BROOKINGS | QUALITY. INDEPENDENCE. IMPACT.

Incorporating Macro-prudential Financial Regulation into Monetary Policy

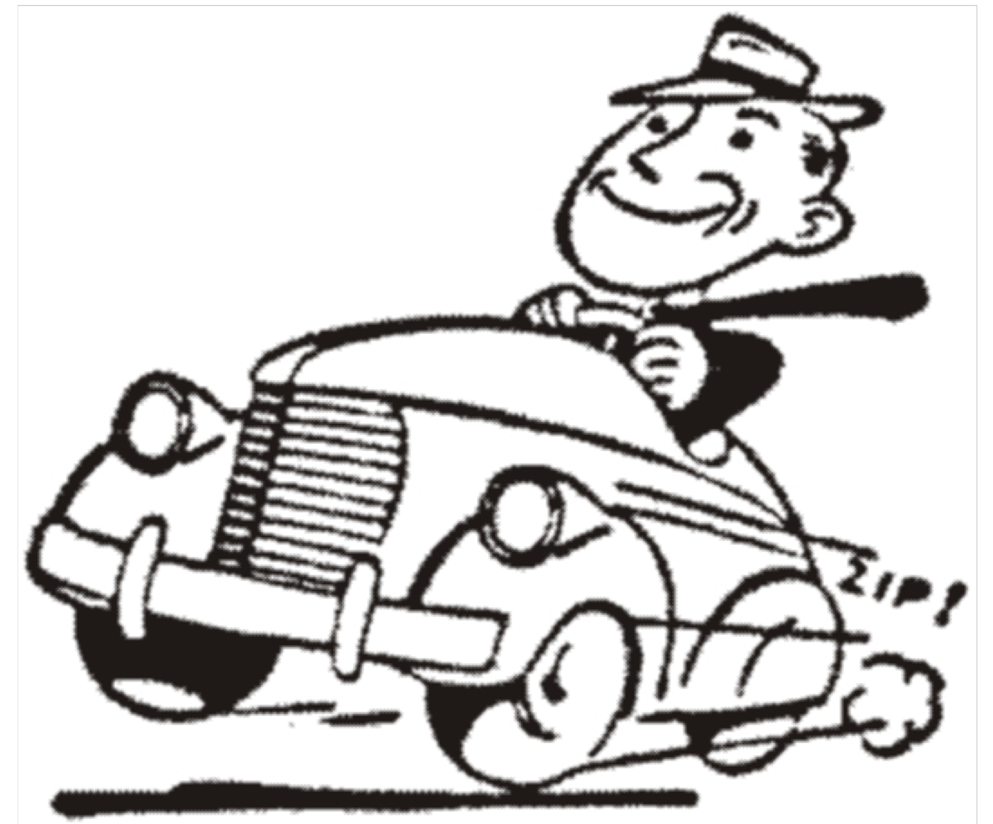
Aaron Klein
Fellow, Economic Studies Brookings

@AaronDKlein

Monetary Policy Driving a Car

- Pre-2008 Optimal Monetary Policy Mostly Solved:

- Key challenges:
  - Lag Times between action and response
  - Anticipating curves, headwinds, tailwinds

