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# Key ideas in our EU crisis report

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Berlin 2013

## Quick summary

What determines rate of profit

## Theory

Conservation laws

Phase space

## Empirical data

## Stability pact

Conclusion on the Stability Pact

Quick summary  
**What determines  
rate of profit**

Theory  
Conservation laws  
Phase space

Empirical data

Stability pact  
**Conclusion on the  
Stability Pact**

I will give a quick account of our analysis and then go into depth.

The crisis is caused by two main mechanisms:

1. the falling rate of profit and
2. the polarisation of capital into **rentier** and **productive** capital.

- ▶ Always a spread of rates of profit,
  - ▶ some capitals are obtaining a profit below and some above the current interest rate.
- ▶ The higher the interest rate → more capitalists earn less profit than they could earn by simply lending money.
- ▶ **Polarisation** of capitalist class into two groups,
  - ▶ net debtors
  - ▶ net creditors
- ▶ Polarisation grows → a distinct class of rentier capitalists arises

Very important!

- ▶ Sum of credit is always 0
  - ▶ since the **asset** of one capitalist is a **liability** of another.
- ▶ There is therefore no value held in the financial system.
- ▶ Capital can not 'move into finance'

## Quick summary

What determines rate of profit

## Theory

Conservation laws

Phase space

## Empirical data

## Stability pact

Conclusion on the Stability Pact

## Quick summary

What determines  
rate of profit

## Theory

Conservation laws

Phase space

## Empirical data

## Stability pact

Conclusion on the  
Stability Pact

- ▶ Growth of value given by product of the **rate of profit** and the **share** of this profit that is **accumulated**.
  - ▶ Typically in developed capitalist countries the accumulation share is only about 20 to 30%.
- ▶ Fundamentally the rate of accumulation is constrained by the growth of the working class population.
- ▶ Marx : *“accumulation of capital is growth of the proletariat.”*
  - ▶ As the growth of the working class slows down, so must the rate of accumulation.

# What determines long run rate of profit ?

Key ideas in our  
EU crisis report

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Quick summary  
What determines  
rate of profit

Theory  
Conservation laws  
Phase space

Empirical data

Stability pact  
Conclusion on the  
Stability Pact

- ▶ Factors Increasing Profit Rate
  - ▶ Rate of growth of working class
  - ▶ Rate of growth of **productivity** of labour
- ▶ Factors Reducing Profit Rate
  - ▶ The share of profit being accumulated
    - ▶ The more is accumulated the faster the rise in  $\frac{c}{v}$  → the more profit rate falls

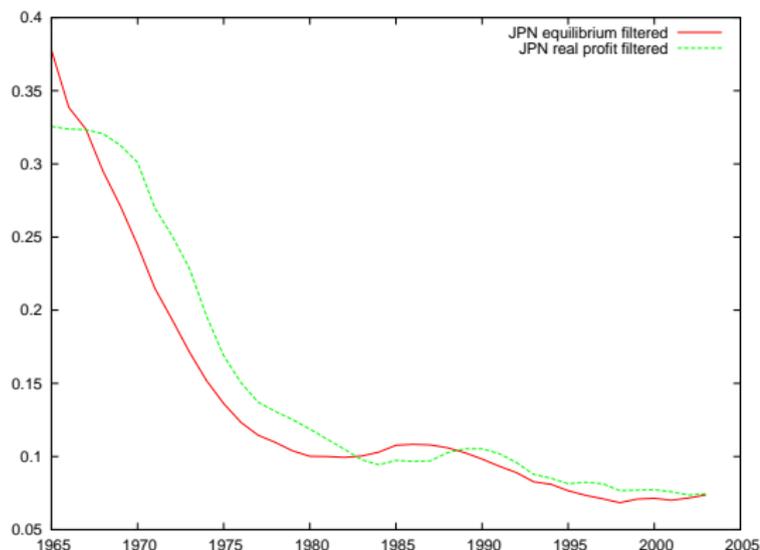
In a country like Japan with a static working population, capital accumulation becomes impossible as the low rate of population growth forces down the rate of profit.

