

The Puzzling Persistence of Financial Crises

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Financial Crises Are Costly

- Crisis defined as time when asset values decline sharply related to change in risk perception. Applies to all classes of assets (stocks, bonds, land, loans)
- If high pre-crisis period's risk is identifiably different from other times and avoidable, it appears not to be worth the enormous cost. (*Banking crises see declines of 5.5% of real GDP on average and output losses are even larger when that distress culminates into a full-scale crisis; the median fiscal costs associated with resolving distressed banks during crises are about 16% of GDP for the more than 100 banking crises that occurred around the world since 1980*).
- Is the risk of a crisis identifiably unique from other episodes? And if so, why aren't these risks avoided?

Some Existing Answers

- Minsky-Kindleberger view: Behaviorist theory based on oscillating fear and greed, producing endogenous cycles of high risk, followed by crisis, followed by low risk. Irrationality may explain why this is not avoided. **But...**
- Historical particularity view: All crises are different in some respects, so it may be hard to learn from past. **But...**
- Crisis prediction literature has identified some useful predictors of (1) banking crises (high loan growth, government protection); (2) exchange rate collapses or sovereign debt crises (unsustainable fiscal and monetary policies); and (3) stock collapses (returns extrapolation).
- Also, many crises have common narrative features (Mexico 1994 a replay of Chile 1983, Greece 2010 is a replay of East Asia 1997).

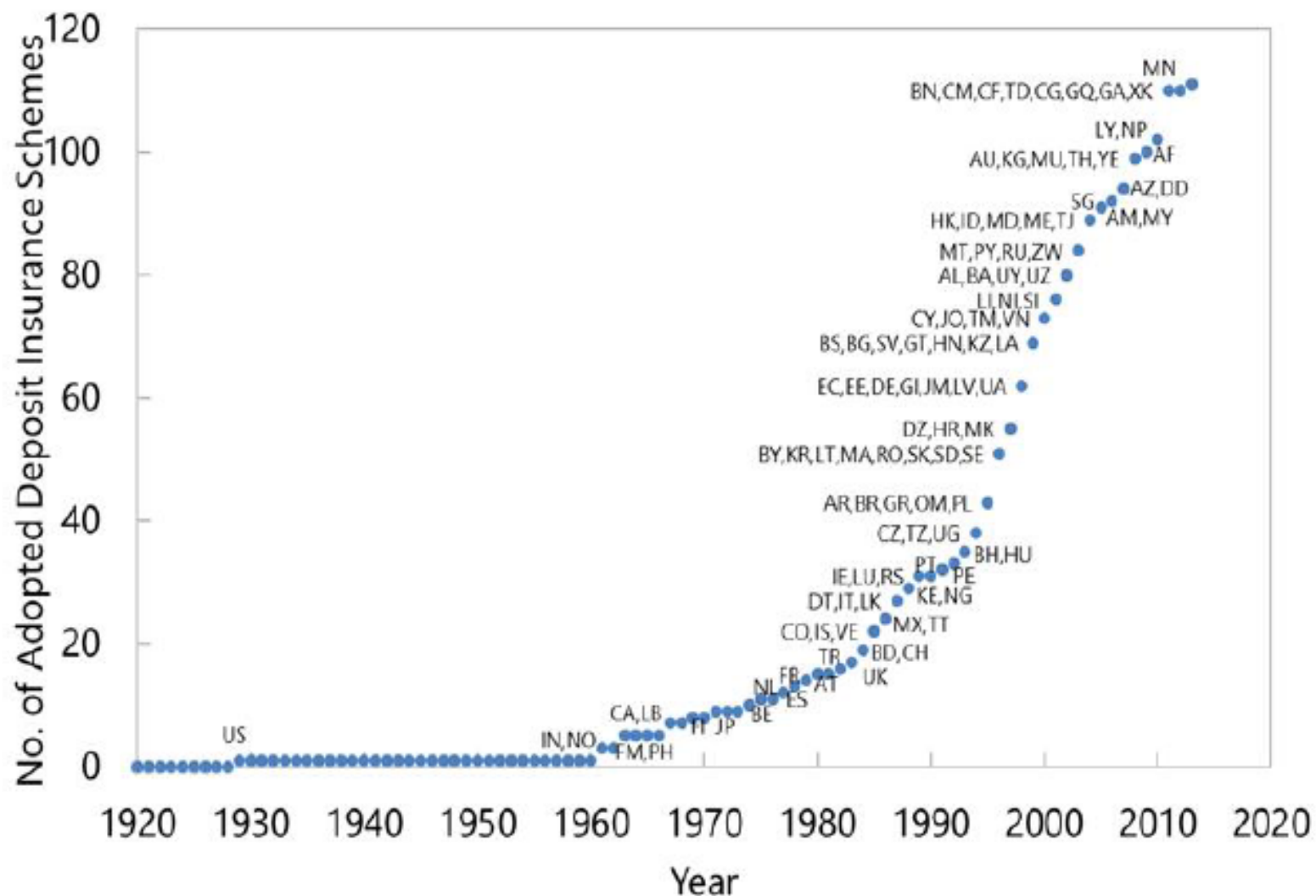
Adaptive Crises?

- Perhaps crises are actually part of an adaptive equilibrium. Crises may not be worth the risk if viewed in isolation, but perhaps *allowing crisis risk creates gains* (for someone, or possibly for everyone) that discourage society from enacting regulations that would prevent them.
 - **Domestic political economy** (Calomiris-Haber on the Game of Bank Bargains: design a fragile system may be the most effective way to get rents). **Mortgage risk subsidies; Dep Ins. (Figs 3, 2)**
 - **Geopolitics** (countries may take risks on purpose because of competitive pressures to catch up, where the cost of failing to catch up may be catastrophe for the state). **Early Modern Europe; EMs.**
 - **Learning/innovation advantages** (crisis-avoiding regulation may prevent socially beneficial innovation). Shares view that risks are at least sometimes new. **Florida in 1920s, stocks in 1920s .**
 - **Extent of risk may hard to see ex ante**, especially in a free, market-based society (fraud as magnifier that is very costly to prevent ex ante). **Florida in 1920s, banking crises.**
 - **Market economy/fiat money** may create sudden shocks that sometimes contribute to crises, perhaps even predictably and wrongly, but which are part of beneficial system that may be hard to improve. **Monetary policy in 1929, 2002-2007. (Fig 1)**

Adaptive Crises? (Cont'd)

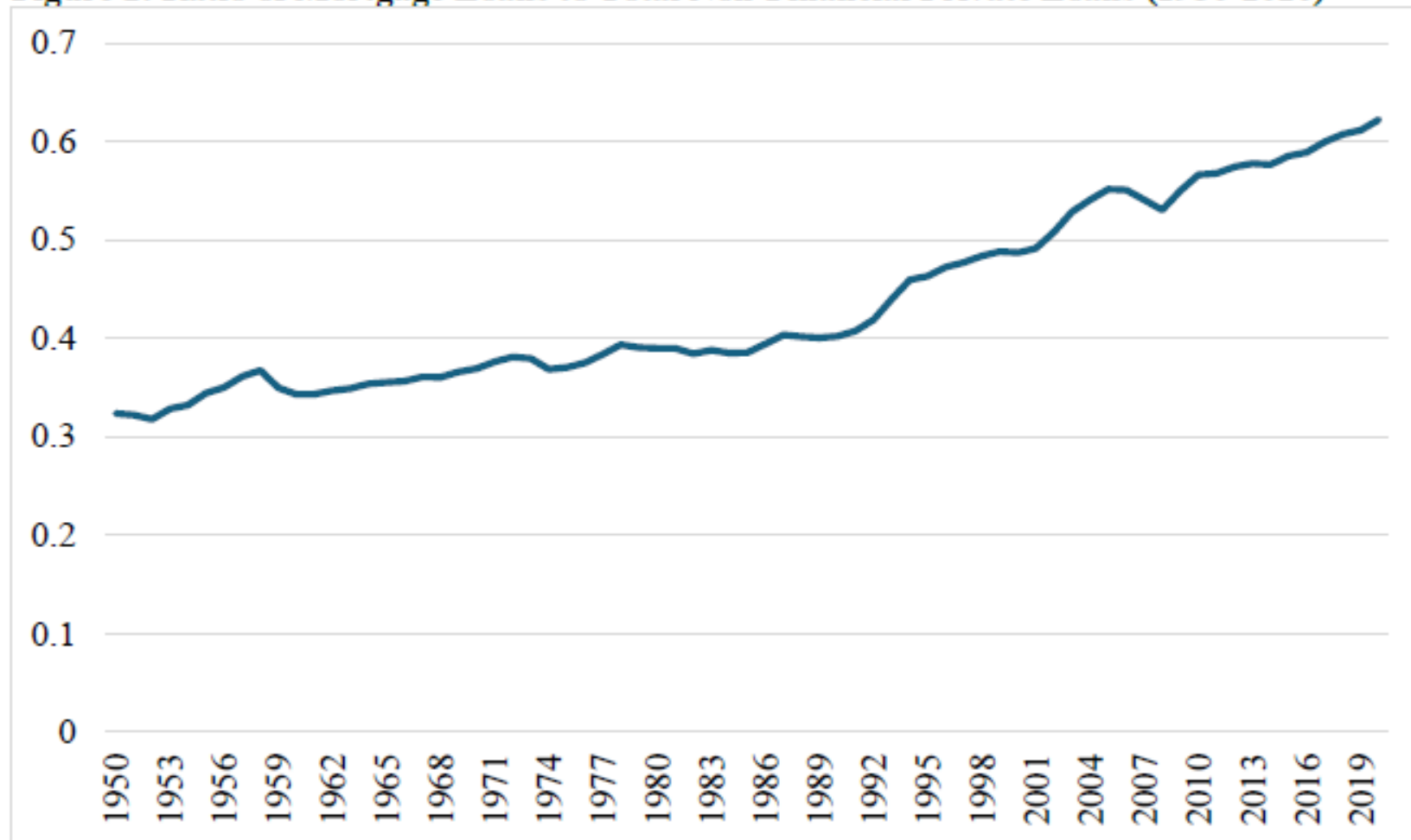
- Understanding why crises persist is akin to understanding what kind of society we have chosen to be.
- Choosing to have crisis risk is a window into who we are across many dimensions.
- The motto of the academic literature on explaining crises might be “Know Thyself” rather than being puzzled by the lack of efficiency (based on narrow economic thinking)

