

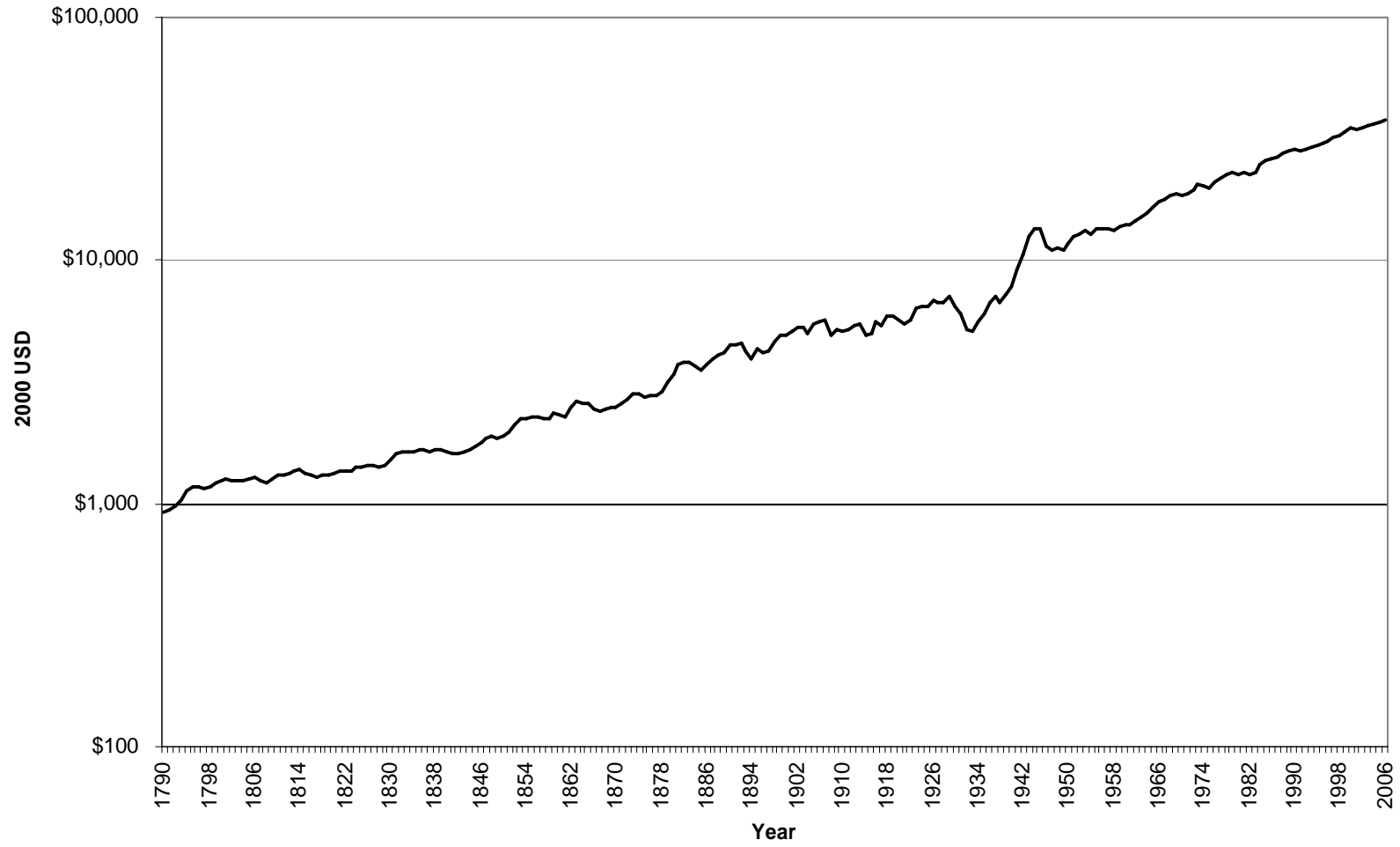
Lessons from five US crises:
1792, 1837-1842, 1873, 1907, and 1930-1933

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Real GDP Per Capita in the United States, 1790-2006



Kindleberger model

Stages

- Displacement
- Boom
- Speculation
- Mania

- Distress
- Revulsion
- Panic/crash

Underlying process

Money chases assets

Assets chases money

- » Depression?
- » Lender of last resort?

1792: Alexander Hamilton saves his financial revolution

- US is in midst of a financial revolution, 1789-92, planned earlier and now executed by Alexander Hamilton, a founding father of the USA and the first Secretary of the Treasury.
- Hamilton stabilizes public finances, restructures the US national debt, founds a central bank, and defines the convertible US dollar.
- US States respond to the plan by chartering more banks and more business corporations.
- Private actors respond to the plan by asking the States for banking and corporate charters, and by creating securities markets and stock exchanges (e.g. NYSE, 1792) to give liquidity to all the new securities that appeared in 1790-1792.
- Markets crash in the panic of March 1792.

