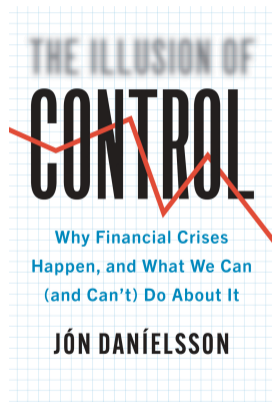


# Illusion of Control



illusionofcontrol.org

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[modelsandrisk.org](http://modelsandrisk.org)

20 June 2023  
EFAMA









# Risk is endogenous

Danielsson–Shin (2002)

- Risk is *exogenous* or *endogenous*

**Exogenous** Shocks to the financial system arrive from outside the system, like an asteroid  
— day-to-day risk, what we usually measure

**Endogenous** Financial risk is created by the interaction of market participants  
— large, rare events, very hard to measure

# What drives endogenous risk?

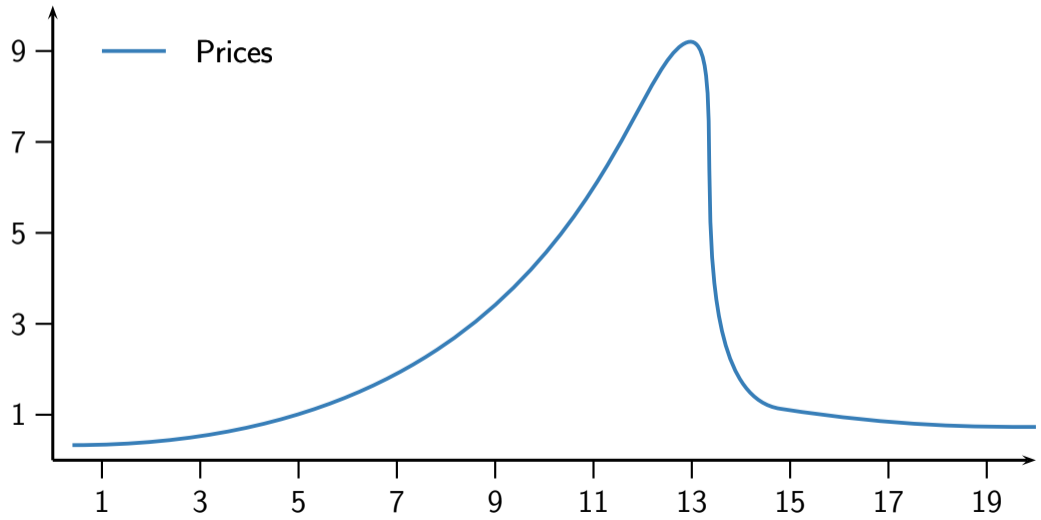
Time between decisions and crises is many years

- 2008 happened because of decisions made years earlier
- In 2003 all the signs pointed to risk being low
- The authorities and the private sector thought we were safe
- And so it was perfectly OK to take extra risk
- But
- “*Stability is destabilizing*” (Minsky)

“The received wisdom is that risk increases in recessions and falls in booms. In contrast, it may be more helpful to think of risk as increasing during upswings, as financial imbalances build up, and materialising in recessions.”

