Is the Financial System More Resilient?

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Yale and NBER

New Rules and Regulations—partial list

- More bank capital
- Total loss absorbing capacity
- Leverage restrictions
- Enhanced prudential standards
- Volker rule
- Swaps pushout rule
- Living wills
- Orderly liquidation authority
- Etc etc etc

- Stress tests
- Compensation regulation
- SIFI, G-SIFI designation
- G-SIFI surcharge
- Liquidity coverage ratio
- Net stable funding ratio
- Bail-in
- MMF reforms
- Etc etc etc

More Resilient Now?

- Resilience = Lower Probability of Crisis
- How do we answer this question?

What’s the Problem?

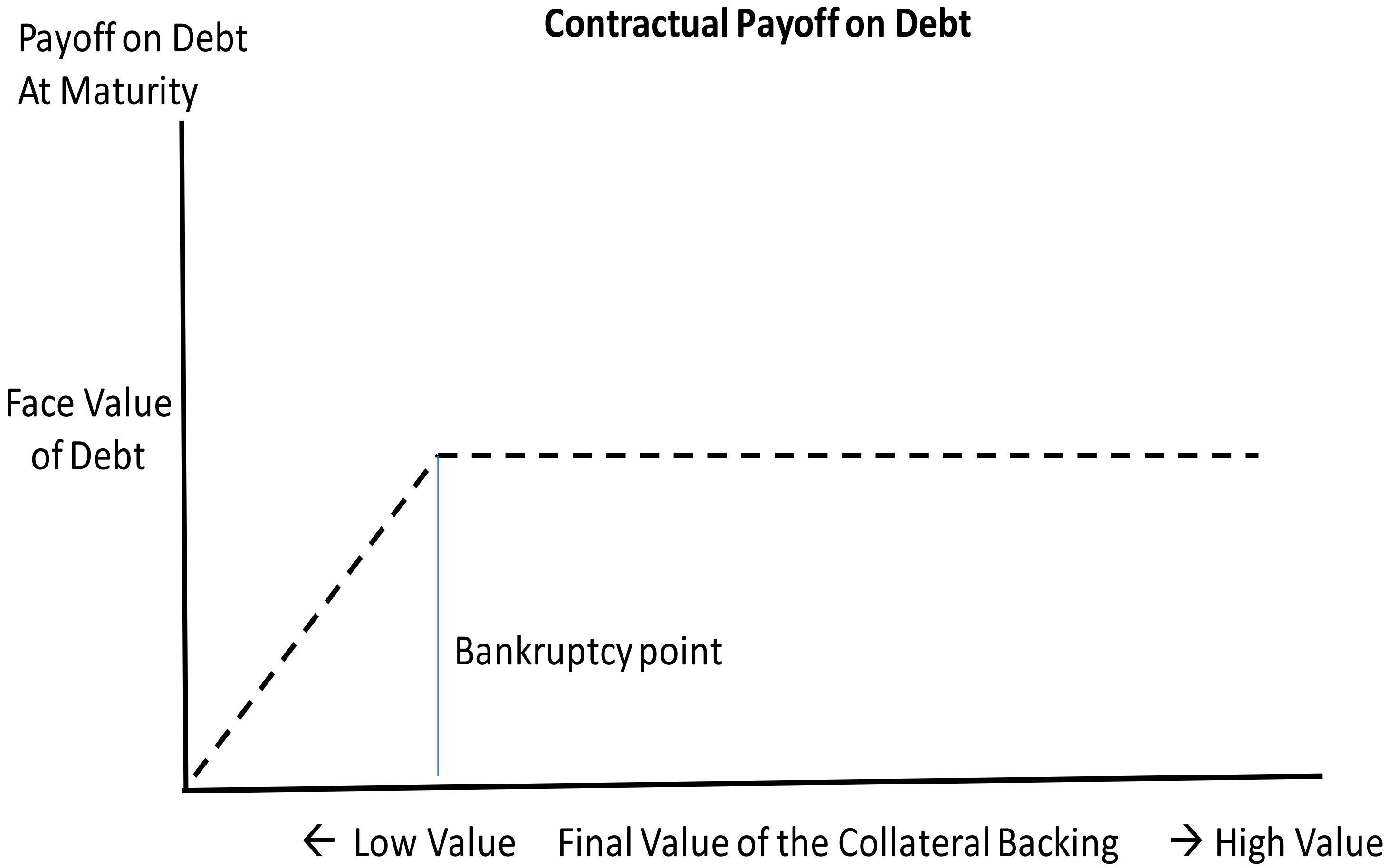
- Doug Diamond: “Financial crises are everywhere and always due to problems of short-term debt (and to the reasons why short-term debt is needed).”