Figure 3: Deposit insurance adoption (1920-2020)



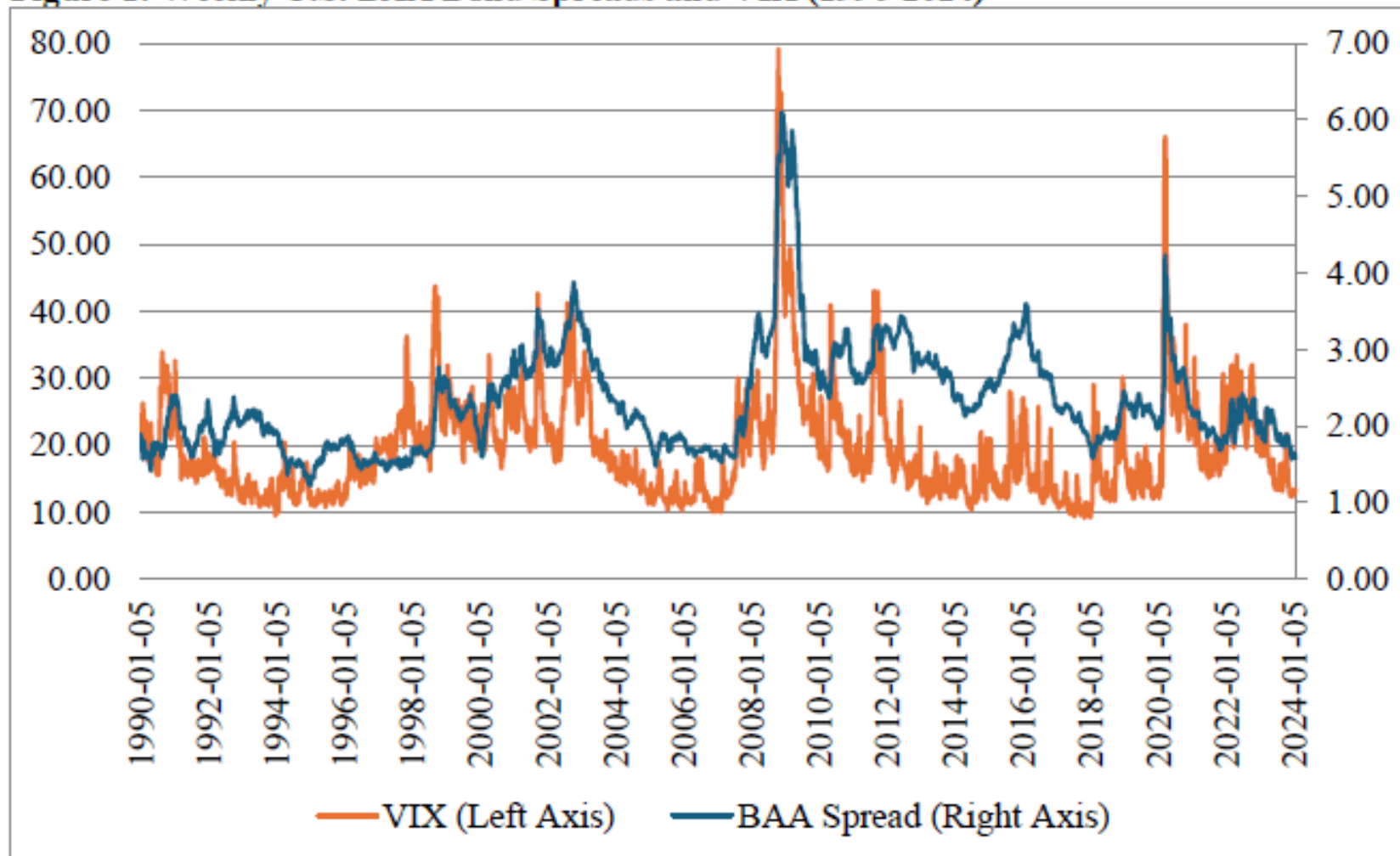
Notes: Figure plots the year of deposit insurance adoption by country. Taken from Calomiris and Chen (2020, Figure 1).

Figure 2: Ratio of Mortgage Loans to Total Non-Financial Private Loans (1950-2020)



Notes: Figure provides the average ratio of mortgage loans to non-financial private sector to total loans to non-financial private sector for the 18 countries contained in Jorda et al. (2015).

Figure 1: Weekly U.S. BAA Bond Spreads and VIX (1990-2024)



Notes: Figure provides Moody's Seasoned Baa Corporate Bond Yield Relative to Yield on 10-Year Treasury Constant Maturity and CBOE Volatility Index. Data taken from St Louis Fed and Chicago Board Options Exchange. Information provides for end of each week.

A Taxonomic Approach

- This list suggests *both persistent variety and similarity* across time.
- Perhaps there's a small number of contributing influences, and crises are not all the same, but subsets of them share (one or more) commonalities related to the above list.
- Framework is illustrated in this paper by ten crises, picked based on our historical knowledge to span important categories of influences (we mention additional crises that are similar to each of the 10 we choose). (Our book will contain about 35 crises.)
- We ask a common set of narrative questions that organize our case studies, from which we build a taxonomy (Fig 4).
- We include all types of asset classes in our review of crises because influences are often not asset-specific.

Deep-Dive Approach

- A common flaw in many crisis histories is their 20-20 ex post perspective, almost making fun of pre-crisis risk takers. We want to recapture the ex ante perspective.
- How were people gauging risk, and pricing assets?
- What were they thinking?
- What information did they have?
- How reasonable was the pre-crisis pricing based on the uncertainties they faced?

Table 1: Summary Characteristics of 10 Financial Panics

| | Panic of AD 33 | Mississippi Bubble | South Sea Bubble | Florida Land Boom | US Stock Crash of 1929 | Great Depression Bank Crises | Mexican Crisis | Korean Crisis | Spanish Crisis | US Subprime Crisis |
|---|---------------------------|-----------------------------|--------------------------|----------------------|------------------------|------------------------------|------------------------|---------------------------|-------------------------|-----------------------------|
| Period | Early Roman Empire | 1720s | 1720s | 1920s | 1920s | 1930s | 1994-1995 | 1997-1998 | 2008 | 2008 |
| Initial Affected Markets | Bank Credit/ Italian Land | Sov. Debt/ Stocks/ Currency | Sov. Debt/ Stocks | Florida Land/ Banks | Stocks | Banks | Banks/ Currency | Banks/ Currency | Spanish Land/ Mortgages | US Land/ Mortgages |
| Political Environment | Preserving Imp Expansion | Global Early Modern Comp | Global Early Modern Comp | US 20th C. Democracy | US 20th C. Democracy | US 20th C. Democracy | PRI Dominance | Crony Capitalism | EU and ECB Formation | US 20th C. Democracy |
| Economic Environment | Static/ Declining | Nascent Expansion | Nascent Expansion | New Frontier | Roaring 20s | Global Recession/ Ag Decline | FX Peg/ 1993 Recession | FX Peg/ Product. Slowdown | Cajas/ Low Int. Rates | GSE Act/ CRA/Low Int. Rates |
| Collapse Predictable Pre-Crisis? | No | Yes | Yes | Unclear | Unclear | No | Yes | Yes | Yes | Yes |
| Prior "Excess Price Boom"? | No | Yes | Yes | Yes | Unclear | No | No | No | Yes | Yes |
| Political Risk Subsidies? | Yes | Yes | Yes | No | No | No | Yes | Yes | Yes | Yes |
| Preference, Interest rate, Risk shifts? | No | No | No | No | Yes | Yes | No | No | Yes | Yes |
| Learning about new markets? | No | Yes | Yes | Yes | Yes | No | No | No | No | Yes |
| Endogenous fraud? | No | Yes | No | Yes | No | No | Yes | Yes | No | Yes |