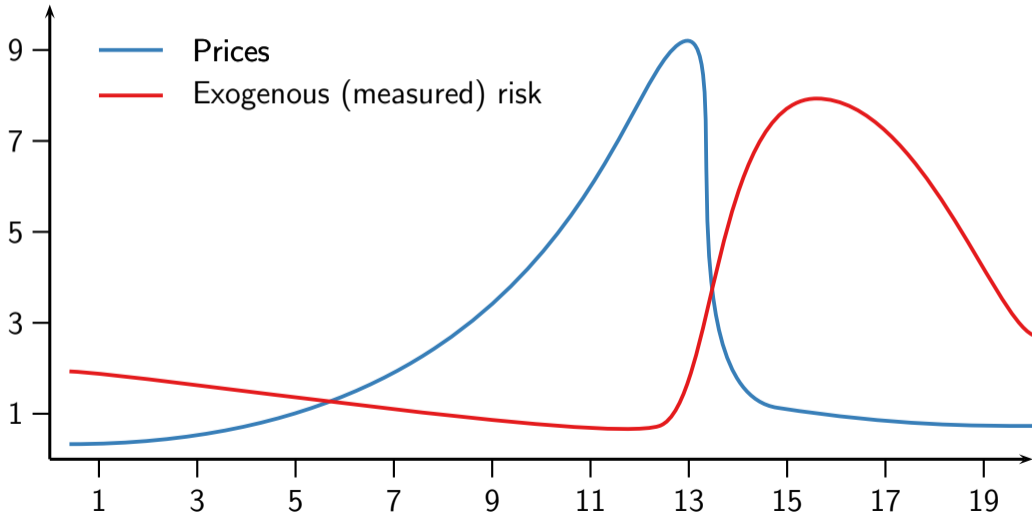
Andrew Crockett, then head of the BIS, 2000

# Endogenous bubble

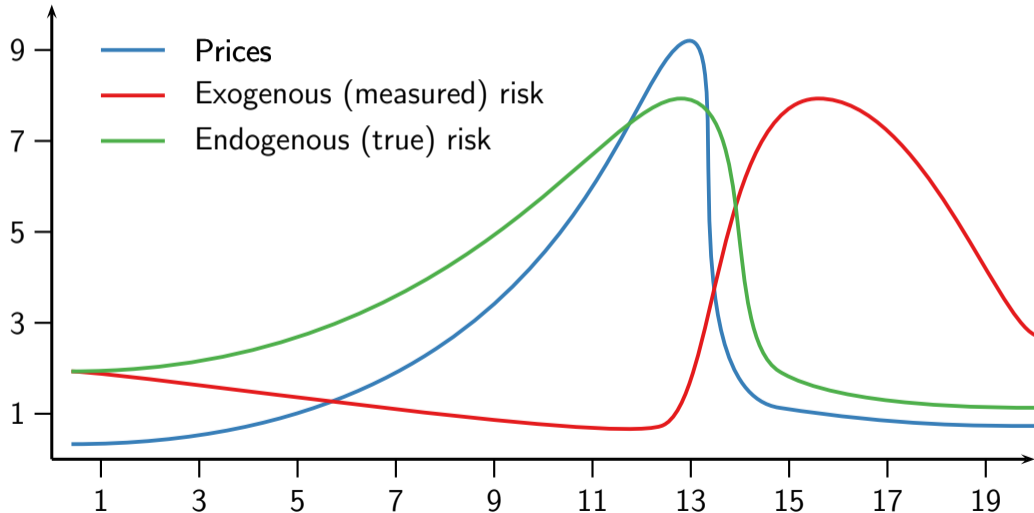




# Endogenous bubble — Money for nothing



# Endogenous bubble — Money for nothing



# Risk comes in many forms

- The US stock market goes down by \$200 billion in one day, and almost nobody cares
- Potential subprime losses of less than \$200 billion in 2008, and a global crisis ensues
- The risk we know we prepare for — *known-unknowns*
- The *unknown-unknown risk* is the most damaging
- But the risk we measure is the known-unknown risk
- Is that all the central bank risk manager will measure?

# The driver of extreme risk is politics

- 2008, Italy, Brexit, Trump, Ukraine, Taiwan, Venezuela, real estate, inflation, ...
- Because politics allows the risk to emerge and prevents timely solutions
- The inability to deal with environmental risk is entirely political
- As is the demographic challenge
- Politics works against those who want to prevent a crisis
- The boom delivers short term tangible benefits

