

Financial Risk – Global Deal Breaker

*How can Society Manage Financial
Uncertainties?*

Andrew Sheng

Distinguished Fellow, Asia Global Institute, The University of Hong Kong

NTU Para Limes “Disrupted Balance – Society at Risk”, Singapore

7 December 2016

Key Points

We are living in age of Volatility, Uncertainty, Complexity and Ambiguity (VUCA) with unknown unknowns:

1. Global Secular Deflation - slow growth, low inflation and financial fragility as asset bubbles deflate
2. Geopolitics: Brexit; Middle East; South China Sea
3. **Social Inequities and Climate Stress, causing migration**
4. QE and NIRP (negative interest rate policy) destroying business model of banking, insurance and pension funds, and asset managers
5. FinTech and complex regulations are challenging legacy business model
6. Policy makers need to be aware of cumulative stresses of these uncertainties on financial system and society
7. We need to think through governance model on central banks, financial policy and how to get finance to serve society, rather than the other way around

Risk versus Uncertainty

- **Risk** is defined as measured volatility, which can be modeled
- Black Swan events are long-tailed (low-probability) but high impact, with retrospective (but not prospective) predictability – Nassim Taleb
- **Uncertainty** (unmeasurable risk arising from random nature of human behaviour)
- *“The reasons for the present disequilibrium of the world economy: disequilibrium, radical uncertainty, the prisoner’s dilemma and trust.”* – Mervyn King, *The End of Alchemy*, 2016

Types of Unknowns

- **Perfect information** – Key assumption of free market model – in practice unattainable
- **Known knowns** – Information and past history available, but may not be available to decision maker at time of decision
- **Known unknowns** – We know that such unknowns exist - e.g. Black Holes, but we have not proven or found out how to measure
- **Knowable unknowns** – Using Big Data, we might be able to conjecture, estimate or paint scenario of what these unknowns may look like
- **Unknown Unknowns** – True radical uncertainty – something unknown that is beyond normal comprehension

Working (or Muddling) through VUCA

- **Volatility** is fluctuation of a variable about a mean – from normal of two standard deviations to not uncommon volatility of up to five standard deviations
- **Complexity** is a property of systems under change – Second Law of Thermodynamics: entropy or complexity increases over time
- **Ambiguity** is related to **Uncertainty** of manifestation and interpretation – decision-maker is also ambiguous on which path or solution to choose
- Central bankers are used to dealing with **constructive ambiguity** in policies. If central banks are too predictable, they lose their power over financial markets

A Eureka Moment: Can Conventional Finance Cope with Huge Uncertainties?



Section 1 **Global Trends**

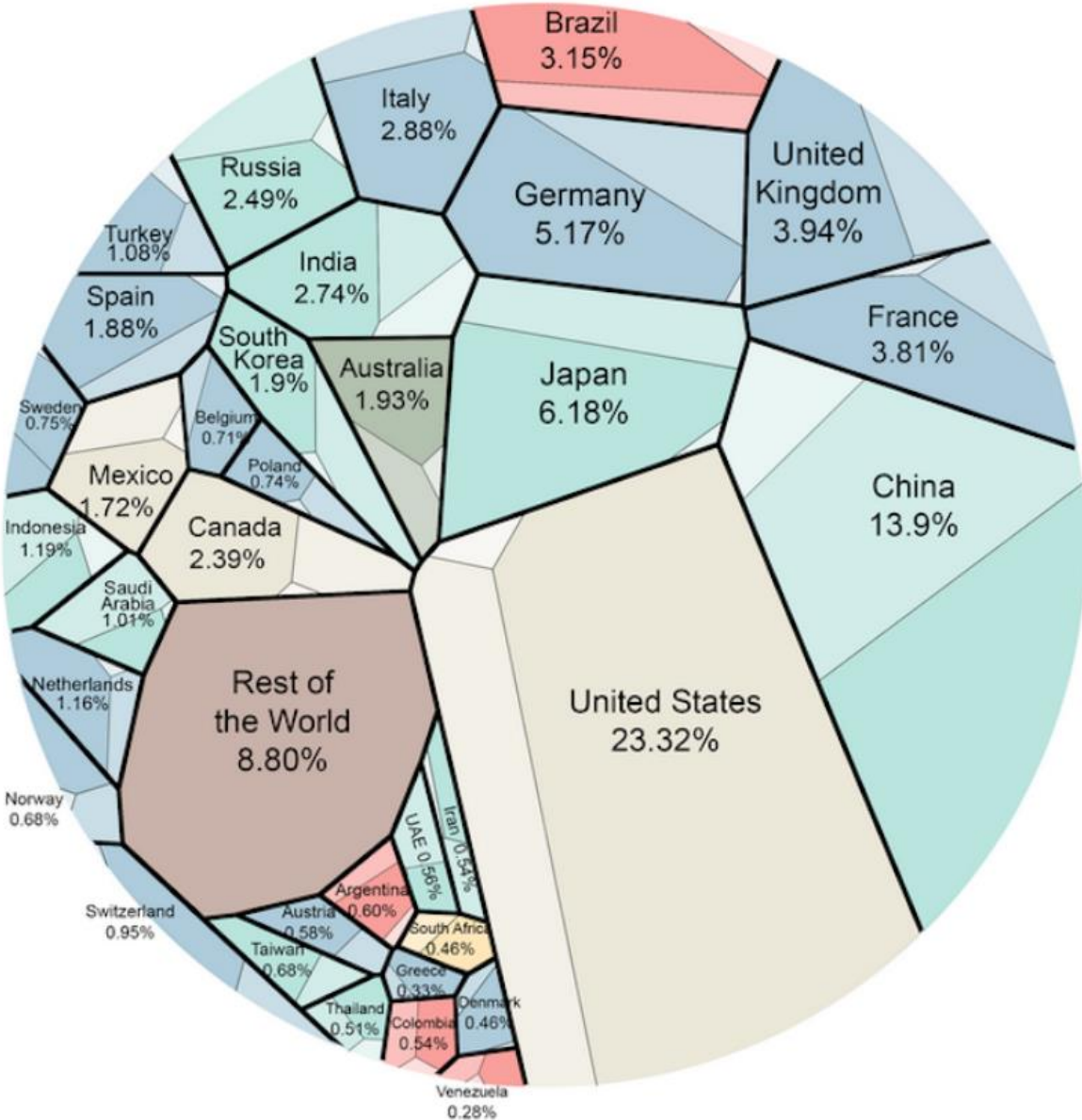
Geopolitics, Climate Change, Global Digital Transformation, Unconventional Monetary Policy/Regulation and Creative Destruction

Transformative Mega-trends that Change Finance

- Global Rebalancing – Multipolar Cold War 2.0 = growing geopolitical risks
- Demography – Dividends or Age burden?
- Financialization and Debt Overhang – Who pays?
- Disruptive Technology – Jobs and Creative Destruction
- Climate Change – Water, Food & Energy Stress
- Governance – Democracy, Market or State?

QE and Negative Interest Rate Policy (NIRP) is destroying business model of financial sector and taxing the savings of the community.

The World Economy in One Visualization



The World's Economy Divided by Area

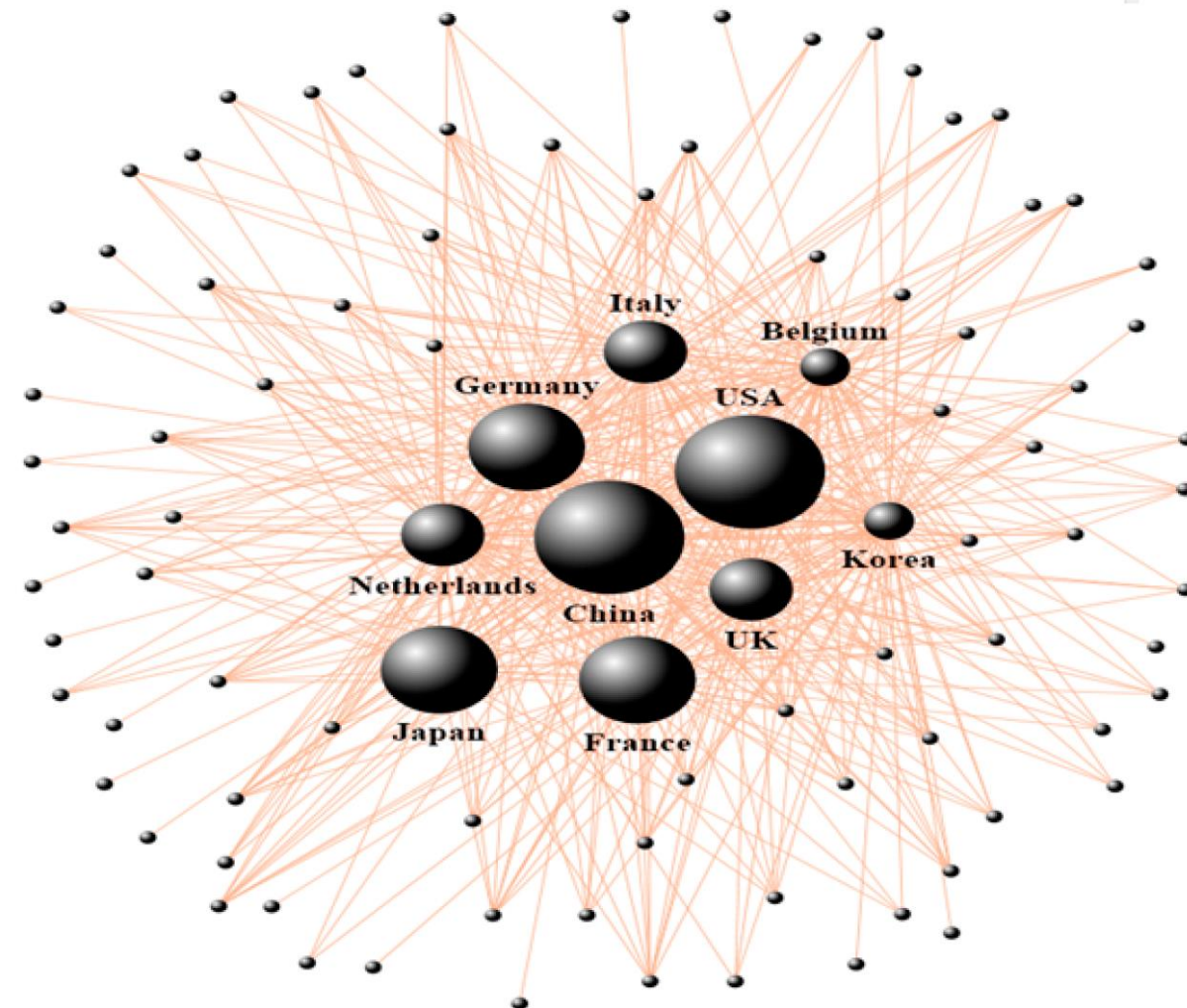
Composition by sector

Services Industry Agriculture



Global Finance is Interconnected, Interactive and Interdependent

The Global Trade Network, 2009



Trade, finance, investments and information are increasingly interconnected and interactive around key hubs of global financial centres

Data sources: DOTS and Fund staff estimates.