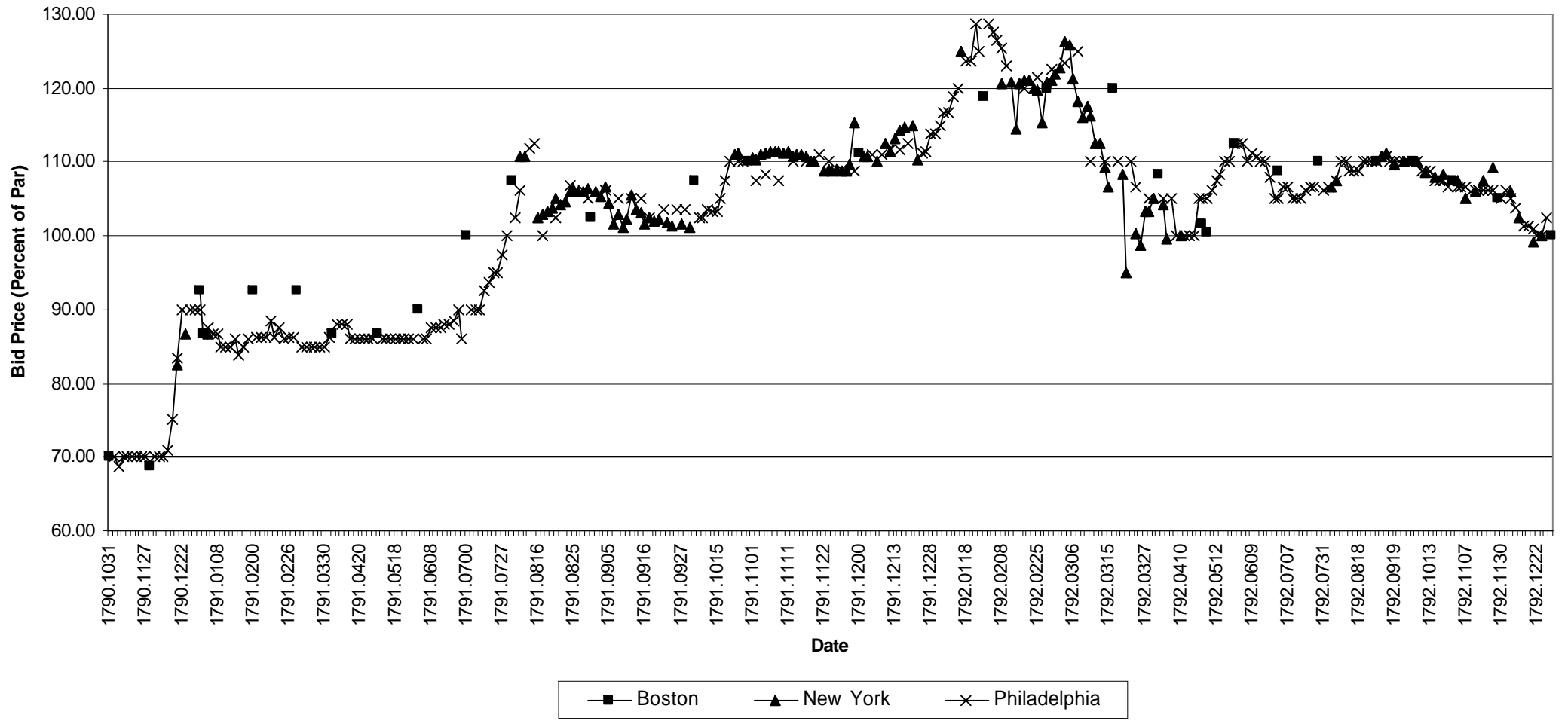
1792: Bubble, collapse, panic

- Fueled by increases in bank credit, partly from the new central bank, and a speculative cabal to corner a US debt issue, securities prices rose rapidly early in 1792 [see securities price chart—slide coming].
- Prices crashed in March, after banks stepped on the brakes and the cabal collapsed in default. Panic selling drove US 6s in New York from 126 on March 5 to 95 on March 20, a drop of 25% in two weeks.
- Hamilton intervened on a number of fronts in response to the crash.

Bank of the United States, Dec. 1791 to Mar. 1792

Date/BUS data	Discounts	Notes and deposits	Specie reserves
Dec. 29, 1791	\$0.96 mill.	\$1.10 mill.	\$0.706 mill.
Jan. 31, 1792	\$2.68 mill.	\$2.17 mill.	\$0.510 mill.
Mar. 9, 1792	\$2.05 mill.	\$2.06 mill.	\$0.244 mill.

