Regulation, Financial Crisis, and Liberalization Traps Discussion

Eva Schliephake

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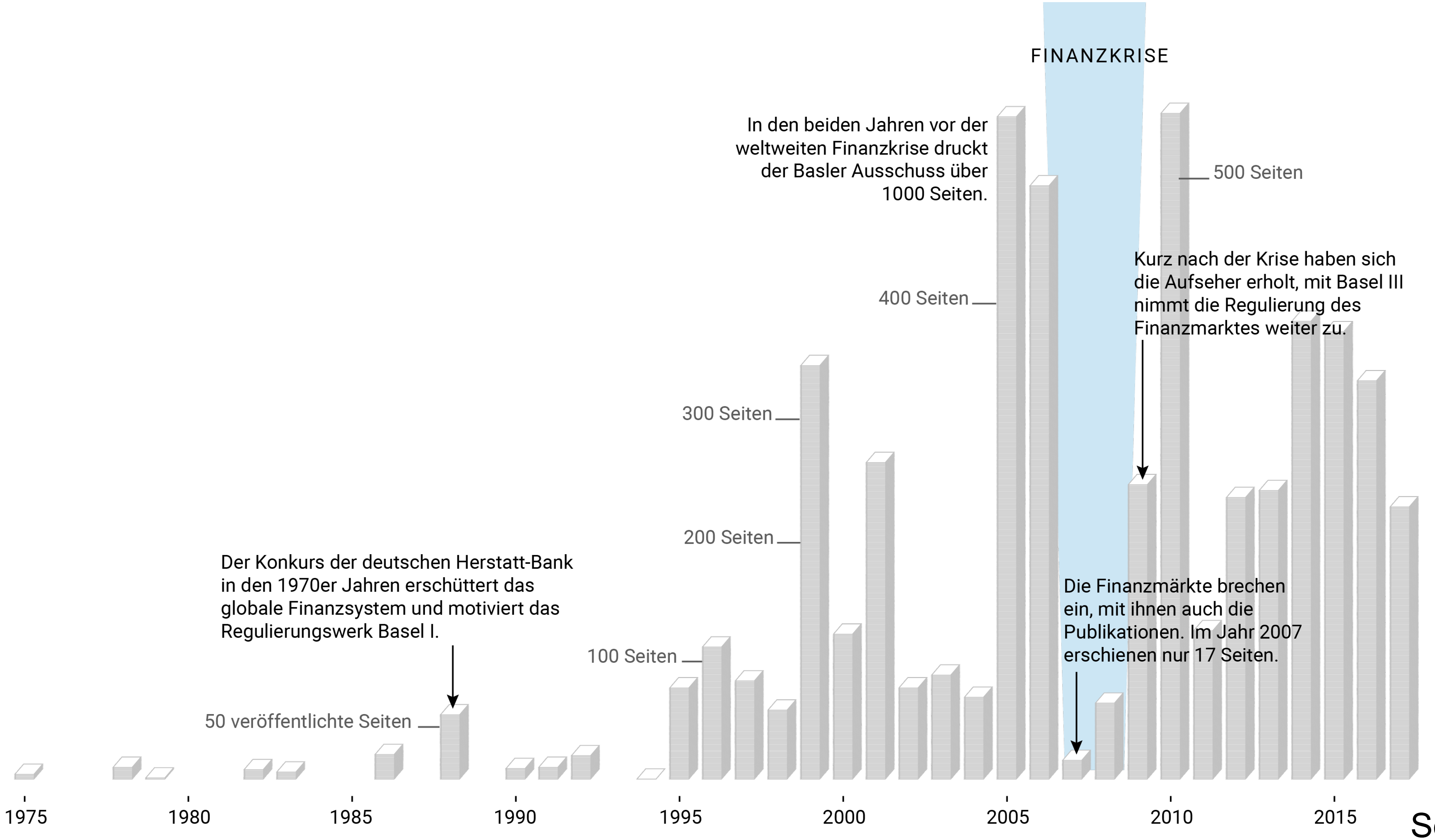
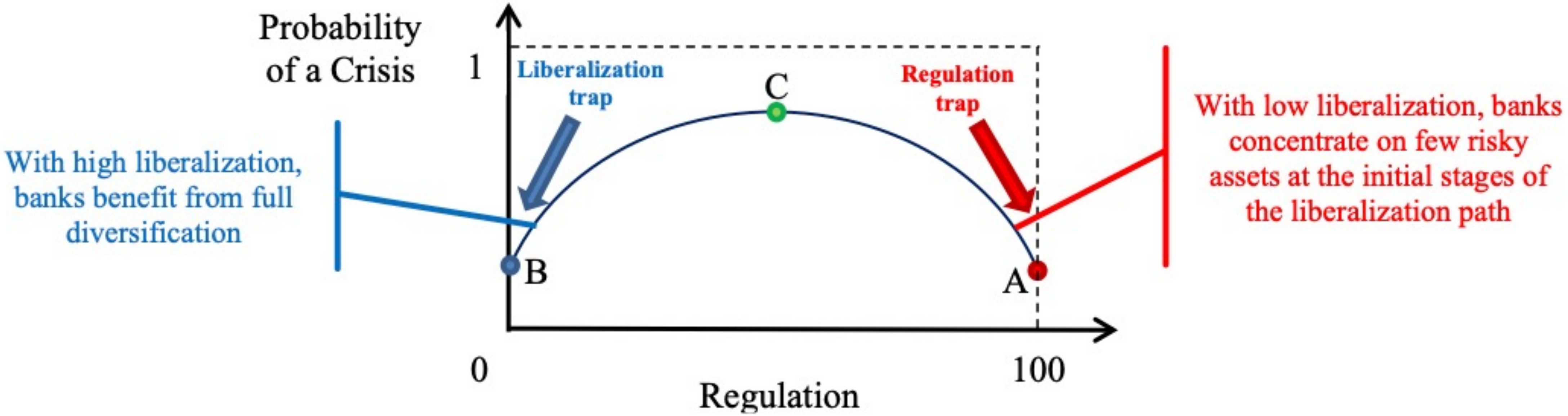
Does Regulation cause Crises?



