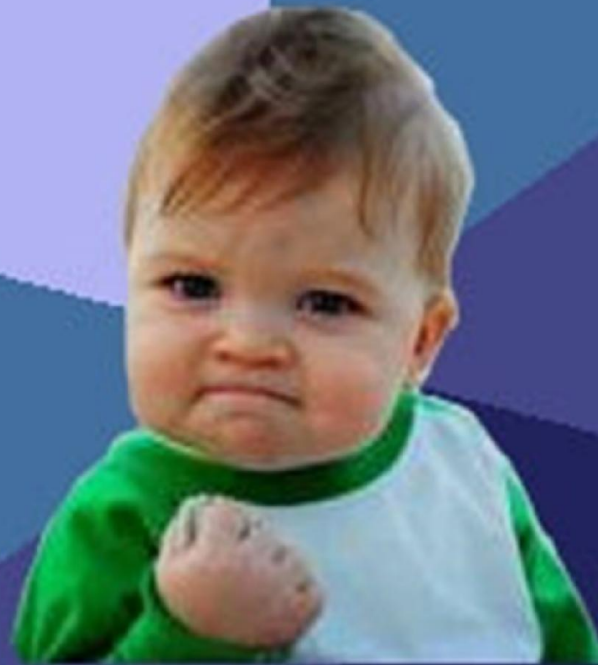


LAST DAY OF CLASS...



T O D A Y

INTERNATIONAL WOMEN'S DAY...

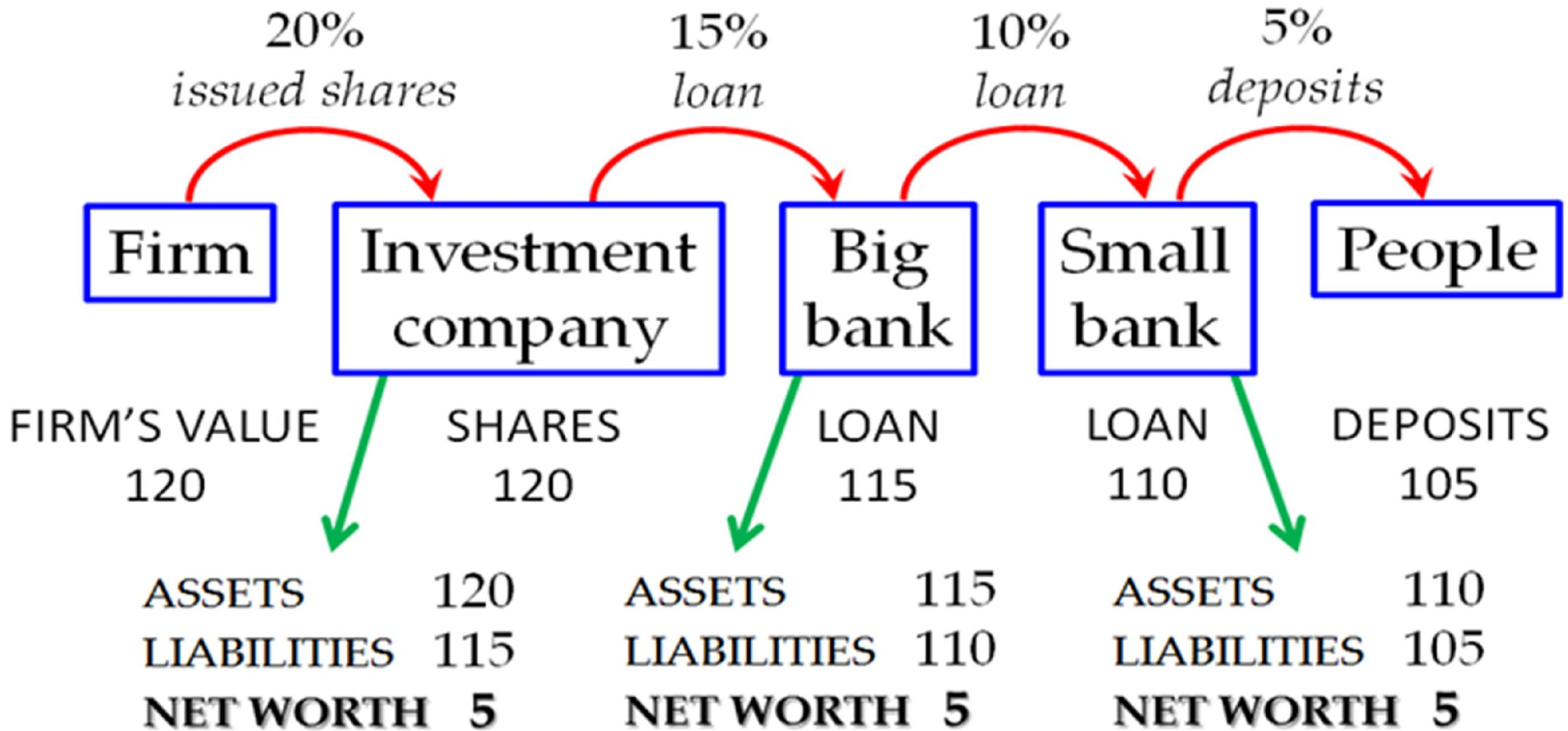


T O D A Y

Financial assets

- The need to raise money vertebrates economies
- Financial asset = promise of payment in the future in exchange for receiving money now
- Function: way of saving / getting purchasing power
- Properties: maturity / risk / liquidity / return
- Types: tradable (securities) / non-tradable
- Securitization
- Trade-offs between properties

