Thinking Historically about Banking Crises and Bailouts

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What does it mean to “think historically”?

First, and most obviously, it means noticing basis facts.

Banking Crises Vary over Time and Space

Some times were relatively crisis-free worldwide (1874-1913) despite high economic volatility, and abundant provision of bank credit (if crises are defined properly).

Crises varied: In 1874-1913, of 10 crises, 5 were US panics with little failure, and 4/5 of the others were insolvency crises related to real estate problems – Argentina 1890, Australia 1893, Italy 1893, Norway 1900.

The period 1980-2013 is an unprecedented crisis pandemic, with 10 times more crises that are 5 times more severe than 1874-1913. (US Great Depression 2.5%)

Some countries have been crisis-free: Canada, a volatile commodity exporting country, with more banking/GDP, has never suffered a severe banking crisis, while the US has suffered 17 (12 since 1840).

Ahistorical Banking Crisis Modeling

Banking crises occur when a large enough observable shock occurs.

Because banks fund opaque assets with demandable deposits, depositors can withdraw funds from banks with increased insolvency risk.

Banks cut lending in response to deposit outflows and hope to restore confidence through lower asset risk and lower deposits/assets.

Banks may be forced to suspend or to fail if they cannot restore confidence fast enough.

Ahistorical modeling of banking crises is potentially useful, but incomplete. It does not explain why some countries have many, and others none.

Historical thinking **verifies** modeling assumptions, **notes** model incompleteness, **identifies** additional causes of banking crises, and **explains** why some countries tolerate avoidable crises.

Identifying Causes

Historical Thinking ***Identifies Causes***

Causes of banking crises:

1. Political shocks (e.g., wars, expropriations).
2. Industrial organization (e.g., U.S. unit banks)
3. Safety nets that undermine discipline.

Identifying Causes: Political Shocks

First Major Banking Crisis: Panic of 33 AD

What caused Rome's Panic of 33 AD?

Enforcement of usury law => credit crunch

Tacitus is the only detailed source.

(The web is full of different versions of a made-up story about this panic, all of which are traceable to an attempt at humor by a University of Minnesota history professor at the turn of the 20th century, which he transparently modeled on the Panic of 1907.)

What happened in 33 A.D.?

Due to debtor lobbying, unenforced usury laws were suddenly enforced, although notice allowed illegal credit to be extinguished over 18 months.

Total credit supply fell due to cut in maximum rate, as banks refused to rollover loans at low interest rates.

Land prices of Italian estates declined, as borrowers who could not repay their debts scrambled to sell land to fund the retirement of debts that were due.

What happened in 33 A.D.? (Cont'd)

