Chapter 7

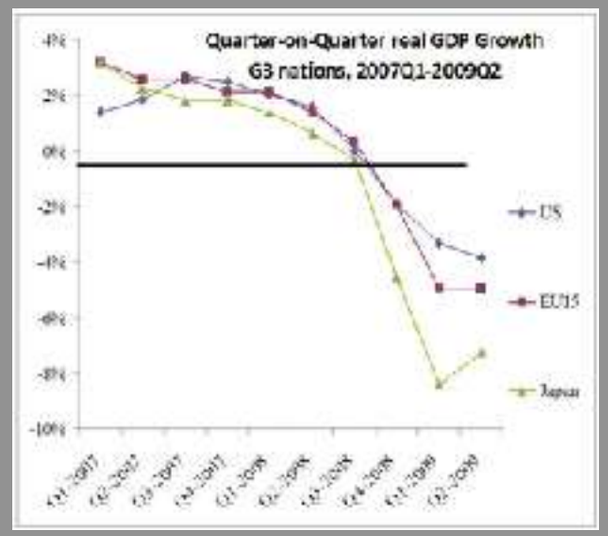
Global Finance

Global finance

If globalization is mainly defined by growing interdependence between countries and people, then internationalization of financial markets and banking activities is a key vector of globalization

Global finance

The recent financial crisis is a perfect example of how turmoil on U.S. housing markets is linked to surge of poverty in Greece



Global finance

The purpose of this chapter is not to provide a comprehensive overview of global financial issues, but just a quick glance.

Global finance

1) **Finance and financial markets integration: an introduction**
2) Is financial globalization a good thing?
3) 2007-2008 Financial crisis

Finance and Financial Markets

The aim of the financial system allows the exchange of funds between economic agents

For many reasons, some people want to save, while others need funding to invest
There is room for a deal between these agents

Saver

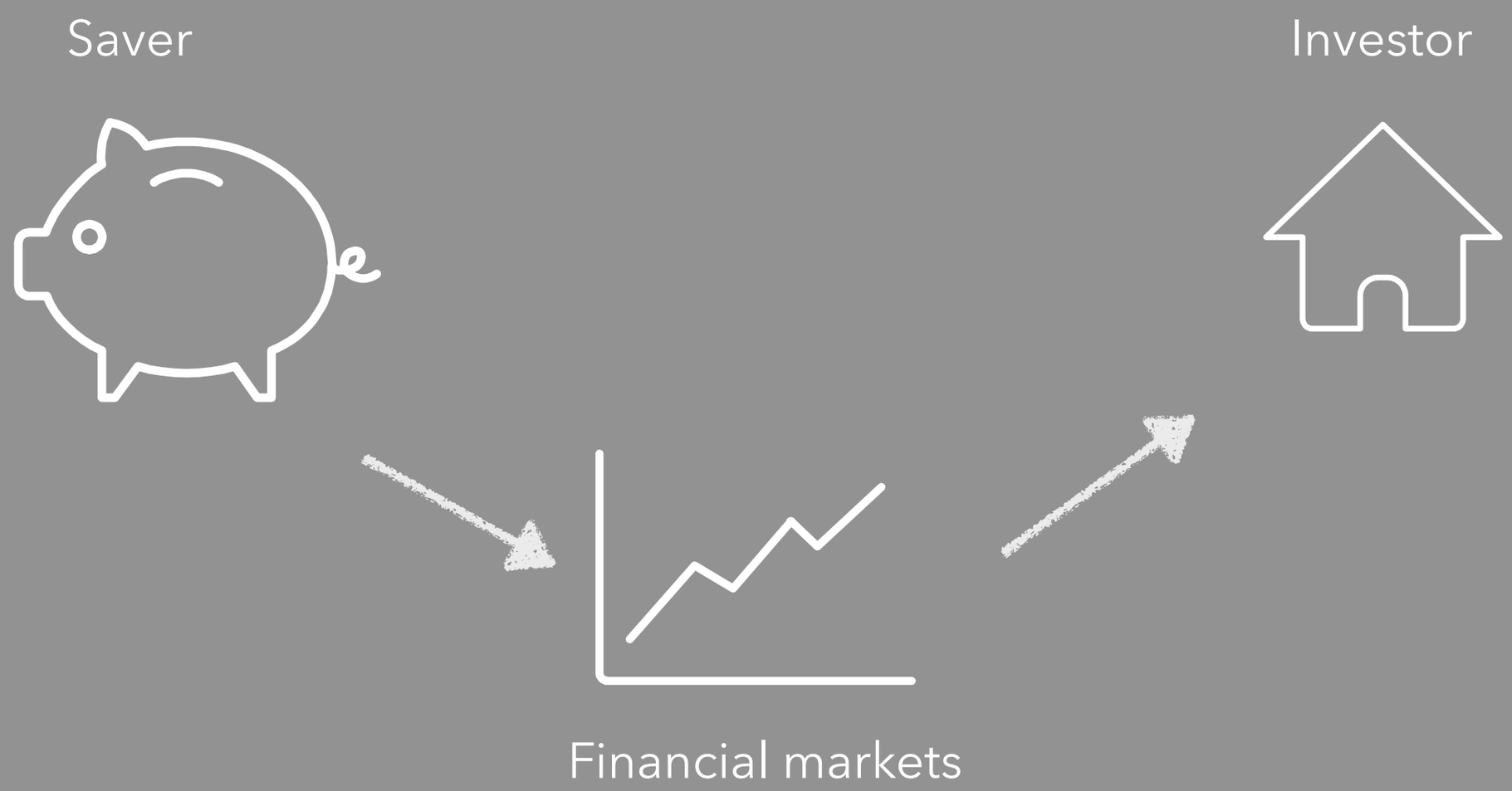
Investor

But direct deals are:

- Risky (no diversification)
- Need double coincidence of wants: Transaction only occurs when the deal meets the needs of both parties

Finance and Financial Markets

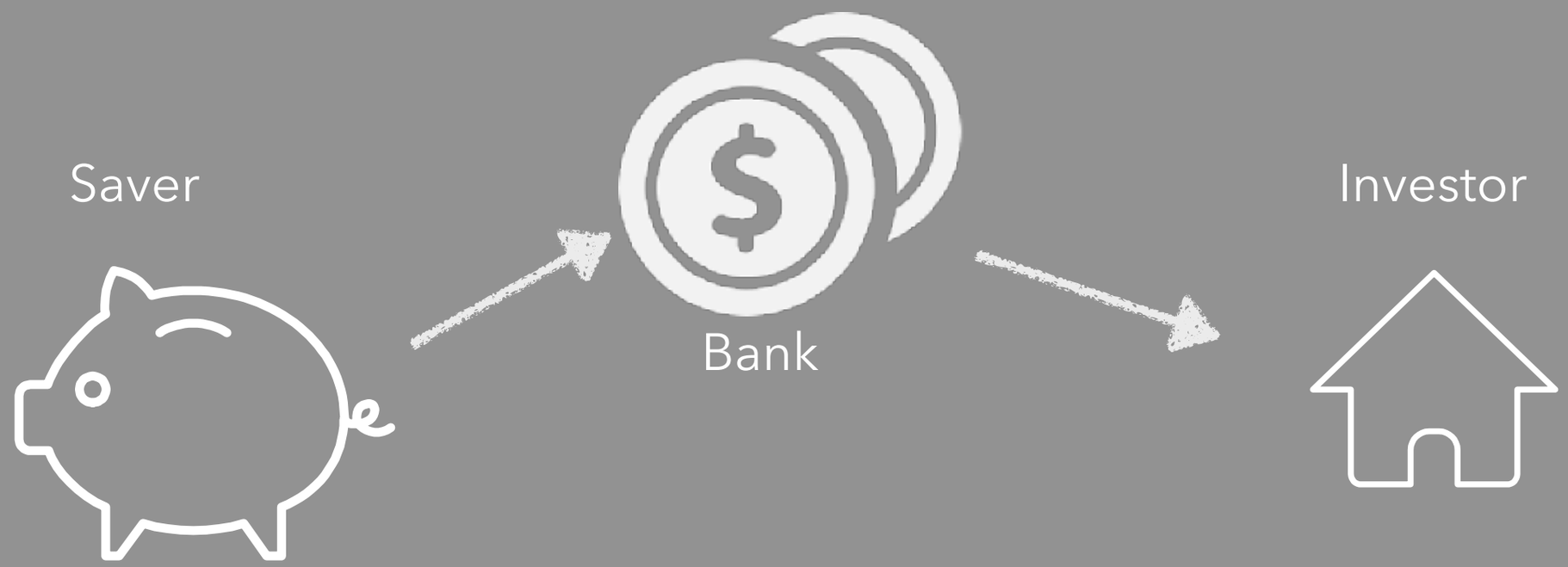
Financial markets allow investors to publicly announce their needs and savers to compare the different demands



Finance and Financial Markets

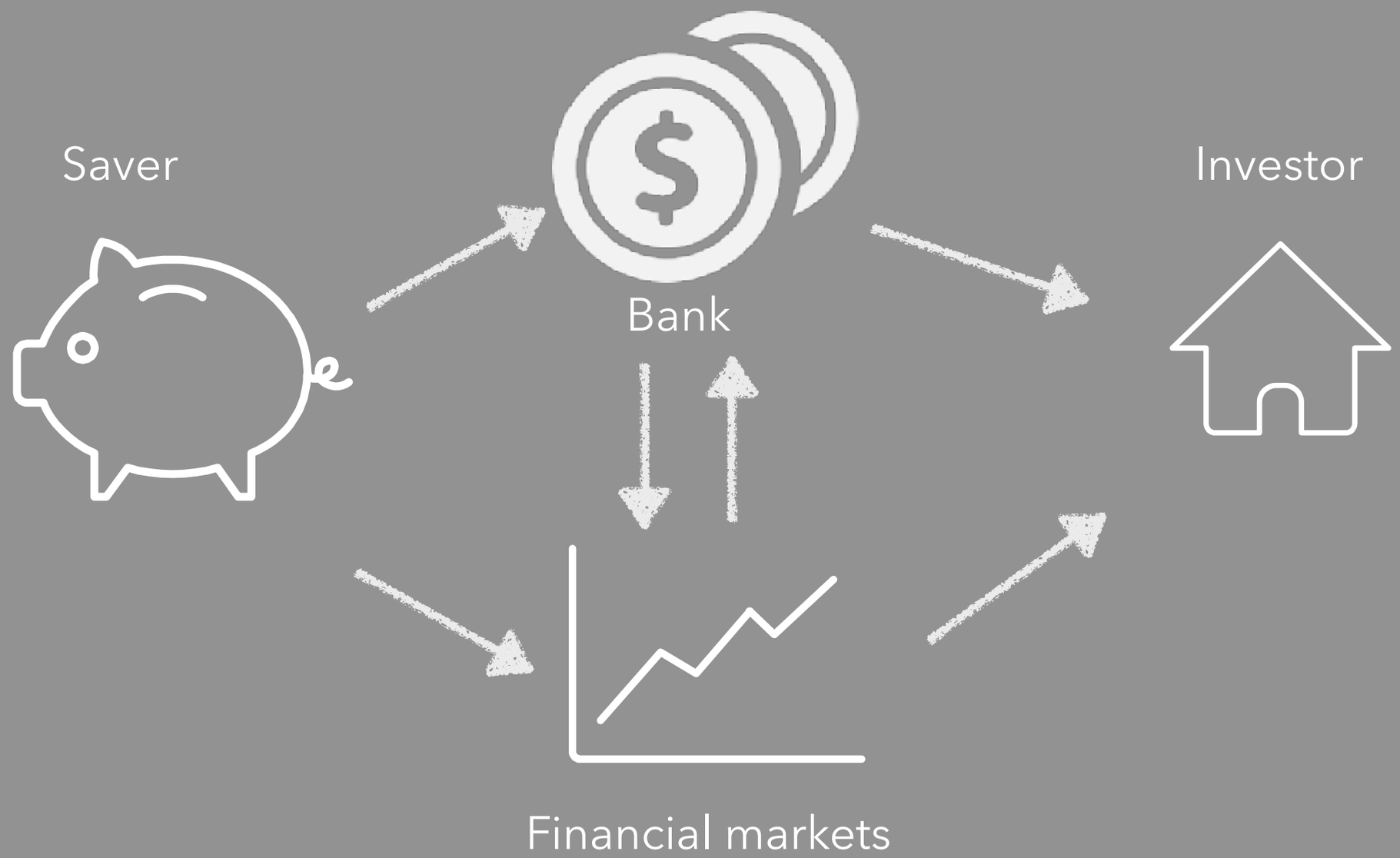
Bankers are intermediary agents who collect savings and offer loans.

