

Paul Kupiec and Carlos Ramirez.

*Bank failures and the cost of systemic risk:
evidence from 1900 – 1930*

A comment by Andrew Coleman

March 2011

From the conclusion

An increase in the share of liabilities in failed depository institutions has a negative and long lasting effect on the growth rate of industrial production....

....a 1% increase in liabilities in failed banks reduced industrial production by 16.5% and GDP by 7% over 10 quarters....

....the size of this effect explains the desire for counterbalancing government (Federal Reserve) interventions since 1913, and may balance moral hazard concerns.

Economic Issues

(1) If banks fails, how much does output fall?

Part (i) quantifies this: lots

Economic Issues

- (2) If a bank fails, and output falls, is the main effect because:
- (a) depositors have less wealth, and demand falls
 - (b) borrowers can't get access to funds with another bank on such good terms
 - (c) Other banks become more careful at extending credit.

Part (ii) may help address this issue

Some awkward questions

The econometrics of part 1 is predicated on the idea that there is a single model explaining the entire period.

This assumption needs to be actively argued.

(a) Federal Reserve created 1914 with the intention of reducing occurrence of bank panics

(b) WW1 created inflation, then deflation,

(c) US amassed large gold reserves > 1914

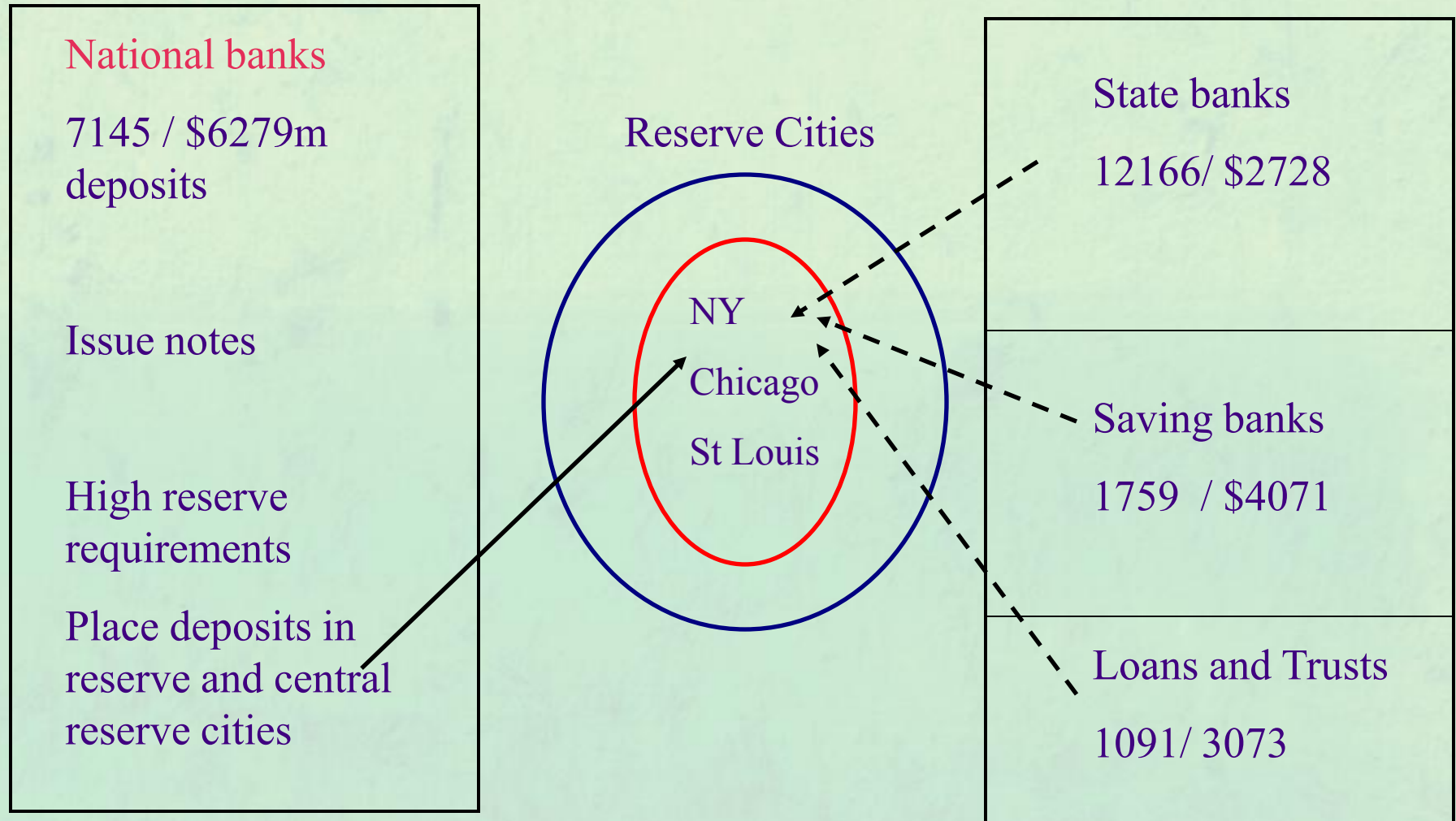
(d) role relative to London changed.