Vulnerability of the financial sector

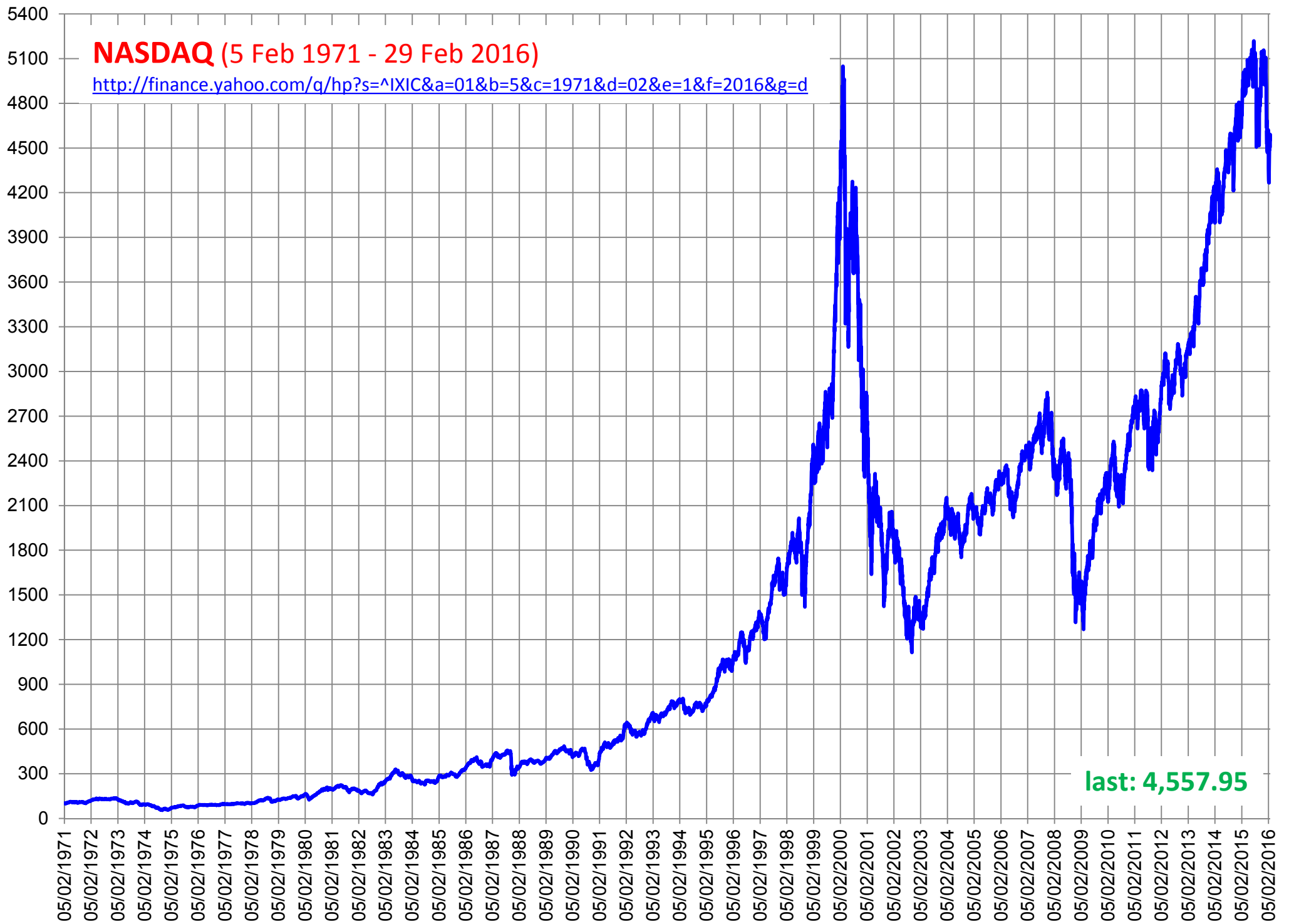


Financial sector instability/fragility /1

- Reckless and/or excessive lending by banks?
- Possibility of bank runs
- Stability relies on the belief that the sector is stable
- Shadow banking – sector that sidesteps regulations
- Speculation – contributes to magnify outcomes and create bubbles (Ponzi schemes)
- Abuse of leverage?

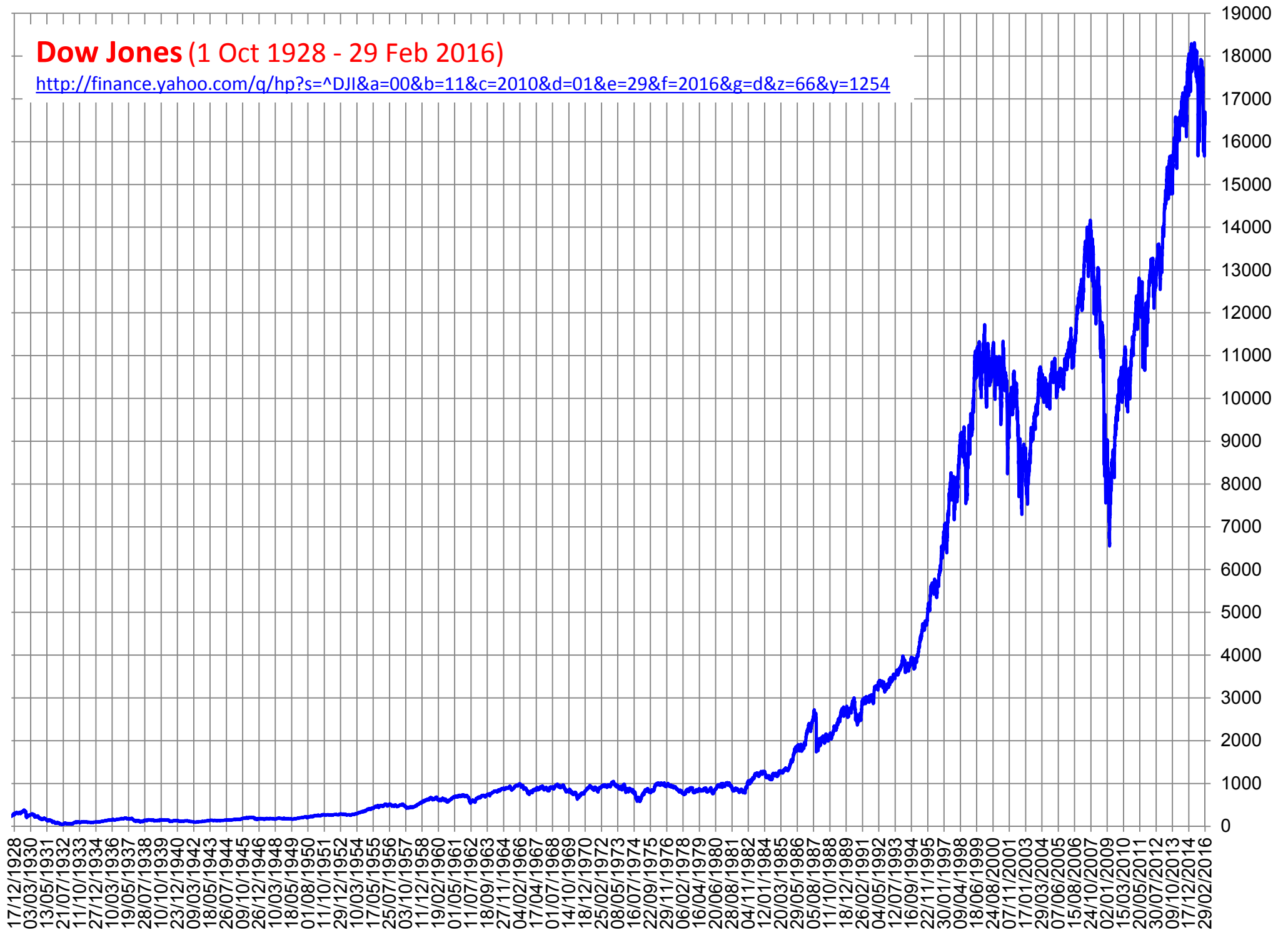
Financial sector instability/fragility /2