- All savers do not have the same objectives and behavior, banks can transform short term investments in long term loans
- Banks have many clients = they can diversify and mutualize the risk



Finance and Financial Markets

"New intermediation": Banks also borrow and lend on the financial markets



Finance and Financial Markets

An efficient financial system:

- Encourage savings (by offering saving products that meet the needs of savers)
- Select the best investment projects and directs the savings towards them

= key role in the countries' economic system by allowing optimal investments

Growth of Financial sector

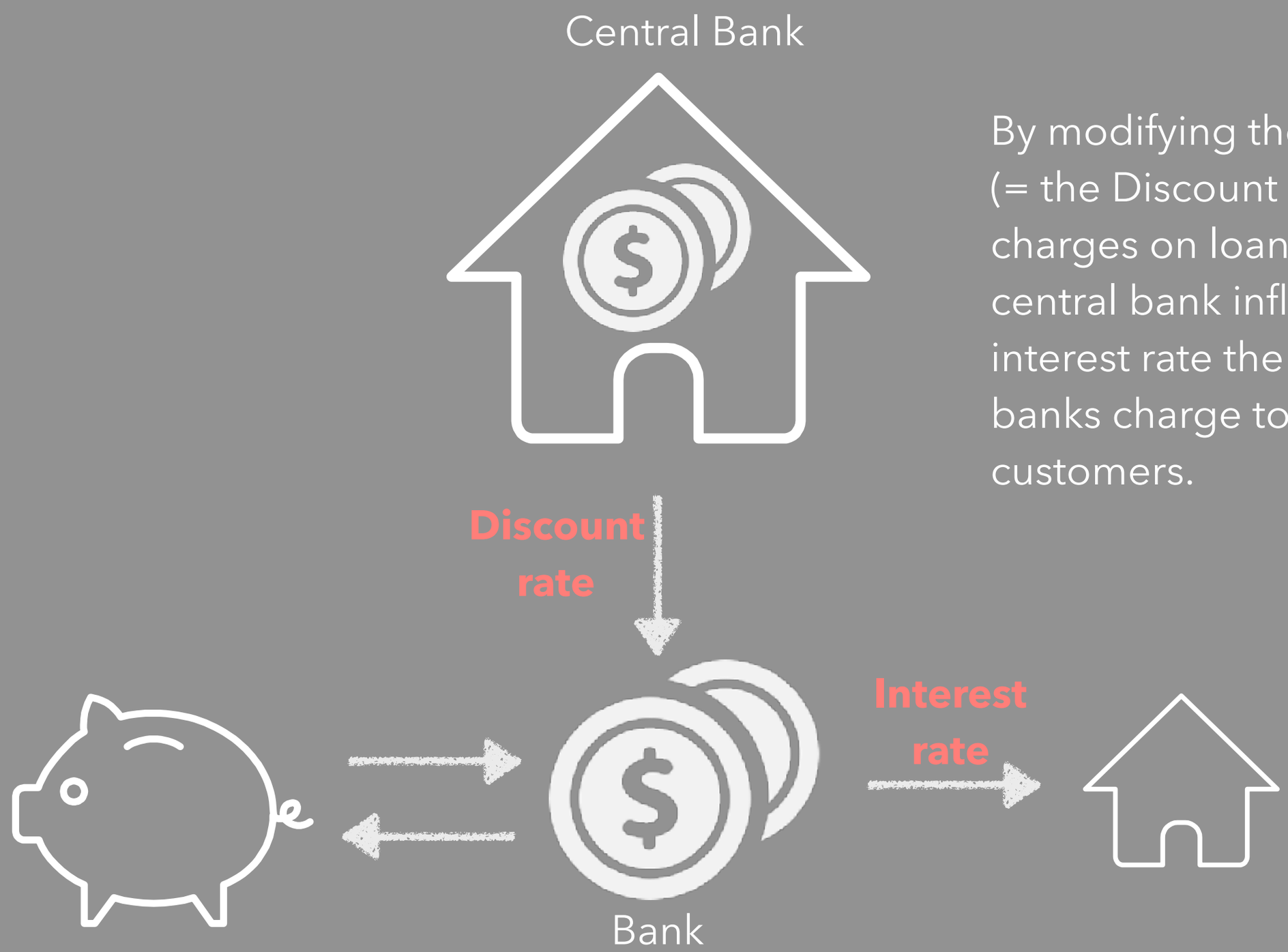
Some macroeconomics theory

Central banks play a central role in the financial system

Growth of Financial sector

If savers want their money back, the bank may need liquidity

Banks can borrow liquidity to the central bank… which charges an interest rate



By modifying their interest rate (= the Discount or Bank Rate), it charges on loans to banks, the central bank influences the interest rate the commercial banks charge to their customers.

Growth of Financial sector

If the central bank decreases the discount rate:

- commercial banks decrease their interest rate
- loans are cheaper
- investment and consumption is boosted
- economic growth and inflation

If the central bank increases the discount rate:

- commercial banks increase their interest rate
- loans are more expensive
- investment and consumption slow down
- economy slow down and inflation is reduced

Growth of Financial sector

Link between monetary policy and capital flows

If the central bank decreases the discount rate:

- savers seek better investments = capital outflows
- they sell the domestic currency to be able to buy foreign assets
- = currency depreciation

If the central bank increases the discount rate:

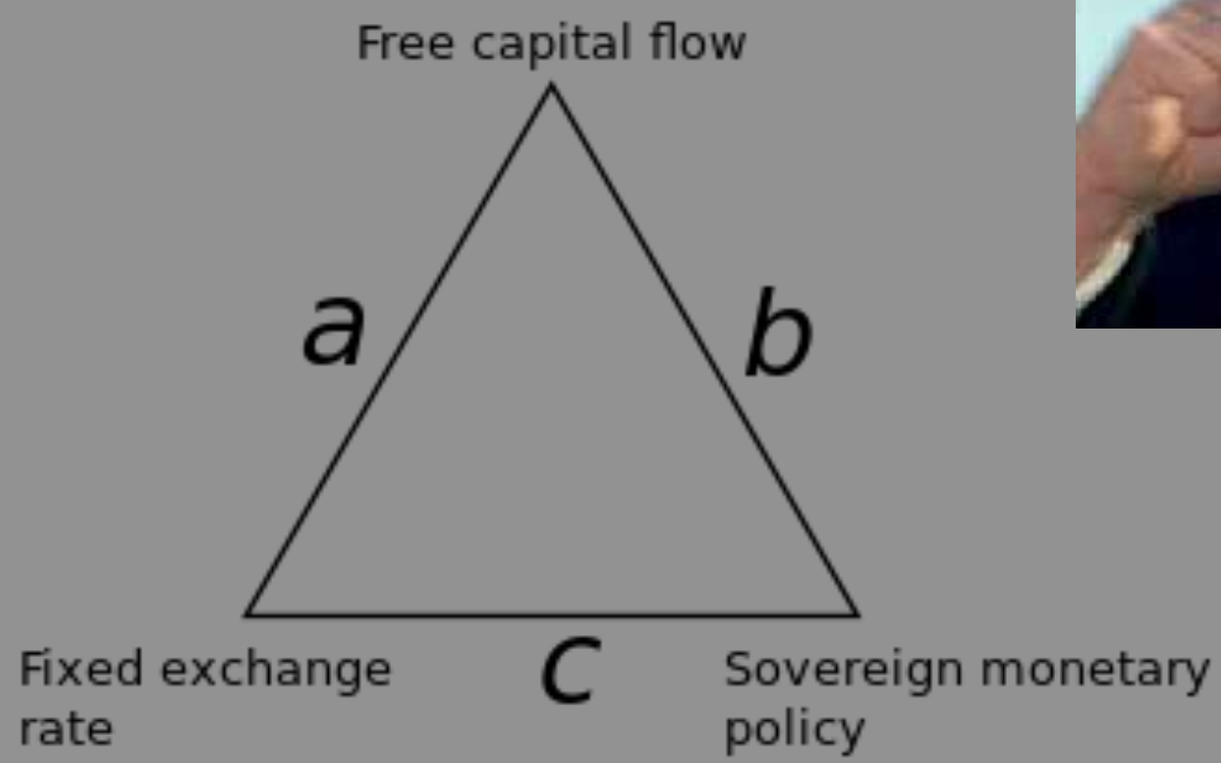
- capital inflows
- foreign investors buy domestic currency to be able to buy domestic assets
- = currency appreciation

Growth of Financial sector

If countries have to maintain a fixed exchange rate, they must either:

- Abandon the autonomy of their monetary policy (domestic and foreign interest rate have to be the same)
- or restrict international flows

Mundell's impossible trinity



Growth of Financial sector

1971: Nixon Shock

During the 1960's, as European countries' and Japanese economies recover they progressively accumulated important reserves in US$

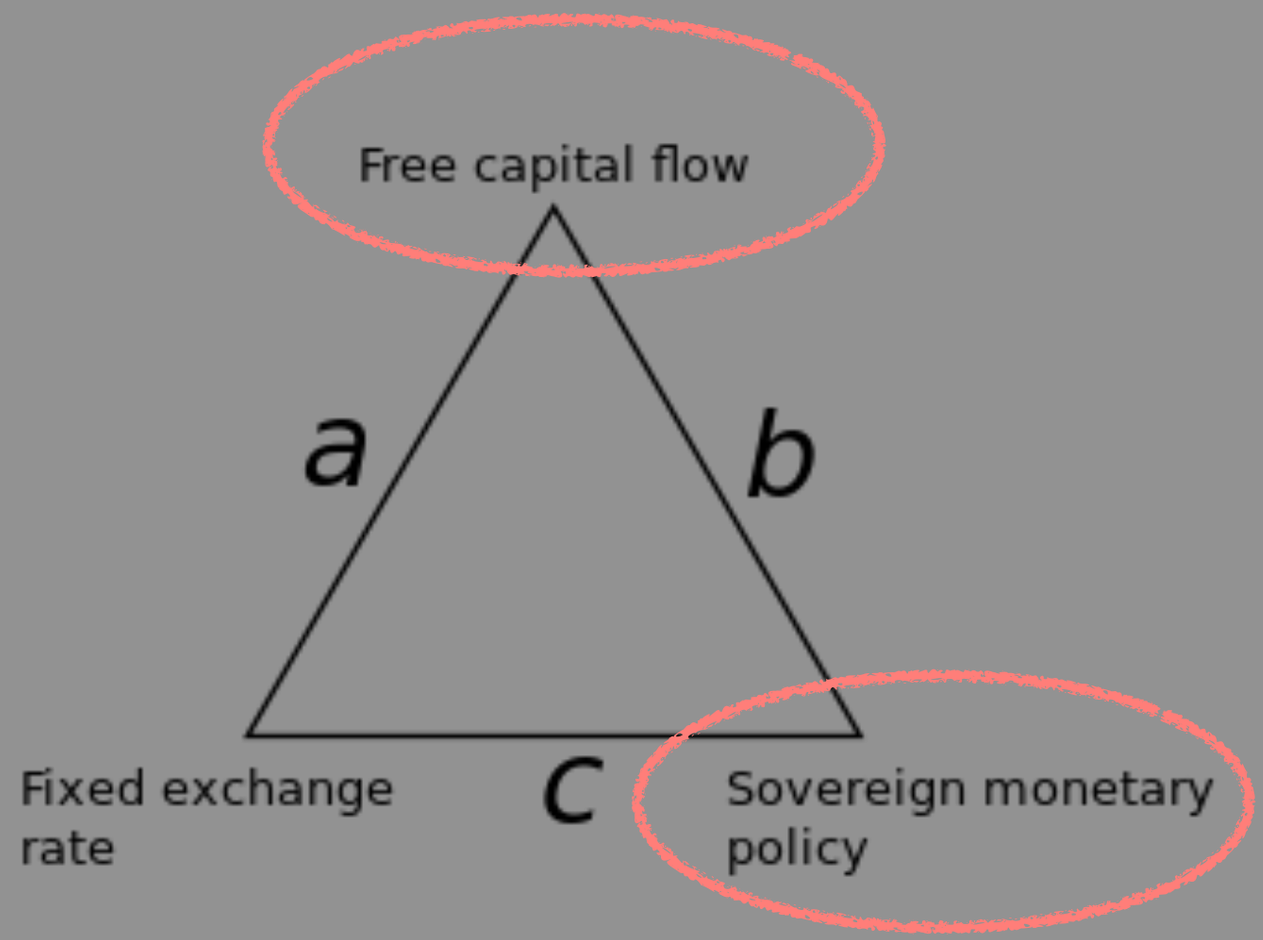
By 1966, non-US central banks had $14 billion, while the US only had $13 billion in gold reserve

1971: For the first time since the end of WWII, the USA have a trade deficit Capital starts to flow out of the country and US government decides to interrupt the convertibility between US$ and gold + a devaluation of the the US$

1973: Fixed exchange rate system is abandoned

Growth of Financial sector

With exchange rate flexibility, countries can have a sovereign monetary policy and free capital flow



Growth of Financial sector

With exchange rate flexibility, countries can have a sovereign monetary policy and free capital flow

End of Bretton Woods system unleashed financial globalization

Now, the objective - based on free-markets principles (cf. "Washington consensus") - is to attract capital flows while keeping the interest rate as lower as possible, by developing the financial sector and offering an attractive capital market

Growth of Financial sector

U.S. Regulation Q:

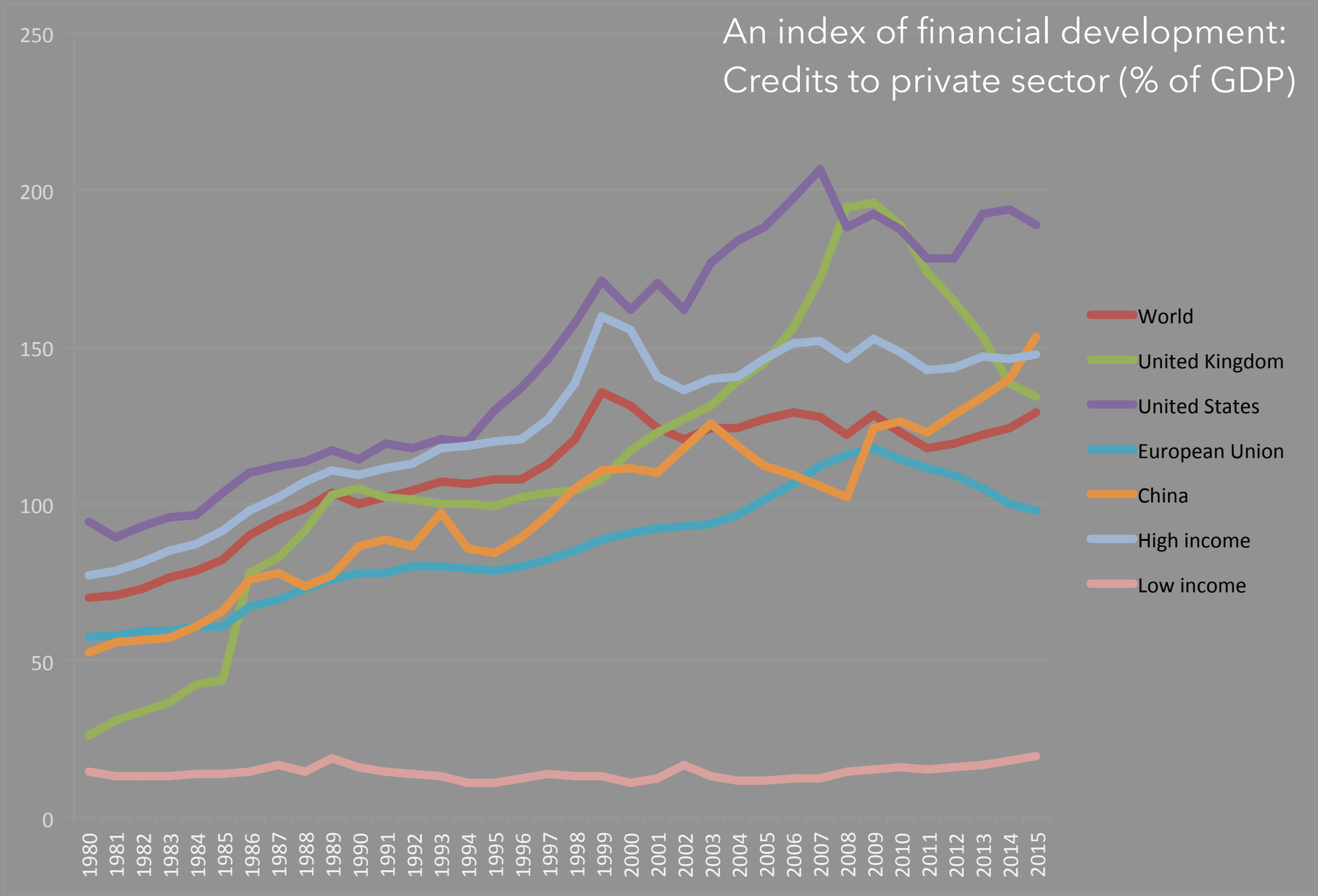
- Decided in 1933, it imposed maximum rates on bank interest rates
- Progressively changed since 1980, repealed in 1986