Source: IMF. 2011. "[Changing Patterns of Global Trade](#)."

Global Capital Market Integration and Contagion: *Hubs are Where Contagion Spreads – Haldane (2014)*

Chart 3: Global capital market integration

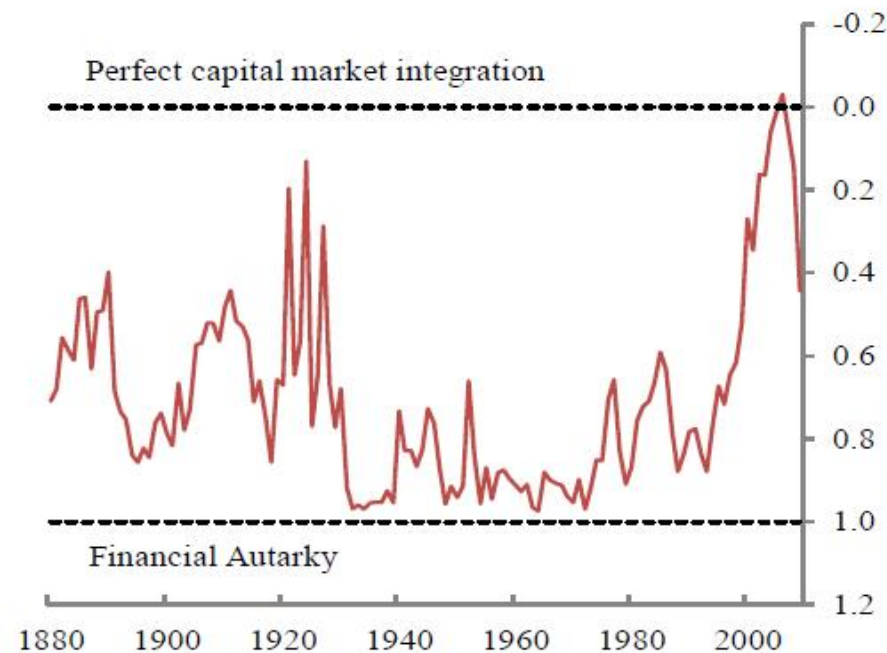
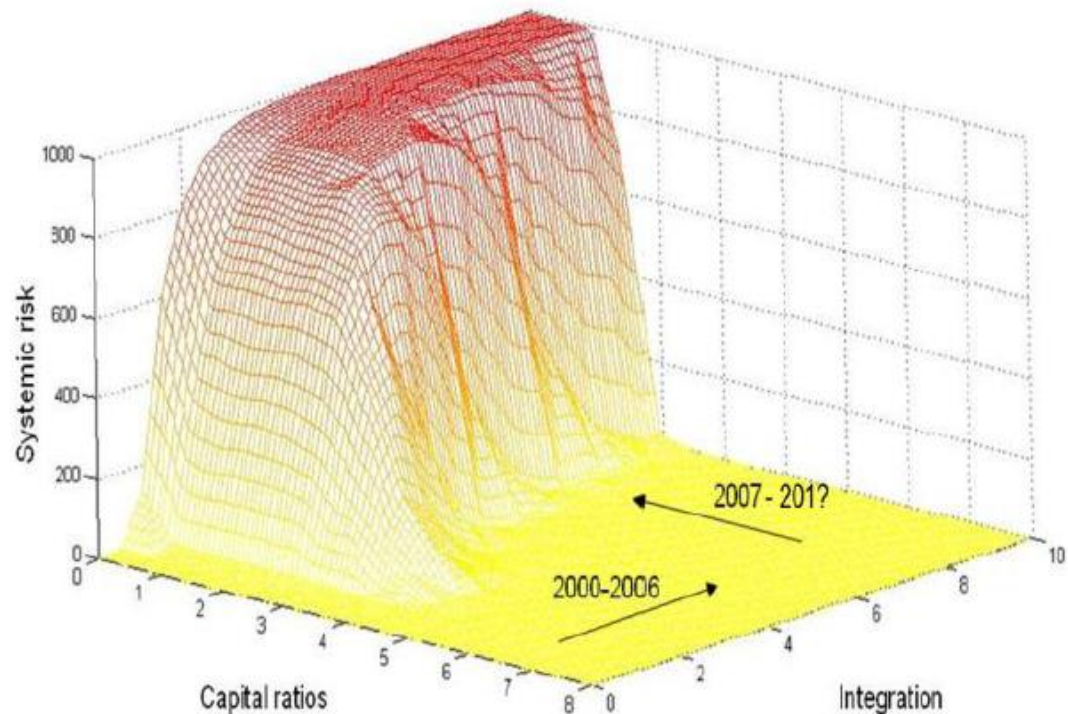
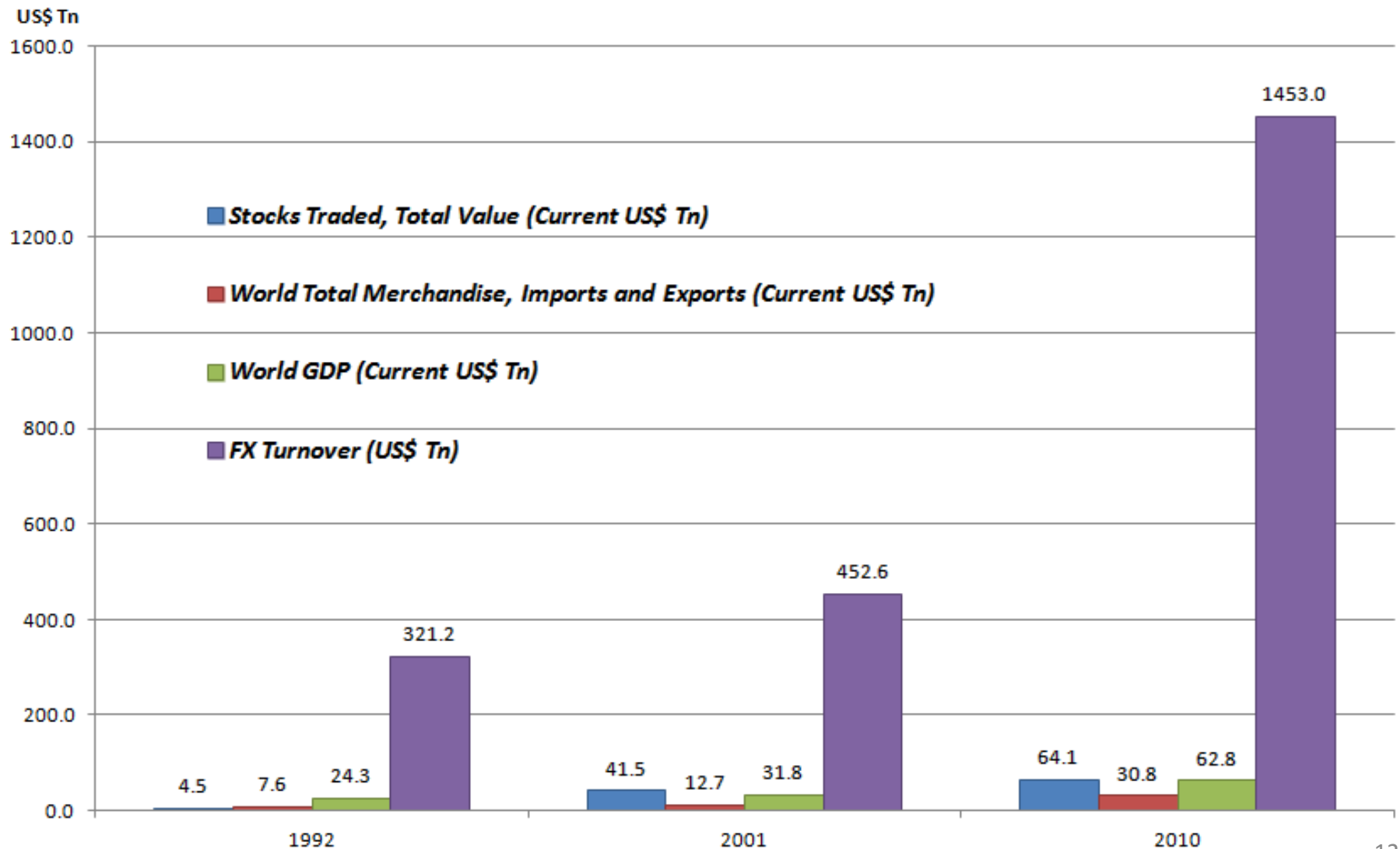


Chart 4: Contagion in financial networks

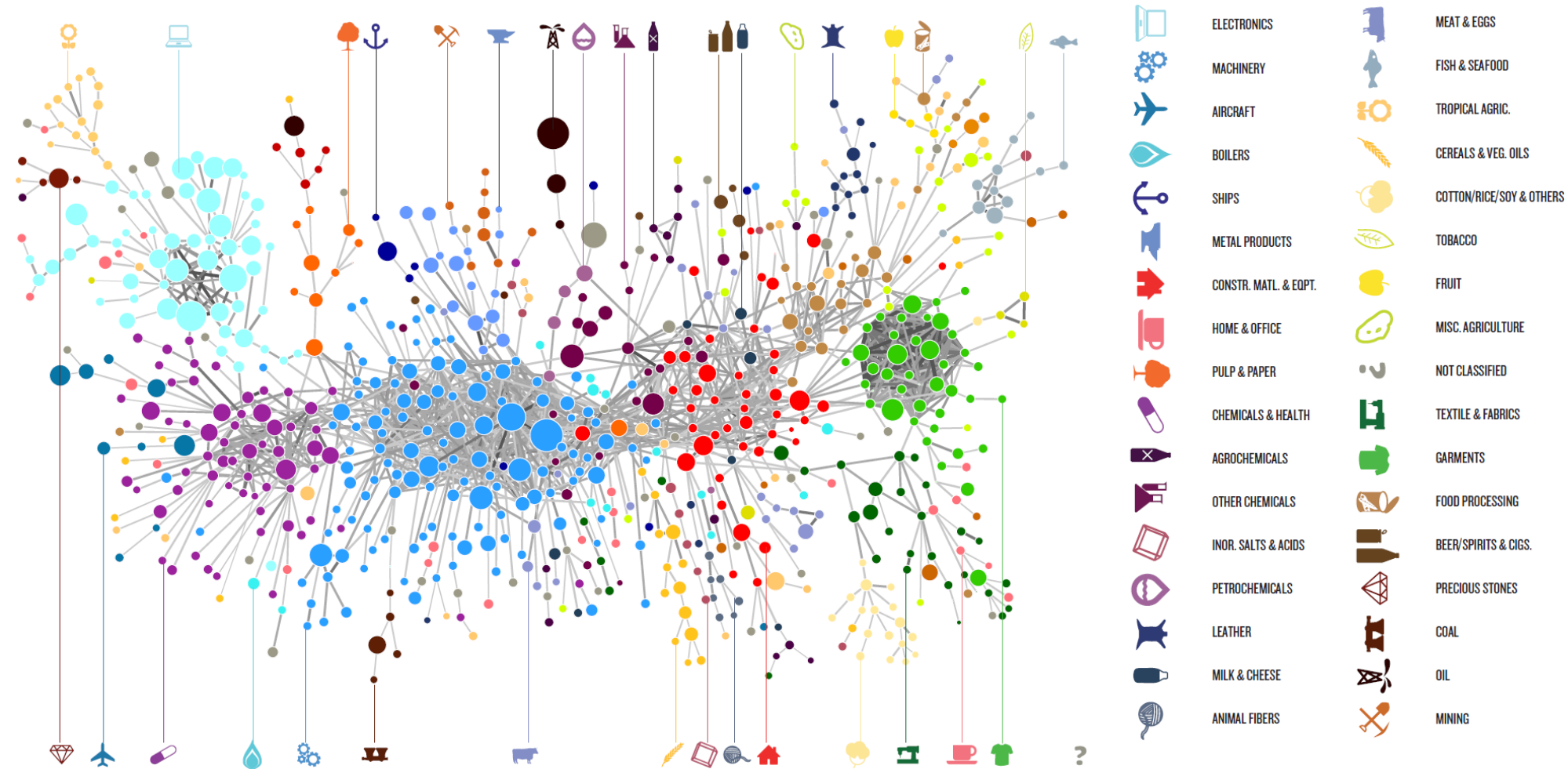


Financial Transactions Grew Faster than Real Trade

FX turnover = 23 times world GDP in 2010 (13 times in 1992)