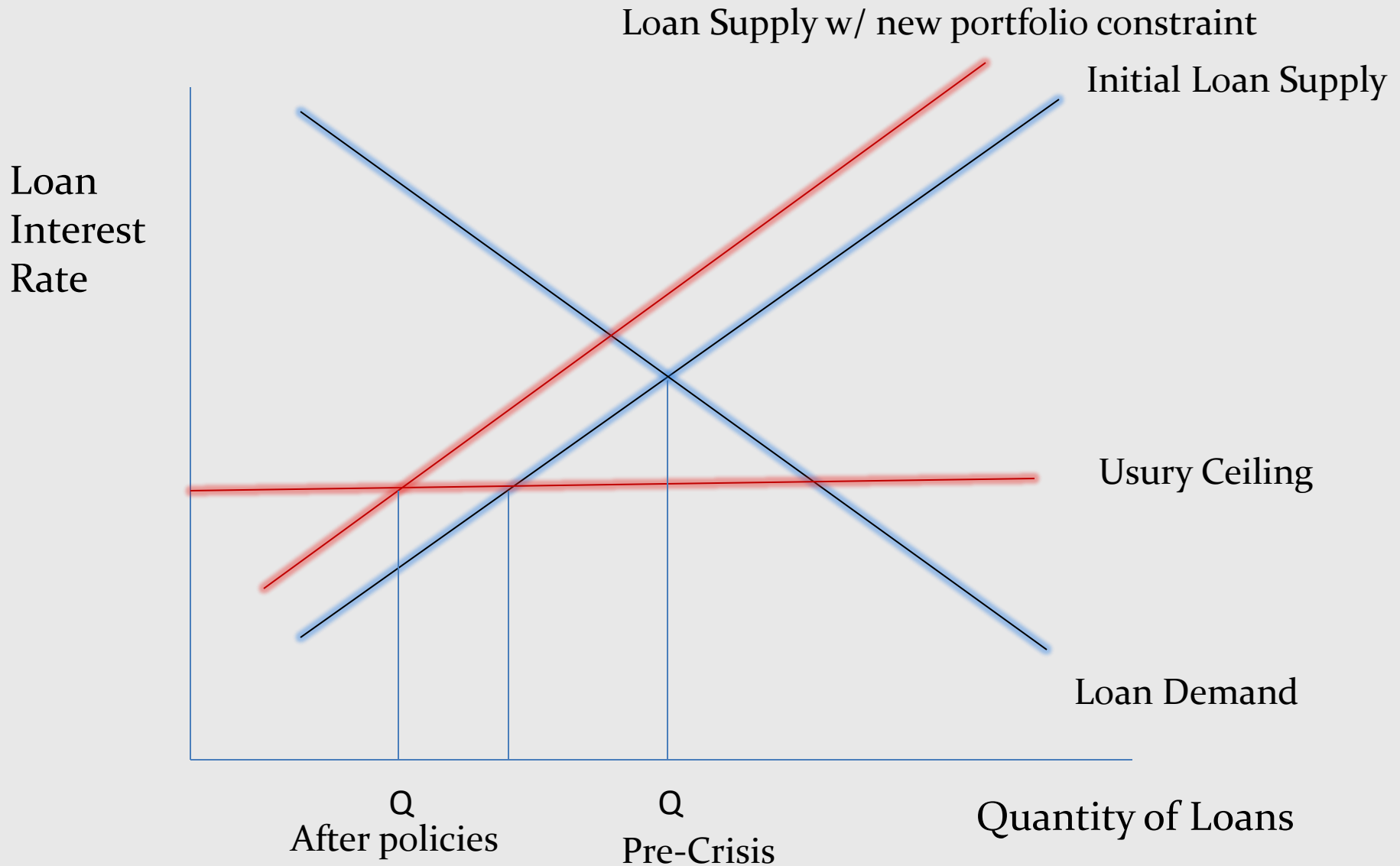
Conclusions

- We develop a new approach to thinking about financial crises and learning about them, one that borrows more from biology than physics, emphasizing adaptation, competition, and innovation (in evolution, mutation, speciation).
- Crises occur for all asset classes (loans, bonds, stocks, currencies, land).
- We posit a taxonomic approach that identifies several key elements of crises in the past, and consider reasons that these elements are not eliminated over time, because risk of crises may be adaptive (learning and innovation, domestic political equilibrium, international competition).
- Taxonomies are useful to capture similarities and differences:
 - Some crises occur after expansions, but not all (Mexico and Korea).
 - Some crises reflected risks that made them predictable, others not
 - Some reflected major shocks (monetary policy), others not
 - Some reflected domestic political economy of risk subsidies, others not
 - Some reflected international competition, others not
 - Some reflected learning about risks related to new markets or products, others not
 - Some reflected systemic fraud, sometimes with government complicity (John Law, Florida), others not
- Our future work will try to build a general taxonomy of crises, looking at covariation among these factors (e.g., political subsidies, predictability >0 ?)

Roman Bank Panic of AD 33

- Roman lending occurred both through deposit banks and money lenders, where the latter was dominated by the political elite. Lending was regulated for political purposes to sustain the Empire and its elite.
- By the time of Julius Caesar, two elements of lending regulation favored the elite (**perhaps to ensure political stability of an expanding empire**): a usury ceiling on loans (which varied over time and by loan type), and a requirement that lenders hold a minimum fraction of their wealth in Italian land.
- Under Julius Caesar, abundant money and low interest, under Tiberius this was reversed and usury ceiling became binding. Some members of the elite (presumably borrowers) pressed to enforce the usury law.
- Collapse of credit and Italian land prices.
- To boost land prices, Senate tightened requirement on Italian land holding to 2/3 of lenders' wealth, but this furthered the decline in credit supply and land prices.
- Tiberius made 3-year loans to lenders at zero interest to end crisis.

Roman Credit Policy and the Panic of 33 AD



What Lessons Would One Expect To Learn?

- There was no repeat of the specific circumstances.
- But capital controls and usury laws are still used as political tools today.
- And the concern about divisions emerging within the Empire as power becomes scattered was real, as subsequent history showed.

Rise of the Modern World

- Modern nations, vying over trade and territory, emerged c. 1600.
- The modern world reflected changes in technology of weapons, shipping, and navigation, which centralized national power.
- A new coalition of rulers and merchants formed to expand the territorial reach of the state. Trade routes expanded as the primary focus of trade shifted from the Mediterranean to the Atlantic Ocean.
- Important tools of conquest and trade expansion included new institutions guiding the mercantilist system: granting of monopoly rights, the chartering of privileged joint stock corporations funded by a wide range of investors, the issuance of new types of sovereign debt, and the chartering of banks.
- The period's financial crises were almost always the result of rising sovereign default risk or outright sovereign default, which was itself reflecting of new international competition (big navies and armies, big fiscal needs).
- Mississippi and South Sea Bubbles occurred in latecomer countries trying to catch up with incumbents.

Law's Adventures in France

- Law goes to France in 1716, engineers a radical restructuring of French public finances, banking, and securities markets, which ended in the Mississippi Bubble of 1719, referring to the stock price rise and fall of the share price of the *Compagnie des Indes* (CDI).
- His System was complex and changed over time. It involved the floating of shares in a joint stock company, various purchases of assets by that company (both land and rights in Louisiana, new trading rights, and government “tax farms”), creation of a bank, issue of legal tender paper money, conversion of government debt into other securities, close government sponsorship of private companies, and coordination of these initiatives through market manipulations.
- Was the pricing irrational? Garber's view is that Law's “Keynesian” ideas were new and untested, and it was reasonable for market participants to price stock based on a belief that his ideas, implemented with the full power of the French state behind him, might have worked (clearly, there is merit to that view).

Was Law's System a House of Cards?

- Must be addressed ex ante. From governance theory standpoint, it was likely to end badly (but governance theory was not well formed then). If governance had been proper, fundamental aspects of System were sound.
- There were several smart aspects to the Law System:
 - Combining tax farms with debt created an alignment of interest: more effort in collection both makes your tax surplus higher and makes sovereign debt worth more.
 - The creation of value via debt restructuring is now well understood
 - Increase sovereign willingness to pay by creating vested interests in future of the company
 - Increase value of debts by coordinating creditors and avoiding holdouts
 - Provide liquidity to the system by replacing illiquid debts with liquid stock
 - Coordinating resources in pursuit of empire's goals (domestic tax collections, but private contributions to the CDI to increase France's global market share) would boost economy and sovereign finances
 - Use of paper money could stabilize prices and save resources

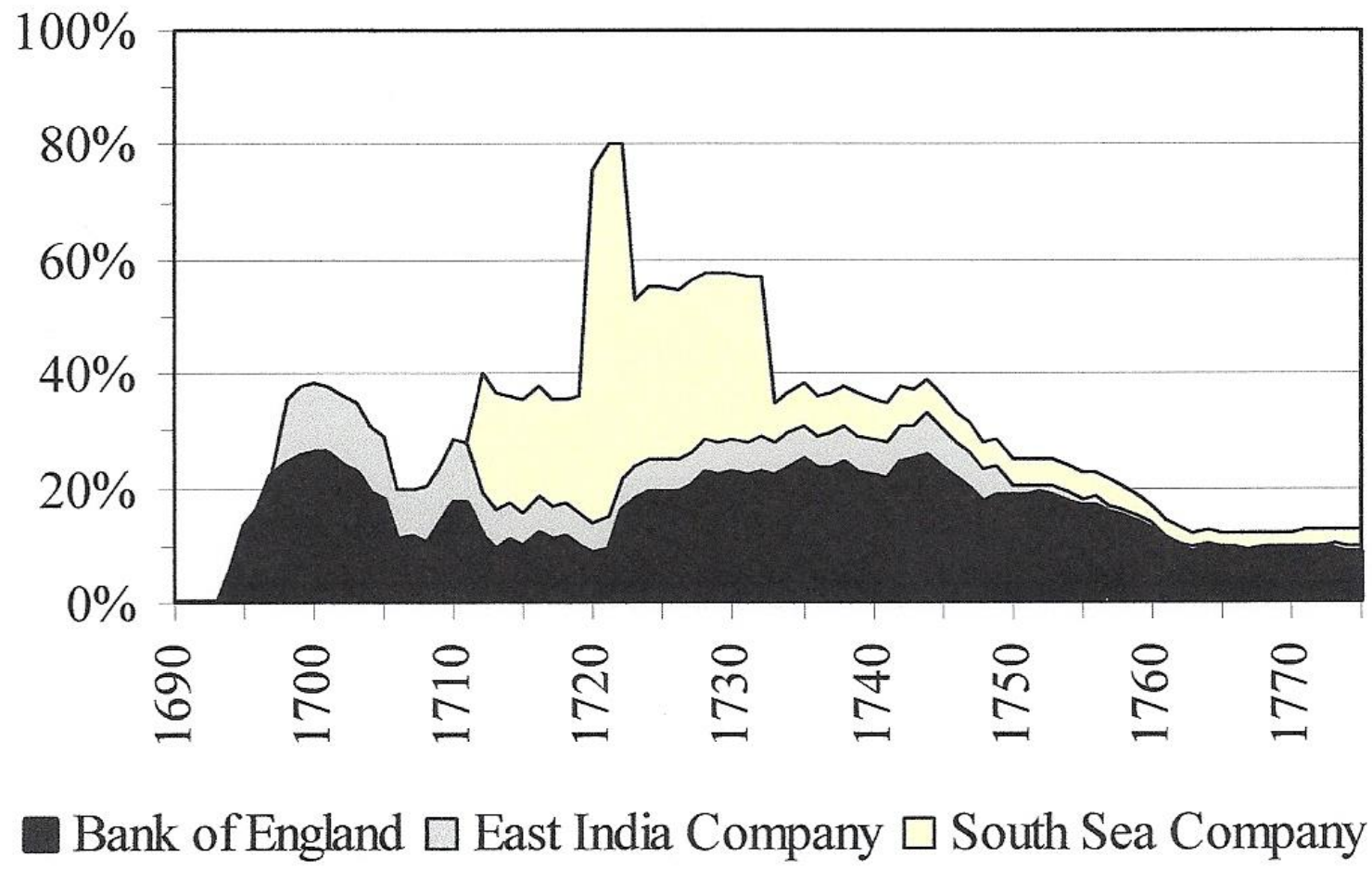
South Sea Bubble

- Glorious Revolution of 1688 begins a period of British war with France and others that will last till 1815.
- A key goal was to improve sovereign creditworthiness. Both the Bank of England (1694) and South Sea Co. (1711) did sovereign debt swaps that raised the value of sovereign debt by enhancing liquidity and credibility of the sovereign. One was controlled by Whigs, the other by Tories.
- The SSC had monopoly rights on trade with Spanish colonies in America in exchange for sharing trade profits with the Crown and swapping SSC shares for outstanding government notes. The swap granted the government a reduction in interest expenses and investors a share of profits of the company's trading agreements.
- War with Spain hurt the SSC, which then adopted a scheme to profit on sovereign debt speculation via various manipulations, which proved unsustainable.