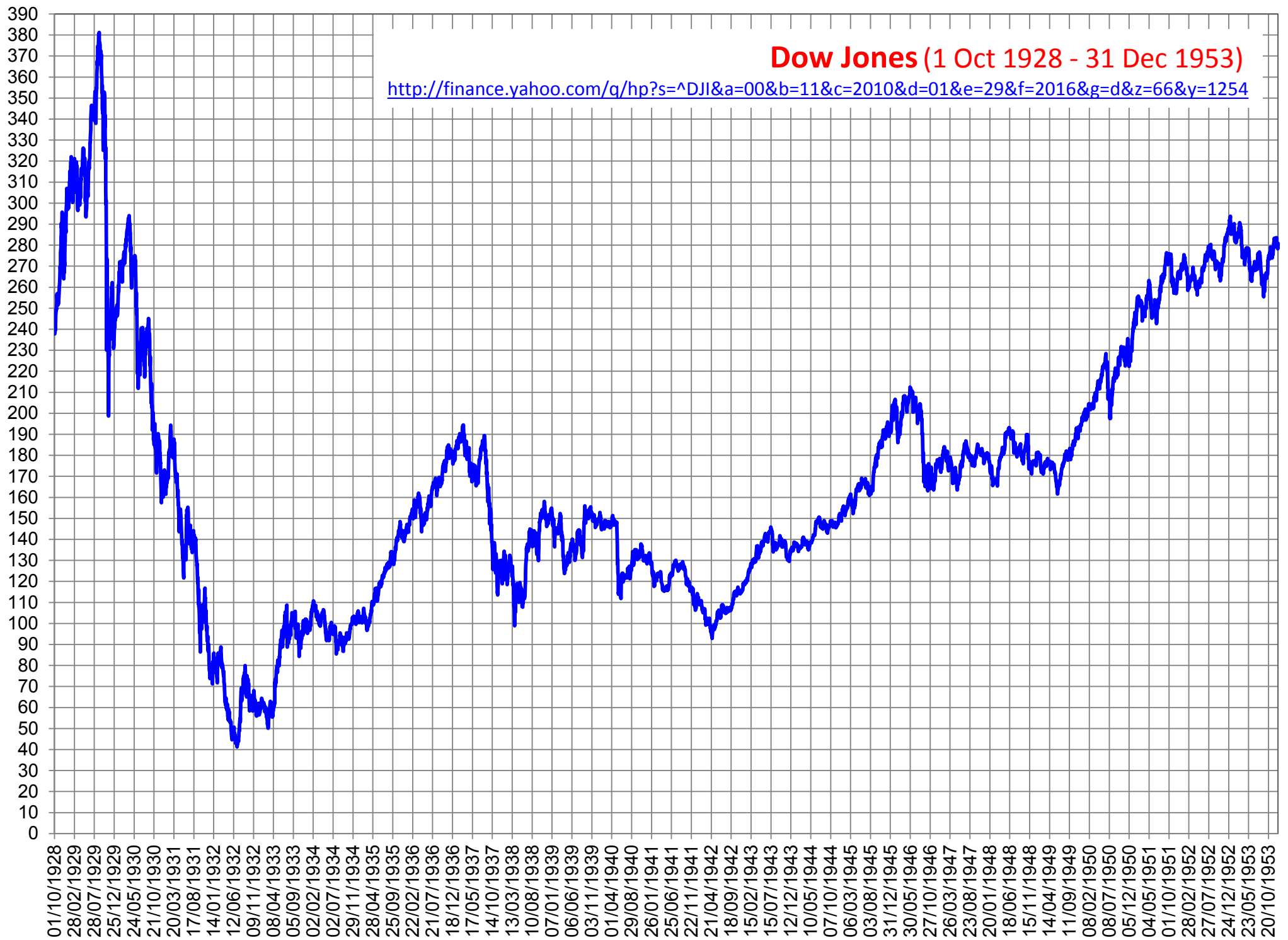
- Financial activities increase interdependence – long chains of connections
- Contagion effects
- Myopic decisions – ignorance of systemic risks (belief that what holds locally, holds globally)
- Emergent properties – larger scale, new banking and/or derivatives risks (banks too big to fail)
- Minsky's instability hypothesis – overoptimism



Dow Jones (1 Oct 1928 - 29 Feb 2016)

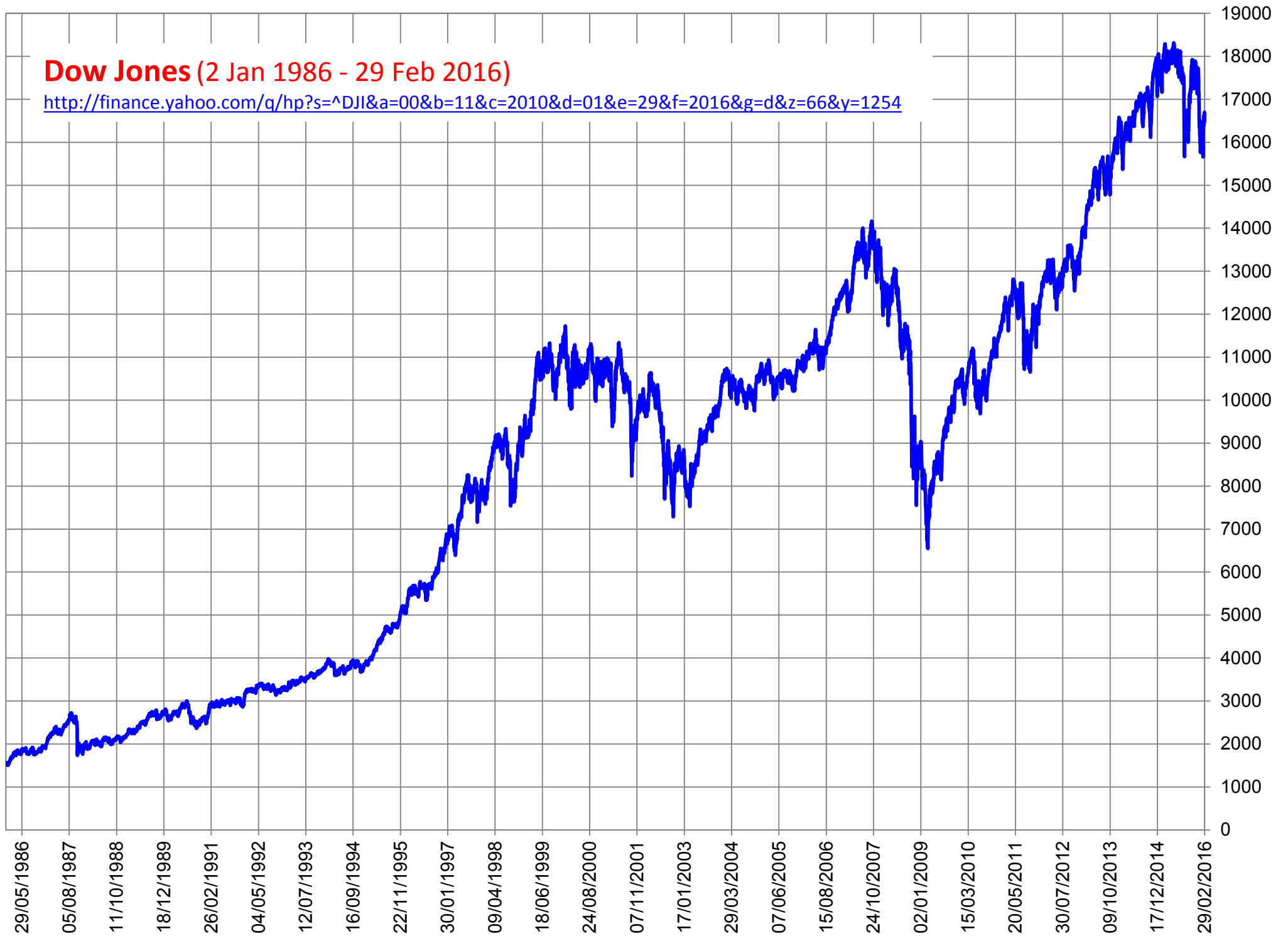
<http://finance.yahoo.com/q/hp?s=^DJI&a=00&b=11&c=2010&d=01&e=29&f=2016&g=d&z=66&y=1254>