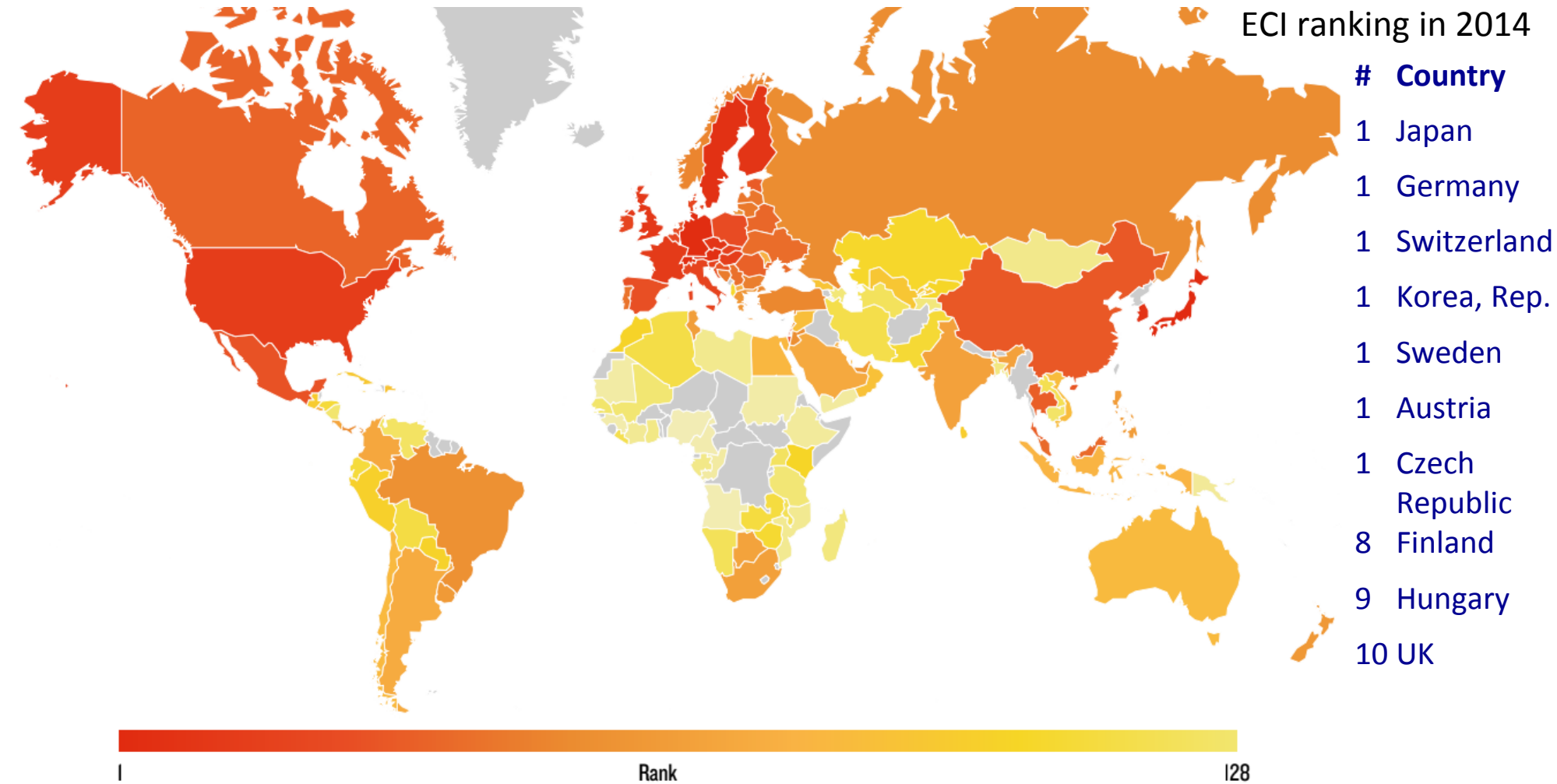
Product Space: Indicators of Complexity – Hausmann (2014)



Geography of Complexity: Most Advanced Countries have Developed Knowledge Economies

Economic complexity index by country in 2013 (128 countries)

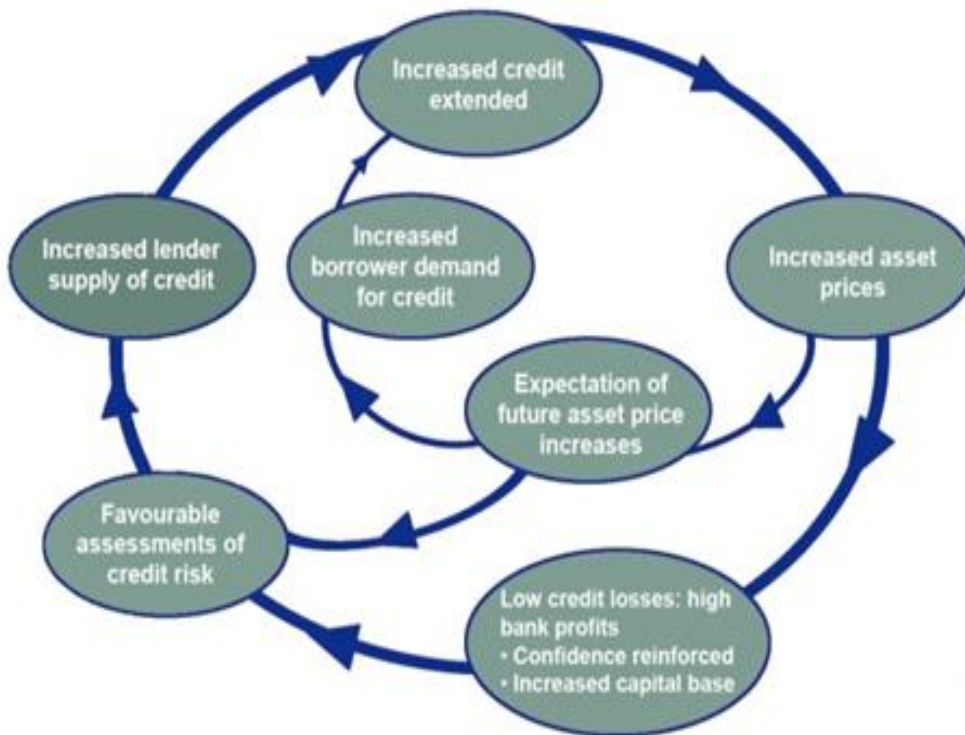
Top 10 countries by ECI ranking in 2014



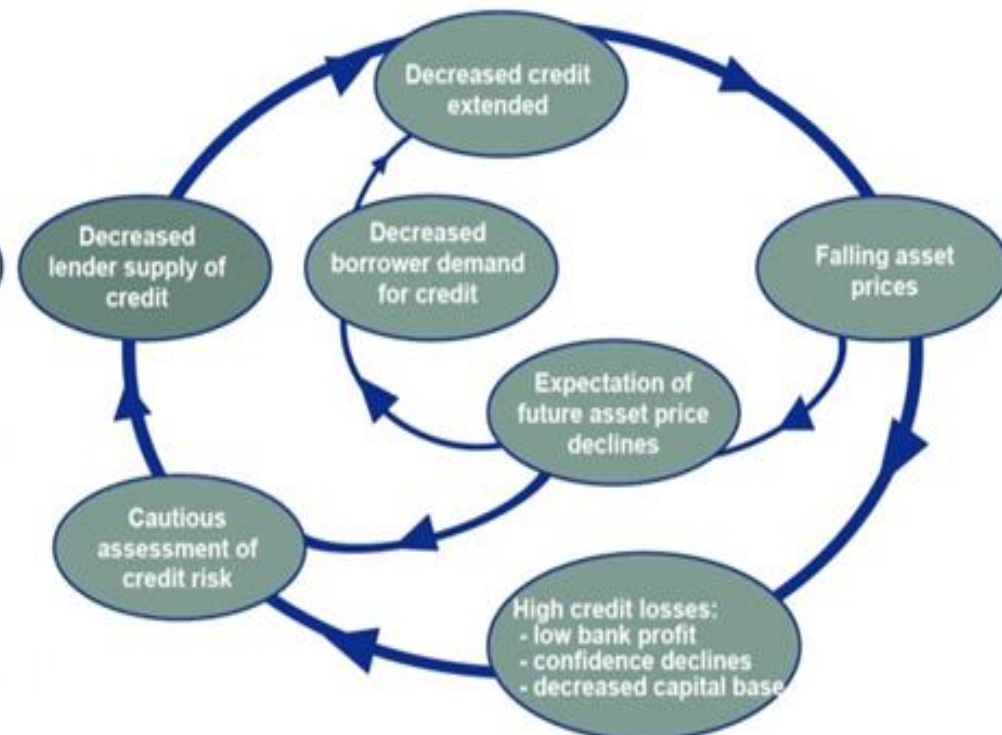
Sources: Hausmann, Hidalgo et al. 2014. "The Atlas of Economic Complexity: Mapping Paths to Prosperity."; Hausmann, Hidalgo et al. 2014. "[Country Rankings \(2014\)](#)." CID at Harvard University.