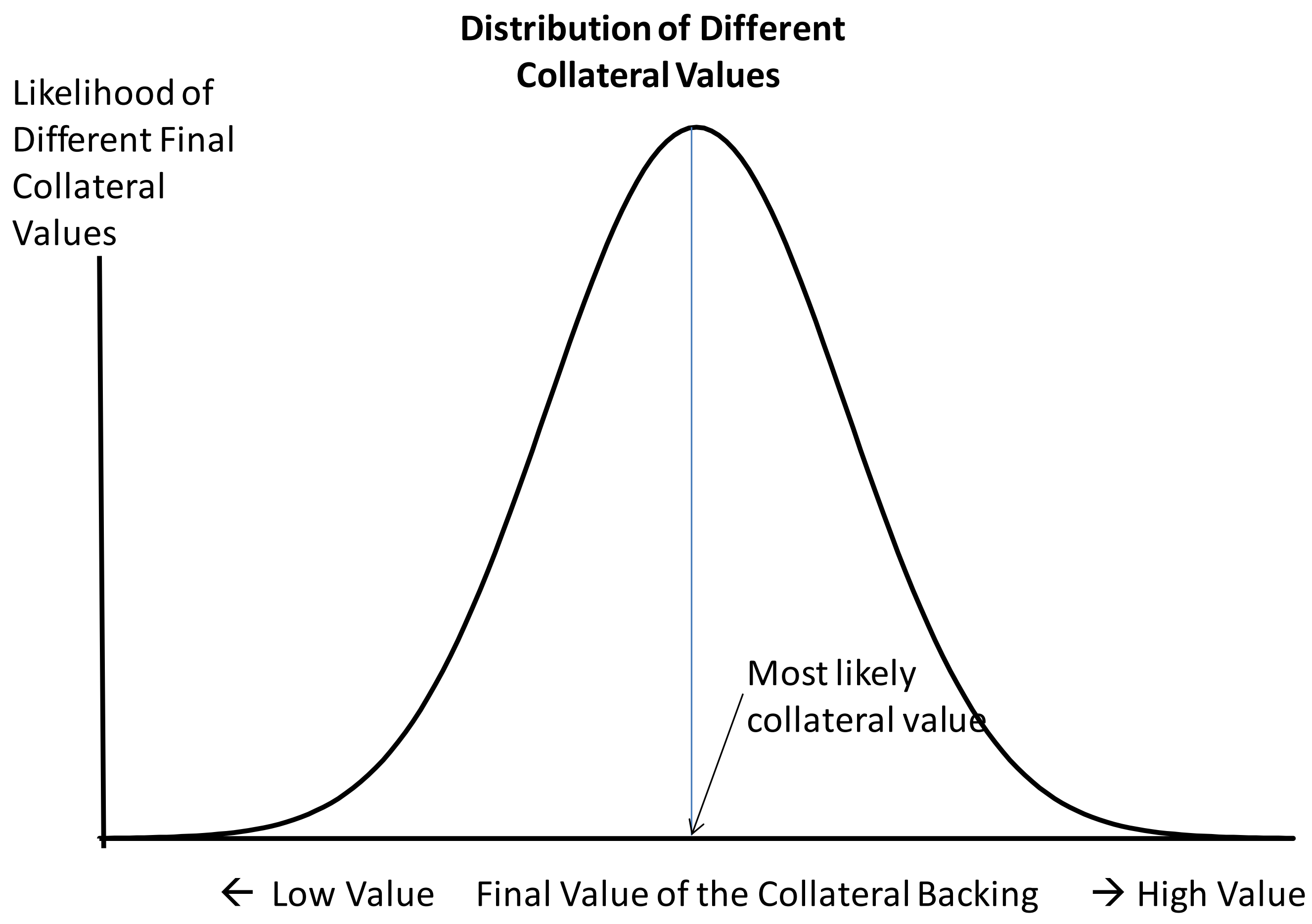
- Need short-term debt → but fragile.