Quick summary  
What determines  
rate of profit

Theory  
Conservation laws  
Phase space

Empirical data

Stability pact  
Conclusion on the  
Stability Pact



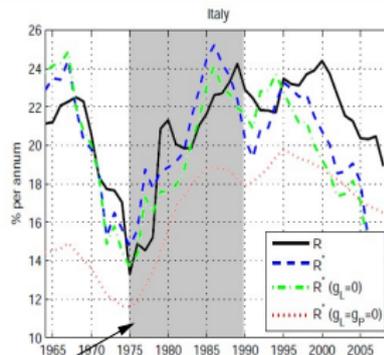
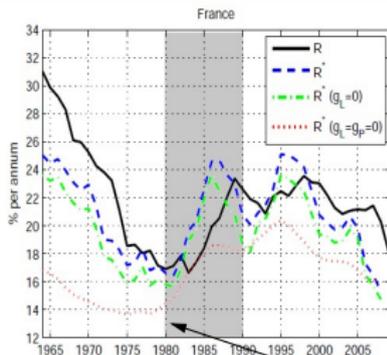
In Europe decline not so bad due to lower rate of  
accumulation

# European profit regime

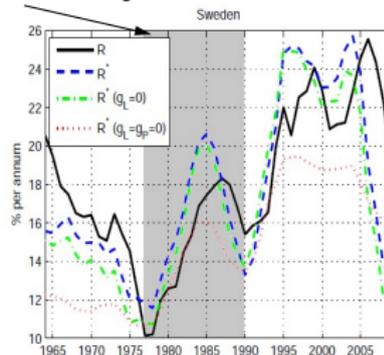
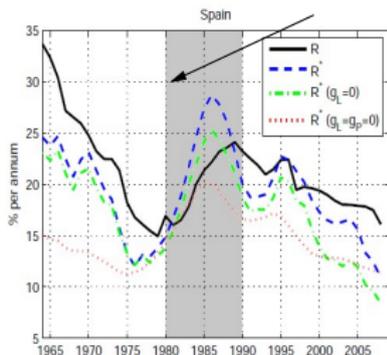
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EU crisis report

Paul Cockshott,  
Dave Zachariah

in



Onset of low accumulation regime



Europe

Quick summary  
What determines  
rate of profit

Theory  
Conservation laws  
Phase space

Empirical data

Stability pact  
Conclusion on the  
Stability Pact

- ▶ If firms attempt to accumulate under these circumstances the law of the **falling rate of profit** cuts in
  - ▶ drives down the rate of profit until a large part of capital is earning less than the rate of interest.
- ▶ These firms then stop investing and try lending their profits out via the banking system.
- ▶ There are not enough profitable firms wanting to borrow
  - ▶ the banks seek other **unproductive** avenues for the deposits:
    - ▶ lending to the state,
    - ▶ lending to consumers,
    - ▶ and speculation in asset markets.

Thus the typical pattern in a developed capitalist country is

- ▶ banking system channels funds from productive companies and rentier class to
  - ▶ state,
  - ▶ working class consumers via consumer credit,
  - ▶ and as vast bonuses paid to the bankers themselves.
- ▶ In the City of London alone there are more than **3000 bankers** who are paid more than **£1Million** a year.

Since, in Europe and Japan, capitalism is a historically obsolete system and can no longer accumulate ( due to demographic reasons ) the financial system turns into a vast parasitic excrement consuming the surplus product unproductively or channeling it into unproductive uses.

Quick summary  
What determines  
rate of profit

Theory  
Conservation laws  
Phase space

Empirical data

Stability pact  
Conclusion on the  
Stability Pact

## Quick summary

What determines rate of profit

## Theory

Conservation laws

Phase space

## Empirical data

## Stability pact

Conclusion on the Stability Pact

Quick summary  
**What determines  
rate of profit**

Theory  
Conservation laws  
**Phase space**

Empirical data

Stability pact  
**Conclusion on the  
Stability Pact**

Marx, we suggest, wanted to establish a theory of the capitalist economy informed by the laws of physics.