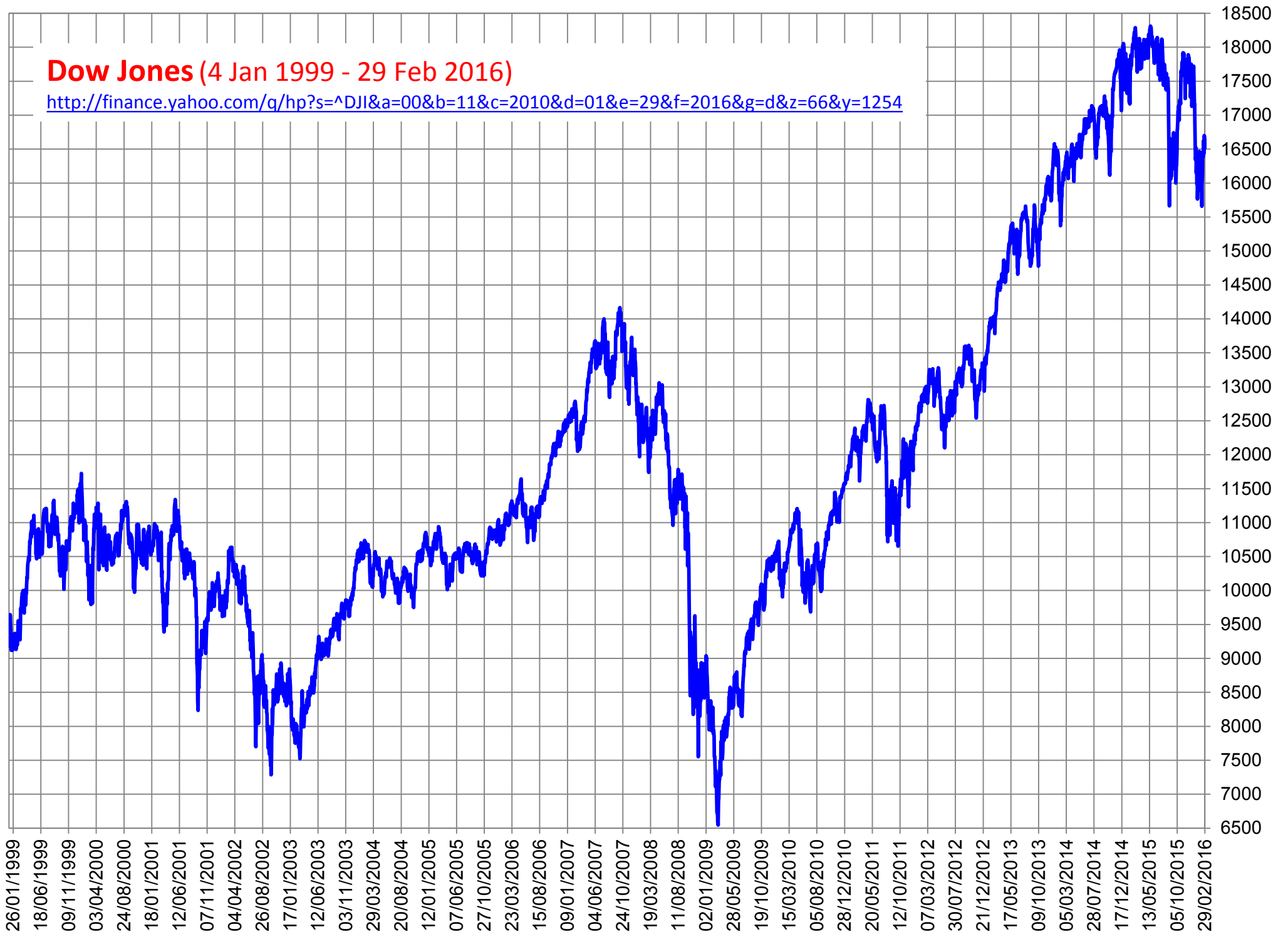
Dow Jones (2 Jan 1986 - 29 Feb 2016)

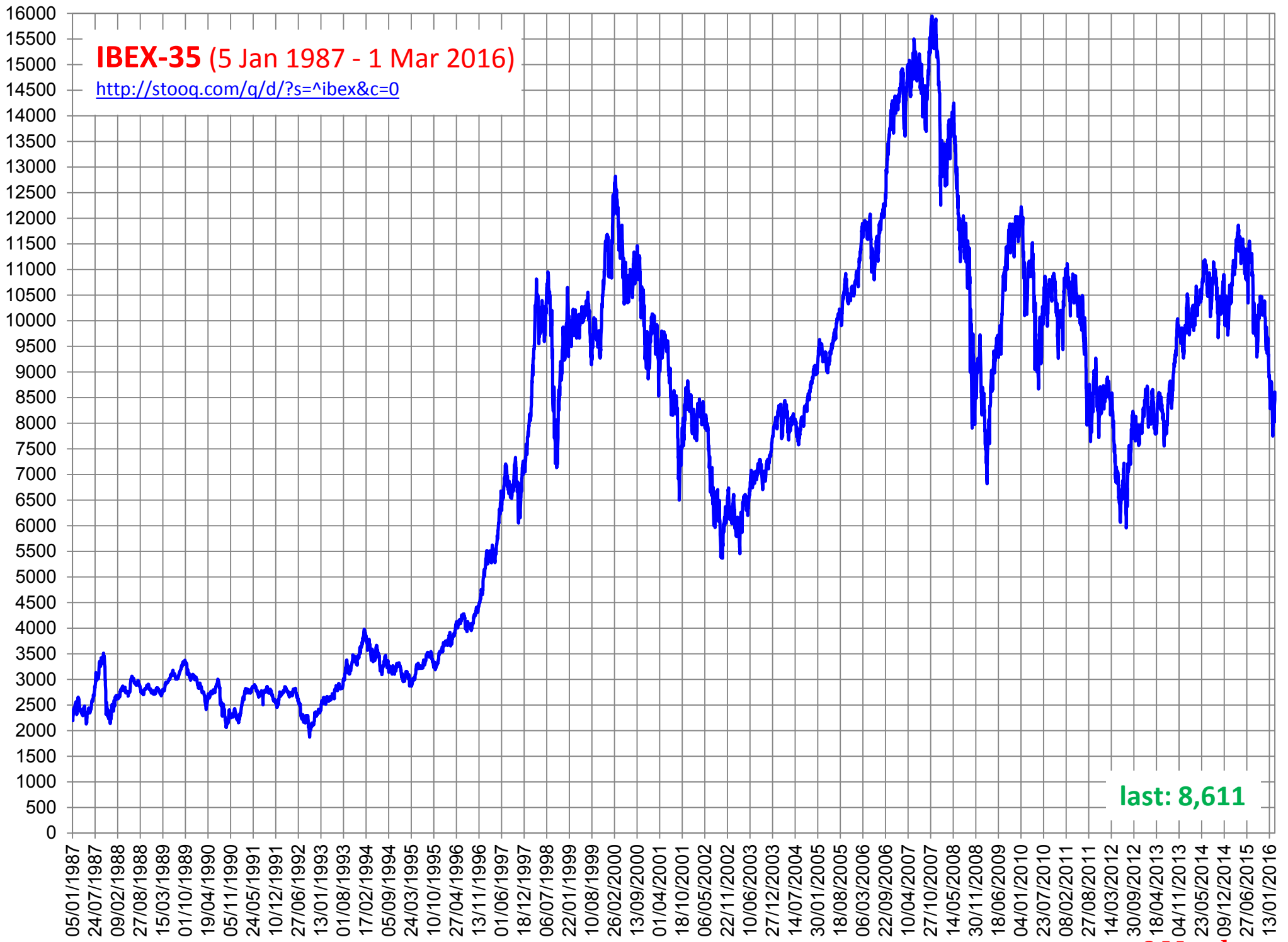
<http://finance.yahoo.com/q/hp?s=DJI&a=00&b=11&c=2010&d=01&e=29&f=2016&g=d&z=66&y=1254>