Bank Debt

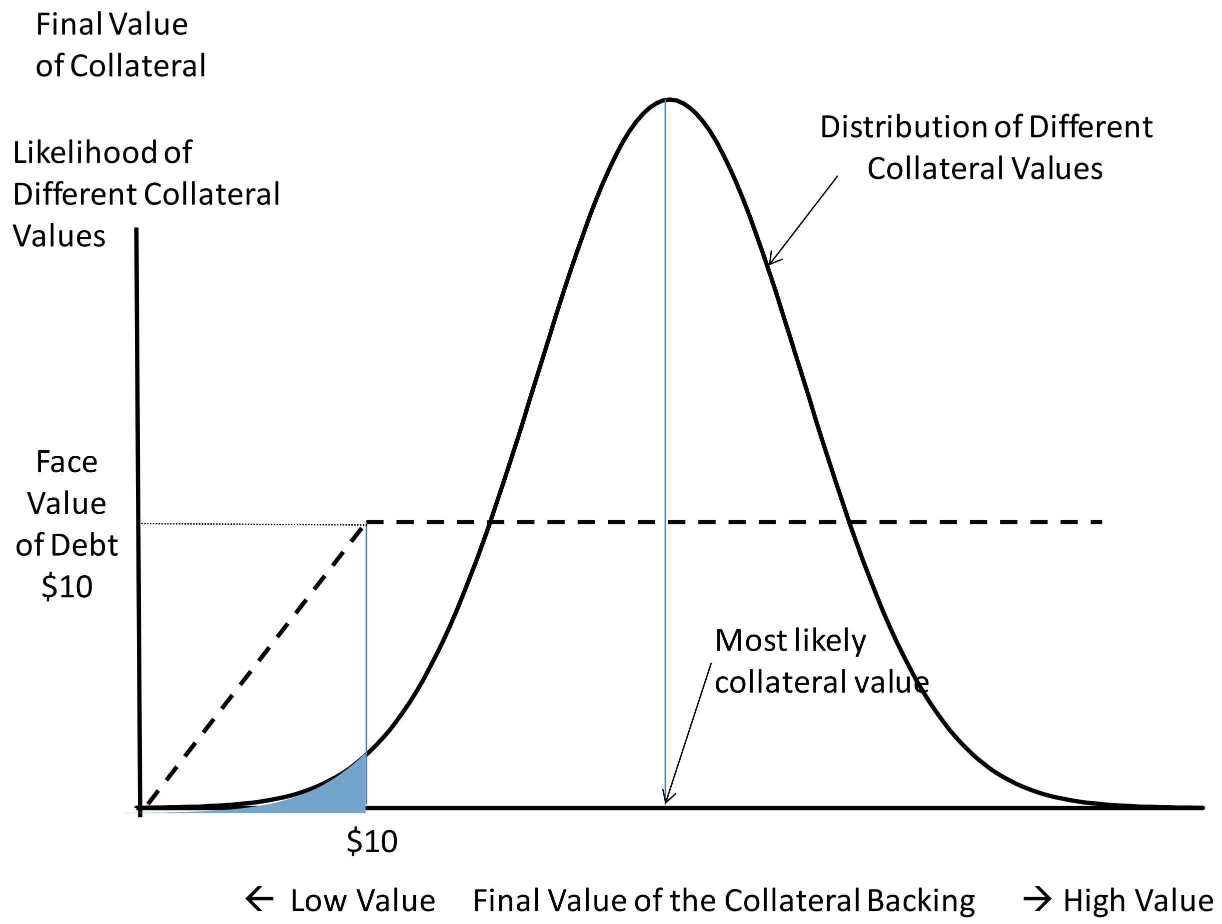
- The output of banks is debt.
- Bank debt designed to prevent losses to insiders when the uninformed trade.
- Want bank debt to always trade at par.
- Bank debt designed to be **info-insensitive**: $10 is $10.
- But, the debt can become **info-sensitive**→crisis.
- $10 is no longer $10 – maybe $9, maybe $8 –
  - Best to go get cash!!