This comes across in several ways:

- ▶ his avowed aim to write a book on the 'laws of motion' of capitalism; Newtonian
- ▶ his distinction between the concept of labour and labour power; Watt
- ▶ his presentation of value as the crystallisation of human energy; von Mayer, Joule
- ▶ and his analysis of commodity exchange as an equivalence relation. Grove

*Another result that would have delighted old Hegel is the correlation of forces in physics, or the law whereby mechanical motion, i.e. mechanical force (e.g. through friction), is, in given conditions, converted into heat, heat into light, light into chemical affinity, chemical affinity (e.g. in the voltaic pile) into electricity, the latter into magnetism. These transitions may also take place differently, backwards or forwards. An Englishman [Joule] whose name I can't recall has now shown that these forces pass from one to the other in quite specific quantitative proportions...*

## Quick summary

What determines rate of profit

## Theory

Conservation laws

Phase space

## Empirical data

## Stability pact

Conclusion on the Stability Pact

Quick summary  
**What determines  
rate of profit**

Theory  
**Conservation laws**  
Phase space

Empirical data

Stability pact  
**Conclusion on the  
Stability Pact**

A basic tool of statistical mechanics is the concept of **phase space**.

Consider a collection of particles in a closed volume.

Each particle can be described by 6 numbers:

- ▶ 3 numbers to specify the position and
- ▶ 3 numbers to specify its momentum.
- ▶ We say that each particle has 6 degrees of freedom.
- ▶ If you have  $N$  particles you have  $6N$  **degrees of freedom** or dimensions

# Why is this relevant to economy?

- ▶ Again dealing with a system with very large numbers of agents.
- ▶ We have analogues of position and momentum.
  - ▶ The total debt/credit position of an agent is analogous to its mass,
  - ▶ and the rate of change of its debt/credit position is analogous to its momentum.

Thus if two billion people in the world are enmeshed in debt/credit relations then the whole system is a phase space of 2 billion dimensions/degrees of freedom.

Key ideas in our  
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Quick summary  
What determines  
rate of profit

Theory  
Conservation laws  
Phase space

Empirical data

Stability pact  
Conclusion on the  
Stability Pact



# Growth of entropy

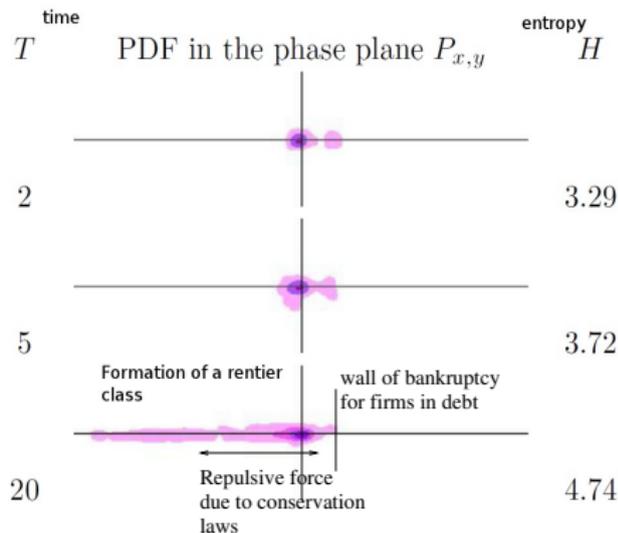
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We ran models of a capitalist economy with a large population of workers and capitalists and a banking system and plotted the probability distribution of capitalists over time in phase space and computed entropy.

Note how entropy increases with time as the system becomes more disordered.

Dark colour means higher density of firms.



Quick summary  
What determines  
rate of profit

Theory  
Conservation laws  
Phase space

Empirical data

Stability pact  
Conclusion on the  
Stability Pact

Since the rentier firms try to accumulate credits with the banks somebody has to borrow these.