Some awkward questions

- (a) The authors are reasonably convincing that Federal Reserve was NOT aggressively interventionist 1914-1930.

Nonetheless, the Federal Reserve Act changed the way the banking system worked in a manner that was meant to reduce monetary system stress. It is plausible that these changes affected the relationship between the various variables.

The US banking system 1910



Federal Reserve Act

All national banks join

Federal Reserve notes issued by district:

- designed to replace national bank notes
- More elastic supply of notes
- Backed by gold reserves and commercial paper

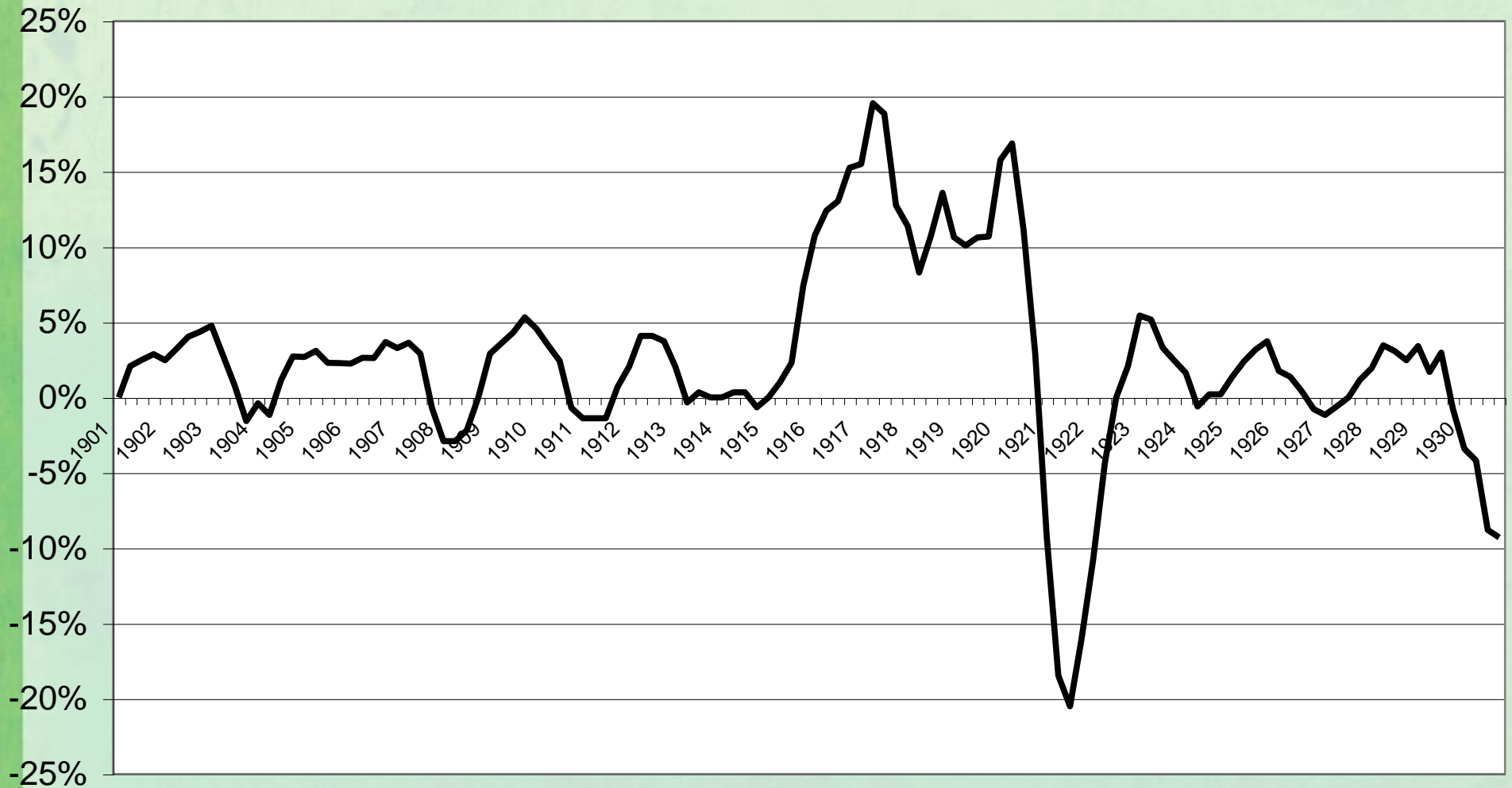
⇒ Less reliance on NY

⇒ More elastic supply of Federal Reserve notes