Source: NZZ

Main Take

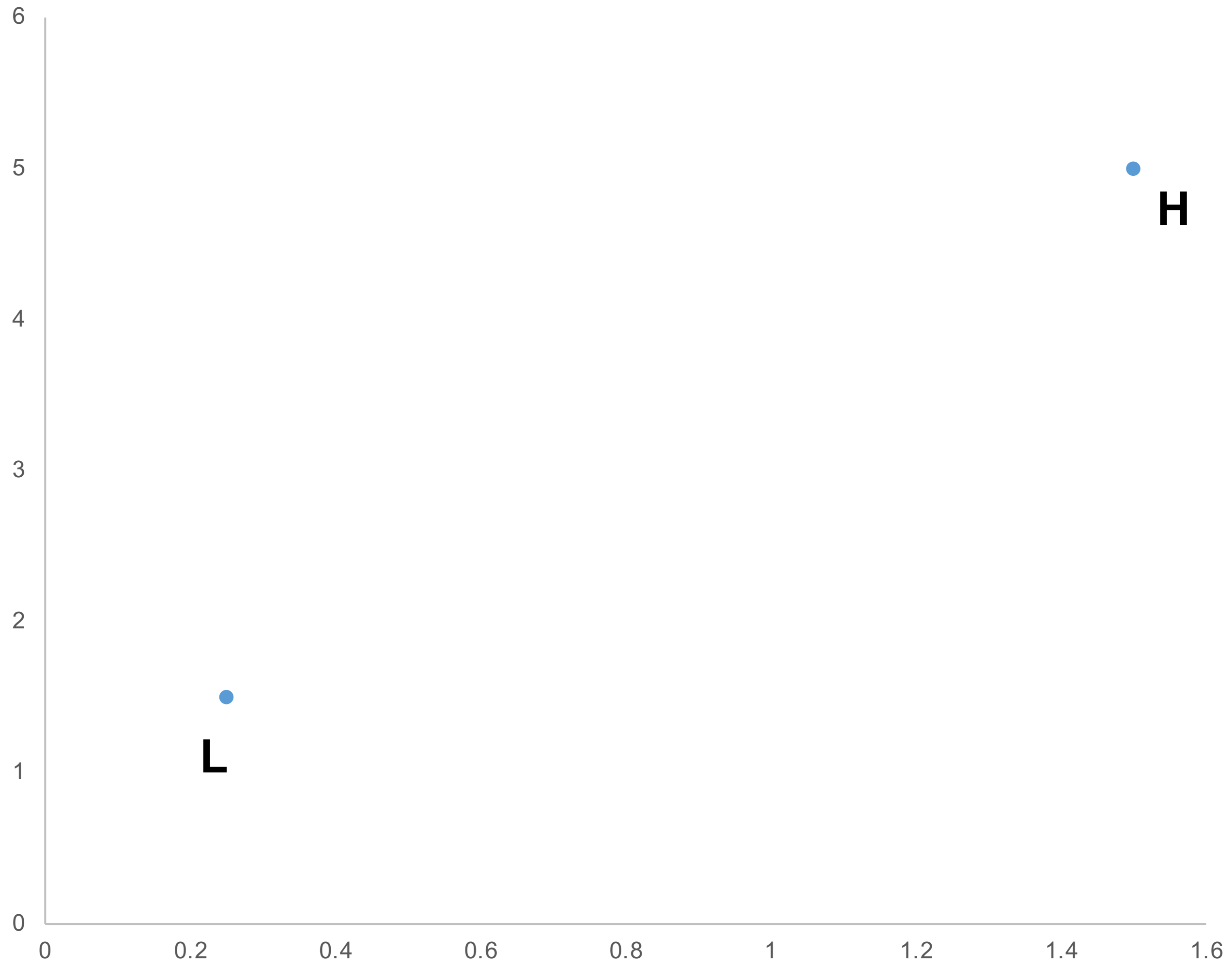

Probability
of a Crisis
1
Liberalization
trap
C
Regulation
trap
With high liberalization,
banks benefit from full
diversification
With low liberalization, banks
concentrate on few risky
assets at the initial stages of
the liberalization path
B
A
0
100
Regulation

Comments

- What is the goal of the bank?
- What is the goal of the regulator?
- What defines a banking crisis?

The Model

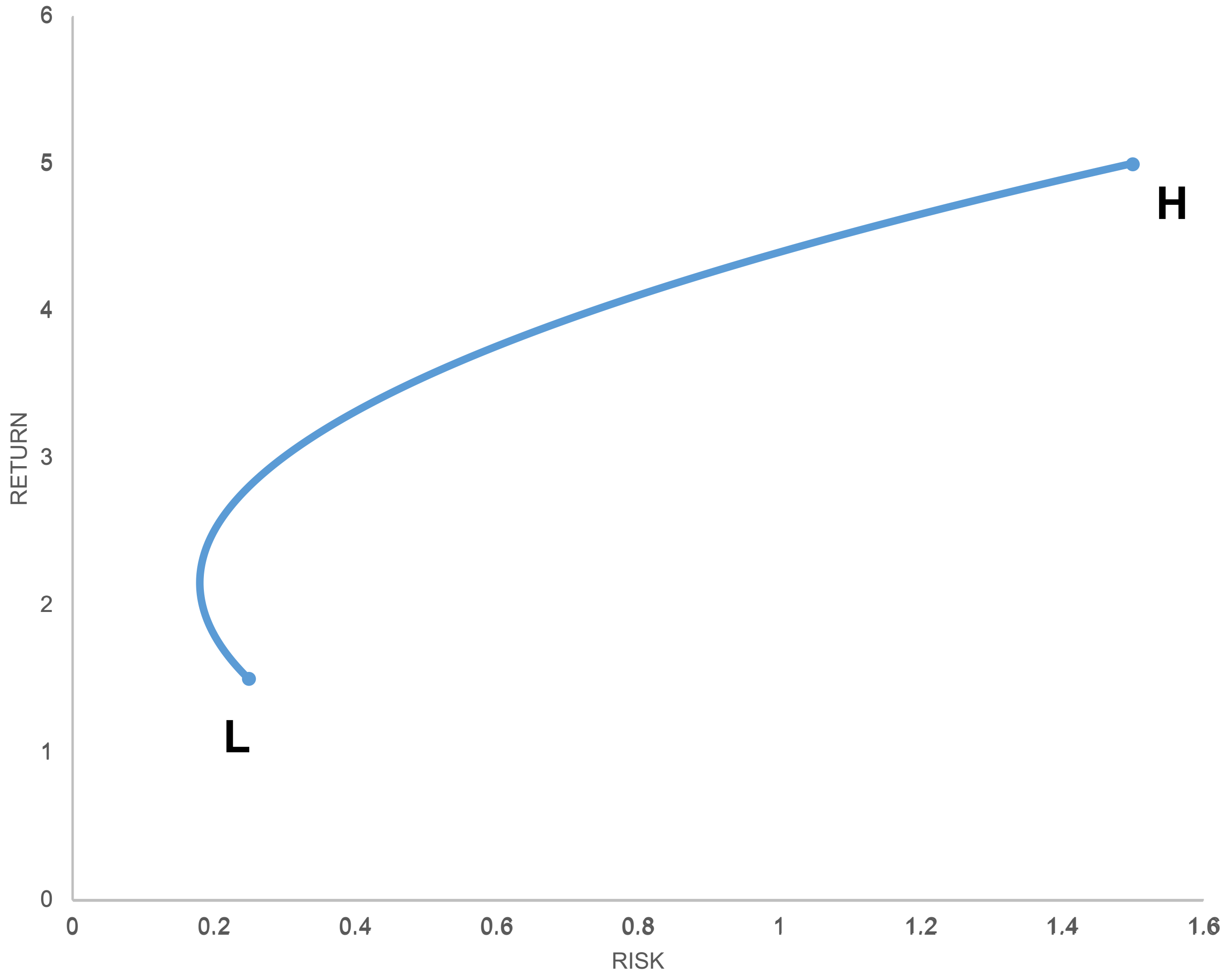
- Two uncorrelated Assets



$$r_p = (1-q)[1+r_L+\alpha(r_H-r_L)]-1$$
$$\delta_P^2 = (1-q)^2[\alpha^2(\delta_H^2+\delta_L^2-2\rho_{HL}\delta_H\delta_L)+2\alpha(\rho_{HL}\delta_H\delta_L-\delta_L^2)+\delta_L^2]$$