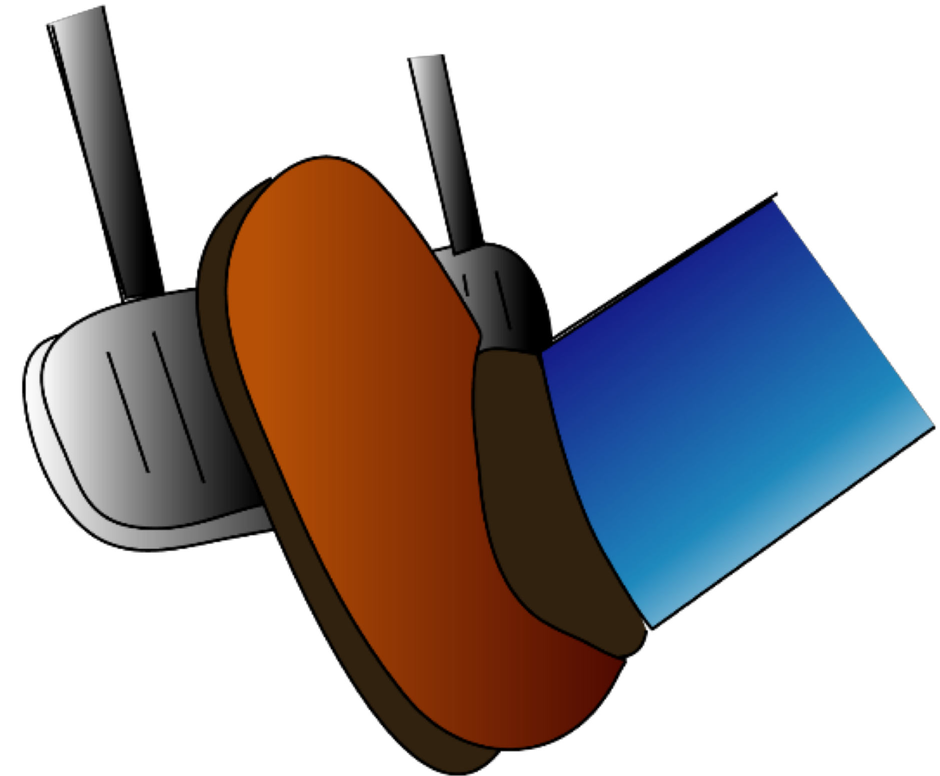


Monetary Policy as the Gas and Brake

- Cut interest rates: Step on the Gas
- Raise interest rates: Hit the Brakes

- During Financial Crisis it doesn't work:

" Monetary Policy has not been powerful enough to restore price and economic stability quickly once they have been disturbed by a major financial crisis" (Kohn, 2015)



Financial Regulation: The Clutch

- Explains why traditional policy was less effective
  - Not a question of magnitude of response

- Integral to vehicles operation
- Underappreciated in models and theory
- Provides new insights for how to merge monetary policy, financial ‘macro-prudential’ regulation

Regulation: Macro vs. Micro

	Macro-prudential	Micro-prudential
Proximate objective	Limit financial system-wide distress	limit distress of individual institutions
Ultimate objective	avoid macroeconomic costs linked to financial instability	consumer (investor/depositor) protection
Characterization of Risk	“endogenous” (dependent on collective behavior)	“exogenous” (independent of individual agents’ behavior)
Correlations and common exposures across institutions	Important	Irrelevant
Calibration of prudential controls	in terms of system-wide risk; top down	in terms of risks of individual institutions; bottom-up