English Public Finance and the SSC

- The South Sea Bubble at the end of the Mississippi Bubble (fall of 1720). The South Sea Co. (SSC) scheme shares many features with that of CDI:
 - Scheme for converting existing sovereign debts into equity.
 - Equity paid via installments (**limits downside, and less immediate cash**).
 - Packages restructured debt with trading rights to attract investors.
 - Peddled political influence (achieved by bribery); a company is essentially a conspiracy to bribe officials to gain advantages). 132 members of Parliament received 1.1 million pounds and 64 Peers received 686,000 pounds in loans against shares from SSC. Such relationships signaled to investors that the SSC had the government on its side.
 - Its share prices surge and then collapse.
- One of many schemes to raise sov. debt value (**BOE, Million Bank, etc.**), essentially a sovereign debt mutual fund, whose stock return is used today by historians as a measure of average actual returns on English sovereign debt. Betas of these stocks were low (about 0.5) reflecting their assets.
- SSC founded in 1711 to buy existing short-term debt of government and then accept lower interest on debt refinancing from government. Capital of 10 million p. in 1715, raised to **£38 million in 1720**, practically the **whole market** on a value-weighted basis, to allow it to purchase all the national debt **not already held by the BOE or the EIC**.

Figure 3. Share of National Debt Held by Each Company



The Alchemy

- Quinn (2008) shows the mechanism of converting sovereign debt into stock in privileged companies (BOE, EIC, SSC) did more than just reduce default risk through a coincidence of interest; the mechanism of the debt for equity swap also **(1) created tangible and mutually advantageous efficiency gains in sovereign debt management that benefited both creditors and debtors, and (2) substantially improved the liquidity for investors in government debt.**
- These two effects were **hugely important**, and had important and lasting effects on England's sovereign debt management that set it apart from other countries in the 18th century.
- System's collapse reflected political competition and corruption, competitive bidding with BOE, as well as participation of unsophisticated investors (a first for many).

Meta-thinking

- Πάν μέτρον ἄριστον. The basic ideas of Mississippi and South Sea schemes were not bad. It **made sense to have the state piggy back on the prior development of successful private markets by using equity for debt swaps to take advantage of the changes in default incentives, liquidity, and efficiency of renegotiation coordination** that come from transforming inflexible and illiquid sovereign debts into equity.
- But it was overdone in the CDI and SSC schemes through overreach in the use of state powers (especially in the case of the CDI) and state greed (especially in the SSC). **This is what pushed the firms to extend their nets to try to bring in so many investors, which pushed them toward installments and the use of credit to pump up demand, which caused the bubbles.**

Overreach Reflected Political Competition

- As Neal points out, **what drove the risk preferences of the time was the competition among sovereigns.** The phenomenon of sovereign refinancing-related bubbles was common to most countries during the frenetic competition, coming out of the costly war episodes, and looking toward continuing competition for trade and territory.
- “The bubbles in France, in England, and then later in the Netherlands and Portugal that occurred in the years 1719-21 were part of the same historical process. The governments in all those cases were in the beginning stages of political modernization, with more limited monarchies and more powerful parliaments, but at the same time financially encumbered with antiquated tax systems and debt instruments. Political advantages were readily apparent to whichever party could tap directly into the financial markets and foreign trade opportunities emerging for northwestern Europe. **The boldest initiatives were taken, as might be expected, by France, the most backward of the mercantile states. The greatest long-run success was enjoyed, as might also be expected, by England, the best endowed of the mercantile states in terms of both financial markets and foreign markets.**” England’s financial system did not collapse in the wake of the South Sea Bubble. France’s did.

Mississippi and South Sea Bubbles: What Lessons Would One Expect To Learn?

- There was no repeat of the specifics. And there were regulations to limit risk going forward: in France an abandonment of banking as a development strategy for over two centuries; Bubble Act in Britain at the behest of the SSC during its decline (forbidding incorporation without Royal Charter). Were those smart? Probably adverse consequences for development.
- Sovereign defaults for LDCs and EMs reflect similarly risky strategies to propel growth quickly as part of the international competition among nations.

Florida Land Boom of the 1920s

Some Not-So-Deep Dives

- “The Florida land boom was the first indication of the mood of the Twenties, the conviction that God intended the American class to be rich.” -Galbraith (1955)

“Dead subdivisions line the highways, their pompous names half-obliterated on crumbling stucco gates. Lonely street lights stand guard over miles of cement sidewalks, where grass and palmetto take the place of homes that were to be.” -Villard (1928)

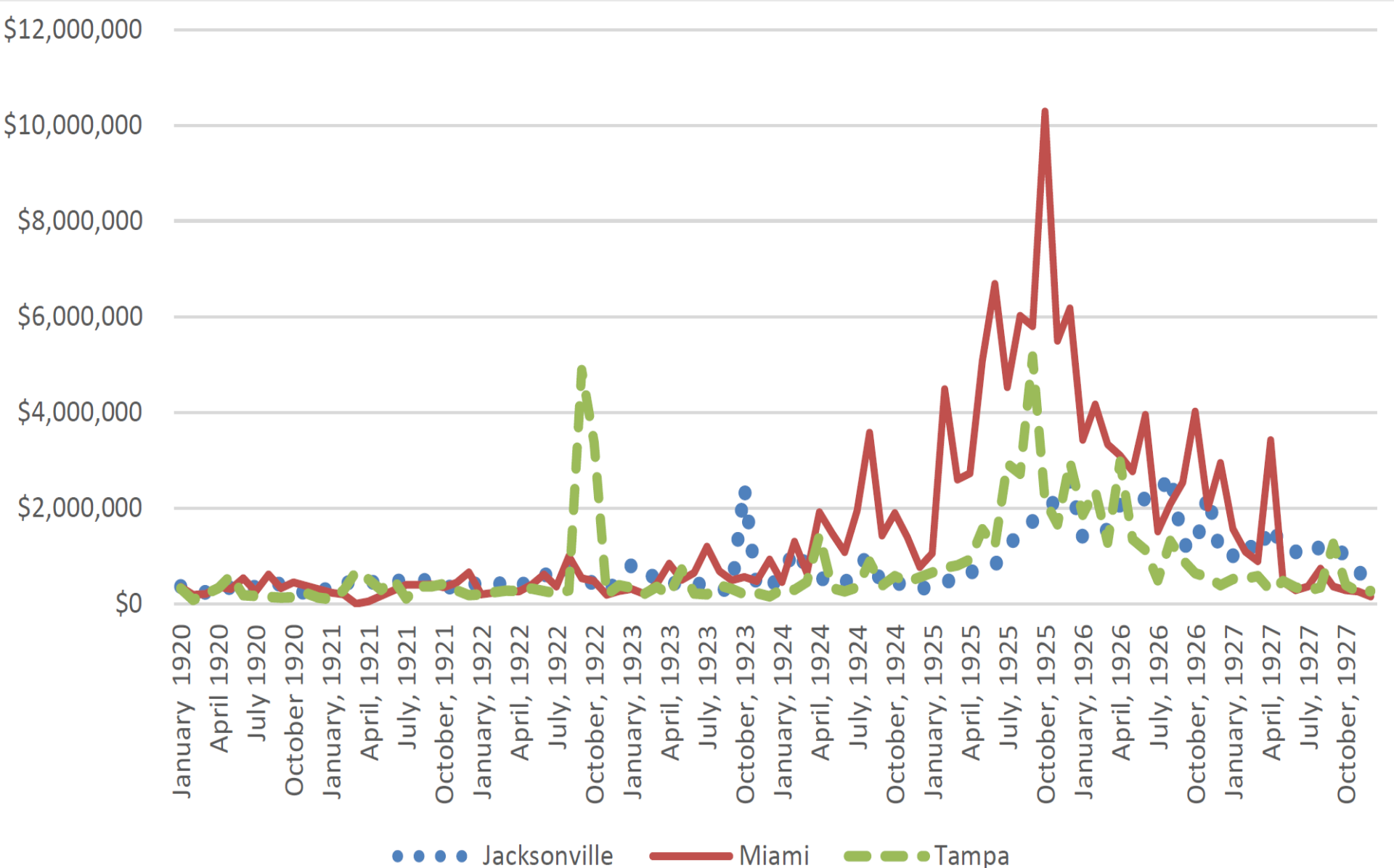
Florida Land Boom and Bust of 1920s

- Florida in the 1920s is the first national land boom, with people purchasing homes sometimes from long-distance based on advertisements and aggressive sales tactics based on sketches.
- Railroad boom and new technologies to access Florida and develop its land made it attractive to middle class.
- Lack of aggregation of data across developers and across locations limited market analysis.
- New technologies for creating usable land affected supply unpredictably, also made analysis difficult, given lack of experience with anything like this before.
- Bank funding through deposits was widespread, but bank failures were limited to banks with developer conflicts and regulatory corruption was important in allowing fraud.
- In general banks maintained conservative postures ex ante and losses were limited ex post.

