

**PROVISIONAL**  
**GLOBAL BUSINESS AND FINANCIAL ENVIRONMENT**  
**Project Management October 2014**  
**part 1**

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**Further papers by robin Matthews can be found at**

**<http://robindcmatthews.com>**

**<http://www.tcib.org.uk/about.html>**

**Also <http://kpp-russia.ru> and <http://www.russtrategy.ru>.**

**<http://kingston.ac.uk/CIPB.php>**

# **Global business environment: history 1**

- **Postwar recovery 1945 – 70**
  - **Keynesian policies**
- **Stagflation 1970 -1980**
- **Monetarism and supply side economics  
1980 – 2007**
- **Global crisis**

# **Fundamentals managing projects 1**

Firms as collections of projects

# NPV AND NCF

## NET PRESENT VALUE and NET CASH FLOW

- Net Present Value
- Net Cash Flow
- Fundamental Equation

$$\Pi(t) = R(t) - C(t)$$

$$C(t) = W\&S(t) + M(t) + I(t) - D(t) + [rd(t) + re(t)]$$

# **Fundamentals managing projects 2**

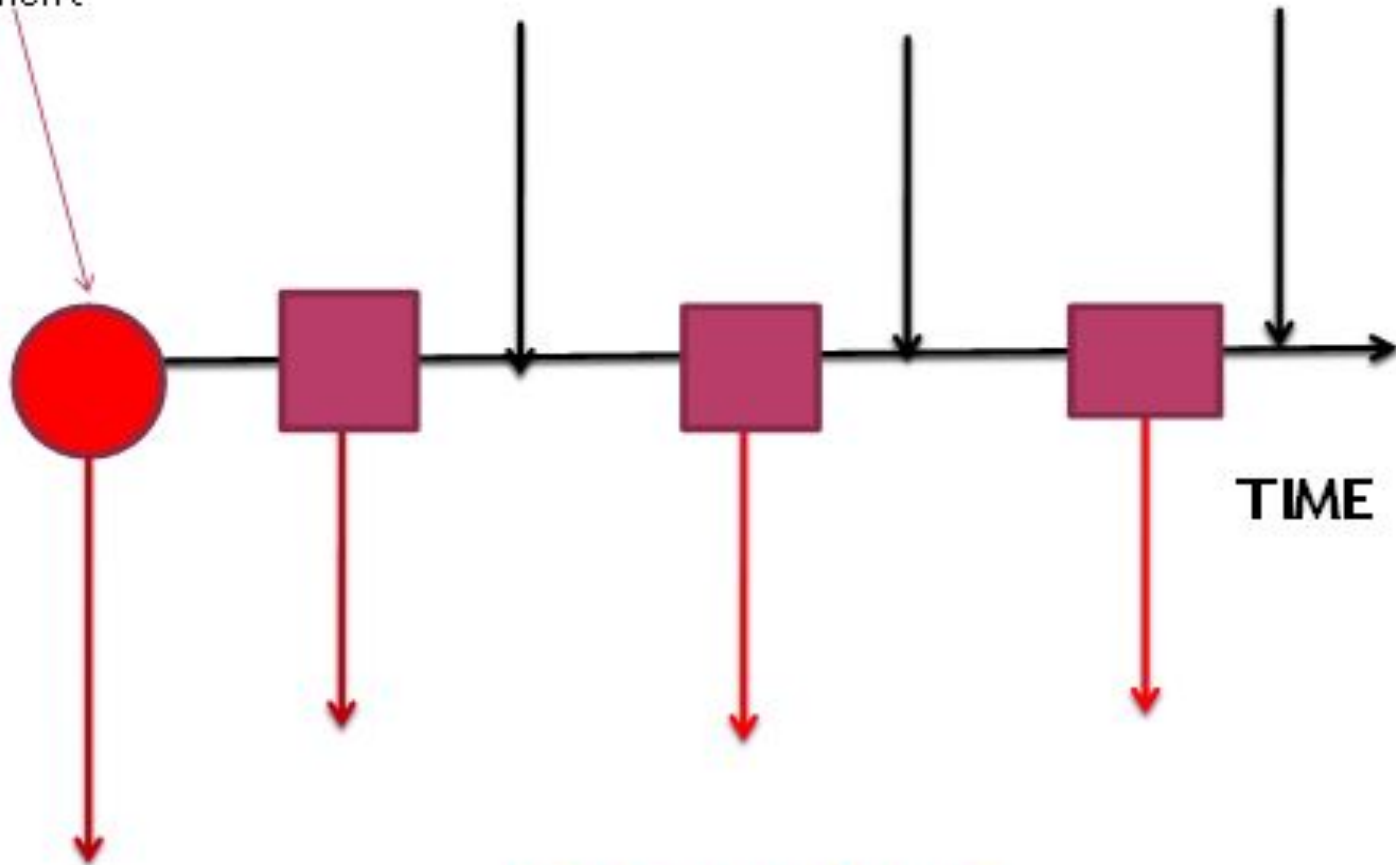
Integrating the real and financial  
sectors



BANKS REFINANCE THE TIME GAP BETWEEN CASH INFLOWS AND OUTFLOWS

Initial investment

Cash inflows



TIME

Cash outflows

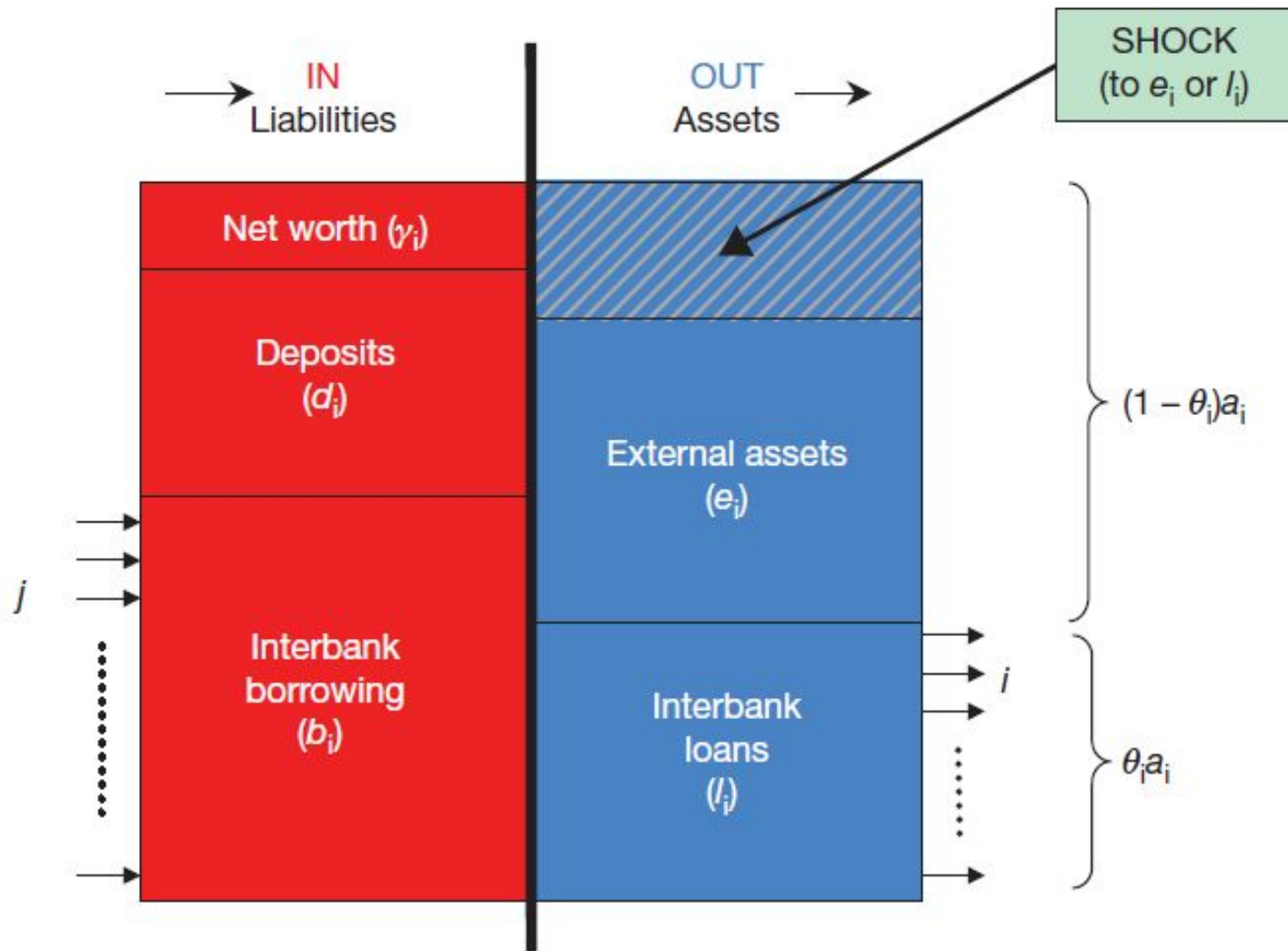
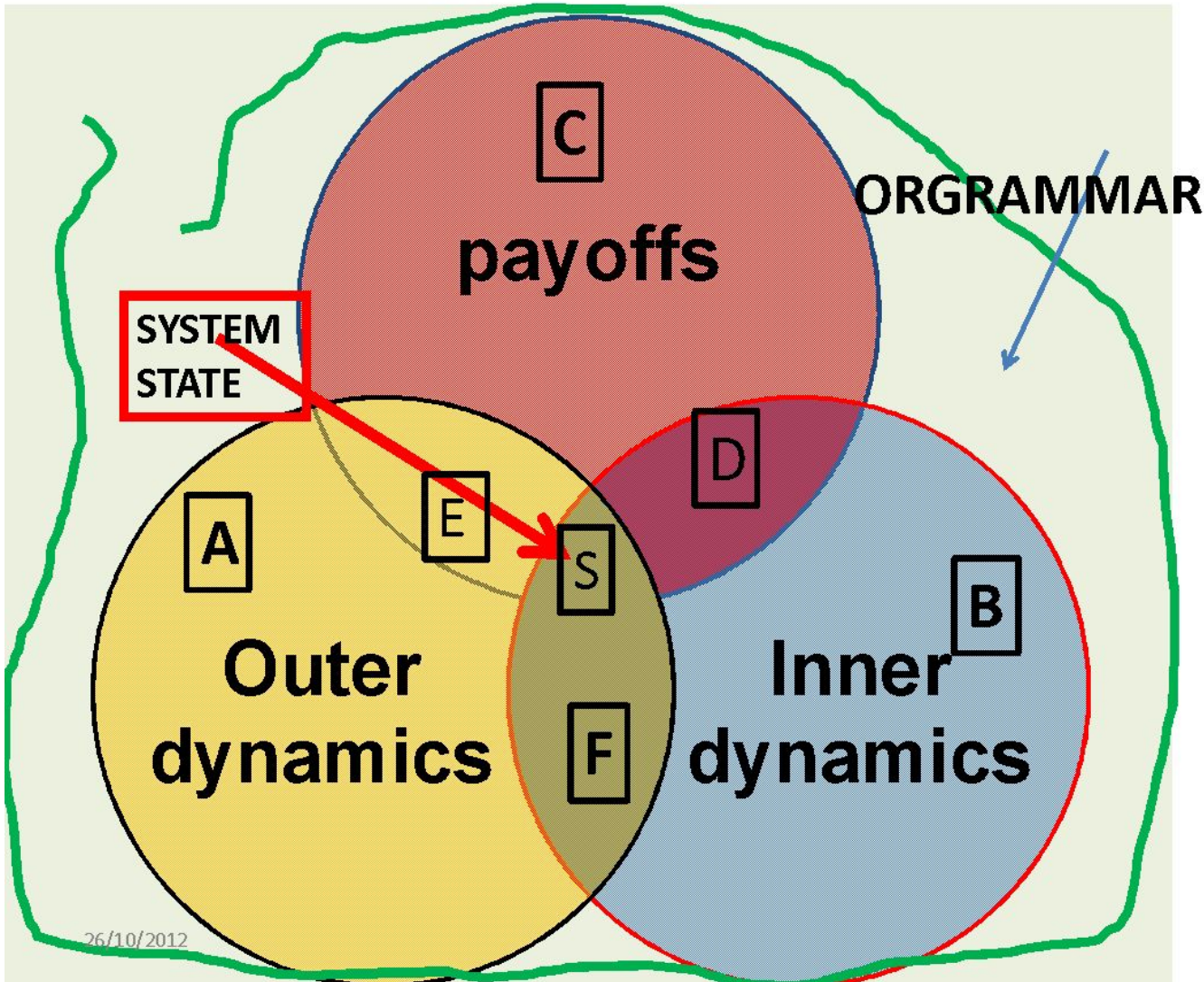


