Macroeconomic paradigms, policy regimes and the crisis:

The origins, strengths & limitations of Taylor Rule macroeconomics

Wendy Carlin

UCL & CEPR

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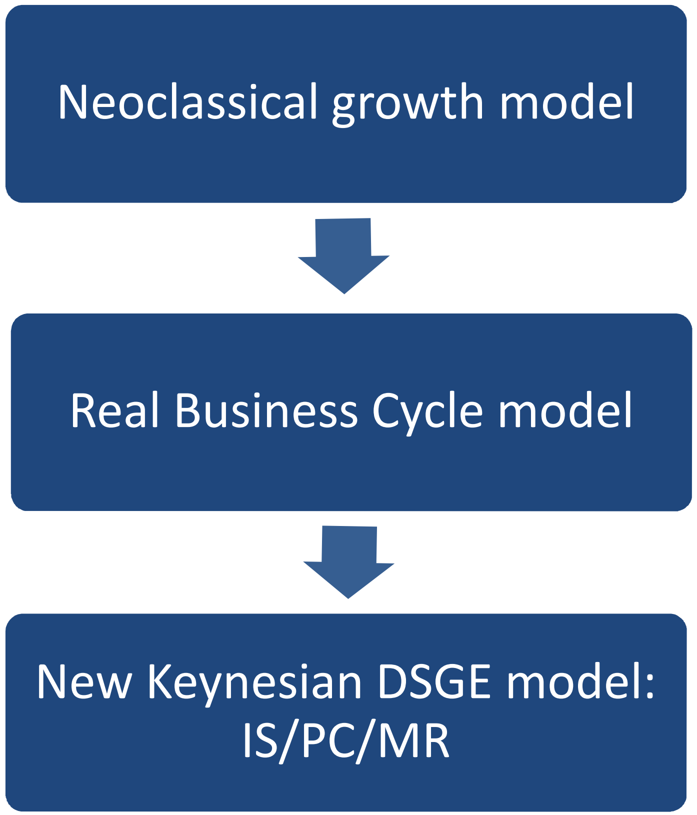
Outline

1. How should we characterize the mainstream macro model and the policy regime before the crisis?
   – ‘Narrow’ and ‘broad’ versions of Taylor Rule macroeconomics
2. Macro models, policy regimes and global economic crises
   – Where did Taylor Rule macroeconomics come from?
3. The Taylor Principle and stabilization
   – Three examples: the eurozone crisis, the causes of the global financial crisis, and post-crisis management
4. Where do we go from here?

Mainstream macroeconomics pre-crisis

'Narrow'



+ rational expectations, technology shocks

+ money, imperfect competition in goods market, sticky prices

Mainstream macroeconomics pre-crisis

'Broad'

Liquidity-constrained & unconstrained households & firms (IS)

+

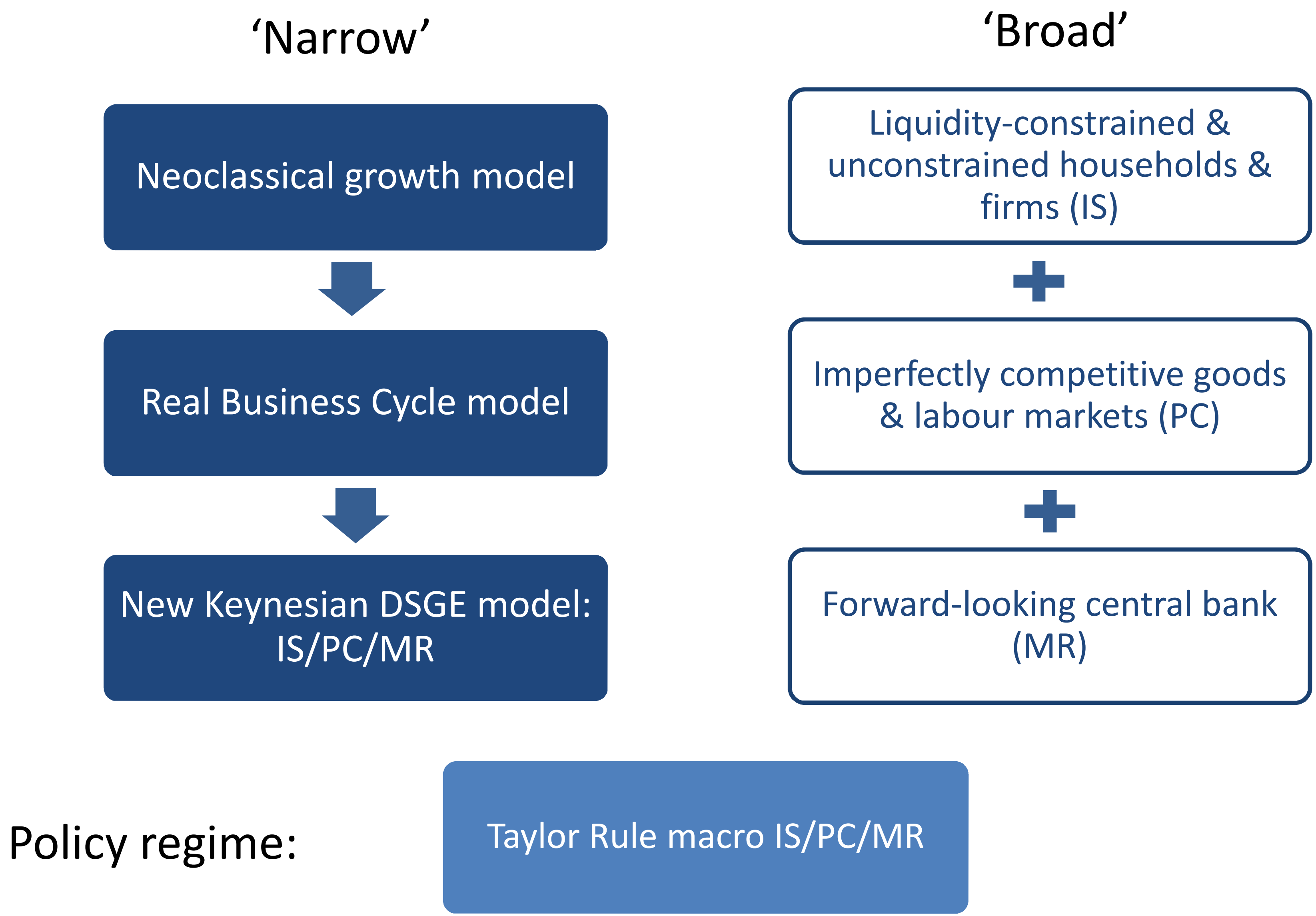
Imperfectly competitive goods & labour markets (PC)

+

Forward-looking central bank (MR)

Taylor Rule macro IS/PC/MR

Mainstream macroeconomics pre-crisis:



Mainstream Taylor Rule Macro before the crisis

Missing: the financial sector

Neoclassical growth model

↓

Real Business Cycle model

↓

New Keynesian DSGE model: IS/PC/MR

Liquidity-constrained & unconstrained households & firms (IS)

+

Imperfectly competitive goods & labour markets (PC)

