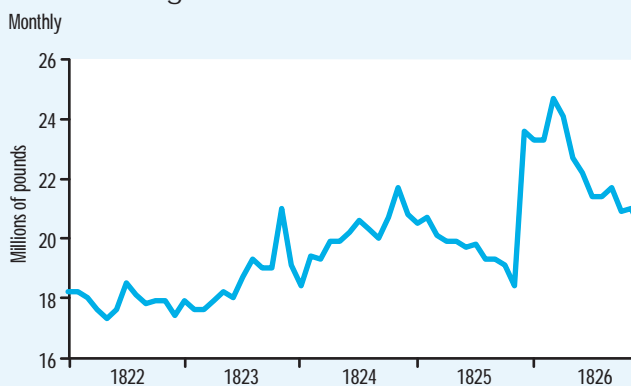
**Money.** Expansionary monetary policy fueled the boom and created the 1825 crash, as shown in Figure 1. As Neal argues, the Bank followed a liberal policy to accommodate the government's fiscal demands. The expansion in the monetary base (notes shown in Figure 1 and deposits in the Bank shown in Figure 2) created the conditions that allowed country banks to expand their note issues.

At the same time, expansionary monetary policy in the gold standard environment was creating the seeds of its own reversal, as rising domestic prices (Figure 3) led to a trade deficit (Figure 4); an external drain of specie, as manifest in a decline in the Bank's bullion reserves (Figure 5); and a decline in the price of Paris Bills on London (Figure 6). The Bank began tightening early in 1825 (Figure 1), and the stock market (including mining stocks) peaked in January (Figure 7). All other stocks peaked in April.

**Price-Level Variability and Financial Distress.** Price-level instability is closely related to banking instability. According to one hypothesis (Schwartz 1988), rising prices may contribute to banking instability by increasing misperceptions about current and prospective real returns and possibly by creating an environment in which misman-

Figure 1

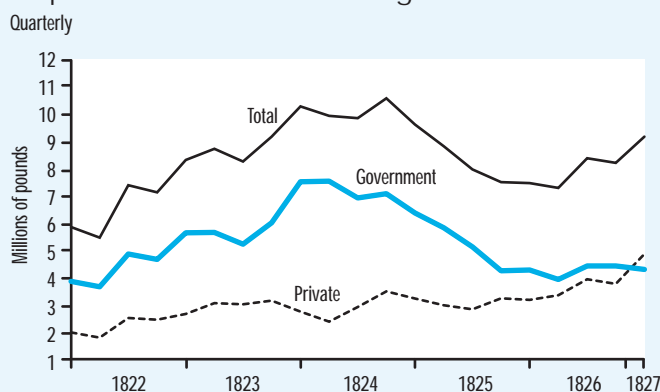
### Bank of England Notes in Circulation



SOURCE: Gayer, Rostow, and Schwartz (1953), Table 135.

Figure 2

### Deposits in the Bank of England



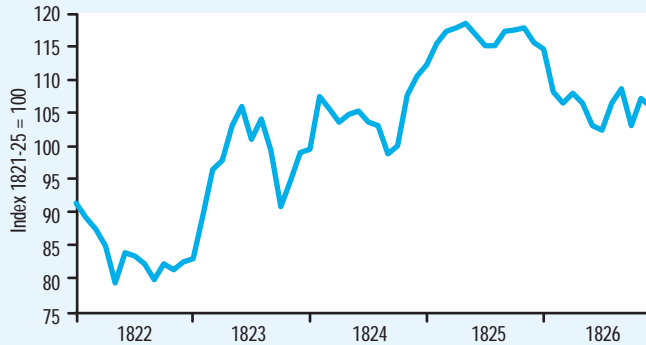
SOURCE: Gayer, Rostow, and Schwartz (1953), Table 146.

agement and fraud are more likely to persist. Unexpected disinflation promotes financial instability by adversely affecting financial intermediaries' balance sheets. As a result of unanticipated disinflation, the real value of nominal debt rises and, without complete contracts, can lead to an increase in bankruptcy and banking distress. Figure 8 shows the U.K. annual inflation rate from 1821 to 1991. As can be seen by the arrows in Figure 8, virtually all banking panics occurred at inflection points of the inflation rate. The first arrow points to the crisis of 1825. The panics ceased after 1866 when the Bank of England learned to act as a proper lender of last resort.

