

The Real Impact of the Panic of 1907: Evidence from Trust Company Stocks

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- Financial panics cause significant disruption to the economy via liquidity freezes
 - Financial institutions operating outside of regulatory framework and absent liquidity backstop (LOLR) precipitate runs more readily due to their typically higher risk portfolios and undercapitalization
 - Opacity often exacerbates their susceptibility to runs
- The Panic of 1907 bears resemblance to the 2008 financial crisis
 - The trust companies of early 20century similar to shadow banks of early 21century
 - Some trust companies benefited from connections to the biggest NYC national banks and to JP Morgan and big industrialists such as Rockefeller

This paper contributes to the large literature on the causes and consequences of the Panic of 1907

- Global copper market disruption (Rogers et al, 2018)
- Gold drain by London insurance co claims from the San Francisco earthquake (Odell and Weidenmier, 2004)
- Teddy Roosevelt's trust-busting campaign (Bittlingmayer, 1993)
- Trust companies propagating panic (Moen & Talman (1992); Talman & Moen, 2018)
- The volatility of the funding market (Fohlin, 2019) and related illiquidity of the stock market (Fohlin & Gehrig, 2019)
- The impact of trust company losses on "connected" businesses (Frydman et al, 2015)

Global Conditions Set the Stage for the Panic of 1907

Most of these points raised by Lefevre (1908); argued that the real causes of the financial crisis related to excess demand for gold

- Wars + natural disaster
 - Boer War (1899-1902) and Russo-Japanese War (1904-05) each drained \$1 billion in capital from the global economy
 - San Francisco Earthquake (1906) drained another \$500 million
- Mexico move to gold standard (May 1, 1905)
- Argentina + Egypt both drawing large amounts of gold
- Lefevre: “the crash would have come earlier if the gold production had not been so great—the greatest it has ever been”

Proximal Causes: The Copper War + The Wall Street “Mob”

Circa 1903 Rockefeller & co. bid to monopolize US copper production (as with Standard Oil)

- Led to oversupply, then price hikes, then “The demand for copper ceased so abruptly and completely that it seemed the work of black magic.” (Lefevre)
- Aug. Heinze (United Copper) sold out to Rogers (Standard Oil/Amalgamated)
- Heinze Used funds from this sale to buy Mercantile National Bank
- When brother Otto failed in his United Copper corner, the establishment bankers “thought they perceived a heaven-sent opportunity to eliminate Heinze and his associates from the banking situation of New York City.” (Lefevre)
- Lefevre: “But the seed of fear had been implanted in the breast of the New York City mob.”

The Problem of the Trust Companies

Trust Companies' Susceptibility to Runs

- Extremely undercapitalized e.g. Knickerbocker held \$62 million in deposits with \$1 million in capital stock
- Large proportion of assets consisted of call loans, which were collateralized by common stock
- Highly dependent on liquidity of risky counterparties, largely brokerages
- Lack of regulation and oversight, opaque to depositors and investors
- Lack of access to the New York Clearing House (no liquidity backstop)
- Frequently engaged in “overcertification” in their call loan business

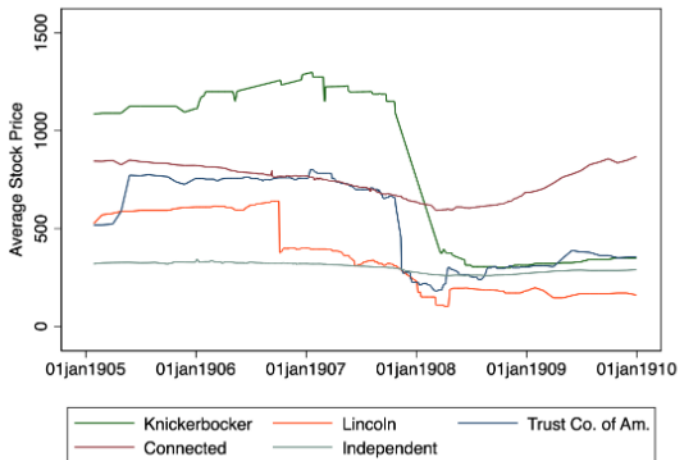
Trust Companies Relationships with National Banks and Investment Banks

- Commercial and investment banks often worked closely with trust companies, providing some backstop to those connected trust companies.
- “The Money Trust” investigation in Congress probed these interconnections, arguing that they controlled a large share of financial resources
- Most trust companies not connected, perhaps leaving them more vulnerable to liquidity freezes