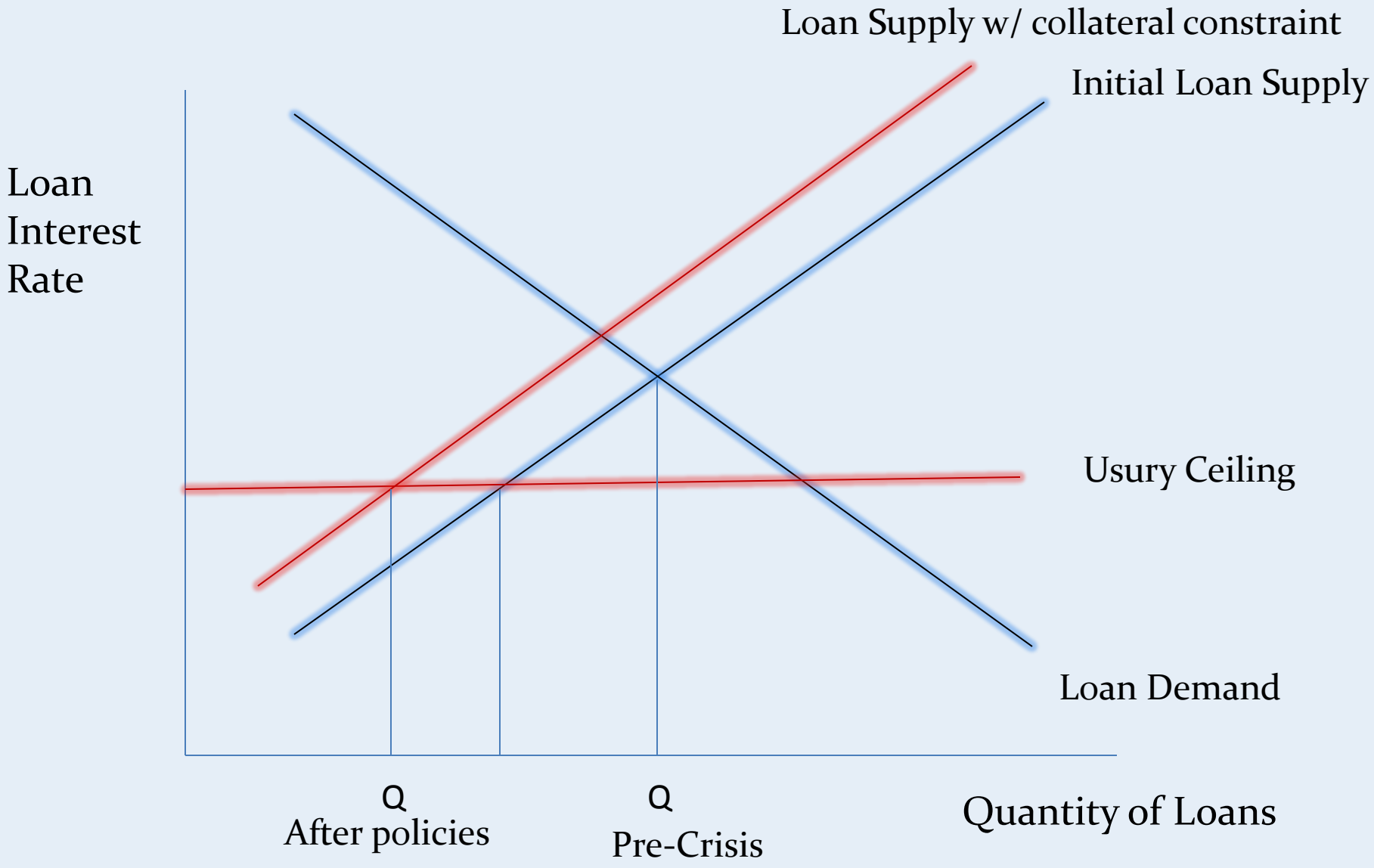
Senate responded by adding a requirement that banks require Italian land as backing (meaning unclear). This was meant to bolster land prices.

Credit supply was further reduced by this new constraint on how credit could be supplied.

Land prices declined further and bankruptcies increased.

Emperor Tiberius intervened to provide loans to Roman banks at zero interest for three years, requiring double collateral in land (which was not strictly enforced). This ends the crisis.

Roman Credit Policy and the Panic of 33 AD



America's First Banking Bailout: Crisis of 1861

Fiscal shock of unanticipated Civil War costs, reluctance to tax. Use of banking syndicate to absorb government debt issues reflected safety in numbers belief.

December Report caused banks to become insolvent, produced runs and suspension.

Safety in numbers belief was born out by Legal Tender Act, which bailed out banks in February 1862 by redenominating their deposits, establishing new precedent for permanent legal tender fiat currency.

Identifying Causes: Unit Banking

Why Was Historical U.S. So Unstable?

Equity/Assets and Cash/Assets higher in U.S., but Canada has no crises. U.S. had **unit banks**, Canada has nationwide **branching banks**. Unit banking was preferred by **landowning farmers** as a means of insuring credit supply by tying banks to local economy.

	U.S. (1904)	**Canada (1904)**
Cash Assets/Assets	**0.45**	**0.27**
Equity/ Assets	**0.20**	**0.19**

Six National Banking Era Crises

National Banking era crises occurred at peaks, **iff** liabilities of failed businesses increased 50% and stock market fell 8%.

Small negative net worth of failed banks (0.1% in 1893 highest).

Three factors are needed to explain the U.S.'s unique experience with panics during this era: (1) asymmetric information, (2) intolerance for risk in deposits, (3) **unit banking system**.

It was not that U.S. banks – even in periphery – were managed badly. But they were **impossible to diversify ex ante or to coordinate ex post**.

Fixing the Problem?

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

It 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 creating liquidity risk and causing U.S. crises.

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

U.S. Banking Crises of the Great Depression

Fed was not equipped to prevent banking crises based on severe shocks (e.g., monetary contraction).

Depression crises reflect insolvency, first in agricultural areas, then spreading elsewhere, also exacerbated by interbank withdrawals.

Reforms wrongly blamed big banks, preserved unit banking structure with FDIC, anti-consolidation rules, RFC assistance.

Failure to fix industrial organization of unit banking was politically driven by unit banking advocates.

Unit banking was long-lived. Not until 1997 was unlimited nationwide branch banking finally permitted in the U.S.

Another Mitigator: RFC Policy in 1930s

RFC lending (inadequate and counterproductive due to deposit subordination).