# The political economy of booms

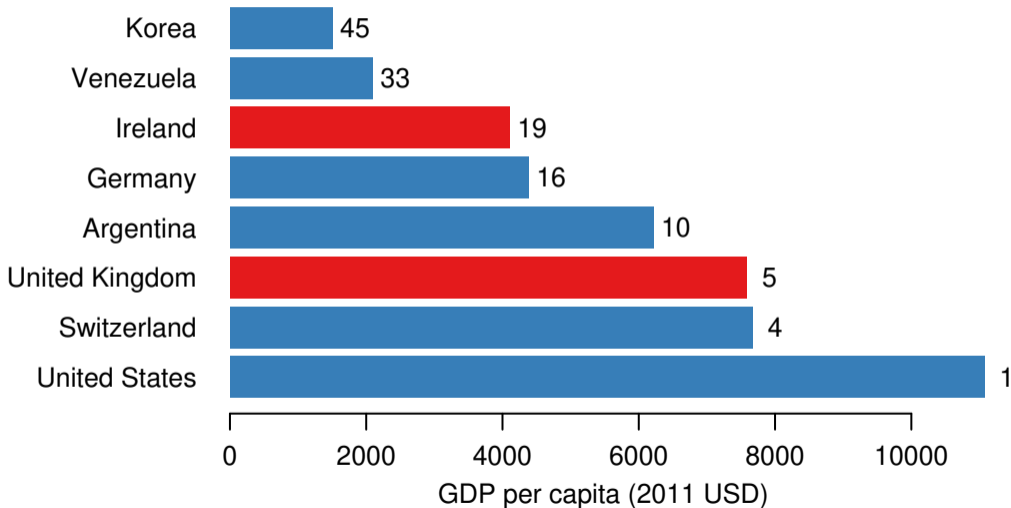
- The politics works against those who want to prevent a crisis
- Especially is we are in a pre-crisis boom, as usually is the case
- The boom delivers short term tangible benefits
- The long term downside will be dismissed by everybody
- Practically impossible to warn or reduce risk

# The dilemma of political risk

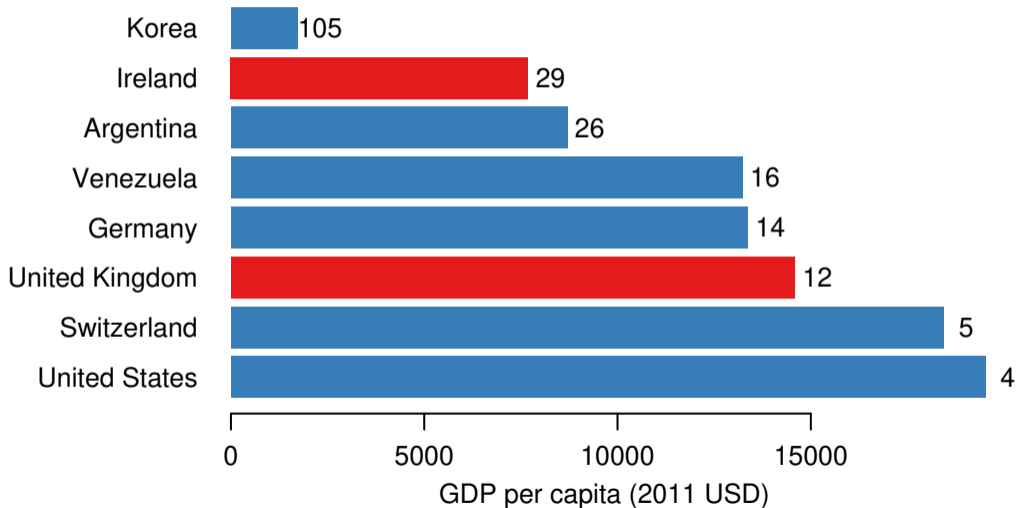
Jon Danielsson and Robert Macrae (2016 )

- Can a nonpolitical entity legitimately implement macroprudential policies that affect democratic outcomes?
- Recall Bank of England and Brexit
- Does the mandate given by the political leadership to the regulator extend to the behavior of the political leadership?
- If the CB can not able to incorporate political risk in its analytic framework, how effective can it be?
- And how legitimate?