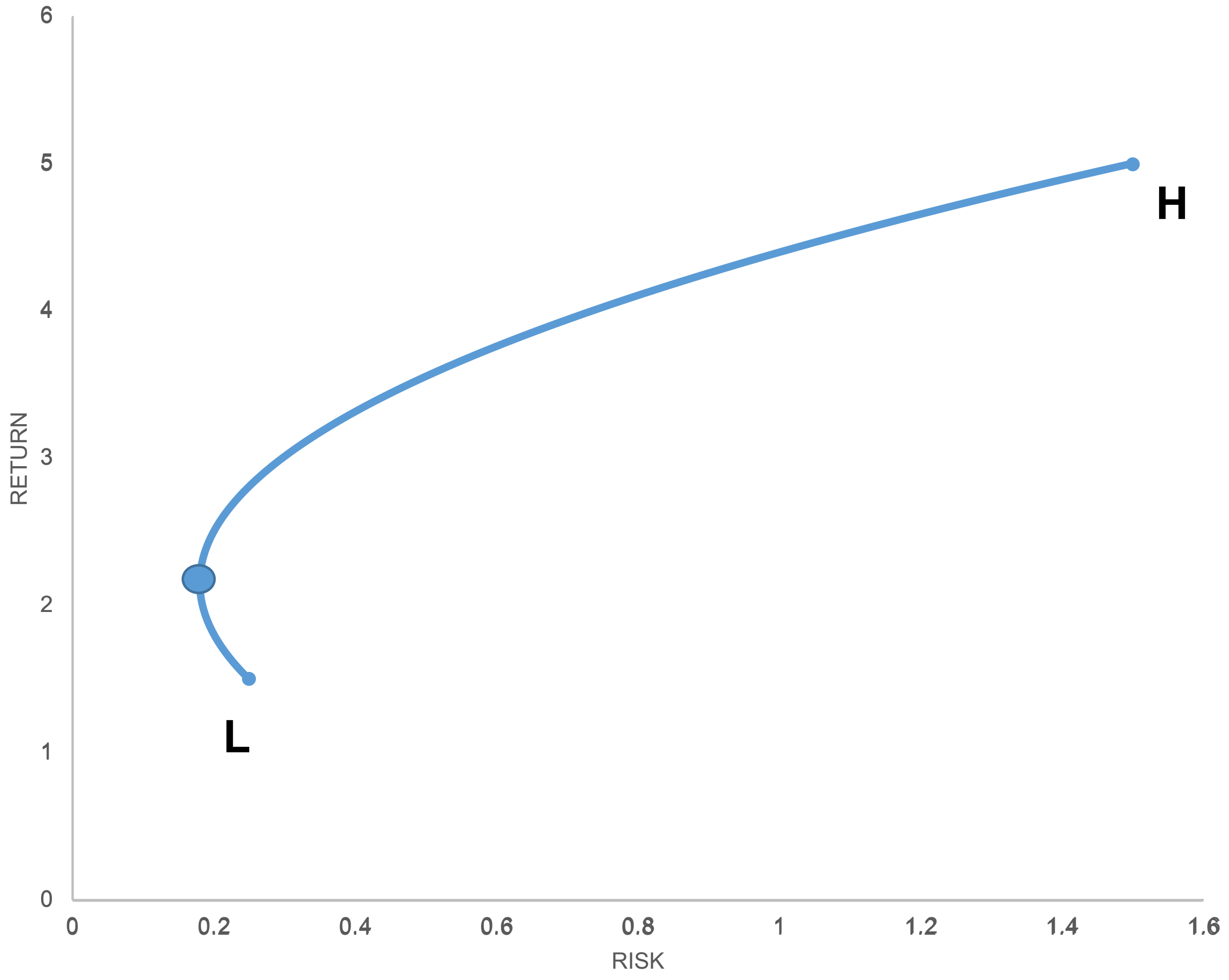
The Model

- Two uncorrelated Assets
- Bank Invests in Portfolio



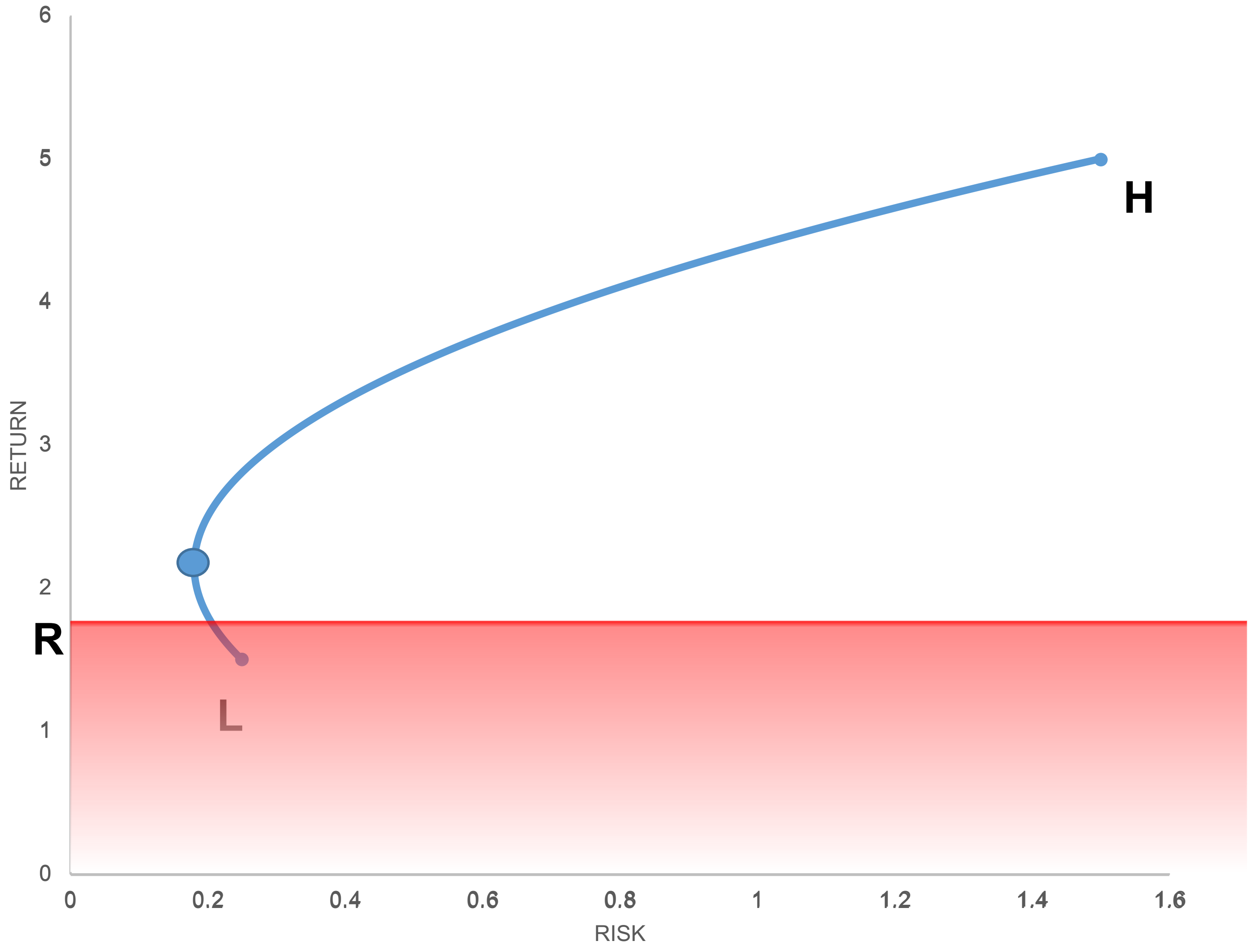
The Model

- Two uncorrelated Assets
- Bank Invests in Portfolio
- Bank chooses α that minimizes Risk