RFC preferred stock begins in March 1933

- Selective: Targeting marginal banks, field office autonomy seems to have limited abuse.
- Limits behavior: Dividends, capital, voting on management issues; Regression evidence suggests that RFC conditionality mattered.
- Effective in reducing failure risk (survival elasticity of 2) and promoting lending (1% prob. increase => 1% lending; Calomiris et al. 2014).

Identifying Causes: Safety Nets

Insuring Banks' Liabilities

Six US states had enacted some form of bank liability insurance in antebellum period. All disappeared either through government policy change or collapse (all systems with limited assessments, free entry, government enforcement of rules collapsed).

Eight states enacted deposit insurance in early 20th century (based on failed model) and all collapsed due to moral hazard and tolerance for incompetence.

That experience underlay President Roosevelt's opposition to the FDIC (passed as a temporary measure covering only small deposits).

"[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."

Franklin D. Roosevelt
1932 Letter to *New York Sun*

TABLE 3

REGRESSION RESULTS: EARLY ASSET GROWTH OF STATE-CHARTERED BANKS[a]

a. Dependent variable: Growth in total assets of state-chartered banks, 1914–1920

Independent Variables	Coefficient	Standard Error	Significance Level
Intercept	0.156	0.468	0.741
National bank growth	0.682	0.147	0.000
Reserve center times national bank growth[b]	−0.115	0.063	0.080
Growth in land values, 1914–1920	0.526	0.334	0.127
Ratio of farm to non-farm population	−0.328	0.655	0.621
Presence of voluntary insurance	0.327	0.251	0.205
Presence of compulsory insurance	0.609	0.189	0.004
$R^2 = 0.683$			
$\overline{R}^2 = 0.607$			

b. Dependent variable: Growth in total assets of state-chartered banks, 1914–1920

Independent Variables	Coefficient	Standard Error	Significance Level
Intercept	0.101	0.465	0.829
National bank growth	0.681	0.147	0.000
Reserve center times national bank growth[b]	−0.132	0.060	0.038
Growth in land values, 1914–1920	0.555	0.333	0.107
Ratio of farm to non-farm population	−0.283	0.654	0.669
Presence of voluntary or compulsory insurance	0.518	0.165	0.004
$R^2 = 0.670$			
$\overline{R}^2 = 0.607$			

[a] Asset growth is defined as the log difference of total assets. All variables are defined at the state level for a sample of 32 agricultural states.

[b] National bank growth in each state is used as a control for state-chartered bank growth. In reserve-center states, national bank growth may be larger, as it reflects growth of correspondent banks outside of the state as well. To control for this difference, I interact national banking growth with an indicator variable for states with reserve centers.

Source: Charles W. Calomiris, "Do Vulnerable Economies Need Deposit Insurance?" in Philip Brock, ed., *If Texas Were Chile: Financial Risk and Regulation in Commodity-Exporting Economies* (Washington, DC, 1990).

TABLE 4

ESTIMATED ASSET SHORTFALLS OF FAILED BANKS RELATIVE TO REMAINING-BANK EQUITY IN "SEVERE-FAILURE" STATES

	National Banks						State-Chartered Banks						
	Deposits of Suspended Banks, 1921–30[a] ($ thousands)	Number of Liquidations Relative to Suspensions[b]	Average Size of Liquidated Banks Relative to Suspended Banks[c]	Rate of Asset Shortfall[d]	Estimated Shortfall[e] ($ thousands)	Total Bank Equity, June 1930 ($ thousands)	Deposits of Suspended Banks, 1921–30[a]	Number of Liquidations Relative to Suspensions[b]	Size Ratio[c]	Rate of Asset Shortfall[d]	Estimated Shortfall[e] ($ thousands)	Total Bank Equity, June 1930 ($ thousands)	All Banks: Ratio of Shortfall to Equity[f]
Arizona	$ 1,256	0.67	0.83	0.50	$ 349	$ 3,815	$ 15,056	0.80	0.06	0.09	$ 65	$ 8,496	0.03
Colorado	11,003	0.94	0.45	0.40	1,862	13,776	12,187	0.95	0.95	0.32	3,520	10,273	0.22
Georgia	16,538	0.84	0.09	0.49	613	39,064	46,318	0.75	0.70	0.56	13,618	39,805	0.18
Idaho	10,601	0.81	0.65	0.53	2,958	4,612	9,185	0.85	0.63	0.51	2,509	4,983	0.57
Iowa	55,984	0.79	0.50	0.31	6,855	35,750	138,995	0.75	0.66	0.46	31,649	74,935	0.35
Minnesota	28,338	0.97	0.59	0.42	6,812	69,387	80,634	0.77	0.47	0.52	15,174	38,417	0.20
Montana	16,287	0.87	0.44	0.66	4,115	9,999	31,361	0.89	0.47	0.48	6,297	9,947	0.52
Nebraska	13,695	0.80	0.94	0.56	5,767	26,083	78,093	0.85	1.04	0.65	44,872	27,760	0.94
North Dakota	17,438	0.84	0.80	0.55	6,445	9,210	45,199	0.92	1.05	0.83	36,240	9,695	2.26
Oklahoma	27,364	0.72	0.70	0.57	7,861	41,251	38,986	0.79	0.28	0.44	3,794	11,493	0.22
South Carolina	12,153	0.92	0.57	0.49	3,123	11,665	50,970	0.91	0.58	0.34	9,147	17,069	0.43
South Dakota	21,109	0.93	0.60	0.49	5,772	8,477	91,619	0.77	1.00	0.76	53,615	10,848	3.07
Wyoming	9,154	0.91	0.45	0.30	1,125	4,819	7,536	0.80	0.48	0.46	1,331	3,844	0.28