Basic Facts of the Florida Land Boom of the 1920s

- 20+ million lots were for sale in Florida
- Anecdotes of land prices rising by 1000-fold
- Nearly \$900 million in deposits flowed into Florida from investors throughout the nation
- Crescendo of the nation-wide housing boom that decreased investment during the Great Depression
 - e.g., Gordon (1951); Field (1992); Brocker and Hanes (2014)
- Over 10% of Florida's banks suspended or failed in 1926
 - Almost all associated with Manley-Anthony chain

Monthly Building Permits By City



Miami Beach, Florida

America's Winter Playground

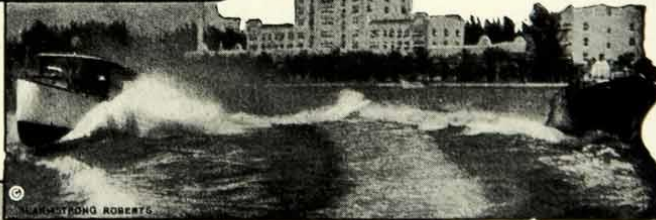
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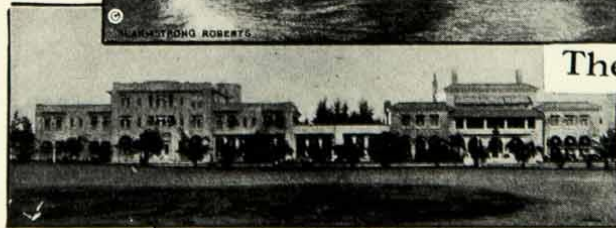
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Geo. S. Krom, Mgr.
Opens Jan. 2nd

The Flamingo
C. S. Krom, Mgr.
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The Lincoln

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Mgr.
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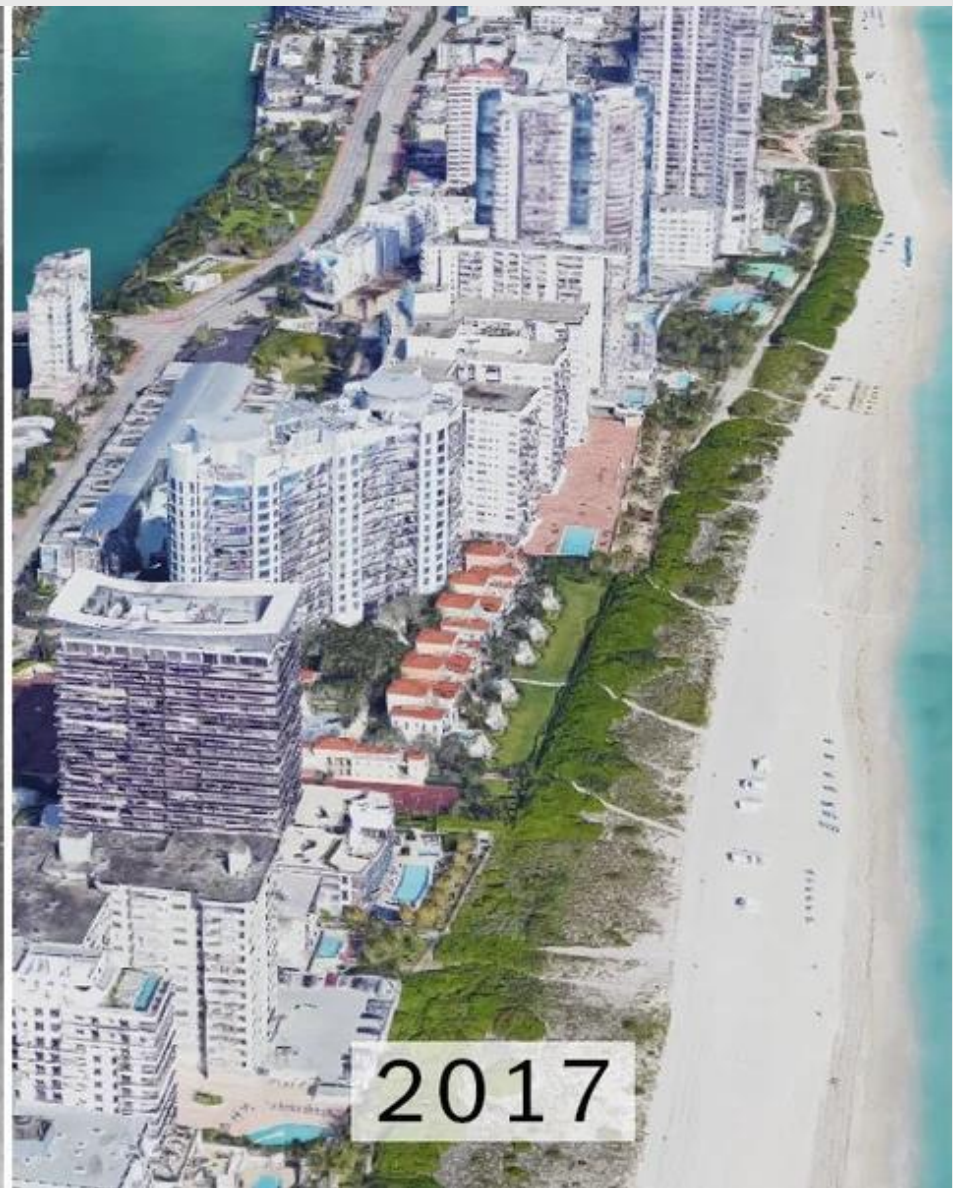
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Previous Literature

- Mostly focused on fantastical narratives of developers, land sales, and price growth
 - e.g., Ballinger (1936), Turner (2015), Knowlton (2021)
- Vickers (1994) shows that developers bought interests in chain banks and extracted loans
- Frazer and Guthrie Jr. (1995) argue that banks were investing deposits as they would in any period

Calomiris-Jaremski JFI Paper

- Seeks to understand the boom's foundation using a range of narrative and empirical evidence
- Determine whether people acted reasonably (under incomplete information) or increased their tolerance for observable risk?
- Focus on banking market as fueling the boom and concealing risk. Did banks or their funding sources change their tolerance for risk in Florida?

Conclusions

- Evidence consistent with rationality under incomplete information, process of learning about market and technology, and special circumstances of endogenous fraud.
- Aggressive advertising and sense of urgency led to purchases from long-distance, often sold sight unseen; analysis of fundamentals for market very challenging.
- Risk taking seems concentrated in Manley-Anthony chain
 - Developers bought into the chain to obtain loans
 - Bank regulators allowed undiversified lending and tunneling of assets to insiders
 - Key: Maintained low observable risk characteristics

What Lessons Would One Expect To Learn?

- Banks in general had remained conservative during the boom. Failures were limited to corrupt chains run by developers who lost their shirts as equity investors too. Bank regulators were complicit and corrupt, so there is a lessons there (but recent experience in U.S. and elsewhere suggests regulation remains politicized for a deep reason).
- It was hard to gauge price of land due to limited data and experience, and inherent challenges of identifying supply and demand in land markets (no short selling). Ultimately, places like Boca Raton were great places to retire.

U.S. Stock Boom of the 1920s and Crash of 1929

Was 1928-1929 a Bubble?

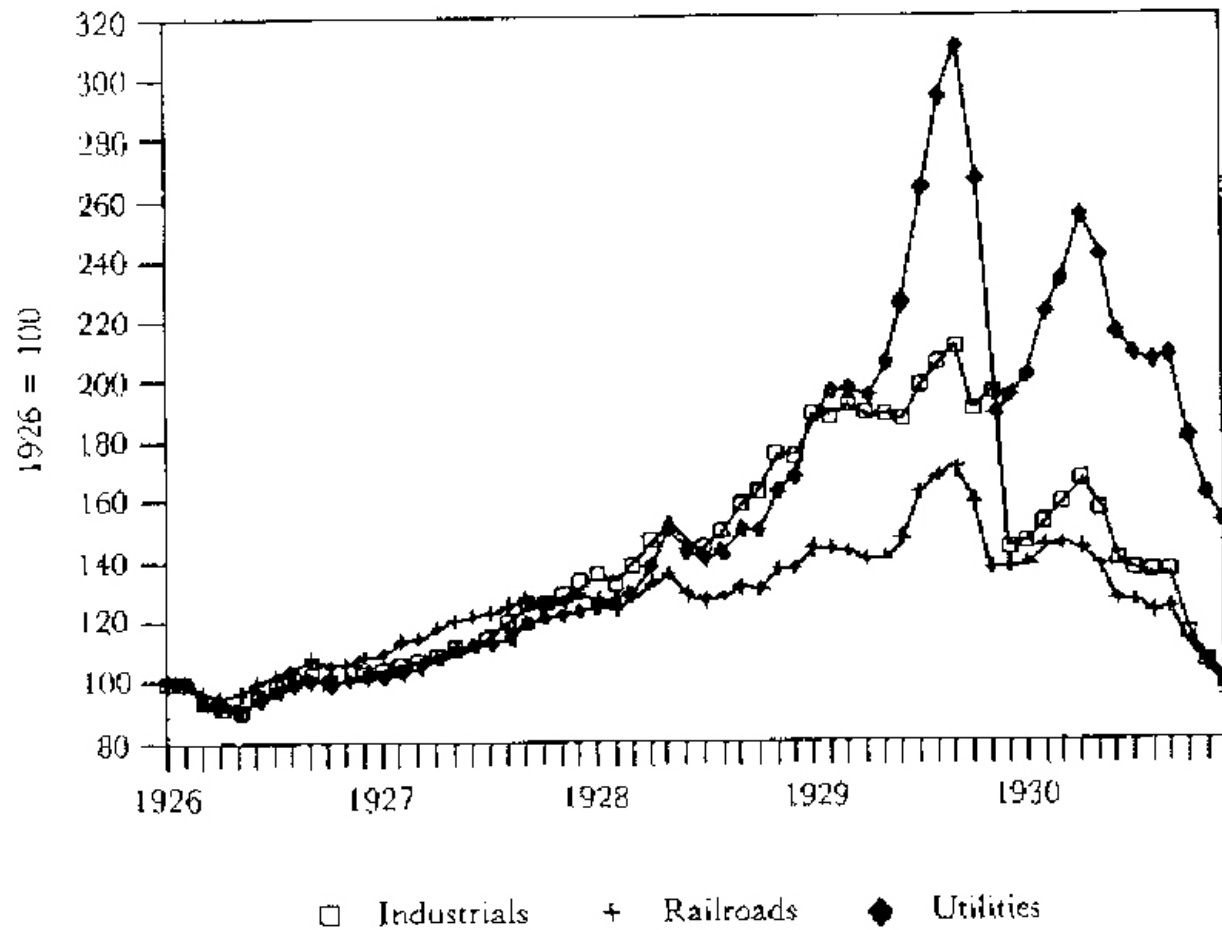
- Some people (Allen, Galbraith, Kindleberger, Rappaport and White) argue that the **February 1928-October 1929** rise was a “bubble” (a rise not justified by fundamentals, defined as reasonably expected earnings and dividends), and that the crash of October 1929 was an inevitable recognition of the folly that had preceded it.
- Unlike the South Sea Bubble, in which “smart” profited from inexperienced investors profitably, many famous economists and valuation experts argued during the run-up, immediately after it, and still to this day, that the increase during 1928-1929 was warranted by fundamentals (new technologies like aviation, electricity, radio, movies, GM’s way of making cars, etc.; new managerial organization structures; stabilizing effects of the new central bank’s policies; new communications and transportation to improve resource utilization and integration of the economy). The policies that caused the crash of 1929, and its aftermath, changed fundamentals, dashing expectations of stable growth.