Market Constraint

- Two uncorrelated Assets
- Bank Invests in Portfolio
- Bank chooses **α** that minimizes Risk
  - Subject to Required Return **R**



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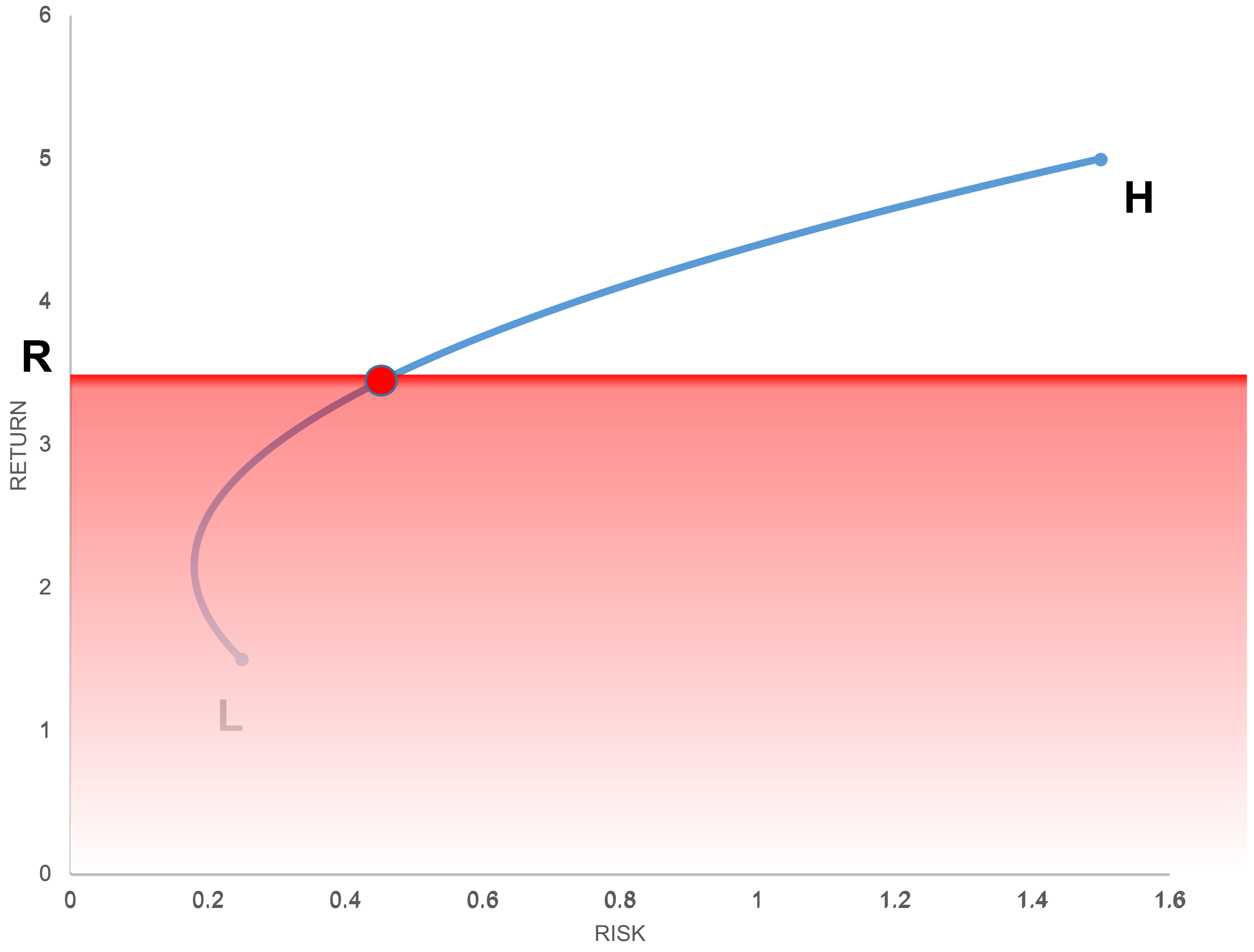
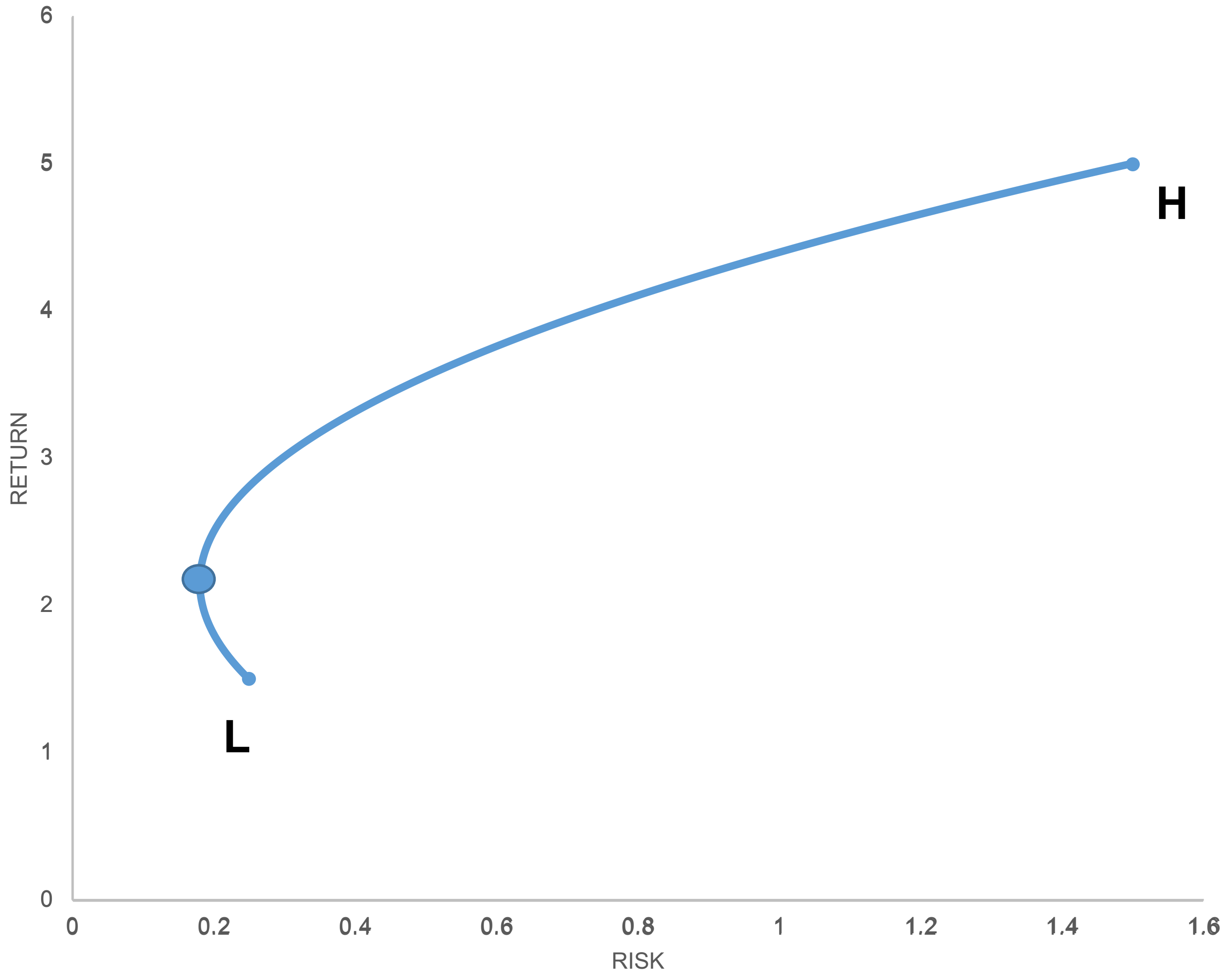