U.S. Sixes, Boston, New York, and Philadelphia

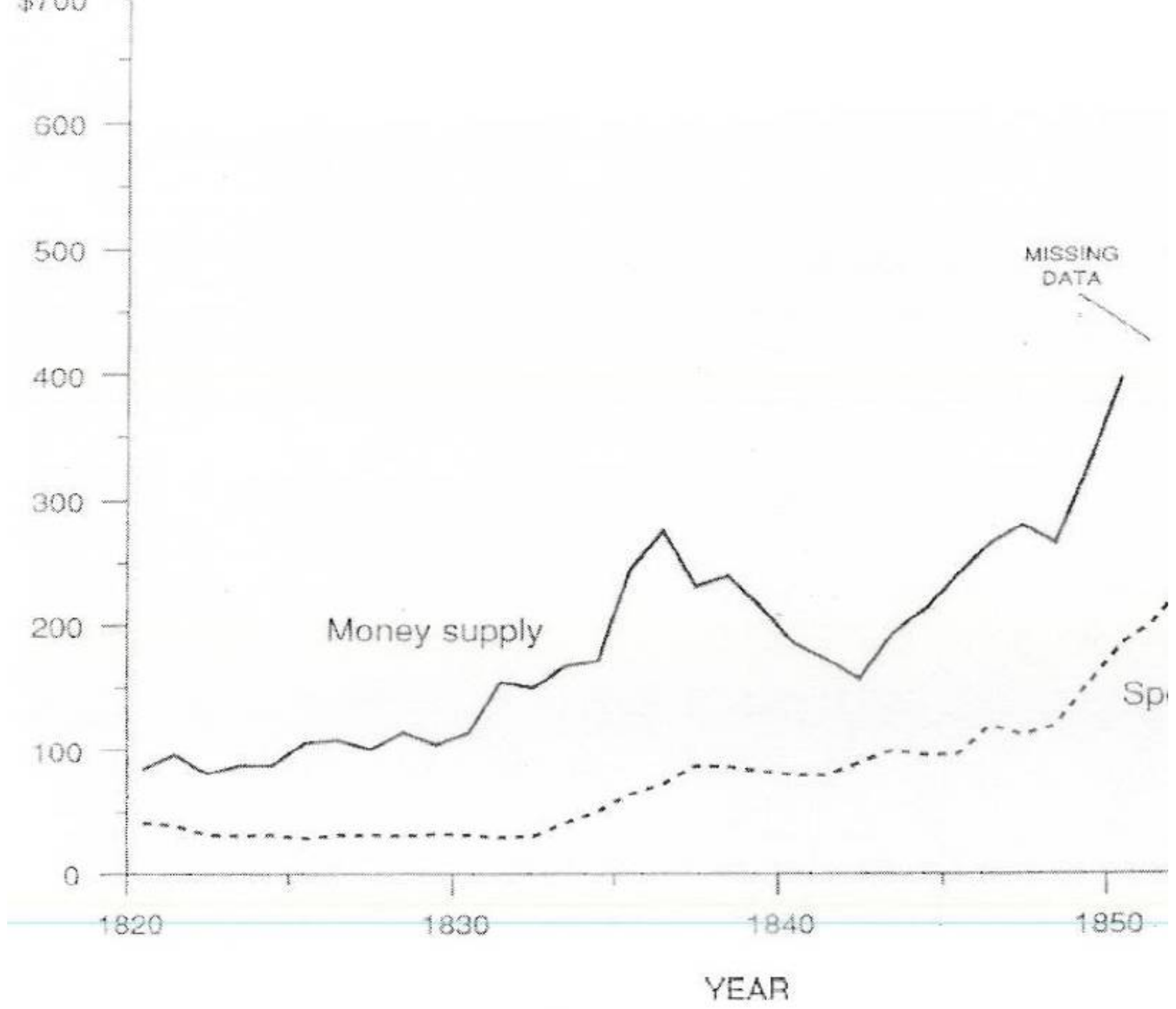


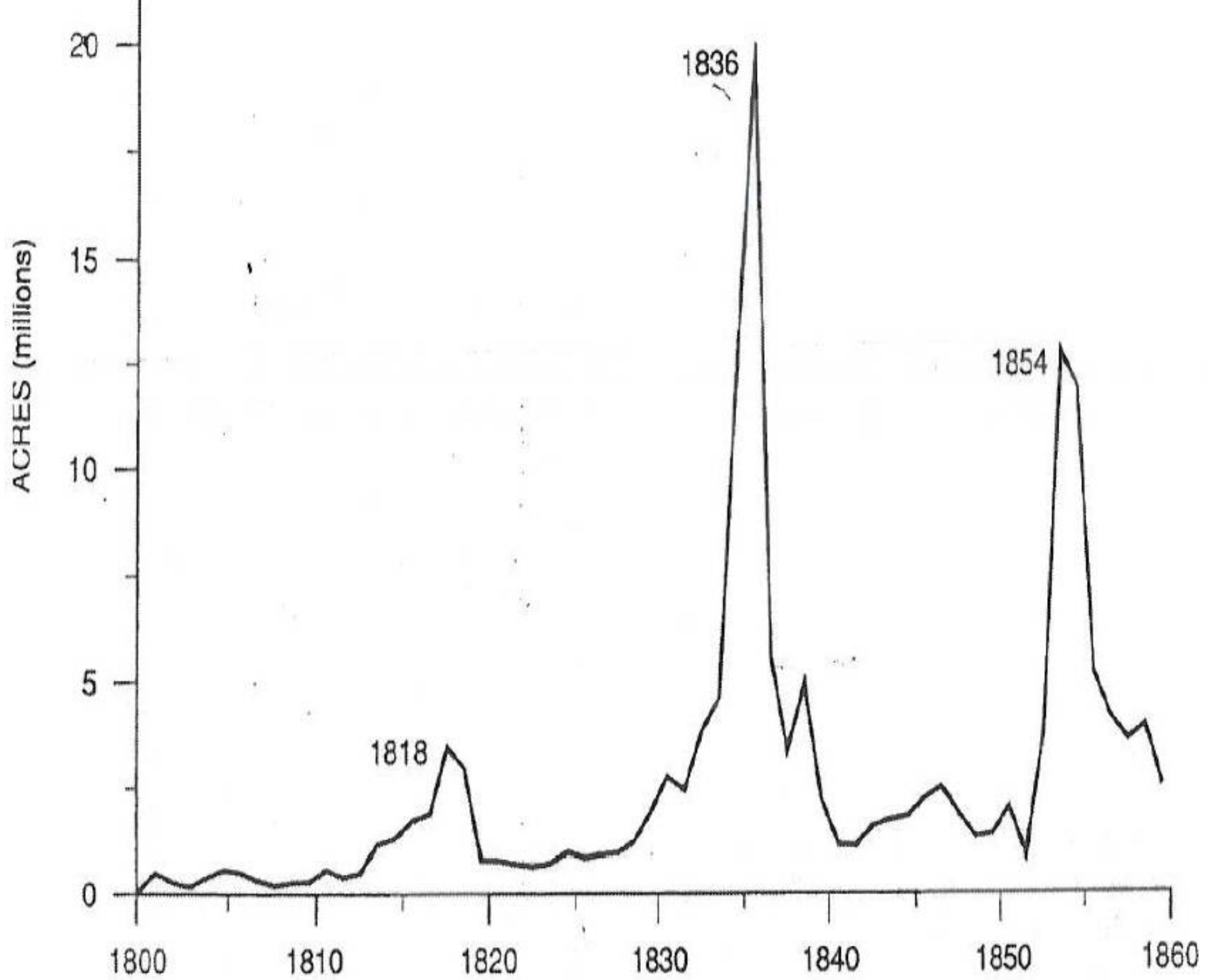
Hamilton's crisis management, March and April 1792