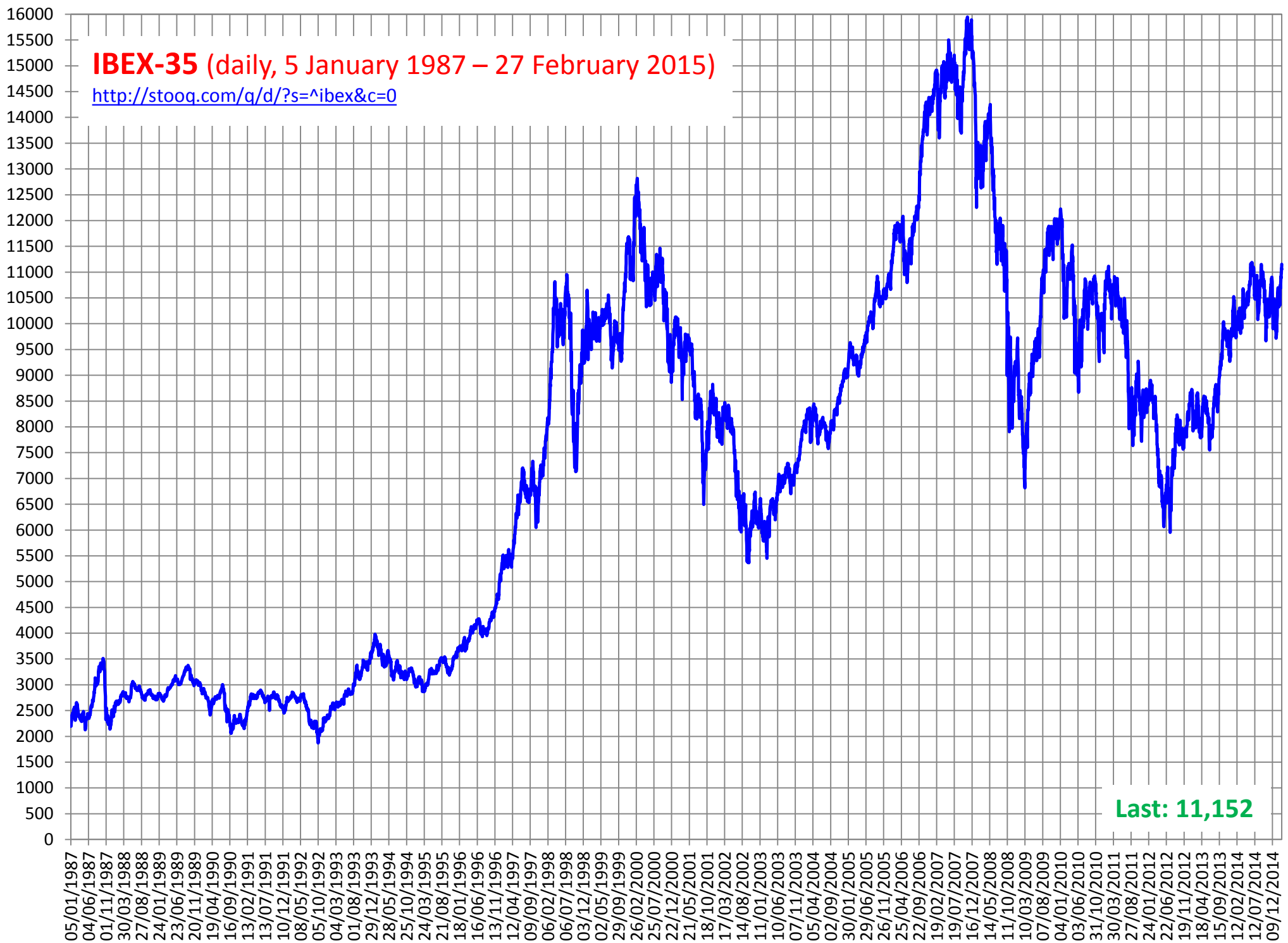


Dow Jones (4 Jan 1999 - 29 Feb 2016)

<http://finance.yahoo.com/q/hp?s=DJI&a=00&b=11&c=2010&d=01&e=29&f=2016&g=d&z=66&y=1254>