Literature on Crash of 1929

- Federal Reserve consciously worried over the stock market call loan market, and employed monetary policy (successfully!) to rein in speculation.
- Nicholas finds cross-section of returns reflects citation-weighted patenting . (Cross-section differences could mean relative but not absolute pricing was reasonable.)
- Field argues innovation was in fact extremely important.
- Kabiri finds prices were consistent with professional stock valuation modeling (not driven by new entrants).
- But Rappaport and White lending correlated with price changes, and Calomiris and Oh find that NYC banks' stock prices were likely too high (given CEOs' decisions to delist from NYSE).
- Pricing excesses during the boom thus remain unclear.

Figure 2

Common Stock Indices



Source: Board of Governors of the Federal Reserve System (1943).

Conclusions

- The market did not just bid up stocks, per se; there was lots of cross-sectional variation. Sophisticated valuation modeling was consistent with prices, subject to disagreements about earnings. Unlike Mississippi Bubble, disagreement is about earnings growth; some (including managers) see the implied assumptions as unrealistic, but others (with impeccable credentials as economists) say that those managers are not seeing the bigger picture of why the era was unique, and why earnings growth should continue.
- The era was actually unique in terms of innovations. At the least, Fisher's and others' views were reasonable, and once one takes account of **positive feedback**, they may have been correct. They were reflected in cross-section of returns.
- Shock reflected Fed desire to deflate the stock market.
- Market recovery in 1930 indicates further than there were persistent, sophisticated views (not easily spooked) in support of high prices, and that the disagreement was about earnings growth.

What Lessons Would One Expect To Learn?

- Given that it remains unclear whether the stock boom of the 1920s was excessive and destined to crash, it is hard to argue that one should learn something about pricing from this example.
- The most uncontroversial lesson seems to be that monetary policy tightening was unwarranted and very damaging. But note that many people today are arguing that macro-prudential regulation should try to rein in asset market bubbles (although it may not be so easy to detect them). Are those people obviously wrong?

U.S. Failure to Learn from Banking Crises of the pre-Depression Era?

Panic of 1907 leads to creation of National Monetary Commission (1910).

It commissioned many books that performed detailed analyses of U.S. in light of other countries' banking systems, especially Canada, Britain, and Germany.

NMC clearly understood central role of unit banking in causing U.S. crises.

Industrial organization change was not on the menu, so recommends creation of Fed to mitigate liquidity risk within the flawed system.

Mutual Knowledge c. 1910

- U.S. National Monetary Commission: three volumes devoted to Canadian banking, extolling the virtues of its branch banking system. (They do not propose imitation, but rather to create something Canada did not have: Federal Reserve System.)
- Canadian banker training manual (Patterson 1917) advises students not to look for wisdom south of the border.

Ex Ante U.S. Known To Be Unstable

- Capital ratio and cash ratio were higher in U.S. than in Canada. (For a reason! Unit banking.)

Cash Assets/Assets (1904):

US 0.45 Canada 0.27

Equity/ Assets (1904):

US 0.20 Canada 0.19

Great Depression Bank Crises

- Bank failures and losses (while not large by postwar standards of crises) were largest in over a century in US (very different from pre-WWI panics).
- Monetary policy contraction was the primary shock.
- Fundamental weakness, not panic, drove bank failures and contraction of credit (reflecting **unit structure**).
- Fundamental weakness reflected two aspects of unit banking system in US: lack of diversification of bank portfolios, and pyramiding of reserves (with consequent liquidity risk). Both were important in producing failures and contraction of credit.
- This explains why US and Canada, with similar GDP paths, had very different banking experience.
- Crisis ended through combination of examination and recapitalization (after March 1933).

Why Didn't the Fed Respond More?

- Fed philosophy and Fed targeting:
 - Allow firm and bank failures, which is market discipline (“liquidationist” thinking).
 - Real bills cyclical adjustment **wrongly focused all three policy (OMO, discount rate, acceptance rate) tools similarly** on targeting borrowed reserves, interest rates, stock market, and gold flows (“rules of the game”). Also, seasonal adjustment. This was **same reaction function used in 1920s (although gold reserves became a special concern in 1931)**.
 - Gold reserve was a factor (at least in Fed thinking) in 1931 (Congress removed that factor somewhat in 1932).
 - F&S view on Strong's death no longer accepted (Wicker, Wheelock, Meltzer).

What Lessons Would One Expect To Learn?

- Primary lessons were that unit banking was a socially costly source of banking instability, and that monetary policy should be smarter.
- Of course, the first was a lesson that had been clear for decades (1873, 1884, 1890, 1893, 1896, 1907, 1920s). As many historians have showed, political interests that favored unit banking rather than economic efficiency preserved unit banking. (Agricultural landowners favored it.)
- The lessons chosen to be “learned” was that branching and consolidation should be stopped, and Fed Board was charged with monitoring governance.
- Fed was also freed forever from gold standard discipline (even more discretion!)

Deposit Insurance History

- Deposit insurance exists in most developed financial systems
- Studies consistently find that it leads to risk taking, and is an important cause of banking crisis pandemic
- Robust finding, but leads to no change in policy
 - Have studies mis-measured the effect of deposit insurance? Confusion about causal chain?
- Can we identify mechanism through which deposit insurance produces social costs?
 - Do depositors ignore warning signs at insured banks but not at uninsured banks?
 - Does deposit insurance create problems in some environments more than in others?

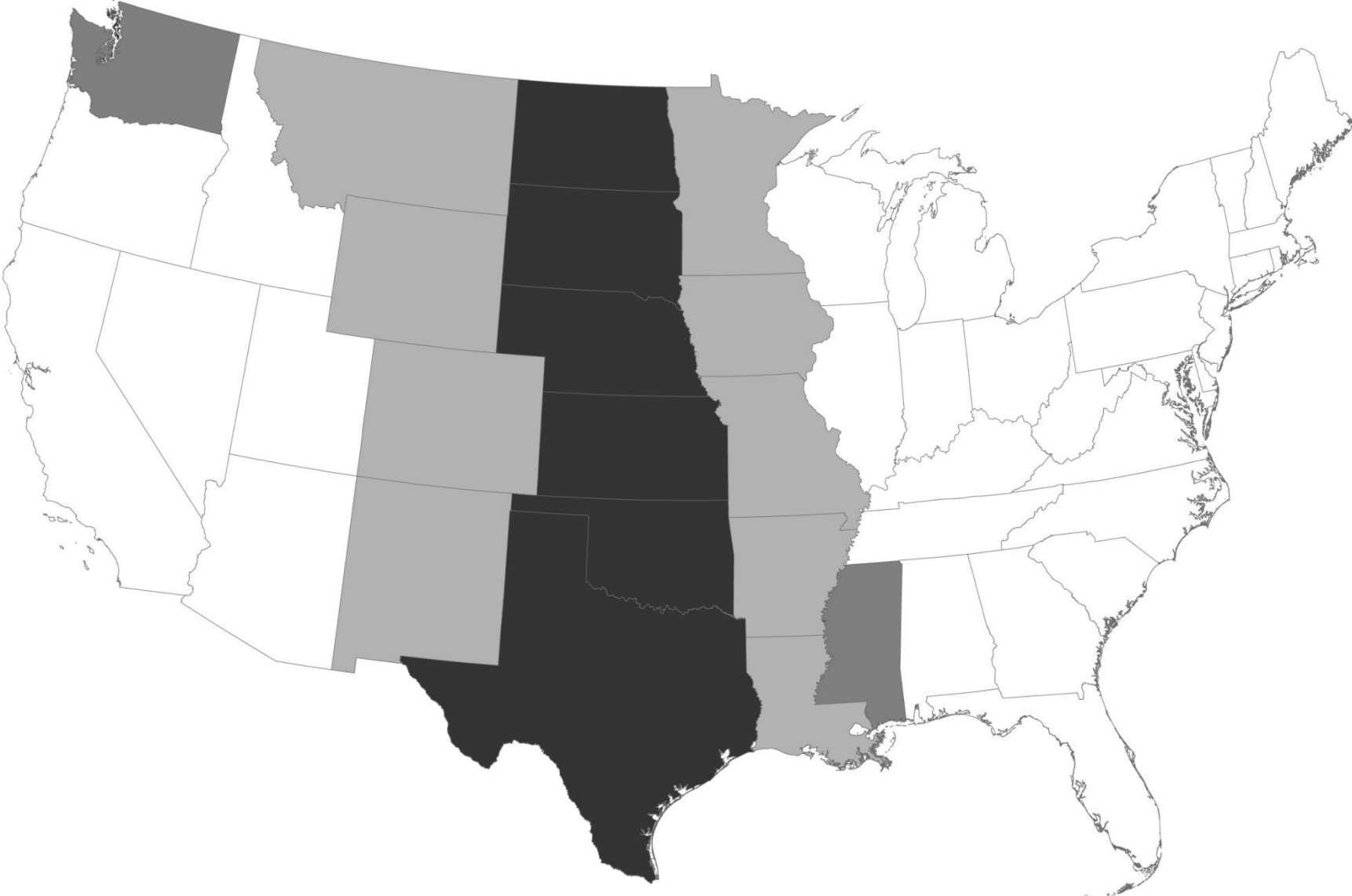
Preview of Conclusions about Pre-Depression Period