Source: Galati and Moessner, BIS Working Paper 337

Alternative sets of tools to foster financial stability

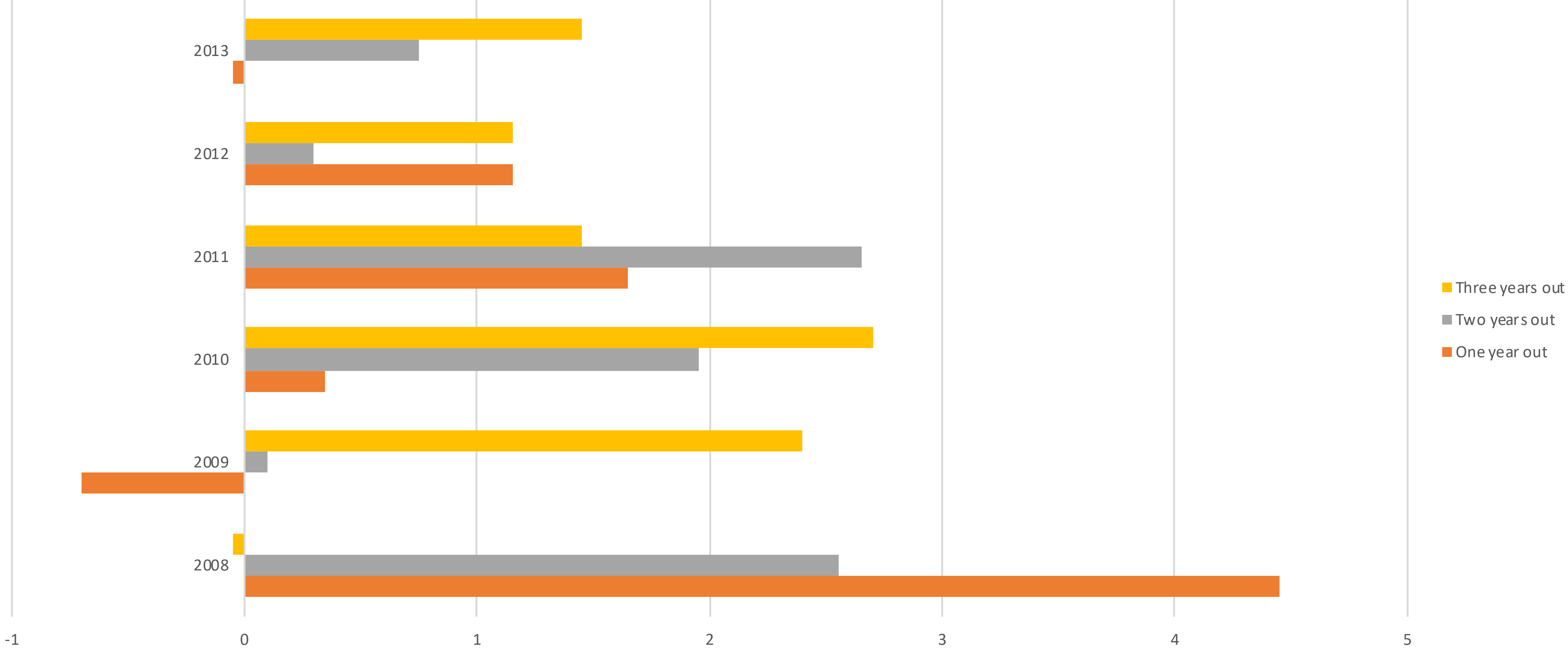
Tool set	Goal	Instruments
Prudential policy: Micro-prudential	limit distress of individual institutions	e.g. quality/quantity of capital, leverage ratio
Prudential policy: Macro-prudential	limit financial system-wide distress	e.g. countercyclical capital charges
Monetary policy	Price stability	policy rate, standard repos
	Liquidity management	Collateral policies; interest on reserves; policy corridors
	Lean against financial imbalances	policy rate; reserve requirements; mop-up of liquidity; FX reserve buffers
Fiscal policy	Manage aggregate demand	Taxes; automatic stabilizers; discretionary countercyclical measures
	Build fiscal buffers in good times	e.g. measures to reduce debt levels; taxes/levies on the financial system
Capital controls	Limit system-wide currency mismatches	e.g. limits on open foreign exchange positions; constraints on the type of foreign currency assets
Infrastructure policies	Strengthen the resilience of the infrastructure of the financial system	e.g. move derivative trading on exchanges

Source: Galati and Moessner, BIS Working Paper 337

Insight: Improving Models

- Pre-crisis models assumed away financial sector's importance (Greenspan 2008, Kohn and Sach 2018)
- Importance of Financial Regulation (Yellen 2015, Dudley 2017)
- Financial System is not an automatic transmission but manual. Implying a symbiotic relationship between the two.
- Not an 'economic marriage of convenience'! (Canuto and Cavallari 2013)

Insight: Financial Crisis Slower Recovery Getting into Gear



Source: Dan Kopf, "The Fed Keeps on Overestimating Future GDP Growth"

Zarnowitz’s Rule Fails

- The size of the economic recovery is inversely proportional to the size of the recession.
- False when dealing with financial crisis

- Bernanke Magnitudes (2018): **Financial Panics** are orders different than recessions.