Goal of the bank?

- Why does bank minimize risk instead of maximize ROE?
- Bank is fully equity funded: Are there any market frictions?
- Simple model of dual effects of capital regulation with risk minimizing bank manager
  - Gale (2010) "Capital regulation and risk sharing."

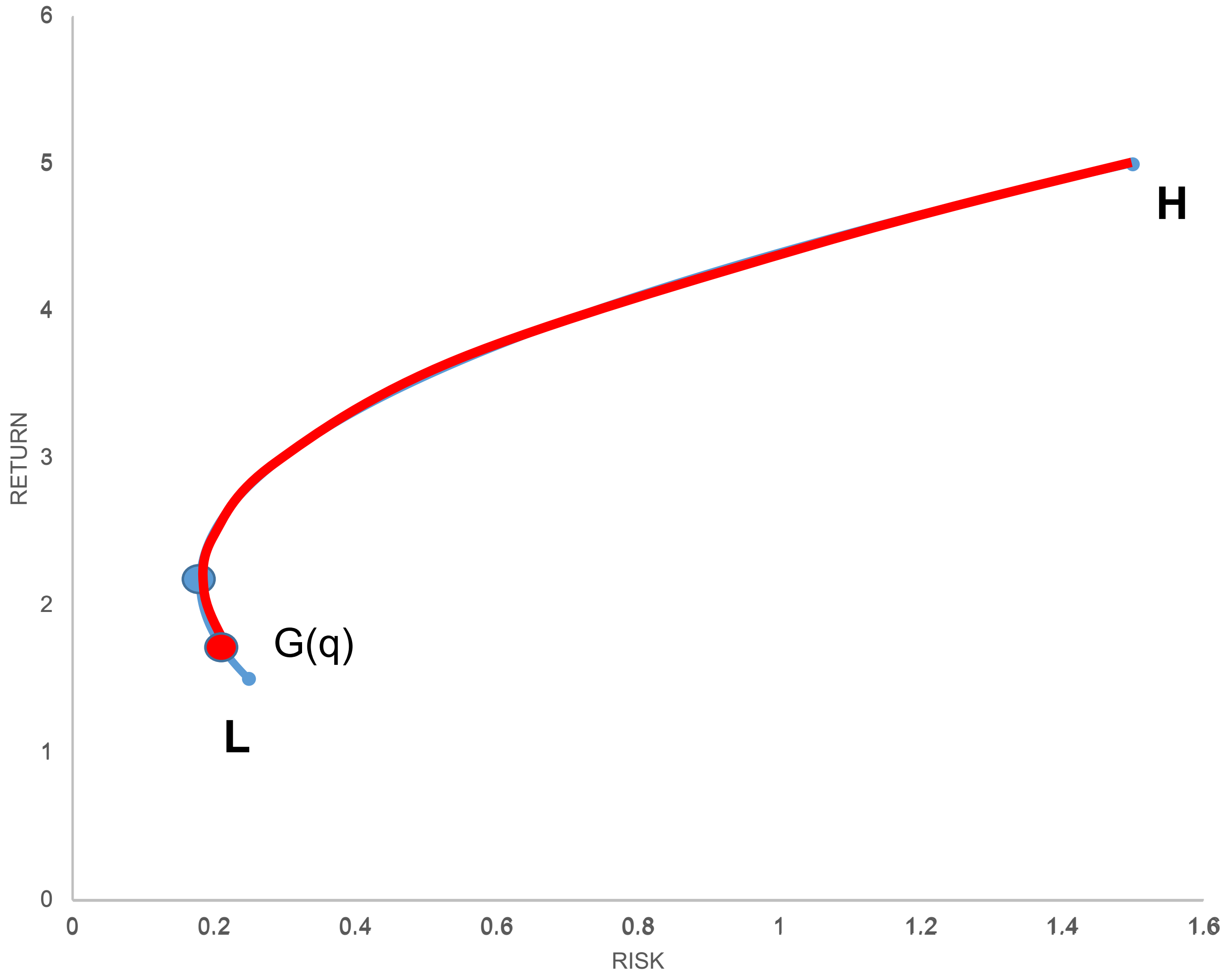
Direct Effect of Regulation

- Two uncorrelated Assets
- Bank Invests in Portfolio
- Bank chooses **α** that minimizes Risk
  - Subject to Required Return **R**
  - Subject to risk regulation **α**<G(q)



Direct Effect of Regulation

- Two uncorrelated Assets
- Bank Invests in Portfolio
- Bank chooses α that minimizes Risk
  - Subject to Required Return **R**
  - Subject to risk regulation α<G(q)
- Regulation increases bank risk
- Literature on how capital regulation affects optimal composition of bank asset portfolios
  - Kahane (1977)
  - Koehn and Santomero (1980),
  - Kim and Santomero (1988)
  - Rochet (1992)).