UK "Big Bang": Vast deregulation of the London stock market generating a fast decrease of transaction costs, a rapid growth of the volume of transactions and a significant internationalisation of the transactions

To defend their attractiveness, other developed countries had to also to deregulate their financial markets

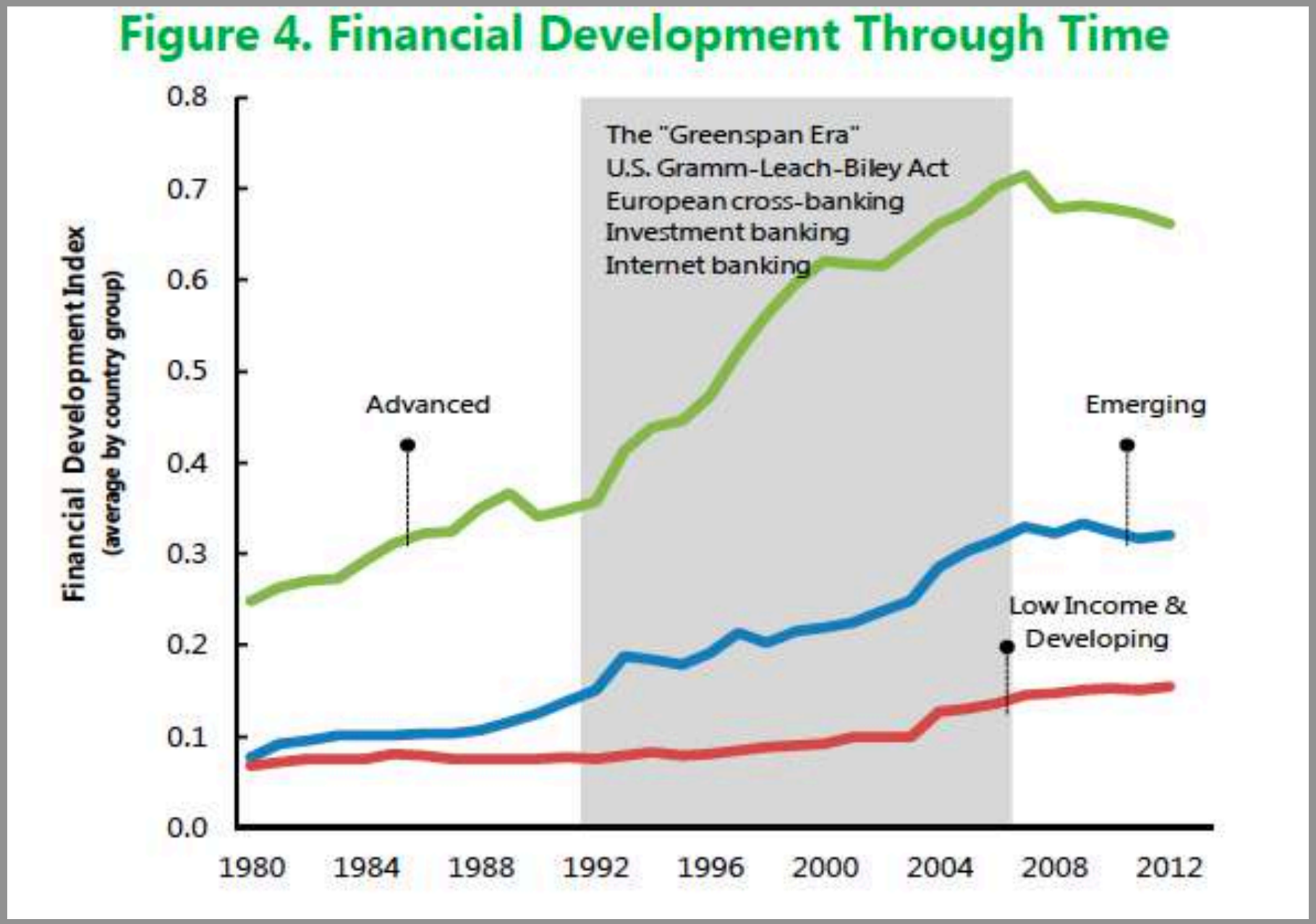
Etc…

Growth of Financial sector



Growth of Financial sector

A synthetic index of financial development (IMF, 2015)



Measures of financial globalization

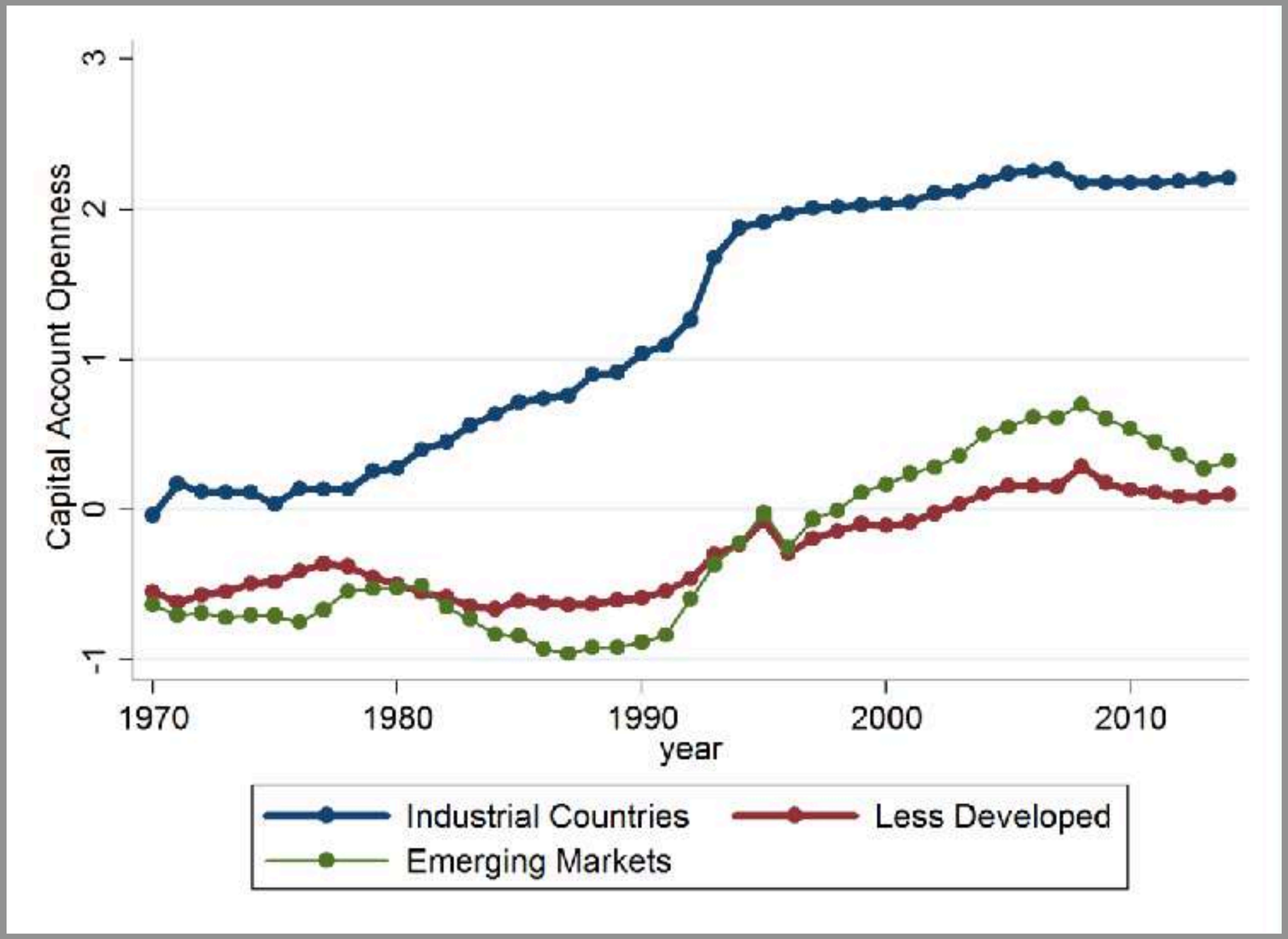
De Jure = Official restrictions to international capital movements (compiled by the IMF)

Example: In October 09, Brazil decided to tax capital inflows to discourage short term hot money from flowing in.

De Facto = How much international trade in financial assets?

International integration

Chinn-Ito Financial Openess Index (De Jure)



De facto measures of openness

Based on stocks:

(Domestic assets held by foreigners + Foreign assets held by domestic agents)/GDP

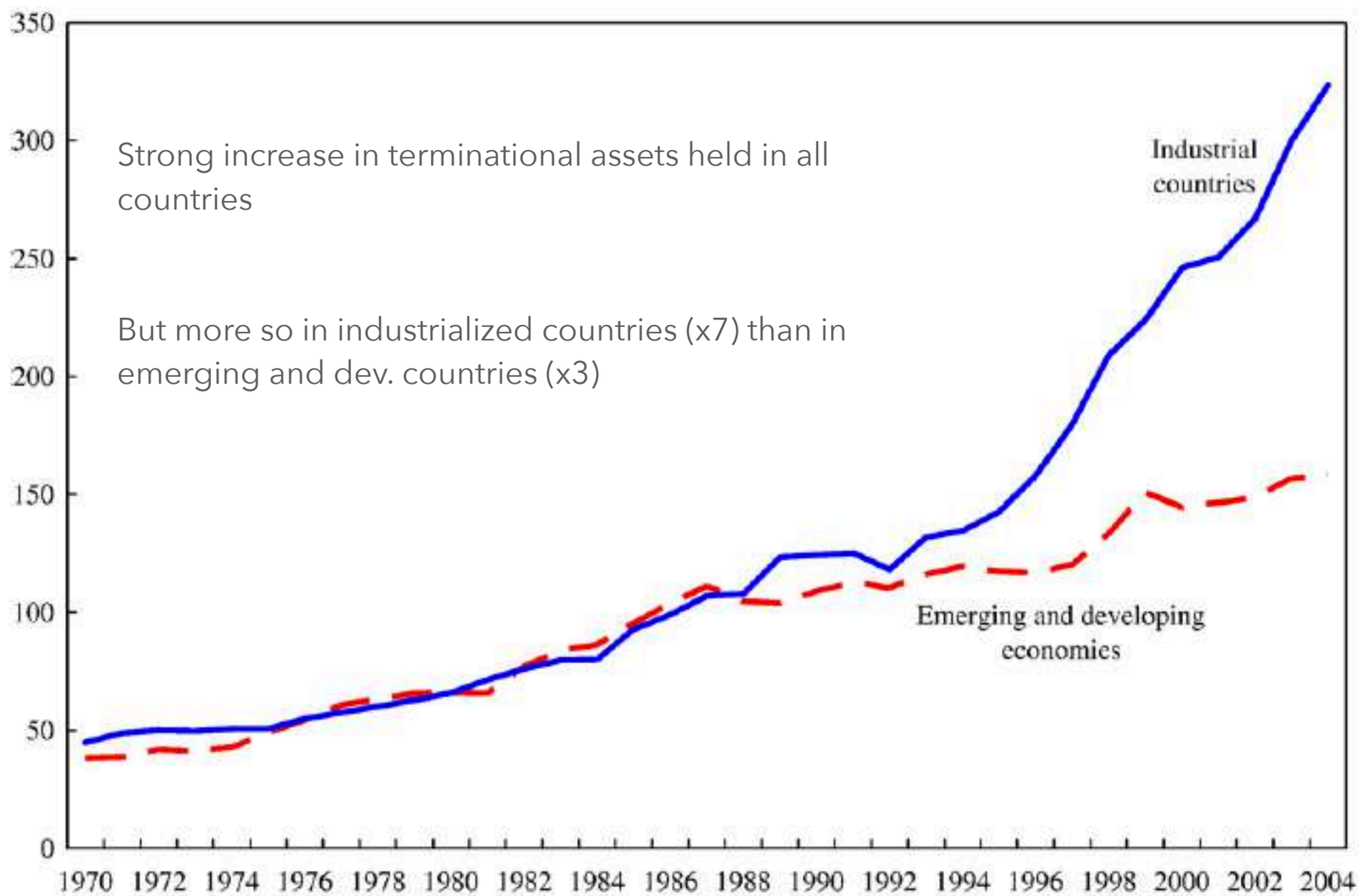
Based on flows:

(inflows/ GDP) and (outflows/GDP)

Example of inflow = loan by a foreign bank to a domestic firm
Example of outflow = domestic household buying a bond issued by a foreign governmen

International integration

Stocks



Strong increase in terminational assets held in all countries

But more so in industrialized countries (x7) than in emerging and dev. countries (x3)

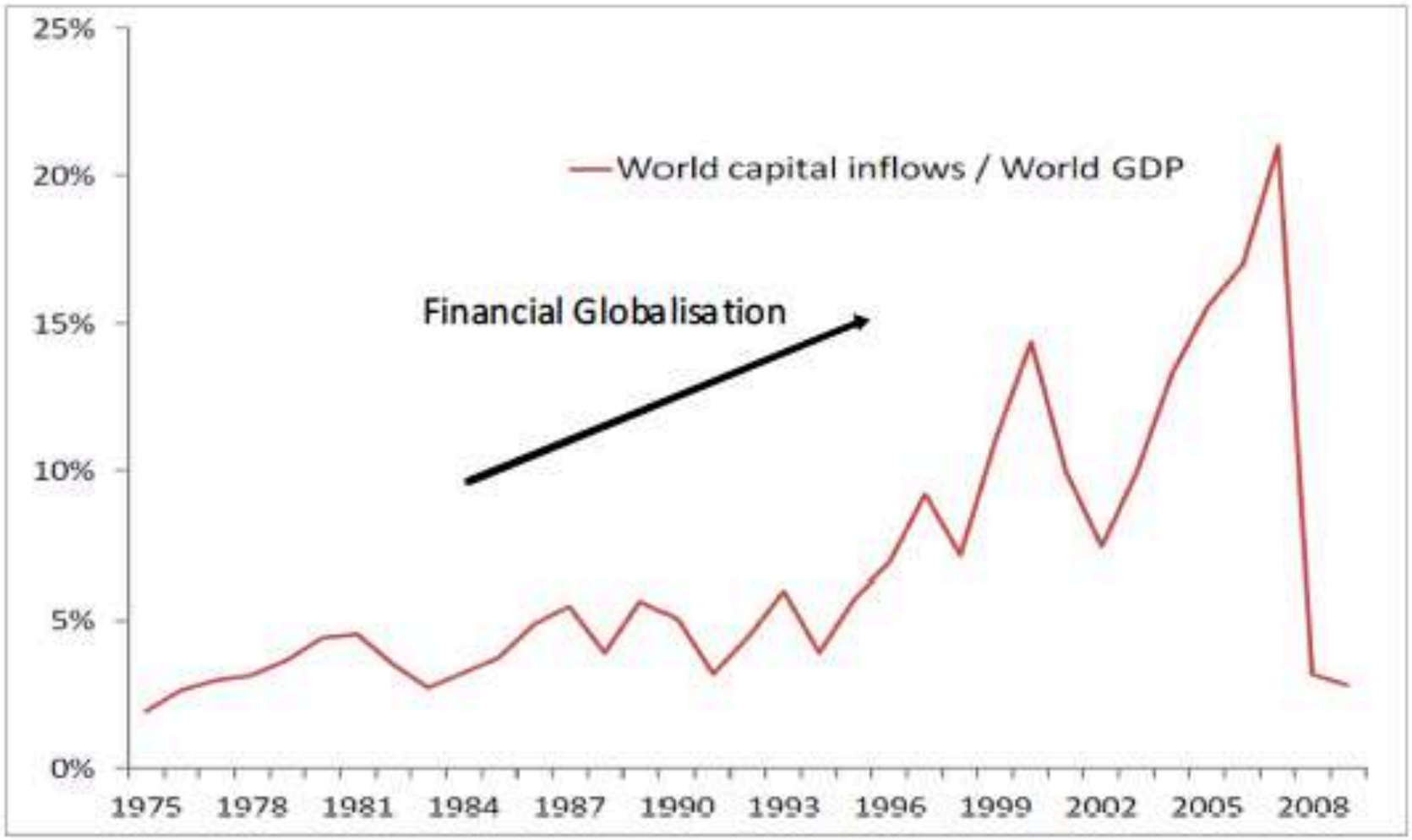
Fig. 3. International financial integration, 1970–2004. Note: Ratio of sum of foreign assets and liabilities to GDP, 1970–2004.