+

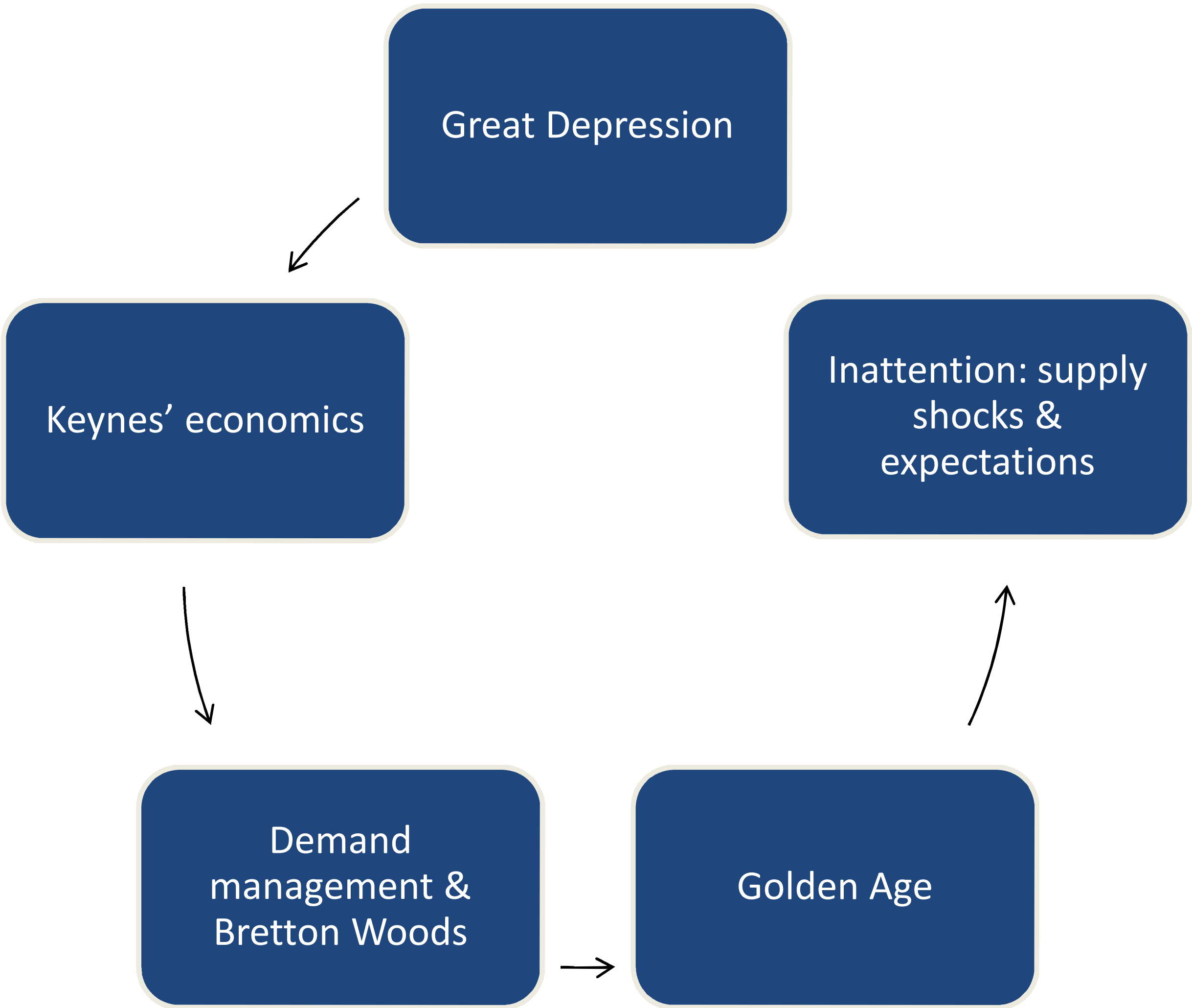
Forward-looking central bank (MR)

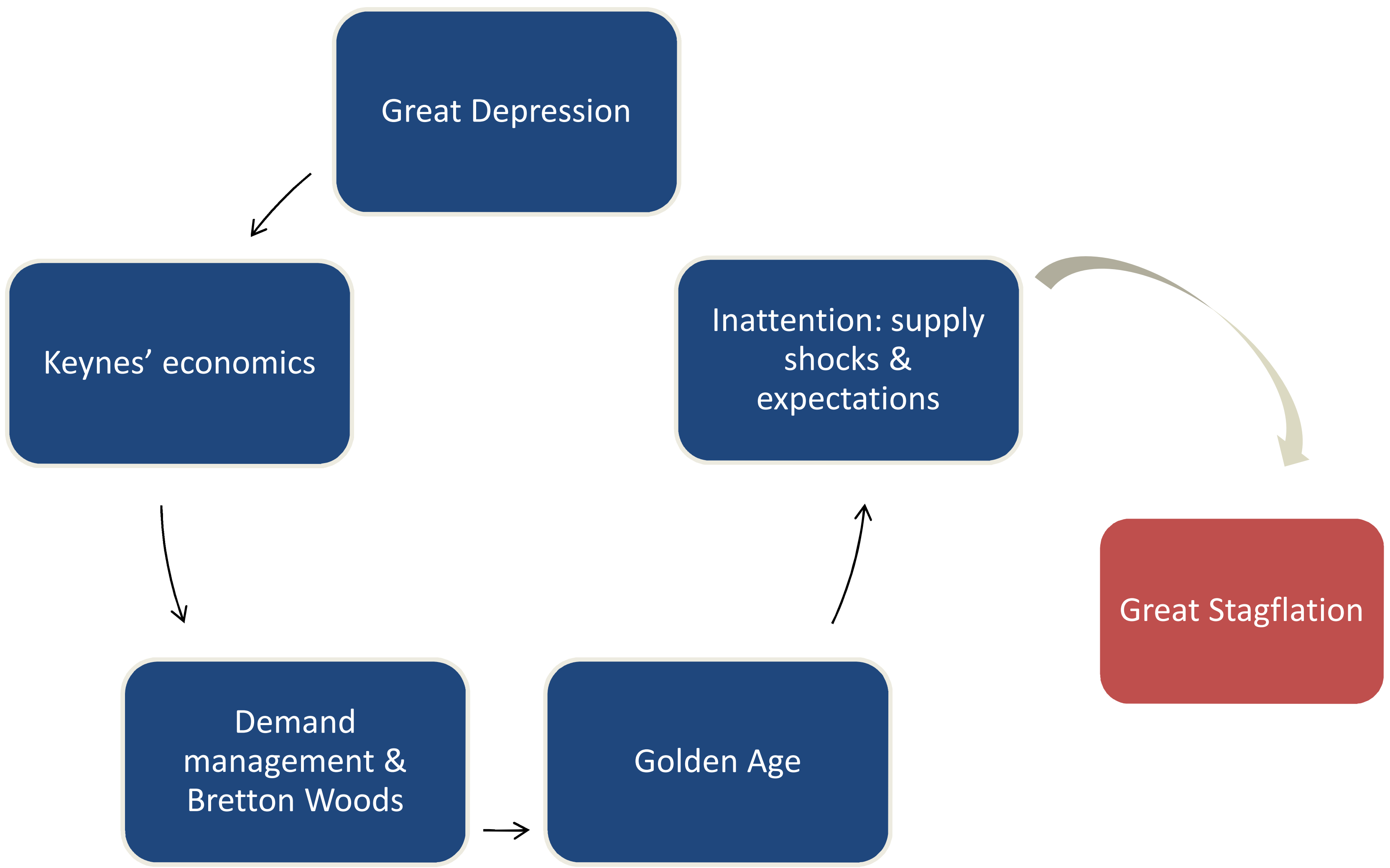
Policy regime: Taylor Rule macro IS/PC/MR

2. Macro models, policy regimes and rare global economic crises

Where did a rules-based policy regime centred on the Taylor Principle come from?