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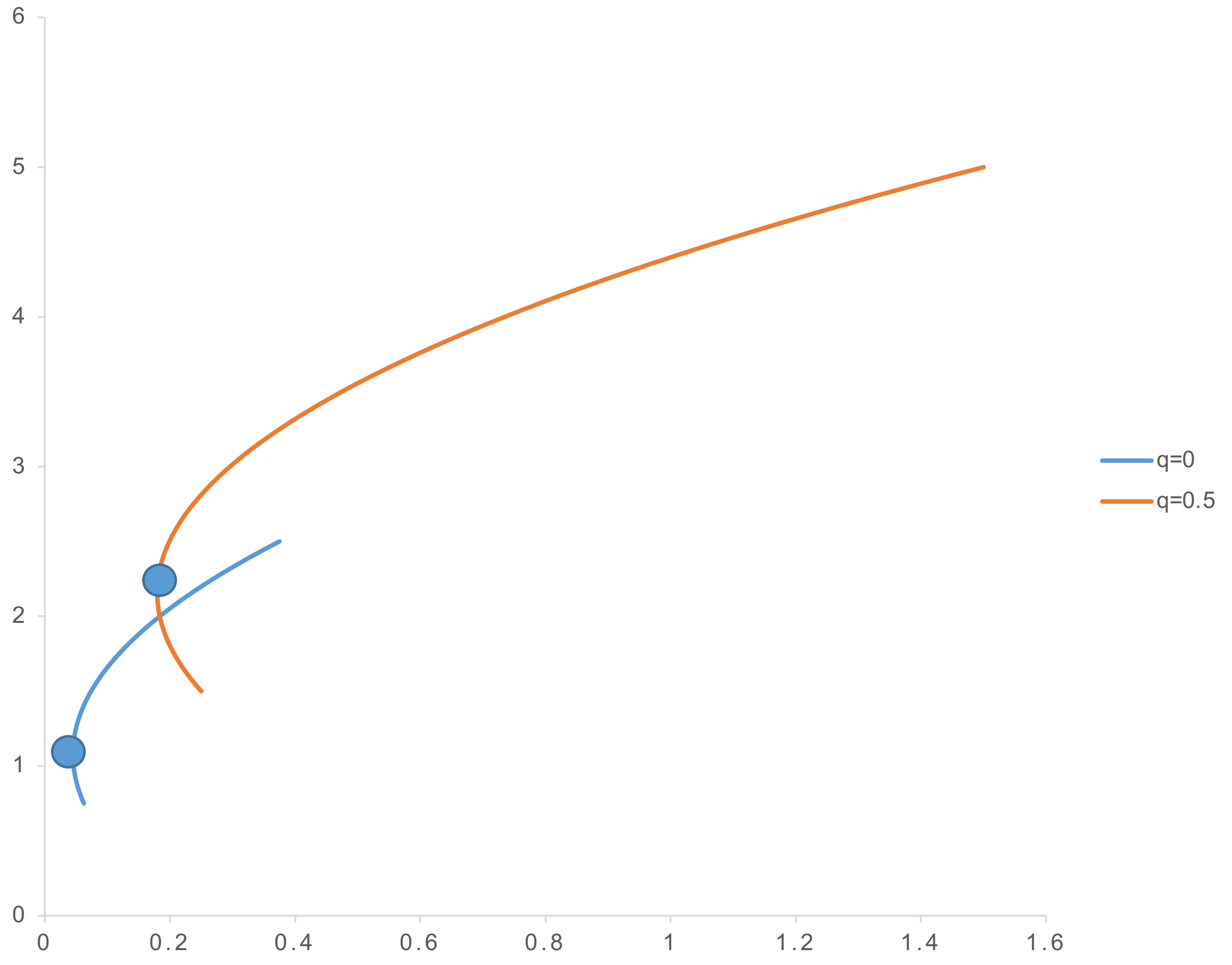
Indirect Effect of Regulation

- G(q) increases in q
- q reduces expected return
- With higher q banks take lower risks



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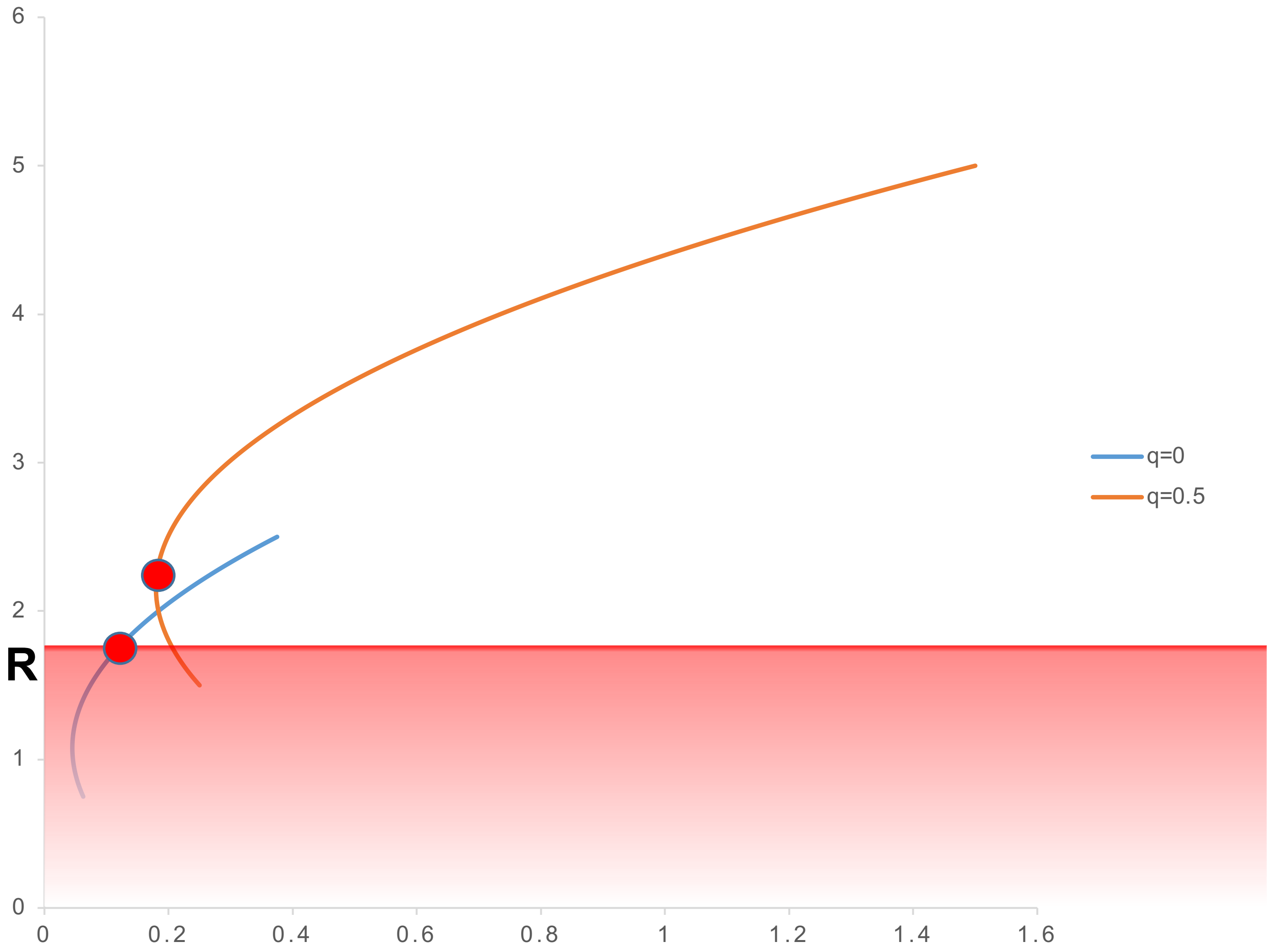
- But market constraint might become binding