## GDP per capita and rank. 1923

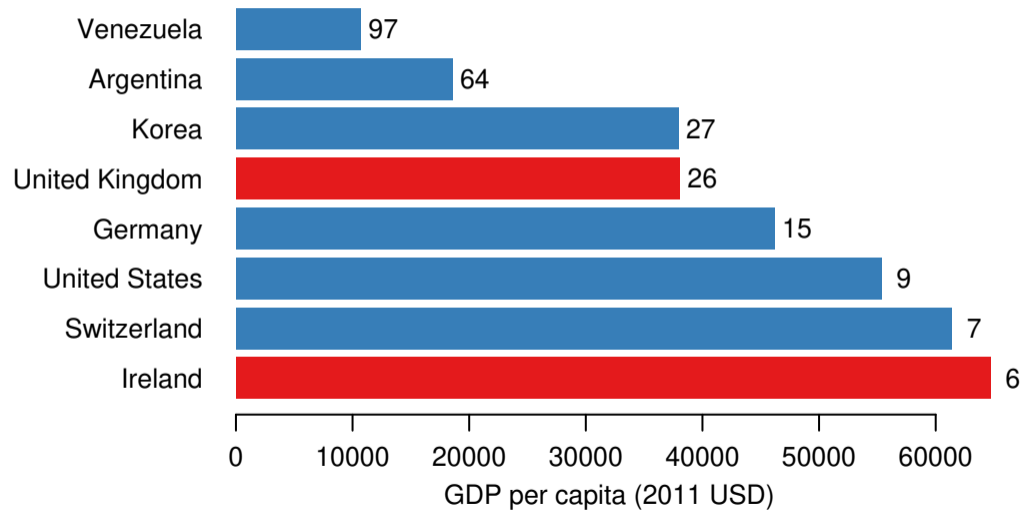


## GDP per capita and rank. 1963





# GDP per capita and rank. 2018



# Silicon Valley Bank and Credit Suisse should have not have failed

“Over the past decade, G20 financial reforms have fixed the fault lines that caused the global financial crisis”

Mark Carney (2017)

Governor of the Bank of England  
Head of the Financial Stability Board

# The philosophy of modern regulations

Danielsson–Goodhart (2023)

- All important risk is identified and measured
- And used by the banks and the financial authorities to determine the appropriate level of risk
  - Need more growth/prevent recession, reduce capital requirements
  - Demand more capital if risk is too high
- Like the thermostat in the risk managers office keeps the temperature at steady 21°
- Accurate measurements of risk are essential

# The fallacy of composition in financial regulations

Definition— fallacy of composition is inferring that something must be true if all or even some parts of it are true— Hydrogen (H) is not wet. Oxygen (O) is not wet. Therefore, water ( $H_2O$ ) is not wet.

- If all the banks are prudent, keeping all their individual micro risks under control, the entire financial system is safe

# The trilemma of financial policy

Danielsson–Goodhart (2023)

Trilemma — noun— “A situation in which a difficult choice has to be made between three alternatives”. See cakeism and Boris Johnson

1. The economy should grow, or at least recessions must be avoided
2. Inflation needs to be close to its 2% target
3. Financial stability is to be high

“No trade off between price stability and financial stability”  
Christine Lagarde 16 March 2023

# The years after 2008

- All three objectives — growth, inflation, financial stability — appeared to be in sync
- Easy money helped growth, inflation was close to target and financial stability high

# The hope

- Lax monetary policy, designed to help the economy grow, made the financial system dependent on low interest rates
- A bet on low inflation and low interest rates lasting forever, because else those firms and countries dependent on low rates were in for a shock
- The longer monetary policy stayed lax, the more systemic financial risk increased
- Not supposed to be a problem because regulations would contain that systemic risk