International integration

Of course, flows are more volatile

Flows are more volatile than stocks: in the 2008 crisis, collapse of international flows

Figure 1. Global Capital Flows, 1975-2009
Percent of world GDP



Note: sum of gross capital inflows across the world's countries, as a ratio of world GDP. Source: Lane and Milesi-Ferretti, EWN II database, and IMF, Balance of Payments Statistics.

International integration

Comparison between financial globalization and trade globalization

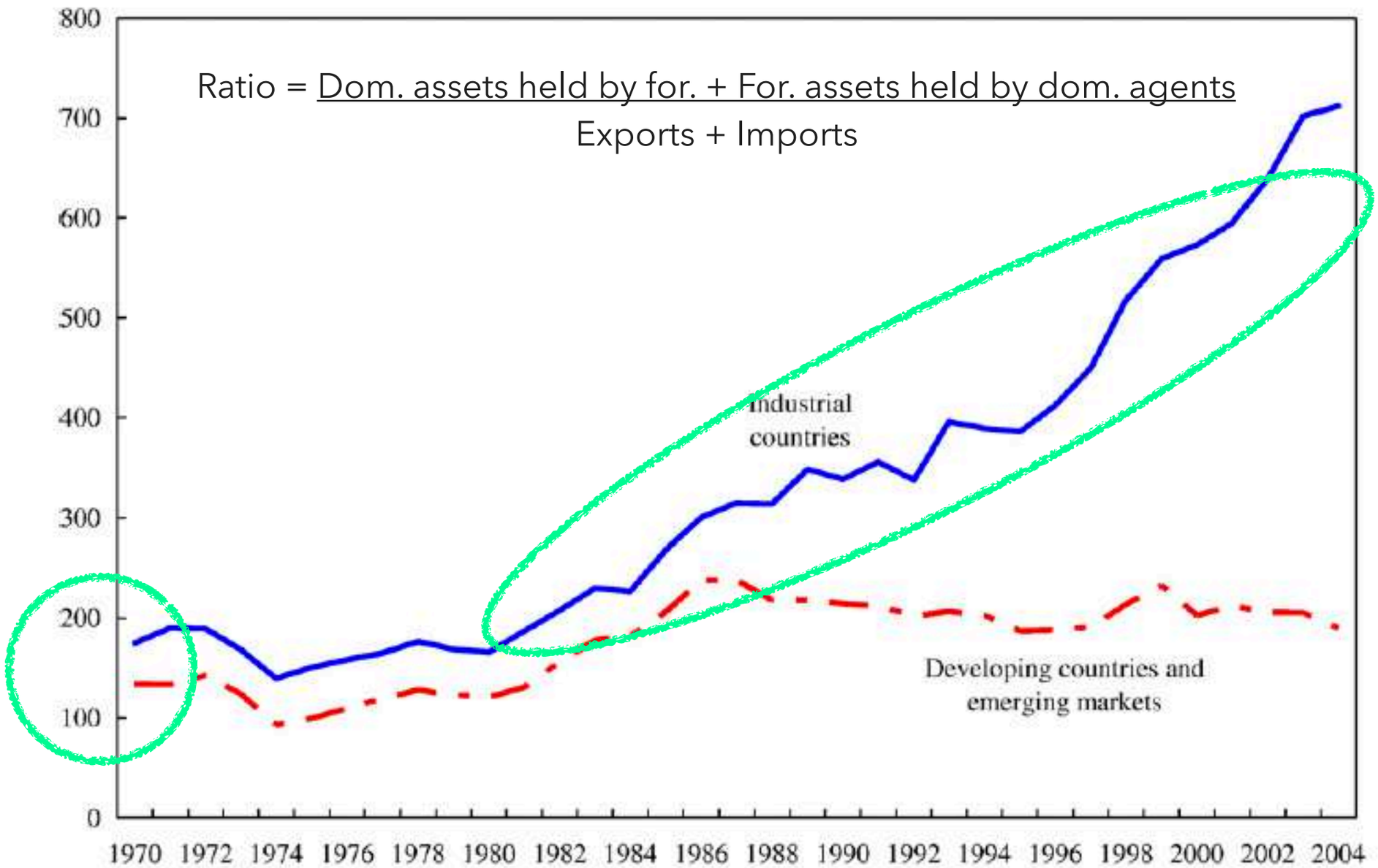
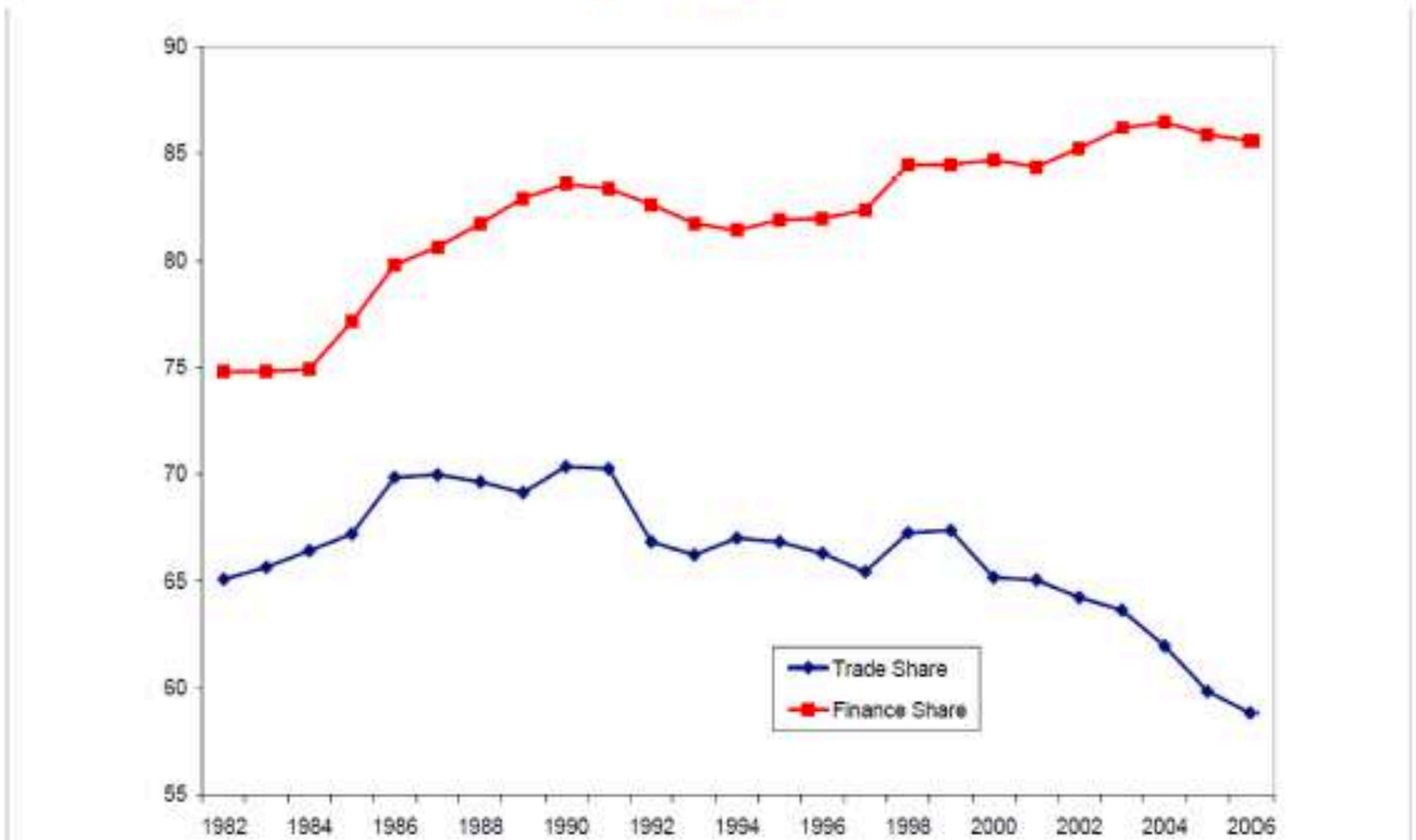


Fig. 4. Financial integration versus trade integration, 1970–2004. Note: Sum of external assets and liabilities in percent of sum of exports and imports.

International integration

While emerging countries take market shares on global export markets, developed nations confirm their domination on global finance



Note: Authors' calculations based on Lane and Milesi-Ferretti (2007) and WDI data.

International integration

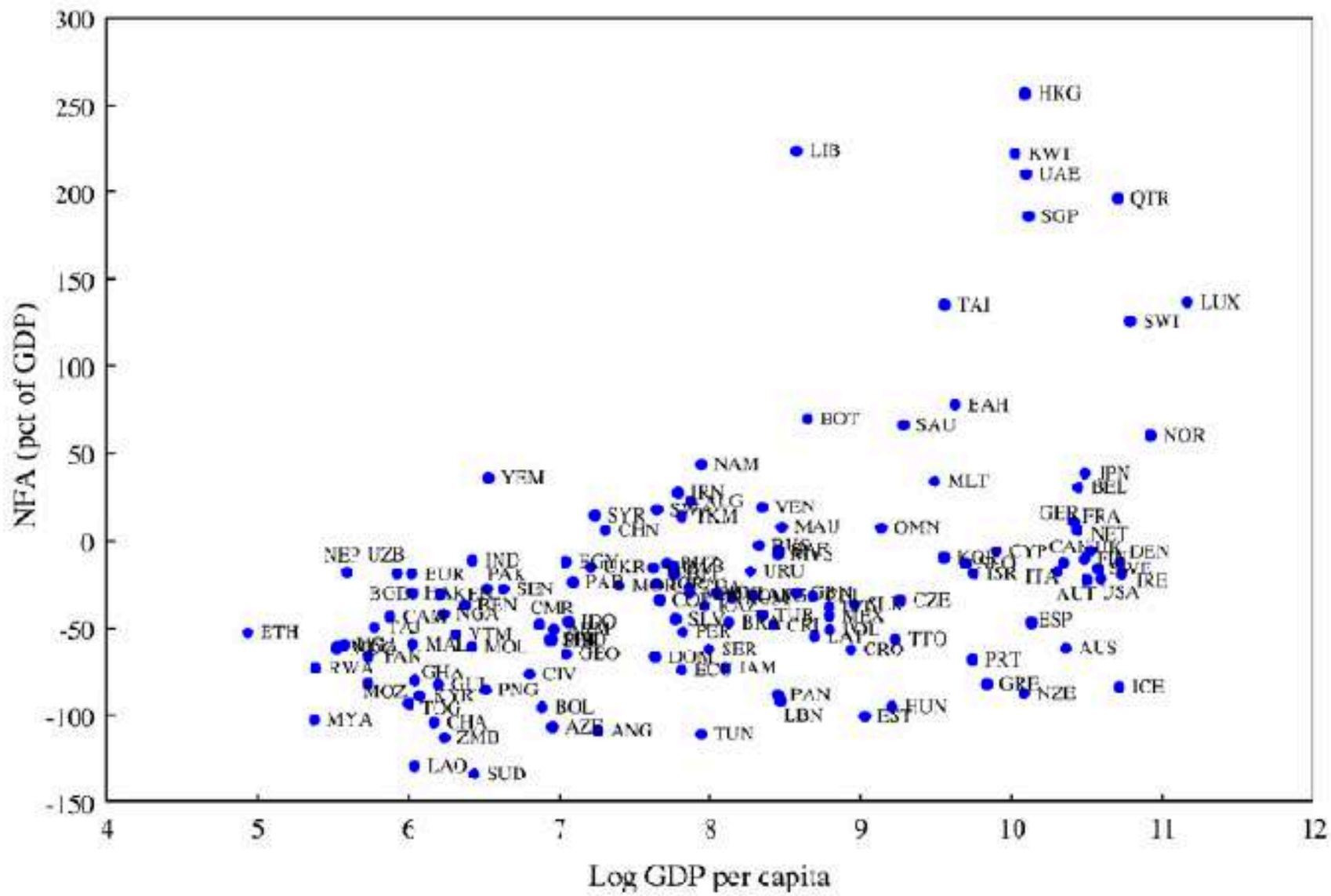
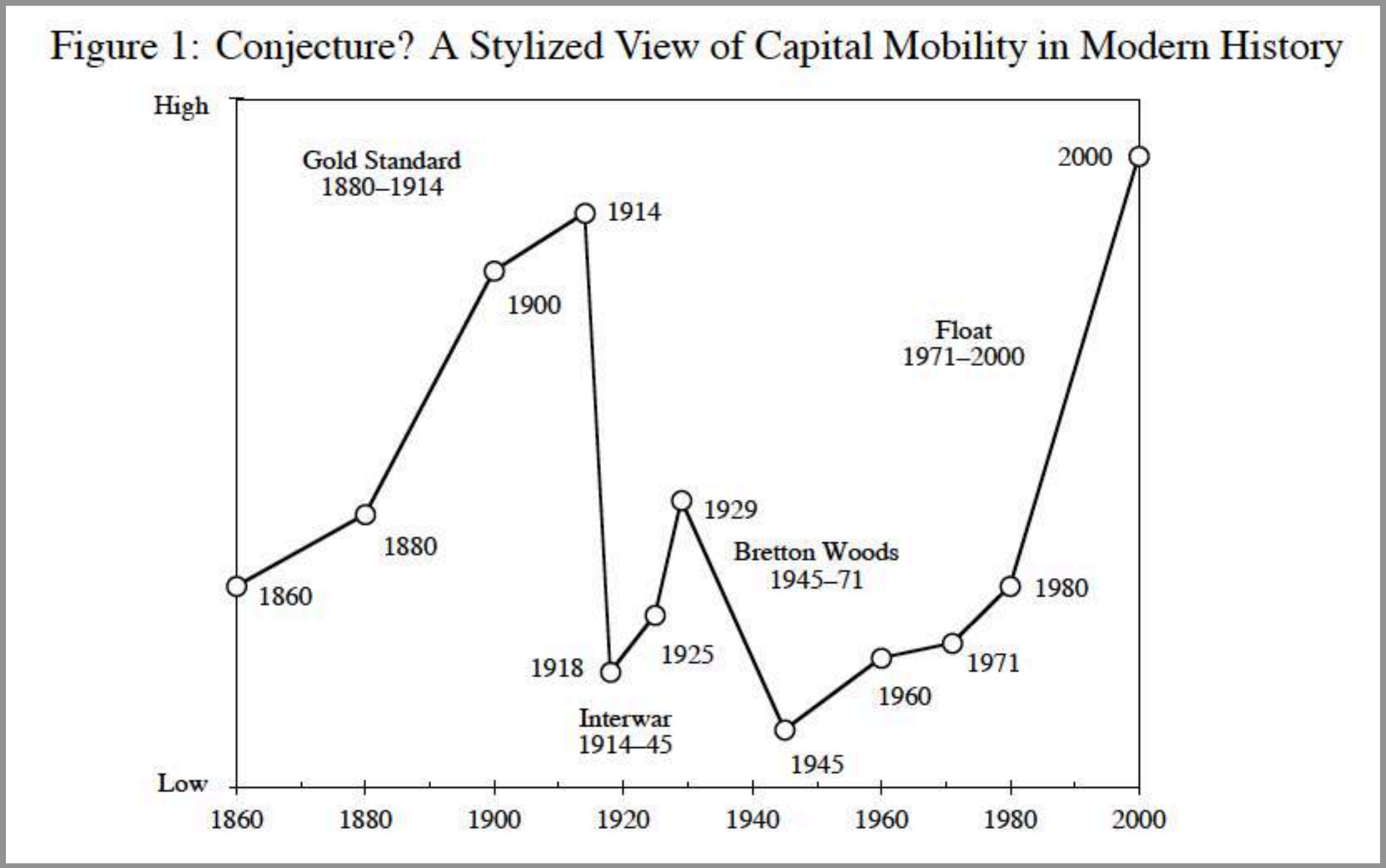