- Deposits shifted from uninsured banks into insured banks, resulting in an overall expansion of loans
- Insured banks took on more risky portfolios
- Deposit insurance reduced depositor discipline
- Effects strongest in places where WWI agricultural price increases had greatest impact
- Insurance systems saw large losses after 1920 and all collapsed

State Deposit Insurance After 1865

- States where small banks were plentiful (White 1983)
 - Oklahoma in 1908
 - Texas and Kansas* in 1909
 - Nebraska in 1909 (fixed in 1911)
 - South Dakota in 1909 (fixed in 1916)
 - Mississippi in 1914
 - Washington* in 1917
 - North Dakota in 1918
- Surrounding states narrowly defeated legislation

Deposit Insurance States and Border States



FDR on Deposit Insurance (1932)

FDR was aware of the 1920s experience.

His 1932 letter to the *New York Sun* stated that federal deposit insurance...

“would lead to laxity in bank management and carelessness on the part of both banker and depositor. I believe that it would be an impossible drain on the Federal Treasury.”

But FDR acquiesced to enact FDIC in 1933 as a logrolling deal to get other things he wanted...

Post-1980 Banking Crisis Pandemic: Two Gorillas

- Bank protection, mortgage risk subsidization are the two gorillas driving current systemic risk. (Additionally, there are crony industrial credit subsidies in autocracies.)
- DI and RE spread post-WW II and are associated with increased frequency and severity of bank crises. (Contrast 1874-1913 with 1974-2013 – crises now 10 times as frequent and five times as severe).
- Evidence on political economy of DI adoption (Calomiris-White, Demirguc-Kunt, Kane and Laeven, Calomiris and Chen).
- Evidence of DI's and RE's impacts on banking risk.

Mexican Twin Crises of 1994

- Was in many ways a replay of Chilean twin crisis of 1983: unsustainable peg (based on fiscal and monetary policy) combined with bank insolvency produced by protection of banks that engaged in huge insider lending.
- Reflected banking system weakness from 1990 privatization, and need for government revenue, which led to the creation of *100% liability insurance* and lack of actual bank recapitalization.
- Reflected monetary expansion (sterilization policies in wake of outflows), and fiscal expansion leading up to election of 1994.
- All of this was central to PRI's attempt to preserve power, which ultimately failed in the wake of the crises.
- Opening up to foreign banks also reflects lessons learned.

Korean Twin Crisis of 1997

- Not a fiscal or monetary expansion, and unlike Mexico no apparent over-valuation (based on looking at time series of real exchange rate).
- Crony capitalism maintained through chaebols, banks, and government relationships, with subsidized funding through banks and international bond markets, which undermined market discipline over industrial competition, and bond and bank funding, and permitted productivity growth decline (Balassa-Samuelson, which had been apparent from ~1992).
- Huge contingent liability for cleanup explains combination of dramatic bank losses and exchange rate collapse.
- Major corporate governance reforms in 1999 reflect lessons that seem to have been learned.
- But lesson wasn't learned by OTHERS! Greece in 2010.

U.S. Subprime Crisis of 2008

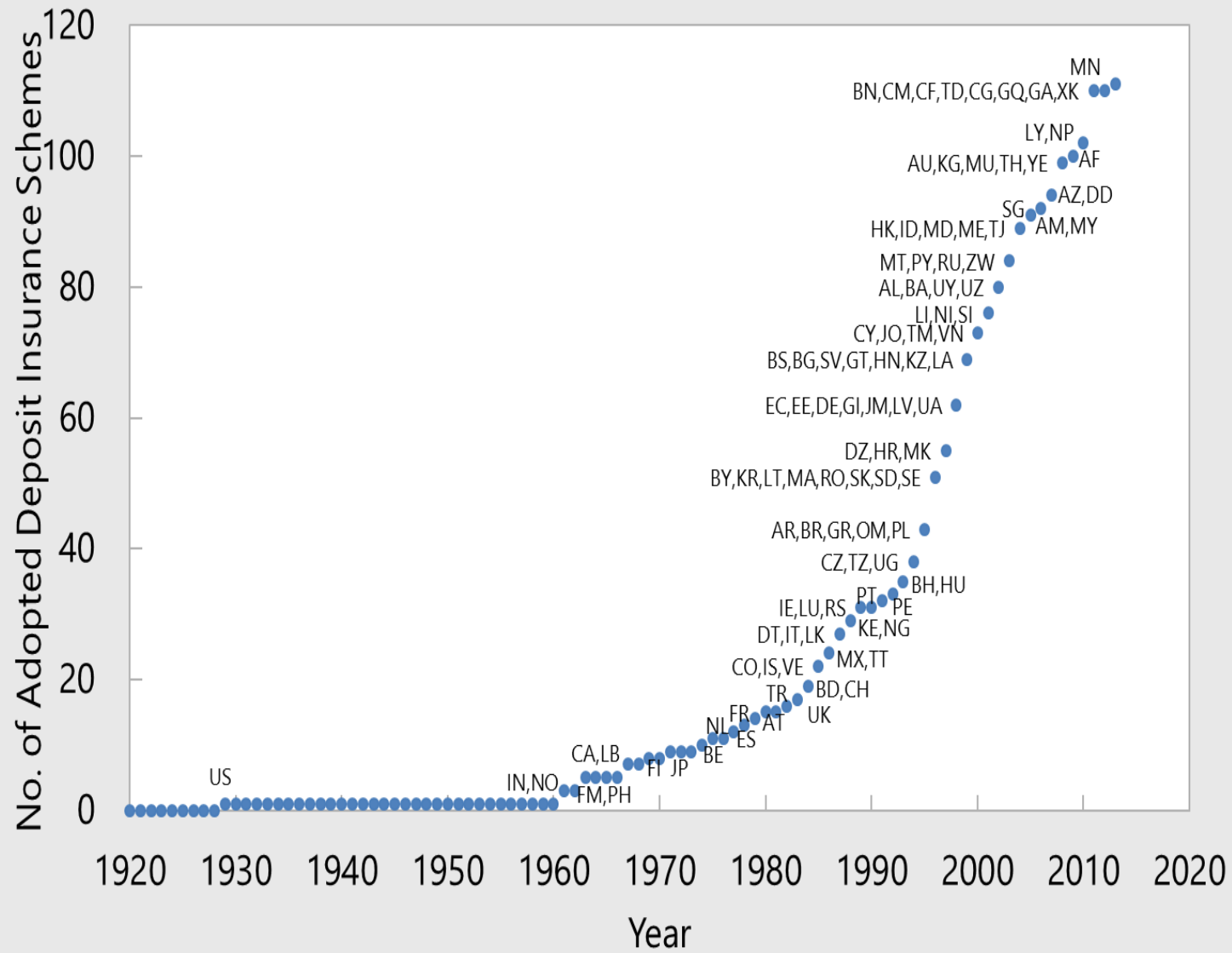
- Ultimate causes reflected a combination of politically driven mortgage credit subsidies (due to a combination of GSE policies, CRA policies, and regulatory rules that permitted this risk to form), as well as expansionary monetary policy, which was a major deviation from implicit Taylor rule policy of 1992-2001.
- Problem was purposefully misdiagnosed by government, and regulatory response also did not focus on these causes (no credible mortgage risk reform, no credible bank capital ratio reform, and no systematic monetary policy reform), but lots of *appearance* of reform.
- The problems of bank protection and mortgage risk subsidization and lack of systematic monetary policy have deep political roots, are interrelated (Calomiris and Chen 2023), and are occurring in much of the world. A government that opposes them probably would not survive politically.

Spanish Banking Crisis 2008

- Interest rate reductions affecting risk premia in Spain due to creation of euro.
- Between 2000 and 2007, the cumulative growth of mortgages to Spanish households exceeded 250%, and lending to the aggregate real estate sector rose to 513%.
- Cajas de ahorros saw an increasing role in the booming housing market, which reflected the fact that regional and municipal governments controlled the lending by these entities. The cajas enshrined regional and municipal political representation in their governance. Political favoritism of high-risk mortgage borrowers was a key element.
- Cajas politically motivated mortgage risk subsidies were the primary contributor to systemic risk.

Motivation

- The pandemic of crises since the 1970s coincides with the global spread of deposit insurance, but causality is unclear (instability could drive deposit insurance).
- Studies uniformly find that having more insurance makes crisis risk greater.
- What about the mechanism? It should be purposeful choice of risk, which implies something about loan portfolio, L/A, D/A.
- Another major contributor to systemic risk has been mortgage lending. Is there a connection between deposit insurance generosity and mortgage lending?