[a] Deposits are defined at the time of bank suspension.

[b] The number of bank liquidations relative to suspensions measures the proportion of suspended banks that were liquidated.

[c] The average size of liquidated banks is divided by the average size of suspended banks to produce this ratio.

[d] The rate of asset shortfall equals 1 minus the ratio of the value of liquidated assets to deposit liabilities.

[e] The estimated shortfall is the product of the preceding four columns.

[f] The all-bank ratio of shortfall to equity divides estimated asset shortfall for state and national banks by the equity of surviving banks of both types.

Source: Charles W. Calomiris, "Do Vulnerable Economies Need Deposit Insurance?" in Philip Brock, ed., *If Texas Were Chile: Financial Risk and Regulation in Commodity-Exporting Economies* (Washington, DC, 1990).

b. Dependent Variable: Growth in total assets of state-chartered banks, 1920–1930

Independent Variable	Coefficient	Standard Error	Significance Level
Intercept	1.539	0.449	0.002
National bank growth	0.124	0.200	0.539
Reserve center times national bank growth[b]	0.078	0.115	0.502
Ratio of farm to non-farm population	−0.936	0.405	0.030
Growth in land values, 1920–1930	−0.386	0.551	0.490
Business failure rate, 1921–1929/ Business failure rate, 1917–1920	−0.072	0.044	0.118
Presence of deposit insurance (excluding Nebraska)[c]	−0.065	0.140	0.647
Out-of-city branch banking[d]	0.398	0.150	0.014
Within-city branch banking[d]	0.428	0.161	0.014
$R^2 = 0.625$			
$\overline{R}^2 = 0.495$			

[a] Asset growth is defined as the log difference of total assets. All variables are defined at the state level for a sample of 32 agricultural states.

[b] National bank growth in each state is used as a control for state-chartered bank growth. In reserve-center states, national bank growth may be larger, as it reflects growth of correspondent banks outside of the state, as well. To control for this difference, I interact national banking growth with an indicator variable for states with reserve centers.

[c] Nebraska's insured banks remained open long after they were known to be insolvent. Thus data for Nebraska on total assets of state-chartered banks overstate actual state-chartered bank assets for the 1920s. For this reason Nebraska was excluded from the group of insured states in these regressions.

[d] The indicator variable for out-of-city branching takes a value of 1 for states that allowed branching outside the home city of the bank, 0 otherwise. The within-city indicator takes a value of 1 for states that allowed branching only within a bank's home city, 0 otherwise.

Source: Charles W. Calomiris, "Do Vulnerable Economies Need Deposit Insurance?" in Philip Brock, ed., *If Texas Were Chile: Financial Risk and Regulation in Commodity-Exporting Economies* (Washington, DC, 1990).

Current Banking Crisis Pandemic

Global spread of deposit insurance after 1970.

Evidence of severe impact on banking risk has produced empirical consensus that deposit insurance has been a net contributor to instability in banking around the world (Demirguc-Kunt and Detragiache 2002, Barth et al. 2006).

Behavior contrasts sharply with recent market discipline examples (Martinez-Peria and Schmukler 2001, Calomiris and Powell 2001).

Historical Thinking ***Explains Choices***

Crises are largely predictable consequences of bad policies.

The big surprise for economists from history is that experience does not produce change, which suggests that crises are produced "on purpose."

Why choose unit banking if it is so unstable and inefficient?