⇒ Smoother flow of money with seasonal agricultural demands

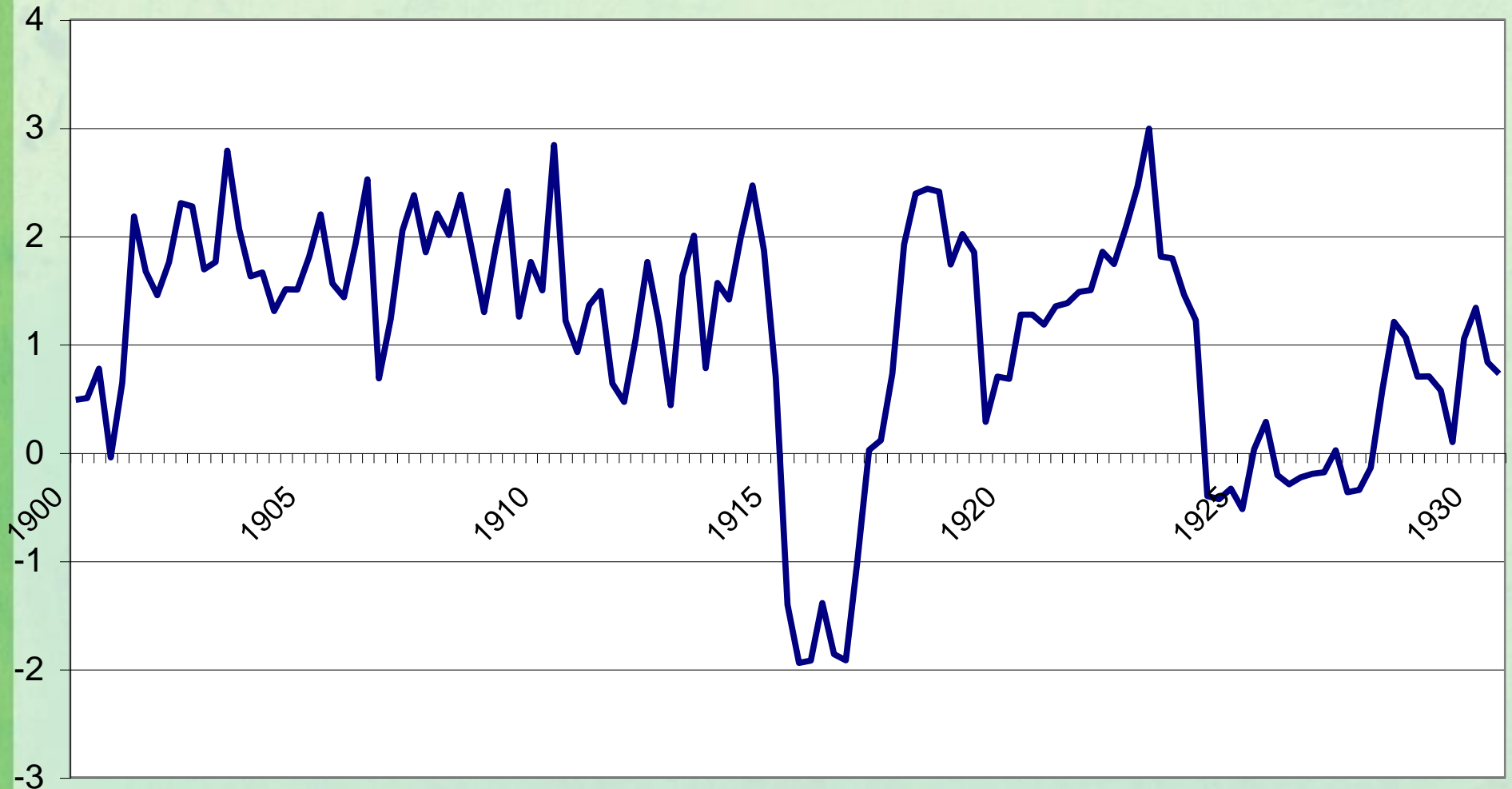
(b) Inflation is different

Annual inflation 1900 - 1930



(c) Interest margins changed

US-UK interest margin



Robustness tests

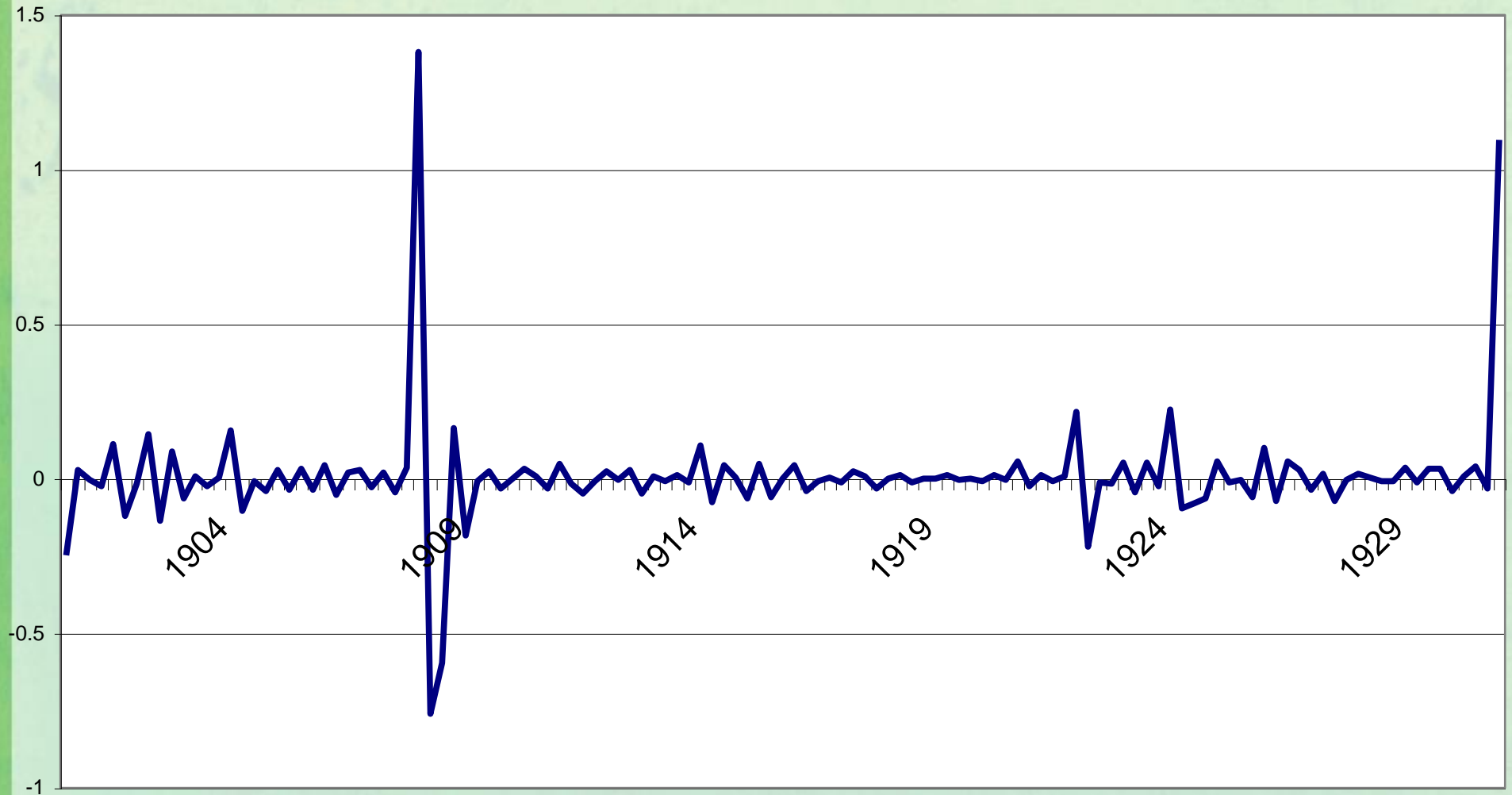
Are the coefficients the same before and after
1914