Financial Market Systemic Risks Originate from Dynamic Interactions Among Domestic & Global Participants – *Adair Turner*

Price Upswing

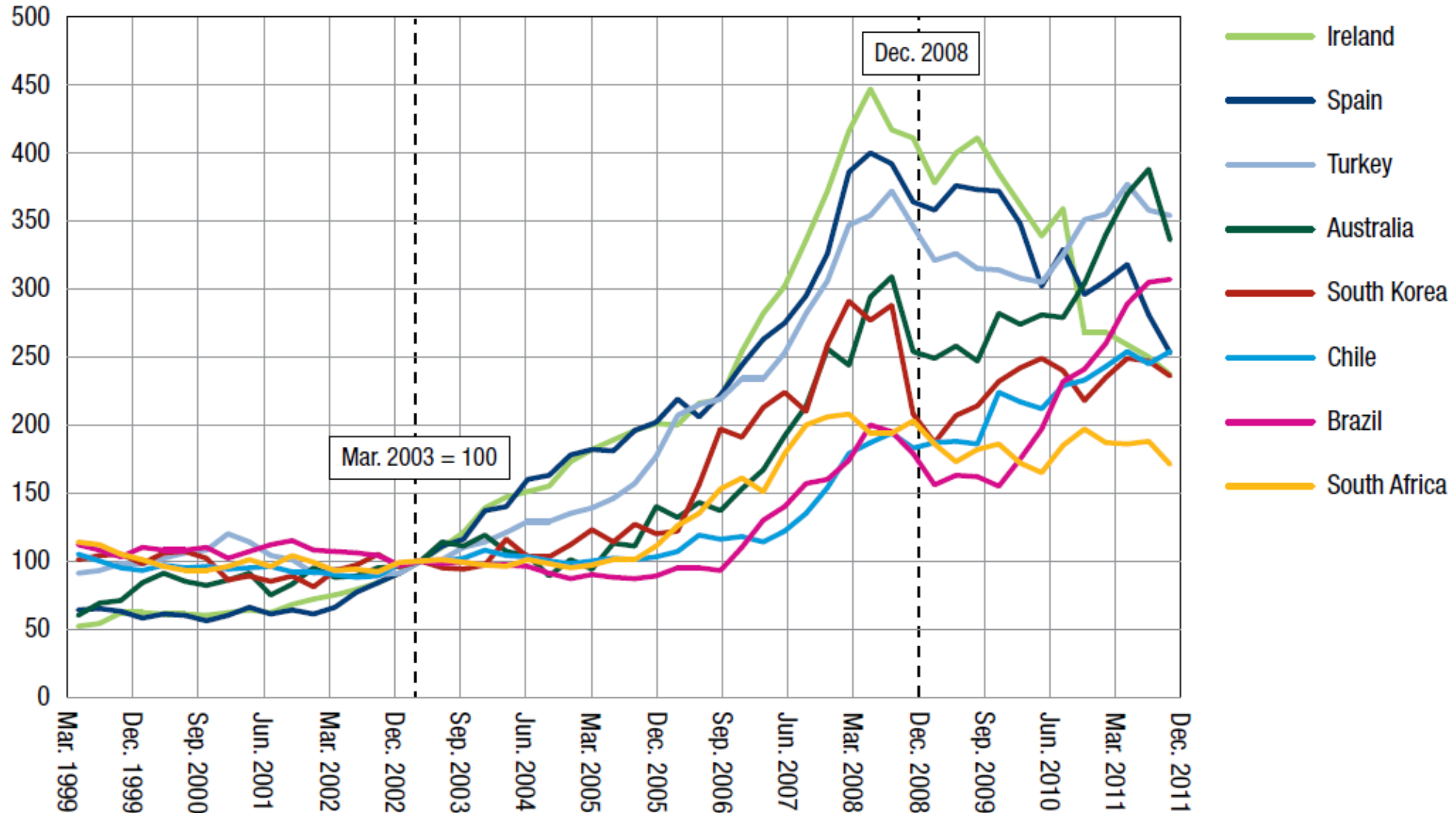


Price Downswing



Banks Became More Internationally Exposed (2002-2008)

External claims (loans and deposits) of BIS Reporting Banks (March 2003 = 100)

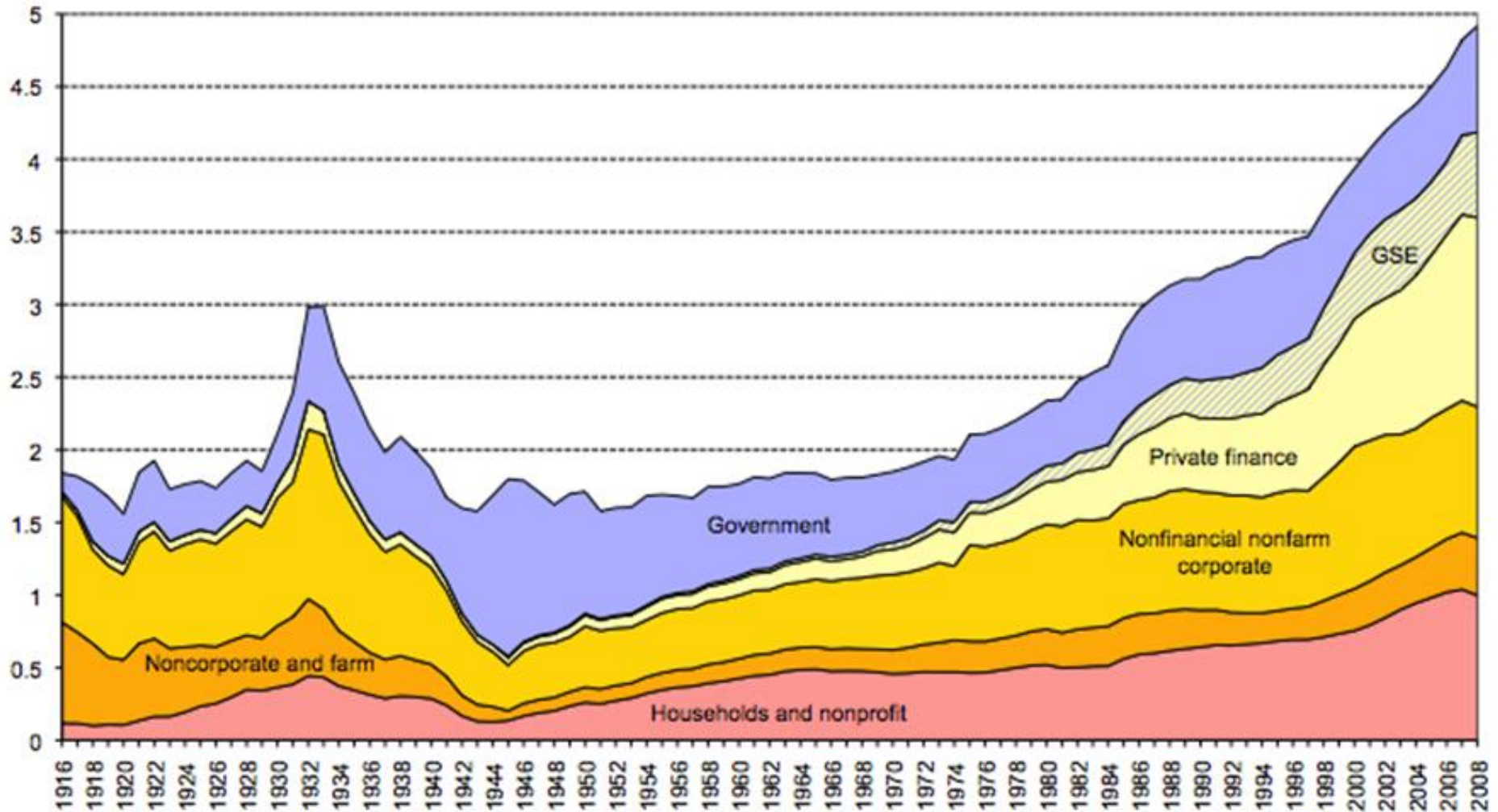


Data source: Bruno and Shin (2011), data from BIS Locational Statistics Table 7A.

Source: CIEPR. 2012. "[Banks and Cross-Border Capital Flows: Policy Challenges and Regulatory Responses.](#)"

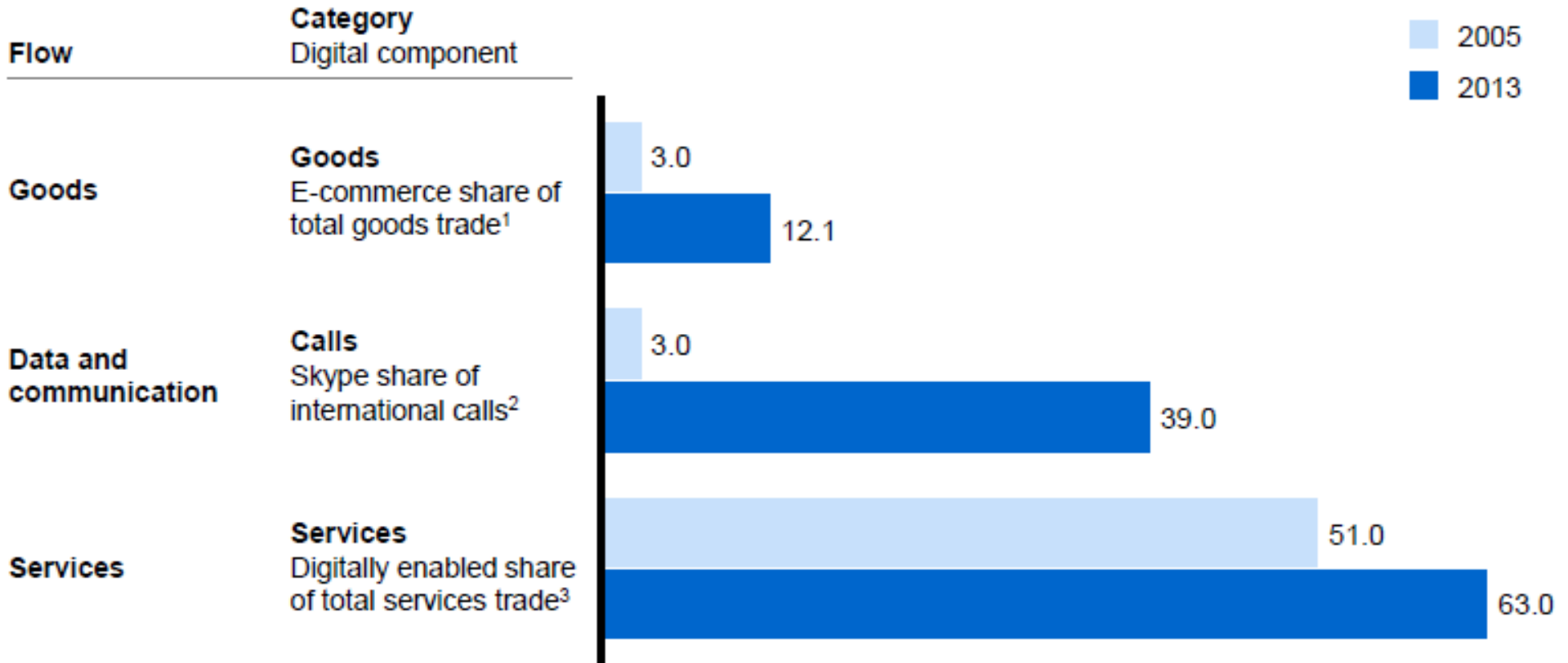
Financial Debt 5 times GDP: Finance is No Longer Agent of Real Sector but TBTF