- Orders open market purchases of 1-2 percent of outstanding US debt.
- Directs banks to keep lending; promises not to withdraw government deposits in the banks.
- Orchestrates cooperative agreement whereby securities dealers collateralize their holdings for bank loans, at a 7% penalty rate of interest, instead of selling on the market at fire-sale prices. Names prices at which collateral is accepted. Agrees to purchase collateral from banks if they get stuck with it.
- Directs Treasurer of USA and Bank of United States not to draw money from other banks without his permission.
- Publicizes new Amsterdam loan of \$1.2 million at 4 % to USA for its calming effects; later uses the Dutch money to pay for his open market purchases.
- These actions end the panic in little more than a month. This is how to manage a financial crisis.

1837-1842, an extended crisis

- 1832: President Jackson vetoes Congress's bill to re-charter Bank of the United States; it will cease to be a central bank in 1836 when the old charter expires.
- From 1830 to 1837, number of US state-chartered banks increases from 380 to 780.
- Money stock, 1830-1837, increases from \$105 million to \$276 million.
- Rising prices and a property boom: huge land sales and speculation, 1830-1836.
- The US government announces two policy initiatives in 1836: A "Specie Circular" decrees that land can be purchased from the government only with gold and silver money. And a "Surplus Distribution" act says that bulging federal surplus revenues after the national debt is retired will be distributed to States on the basis of population. Both measures drain Eastern money-center banks of specie reserves.
- Panic breaks out in May 1837. Widespread bank and business failures. Van Buren, Jackson's successor, resists repeal of the Specie Circular. After a brief recovery, panic and failures return in 1839. Nine US States default on their debts in 1841-1842. Credit of States and US government is tarnished, but both recover in a few years.
- This is how to CREATE a financial crisis, and also how NOT to manage it.





1873—an international crisis

- Was it one crisis or two?
- The pattern of events in Austria and Germany was rather similar to the pattern in the USA.
- The crises were connected by international capital markets. The continental European boom may eventually have reduced the supply of European capital to the USA.
- Leading nations were similar in population.

1870 Populations

- USA 40 million
- Canada 4
- Mexico 9

- Germany 39
- France 38
- UK 31
- Austria 5

The world prior to 1873: Globalizing

Capital flows to the USA:

The USA imported \$1.1 billion of capital, mostly from European investors buying US government and railway securities, in the eight-year period 1866-1873.

US net liabilities to foreigners were \$1.8 billion in 1873.

Thus, some 60% of US net liabilities to foreign investors were incurred from 1866 to 1873.

Displacements in Europe promoting a boom-bust cycle matched those of the USA

- Prussian-Austrian war, 1866
- Overend-Gurney crash, UK 1866
- Transatlantic cable, 1866
- Austrian *Wunderharvest*, 1867
- Suez Canal opens, 1869
- Franco-Prussian war, 1870-71, with 5 billion franc indemnity paid to Prussia
- Thiers *rentes* issued to pay indemnity, 1871 and 1872
- German coin circulation triples as gold coins are added to silver
- German banking laws relaxed: *Maklerbanken*, *Baubanken*, Deutsche Bank
- Civil War ends, 1865. National banks.
- France leaves Mexico, Britain grants Canada independence, and Russia sells Alaska to USA
- Transcontinental railway completed, 1869
- Gold corner panic, 1869
- US national debt restructured
- Chicago fire burns 1/3 of city
- Britain settles *Alabama* claims by paying US \$15.5 million, 1872
- Granger legislation attacks railways
- Monetary tightness to promote resumption of specie standard