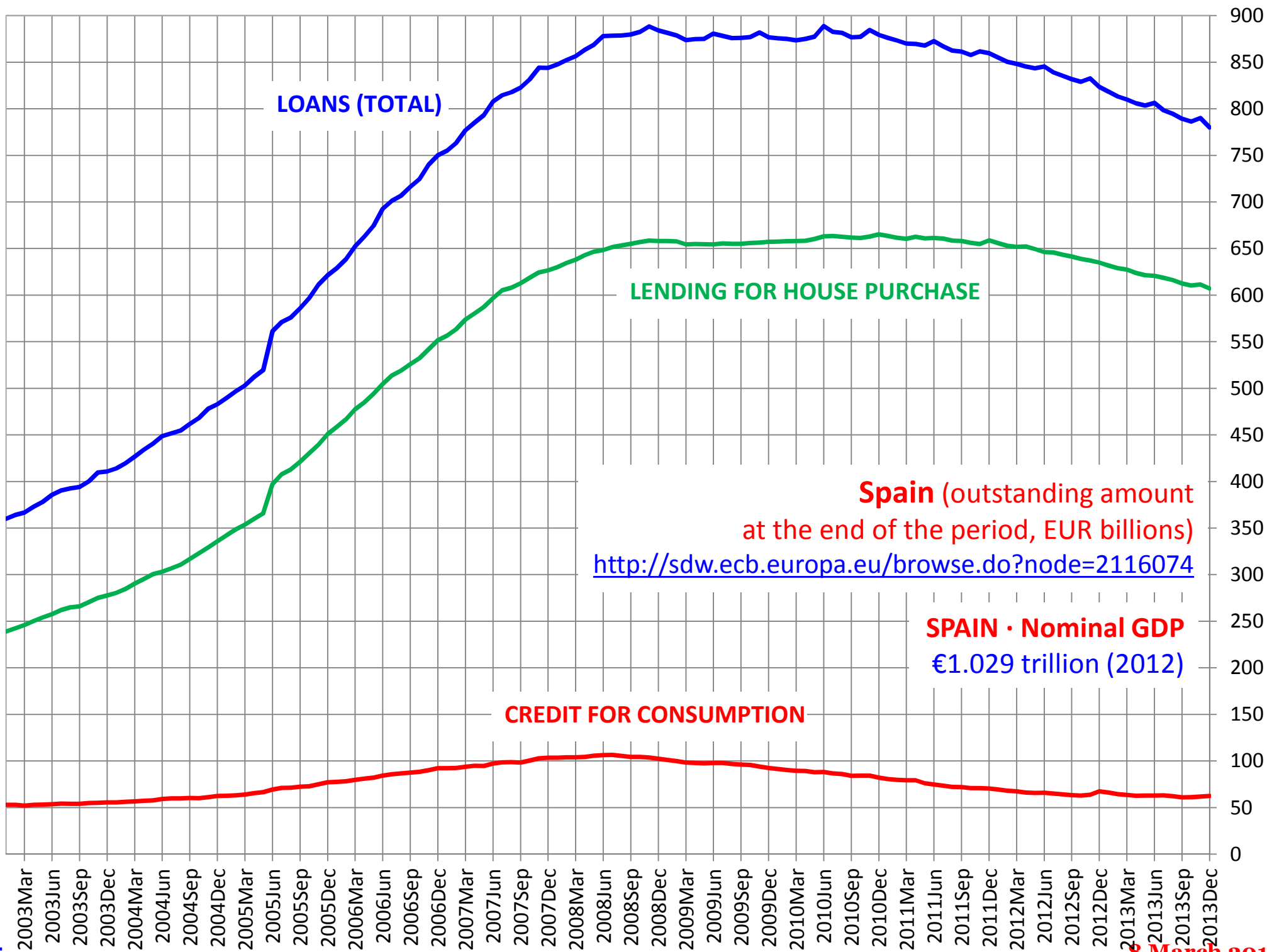


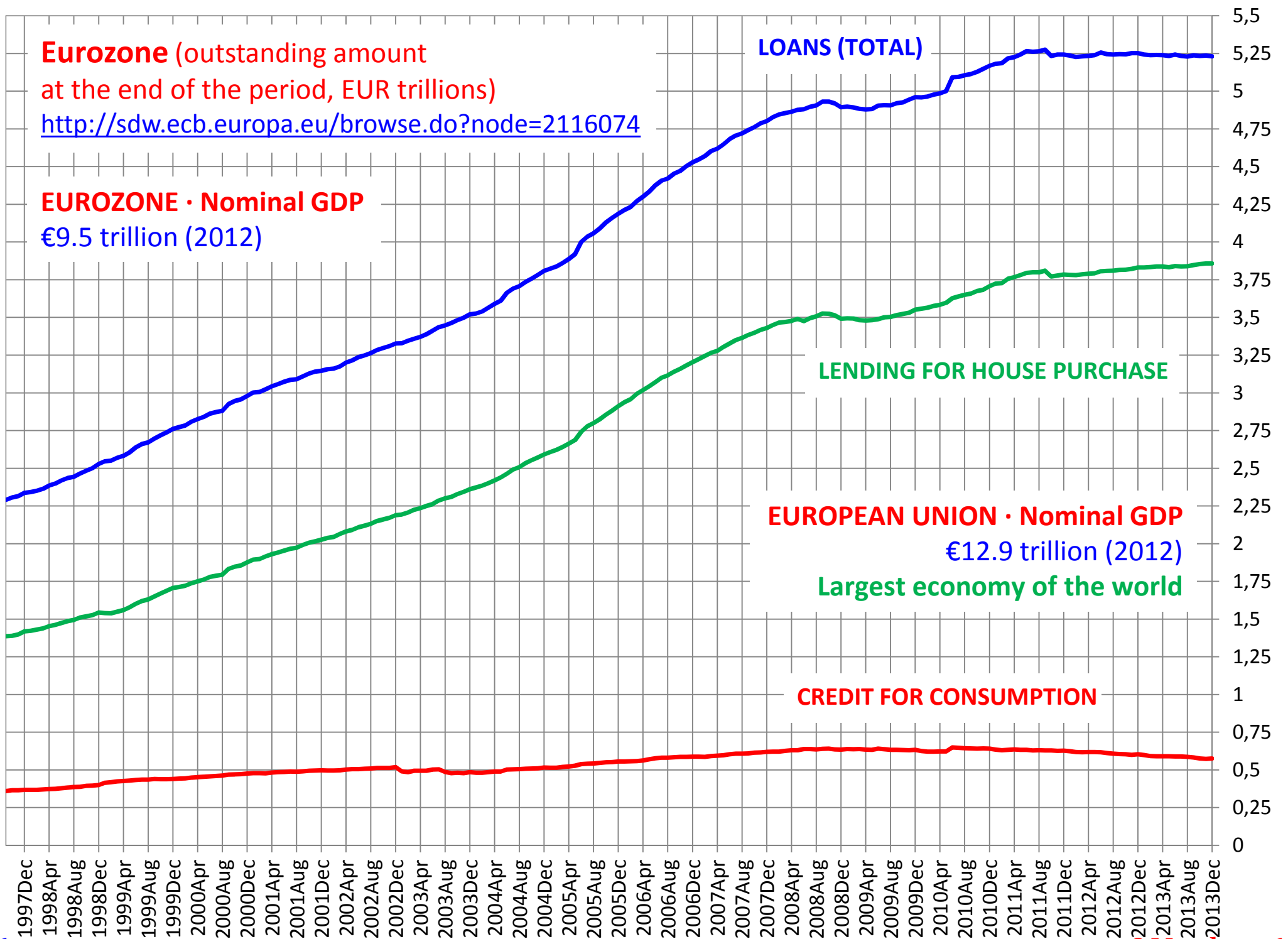


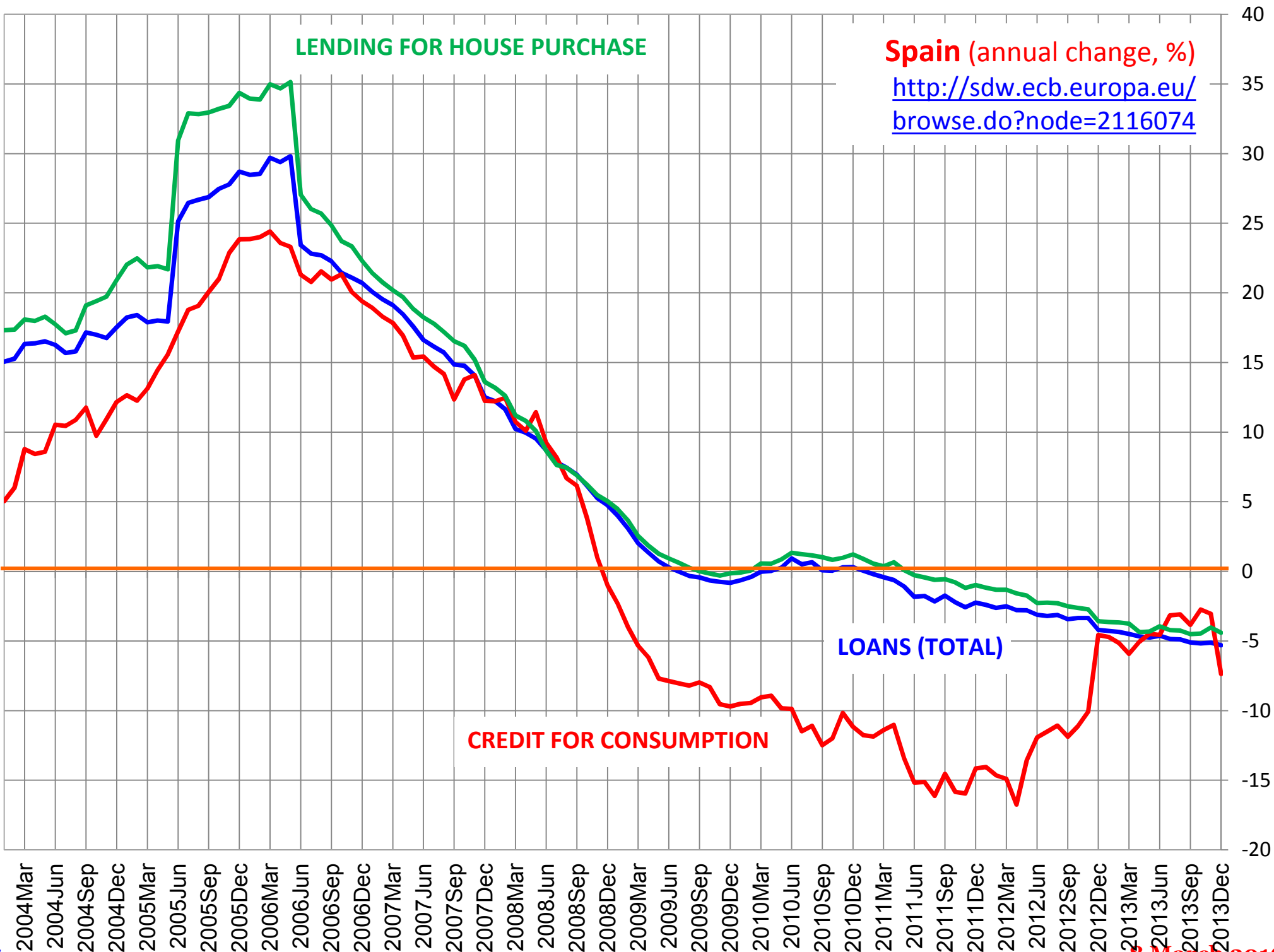
Booms and Busts

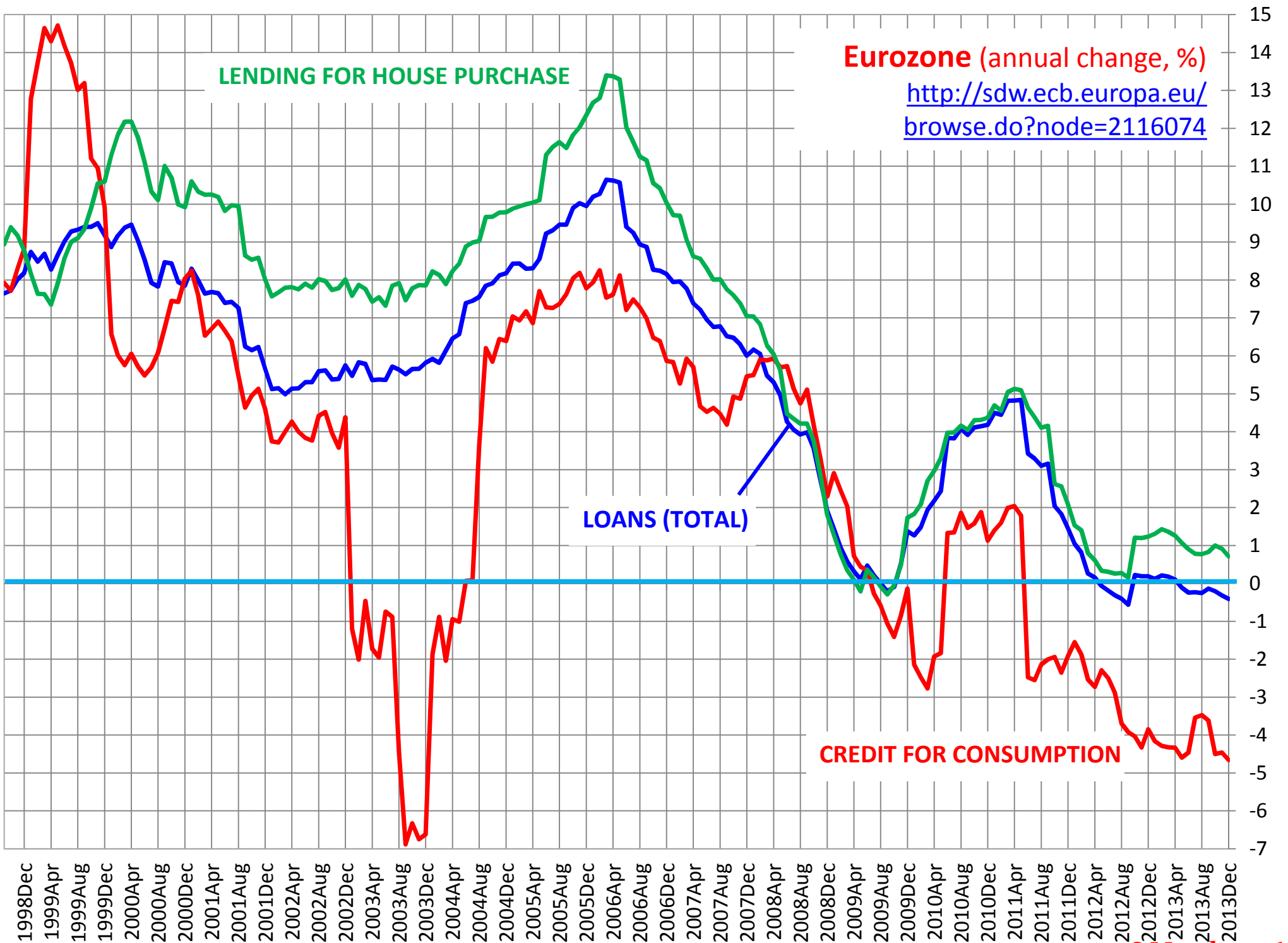
Robert Menschel (2002): *Markets, Mobs, and Mayhem. A Modern Look at the Madness of Crowds*, p. 47

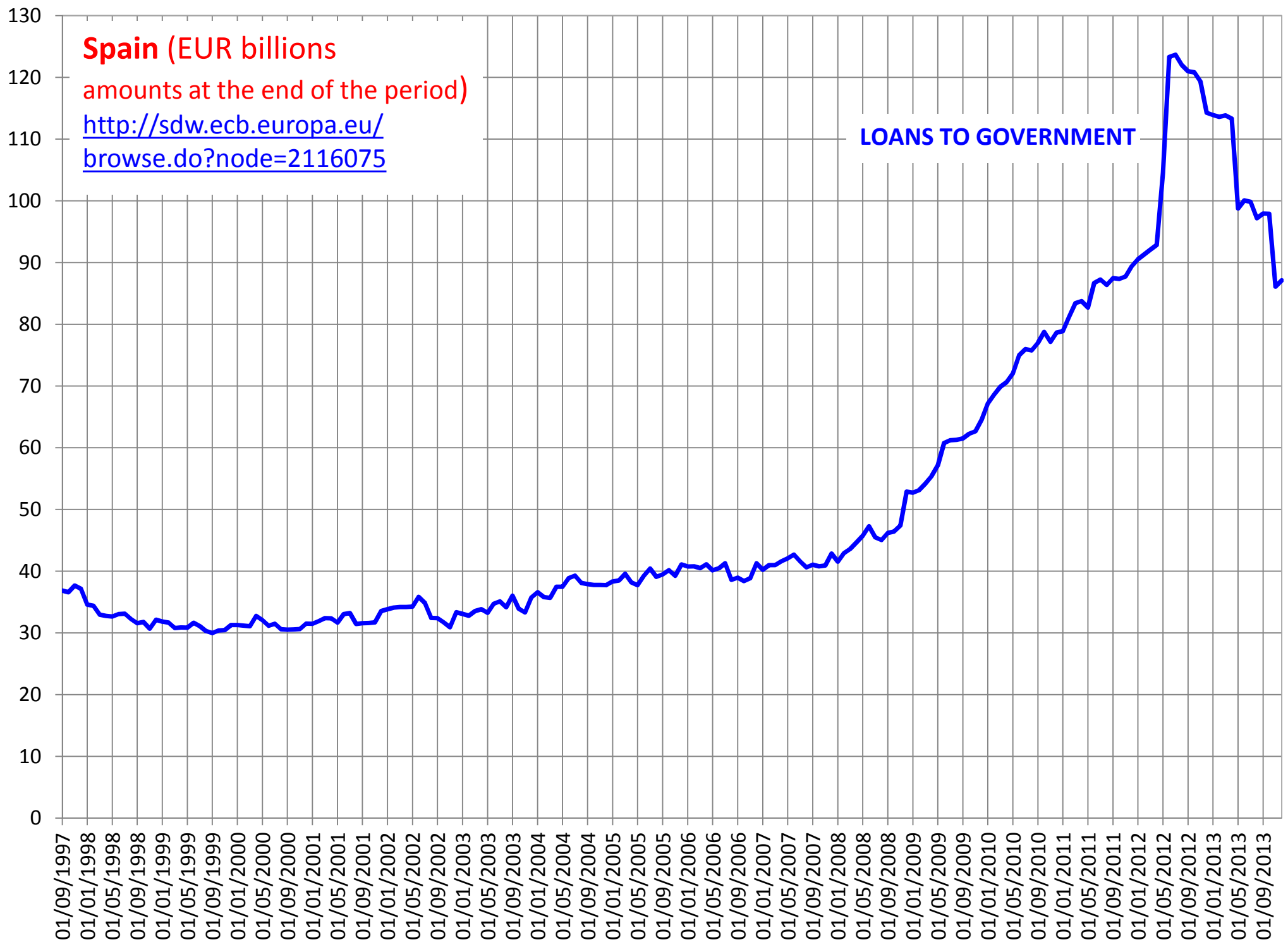
	<i>% Rise Bull Phase</i>	<i>Length of Bull Phase (months)</i>	<i>% Decline Peak to Trough</i>	<i>Length of Bear Phase (months)</i>
Tulips (1634–1637)				
Netherlands	+5900%	36	−93%	10
Mississippi Shares				
France (1719–1721)	+6200%	13	−99%	13
South Sea Shares				
England (1719–1721)	+1000%	18	−84%	6
American Stocks				
U.S. (1923–1932)	+345%	71	−87%	33
Mexican Stocks				
Mexico (1978–1981)	+785%	30	−73%	18
Silver				
U.S. (1979–1982)	+710%	12	−88%	24
Gulf Stocks				
Kuwait (1978–1986)	+7000%	36	−98%	30
Hong Kong Stocks				
Hong Kong (1970–1974)	+1200%	28	−92%	20
Taiwan Stocks				
Taiwan (1986–1990)	+1168%	40	−80%	12