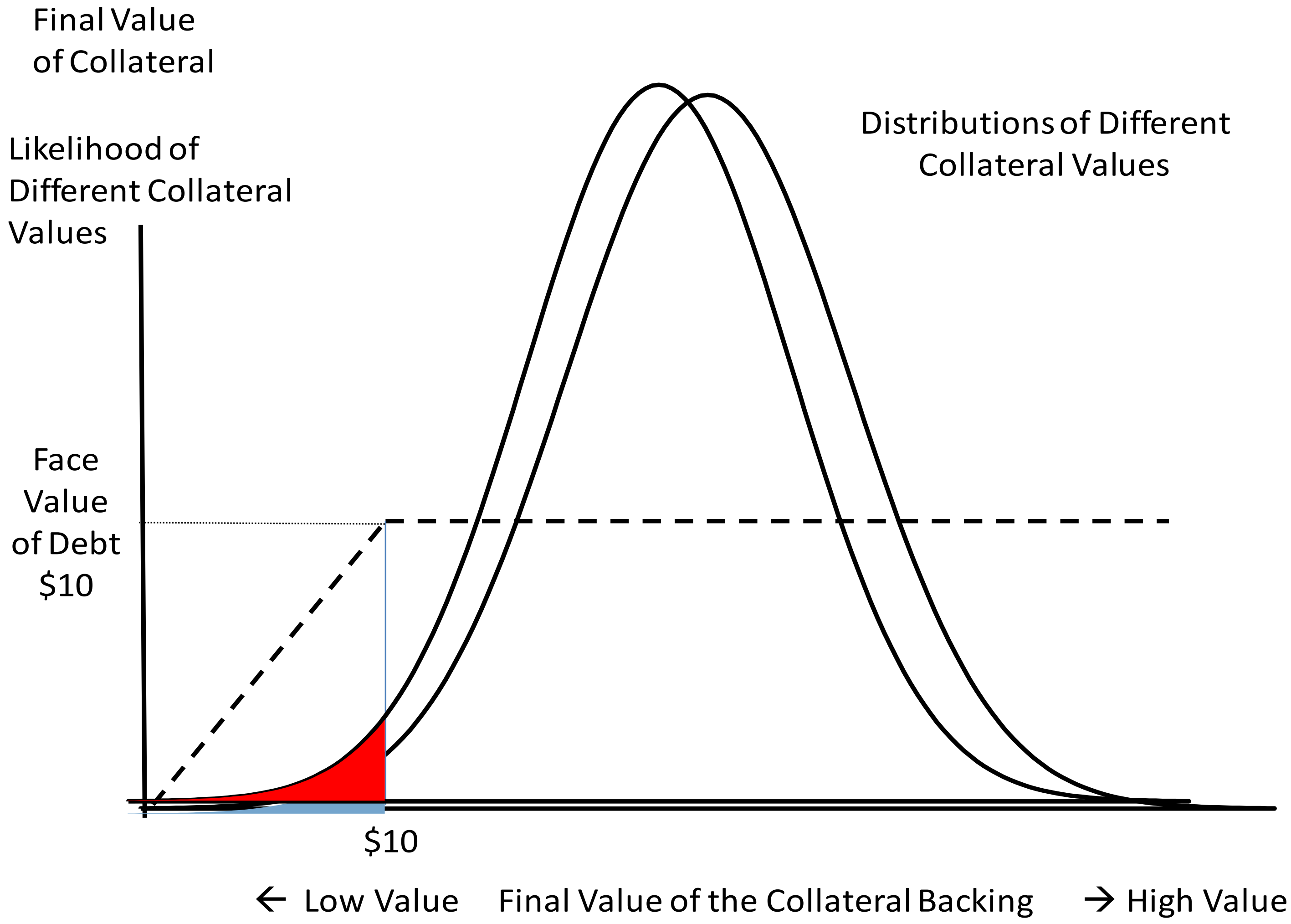
Intuition for Dang, Gorton, Holmström (2011)





Distribution of Different Collateral Values
Likelihood of Different Final Collateral Values
Most likely collateral value
← Low Value
Final Value of the Collateral Backing
→ High Value


Final Value
of Collateral
Likelihood of
Different Collateral
Values
Distribution of Different
Collateral Values
Face
Value
of Debt
$10
Most likely
collateral value
$10
← Low Value
Final Value of the Collateral Backing
→ High Value