- ▶ If insufficient firms voluntarily borrow from the banks, conservation laws force firms to go into debt involuntarily due to making losses.
- ▶ Unless some other source absorbs the funds available for lending the system tends to collapse at this point.
- ▶ There are 3 possible absorbers of the rentier funds:
  1. Working class consumption on credit
  2. State borrowing
  3. Borrowing by other countries.

The breakdown occurred when loans to working class failed in the sub-prime mortgage crisis.

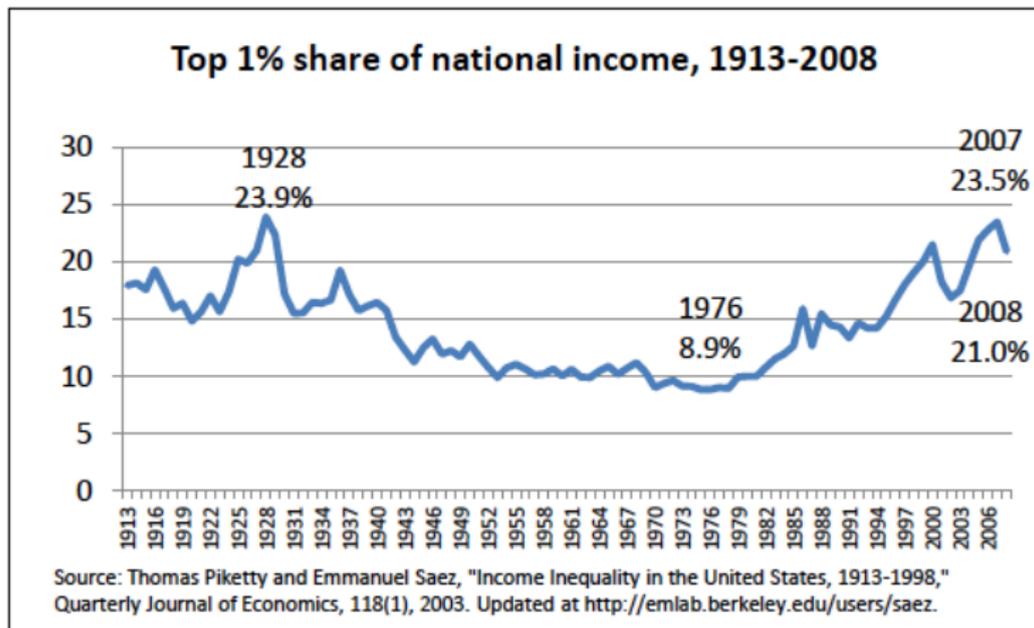
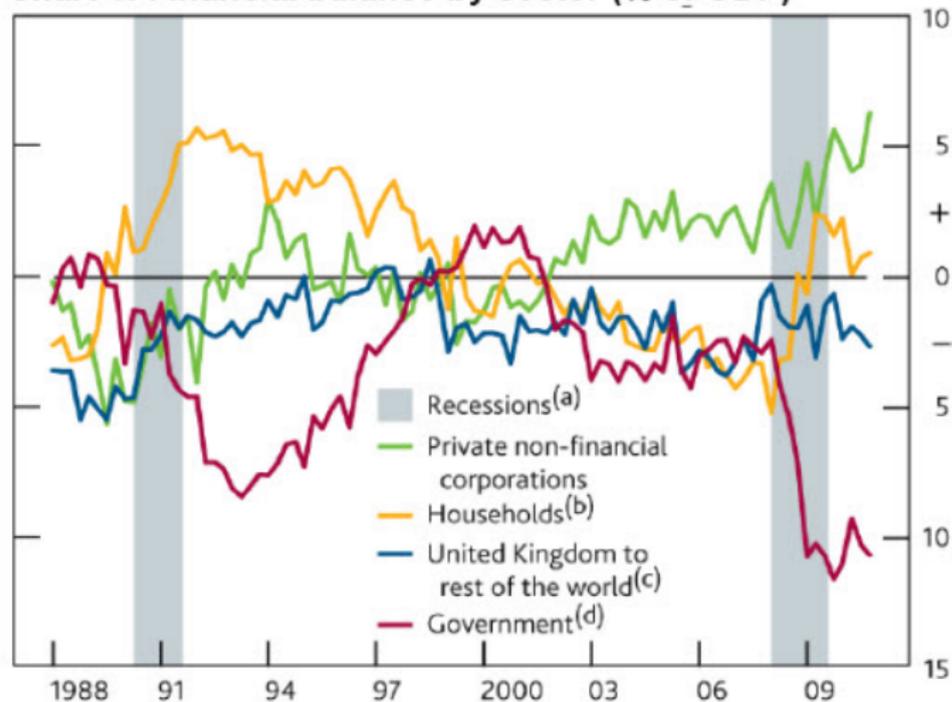