Figure 3 | Schematic model for a node in the interbank network. Adapted with permission from ref. 25.

# Meta Model

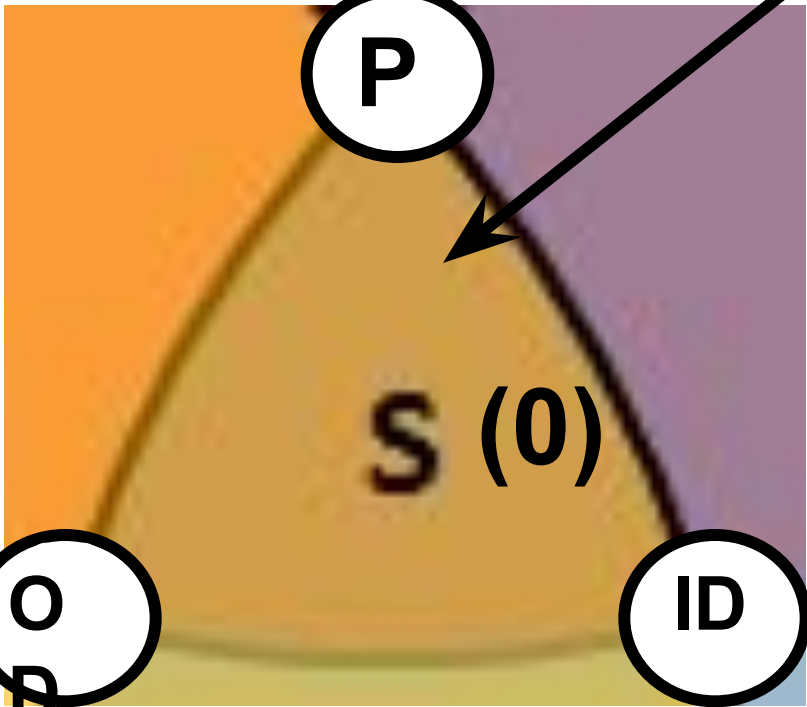




grammar

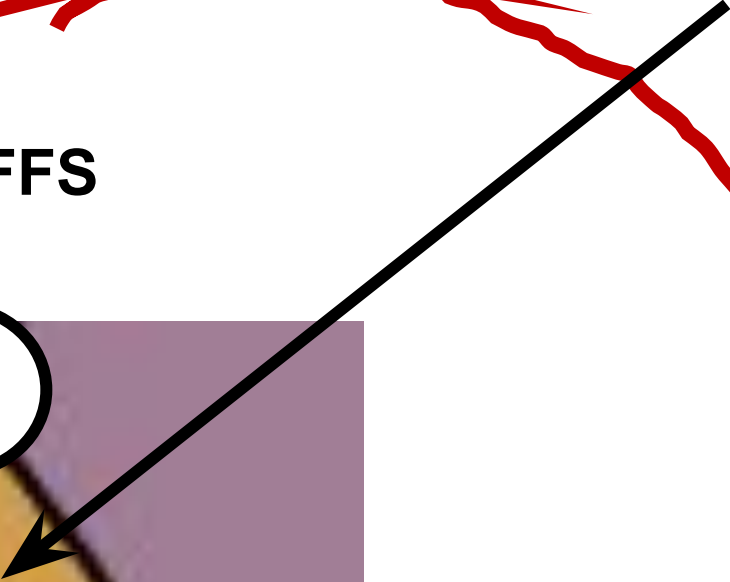
ATTRACTOR

PAYOFFS  
(P)



OUTER  
(OD)  
DYNAMICS

INNER  
(ID)  
DYNAMIC  
S



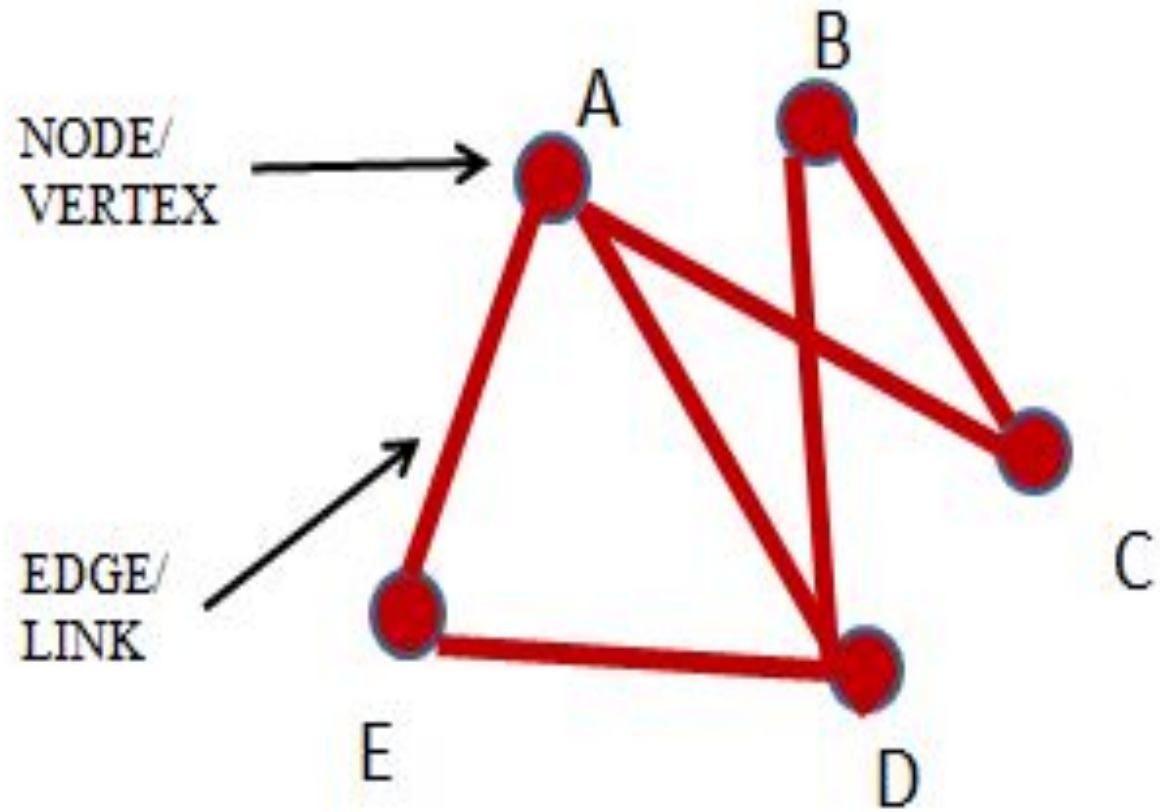
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## **part 2**