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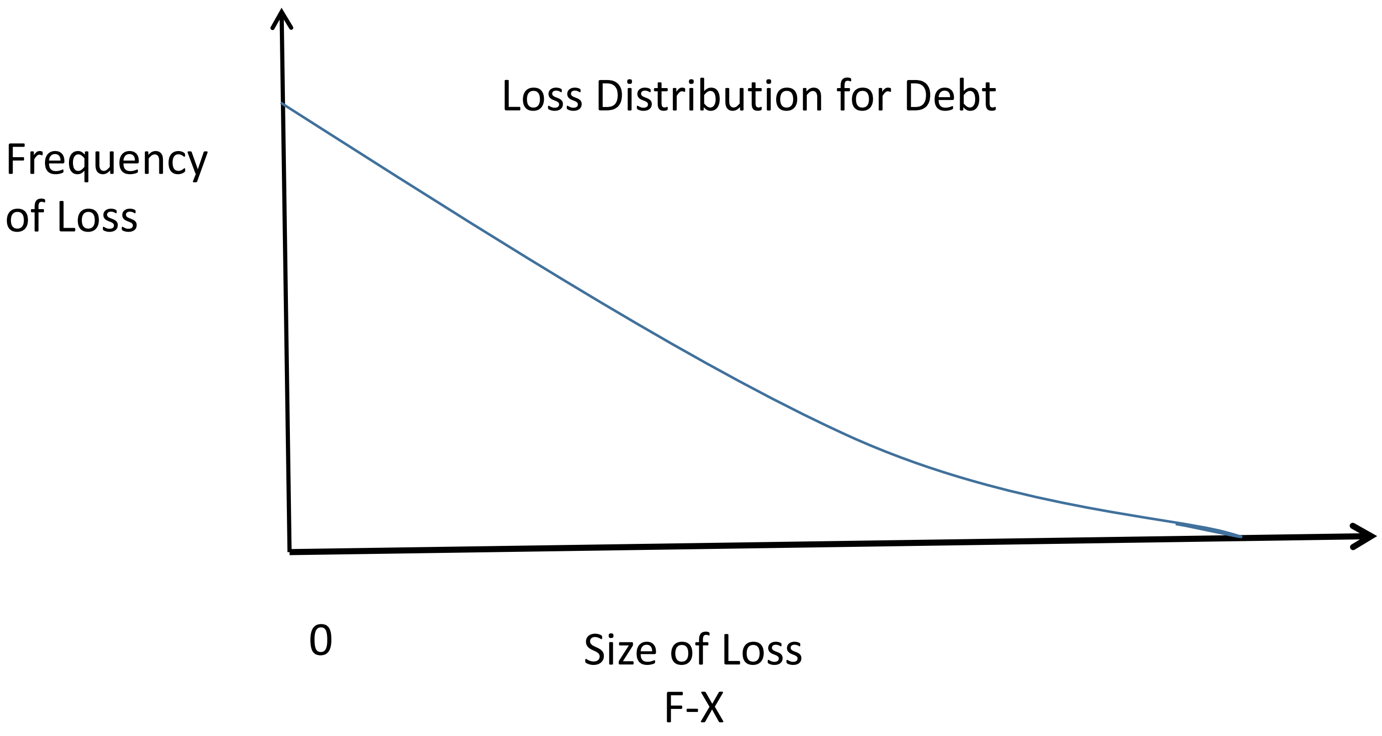
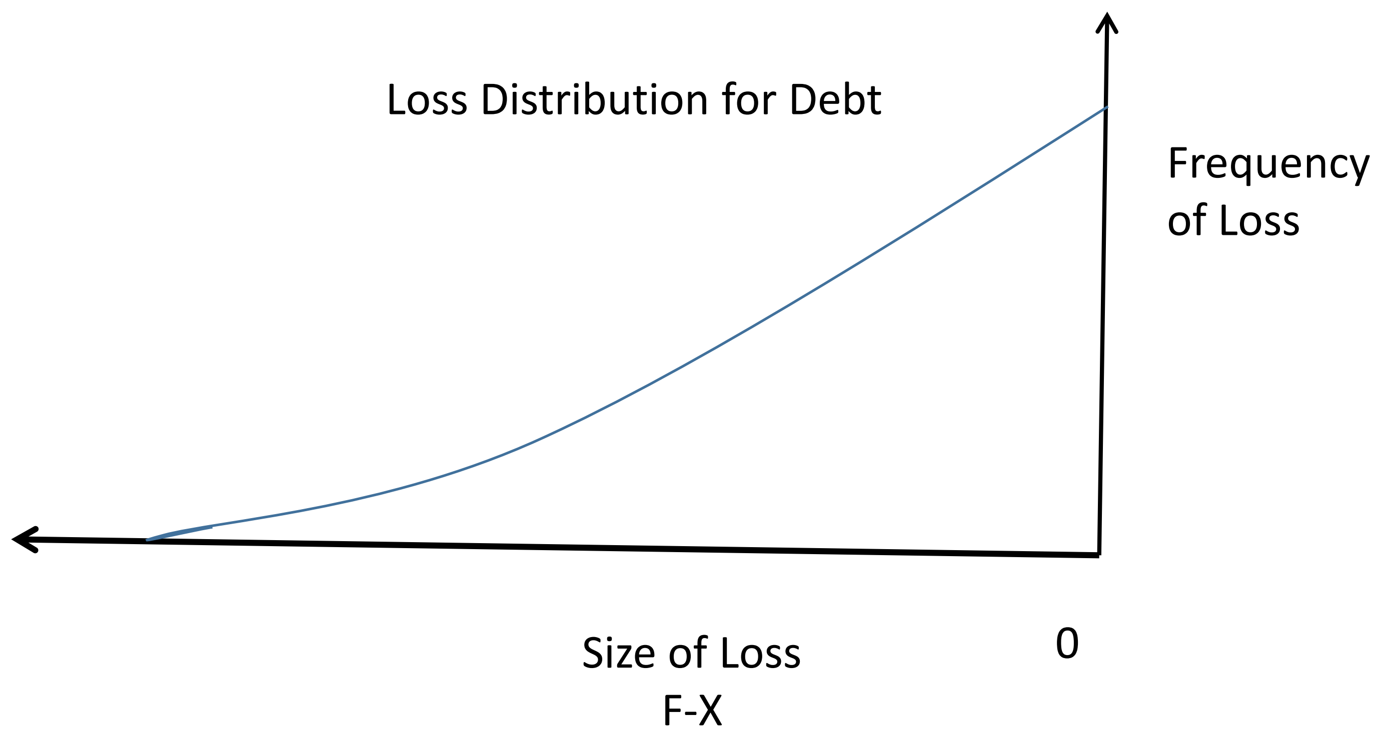

