

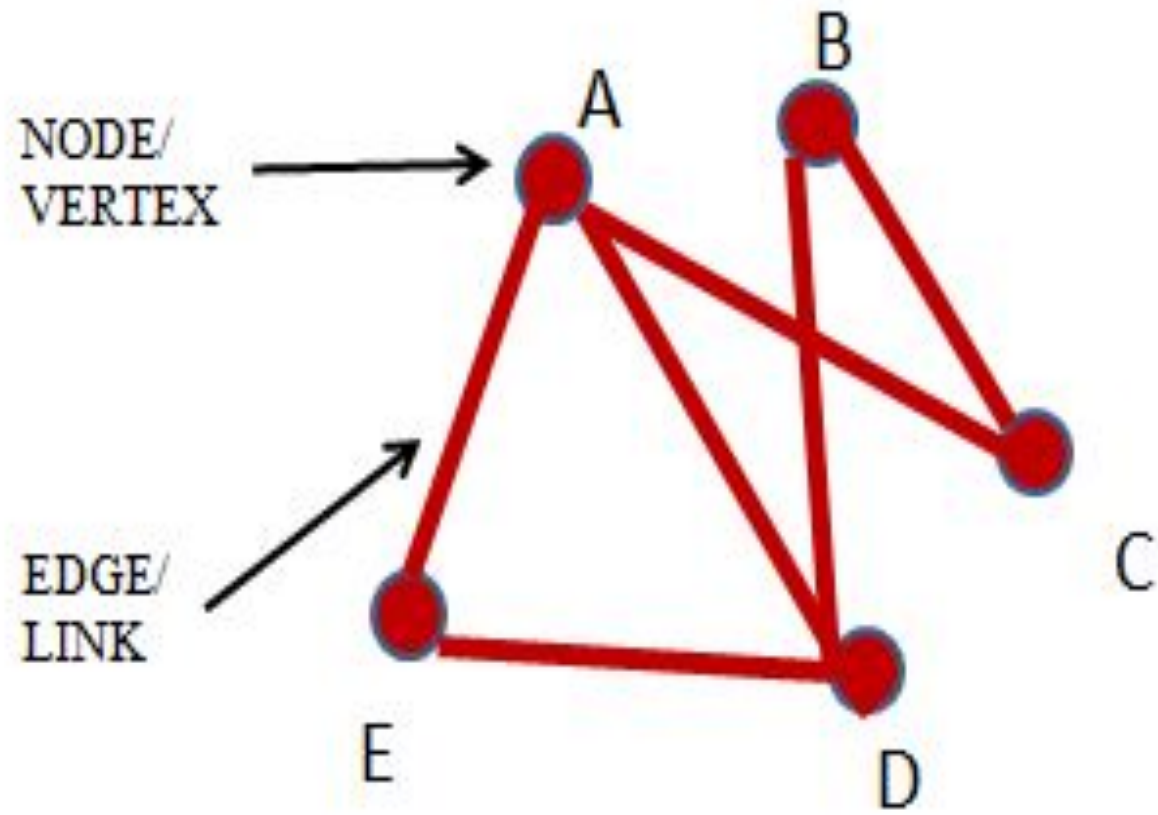
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networks

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
- $P(k) \sim z k^{-\alpha}..$