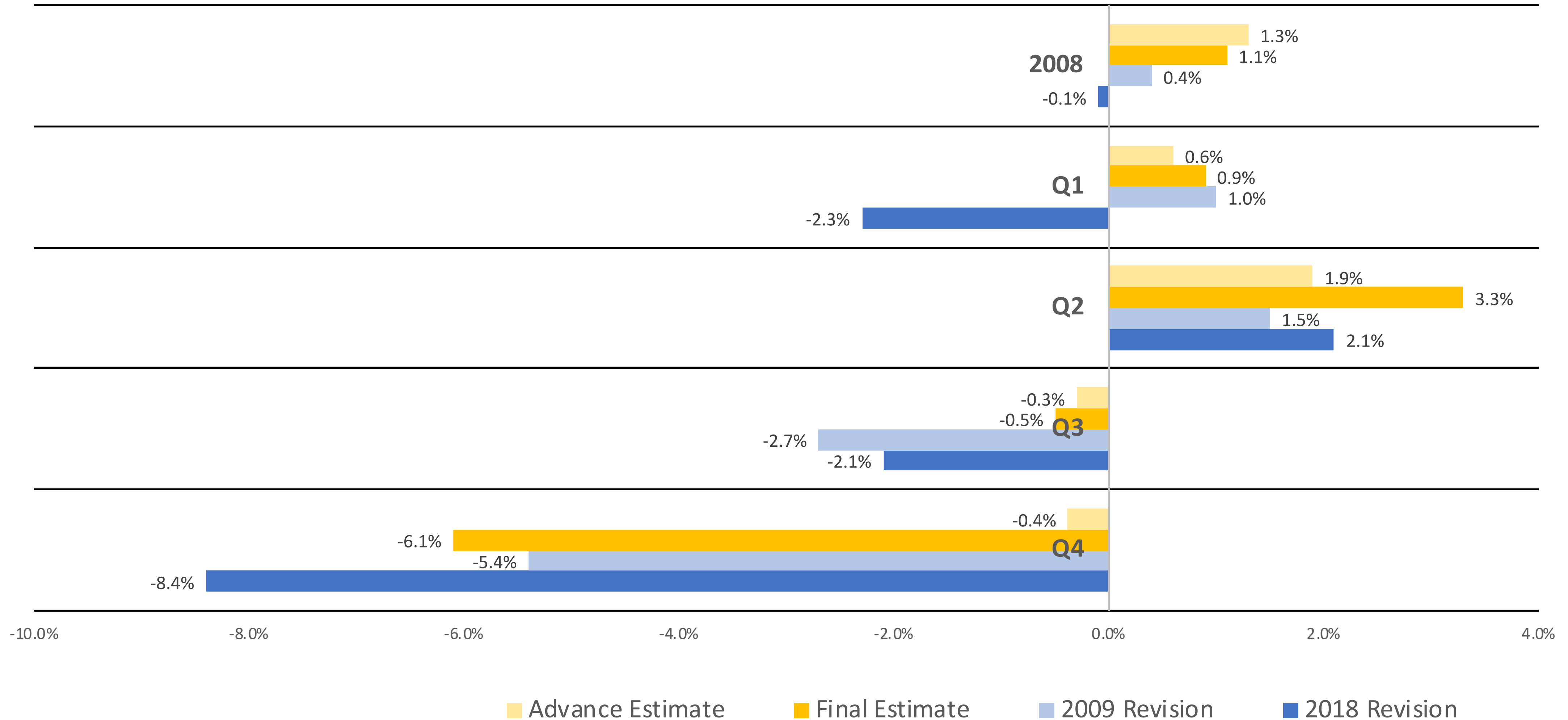
  - Slipping out of Gear Vs. Slowing Down

Insight: Be Skeptical of Real-Time Data During a Panic

- “The disconnect between the seriousness of the financial crisis and the impact – so far – on the real economy is striking” Stan Fischer Federal Reserve Jackson Hole, August 2008

- Consistent with Kohn and Sack (2018): Be prepared to abandon models and data during crisis.

Insight: Be Skeptical of Real-Time Data During a Panic



Source: Kimberly Amadeo, the balance: “2008 GDP, Growth and Updates by Quarter”

Two Ingredients for a Crisis

- A Financial Crisis Requires Leverage **AND** Fundamental Mispricing of an Asset.
- Each alone can cause a bubble and/or a wave of bank failures.
- Both are essential to creating a financial panic/crisis…
- The car will stay in gear with one or the other, but may not when both are present.