Macro models, policy regimes and rare global economic crises


Great Depression
Keynes' economics
Inattention: supply shocks & expectations
Demand management & Bretton Woods
Golden Age



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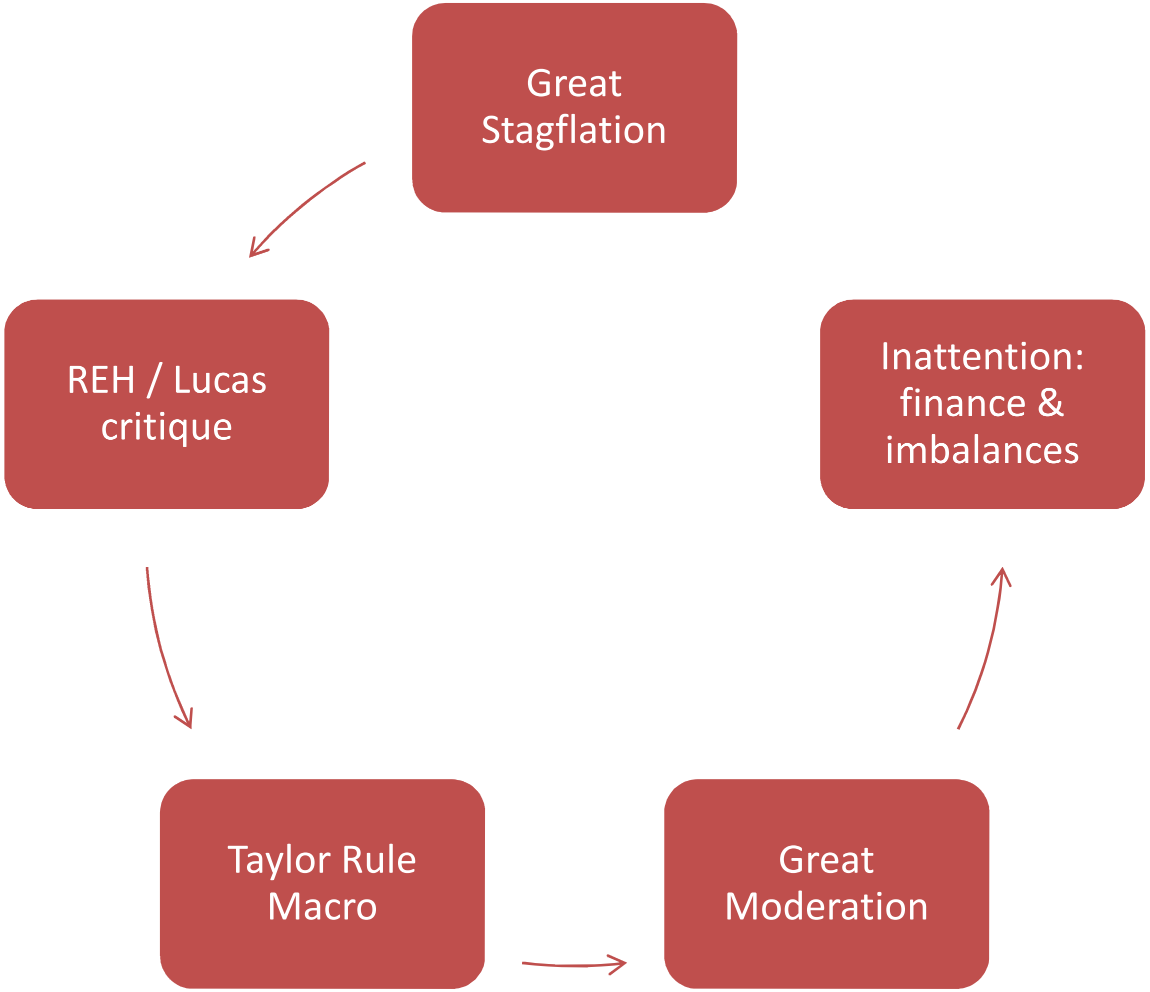
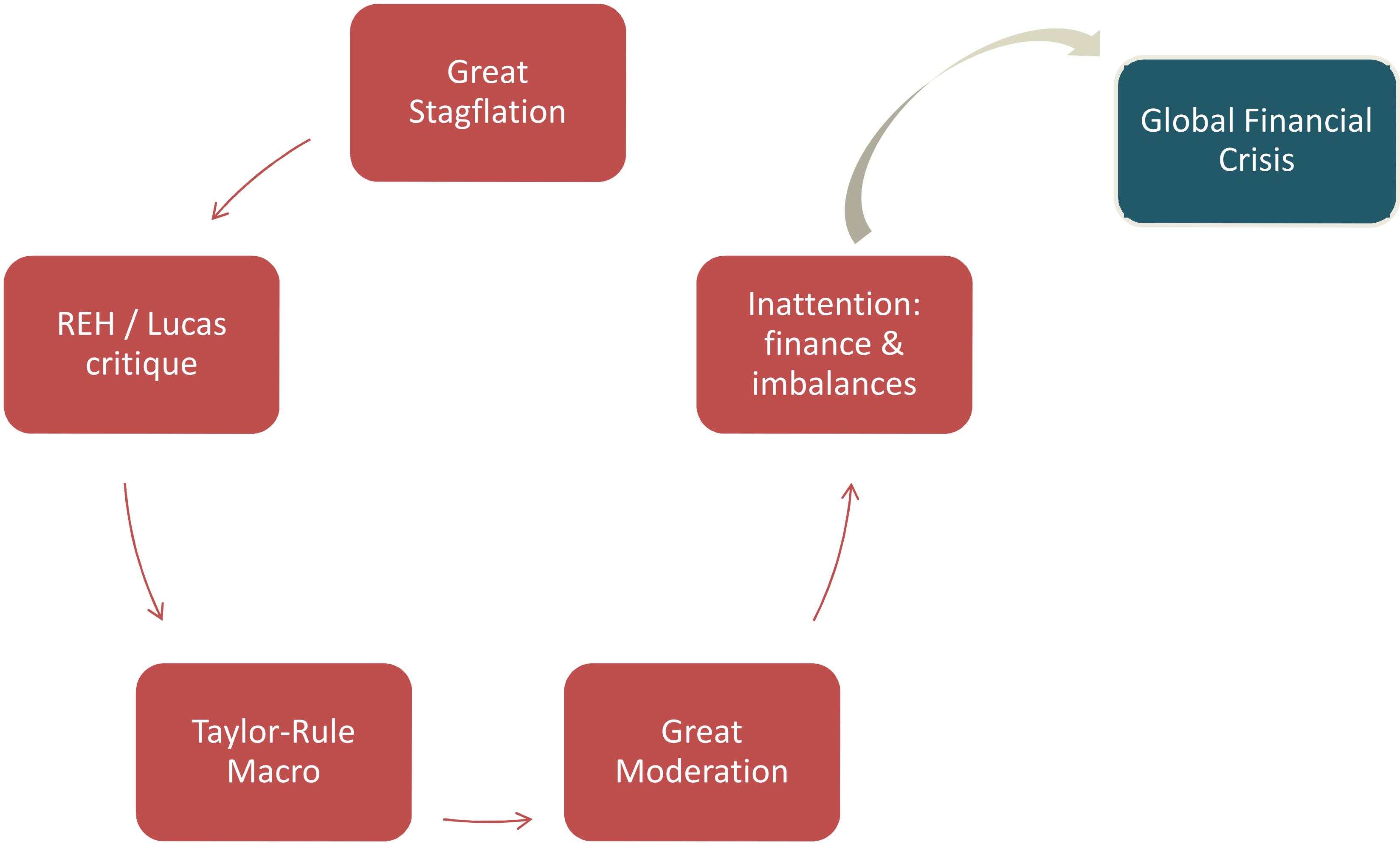