Total financial liabilities relative to GDP



Digital Component has Growing Share of Global Flows

Share of selected cross-border flows that are digital, %



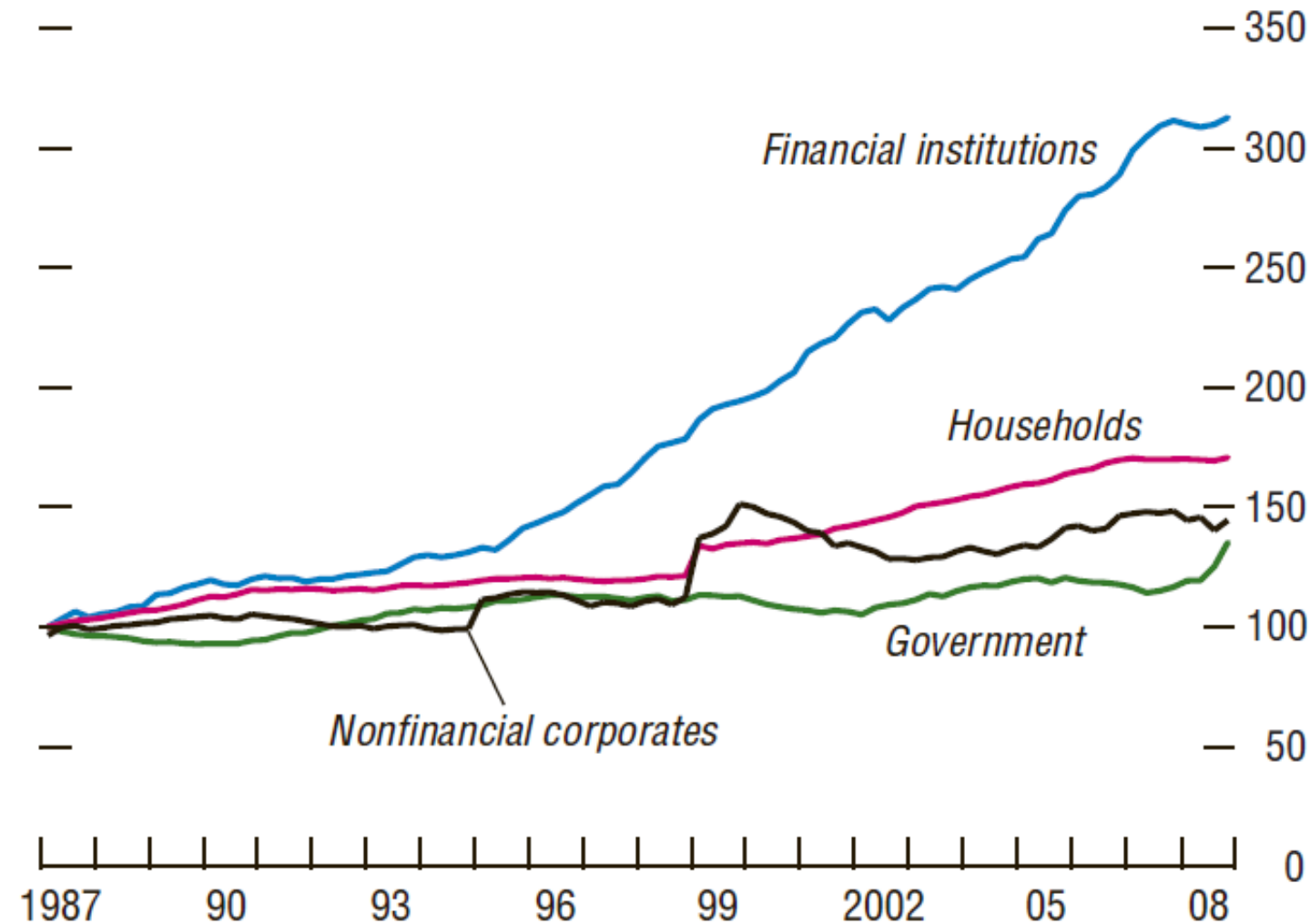
Note: 1 Based on China data; 2 Excludes other VOIP minutes; 3 Based on US data.

Sources: iResearch; Telegeography; OECD; US Bureau of Economic Analysis; McKinsey Global Institute analysis

Source: McKinsey Global Institute. 2014. "[Global Flows in a Digital Age.](#)"

Overall Financial System Became Over-leveraged

Ratio of Debt to GDP Among Selected Advanced Economies
(In %, GDP-weighted, 1987 = 100)



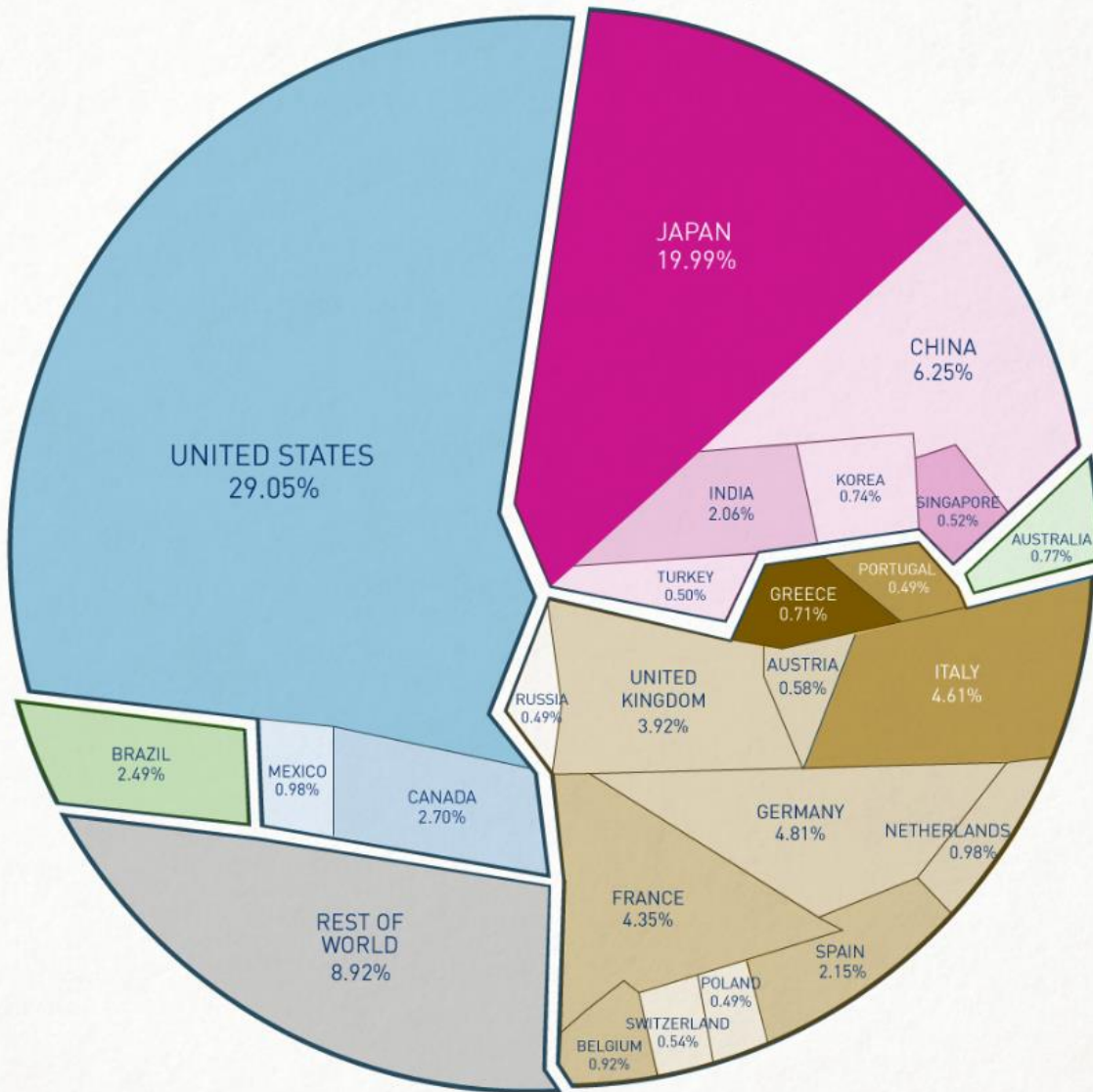
The fundamental problem is overconsumption through over-leveraging of finance

Data sources: Bank of Japan; Bureau of Economic Analysis; Federal Reserve; Office of National Statistics; and IMF staff estimates.

Source: IMF. 2009. "[GFSR April 2009: Responding to the Financial Crisis and Measuring Systemic Risk.](#)"

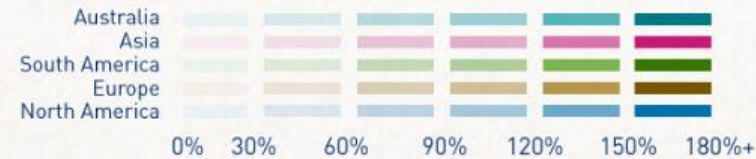
Total Global Debt of US\$59.7 trn – US alone owe 29%