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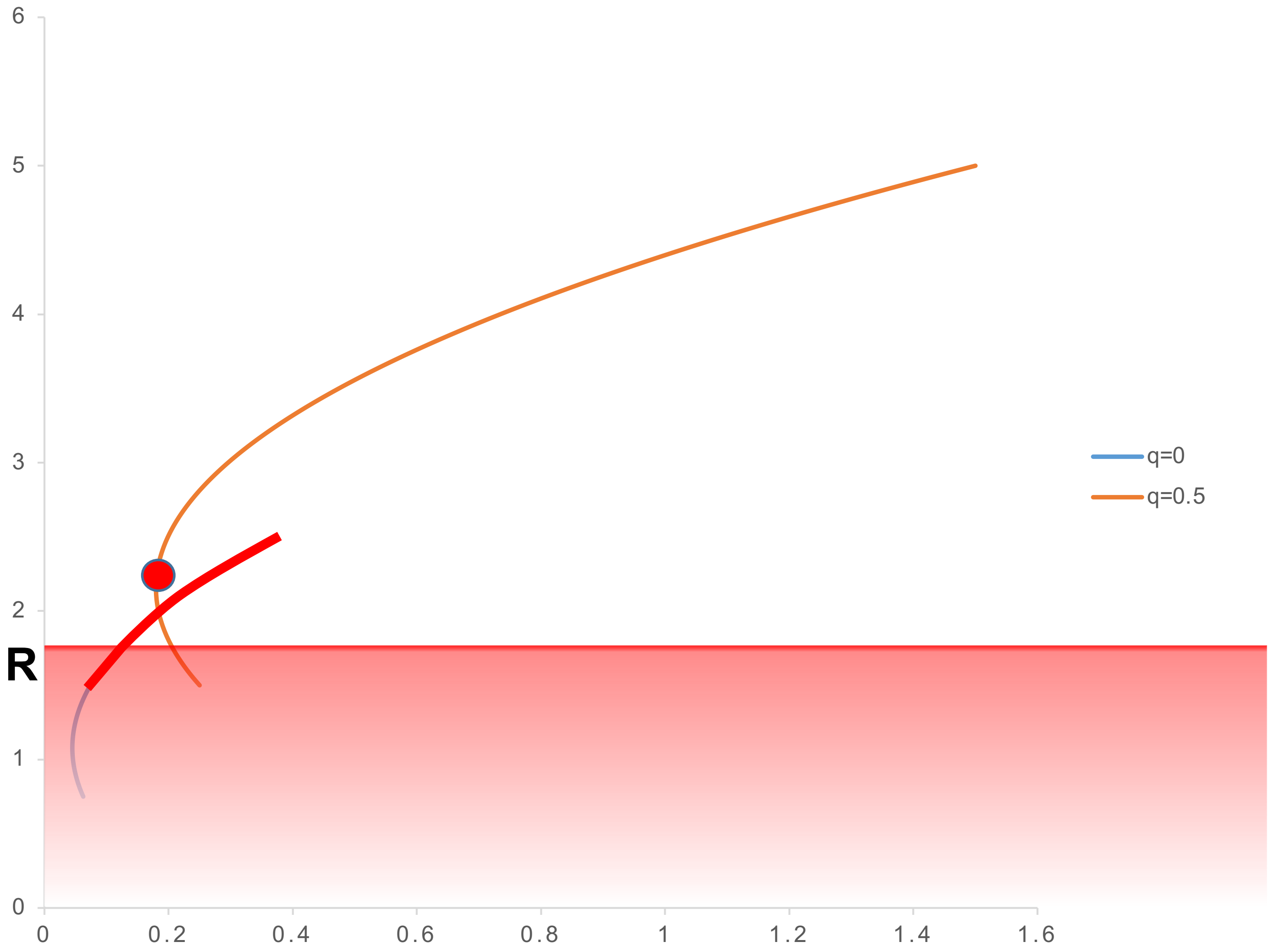
Indirect Effect of Regulation

- G(q) increases in q
- q reduces expected return
- With higher q banks take lower risks
- But market constraint might become binding
- The higher q, the more likely

$$\alpha(R) > G(q)$$

- Banking becomes inviable



Goal of the regulator?

- Regulation increases bank risk
- Regulation decreases bank profits
- But bank is **fully equity** funded
- Are there any benefits of the regulation?

- **What causes financial crisis?**

No reverse causation

Step 2 *(Regulator):* $\max_q \{(1-q)+\beta(1-q)[1+r_L+\alpha(q)(r_H-r_L)](1-PQ(q,\tau))\}$

Comparative Statics

- FOC $\frac{\partial V}{\partial q} = 0$
- Implicit function theorem $\rightarrow \frac{dq}{dP}$
  - Change in **exogenous** P affects choice of q
  - "How does optimal regulation change if Crisis Probability changes?"

Your analysis

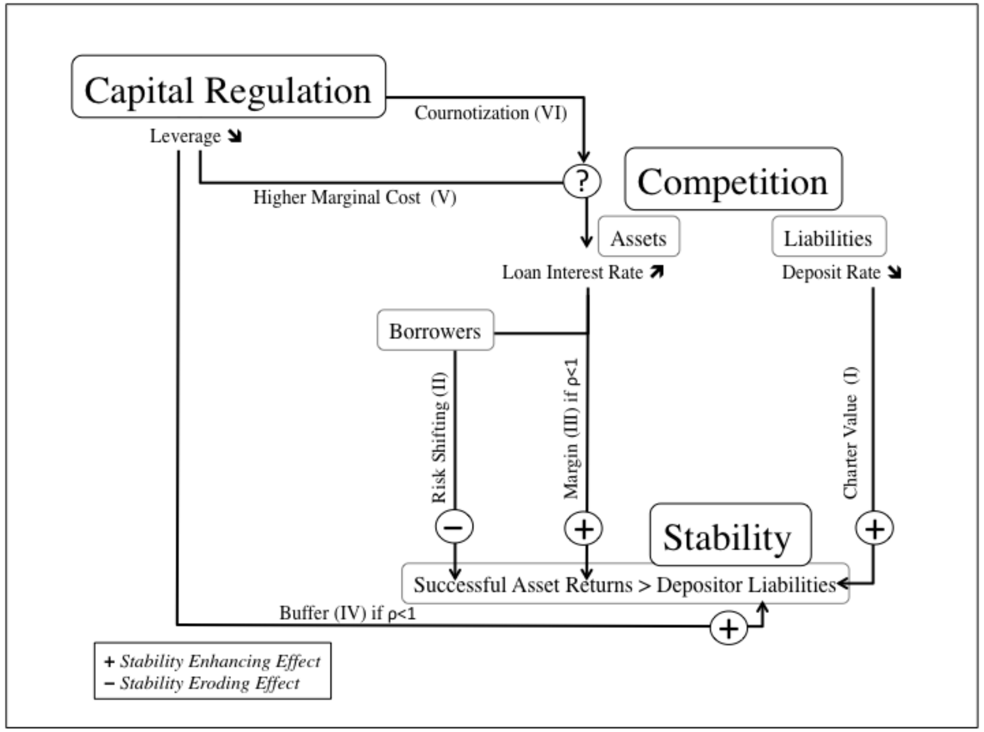
- FOC $\frac{\partial V}{\partial q} = 0$
- Solving for P and taking $\frac{\partial P}{\partial q}$
  - Change in **endogenous** q does not (in this model) change P
  - *"How does crisis probability change in regulation?"*
- Otherwise $\frac{\partial V}{\partial q} + \frac{\partial V}{\partial P}\frac{dP}{dq} = 0$