Great
Stagflation
REH / Lucas
critique
Inattention:
finance &
imbalances
Taylor Rule
Macro
Great
Moderation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REH / Lucas critique
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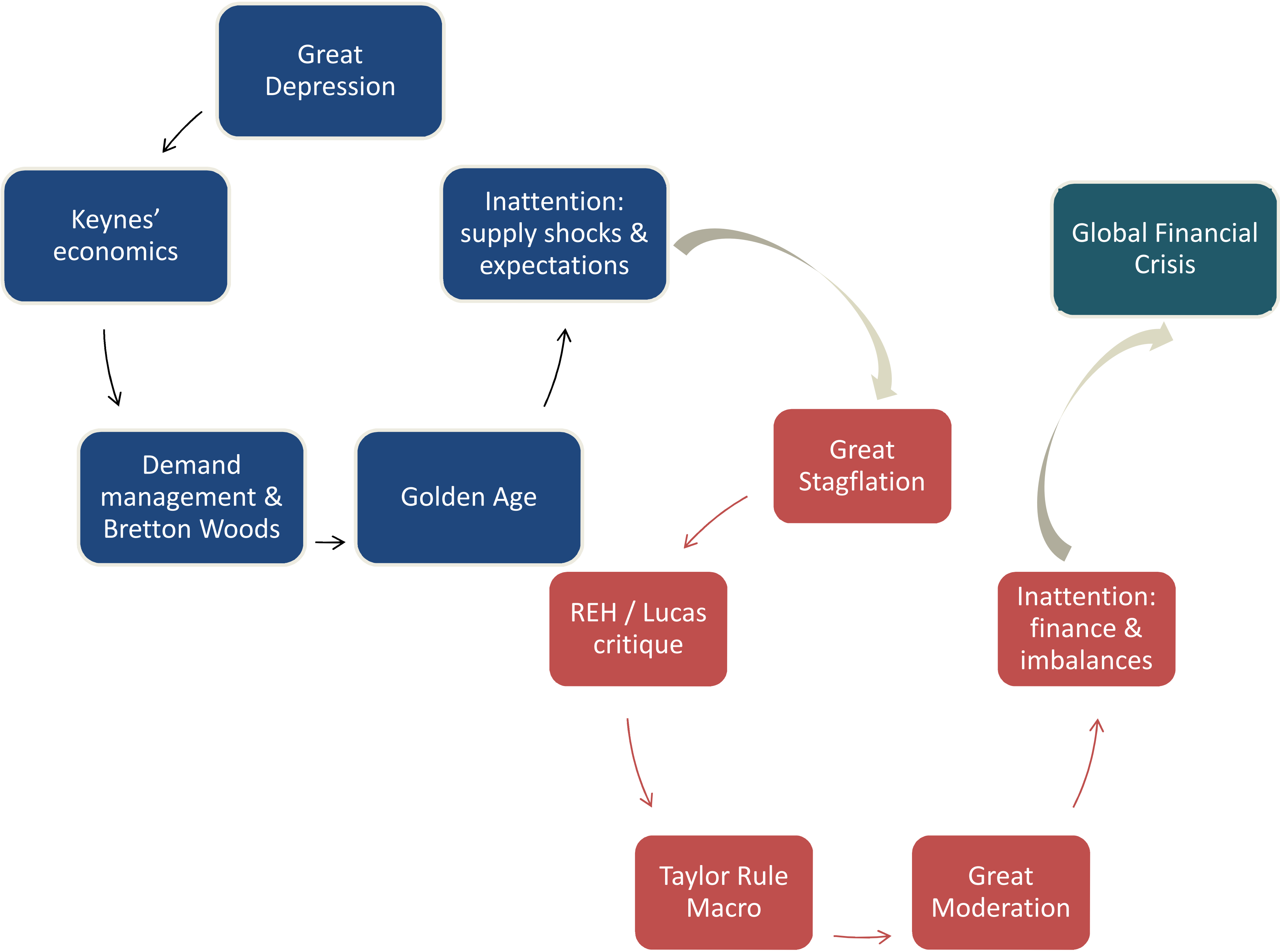
Global Financial Crisis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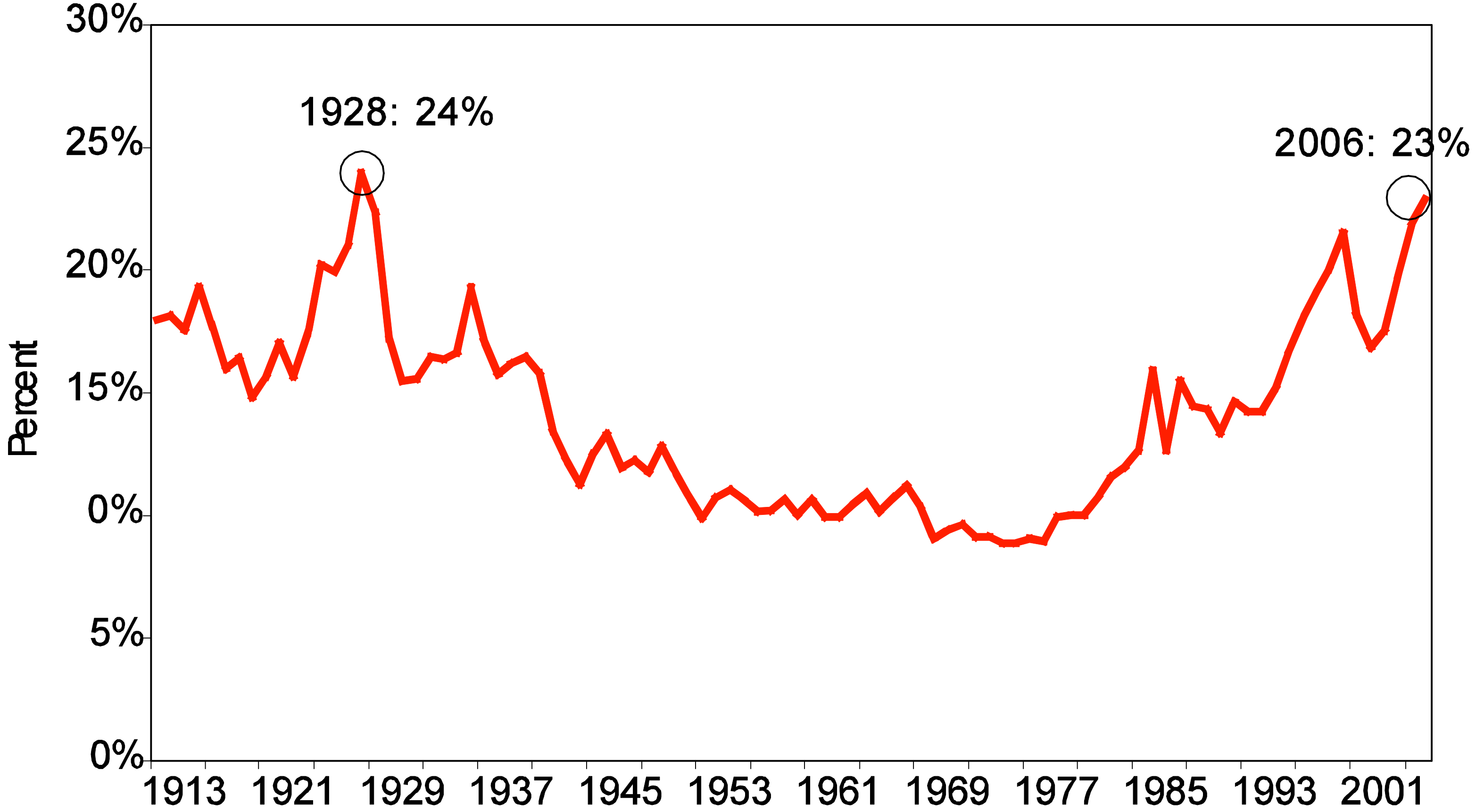
The question