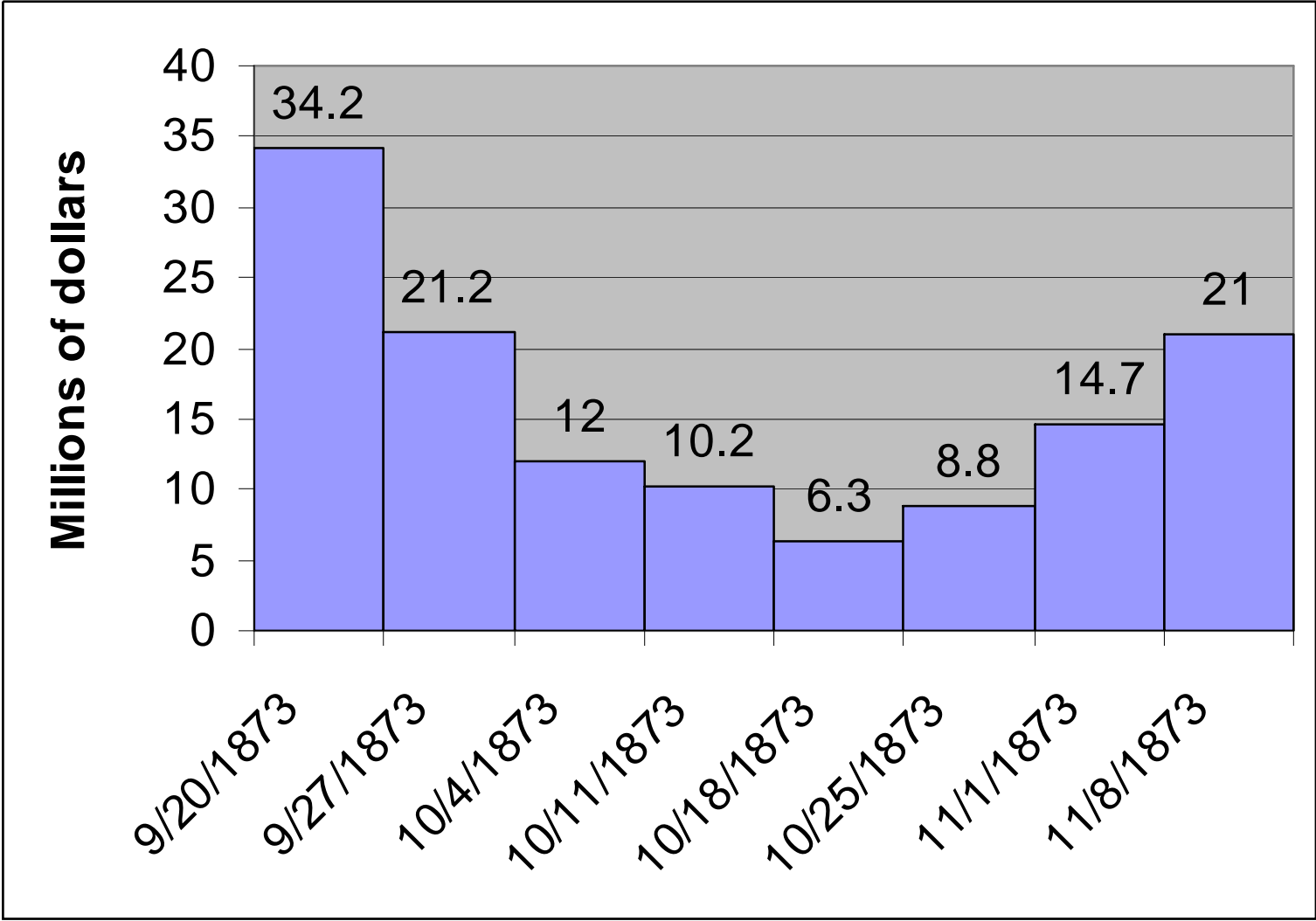
RR Mania leads to panic

- The railroad industry, at the time the nation's largest employer outside of agriculture, involved large amounts of money and risk.
- A large infusion of cash from speculators caused abnormal growth in the industry. US railway network doubles in size from 1866 to 1873; in 1873 it is the size of the entire European rail network—20 countries including Russia.
- Jay Cooke's investment banking firm, like many others, was invested heavily in the railroads.
- Cooke and other entrepreneurs had planned to build a second transcontinental railroad, called the Northern Pacific Railway, across the northern USA. Cooke's firm provided the financing.
- Cooke's bank fails in September 1873, setting off the panic.
- The US government does next to nothing to help. Its goal is to re-establish dollar convertibility to gold. The banking system and the securities markets are left to fend for themselves.
- Financial contraction actually helps the government to re-establish the gold standard in the USA.