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**part 2**

**networks**

**Synergies and feedback**

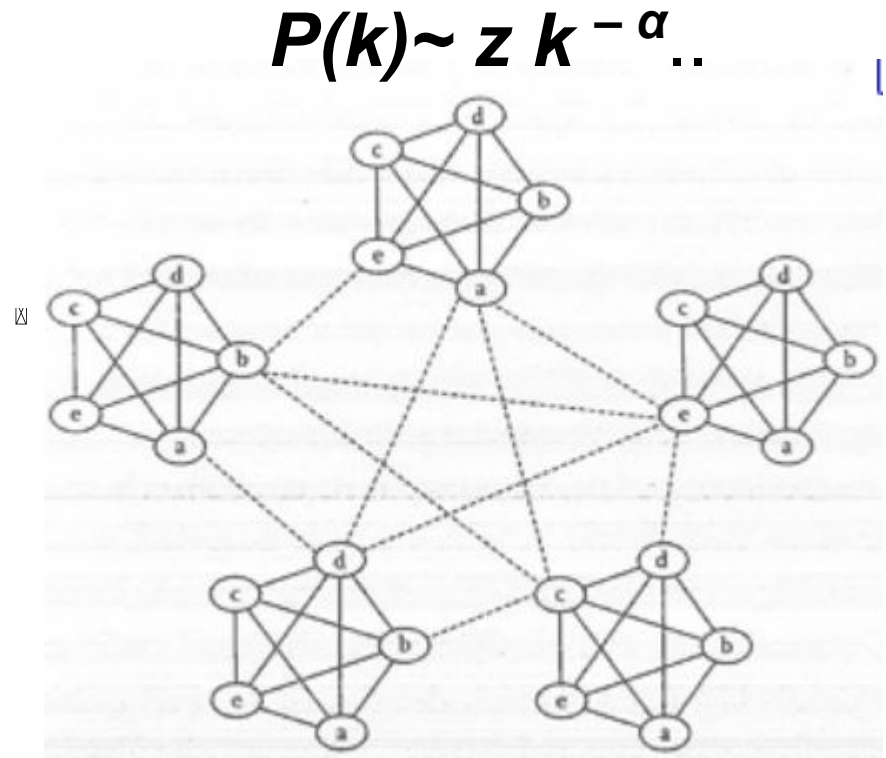


# More complex networks

# Networks: default state

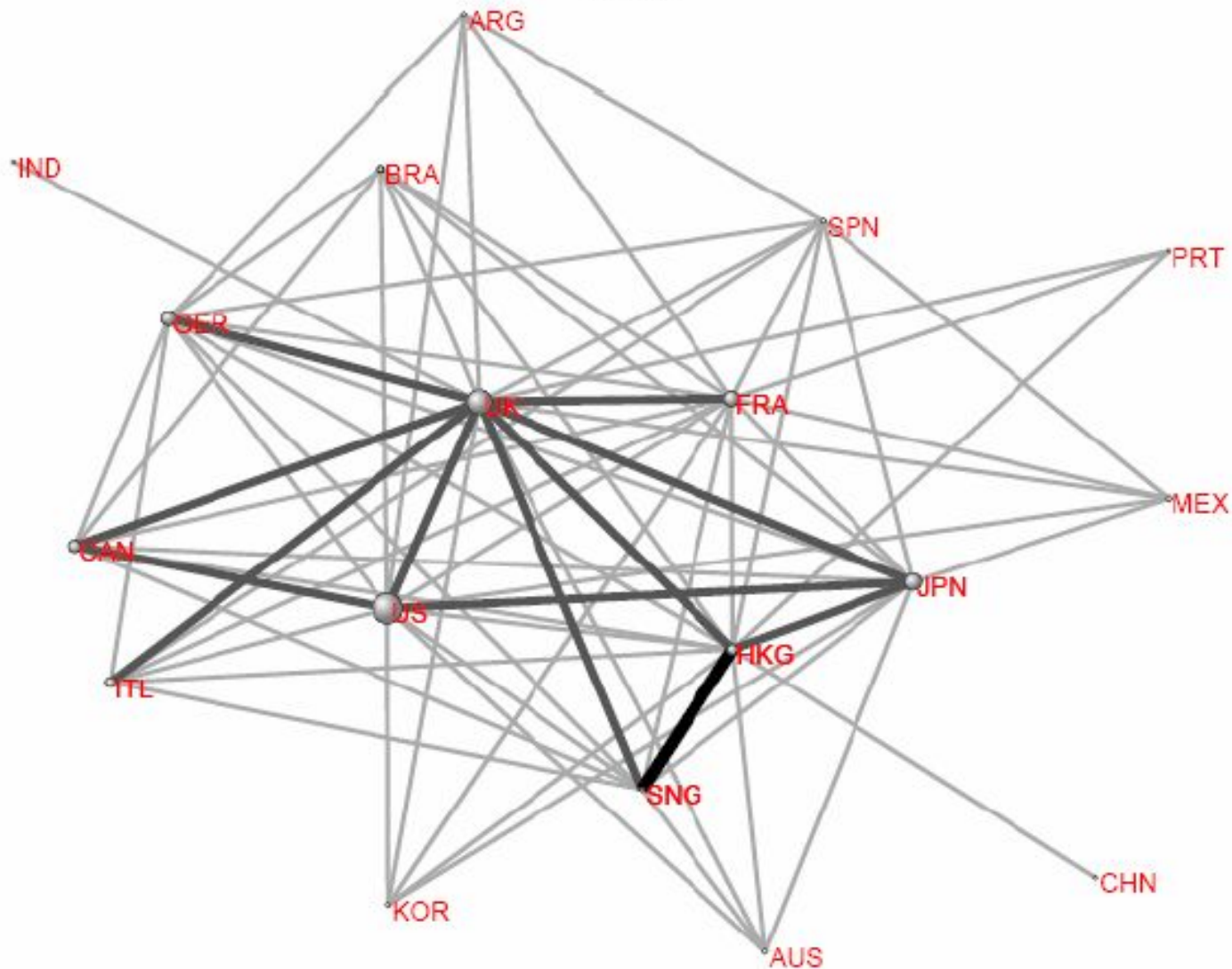
## Small world: highly clustered, short path lengths

- Degree of a node is the number of edges ( $k$ ) connecting it to other nodes.
- High degree nodes have many connections (high  $k$ ); low degree nodes have few (low  $k$ )
- $P(k)$  probability of degree  $k$  follows a power law
- $P(k) \sim z k^{-\alpha} ..$



# Chart 1: Global Financial Network: 1985

1985



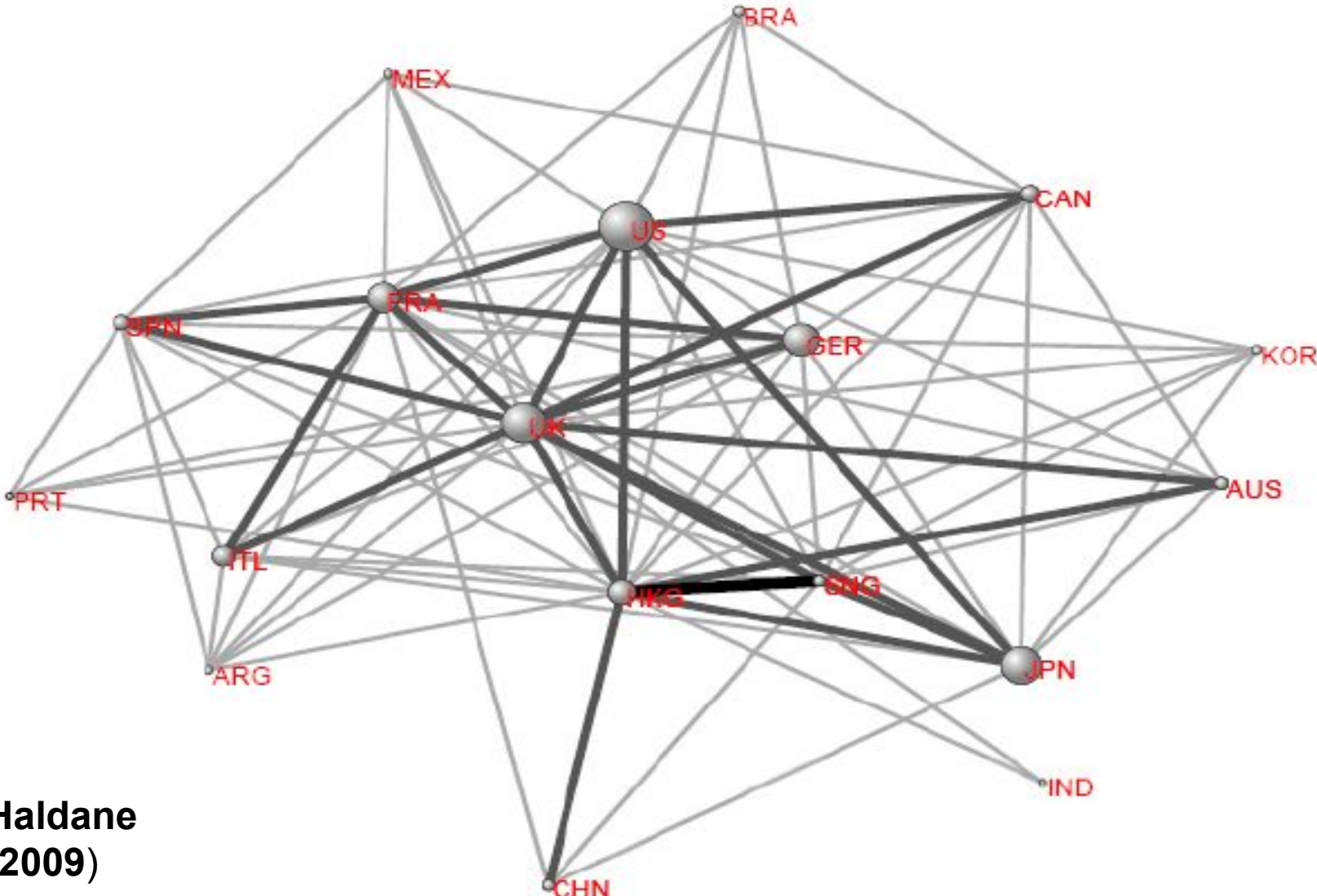
Haldane  
(2009)





# Chart 2: Global Financial Network: 1995

1995



Haldane  
(2009)

Key:

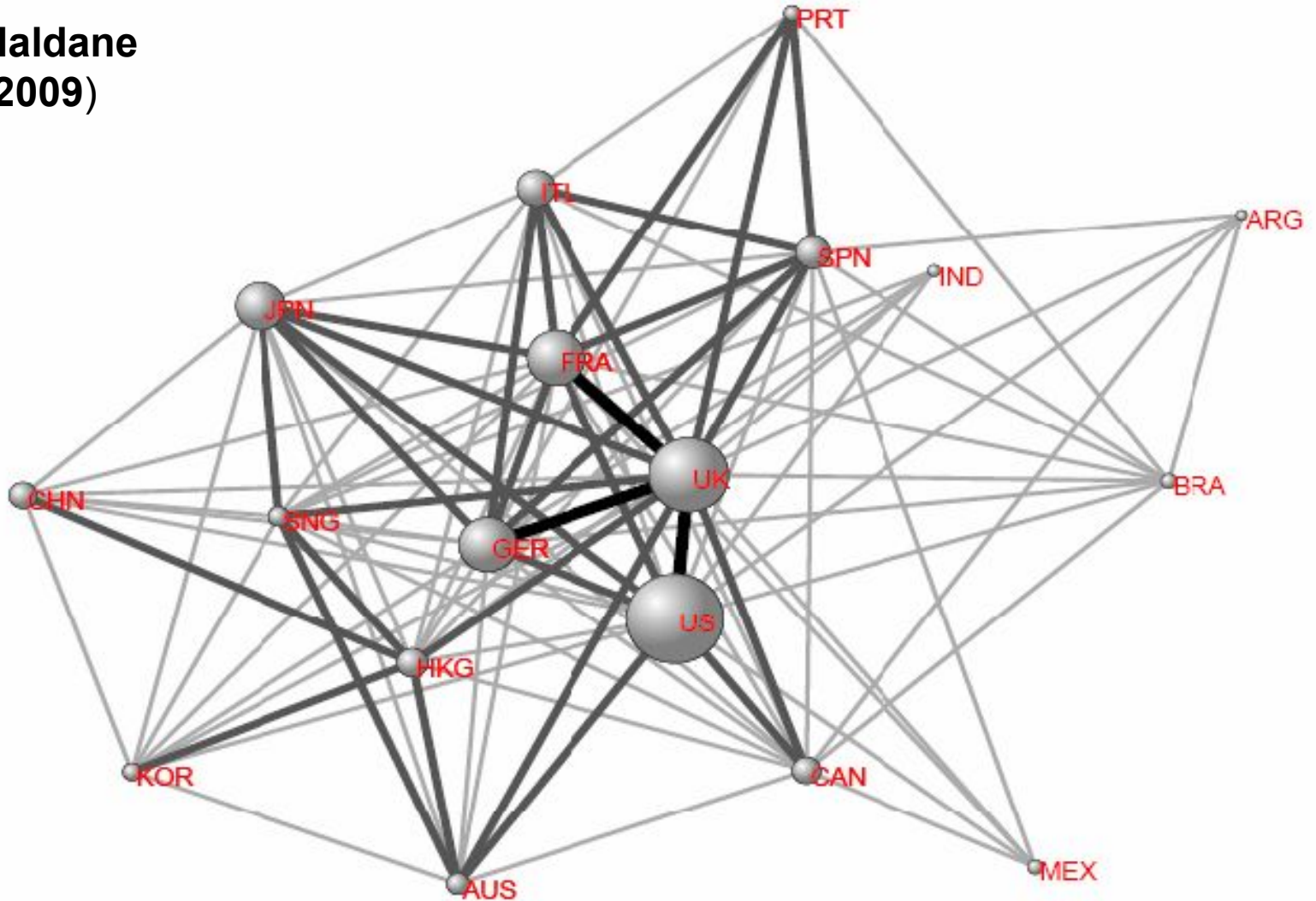
robindcmatthews

12

# Chart 3: Global Financial Network: 2005

2005

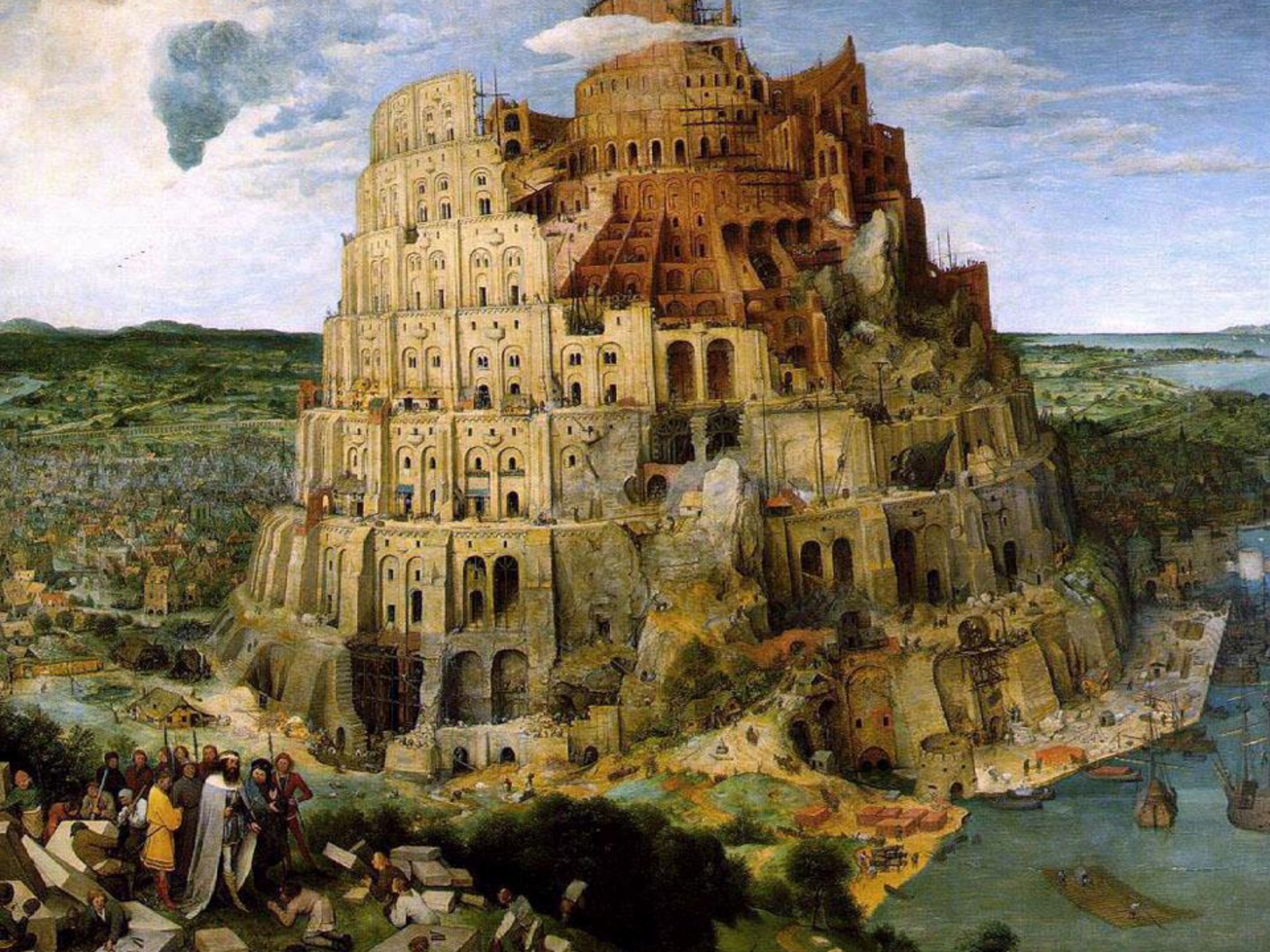
Haldane  
(2009)

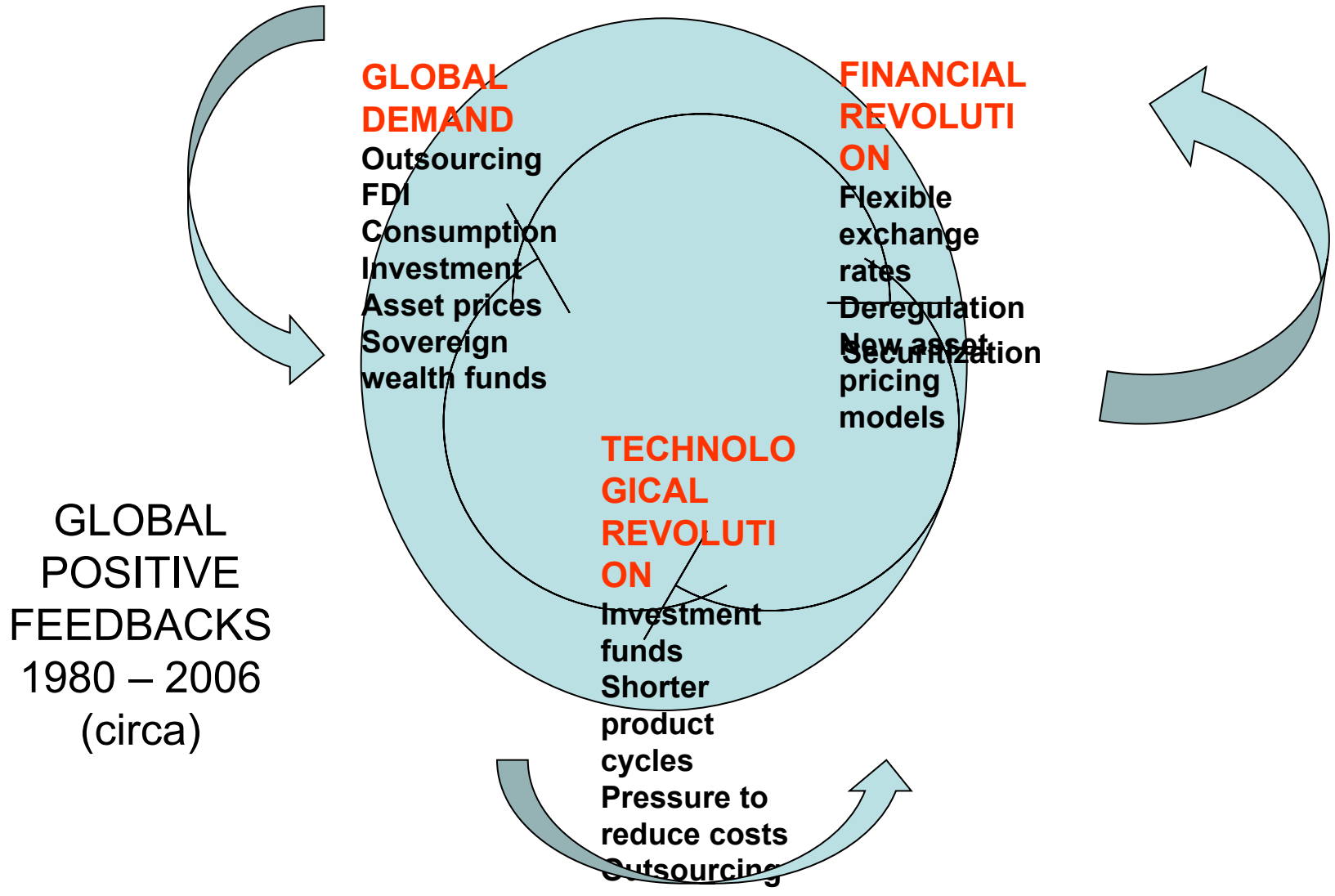


Key: — 0.003-0.03    **robincmatthews** 0.03-0.2    **█** >0.2

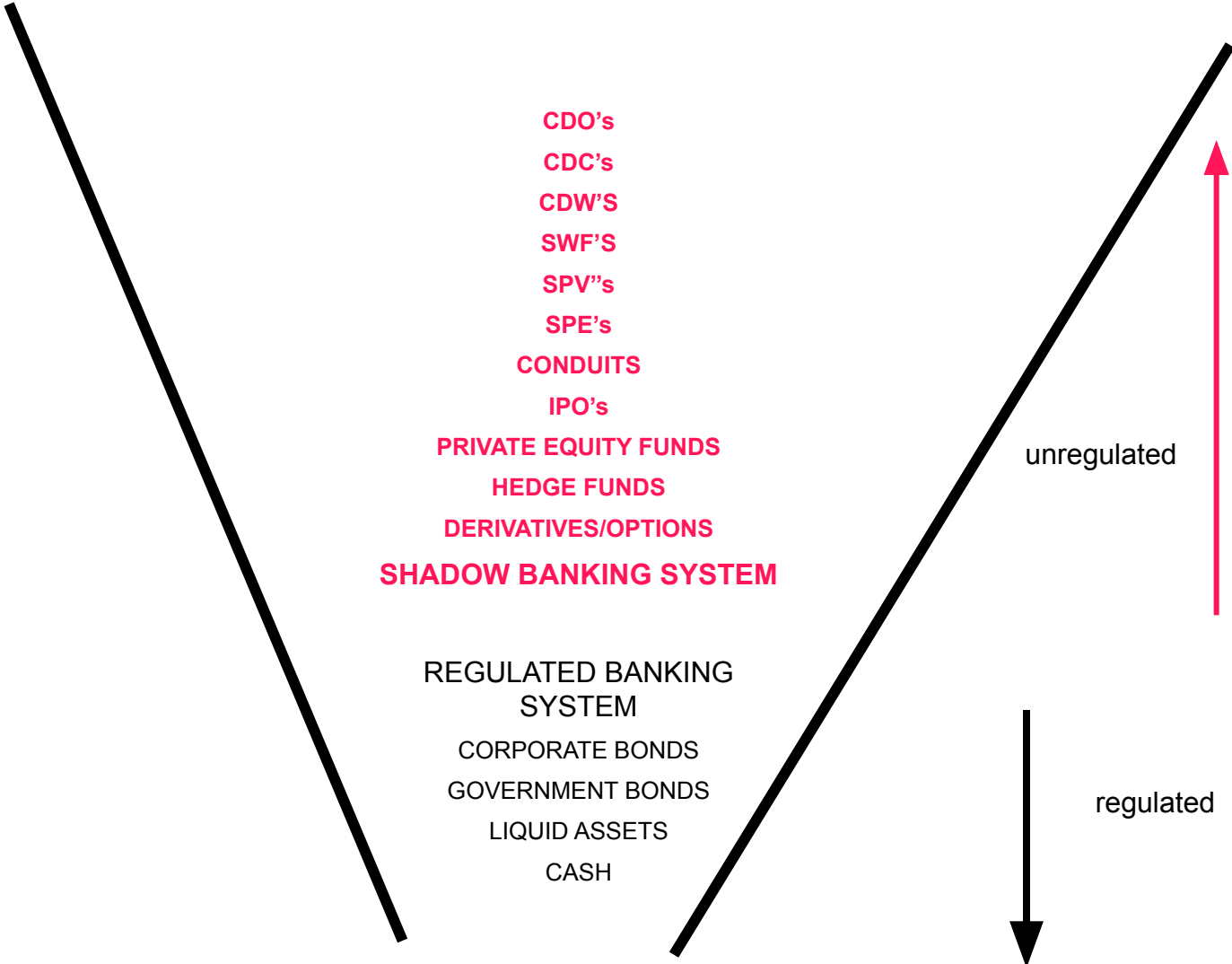
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part 3**