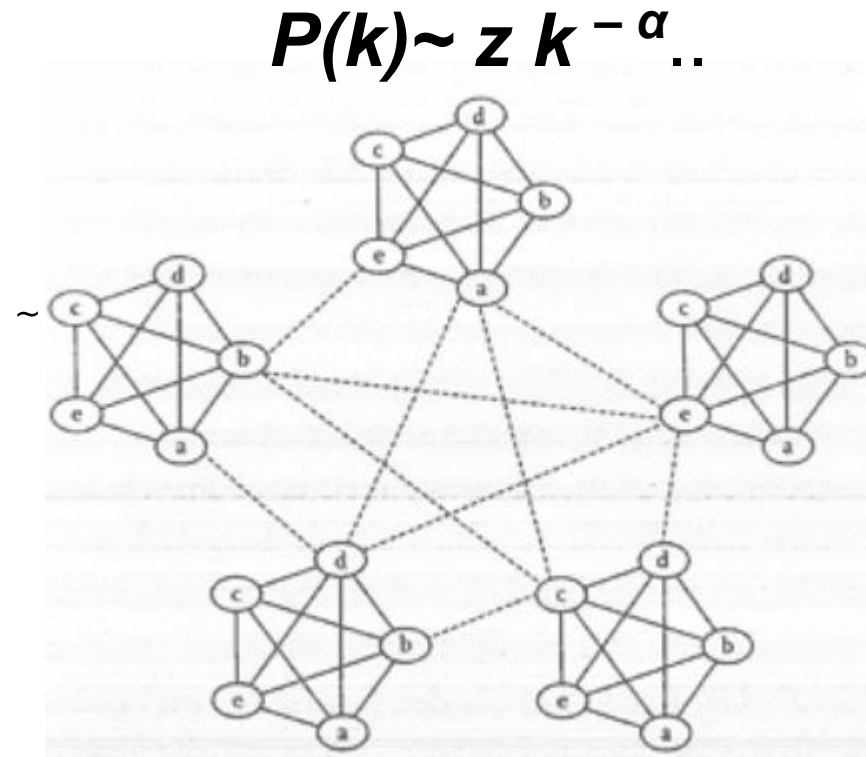


Chart 1: Global Financial Network: 1985