What happens if we include real interest rates?

What happens if we exclude 1907?

(d) Change in deposits in failed institutions

Change in fraction of deposits in failed institutions



Approximately re-estimated regressions: industrial production

	F-test of significance of default variable
Original: 1900- 1930	2.61 (just significant)

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Real interest rates not inflation	2.11

The 1907 Panic

A potentially nice episode to analyse

Concentrated in NY as several NY banks associated with disastrous speculation attempt faced runs.

But...

NY banks special as very large and in general they act as

- (i) bankers for the national banks
- (ii) bankers for internal trade finance and commerce.
- (iii) bankers for stock traders, investors etc through providing loans on call, withdrawn by either party, backed by securities.

Bank characteristics (1909)

	Number banks	Assets	Checking Deposits	On call collateral loans
NY	153	\$4345m (\$30m each)	\$1587 (10m each)	\$727 (\$5m each)
Total (inc NY)	22491	\$21095m (\$1m each)	\$6957 (0.3m each)	\$1940 (0.1m each)

Connecticut is small manufacturing state: 1.1m vs NY
9.1m (IL: 5.6m)

Not clear that Connecticut banks have same function as
NY banks

Most surprising fact in paper:

NY banks only twice as big as Connecticut banks in
1896 (authors) (cf 11x as big as rest of country)