**The Crisis 2007 – 20012  
The financial tower of Babel**





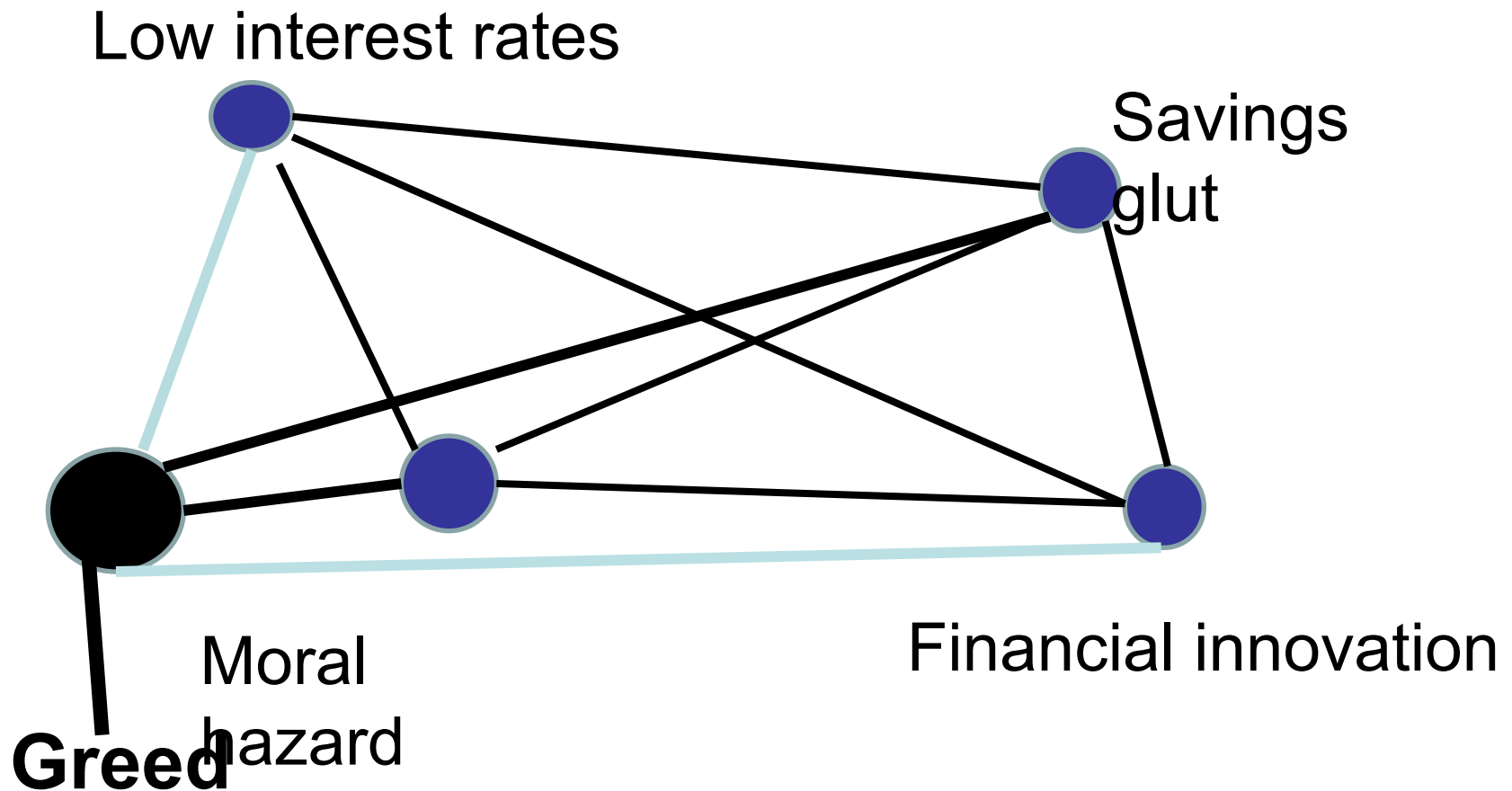
# The financial tower of Babel: 21<sup>ST</sup> century



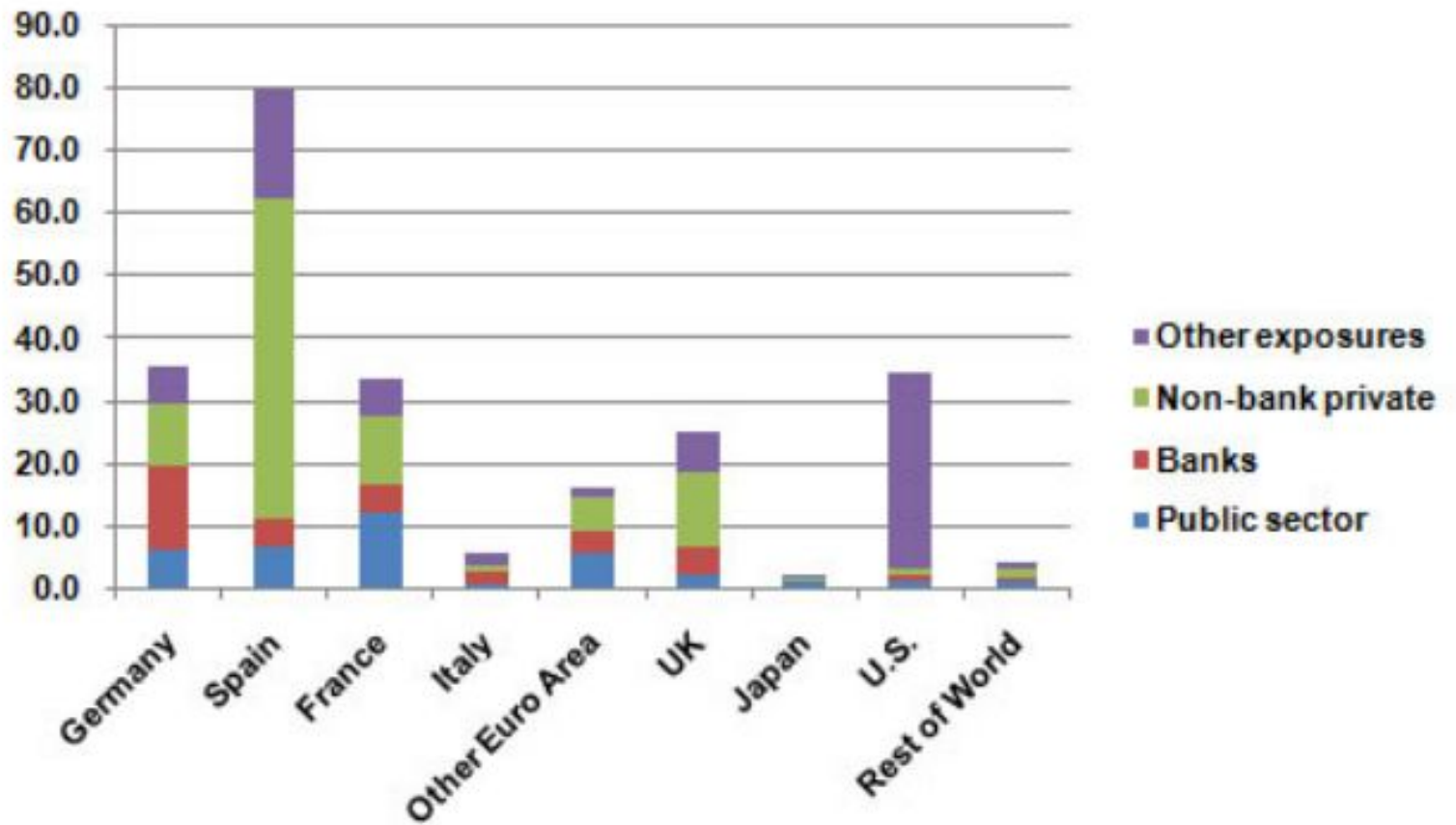
# Causes of crises

- Low interest rates
- Savings glut
- Financial innovation
- Moral hazard
- None of the above
- All of the above
- Samudaya (the second noble truth: thirst)