Loss Distribution for Debt
Frequency
of Loss
0
Size of Loss
F-X


Loss Distribution for Debt
Frequency
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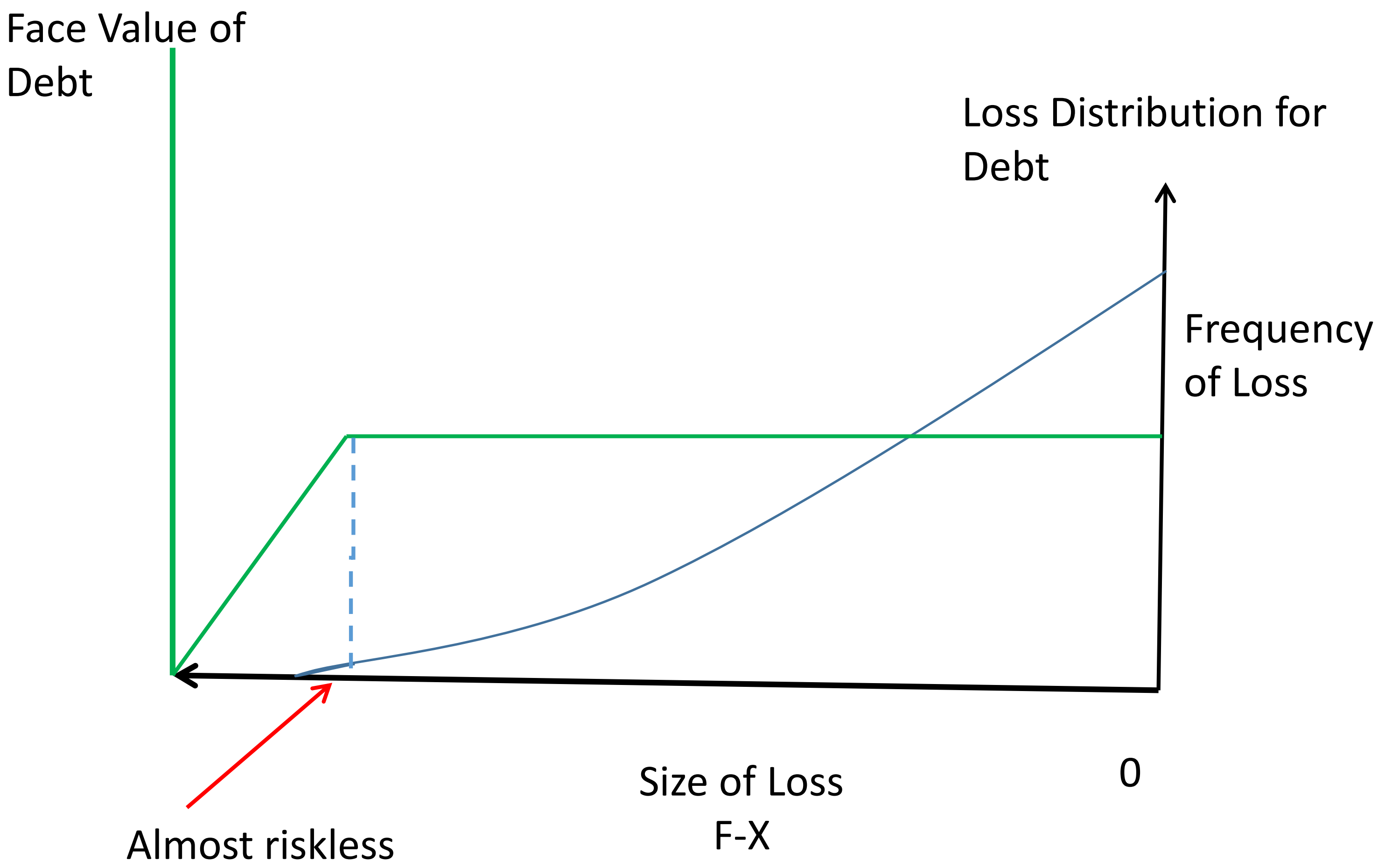
Maximal Info-Insensitivity: Debt-on-Debt