Fig. 8. Net foreign assets and GDP per capita: All countries, 2004. Note: log GDP per capita (current US dollars) on horizontal axis, NFA/GDP ratio on vertical axis. Correlation is 0.43. Graph excludes Brunei Darussalam (estimated net foreign assets of over 600% of GDP).

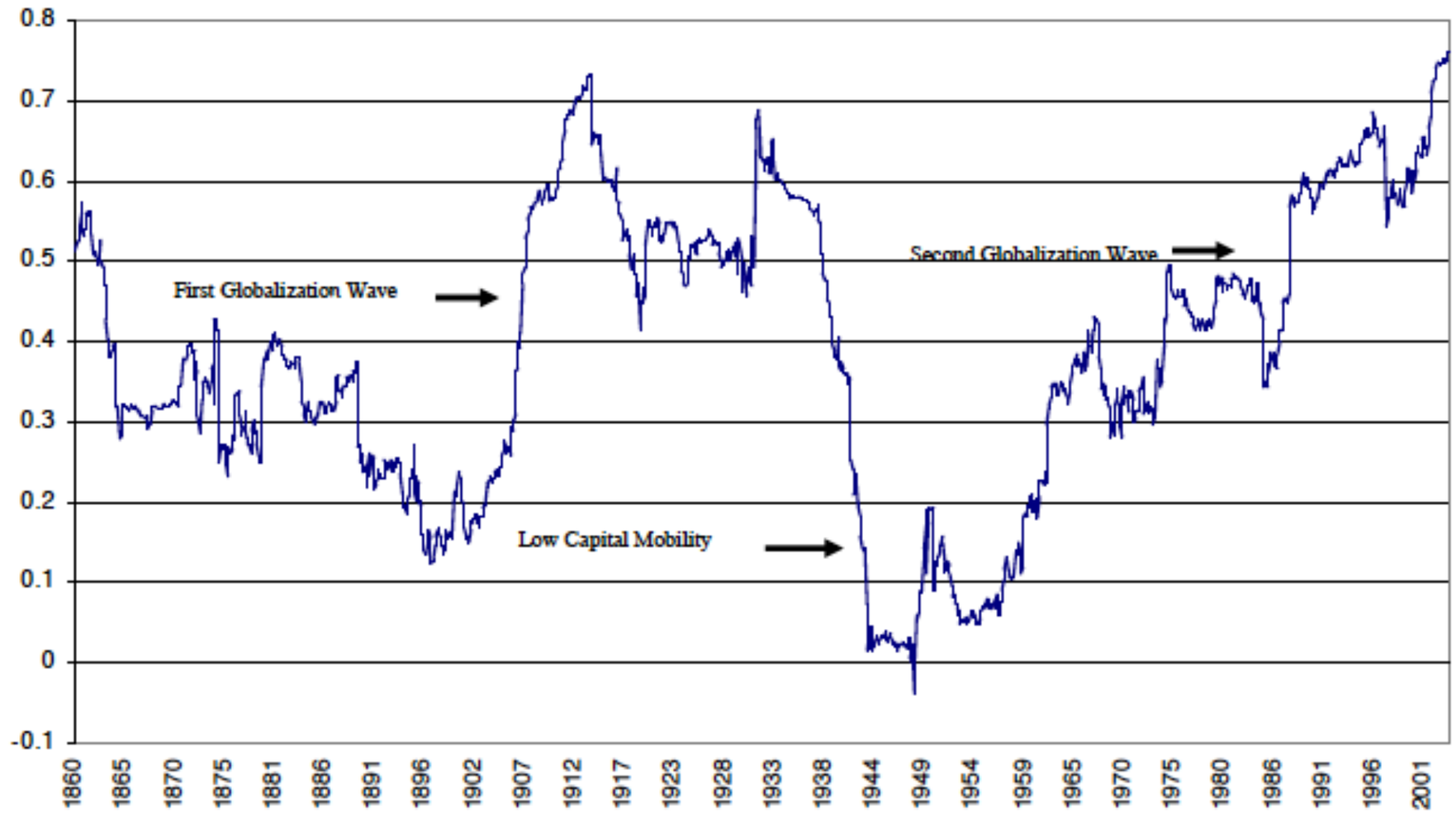
International integration - historical perspective

World capital markets were very integrated at the end of the XIXth century



Obstfeld & Taylor (2002)

International integration - historical perspective

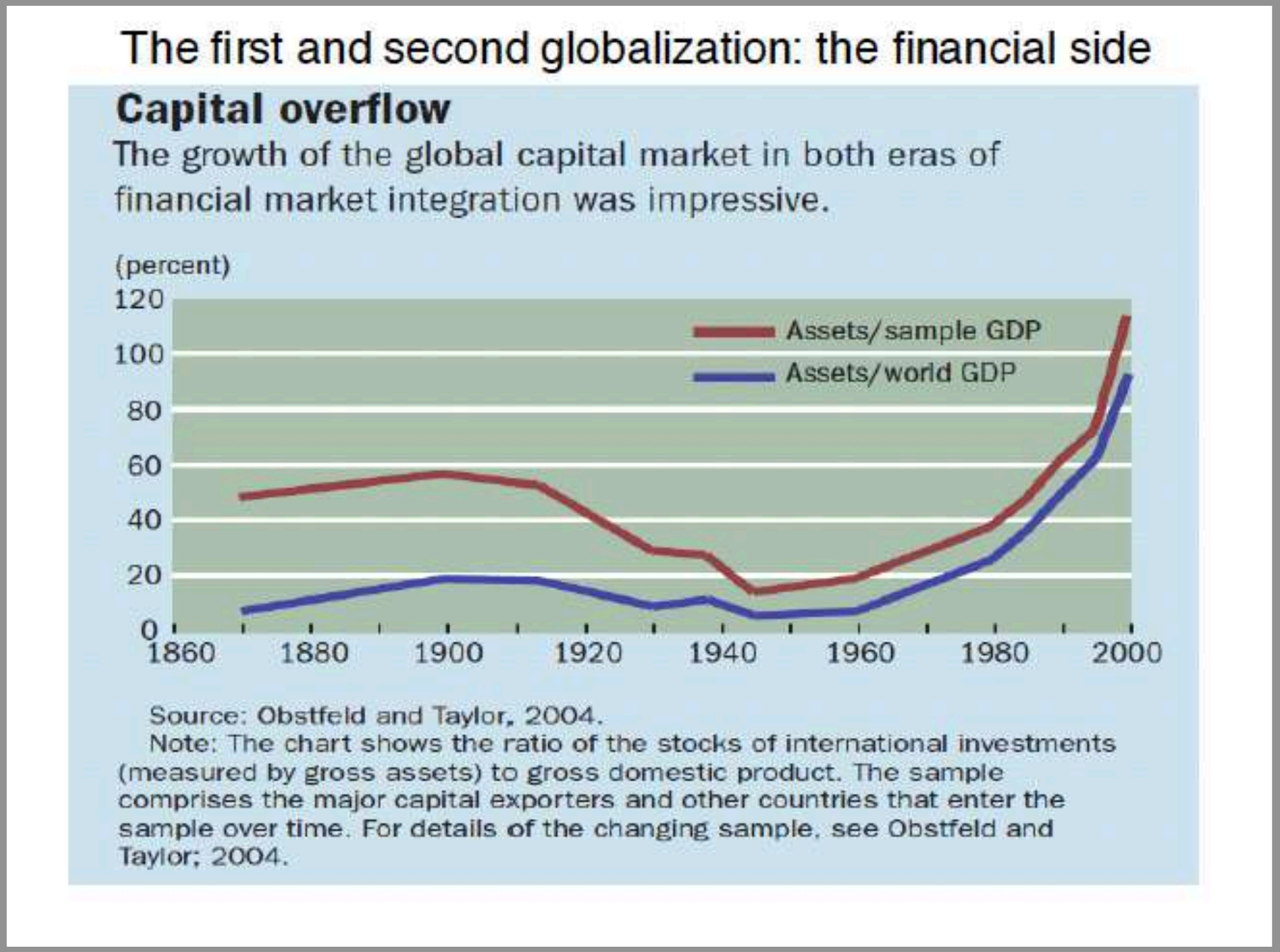


Correlation between UK and US stock returns over long period (source Global Financial Data)

Monthly correlations based on a 5-years window

International integration - historical perspective

But XXIst century globalization is deeper



International integration - depth

Feldstein Horioka Puzzle

In a world with no cross-border financial flows, investors must rely on domestic saving

In a world with perfectly integrated financial markets, savers can finance projects in any country

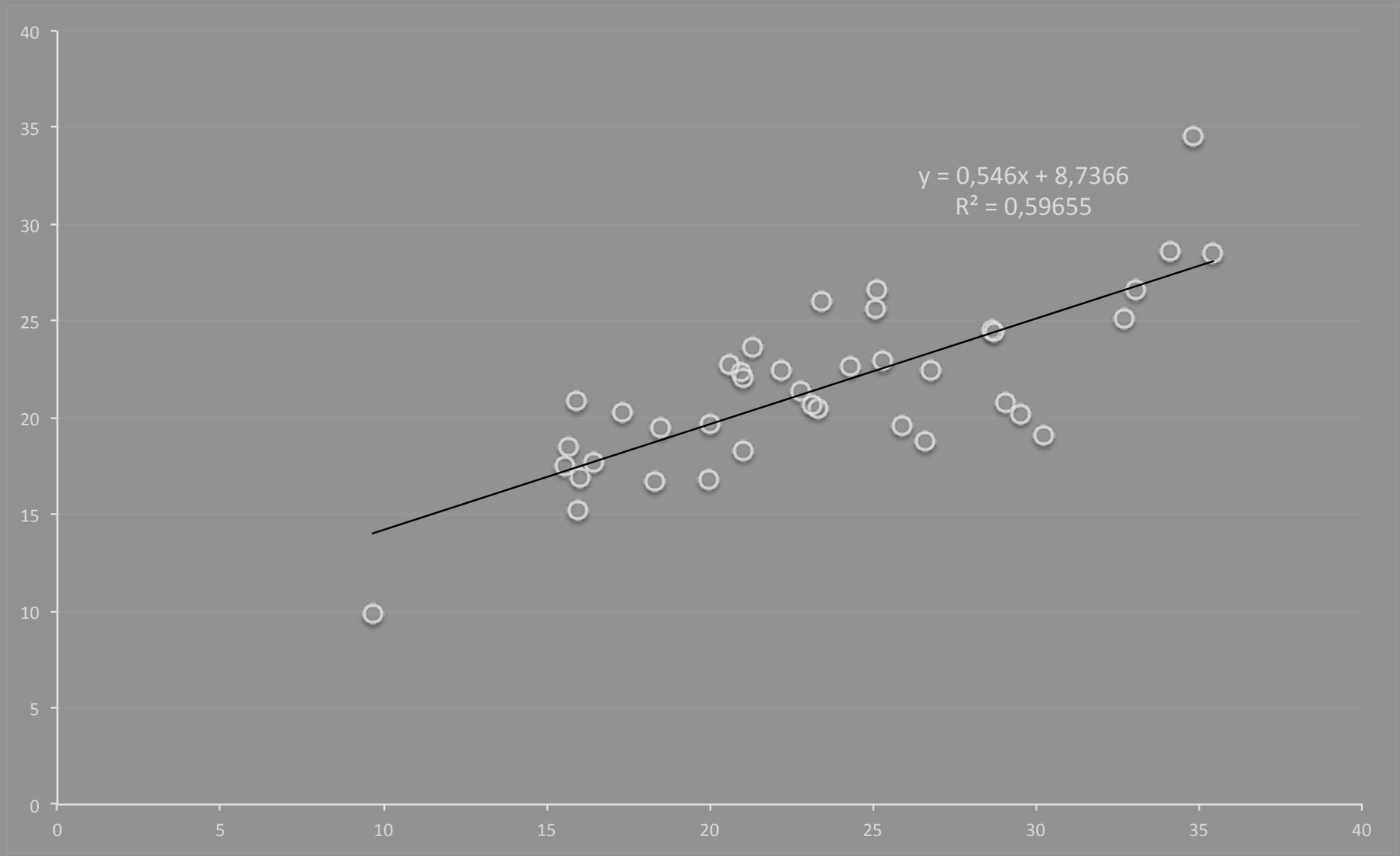
⇒ They should send their funds where the return is the highest = where the demand for funding is the highest = where there are many investment projects