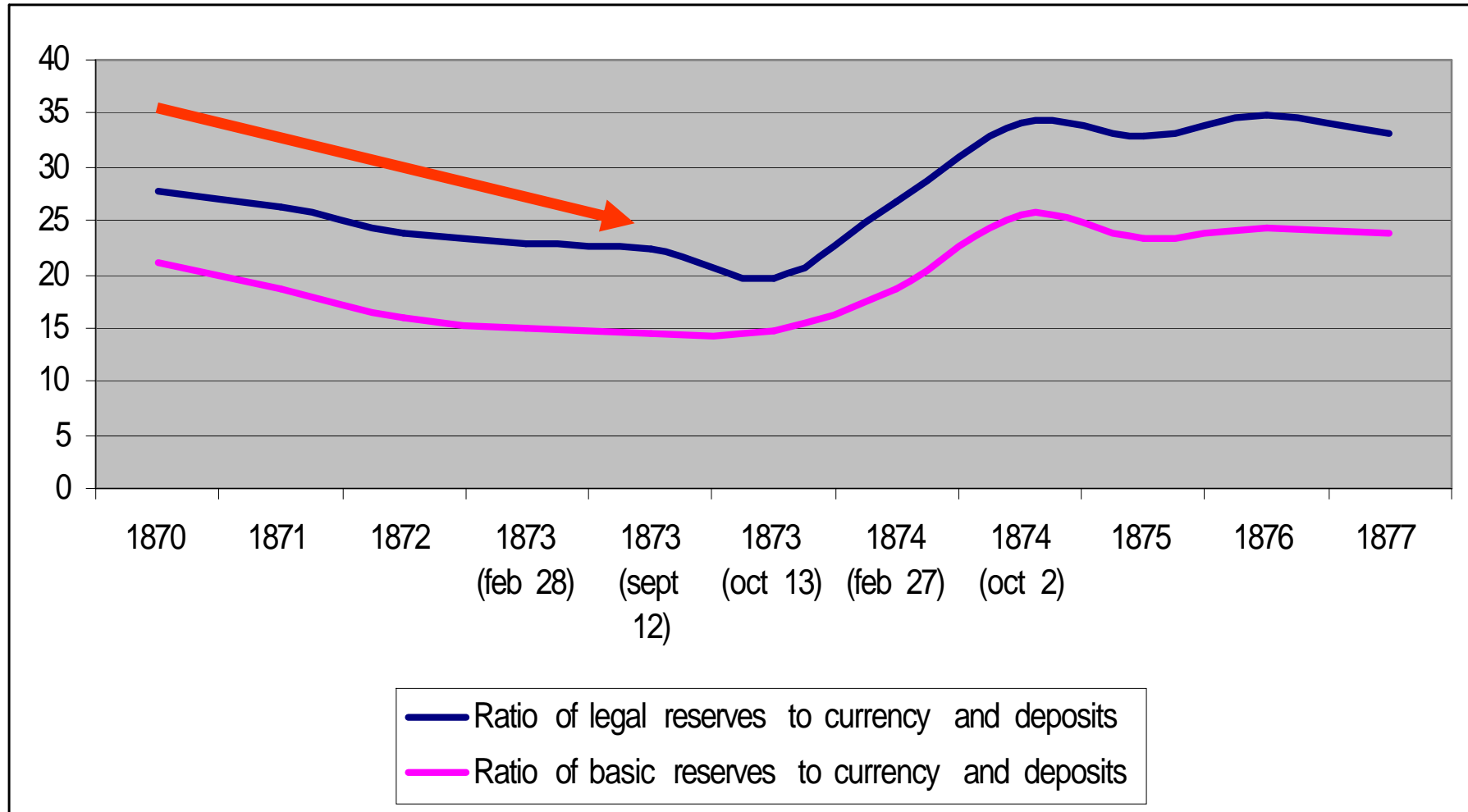
Global speculative shocks

- A major economic reversal began in Europe that reached the United States in the fall of 1873:
- Spring 1873 : Austria. Vienna Universal Exposition to open in May. A speculative movement anticipating it generates tripling of prices in a few months
- May 9 : Austria. 2 big banks fail. Stock market crash. European contagion.
- September : German stock market in Berlin crashes simultaneously with Jay Cooke's failure in New York.

Legal tender currency in NY Banks



Background US:



1907: the background

- Rapid industrial and economic growth, 1897-1906, with a lot of mergers and corporate consolidations.
- Theodore Roosevelt administration somewhat hostile to big business an 'malefactors of great wealth.'
- San Francisco earthquake of April 1906 leads to tightening of Eastern US and international financial markets.
- Rapid expansion of trust companies, which are lightly regulated banks.
- Collapse of a speculative attempt to corner the market in a copper company's stock in October 1907; some banks and trust companies are implicated.
- Runs on trust companies and banks in New York City set off the panic of 1907 in latter half of October.

1907: J. P. Morgan to the rescue (1)

- Called back from a church convention in Virginia, Morgan arrives in New York on October 20, and orders stress tests of trust companies.
- On October 22, the Knickerbocker Trust failed, Morgan asks the Secretary of the Treasury to come to New York from Washington, and when he arrives, requests the Treasury to deposit money in New York banks. The first \$25 million is deposited on October 24, to be followed by more over the next month. At week's end, Morgan encourages the Secretary to return to Washington because it will look good.
- On October 23, Morgan organizes a cooperative agreement of trust companies to pool \$10 million to support those facing runs, and arranges for a \$3 million dollar loan from National City Bank to Trust Company of America, which faced a run.
- On October 24, when the head of the NYSE informs Morgan that he wants to shut it down because no money is available, Morgan orders him not to do so and arranges a \$24 million dollar fund to lend to dealers and brokers.