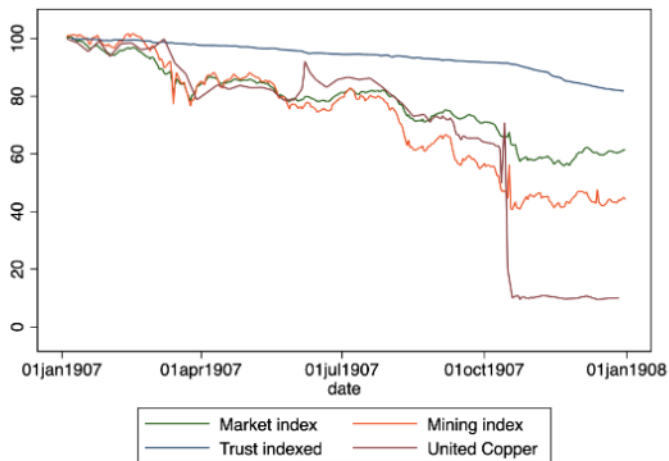
Stock Valuation and Connections

- Trust company stock prices: hand entered "Trust and Surety Company" table from the New York Times
 - Bid and ask quotations printed three times per week
 - Breaks in trade filled via interpolation; mostly affects "problem" trusts
 - Created separate indexes for connected and independent trust companies; separated out three problem trusts (exposed to runs)
- United Copper Company stock price and volume: hand entered from the NYT
 - Daily prices, quotes, and volume for October, 1907; weekly for the rest of the year
- Non-financial corporation stock prices: hand entered from the NYT
 - Daily 1905-1910 (Fohlin and Gehrig), compiled into sectors
- Connections to big banks and syndicates
 - Taken from Pujo Committee report on the Money Trust Investigation

Trust Company Valuations and Connections



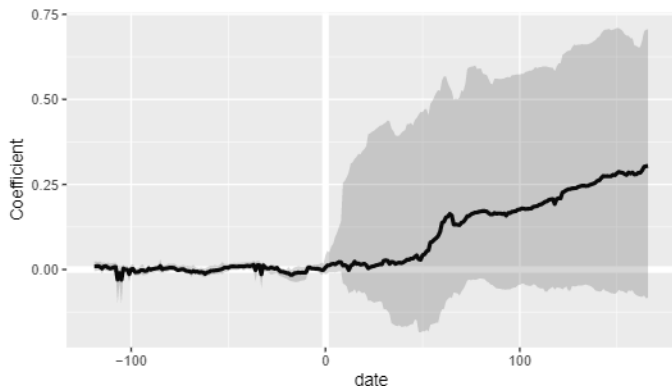
Stock Valuations in 1907



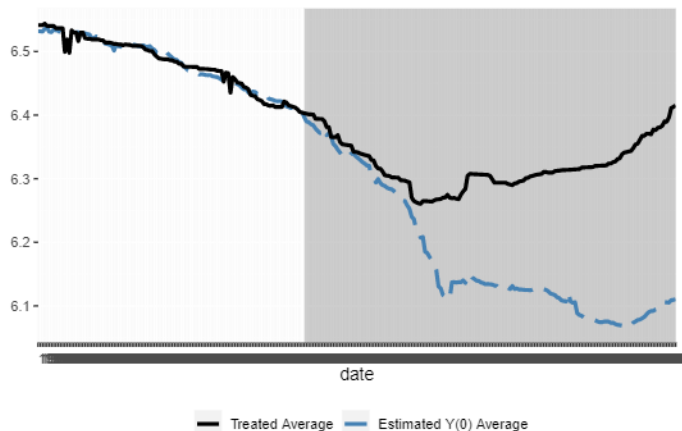
Generalized Synthetic Control

- To evaluate how the “connected” companies and the “troubled” companies perform differently from the “independent” companies, we define $panic \times connected$ and $panic \times trouble$ as the treatments.
- The standard difference-in-difference method may overestimate or underestimate the impacts since it ignores the pre-treatment trends.
- The standard synthetic control method controls for the pre-treatment trend by constructing a counterfactual of the treated unit but only allows for one treated unit.
- Since we have multiple treated units (trust companies), we implement the generalized synthetic control method (Xu, 2017), which allows for multiple treated units.

Estimated ATT



Results: Synthetic Controls – Counterfactuals



Robustness Checks

- Including 3 troubled trusts with “Independents”
- Excluding Lincoln Trust
- Standard diff-in-diff analysis

Table: DID Analysis on Trust Companies' Stock Price

	Full Sample			One-year Sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Panic×Connected	0.051 (1.28)	0.0050 (0.16)		0.026 (0.80)	-0.0099 (-0.40)	
Panic×Trouble			-0.80*** (-14.4)			-0.62*** (-5.44)
Individual FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,248	23,015	21,371	8,024	7,616	7,072
R^2	0.401	0.454	0.621	0.406	0.542	0.641
Number of ID	59	56	52	59	56	52

TBA. Significance at * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Conclusion

We present a new, high-frequency dataset on the stock prices (market/par) of all trust companies traded in New York surrounding the panic of 1907 as well as their connections to Money Trust.

- Trust companies's share prices as a whole did not decline dramatically
 - Only the 3 “troubled” trusts experienced dramatic share price cuts
 - Provides market valuation, assessment of future prospects
- Non-financial stock prices show declining valuations long before the panic
 - United Copper stock hit the hardest
 - Other mining stocks also declined substantially
- Connected trusts seem to have benefited from their ties to the top NYC national banks and to JP Morgan and industrialists like Rockefeller
 - Connected trusts maintained much higher values than independents throughout the period.
 - Connected trusts were losing value faster in the years prior to the panic, but they rebounded faster after the intervention by Morgan and the Treasury (Could explain Morgan's rapid intervention to stop the run)