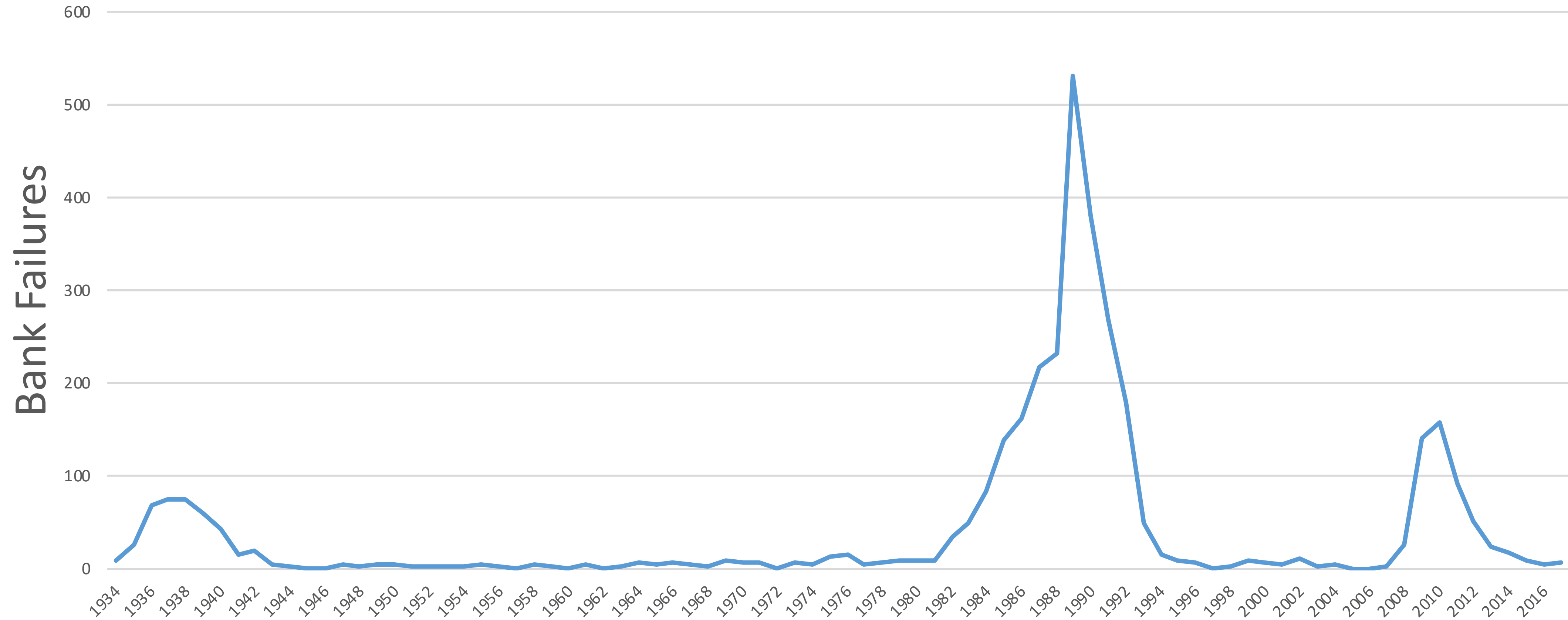
Leverage with out mispriced assets: Savings and Loans, 1980-1989 ($Billions)

Year	Number of S&Ls	Total Assets	Net Income	Tangible Capital	Tangible Capital/ Total Assets	No. Insolvent S&Ls*	Assets in Insolvent S&Ls*	FSLIC Reserves
1980	3,993	$ 604	$ 0.8	$32	5.3%	43	$ 0.4	$ 6.5
1981	3,751	640	–4.6	25	4.0	112	28.5	6.2
1982	3,287	686	–4.1	4	0.5	415	220.0	6.3
1983	3,146	814	1.9	4	0.4	515	284.6	6.4
1984	3,136	976	1.0	3	0.3	695	360.2	5.6
1985	3,246	1,068	3.7	8	0.8	705	358.3	4.6
1986	3,220	1,162	0.1	14	1.2	672	343.1	–6.3
1987	3,147	1,249	–7.8	9	0.7	672	353.8	–13.7
1988	2,949	1,349	–13.4	22	1.6	508	297.3	–75.0
1989	2,878	1,252	–17.6	10	0.8	516	290.8	NA

* Based on tangible-capital-to-assets ratio.

Source: Federal Deposit Insurance Corporation Report: “The Savings and Loan Crisis and Its Relationship to Banking”.