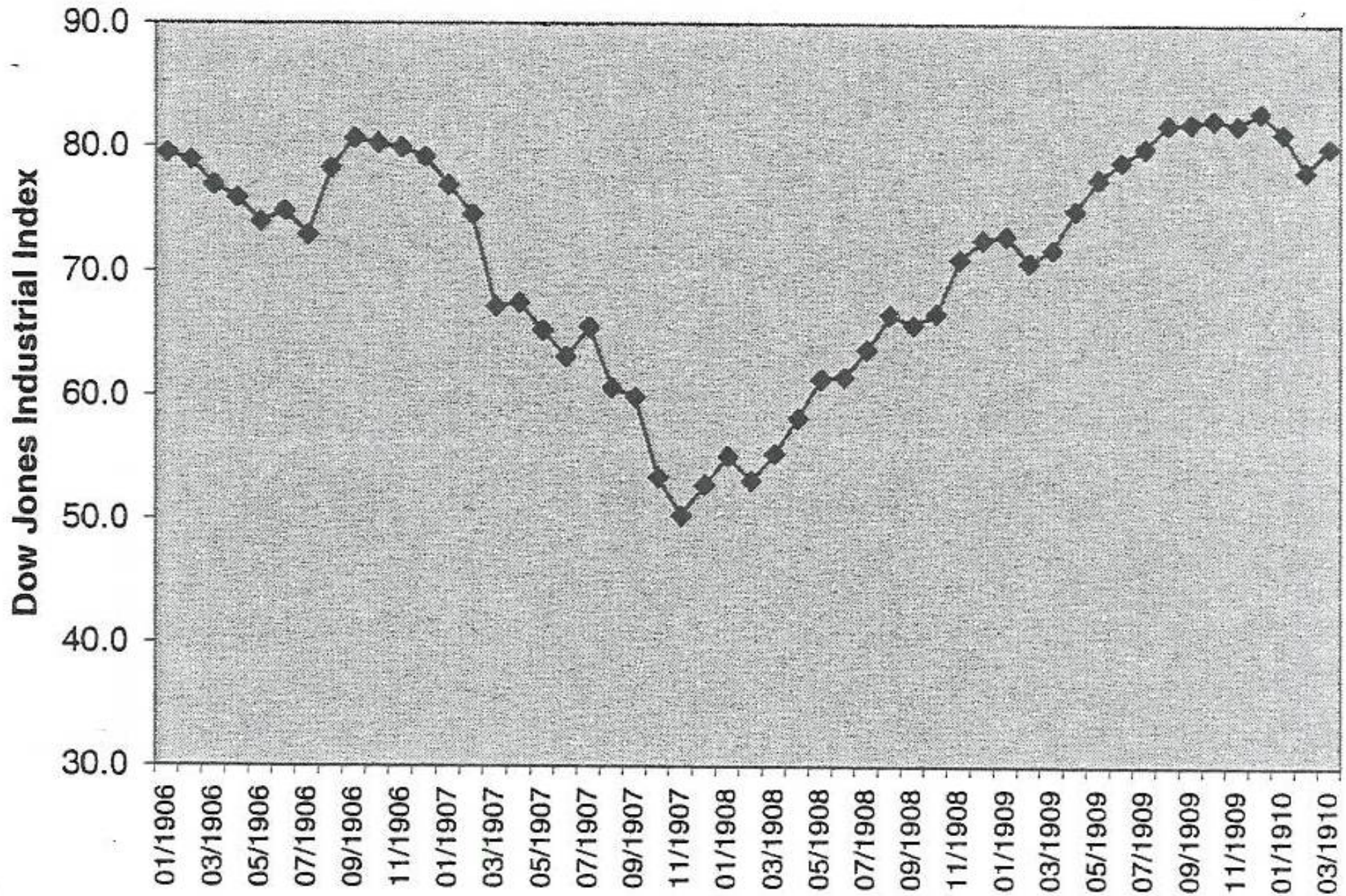
1907: Morgan to the rescue (2)

- Morgan's team requests New York clergymen to give calming sermons on the weekend of October 26-27, and—learning of gold shipments to USA—has these publicized in the press.
- On October 28, the mayor of New York City says the City needs a loan, cannot get one, and will have to default by the end of the week. Morgan underwrites a \$30 million loan to the City. The New York Clearing House issues \$100 million of clearing house loan certificates to help member banks economize on reserves.
- On November 2, Morgan learns that a major investment bank is about to fail because it holds large amounts of stock in Tennessee Coal & Iron Co. (TCI) which it had collateralized for bank loans and now could not repay the loans. Morgan arranges to merge TCI into U.S. Steel Corp., saving the investment bank, after gaining President Roosevelt's approval for the deal.
- The same weekend, November 2-3, Morgan invites New York bank and trust company presidents to his library, locks the doors, and cajoles them to pool funds and lend \$25 million to Trust Co. of America to stem a run.
- On November 6, Morgan arranges a further \$20 million loan to trust companies facing runs.