# Causes of the crisis?

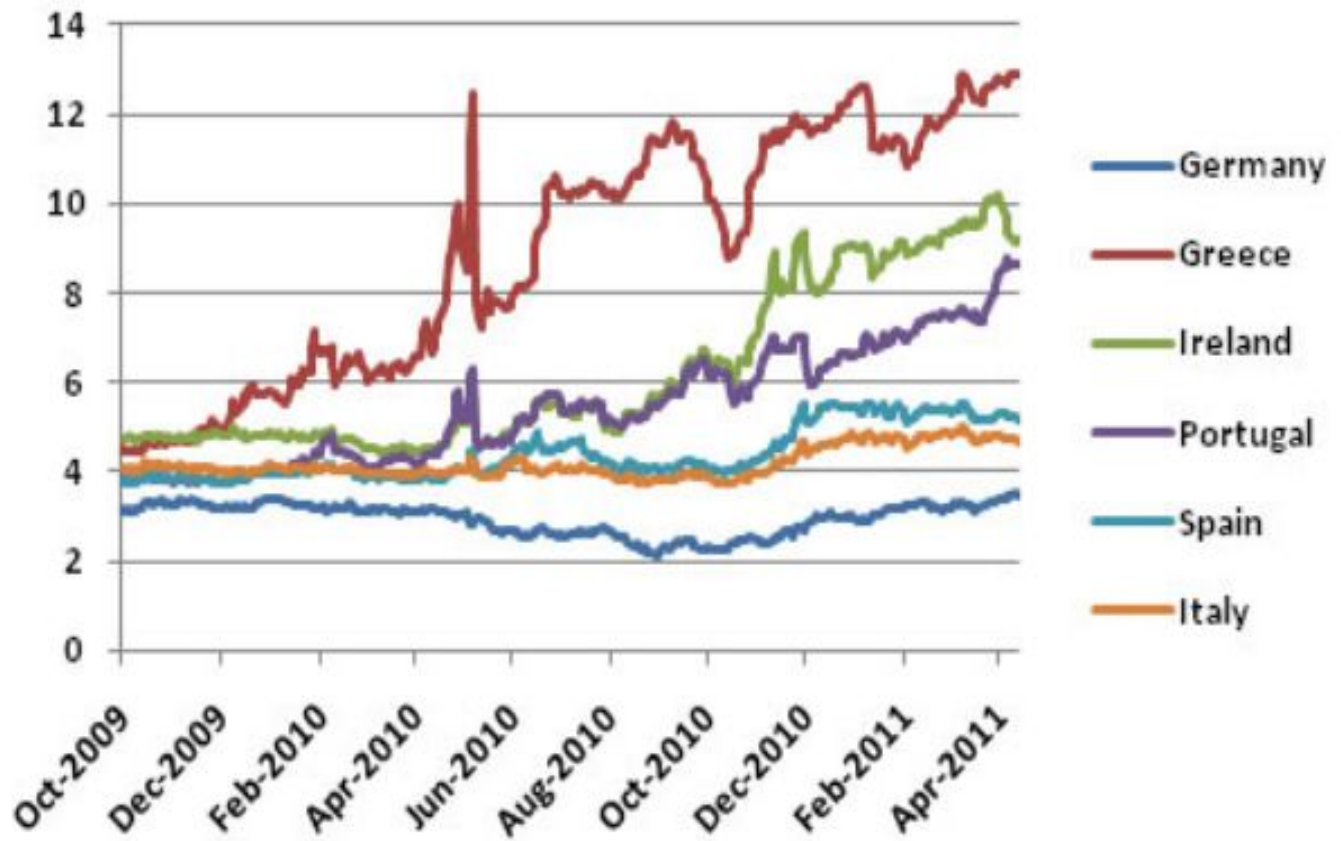






Note: Ultimate risk basis except Germany

Source: BIS, Q3 2010



Source: Bloomberg

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**Emerging nations**

Back to the past

## Why they matter

1

Emerging economies as % of world total, 2005



Sources: IMF; MSCI; BP

Economist Sept 17 2006

## Why they matter

Emerging economies as % of world total, 2005

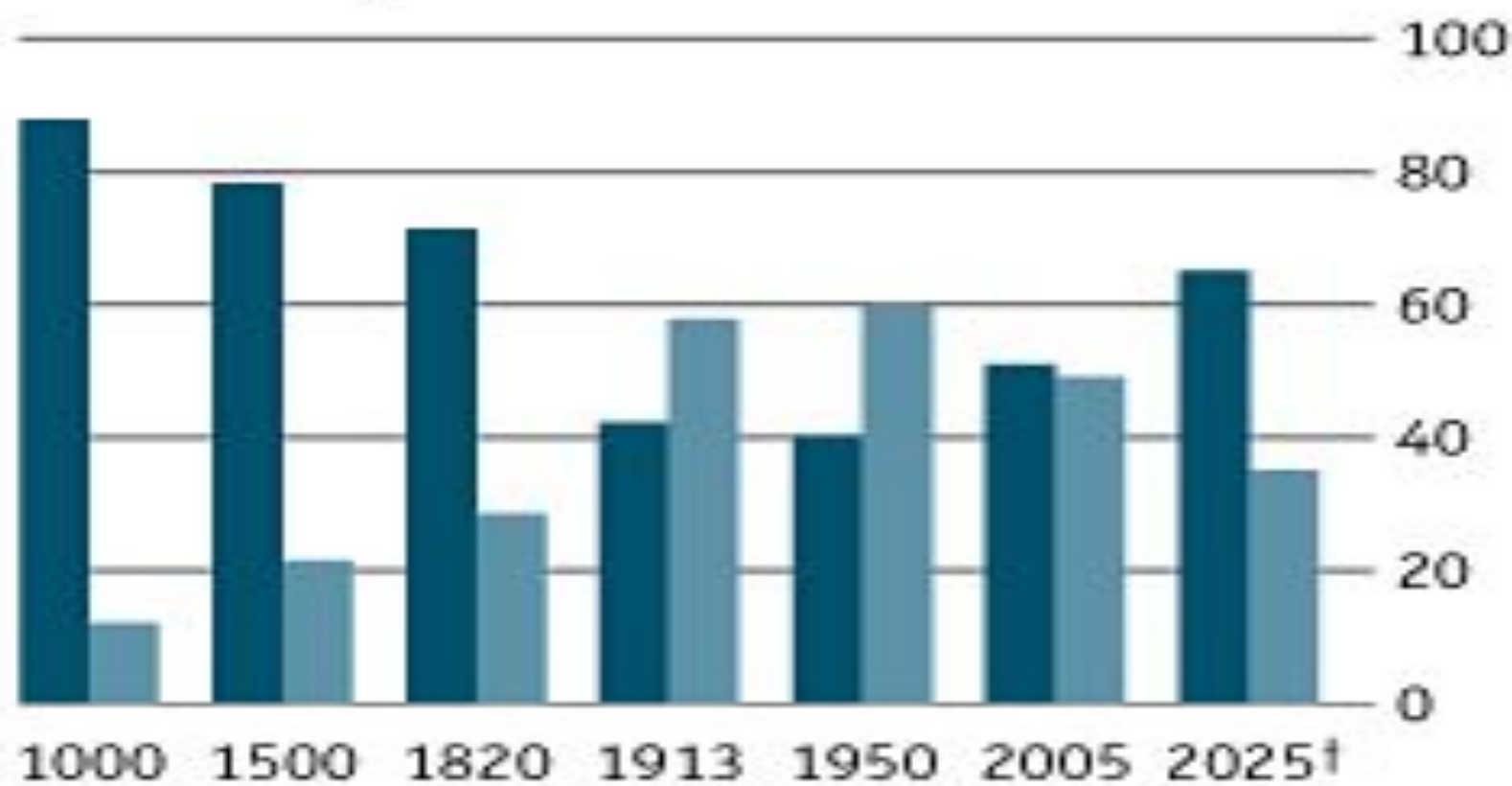


Sources: IMF; MSCI; BP

## Re-emerging

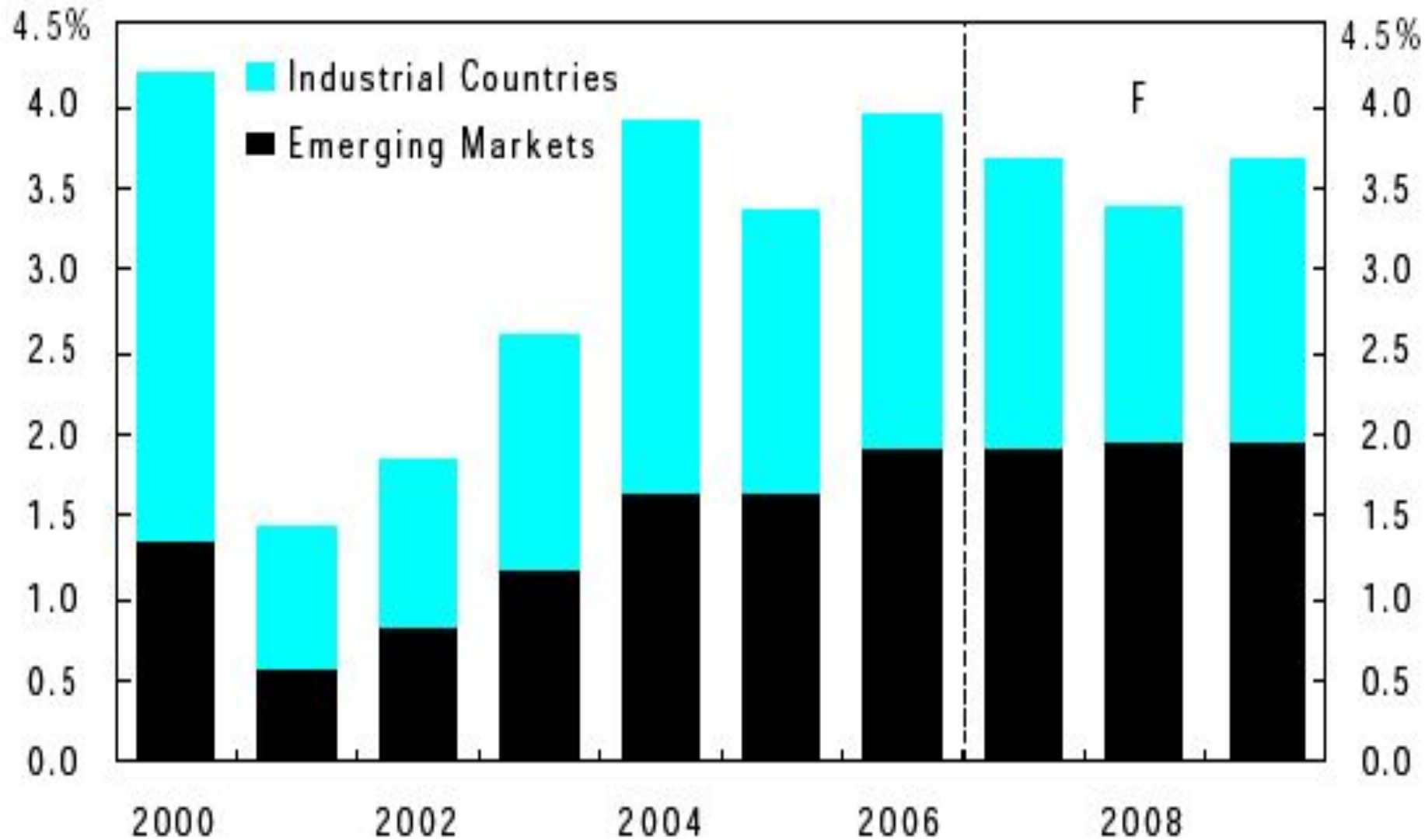
Share of global GDP\*, %

■ Emerging economies  
■ Developed economies



\*At purchasing-power parity †The Economist forecasts  
Sources: OECD, Angus Maddison; IMF

Figure 4. Global – Contributions to Global Growth (Percentage Points)



Sources: IMF and Citi.

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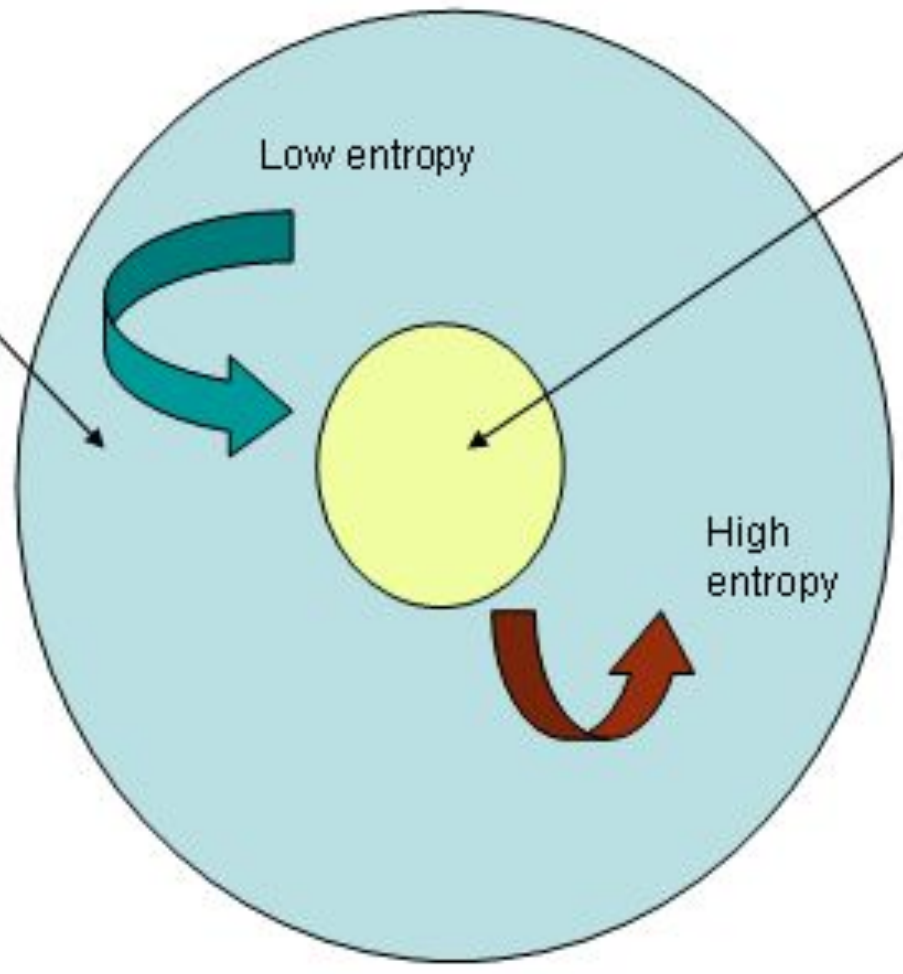
# **The environment**