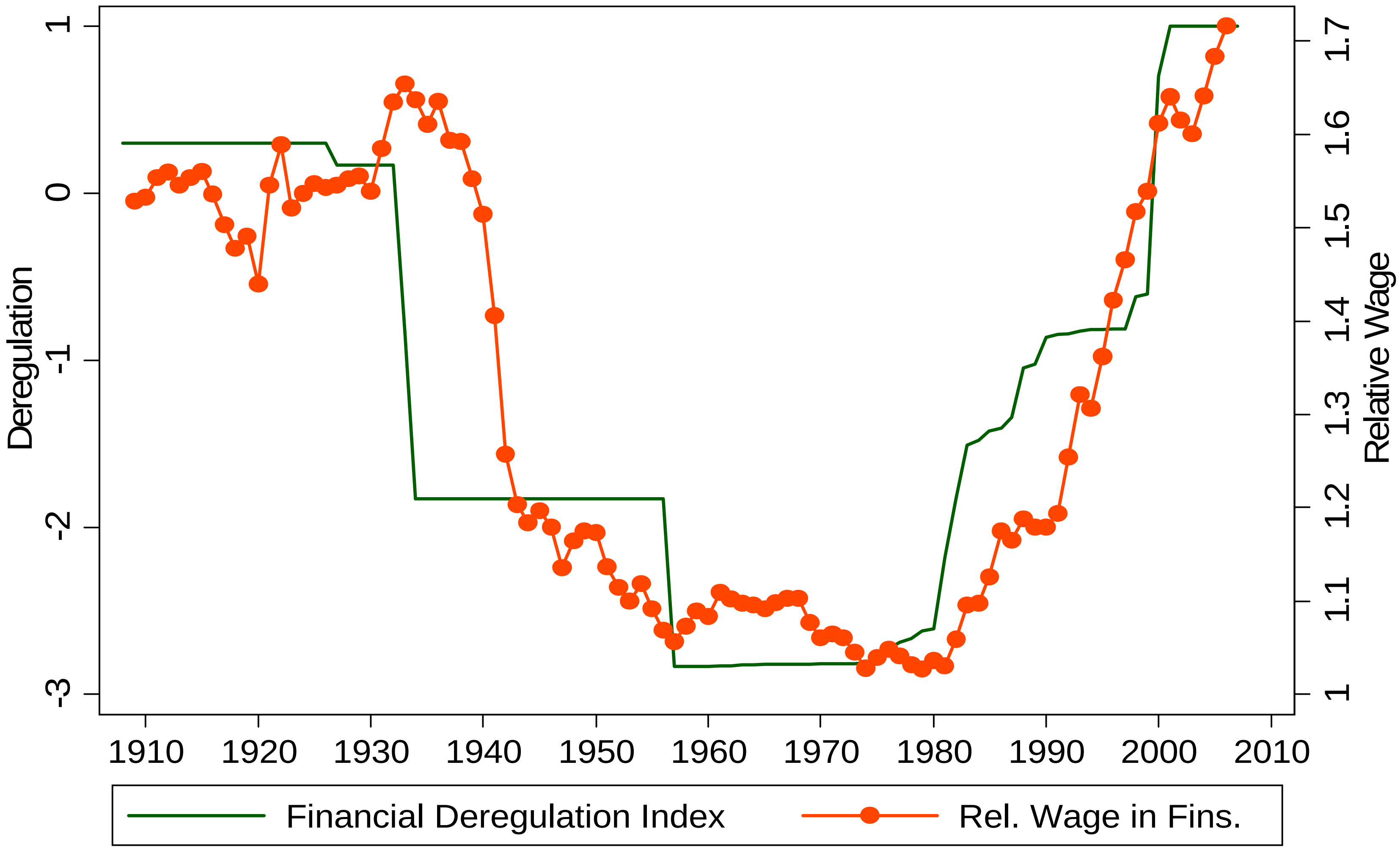
Did improved macroeconomic performance on the back of each new policy regime contain the seeds of a new source of instability that had the potential to incubate the next global crisis?