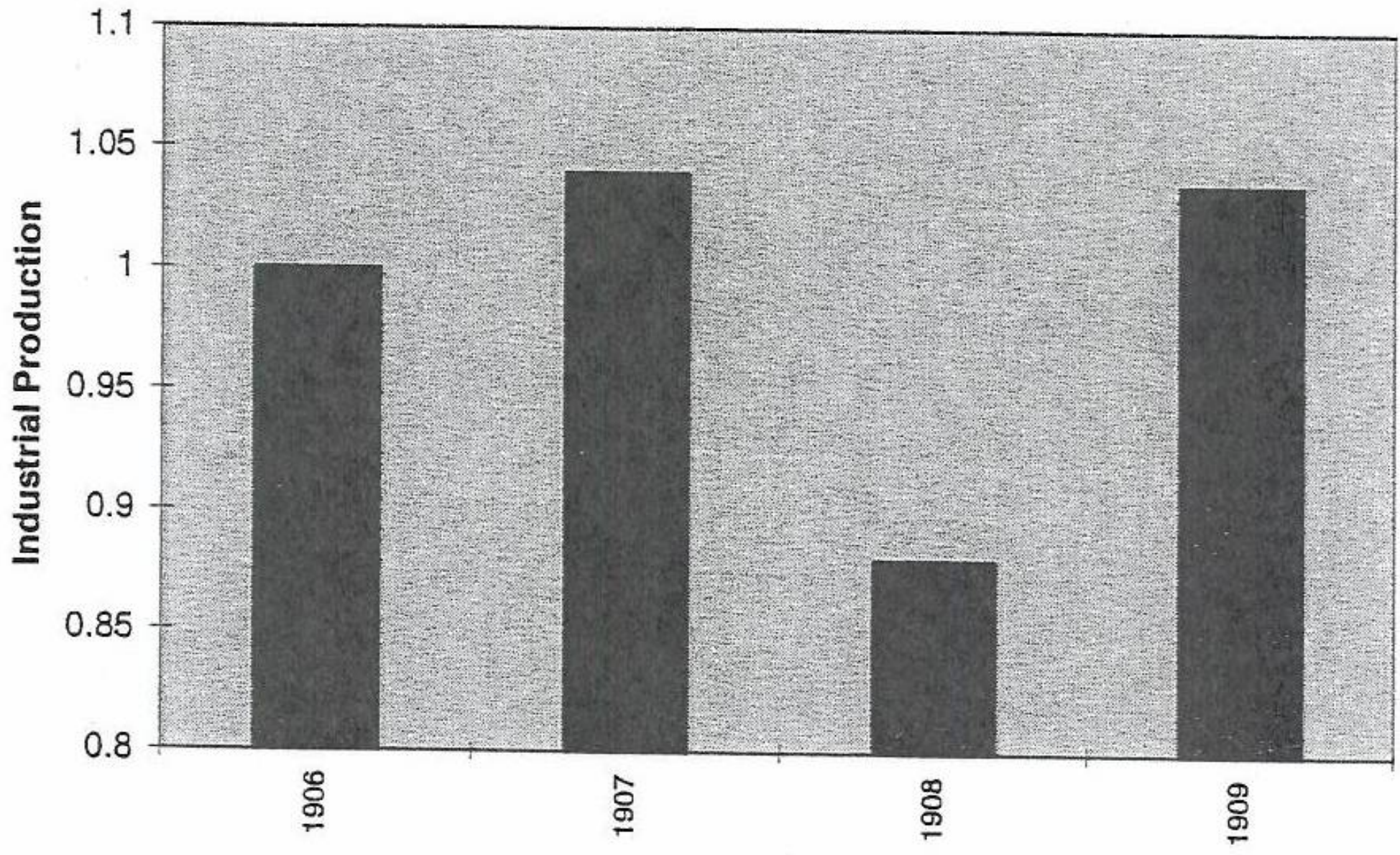
Panic of 1907 ends that year; aftermath leads to new central bank

- J. P. Morgan's one-man central-bank actions end the panic.
- In 1908, Congress passes Aldrich-Vreeland Act.
- Act authorizes emergency currency issues in a panic; it was used in 1914 at outbreak of World War I, stemming a US panic.
- Act also establishes a National Monetary Commission, which leads to Federal Reserve Act of 1913 and Federal Reserve System opening for business at end of 1914. USA once again has a central bank.
- 1907 is another good example of how to manage a financial crisis.

The Cycle of Recovery



The Cycle of Recovery



1930-1933 crisis and Great Depression

- The stock market crash of October 1929 had little to do with the financial crisis that arose a year later.
- The crisis began in the fall and winter of 1930-1931 when large numbers of US banks failed and the Federal Reserve did nothing to prevent the failures, which initiated a deflationary downward spiral and deepening recession.
- In May 1931, the Austrian Creditanstalt failed. The crisis then spread to Germany, which defaulted on its large foreign debts and left the gold standard. Pressure then shifted to the UK, which left the gold standard in September. Pressure then shifted to the USA, which saw a run on its gold.
- The Federal Reserve responds by raising its discount rate from 1.5 to 3.5 %, in the midst of a deflationary downward spiral. The year 1932 becomes the worst year in US economic history.
- This is how NOT to manage a crisis.

Lessons and Grades

- Lender of last resort actions in crises are helpful. Responsible public and private authorities can execute them. Central banks are useful for the purpose. But central banks can also make things worse, as they did in 1792 and 1930-1933.
- 1792 and 1907 demonstrate bold, effective leadership and crisis management. The professor's grade: A.
- 1837-1842 and 1930-1933 demonstrate misguided and ineffective leadership. Grade: D.
- 1873 is an example of public authorities doing nothing and the crisis nonetheless ending quickly. Grade: Pass
- What can be said about crisis management in 2007-2009? Maybe a mid-term grade of B- or C+, with encouragement to the student(s) to try to raise the grade during the second half of the course and on the final exam.