Gaia or exploitation



The biosphere

The earth



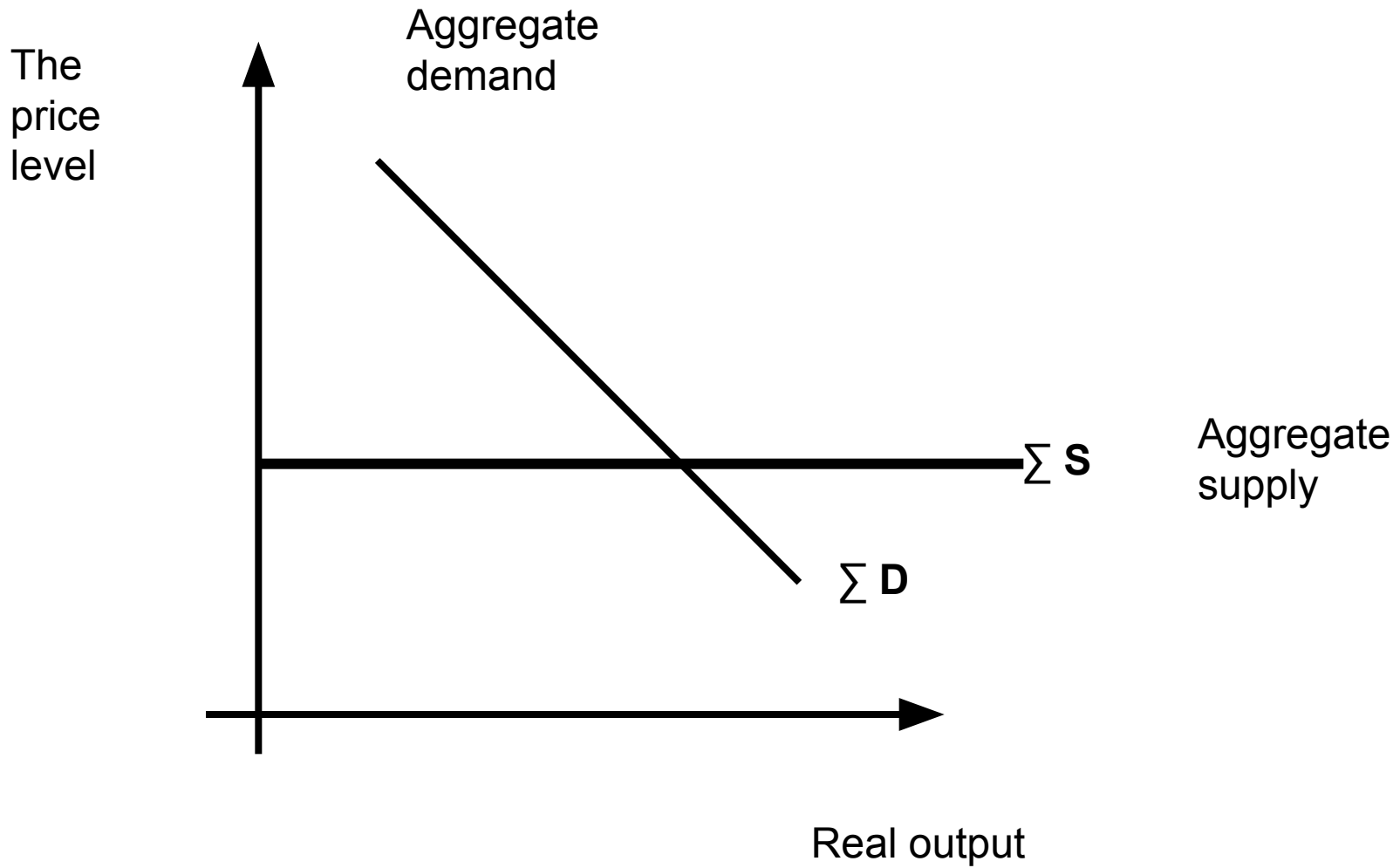
Low entropy

High entropy

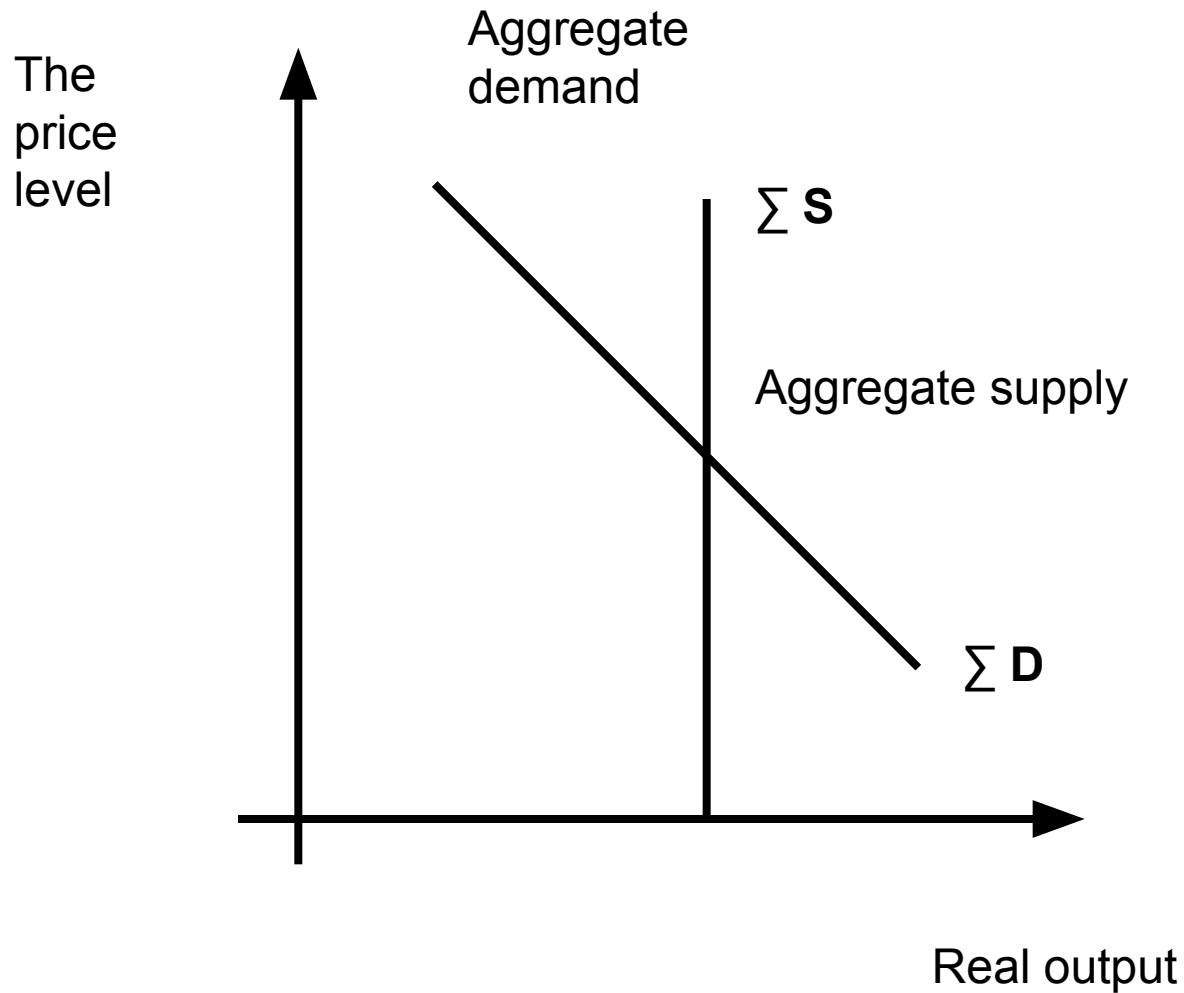
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# **Cryptic models**

**Keynesian and monetarist**



Keynesian case with liquidity trap



The pure classical case  
Reagonomics and crowding out

# Simple Keynesianism

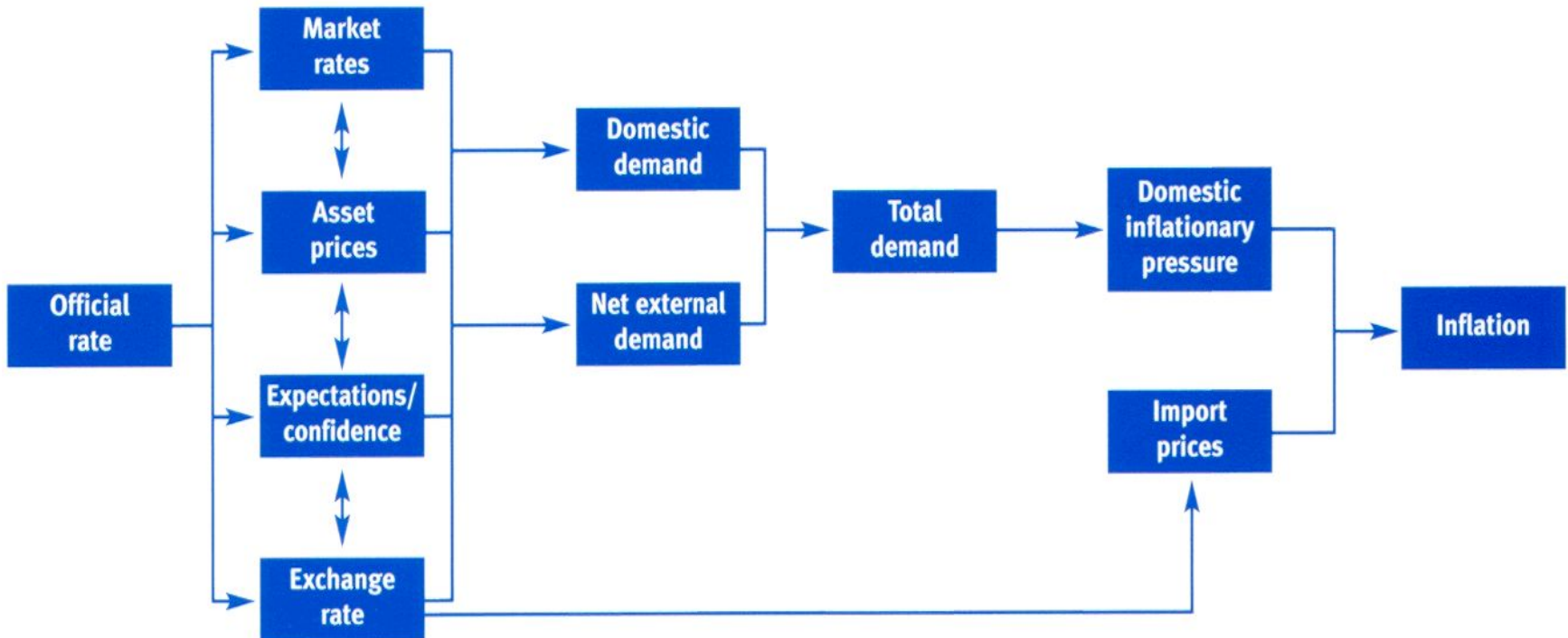
- The multiplier
- The marginal propensity to consume
- The importance of aggregate demand