Why choose deposit insurance if on it makes banking systems much less stable than alternatives?

Historical Thinking (Cont'd)

The answer has to do with political coalitions that favor a policy even though it is not desirable for the society as a whole. But why do some apparently similar societies make different choices from others?

Historical thinkers construct explanations for phenomena that are specific to the particular path of events in a country's history (including non-economic events), which shape a society's institutions.

Explaining Current Crises Pandemic

Evidence on political economy of adoption (Calomiris-White 1994, Demirguc-Kunt, Kane and Laeven 2009).

Benefits of off-budget tax and transfer systems lead them to arise in some countries more than in others.

Calomiris-Haber 2014: use of banks as a political tool not needed in UK, but employed in US as the result of political structure; in Canada, liberal constitution was developed to prevent such use of banks because of its different political history.

Path Dependence

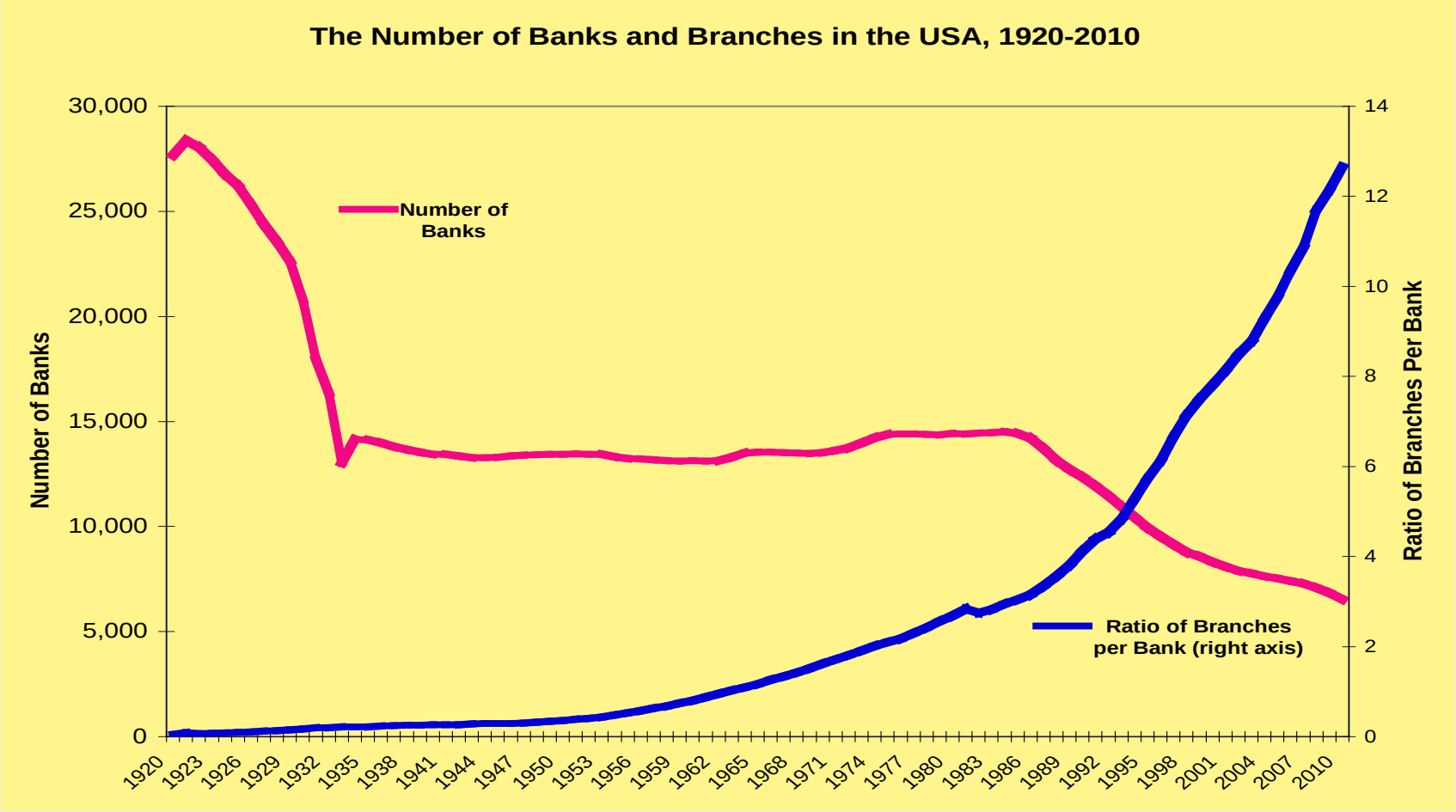
Recognizing political path-dependence requires economists to take history seriously.