⇒ Investors can attract saving from any country ⇒ the levels of domestic investments and domestic saving should be uncorrelated

International integration - depth

Feldstein Horioka Puzzle

Investment rate (% of GDP) versus Saving rate (% of GDP) - 1970



International integration - depth

Home bias in equity flows

$$\text{Home Bias} = 1 - \frac{\text{Share of foreign equity holding}}{\text{Share of foreign stock in World market capitalisation}}$$

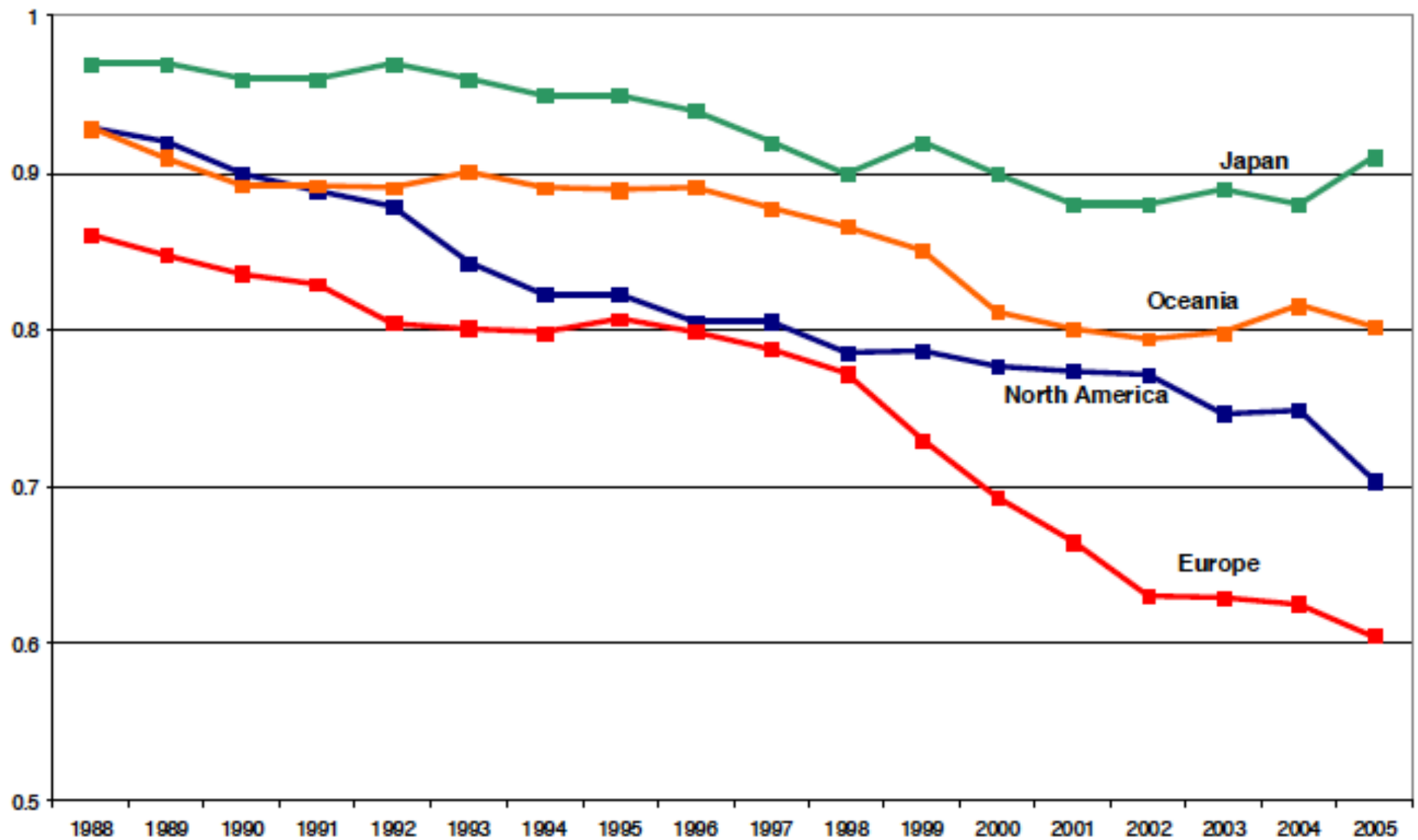
If a country holds 10% of world market capitalisation, denominator = 90%.

In absence of bias, the share of foreign equity should be 90% and the ratio = 1

If, for instance, the share of foreign equity hold is only 45%, then the ratio = 45/90=0.5 and Home Bias = 0.5

International integration - depth

Home bias in equity flows declined sharply… but is still very high



Home Bias (HB) across time for selected regions

International integration - depth

Distance matters ?

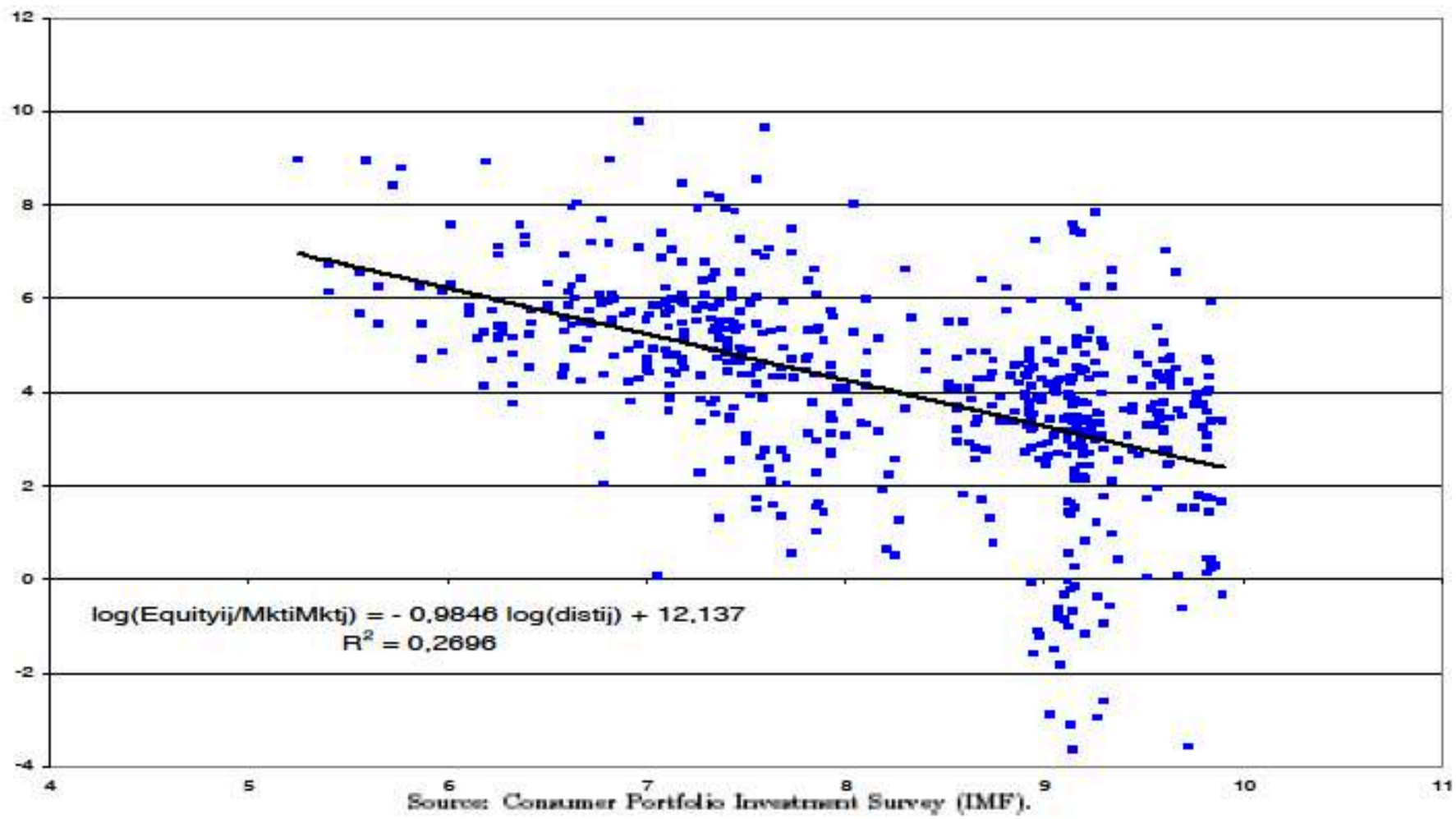


Figure 1: $\log(\frac{\text{Equity}_{ij}}{m_i m_j})$ versus dist_{ij} where Equity_{ij} are equity holdings of country (i) in country (j) in US dollars, m_i is the market capitalization of country (i) and dist_{ij} the distance between the two capitals in km.

"The Geographical Bias" in equity portfolios.

Source CPIS

Global finance

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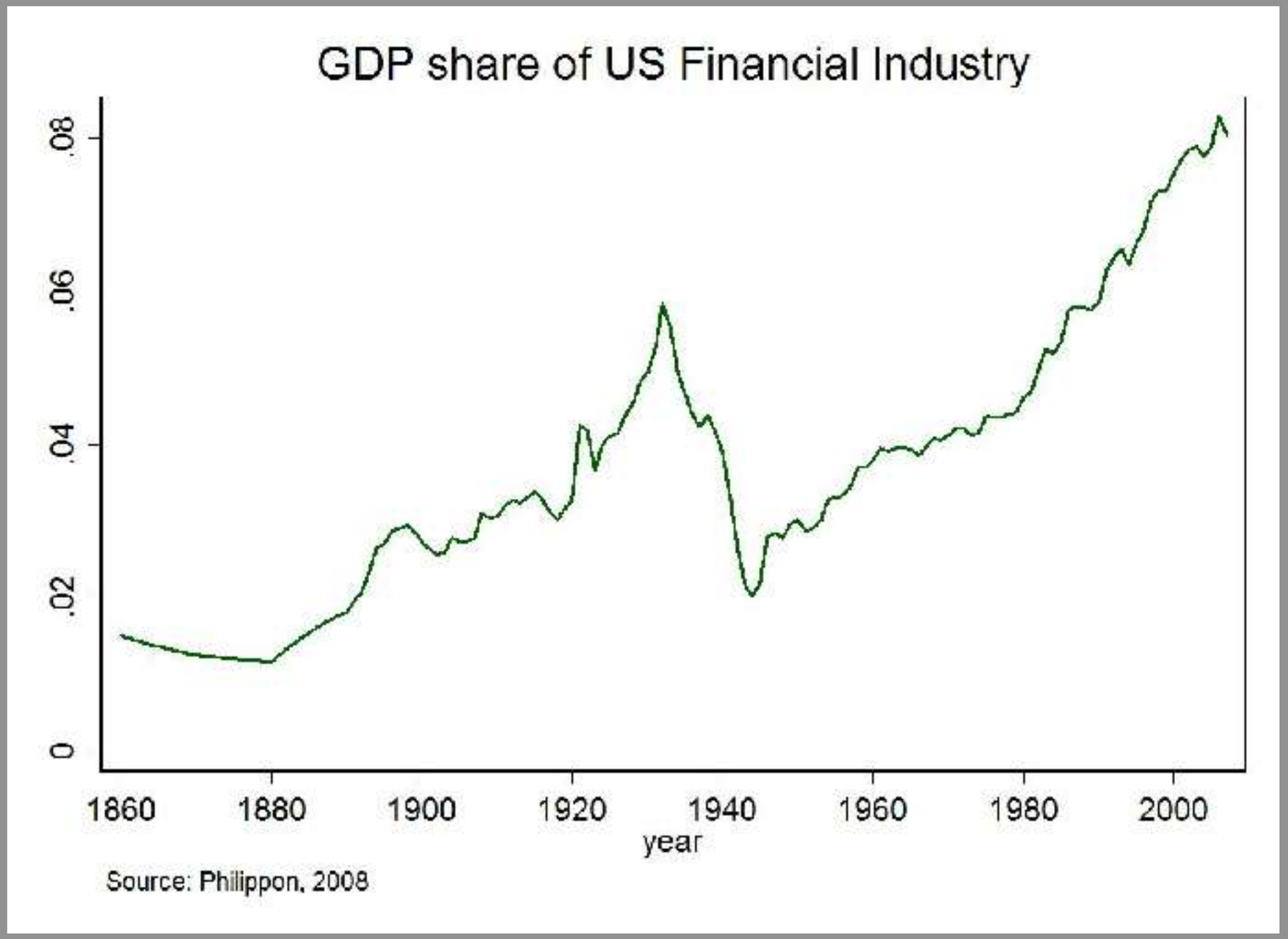
Financial development is good... for finance