1985

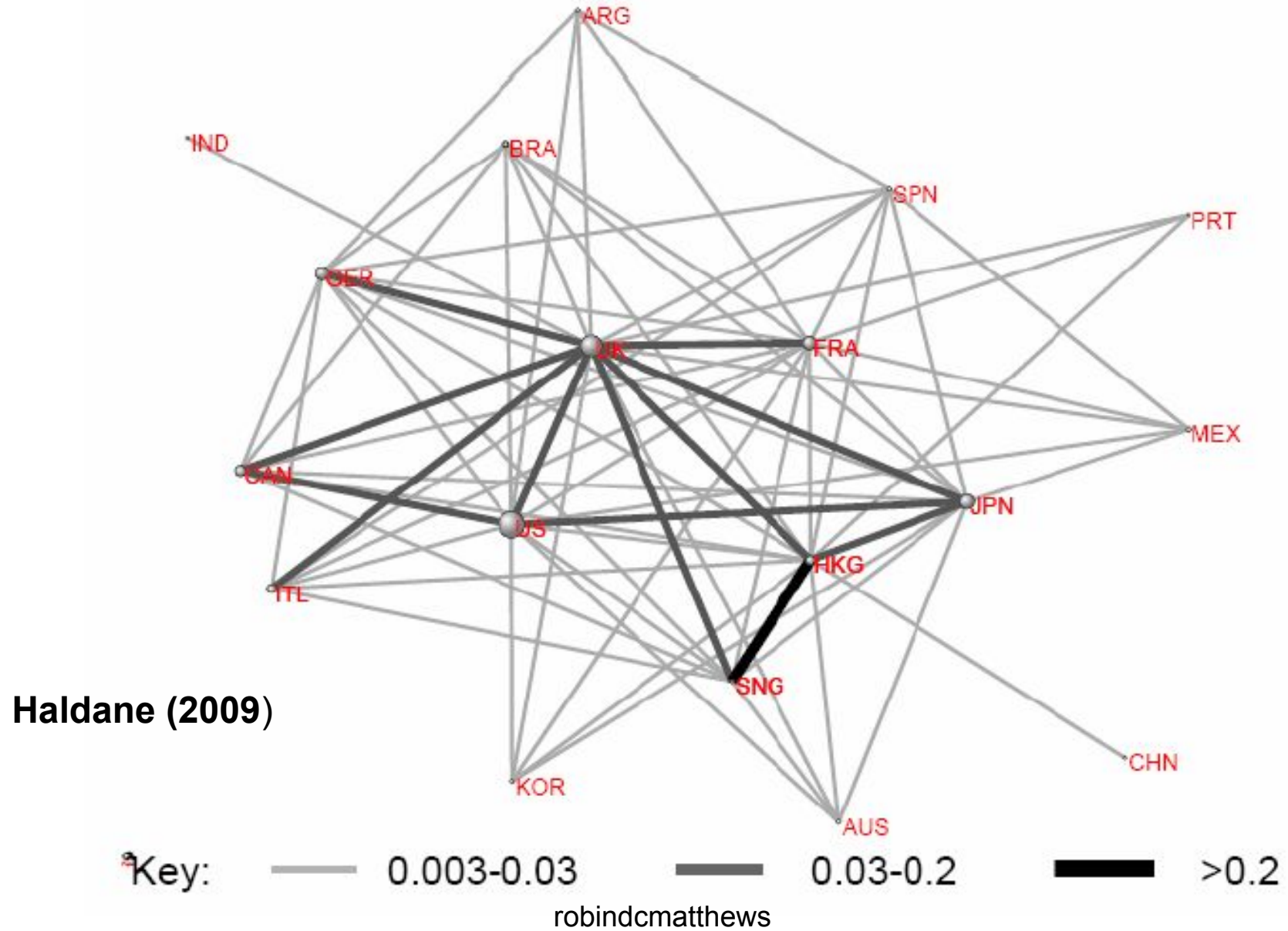
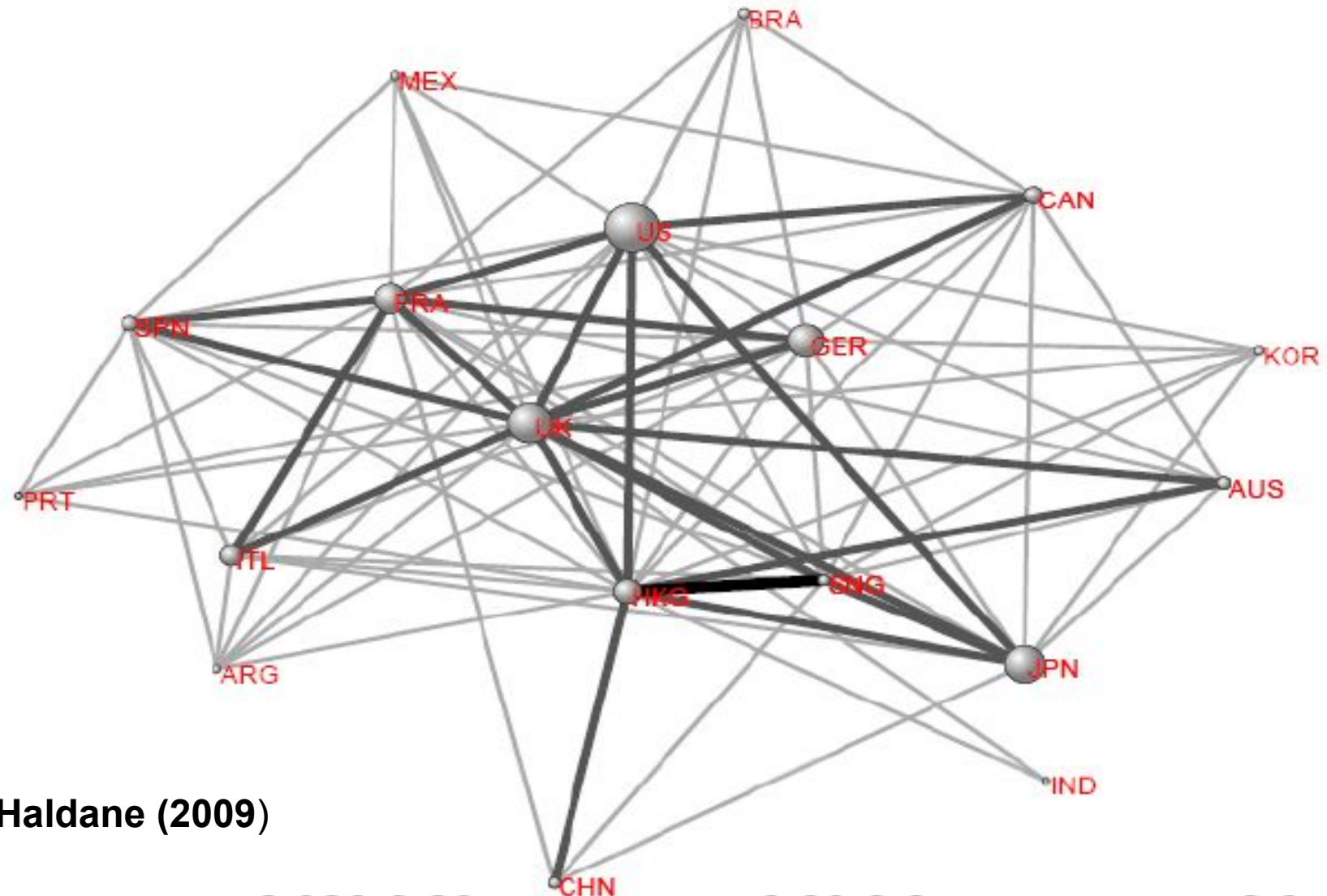