Regulation is not "chosen" each period, but is inherited from prior events via political and economic institutions, which arise for partly exogenous reasons (colonial settlement and trade, empire building, wars, geography, geology, demography, rural vs. urban growth).

Interest groups' influence is endogenous to prior realizations of shocks and regulatory responses to them, which shape coalitions.

An Example from Calomiris-Haber, *Fragile By Design*

The death of the unit banker-agrarian populist coalition



What changed?

The agrarian-unit bank coalition had been quite robust – it survived the Civil War, the banking reform movement c. 1910 in response to the Panic of 1907, and the Great Depression.

Five influences unwound it: (1) demography, (2) technology (ATMs) and court decisions, (3) domestic disintermediation, (4) loss of global market share, and (5) crises of 1980s.

American political institutions replaced one rent-sharing system with another

"We support the NationsBank acquisition of BankAmerica because…they will make credit work for low and moderate income people and they will work with the community institutions."

--George Butts, President of ACORN Housing, from his testimony to the Federal Reserve Board in support of the acquisition of BankAmerica by NationsBank, July 9 1998.

The Deal in a Nutshell

Megabanks are created with benefits of market power, TBTF, scale and scope efficiencies, weak prudential regulation.

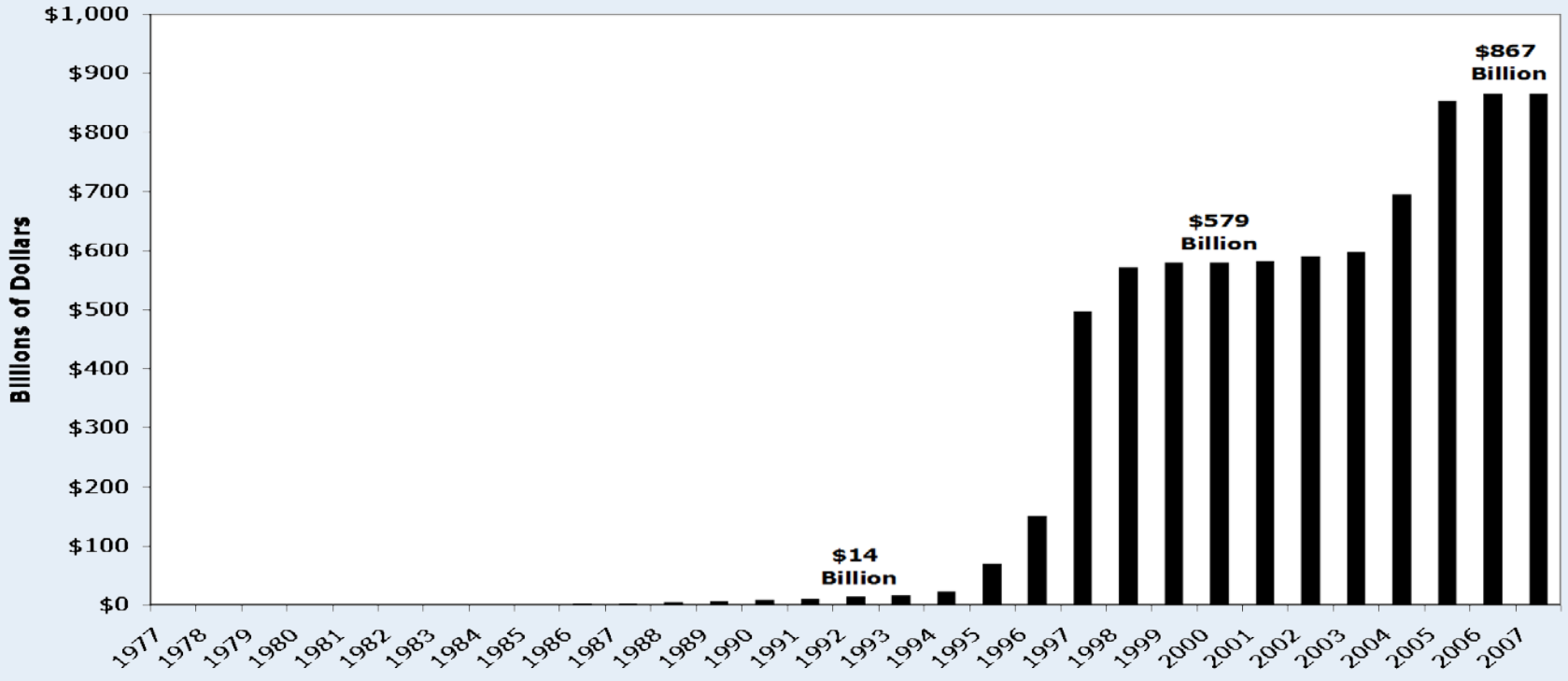
Benefits are shared with urban activist groups via contractual agreements that reward their support in merger hearings. Gingerich gains too!