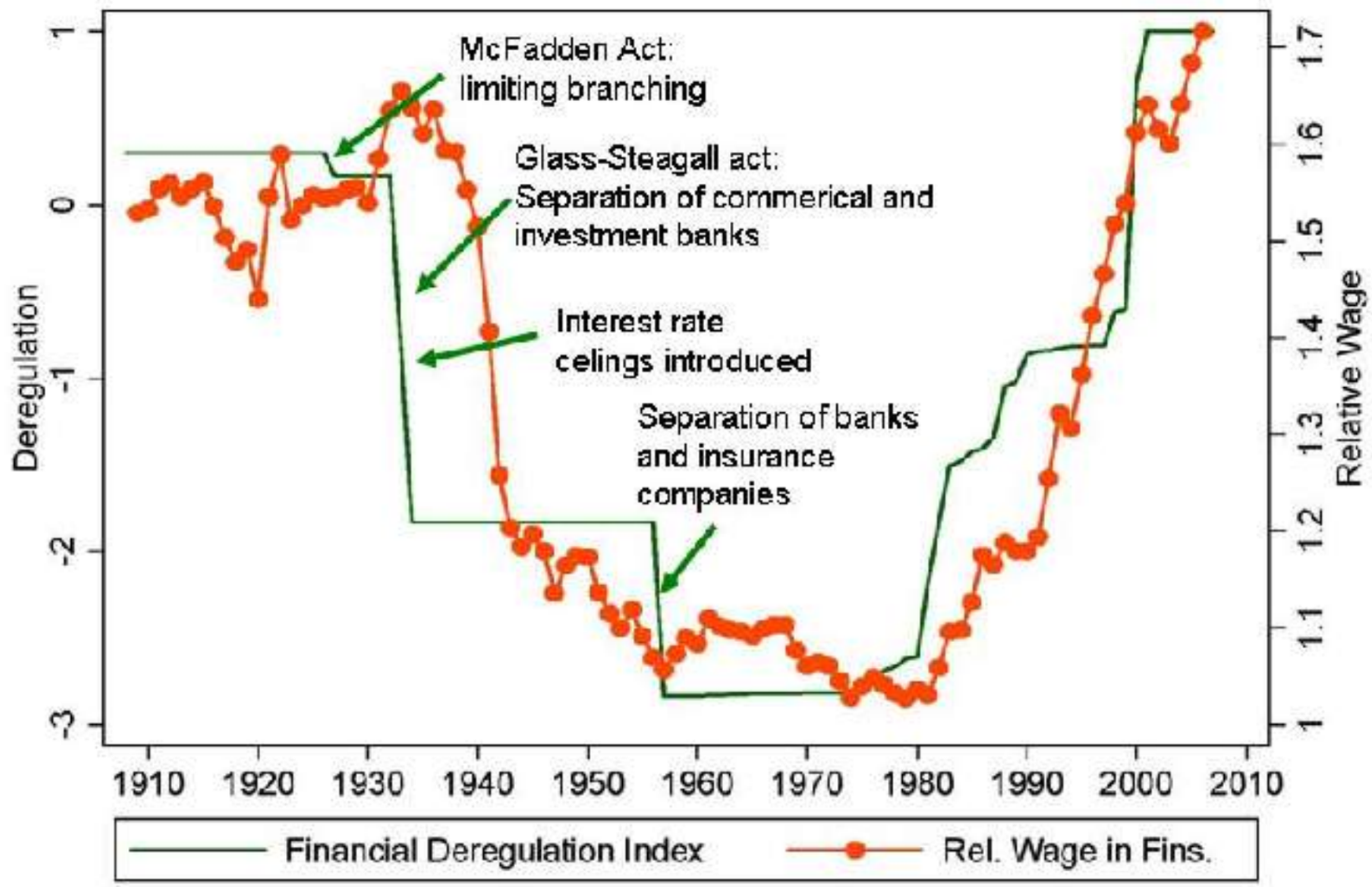
Is financial development good for growth?

Well… first and foremost, it's good for finance itself



Financial development is good... for finance

Huge growth of U.S. wages in finance industry, closely linked with deregulations



Notes: Wages are computed from the Industry Accounts of the U.S., from Kuznets (1941), and from Martin (1939). The relative wage is the ratio of Fins to Non Farm Private wages. See the text for the definition of the deregulation index.

Philippon and Reshef

Is financial globalization a good thing?

Is financial development and internationalization a good for growth?

Strong arguments:

1. Better allocation of financial ressources
   A. Efficient financial system should select the best investment projects
   B. Highly developed financial system should have lower cost of financing = more investment
2. Greater risk diversification = encourage saving and investment
3. Increased economic stability and countries' resilience during economic crises

But:

1. Banks and financial markets may absorb large proportion of skilled labor (see above)
2. Emergence of financial sector favors more the firms that rely on external finance… which are the ones offering more collateral = it does not support the development of innovative sectors = negative effect on productivity
3. Open financial markets may be also very volatile and generate instability (may be lower volatility in calm periods, but higher risks of unpredicted severe crises)

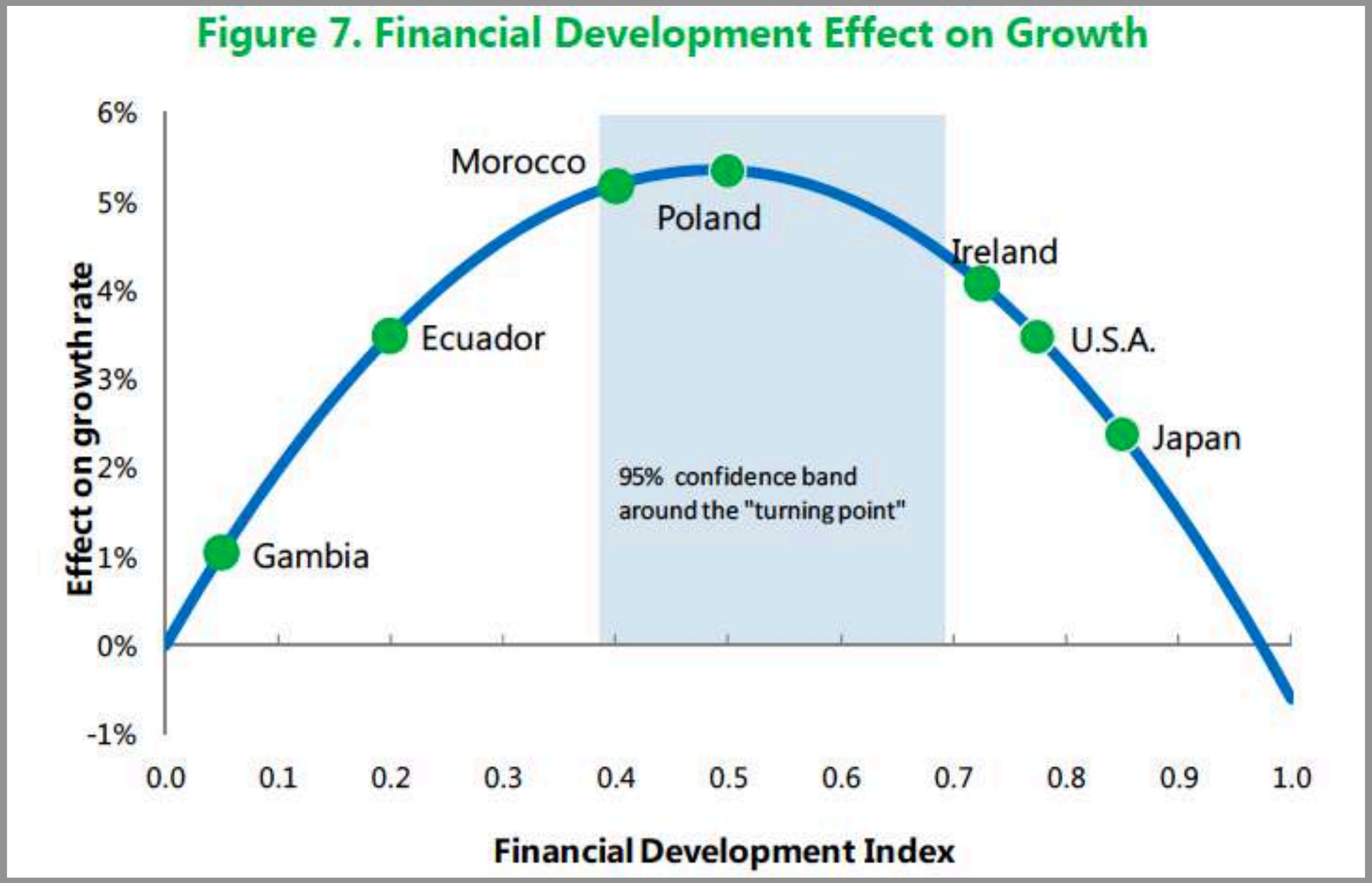
Is financial globalization a good thing?

Empirical analyses tend to show:

1) A robust correlation between financial development and GDP growth (even after controlling for reverse causality bias)

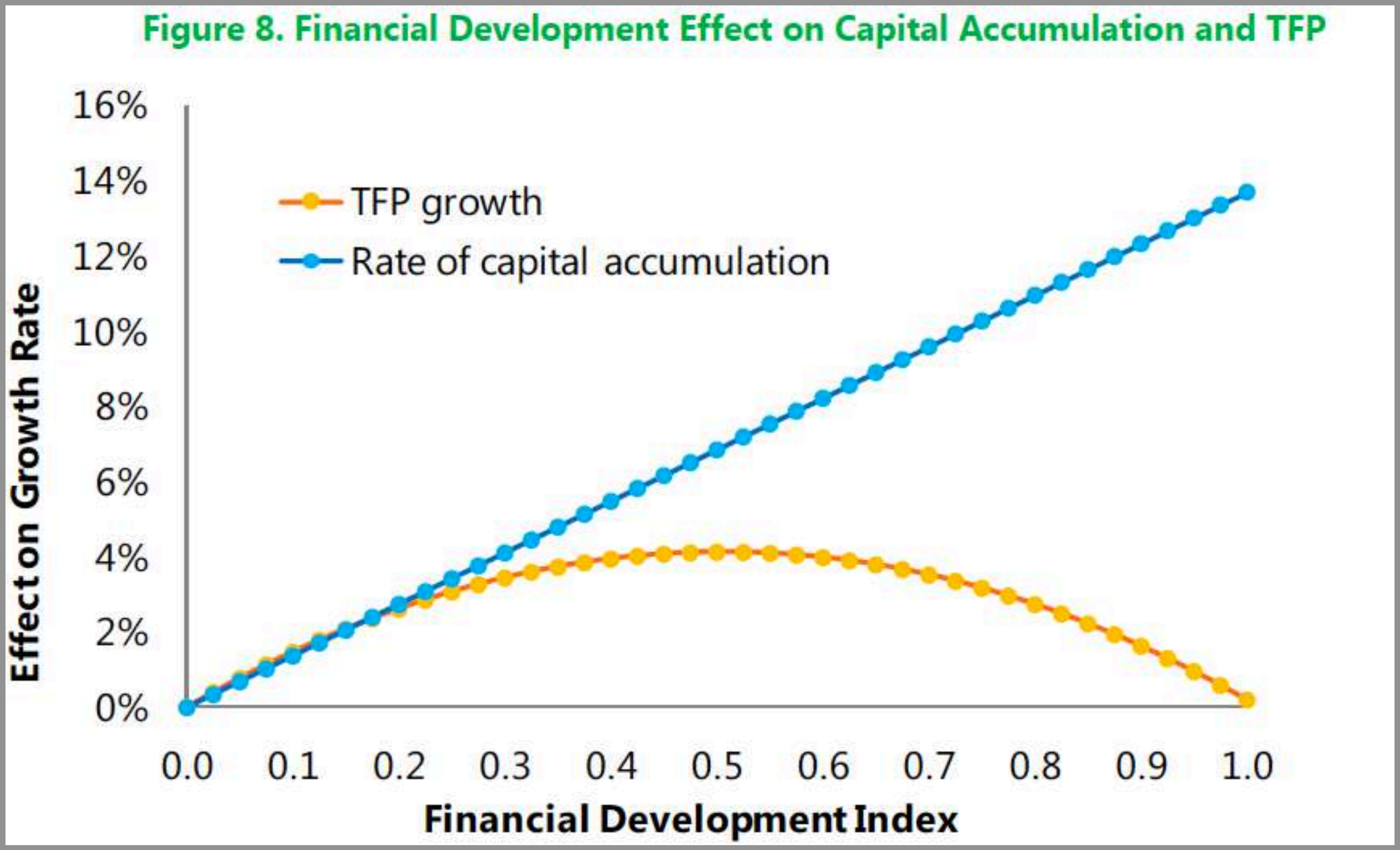
2) A closer look reveals that financial development has a non-linear impact on growth and economic stability

Is financial globalization a good thing?



IMF 2015

Is financial globalization a good thing?



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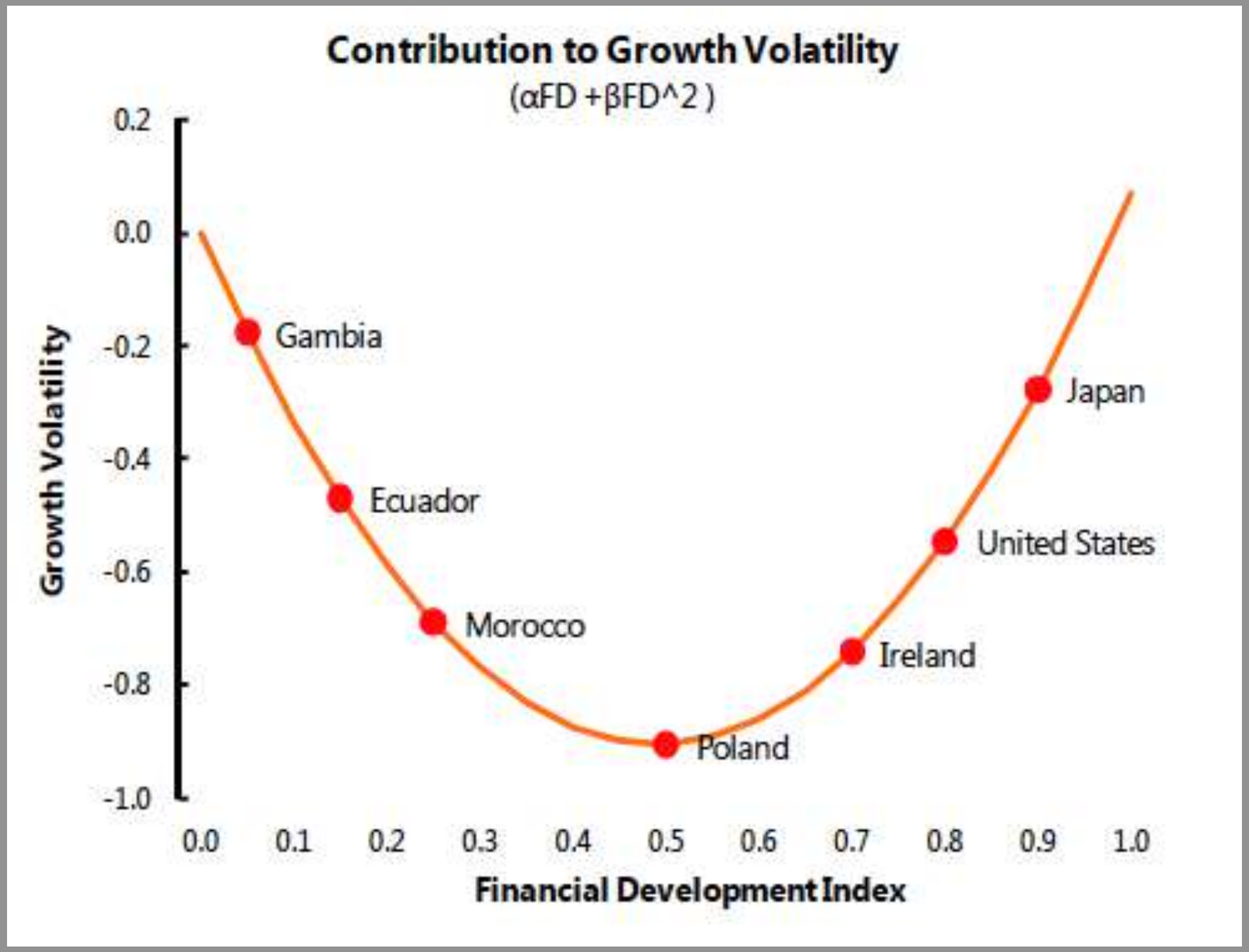