Chart 2: Global Financial Network: 1995

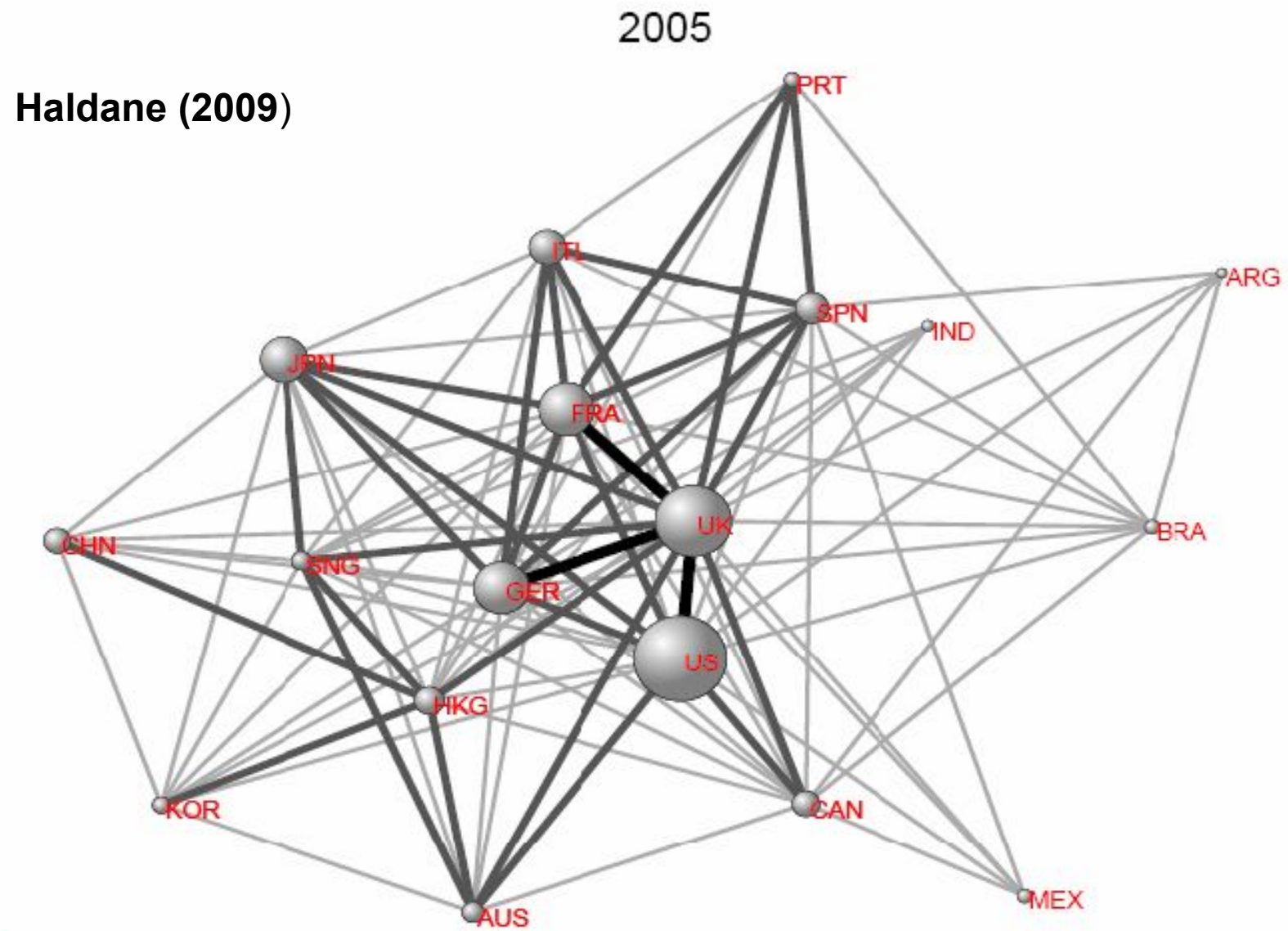
1995



Haldane (2009)