% of World Debt, by Country



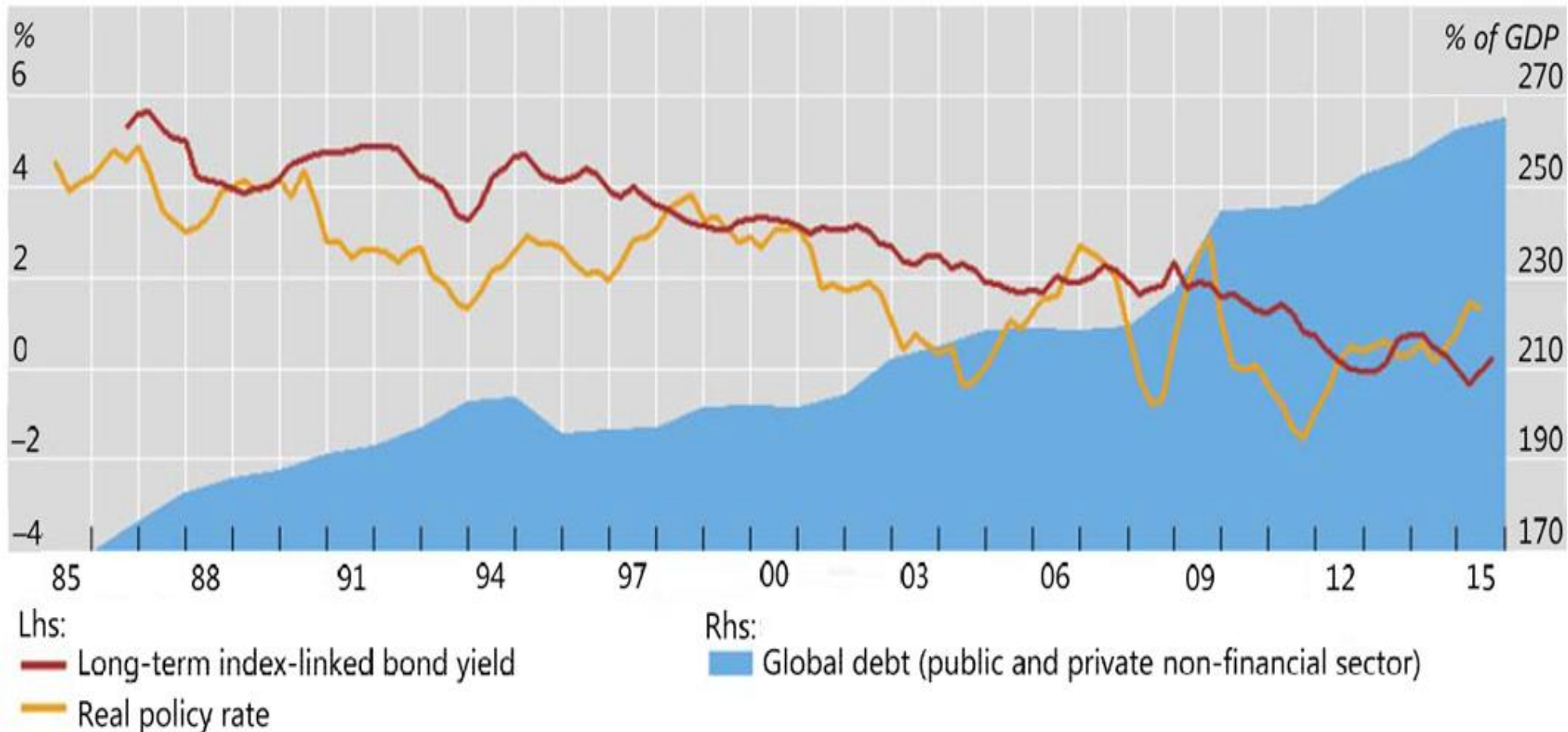
Total Global Debt: \$59.7 trillion

Debt-to-GDP Ratio



Debt Trap? Downward Bias in Interest Rates, Upward Bias in Debt, 1985-2015

Interest rates sink as debt soars

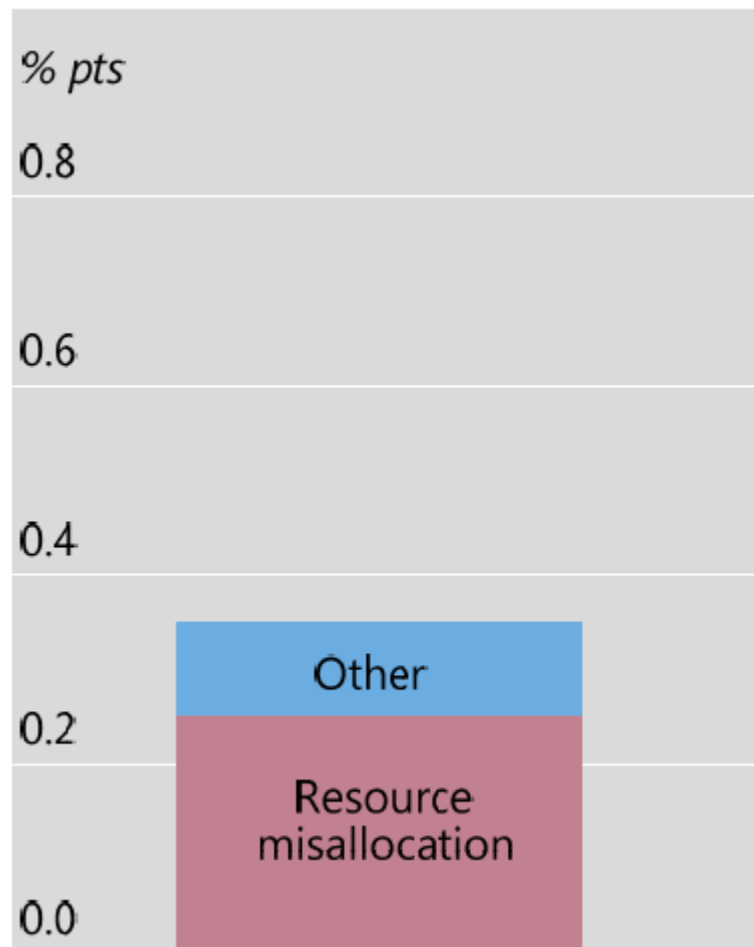


Sources: IMF, World Economic Outlook; OECD, Economic Outlook; national data; BIS calculations.

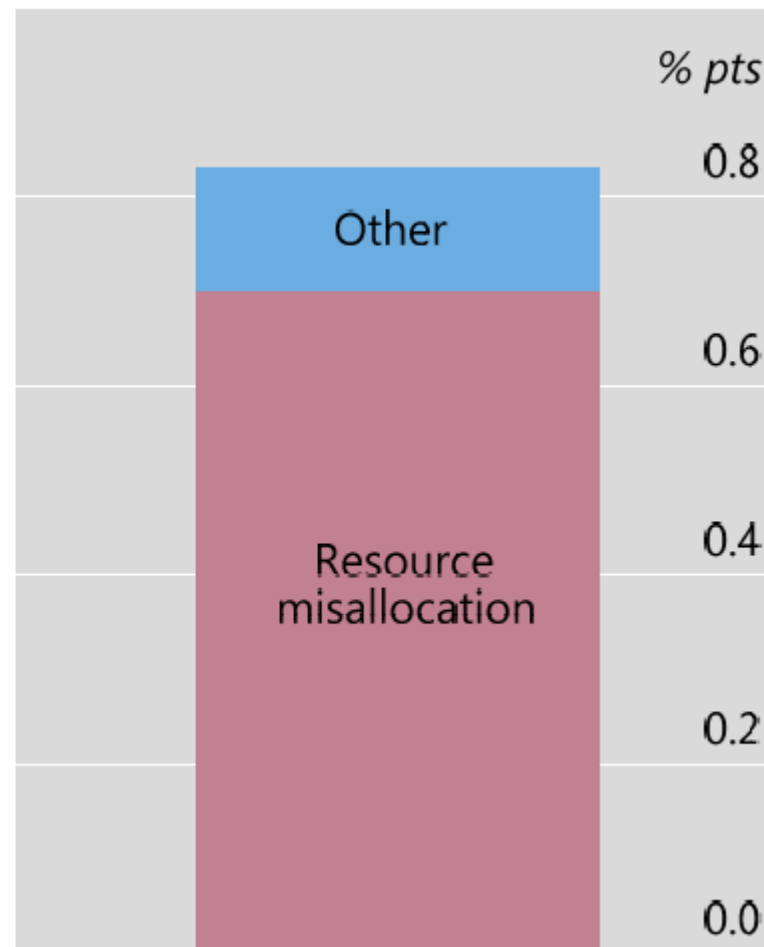
Source: Claudio Borio. 2015, November. [“Revisiting Three Intellectual Pillars of Monetary Policy Received Wisdom”](#) BIS.

Financial Booms Sap Productivity by Misallocating Resources

Annual cost during a typical boom ...



... and over a five-year window post-crisis

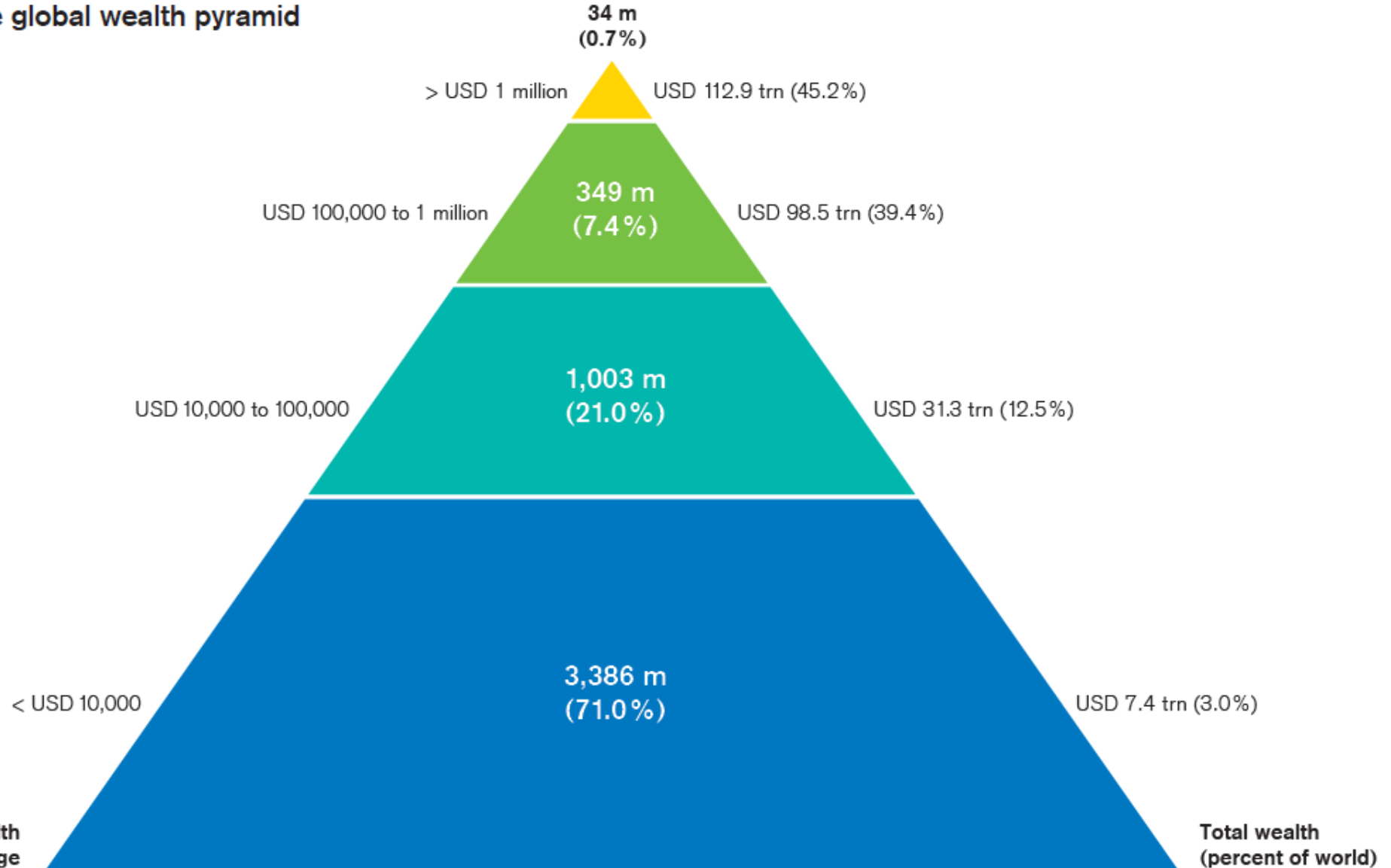


Source: based on Borio et al (2015), BIS calculations.

Source: Claudio Borio. 2015, September. "[Challenges for the global economy: A narrowing road?](#)" BIS.