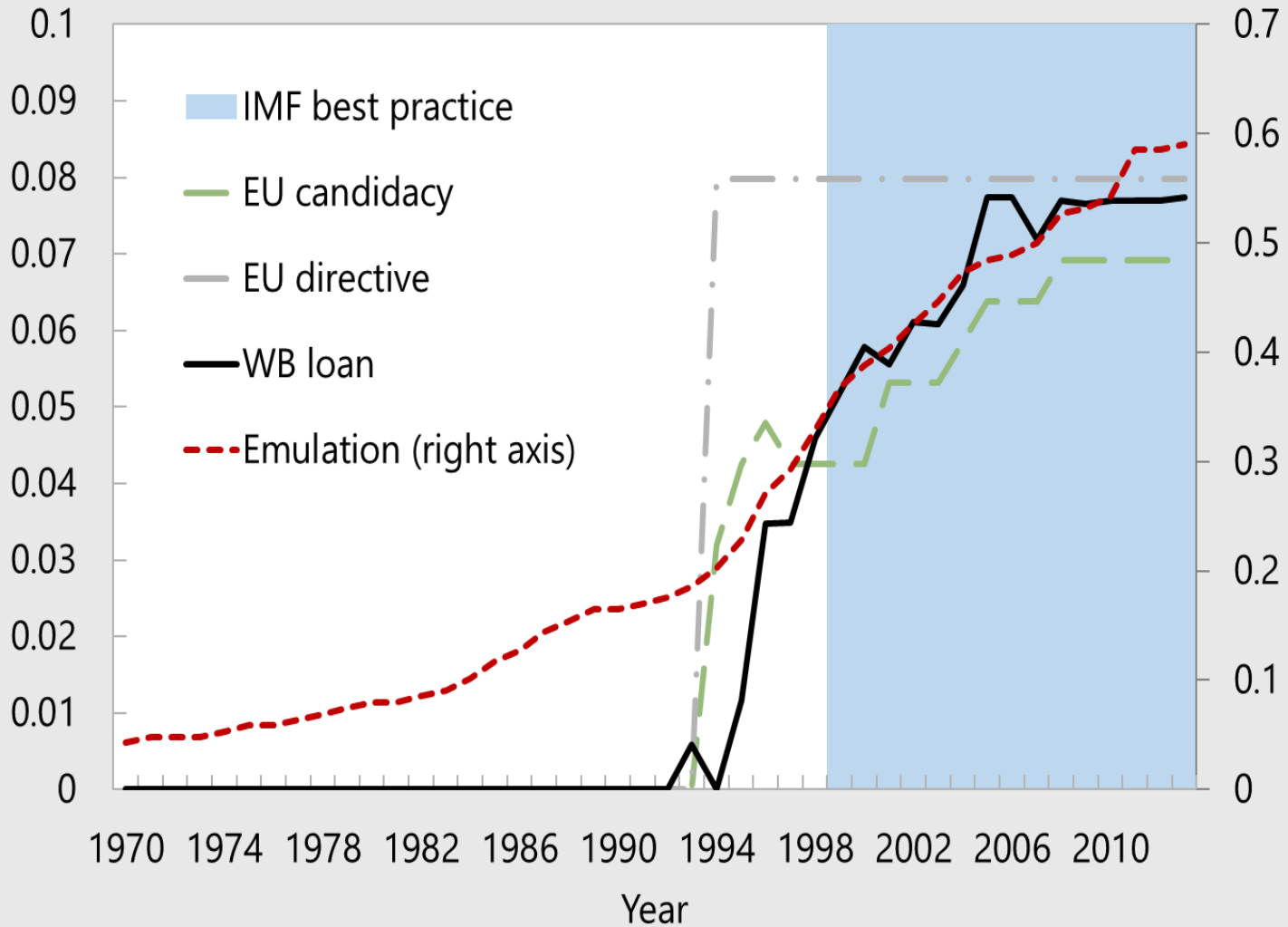
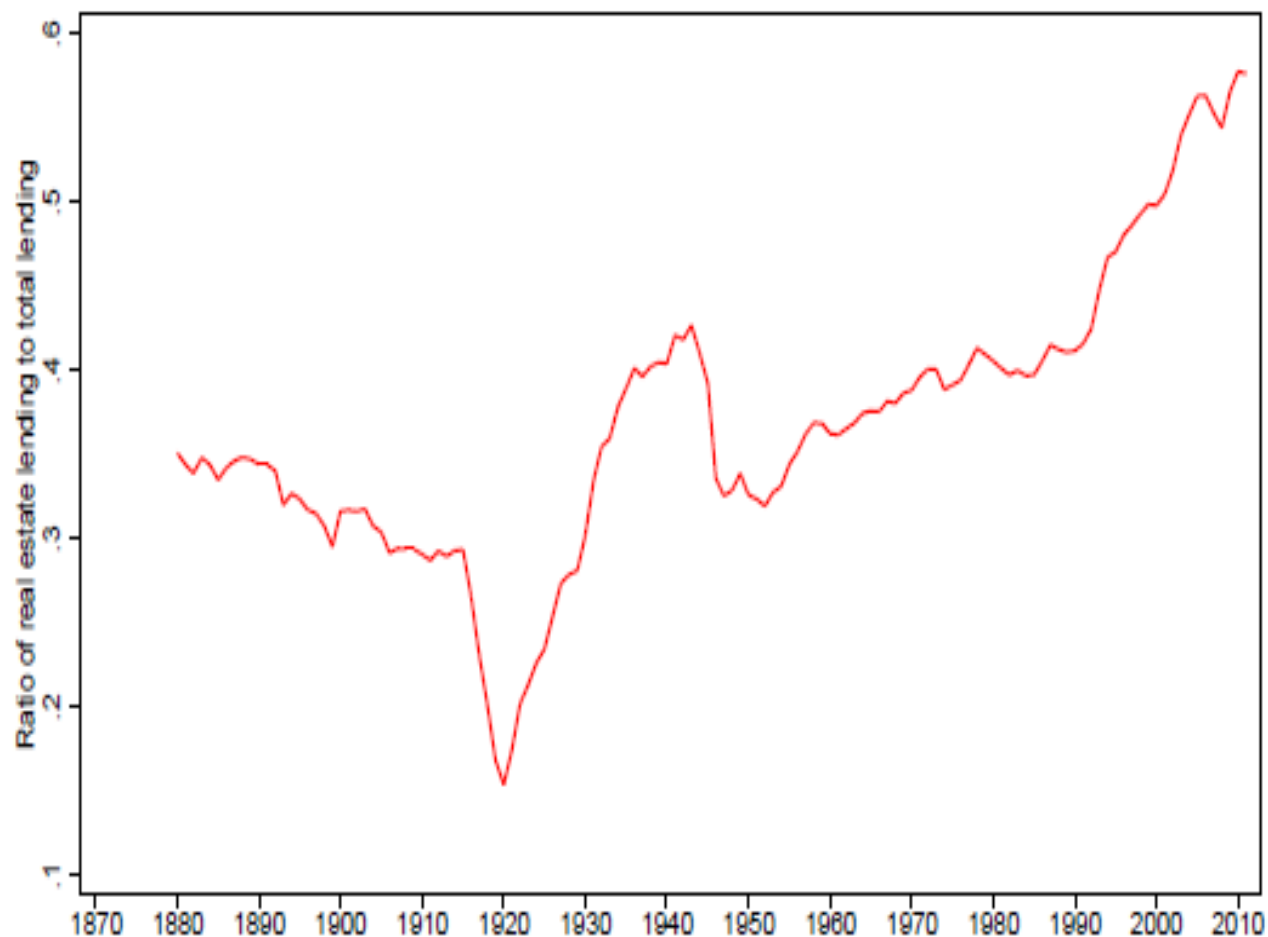


Figure 4: Aggregate share of real estate lending in total bank lending



Notes: Share of real estate lending to total lending averaged across 17 countries. Before 1880 the sample size is too small for use. See text.

Conclusions

- Exogenous (external political) pressures that increase deposit insurance (adoption and generosity) predict increase in Loans/Assets Mortgages/Loans, and Debt/Assets for Emerging Market countries, but less clear results for developed economies, especially with respect to L/A and D/A.
- Same results relative to GDP for loans and mortgages.
- Predicts frequency and severity of crises, too.
- All of these results are economically large, not just statistically significant.
- This provides evidence on purposeful risk-taking mechanisms linking expansion of deposit insurance and banking crisis risk.
- Interesting evidence suggesting that the two gorillas of systemic risk may be connected through a political rent sharing equilibrium.

What Lessons Would One Expect To Learn?

- Mortgage risk subsidies and deposit insurance continue to be major features of governments' toolkits.
- It seems unlikely that the US or other countries will see a change in this political equilibrium anytime soon.
- For example, we are seeing current proposals in the US to expand mortgage risk subsidies to deal with the current problem of expensive housing.

Summing Up

- A Taxonomy of Crises emerges from our Deep Dives, where crises aren't all the same, but can be grouped according to the factors that produce them. Crises are not going to disappear.
 - **Domestic political economy** (Calomiris-Haber on the Game of Bank Bargains: design a fragile system may be the most effective way to get rents). **Mortgage risk subsidies; Dep Ins. (Figs 3, 2)**
 - **Geopolitics** (countries may take risks on purpose because of competitive pressures to catch up, where the cost of failing to catch up may be catastrophe for the state). **Early Modern Europe; EMs.**
 - **Learning/innovation advantages** (crisis-avoiding regulation may prevent socially beneficial innovation). Shares view that risks are at least sometimes new. **Florida in 1920s, stocks in 1920s .**
 - **Extent of risk may hard to see ex ante**, especially in a free, market-based society (fraud as magnifier that is very costly to prevent ex ante). **Florida in 1920s, banking crises.**
 - **Market economy/ fiat money** may create sudden shocks that sometimes contribute to crises, perhaps even predictably and wrongly, but which are part of beneficial system that may be hard to improve. **Monetary policy in 1929, 2002-2007. (Fig 1)**