Chart 1: Financial balance by sector (% of GDP)



Source: Bank of England Inflation Report, May 2011

Quick summary  
What determines  
rate of profit

Theory  
Conservation laws  
Phase space

Empirical data

Stability pact  
Conclusion on the  
Stability Pact

The key measures to solve the Euro crisis according to the Pact are to establish a balanced budget for the state sector.

*Eurozone Sectoral Balance in billion Euro.*

	households	Non-fin	Fin	Govt.	Rest of
		Comps	Comps		world
Surplus	48	22	39	-122	13

All sectors other than the state run a surplus,  
The change proposed by the treaty is drastic.

- ▶ wipe out all net financial transactions between the sectors by changing the state borrowing from 122 billion Euros  $\rightarrow 0$
- ▶ surplus of the household sector, the company sector and the rest of the world  $\rightarrow 0$ ,
- ▶ Requires 100% accumulation rate of company sector

In principle, austerity to reduce the financial surplus of the households possible:

- ▶ 90% income tax on higher incomes
- ▶ a progressive tax on property.

Such policies are not being followed,

- ▶ *the prospect of eliminating the financial surplus of the personal sector is negligible.*

Firms voluntarily seek external finance to expand if they anticipate

- ▶ a high rate of profit on investment,
- ▶ a rapidly expanding market for their products.
- ▶ This is blocked by austerity measures are curtailing consumer demand.

But, rate of profit has only been held up since the 1980s by reduction in accumulation rate.

- ▶ An increased investment rate thus selfcurtailing.
- ▶ Attempting to force companies as a whole to run at break even → bankrupting a significant fraction

- ▶ Banks in the Euro-zone are running a surplus of some 160 billion Euros
- ▶ a thus responsible for  $\frac{1}{3}$  of the total deficit of the state sector.
- ▶ There is almost nothing that the individual Euro zone governments can do to eliminate this.
  - ▶ Whole thrust of economic policy has been to protect the interests of banks.
- ▶ States could levy heavy taxes on financial firms,

But

- ▶ Countries in the Euro-zone in the worst financial position have least profitable banks.

Quick summary  
What determines  
rate of profit

Theory  
Conservation laws  
Phase space

Empirical data

Stability pact  
Conclusion on the  
Stability Pact

One effective tool that national governments have traditionally been able to exercise to overcome trade deficits is now out of reach for the Eurozone.

- ▶ They can no longer devalue to bring their trade back into balance.
- ▶ The ECB again could force a devaluation if it systematically buys up large quantities of dollar securities.
- ▶ But the national governments can not instruct it to do so.

## Quick summary

What determines rate of profit

## Theory

Conservation laws

Phase space

## Empirical data

## Stability pact

Conclusion on the Stability Pact

Quick summary  
**What determines  
rate of profit**

Theory  
Conservation laws  
Phase space

Empirical data

Stability pact  
Conclusion on the  
Stability Pact

The structure set up under monetary union effectively makes it impossible for national governments to meet the obligations that they have undertaken in the pact. Any serious attempt to impose balanced budgets by austerity measures will be ineffective in its professed aim, and would as a side effect engender a downward spiral of bankruptcies, rising unemployment and deepening economic ruin. Only radical change in production and property relations can restore European prosperity.