Inequality: 8.1% of Population Own 84.6% of Global Wealth

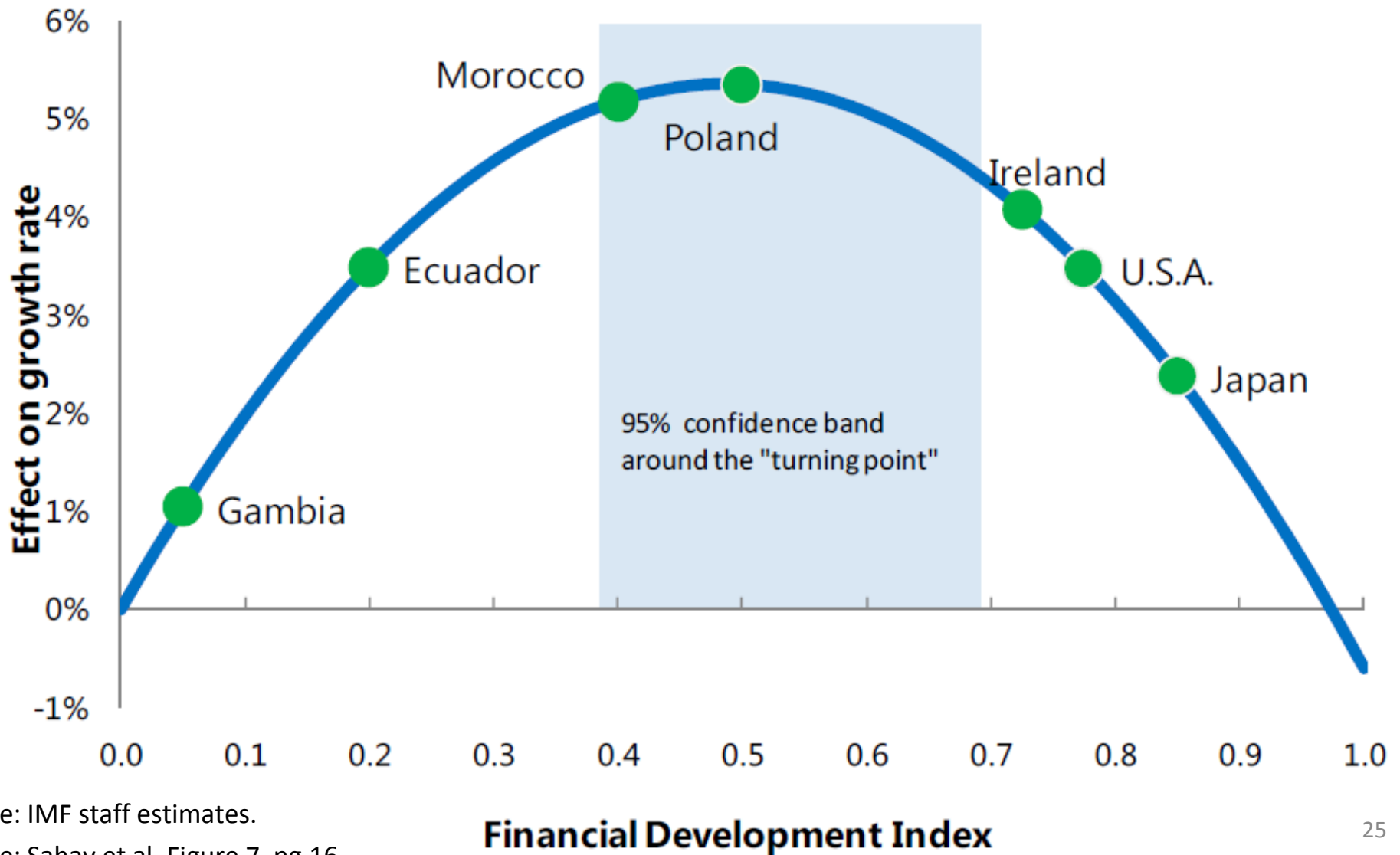
The global wealth pyramid



Source: Davies, Lluberas & Shomocks, Credit Suisse Global Wealth Databook 2015.

Source: Credit Suisse. 2015, October. "[Global Wealth Report 2015](#)."

There are Limits to Financial Development: *Effect on Growth – IMF*



Source: IMF staff estimates.

Source: Sahay et al, Figure 7, pg.16.

Section 2 **What Should Society Do?**

Getting back to a New Normal

What Will be the “New Normal”?

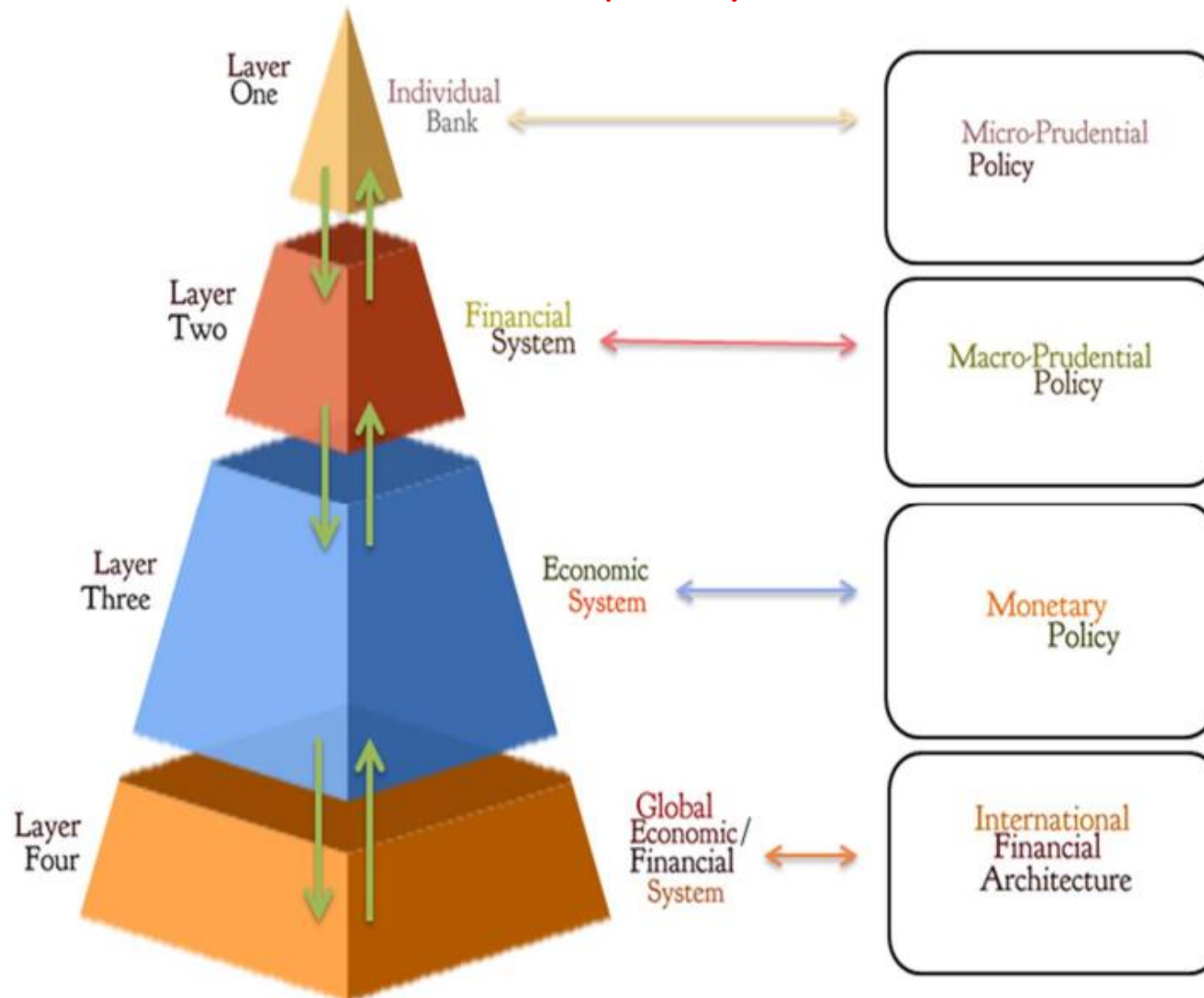
- New normal was easily assumed to be like old normal
 - Decent growth
 - Positive equilibrium interest rates
 - Status quo on consumption financed by debt
- Larry Summers:
 - While debt overhang was clearly relevant, more was going on
 - **Secular stagnation hypothesis**: with chronic excess of saving over investment, keeping the economy at potential may well require very low or even negative real interest rates
 - New normal will not be like old normal
- Debt overhang is indeed playing a role and that the decrease in real rates is likely to persist in the future

We Need to Think Systemically and Learn How to Adapt to Complex Systems Within Systems

- **Macro:** Current neoclassical models “at best useless and at worst harmful” (Krugman) – reductionist based on false assumptions
- **Meso:** Institutions matter – link between Macro and Micro behaviour – must look at quality of Property Rights Infrastructure of law, judiciary etc.
- **Micro:** Specialized silos of academia and policy making miss big picture – what looks reasonable at departmental or national level, does not add up at global level
- **Meta:** Hidden connections and principles underlying economic thought
 - $\text{Macro} \neq \sum \text{Micro}$
 - Pro-cyclical Feedback between state and market, banks and shadow banks, nation and global, lead to complex outcome of unintended consequences + collective action traps

New thinking – from static and stable mechanical markets to dynamic, non-linear, continuous disequilibrium – **When and Where on top of How, What and For Whom?**

Financial Regulation Needs to be Systemic and Not “Silos” – Haldane (2015)



Constructive Reforms Forward

- Real economy will only heal when banks, regulators and politicians are all on same page to get growth going
- Time to prioritize reforms on what is growth enhancing and what is crucial for systemic stability (e.g. capital)
- System stability needs recognition that anti-fragility comes from deepening the capital for borrowers, i.e. deleveraging through capital growth and growing long-term funding from pension, insurance and fund managers, rather than just “squeezing banks”
- Not just regulation and supervision – but “organic system strengthening”

We Need to Think Like Gardeners/Stewards of Our Organic System Diversity

- System-wide view recognizes that past crisis was systemic, and requires systemic solution – growing diversity of intermediaries (long-term funding); deepening equity, reviving growth through innovation
- Governance means that finance must think about serving the community, not the other way around
- One-size fit all and mono-view of risk reduction reduces diversity and increases system fragility and concentration
- In the end, finance cannot be a free lunch that leads to social inequality and consumption beyond our means