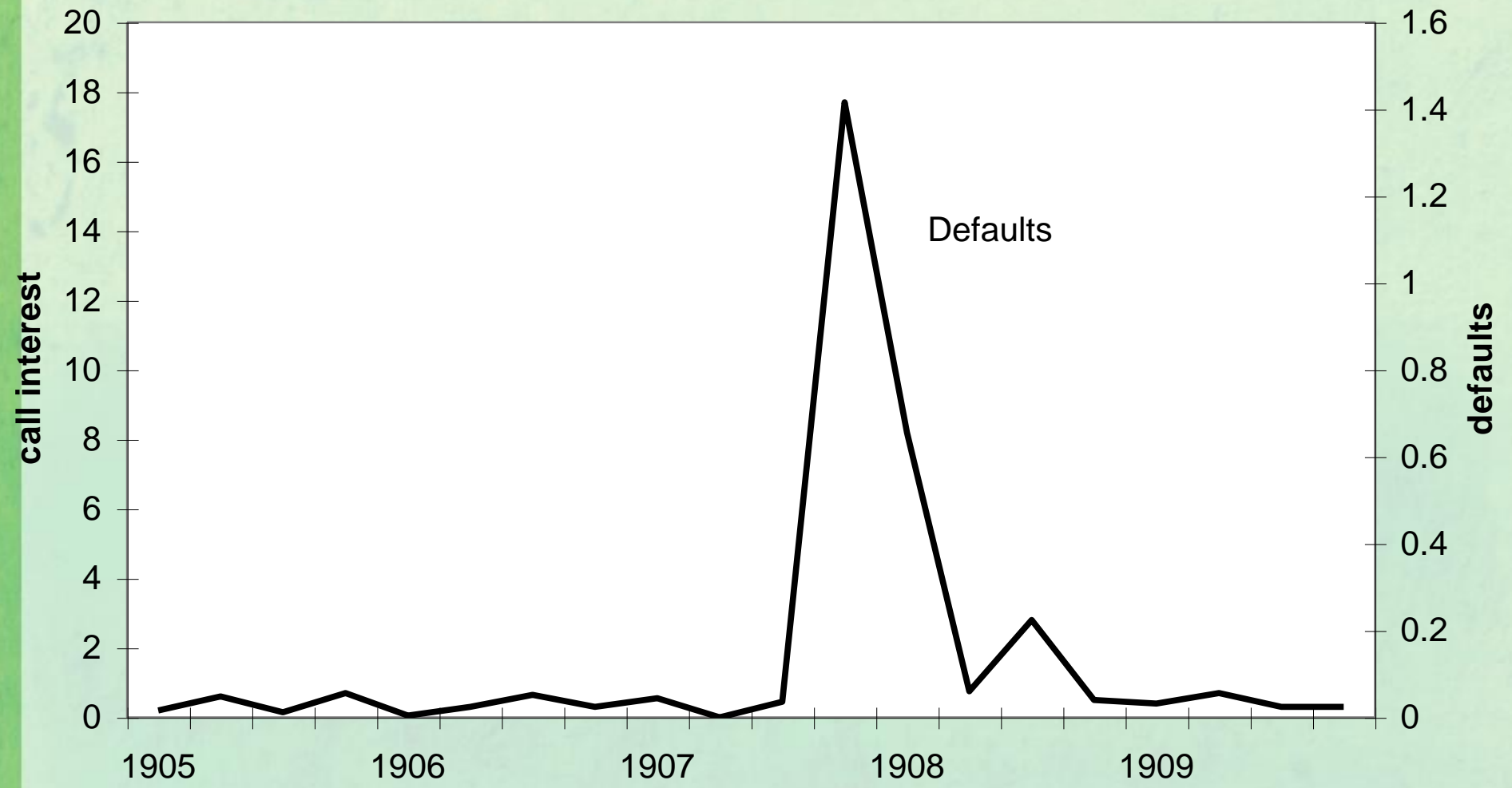
Is Connecticut a proper comparison for NY (why not IL)

Moreover, while the authors show NY had bank failures and then commercial failures, while CT had none, they don't rule out other explanations.