USA: percent of income received by the top 1 percent of taxpayers

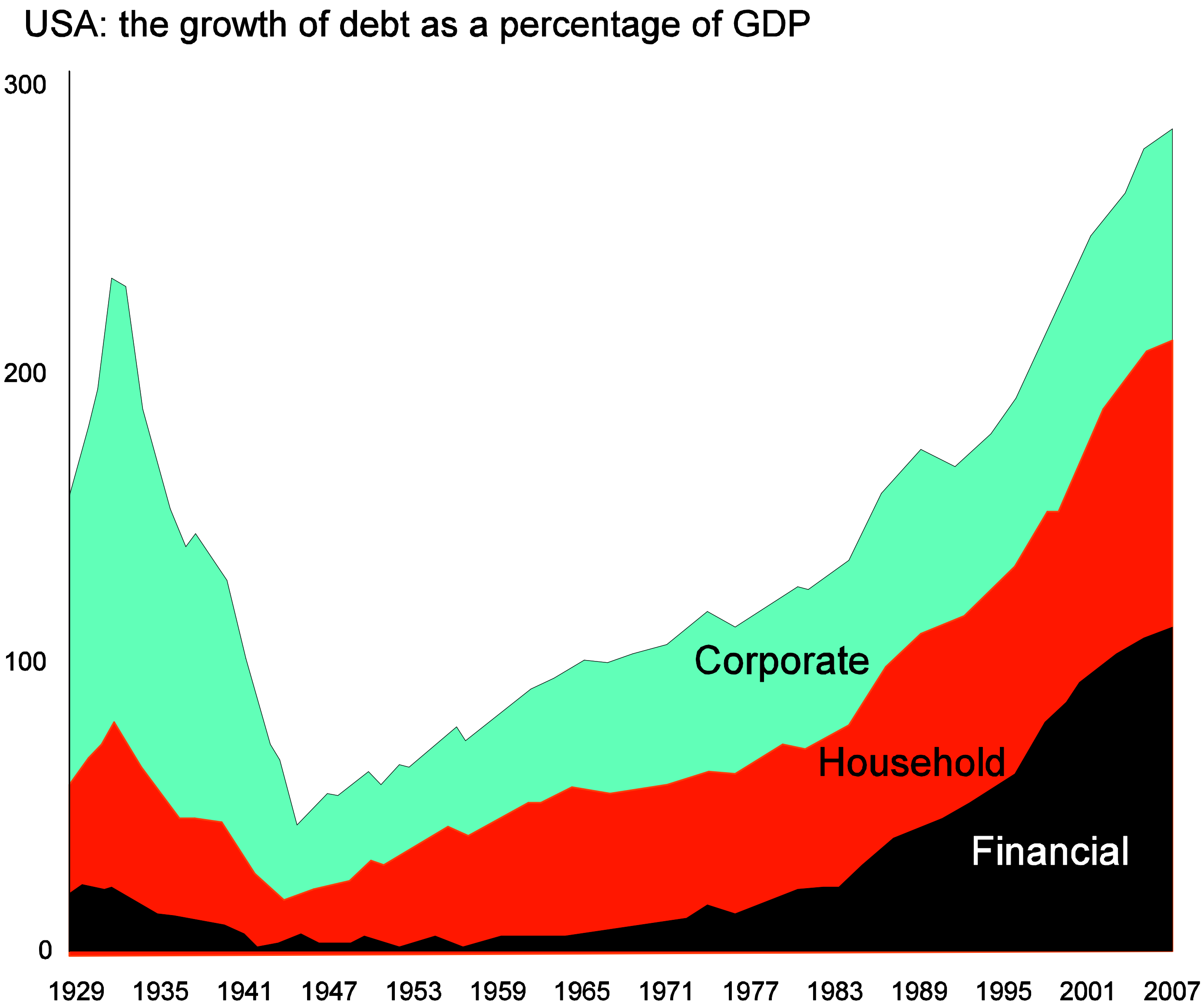


Source: Saez & Piketty

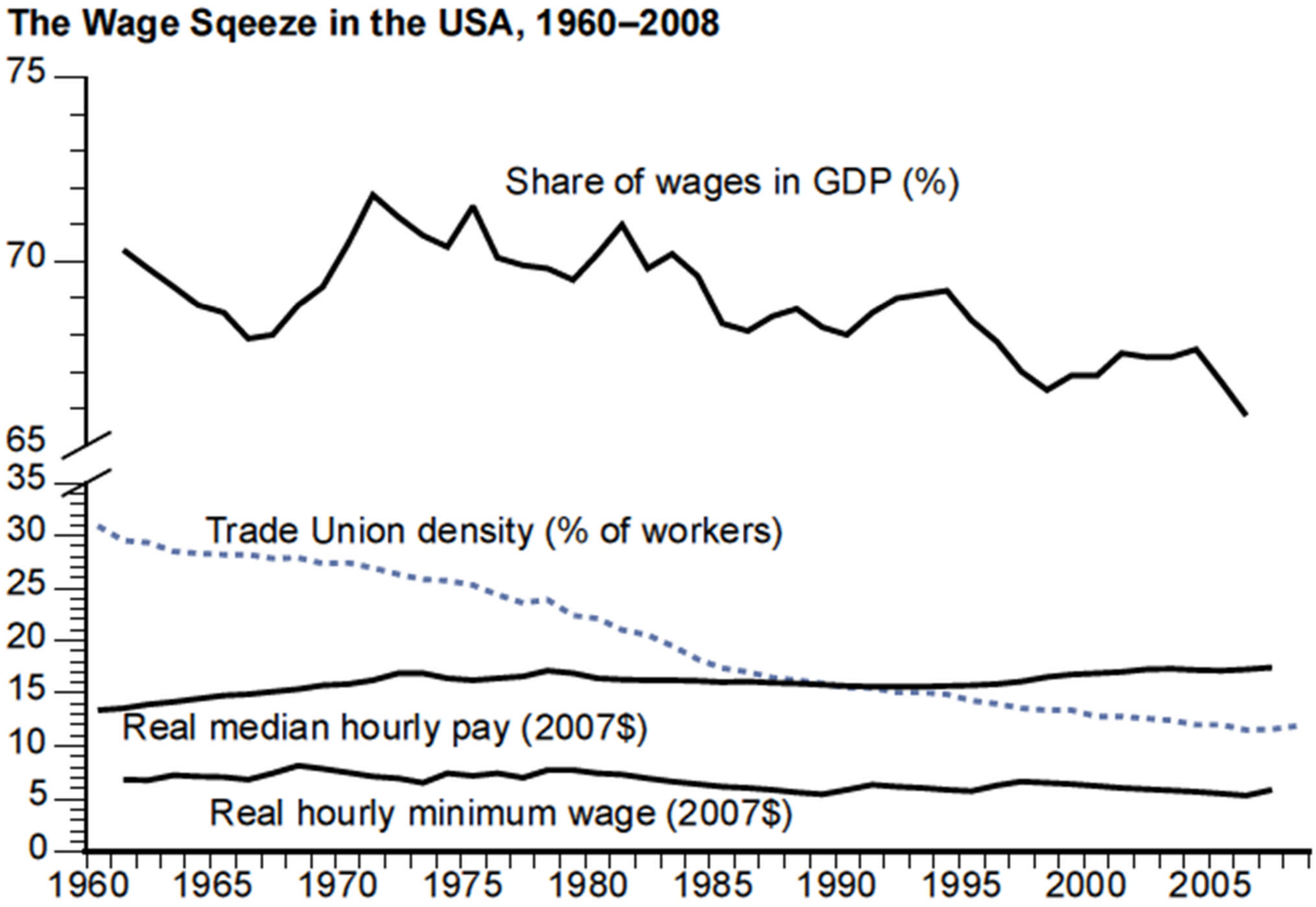
Relative Wages in the Financial Sector & Financial Deregulation, US



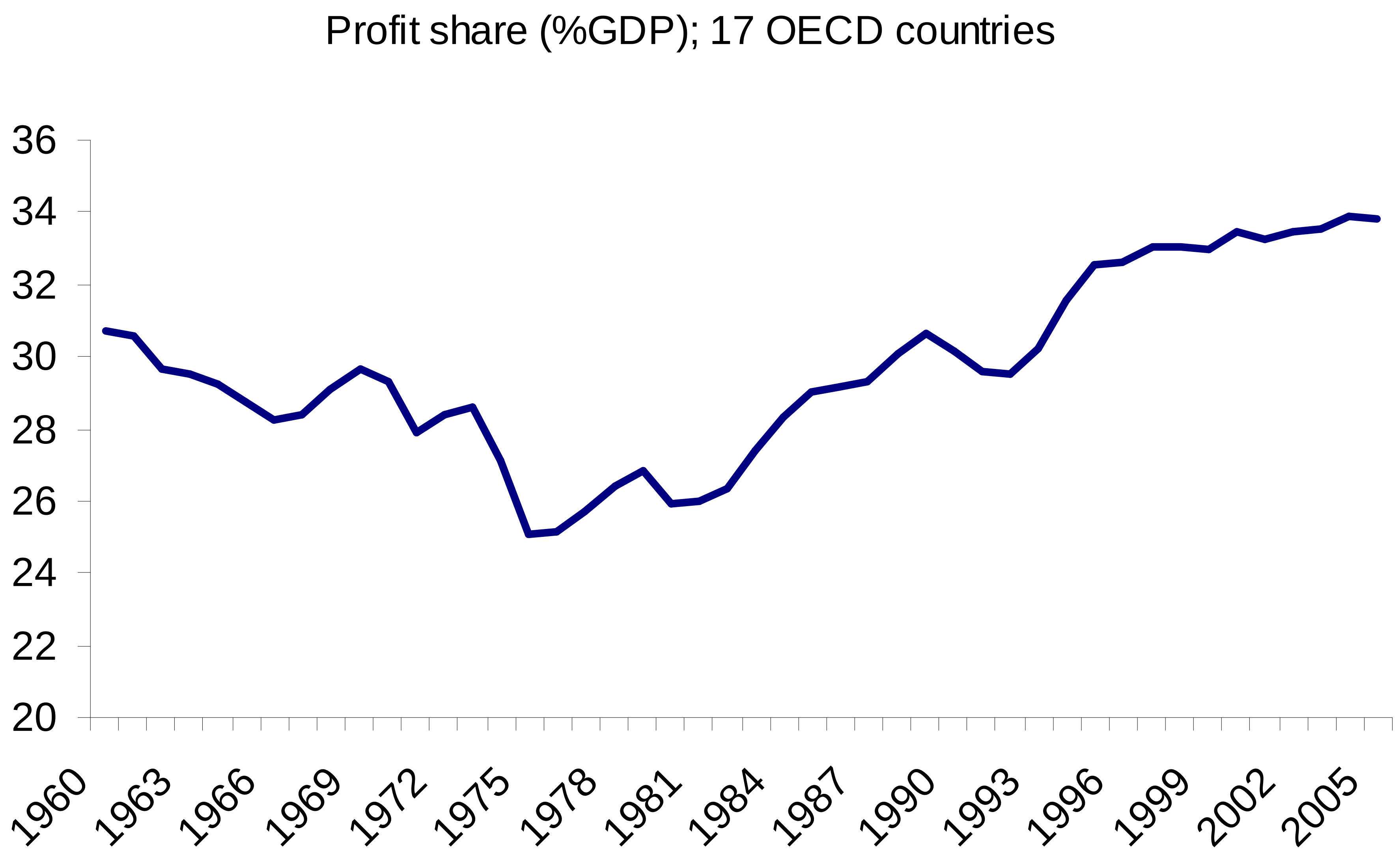
Source: Philippon & Reshef, 2009



USA: the growth of debt as a percentage of GDP
300
200
100
0
Corporate
Household
Financial
1929
1935
1941
1947
1953
1959
1965
1971
1977
1983
1989
1995
2001
2007