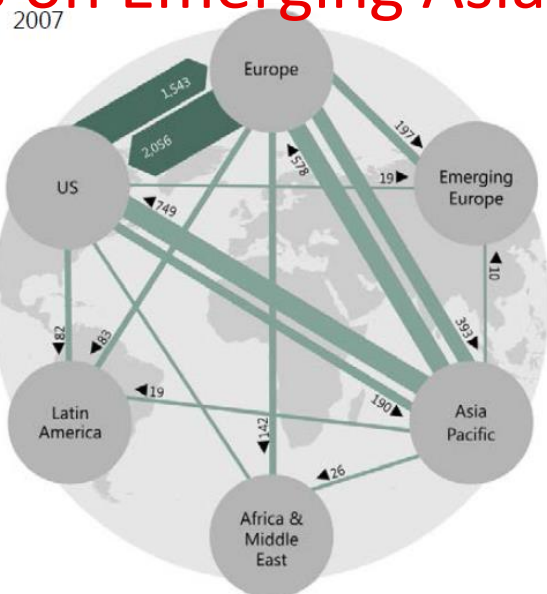
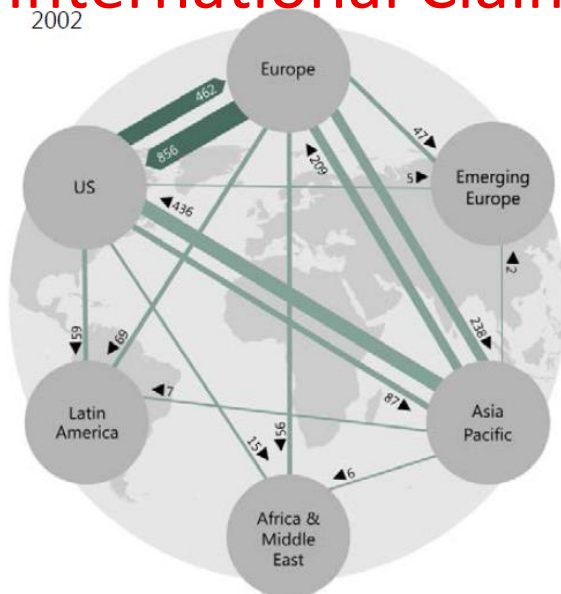
Section 3 **The Future of Asian Finance**

End of Debt Cycle, Rebuilding Equity and Rebooting from Fin-Tech, Big Data and metrics

Characteristics of Asian Finance

1. Financial sectors in Asian EMEs are large (total assets of FIs and outstanding values of bond and equity markets in Asian EMEs, at 340% of GDP in end-2012, are significantly larger than those of EMEs outside Asia, at 210% of GDP)
2. Financial systems dominated by banking sector, well-capitalised (total assets = 240% of GDP)
3. Shadow banking sector in Asian EMEs (25% of GDP) is smaller than those of EMEs in other regions/globally
4. Capital markets in Asian EMEs have grown significantly (market cap increased eight fold, 2003-2013)

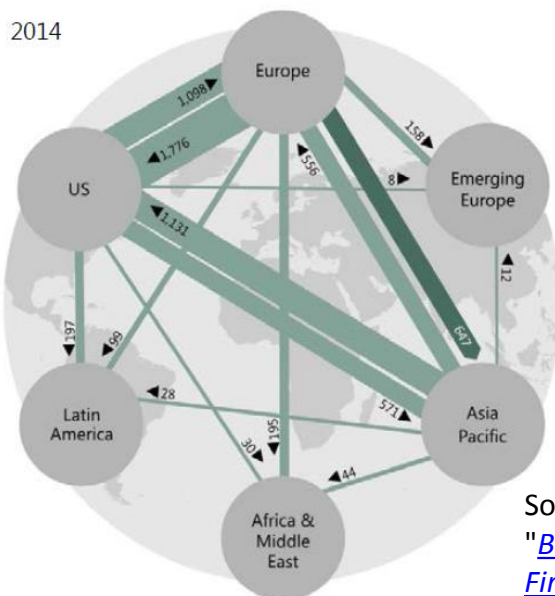
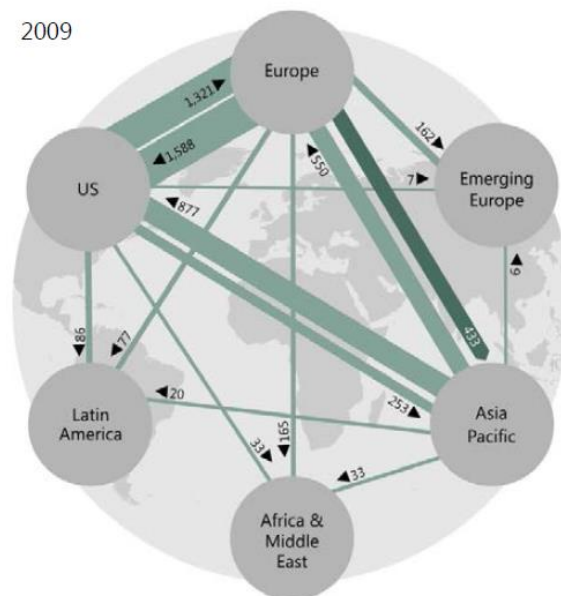
Banks in Asia-Pacific Now Account for More than 50% of International Claims on Emerging Asia-Pacific



US dollar-denominated cross-border claims (US\$ bn)

2007-2014

- Cross-border bank lending to Asia surged by US\$636 bn (U.S.: US\$382 bn, Europe: US\$254 bn)
- Cross-border bank claims between U.S. and Europe contracted by US\$724 bn



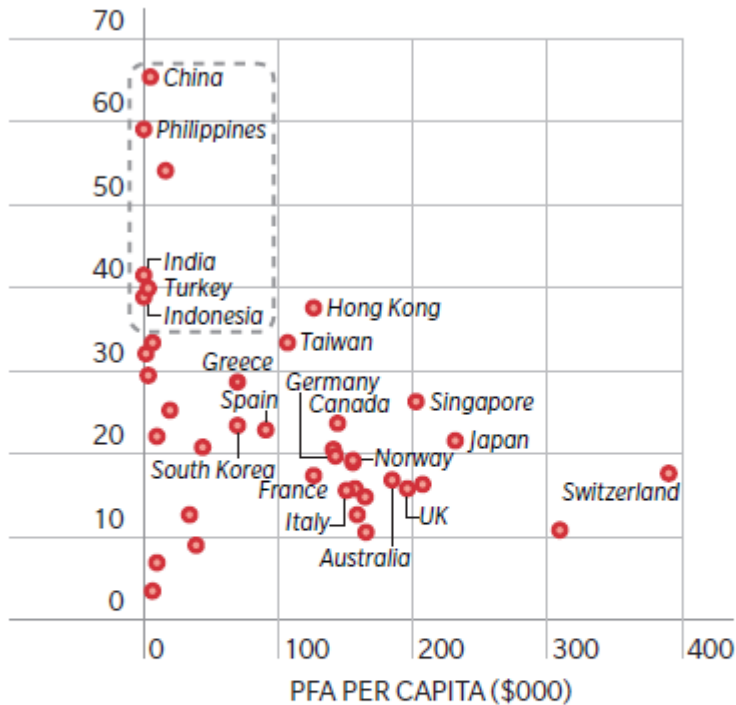
Source: Avdjiev, McCauley & Hyun Song Shin. 2015. "[Breaking Free of the Triple Coincidence in International Finance](#)." BIS Working Papers 524.

Asia Lacks Long-term Institutional Investors

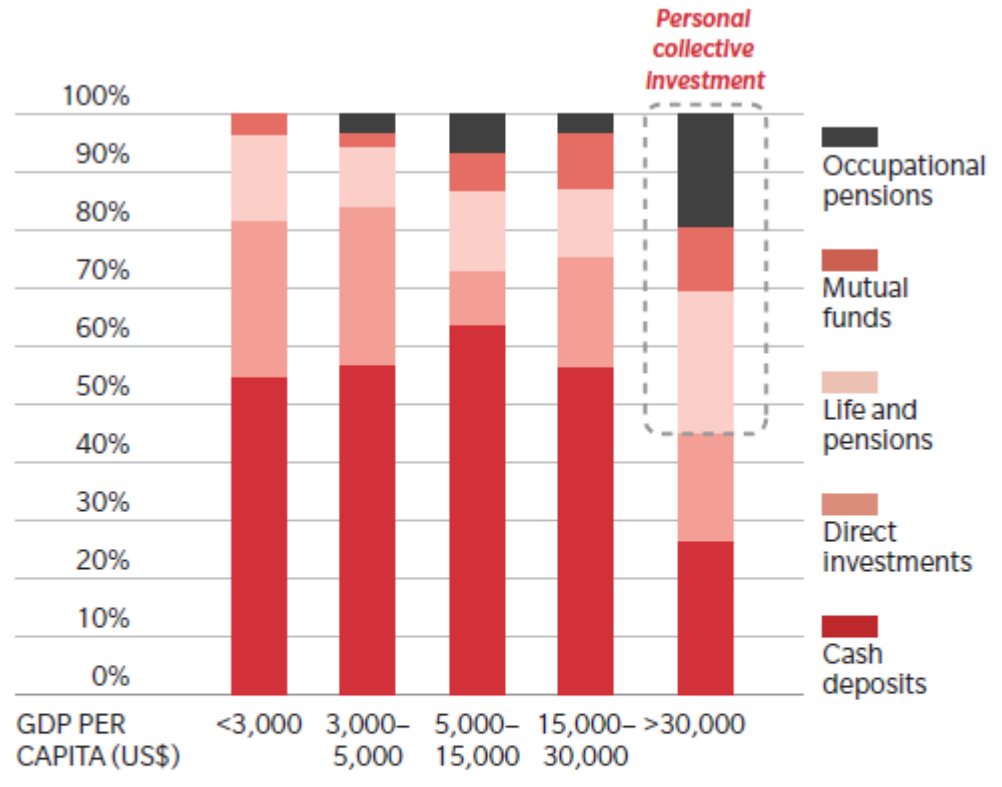
Total insurance + pension (AUM) \leq 20% of GDP for most Asian EMEs, 64% in Eurozone, 152% in U.S.

Share of personal financial assets, 2012: Held in cash, deposits and savings account for each country

% CASH DEPOSIT SHARE OF PFA



Financial deepening at household level, 2012*



EXAMPLE MARKETS



* Excludes home equity.

Source: IMF world economic outlook database, OECD, Oliver Wyman analysis.

Source: Sheng, Ng & Edelman. 2013. "[Asia Finance 2020: Framing A New Asian Financial Architecture.](#)"

Future of Finance: *End of the Debt Cycle*

- If Asia will become a major player in the global economy, the IMF study argues that Asian finance needs to take a bigger role, including:
 1. Better managing accumulated saving
 2. Efficiently mobilizing saving
 3. Investing in human and physical capital
 4. Deepening capital markets to escape “middle-income trap”
 5. Supporting economic and financial integration of ASEAN

Concluding Remarks

- Coping with VUCA? – like we have always coped: flexibly and with one clear purpose – social interest and public good
- Asia in midst of very exciting transformation into New Economy, but there will be lots of pain
- In this *complex environment of systemic shocks, working with different stakeholders* is a pre-condition of policy effectiveness
- Forging closer cooperation within the East, South and South-east Asian economies to enable us to prosper regionally, in an environment of peace
- *Ultimately, managing finance properly is key deal breaker – if we do not control finance to serve community, finance becomes our master*

Thank you

Q&A to
altsheng8@gmail.com
and www.andrewsheng.net