Key: — 0.003-0.03 — 0.03-0.2 — >0.2
robindcmatthews

Chart 3: Global Financial Network: 2005



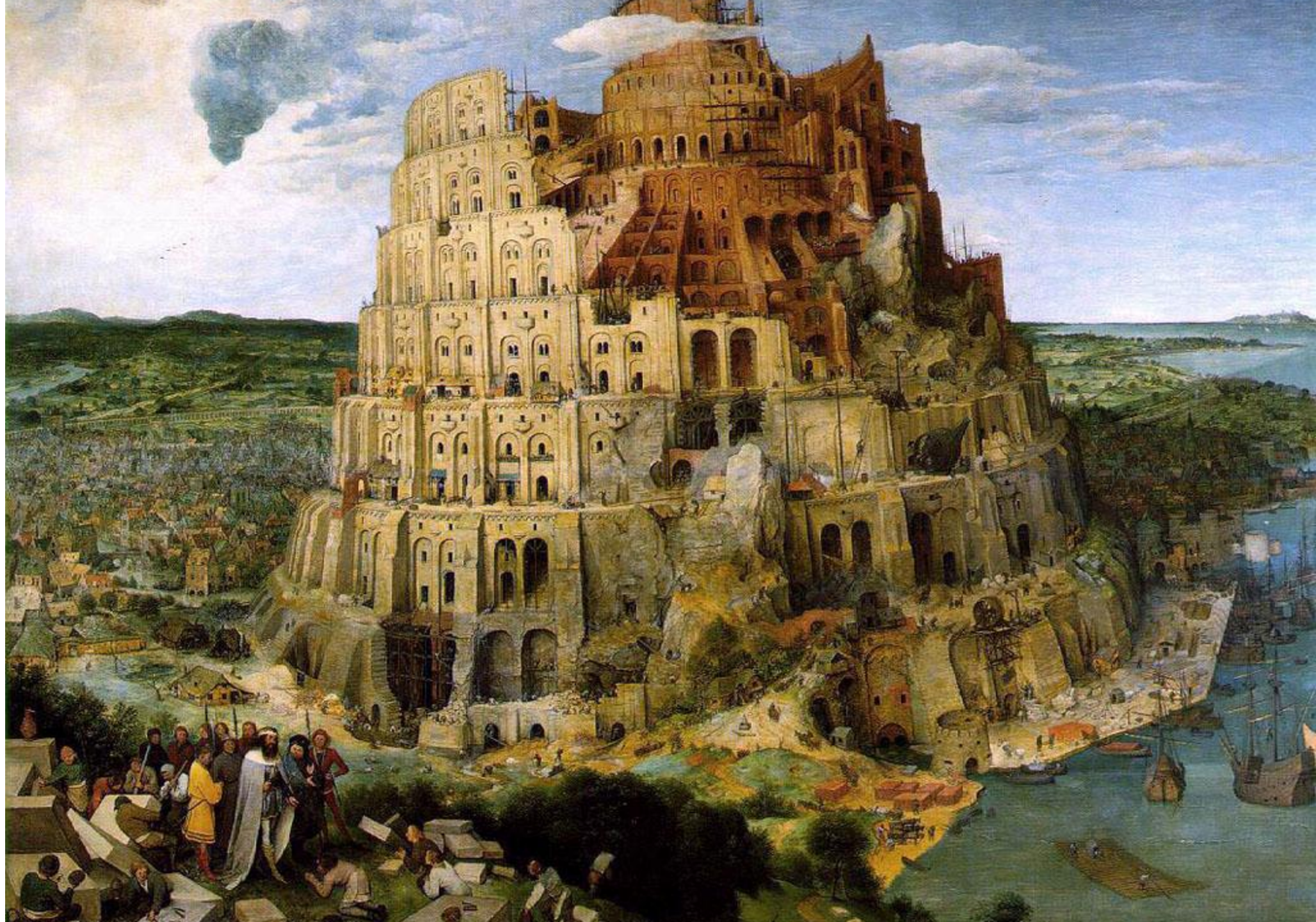
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