Determinants of Financial Crisis

- Probability that a (proportion) of bank(s) fails to meet outstanding liabilities
  - Depending on risk and liability structure of bank
- Individual Bank risk
  - Ability to absorb losses (equity, profit margin)
  - Asset risk (Credit risk, Market risk)
  - Liquidity Risk
- Systemic Risk
  - Interconectedness
  - Counterparty risk
  - Liquidity dryup
  - Market freezes
  - …

Dual Impact of Regulation on Financial Stability

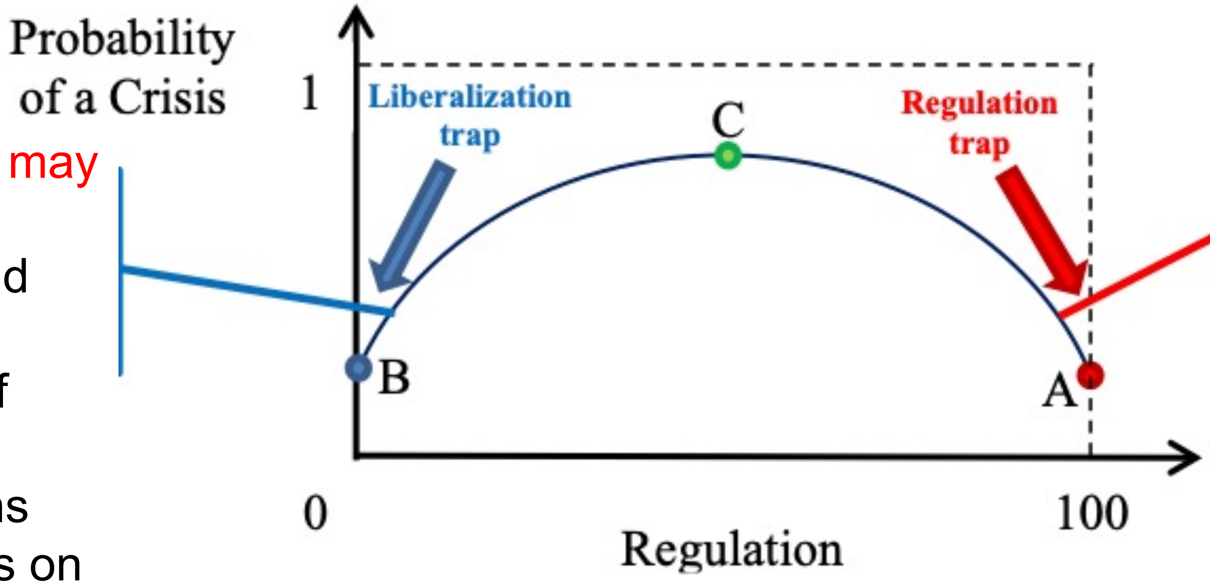
- Schliephake (2016): Market Structure is important



Financial Freedom Index

- The extent of government regulation of financial services,
- The degree of state intervention in banks and other financial firms through direct and indirect ownership,
- Government influence on the allocation of credit,
- The extent of financial and capital market development,
- Openness to foreign competition.

Regulation is minimal but may extend beyond enforcing contractual obligations and preventing fraud. Government ownership of financial institutions is a small. Financial institutions face almost no restrictions on their ability to offer financial services.

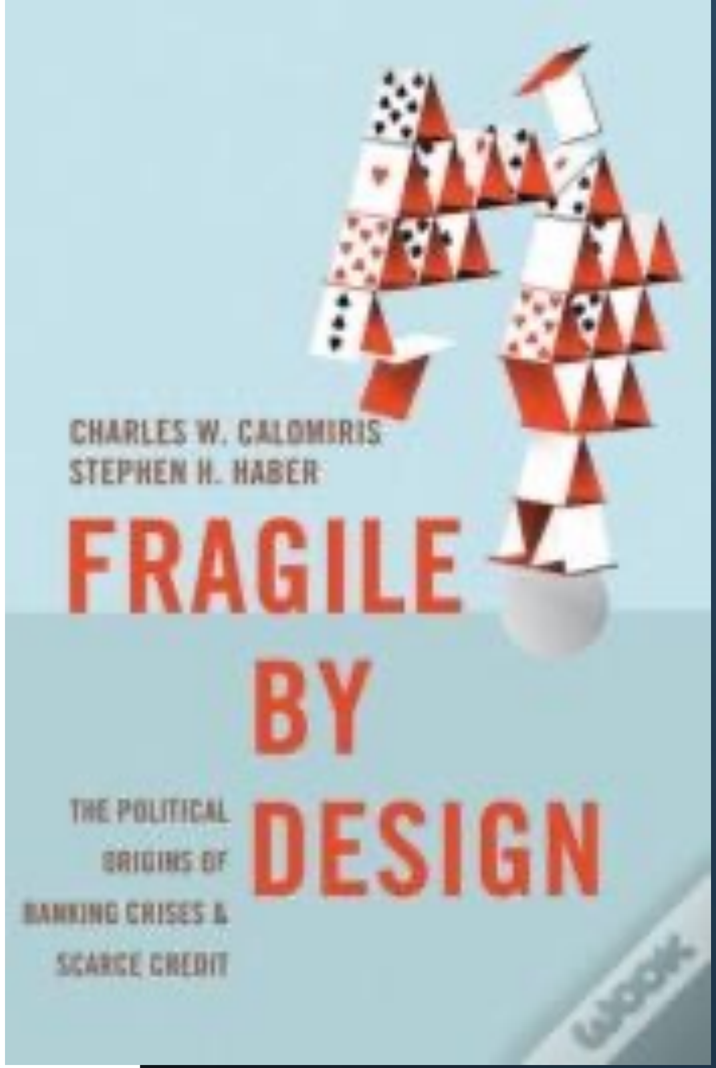


Credit allocation is controlled by the government. Bank formation is restricted. Foreign financial institutions are prohibited. Supervision and regulation are designed to prevent private financial institutions.

“Politics are baked into the banking sector”

You are comparing very different things:

- Cross Country Comparison
- Cross Crisis Comparison
- Cross Regulation Comparison



Conclusion

Important research question to be addressed

- Very important policy implications

Model should provide microfoundation of regulation and banking crisis to guide empirical analysis

- Map the channels of regulation affecting financial crises

Interesting empirical questions:

- Are low/high financial freedom countries different in other aspects (than regulation)?
- What about other important factors such as financial and real sector performance?

Focus more on identification

- To support strong causality claims