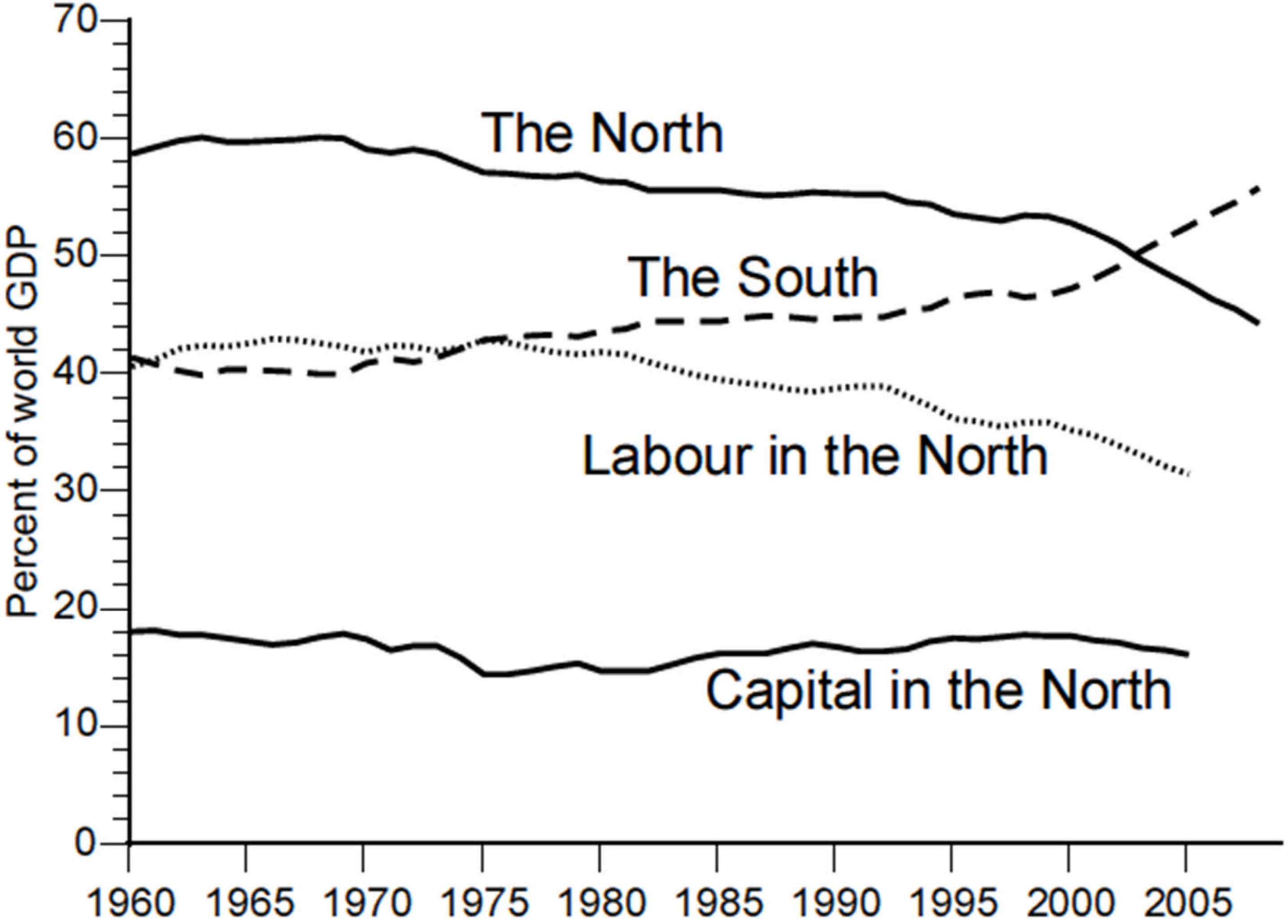


The Wage Sqeeze in the USA, 1960–2008
75
70
65
35
30
25
20
15
10
5
0
Share of wages in GDP (%)
Trade Union density (% of workers)
Real median hourly pay (2007$)
Real hourly minimum wage (2007$)
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005



Source: Data-set from Glyn (2007)

Shares of World GDP: North and South, Labour and Capital



Low frequency shifts in distribution

- Recent work by Kumhof & Ranciere (2010)
- Formalized the role of shift in bargaining power & between group inequality in generating financial fragility
- What is the shock? Shift in wage inequality
- Consumption inequality rises less than income inequality; debt to income ratios outside top 5% rise
- Nascent weakness of aggregate demand requires workers' indebtedness to rise
- Can link wage squeeze to financialization (credit growth … leverage cycle) and to the Greenspan 'put': low real interest rates were required to stabilize domestic demand

Is there learning?

- Yes, a broad interpretation of Taylor Rule macro sees it as incorporating many insights of Keynes' economics
  - Most centrally in the role of stabilization policy
- But what was neglected were the lessons from the cycle of crisis, paradigm change, policy regime change …
- Insufficient vigilance in relation to how solutions to the previous crisis create the seeds of the following one as behaviour & structure evolve in response to the new rules
  - Post Great Depression regime – seeds of inflation & higher equilibrium unemployment
  - Post Great Stagflation regime – seeds of low real interest rates & financial crisis
  - Global Financial Crisis –

3. The Taylor Principle and stabilization

The Taylor Principle is what makes the Taylor Rule stabilizing: CB must set real interest rate consistent with achieving target inflation at equilibrium output

It must reflect changes in the neutral / Wicksellian / stabilizing real interest rate

Strengths & weaknesses of the Taylor Principle approach to stabilization

The Taylor Principle and instability

What role does it play in explaining each of the following?

I. The eurozone crisis (boom & bust)
   - The problem was the absence of an equivalent to the Taylor Principle in the macro policy regime of individual member countries of the eurozone

II. The global financial crisis (boom & bust)
   - The problem was that the Taylor Rule ignored the leverage cycle & wage squeeze

III. The policy problem in the aftermath of the crisis
   - The problem is that a Taylor Rule mentality faced with a Zero Nominal Bound focuses on fiscal stimulus and QE but not on the consequences of the leverage cycle

Example #1. The eurozone crisis (boom & bust)

- Ireland & Spain had negative real interest rates for most of eurozone's first decade
- No Taylor Principle equivalent in *member country* policy regimes

Think of a simple inflation shock

- First under flex e, CB and forex market forecast output contraction required to get back to target inflation; CB tightens; e appreciates; economy returns to equilibrium with target inflation, and all real variables unchanged (optimal Taylor Rule)

Example #1. The eurozone crisis (cont.)

- Now, same, temporary country-specific inflation shock in a eurozone member
- Experiment: assume fiscal policy (FPR) used to implement exactly the same Taylor-rule optimal output & inflation path back to target i.e. at eurozone inflation rate as under flex e
- Back at equilibrium, home's RER has appreciated due to higher inflation along path to equilibrium. Consumption, investment are unchanged at equilibrium (r=r*), net exports are lower so fiscal balance must have deteriorated
- Here fiscal imbalance arises NOT due to 'profligacy' but to use of same 'optimal' policy rule as chosen by flexible exchange rate central bank

Example #1. The eurozone crisis (cont.)