IMF 2015

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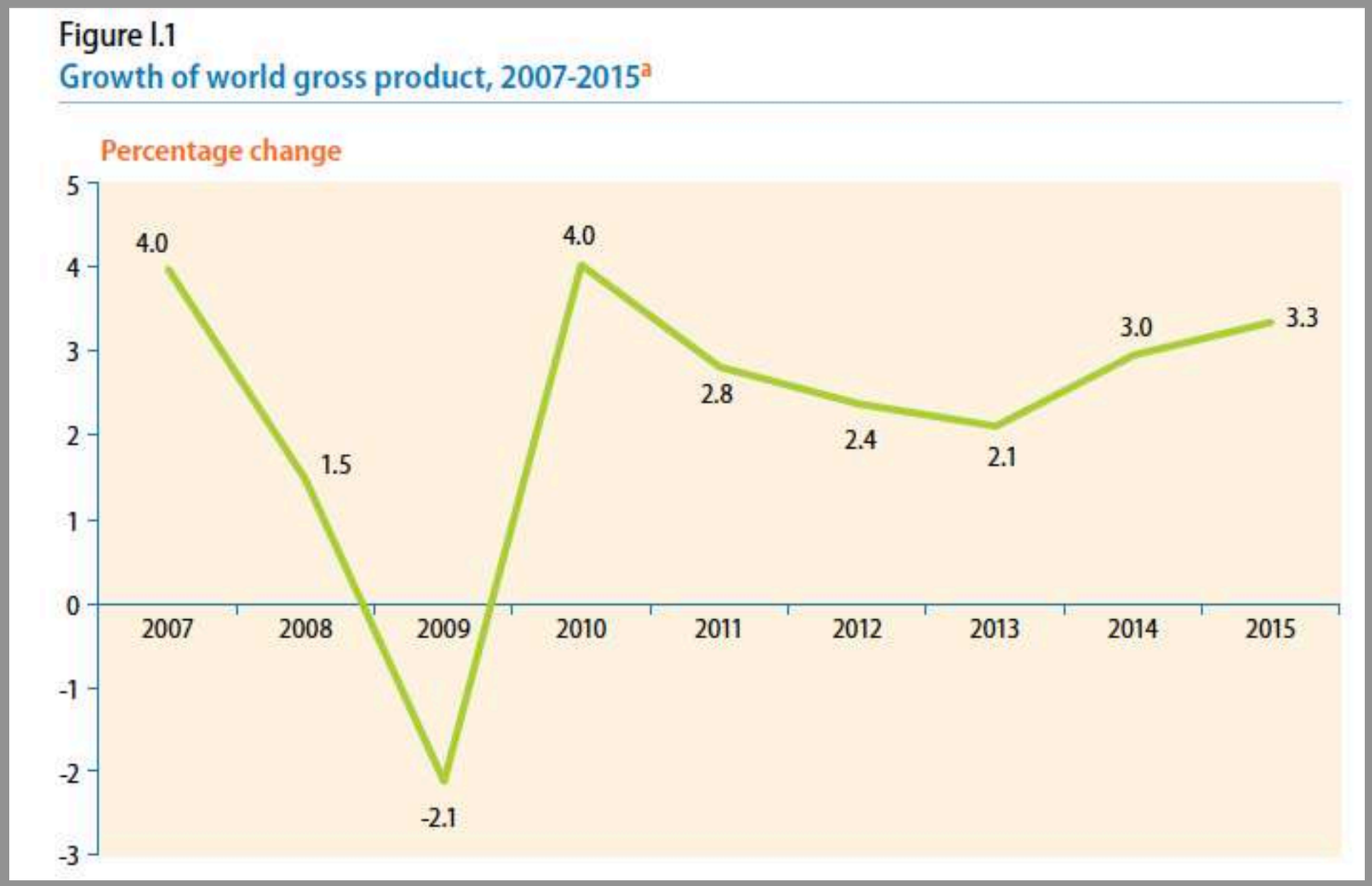
Global crisis

Global crisis

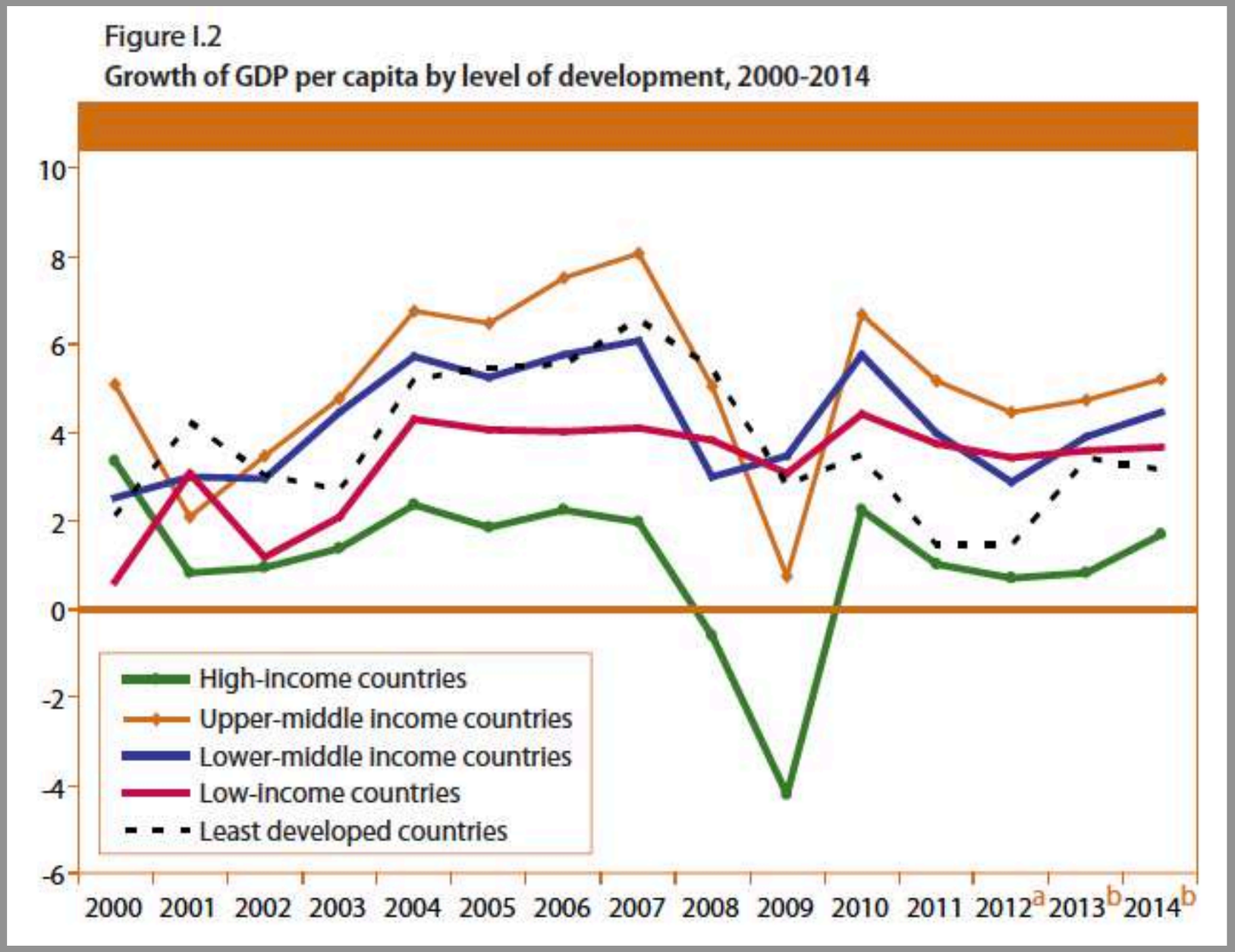
The 2008 financial crisis generated a massive economic crisis



Source: U.N. WESP

Global crisis

The 2008 financial crisis generated a massive economic crisis



Source: U.N. WESP

Growth of world output, 2006-2014

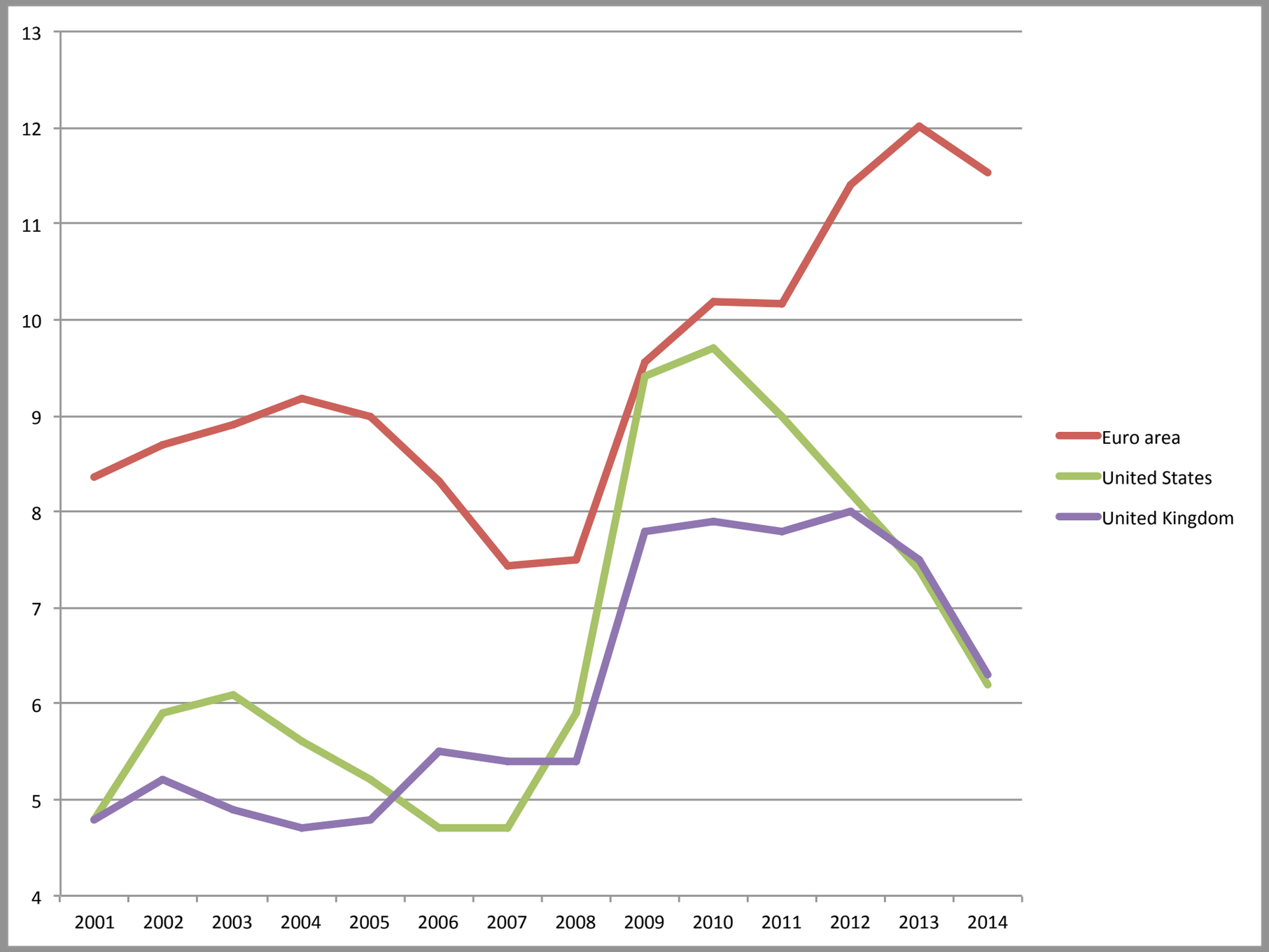
Annual percentage change

	2006-2009[a]	2010	2011[b]	2012[c]	2013[c]	2014[c]
World	**1.1**	**4.0**	**2.7**	**2.2**	**2.4**	**3.2**
Developed economies	-0.4	2.6	1.4	1.1	1.1	2.0
United States of America	-0.5	2.4	1.8	2.1	1.7	2.7
Japan	-1.5	4.5	-0.7	1.5	0.6	0.8
European Union	-0.3	2.1	1.5	-0.3	0.6	1.7
EU-15	-0.5	2.1	1.4	-0.4	0.5	1.6
New EU members	2.1	2.3	3.1	1.2	2.0	2.9
Euro area	-0.4	2.1	1.5	-0.5	0.3	1.4
Other European countries	0.9	1.9	1.7	1.7	1.5	1.9
Other developed countries	1.2	2.8	2.4	2.3	2.0	3.0
Economies in transition	2.2	4.4	4.5	3.5	3.6	4.2
South-Eastern Europe	1.6	0.4	1.1	-0.6	1.2	2.6
Commonwealth of Independent States and Georgia	2.2	4.8	4.8	3.8	3.8	4.4
Russian Federation	1.7	4.3	4.3	3.7	3.6	4.2
Developing economies	5.2	7.7	5.7	4.7	5.1	5.6
Africa	4.7	4.7	1.1	5.0	4.8	5.1
North Africa	4.2	4.1	-6.0	7.5	4.4	4.9
Sub-Saharan Africa	5.0	5.0	4.5	3.9	5.0	5.2
Nigeria	6.6	7.8	7.4	6.4	6.8	7.2
South Africa	2.5	2.9	3.1	2.5	3.1	3.8
Others	6.3	5.5	4.4	3.9	5.5	5.3
East and South Asia	7.1	9.0	6.8	5.5	6.0	6.3
East Asia	7.2	9.2	7.1	5.8	6.2	6.5
China	11.0	10.3	9.2	7.7	7.9	8.0
South Asia	6.4	8.3	5.8	4.4	5.0	5.7
India	7.3	9.6	6.9	5.5	6.1	6.5
Western Asia	2.3	6.7	6.7	3.3	3.3	4.1
Latin America and the Caribbean	2.5	6.0	4.3	3.1	3.9	4.4
South America	3.9	6.5	4.5	2.7	4.0	4.4
Brazil	3.6	7.5	2.7	1.3	4.0	4.4
Mexico and Central America	-0.1	5.4	4.0	4.0	3.9	4.6
Mexico	-0.6	5.5	3.9	3.9	3.8	4.6
Caribbean	3.6	3.5	2.7	2.9	3.7	3.8

Source: U.N. WESP

Global crisis

Unemployment rates



Global crisis

How was it possible?

https://www.youtube.com/watch?v=dI6HNi5I8d4