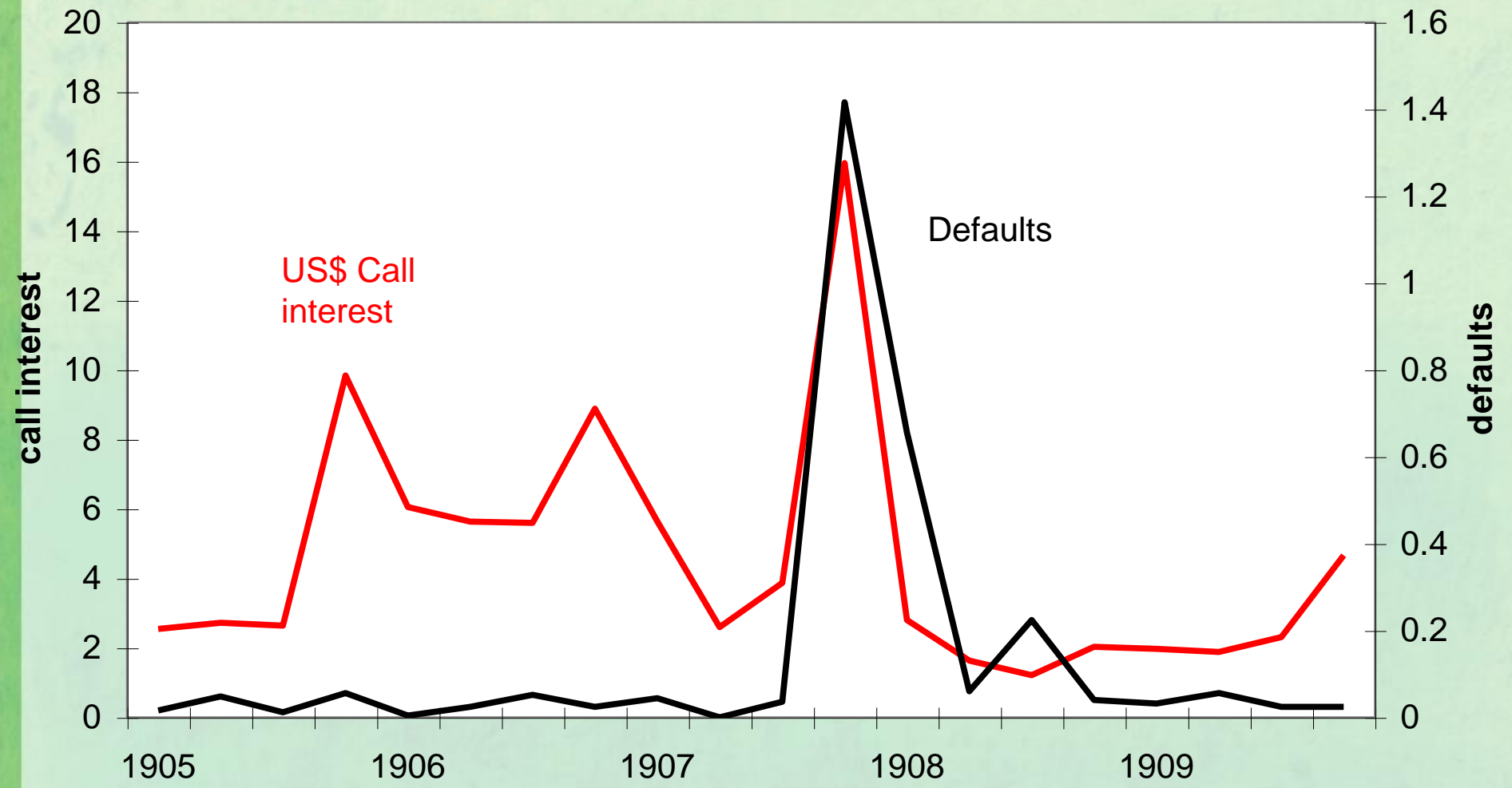
NY banks lend at call and US call rates spike in 1907 – up to 15%.

Could have driven firms into bankruptcy

1905-1909 bank indicators



1905-1909 bank indicators



Is there a more powerful way to use this data?

Is there a way that can address the second question?

If a bank fails, and output falls, is the main effect because:

- (a) depositors have less wealth, and demand falls
- (b) borrowers can't get access to funds with another bank on such good terms
- (c) Other banks become more careful at extending credit.

William Cronon traced the effect of the 1873 crisis in Illinois/ Michigan through bankruptcy courts

Perhaps another paper could see if the failing NY non-bank firms were linked to the major failed banks, or whether they were generic casualties of the sharp business downturn sparked by the crisis.