Figure 3

## Wholesale Price Index

Domestic commodities, monthly



SOURCE: Gayer, Rostow, and Schwartz (1953), Table 40.

Figure 4

## The Trade Balance

Annual

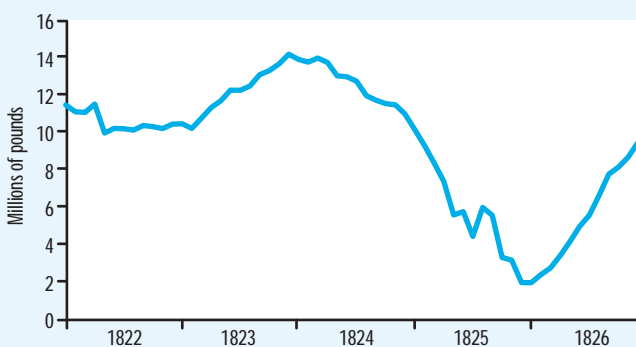


SOURCE: Gayer, Rostow, and Schwartz (1953), Table 114.

Figure 5

## Bullion in the Bank of England

Monthly



SOURCE: Gayer, Rostow, and Schwartz (1953), Table 154.

**Real Shocks.** The background to the crisis of 1825 was not strictly monetary, however. Big real shocks or displacements, as Irving Fisher (1932) termed them, also occurred. These shocks included the massive investment in infrastructure, consolidation of the industrial revolution in England after the upheavals of the Napoleonic wars, opening up of trade, and foreign investment (first with the continent of Europe and then with the newly emerging countries of Latin America). Gayer, Rostow, and Schwartz (1953, Chapter IV) describe some of the details of the investment boom. These investments in turn required finance and monetary accommodation.

### *The Role of the Bank of England as Lender of Last Resort*

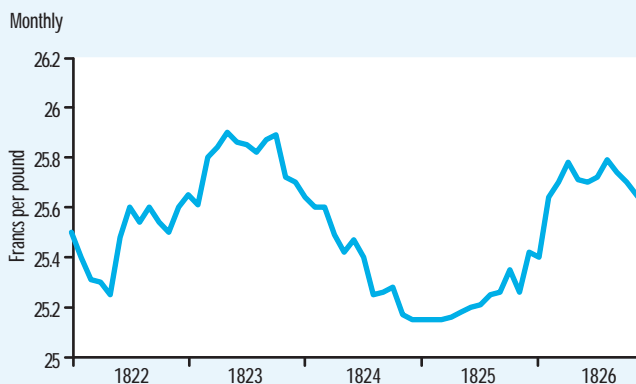
The Bank of England in 1825 was a public bank, not a central bank. The Bank had three loyalties: its shareholders, the British government, and its correspondent commercial bankers. In the first half of the nineteenth century, the Bank of England was learning to balance these three roles. During the suspension period, the Bank made considerable profits from its issue of inconvertible banknotes. With resumption, profits declined; hence there was less incentive to discount freely on unprofitable paper. Indeed, the Bank had not yet adopted Bagehot's (1873) "Responsibility Doctrine" of acting in the public interest first to allay a banking panic or to prevent a stock market crash from spilling over into the monetary system. Henry Thornton basically laid down all the strictures for proper lender-of-last-resort action in 1802 (Humphrey 1989), but the Bank of England did not really "get it" until after the Overend Gurney crisis of 1866 (Schwartz 1986). Also, by following easy money to aid the government in its debt service and loan conversions, the Bank had not yet established the independence needed to follow a stable monetary policy.