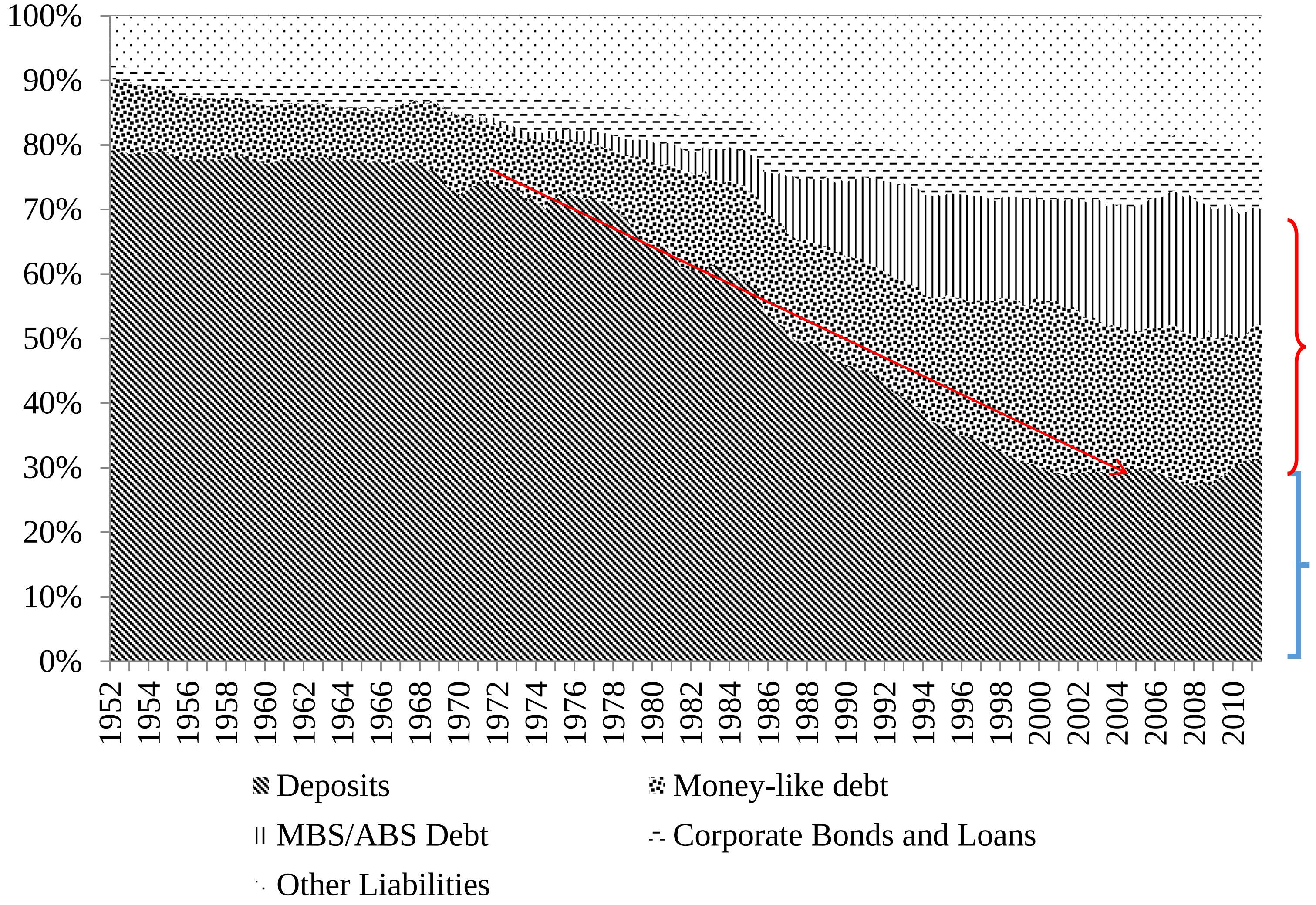


Privately-Produced Safe Debt as % of Total Privately-Produced Safe Debt

Shadow Banking Not identified

Blue=traditional banking

Red=shadow banking

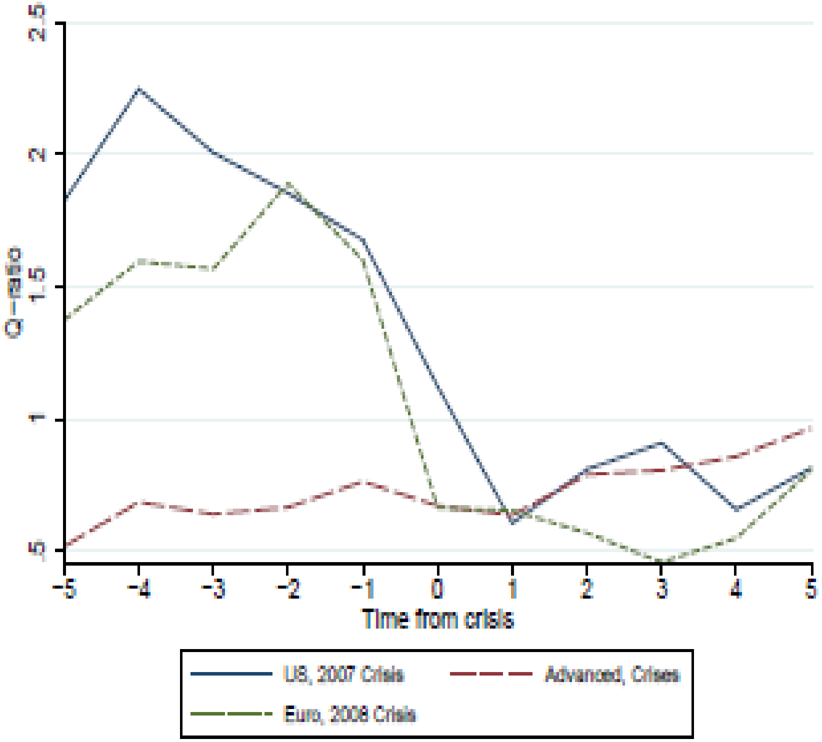


Source: Gorton, Lewellen, Metrick (2012)

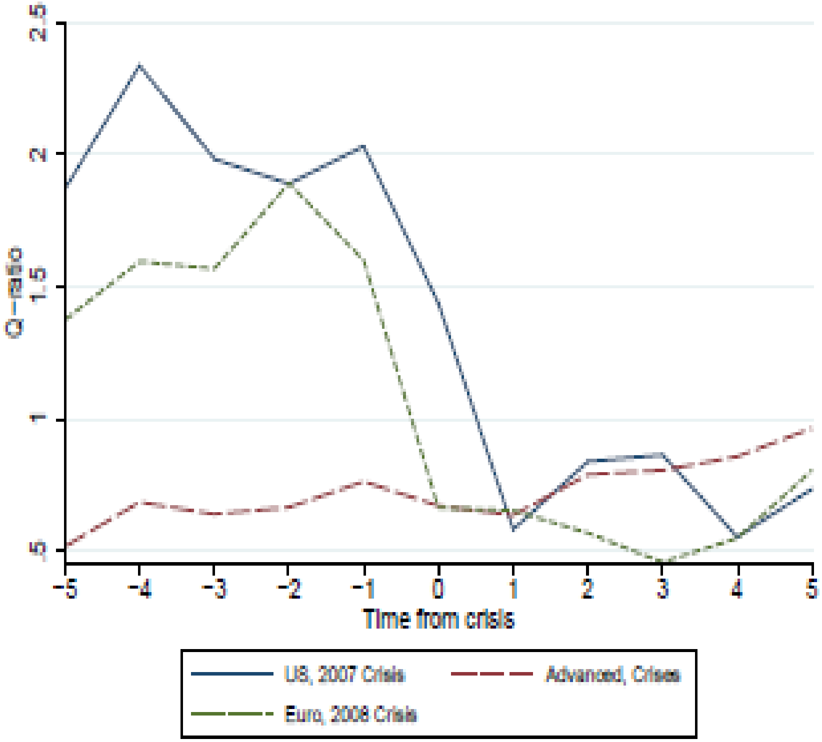
Measuring the Effects of Regulations

- Hard to measure the aggregate effect?

- Two reasonable approaches.
  - Tobin’s Q—does the market think banks have a future?
  - Convenience yields—shortage of safe debt?



(a) US banks (all)



(b) US banks (specific)

Source: Gorton and Chousakis (2017)

	GC-Tr 1m	GC-Tr 3m	Z-spread	Aaa-Tr	Baa-Tr
𝕀(July 2007-present)	0.135***	0.131***	0.0987***	0.425***	0.885***
	(17.13)	(19.43)	(20.61)	(26.91)	(32.39)
𝕀(2012-present)	-0.0958***	-0.0654***	-0.0260***	-0.0204	-0.432***
	(-11.74)	(-9.15)	(-5.14)	(-1.21)	(-14.79)
Constant	0.109***	0.0596***	0.0749***	1.391***	2.348***
	(21.07)	(13.79)	(24.40)	(137.60)	(134.30)
p(crisis+post=0)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Observations	3840	3985	3983	3931	3931
R^2	0.0728	0.0874	0.108	0.202	0.213

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Source: Gorton and Laarits (2018)

Some Cautions

- Regulators can only determine where the banks are.

- Measurement is key; no significant reforms here.
  - “Theory determines what you measure.” Einstein