# Challenges

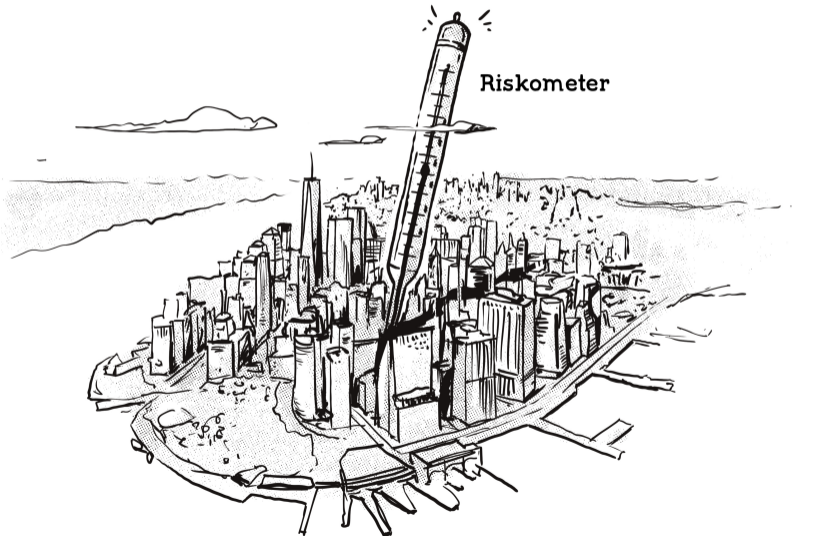
- A policy of growth/no recessions (cheap money and loans) is inflationary and erodes financial stability
- Reducing inflation to target is hence recessionary and increases systemic risk
- High financial stability needs a lot of capital, in turn reducing SME lending, hurting growth
- Foreseeable and avoidable — benefit of housing the regulators and monetary policy makers in the same institution



# The illusion of control — Part I — Complexity

- The financial system is infinitely complex
- Even if the authorities can find a lot of risk to control, there is infinite scope for risk to emerge elsewhere
- You can only patrol small part of an infinitely complex system
- Trying to identify and manage all of that risk would make financial regulations so onerous that the banks would cease functioning
- Why we only spot the Silicone Valley Bank after the fact

# The illusion of control — Part II — Need a riskometer



# The modern philosophy of financial regulations is not sound

- It depends on the authorities and bank been able to maintain a virtues feedback between identification of risk and the taking of risk
- Which depends on the financial system not being infinitely complex
- And risk being accurately measured

# What should we do?

- The most likely response today is tightening up of current regulations, which will be recessionary and increase systemic risk
- We could leave finance to the market, but that will hit political reality when the next crisis happens
- Or have 100% research for deposits and maturity mats assets to liabilities — very expensive and recessionary
- Turn to technology, CBDCs, DeFi, Web3 — promising but will take decades

# Robustness with buffers or resilience with shock absorption?

- We now aim for buffers calculated by risk measurements
- That is very costly
- No buffer can protect against large shocks
- And increases systemic risk since it drives towards harmonisation of beliefs and action
- Instead, work with the inherent shock absorption capacity of the system

# Diversification not uniformity

The more diversified our portfolio of financial institutions is:

- a.** The higher the shock absorption capacity of the system
- b.** The better financial services are tailored to the user
- c.** The lower the cost of regulating

Win-win-win. More growth, better deal for savers/investors and more stability

## How can the authorities do this?

- Tailor regulations to the types of financial institutions instead of one-size-fits-all (with very high fixed cost and hence increasing returns to scale)
- Eliminate barriers to new entrants, especially for those with new business models
- Embrace FinTech and DeFi (perhaps via CBDCs)
- Accept shadow banking is usually a friend not enemy

## And why does it not happen?

- Conservatism — prefer what we know instead of the new
- Risk aversion — regulators are not rewarded for success but blamed for failure
- Local maximisation — collective failure covers individual failure
- Lobbying — the incumbents prefer what we have
- Often stated like “Will somebody please think of the children” — because since anything new can harm, it needs to be banned













# What can go wrong?

1. AI can't reason
2. And is unable to deal with unknown-unknowns
3. While it is procyclical
4. And easy to attack





















# Friedrich August von Hayek (1945)

“Use of knowledge in society”, American Economic Review

Writing about central planning but could just as easily have been discussing the central banker as a risk manager.

“*If* we possess all the relevant information, *if* we can start out from a given system of preferences, and *if* we command complete knowledge of available means, the problem which remains is purely one of logic... This, however, is emphatically *not* the economic problem which society faces.”



THE ILLUSION OF

**CONTROL**



Why Financial Crises  
Happen, and What We Can  
(and Can't) Do About It

**JÓN DANÍELSSON**