- For stabilization, a ‘Taylor rule’ equivalent is required
  - to stabilize country-specific shocks consistent with delivering output at equilibrium, inflation at eurozone target & a real exchange rate consistent with primary fiscal balance
- Member countries implicitly relied on real exchange rate channel
- Ignored destabilizing real interest rate channel (Walters’ critique)
- Important source of pre-crisis divergences among eurozone members
- Exacerbated by neglect of leverage cycle

The eurozone crisis & neglect of stabilization policy

Liquidity-constrained & unconstrained households & firms (IS)

Imperfectly competitive goods & labour markets (PC)

Forward-looking fiscal policy-maker (FPR)

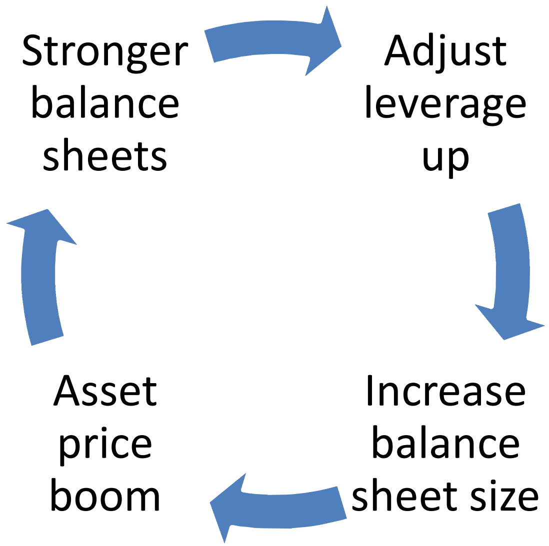
Missing: the Taylor-rule equivalent in fiscal policy

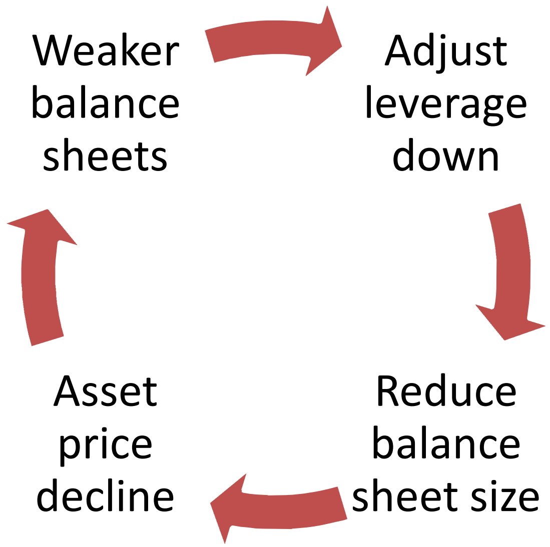
“Taylor Rule” macro IS/PC/**FPR**

Example #2. The crisis (boom & bust)

- Reliance on Taylor Principle → neglect of the upswing of leverage cycle
- Taylor Rule: CB chooses real interest rate to stabilize output at equilibrium and inflation at target
- But no signal from rising leverage and house or mortgage-backed asset prices to adjust policy
- Inattention to role in financial fragility of trends in income distribution

The leverage cycle (Geanakoplos; Shin)





On the way up:
leverage is high & rising,
collateral required is low

On the way down:
leverage is low & falling,
collateral required is high

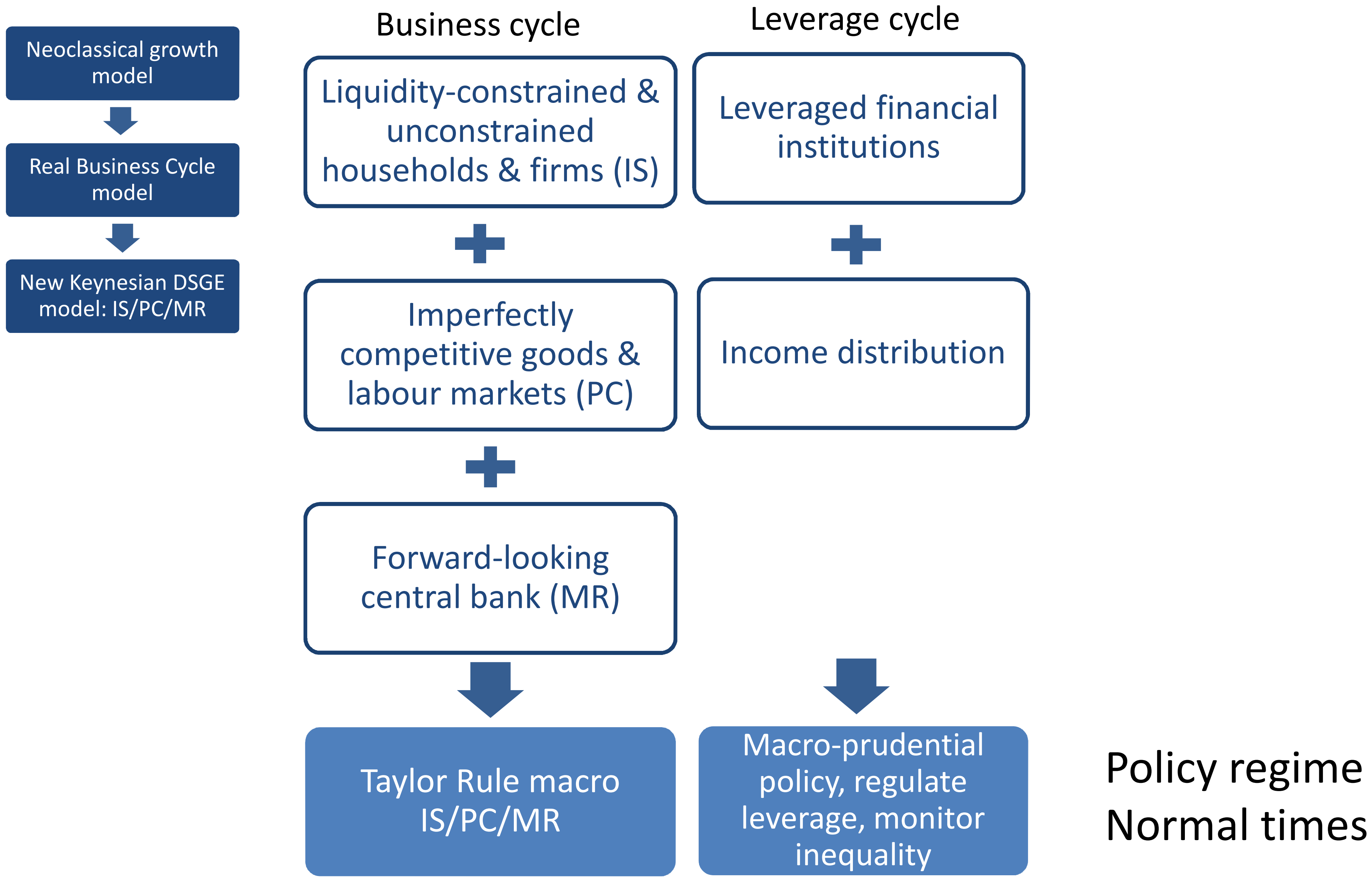
Example #3. Policy in the aftermath of the crisis

- Limits to stabilization via the Taylor Rule itself are clear in presence of ZNB
  - Policy response (parallel to my first example of the eurozone) substitutes for Taylor Rule via fiscal stimulus + QE to achieve target output gap
- But even such an extended Taylor Rule orientation may not be enough
- Neglects consequences of unwinding of leverage cycle
  - larger fiscal multipliers
  - perverse effects of standard supply-side policies if they reduce expected inflation

4. Toward a new synthesis

- If take the broad interpretation of the mainstream, we can see Taylor Rule macro as incorporating many insights of Keynesian economics from the previous paradigm, combining them with
  - Better models of equilibrium unemployment
  - Attention to credibility & the role of expectations, dynamics & sensitivity to Lucas critique
- But we need to augment Taylor Rule macro of business cycle with a model of the leverage cycle, & role in it of income distribution

The future of macroeconomics



“our not knowing … and trying to ignore what ‘goes on’ irreconcilably, subversively, beneath the vast smug surface”

Henry James 1909 preface to The Princess Casamassima