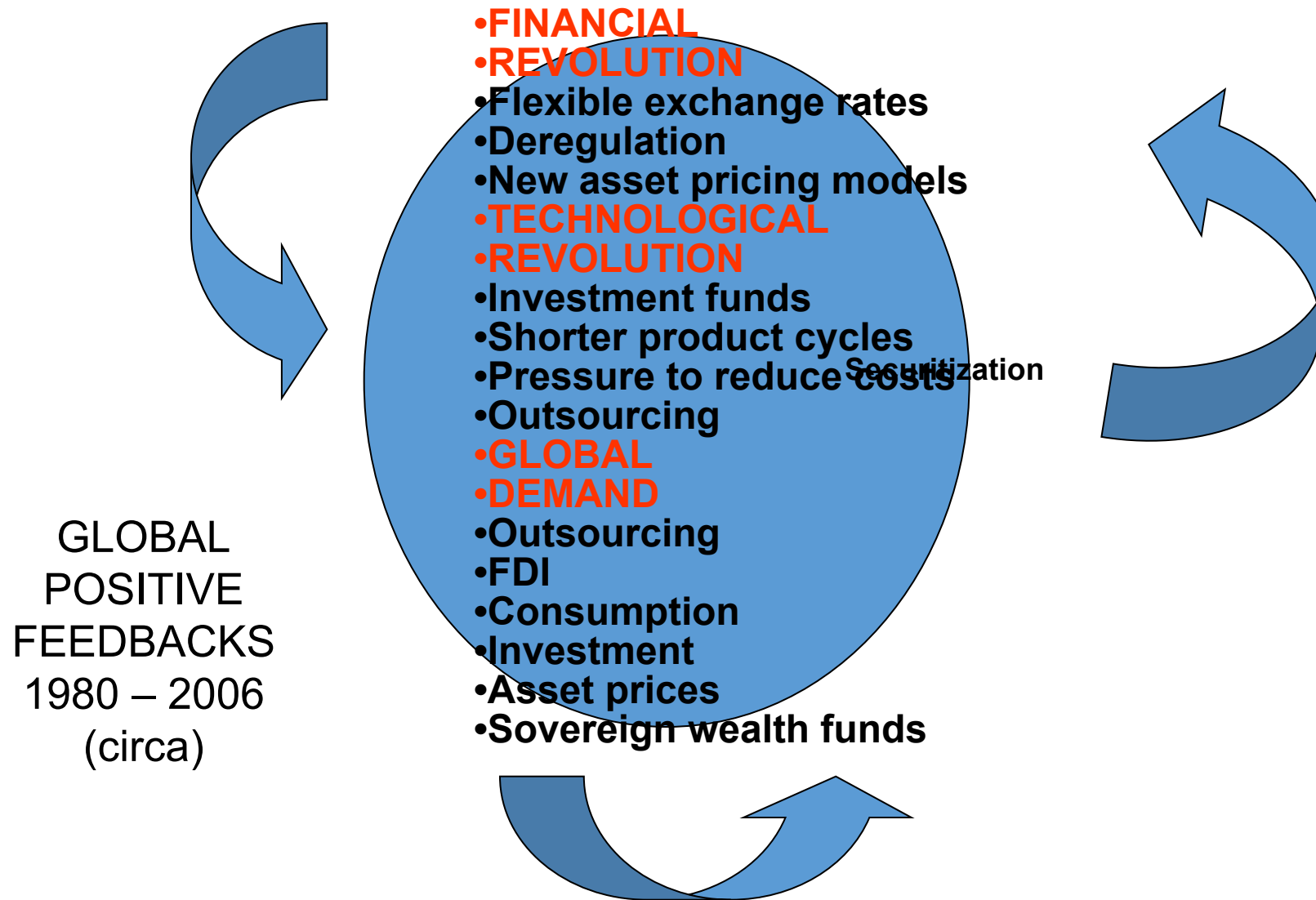
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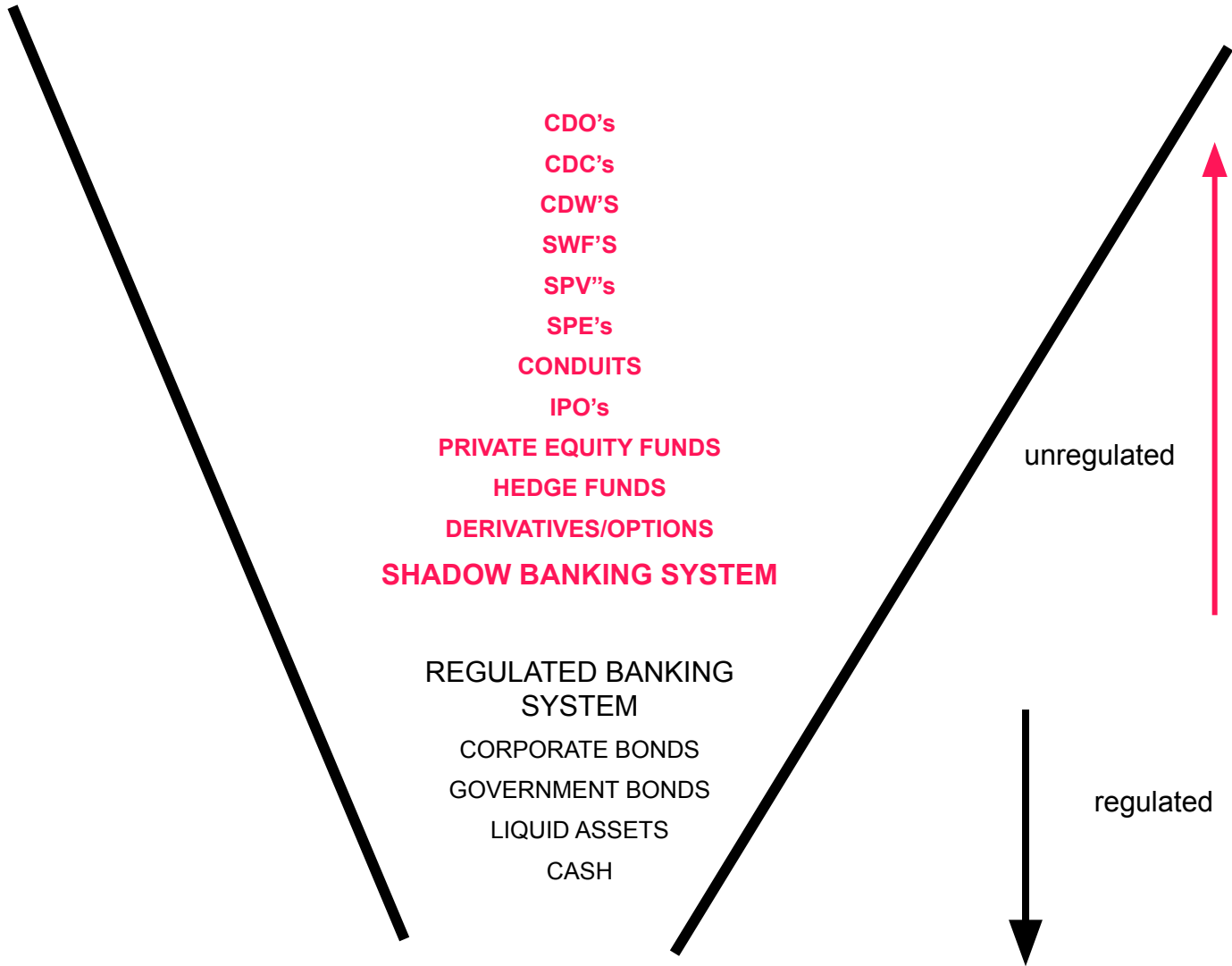
The Crisis 2007 – 20012