Massive Bank Failures, No Crisis



Source: Federal Deposit Insurance Corporation and Federal Reserve Bank of St. Louis

Fundamental Mispricing of Asset but no Leverage fails to create Financial Crisis

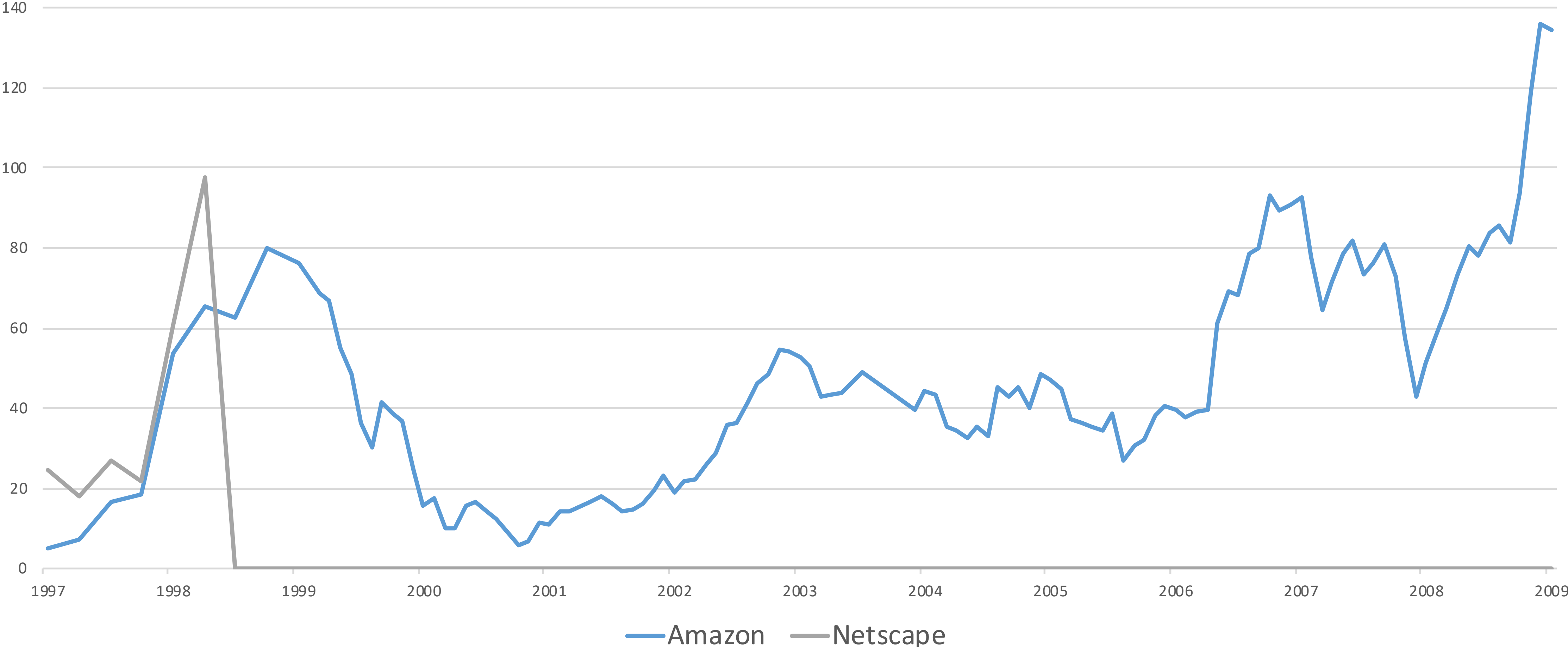
- Major loss of investor confidence during accounting scandals of 2001-2002. Sharp swings in equities.
- Market massively misprices the fundamental value of aspects of the internet (page clicks, website traffic, user base…)

- Absent leverage stock market booms and busts, but recession is mild. Financial system continues to function.

NASDAQ and S&P: 1998-2009

Source: Bloomberg

Amazon vs. Netscape vs. Amazon



Source: Bloomberg

Insight: Macro-Prudential Tools Should Aim at Leverage Not Asset Bubbles

- Answer to Mishkin (2008), IMF (2013) question of whether monetary policy or financial regulation should be used to deal with asset bubbles becomes clear:

- Financial Regulation not Monetary Policy should be the tool.

- Target is at leverage, not asset values.