Thus, 1825 was just one of a series of crises—1837, 1847, 1857, and 1866—in which the Bank of England did not act properly as a lender of last resort. As Neal tells it,

the Bank's reluctance to lend early in 1825—when signs of stress were looming, merchants in the Latin American trade were failing, and the Bank raised the discount rate and cut back on advances later in the summer—likely exacerbated the crisis. Therefore, when the Bank finally did act in December, it was much too late to prevent a large number of banks from failing. True, the Bank did not have to suspend specie payments. Gold from the Banque de France saved the Bank of England. But had the Bank of England lent earlier and prevented the bank failures, it would also have prevented a serious recession. The Bank would likely have received permission from the government to temporarily suspend payments. The Bank Act of 1844 later institutionalized the practice of the Bank's requesting a letter from the Treasury granting permission to suspend payments, which the Bank did in later crises, e.g., 1847 (Dornbusch and Frenkel 1984). The lesson that central banks have learned since Bagehot (1873) is to lend freely, in a timely manner, and on the basis of any acceptable collateral, but to lend at a penalty rate. The Bank apparently followed the penalty rate part of the rule (seen in a rise from 4 percent to 5 percent in December 1825) but did not lend freely nor in a timely manner. Today, most central banks have learned Bagehot's rule, and they do not make the mistake the Bank of England made in 1825 (e.g., the Federal Reserve's response to the 1987 stock market crash). The problem today is that many central banks have learned the lesson too well and now follow the "too big to fail" doctrine, which leads to new problems under the rubric of moral hazard. For emerging countries today, however, the 1825 crisis still has resonance. The problems of adverse selection during lending booms echo the story Neal tells. Structural problems in the banking system, poor oversight and regulation (papered over by rising prices), and profits taken during the boom are revealed when the crash occurs.

Figure 6

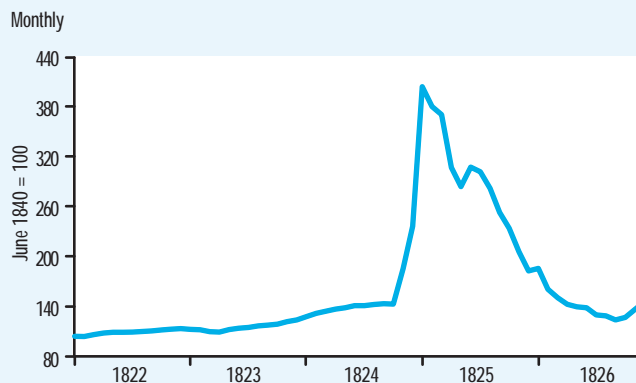
### Price of Paris Bills on London



SOURCE: Gayer, Rostow, and Schwartz (1953), Table 194.

Figure 7

### Total Index of Share Prices

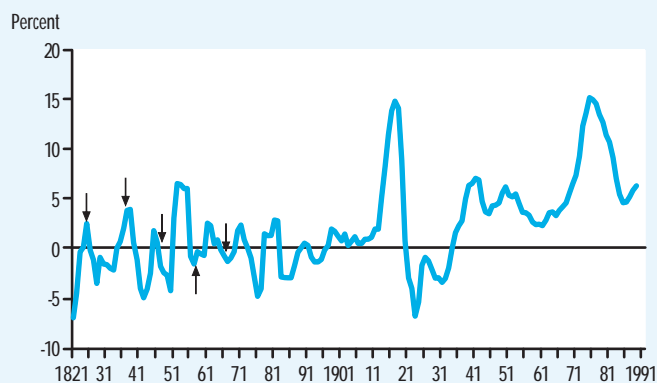


SOURCE: Gayer, Rostow, and Schwartz (1953), Table 9.

Figure 8

### U.K. Inflation Rate

Annual. Five-year-centered moving average of year-to-year change in log price index.



SOURCES: For 1821-79: Mitchell (1962); for 1880-1990: National Bureau of Economic Research.

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