The financial tower of Babel





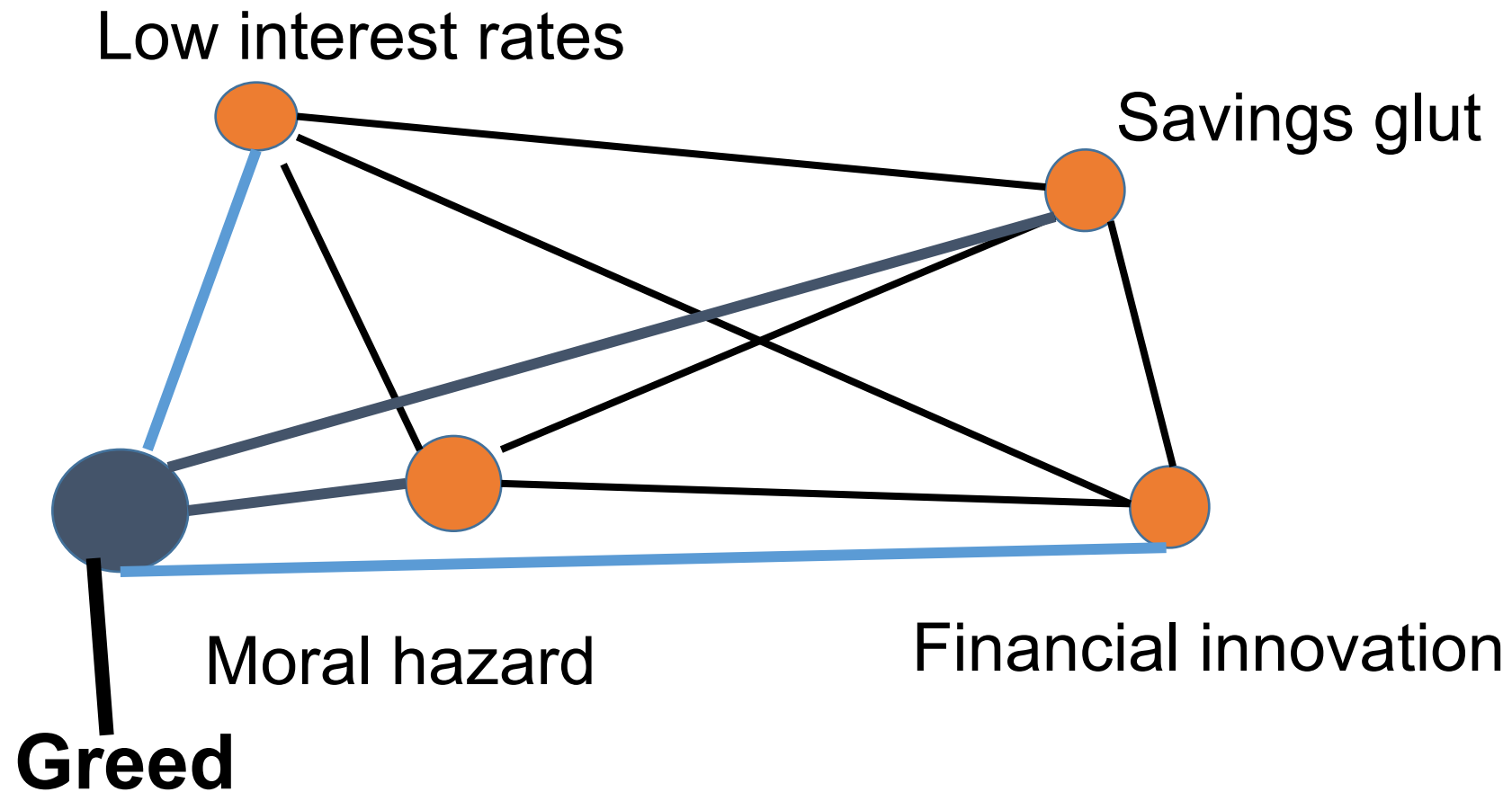
The financial tower of Babel: 21ST century