The Bushes role in urban housing subsidies, and Rand Paul's maxim: Ohio and Florida have cities!

GSEs are cajoled to purchase junk by subsidized funding and weak prudential regulation, and are pushed by mandates to debase underwriting standards for **everyone**.

The curious coalition between emerging megabanks and activist groups

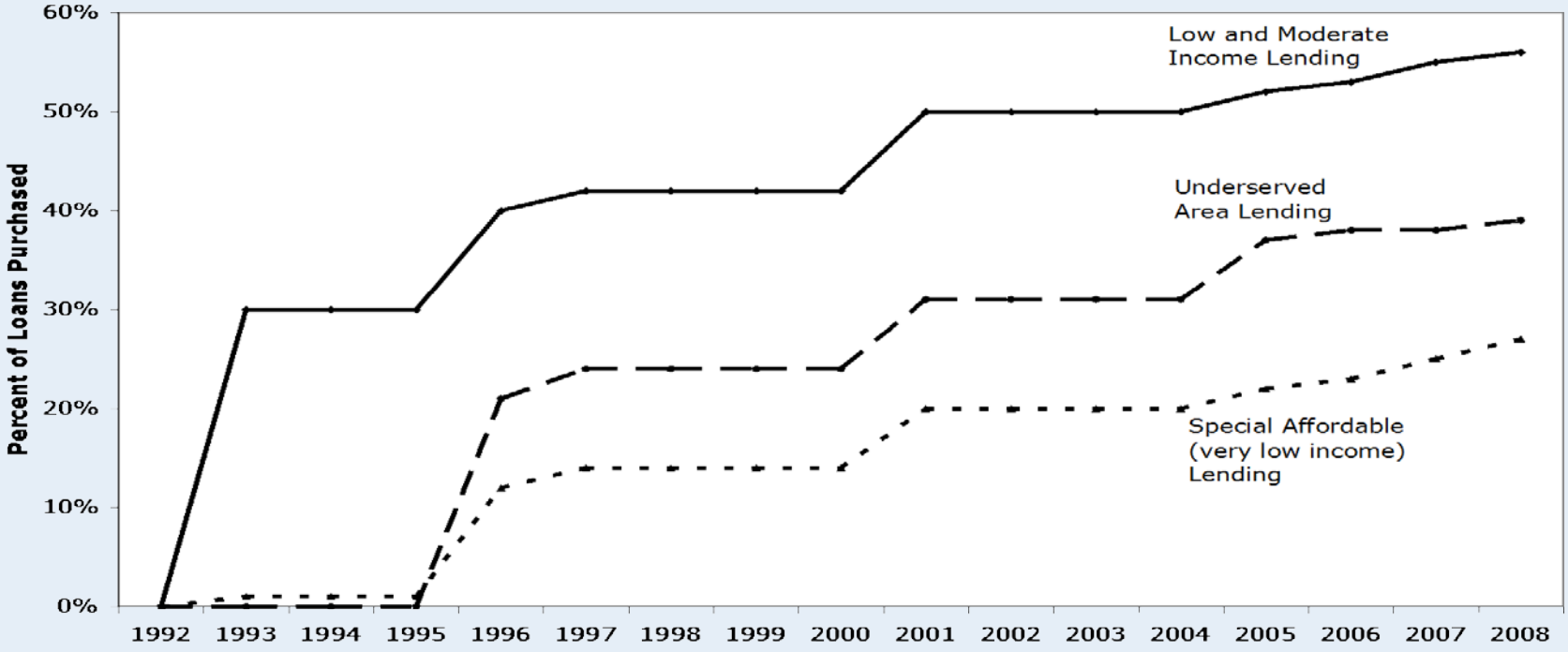
Figure 7.2
Cumulative Value of CRA Agreements Between Banks and Activist Groups, 1977–2007 (in Billions of



Source: National Community Reinvestment Coalition, CRA Commitments (2007), pp. 11–17.

