Debt, Default and the Evolution of Trust

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Latin root of the English word ‘credit’

Credere (Latin) = v. to believe, to trust
Keynes understood the dangers of monetary debasement

“By a continuing process of inflation, Governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens. By this method they not only confiscate, but they confiscate arbitrarily; and, while the process impoverishes many, it actually enriches some .... Those to whom the system brings windfalls .... become “profiteers” who are the object of the hatred ... the process of wealth-getting degenerates into a gamble and a lottery ... Lenin was certainly right. There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one man in a million is able to diagnose.”

John Maynard Keynes, 1921
The insidious redistribution

Source: Piketty & Saez
Don’t take my word for it

“Bank of England defends QE but admits rich benefit most”

BBC Headline, 23-Aug-2012
Medieval English inflation and the Witch Hunts

As inflation rose, society turned on itself
The origins of co-operation: the prisoners dilemma

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Prisoner 2
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Robert Axelrod’s experiment in repeated Prisoner’s Dilemma: Tit-for-Tat

• I start by cooperating
• If you cooperate too, then I will cooperate in the next round
• If you defect, then I will defect

Anatol Rapaport
The problem with Tit-for-Tat in the real world – mistakes happen

• Errors destroys the cooperative equilibrium
• One mistake triggers an endless cycle of retaliation
“Generous tit-for-tat”… the Nowak simulations

• Start with a full spectrum of strategies

• Allow for error
  • If you cooperate, then I will probably cooperate
  • If you defect, then I will probably retaliate
    (but I might just forgive and keep cooperating)
  • This is strategy is called as “generous tit for tat” by Martin Novak

• Allow for evolutionary replication
  • Winning strategies have “offspring”
  • Losing strategies don’t, so they die out
  • Offspring mutate randomly
How nature decides …
generous tit-for-tat

War

Always Defect    Tit-for-Tat

Always Cooperate

Generous Tit-for-Tat

Peace
Cooperation is intrinsically cyclical

“In all my work on the evolution of cooperation it is always the same story, cooperation is never here to stay. Cooperation prevails for some time. Then the system breaks down and you have to rebuild it .... This is far away from the typical economist notion of equilibrium. There is no equilibrium.”

Martin Nowak
Mathematical Biologist at Harvard
Author of “Supercooperators”
The cycle of default

Source: Reinhart and Rogoff
The cycle of inflation

Source: Reinhart and Rogoff
The debt cycle and the inflation cycle, Part 1

% of countries in default

% of countries with inflation >20%

0% 5% 10% 15% 20% 25% 30% 35% 40% 45% 50%


% of countries in default

% of countries with inflation >20%
The debt cycle and the inflation cycle, Part 2

Average debt to GDP ratio (LHS) vs. % of countries with inflation >20% (RHS)

- The graph shows the average debt to GDP ratio on the left (LHS) and the percentage of countries with inflation greater than 20% on the right (RHS).
- The data spans from 1910 to 2009.
Inflation is always and everywhere a fiscal phenomenon

Source: Gokhale
Percentage of trade covered by protective measures

Source: WTO
The breakdown of trust …

“not one man in a million is able to”
The breakdown of trust … “not one man in a million is able to diagnose”
The emergence of non-cooperators: Abe’s “gaffe”

Source: WSJ
The financial market analog to trust: yield

Source: R. Shiller
The subliminal influence of money

“Next to language, money is the most important medium through which modern societies communicate”

Bernd Widdig
Culture and Inflation in Weimar Germany
Google Ngram analysis: “saving” and “spending”
Closing thoughts

• *Investment is the search for cheap convexity as the ultimate protection against our own ignorance*
  • We want optionality on being correct, but safety if we’re wrong

• *Cash has optionality, but cash is “expensive”*
  • Gold is the ultimate hard currency, and it is “cheap(er than it was)”

• *Necessities and natural monopolies*
  • Avoid businesses which rely on (discretionary) government spending
  • Avoid businesses relying on government regulation

• *Capital efficient businesses*

• *Out of the money long-term equity call options?*