# **Keynes: sources of unemployment**

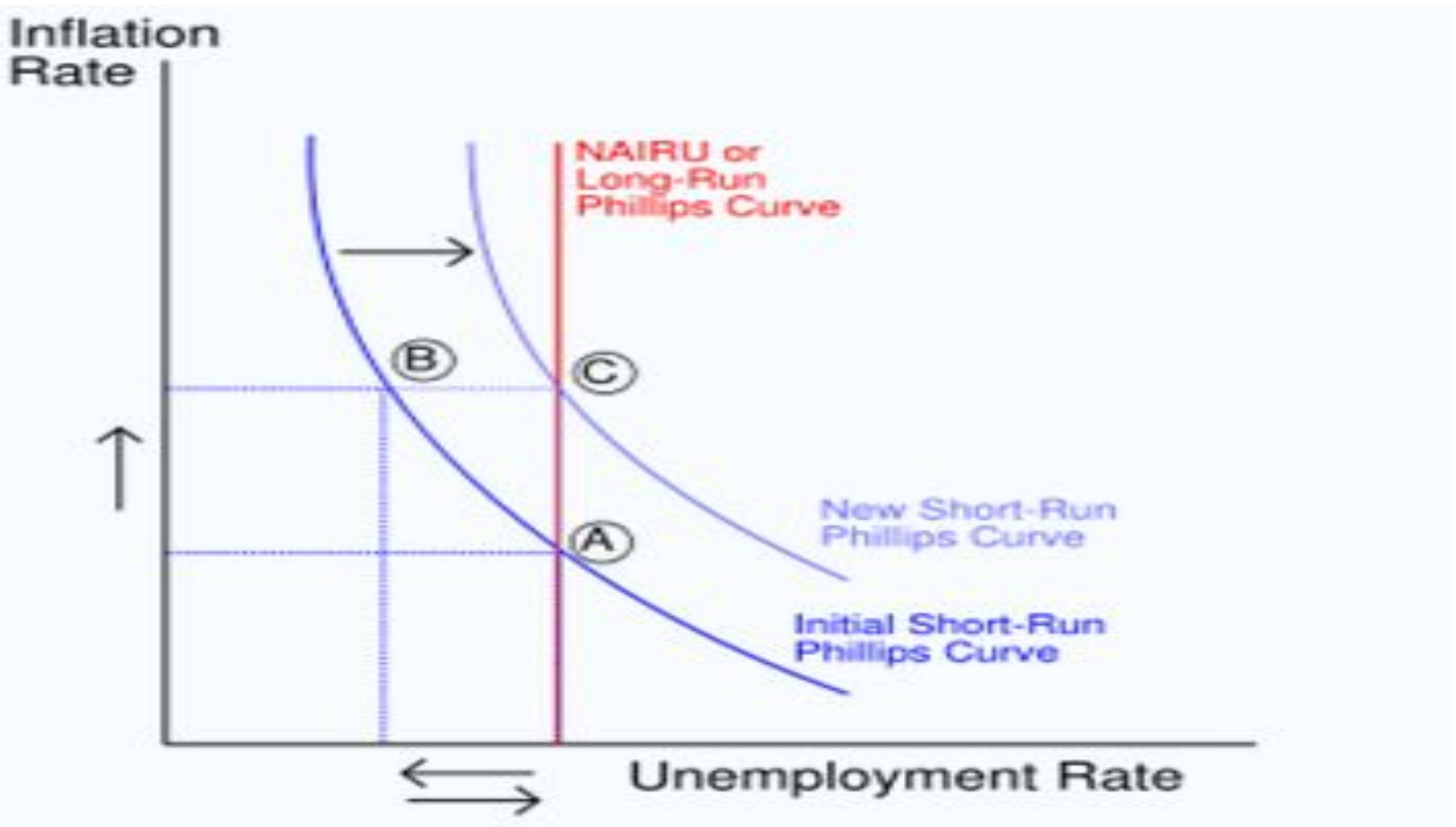
- **The liquidity trap**
- **Inconsistency between savings and investment**
- **Rigid money wages**

# Monetarism

Figure 1: From interest rates to inflation – the transmission mechanism of monetary policy



# The Phillips curve





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**Micro-foundations**

**Costs**

**Revenues**

**Risk**

# NPV AND NCF

## NET PRESENT VALUE and NET CASH FLOW

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- Fundamental Equation

$$\Pi(t) = R(t) - C(t)$$

$$C(t) = W\&S(t) + M(t) + I(t) - D(t) + [rd(t) + re(t)]$$

# costs

AVOIDABLE

UNAVOIDABLE

V

F2

F1

Variable  
Avoidable by  
cutting  
Down output  
(marginal costs)

Fixed  
Avoidable by going  
out of business

Sunk costs  
Unavoidable once incurred  
(*True costs*)

# Scale and scope economies

- Leveraging
- Outsourcing
- Restructuring

# Marketing

## segmentation

# Elasticity (price)

- % change in quantity bought/% change in price
- Defined as an absolute value
- Varies along demand curve
- $E > 1$  implies price reduction increases sales revenue
- $E < 1$  implies price reduction decreases sales revenue

	Effect on sales revenue of price reduction	Effect on sales revenue of a price increase
Elastic $E_p > 1$	Sales Revenue RISES	Sales Revenue FALLS
Inelastic $E_p < 1$	Sales Revenue FALLS	Sales Revenue RISES

# ELASTICITIES

$E_p = | E_p | =$  price elasticity

$E_y =$  income elasticity

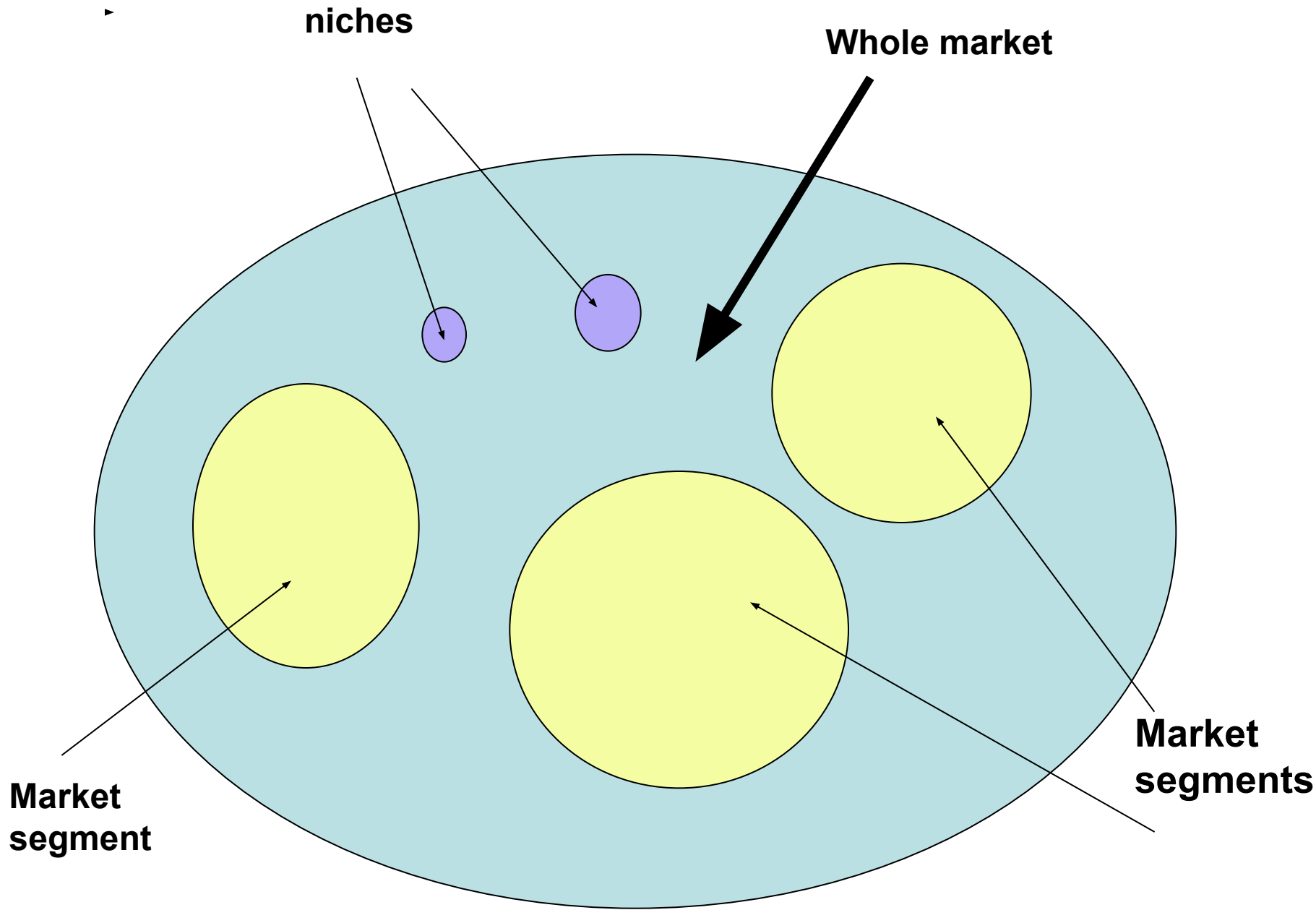
$$E_p = \frac{\% \text{change in quantity demanded}}{\% \text{change in price}}$$

$$E_y = \frac{\% \text{change in quantity demanded}}{\% \text{change in income}}$$



$$E_P = \frac{p}{q} \frac{dq}{dp}$$

$$E_y = \frac{y}{q} \frac{dq}{dy}$$



$$E_m = \sum s_i E_i$$

$(i = 1, 2, \dots, m)$

•where  $E_m$  denotes the elasticity of the market as a whole  $E_i$  denotes the elasticity of the segment  $i$ ,  $E_i$  denotes the elasticity of the segment  $i$  and  $s_i$  denotes the share of the segment in total expenditure on the good.

**Elasticity of demand for the market as a whole (for a particular product X)**

equals

**the sum of the elasticity of each of the segments of the market multiplied by the share of that segment in total expenditure on the market.**