These deals required special purpose banks (Fannie and Freddie) to buy these loans

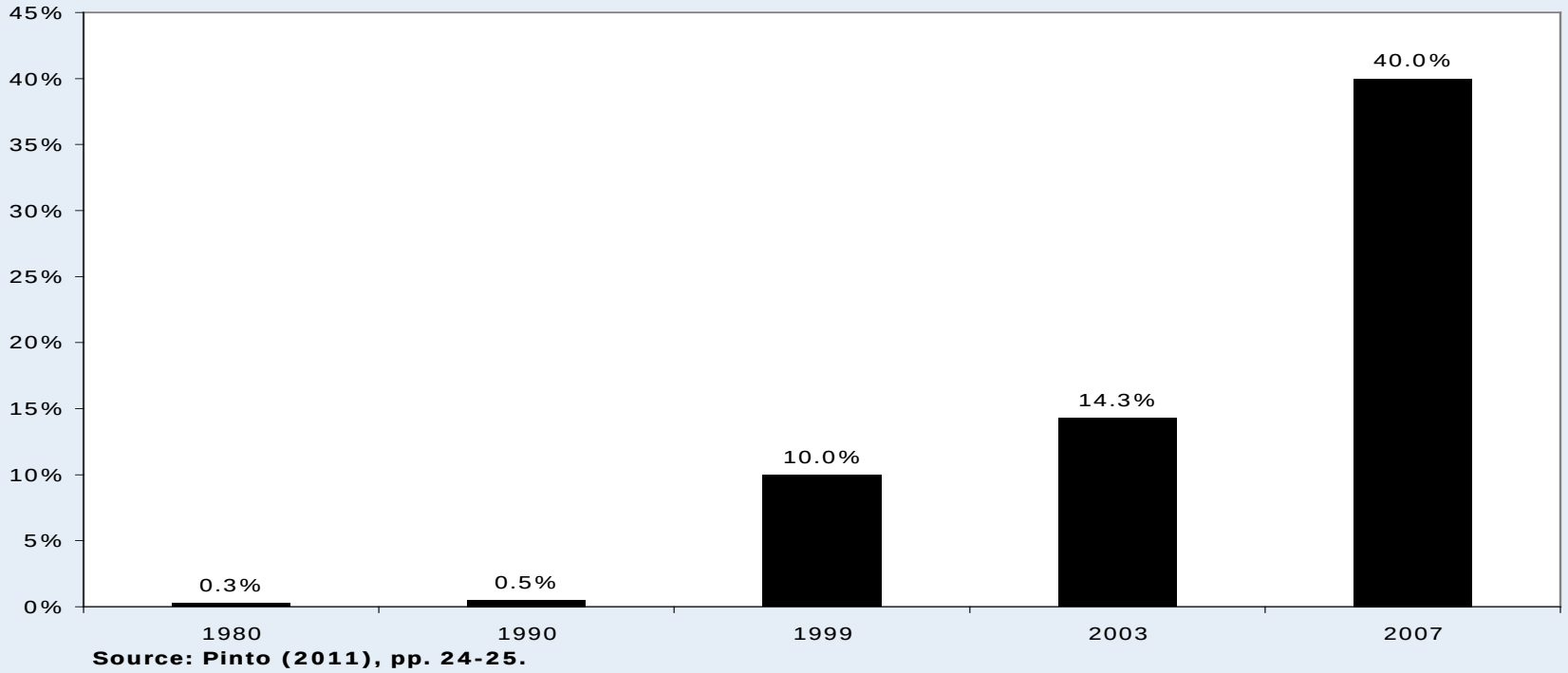
Figure 7.3
HUD Loan Repurchase Mandates for Fannie and Freddie, 1992–2008



Source Pinto (2011), pp. 76, 87, 104, 105.
Note: Fannie and Freddie actual loan purchases met these goals.

Which required ongoing debasement of underwriting standards (lower down-payments, no-docs borrowers).

Figure 7.4
Percent of Home Purchases in the United States with a Downpayment of Three Percent or Less, 1980-2007



Source: Pinto (2011), pp. 24-25.

Some Persistent Themes

Government **financing needs** have been central to deciding whether banks are stable, and whether they are allowed to provide private credit.

Obtaining preferential access to credit by **real estate borrowers** (initially unit banking laws for farmers, later residential mortgage subsidies) has been a primary sources of banking crises, especially in democracies.

Preferred credit to industrialists has also been important, especially in autocratic developing countries' like Mexico, Chile, and Korea.

Persistent Themes (Cont'd)

Since the 1970s, worldwide the main problem has been the global spread of poorly designed safety nets combined with inadequate prudential regulation.

Regulation, crises, and bailouts are part of the same political equilibrium connecting (across time) risk-taking, crises, and the allocations of losses.

Outcomes reflect country-specific politics, not general and unavoidable characteristics of banks.