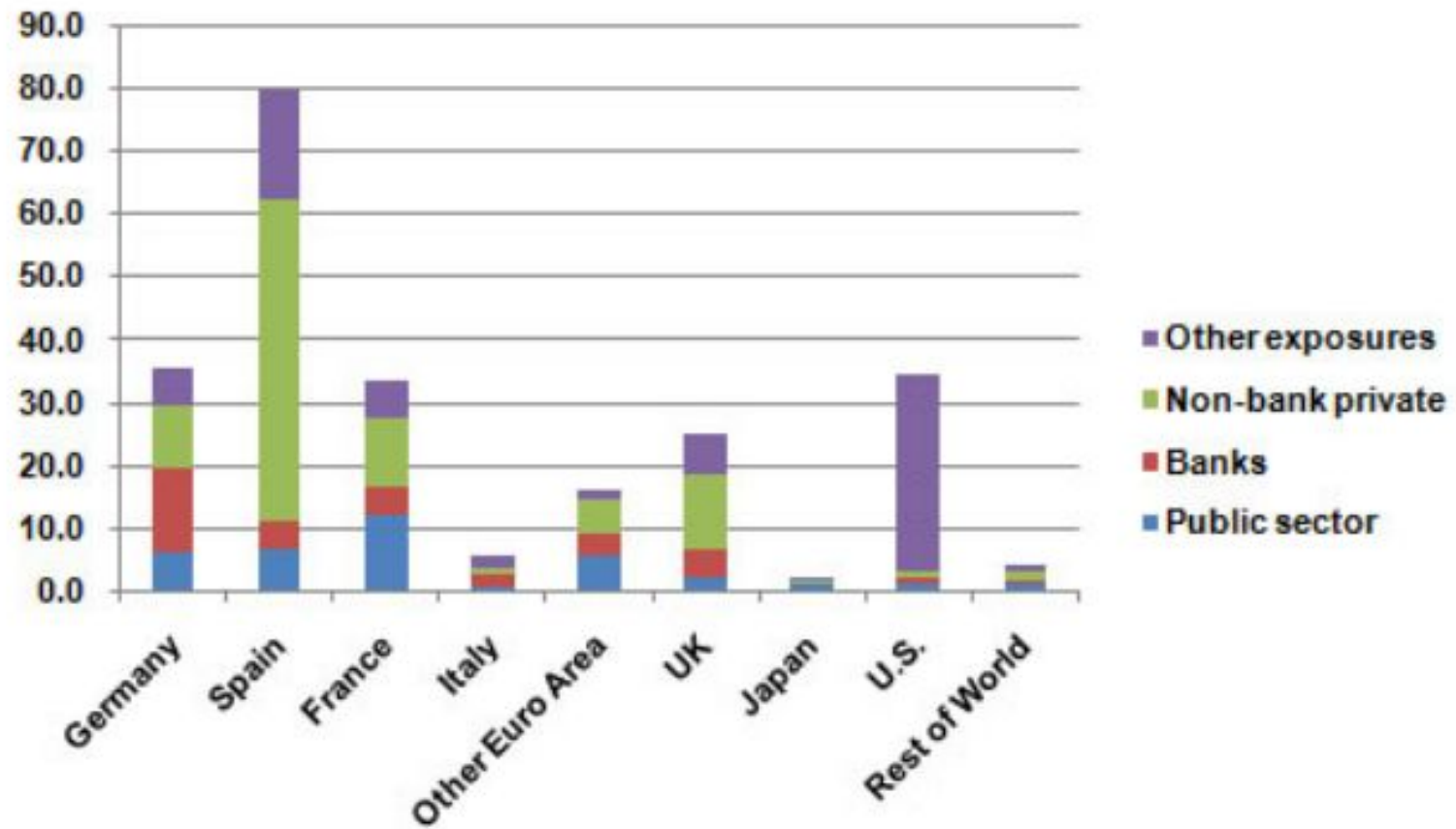


Causes of crises

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

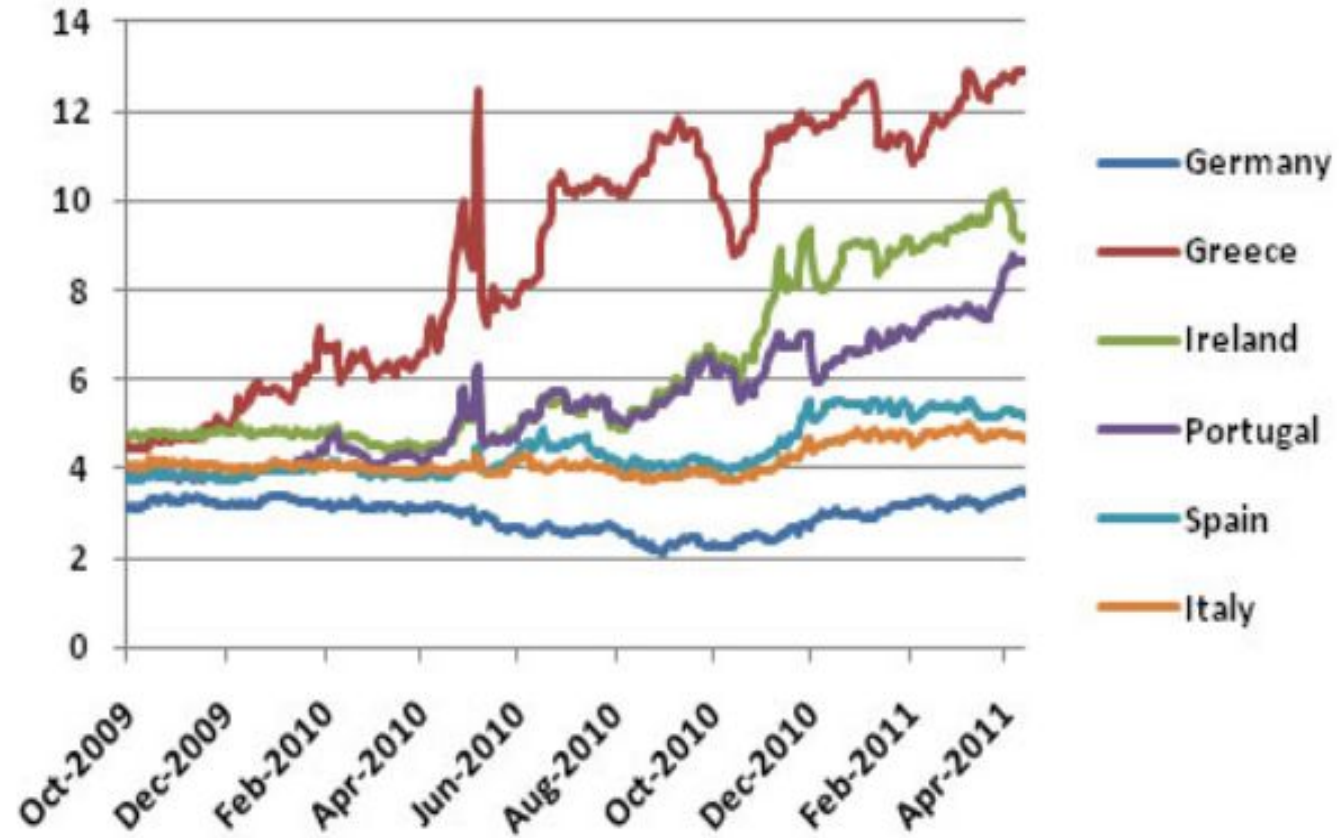
Causes of the crisis?





Note: Ultimate risk basis except Germany

Source: BIS, Q3 2010



Source: Bloomberg