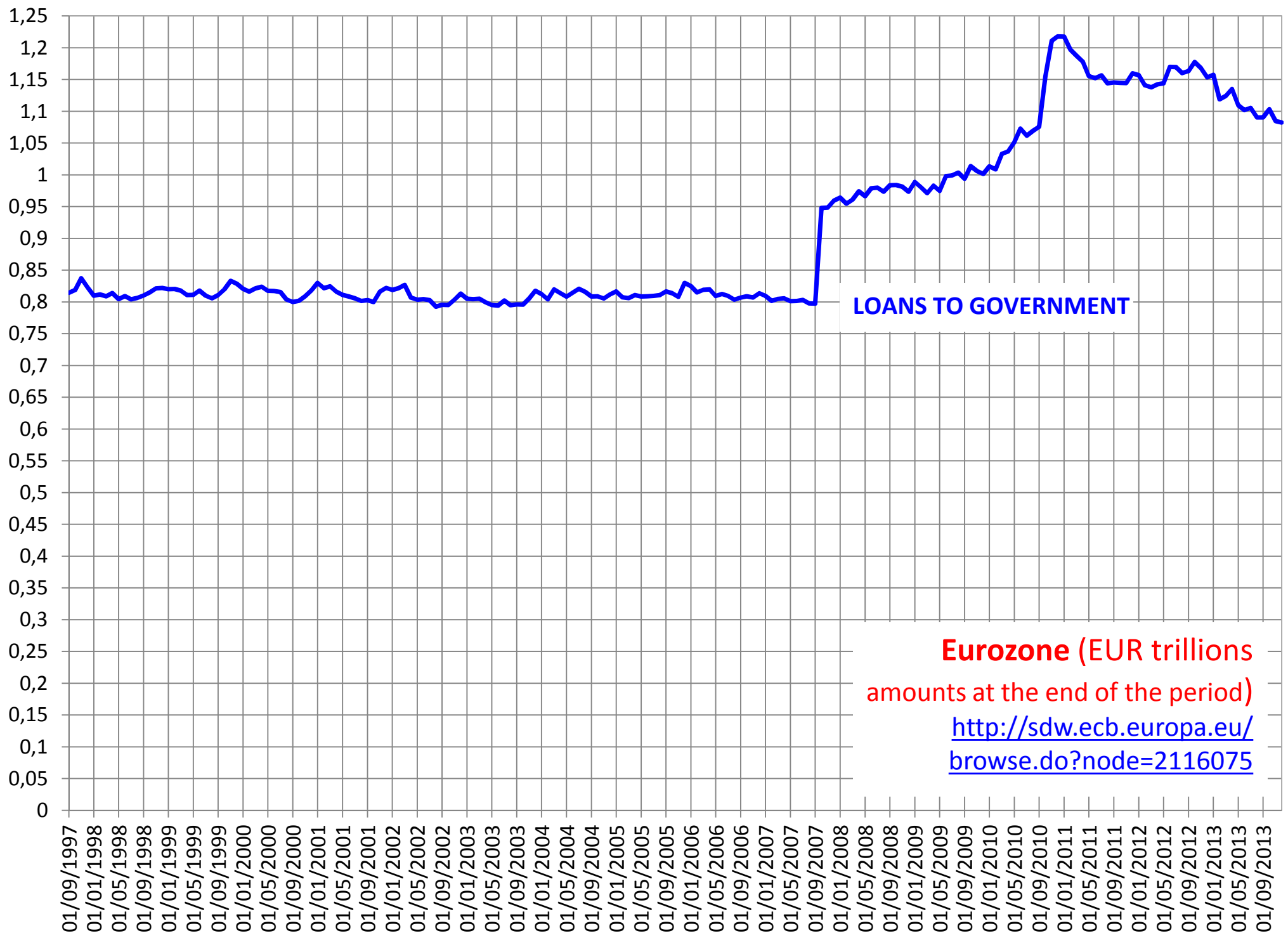










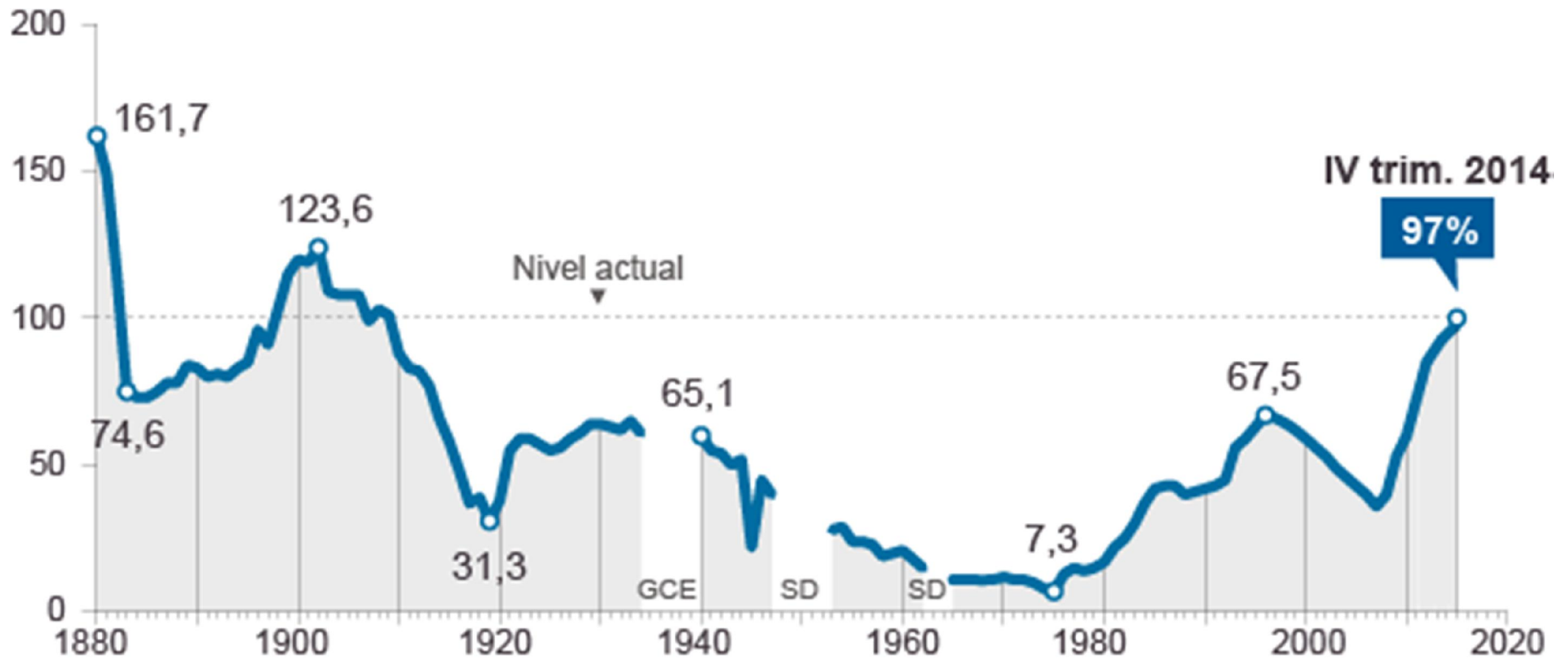


Spain · Debt to GDP (%)

http://economia.elpais.com/economia/2015/02/16/actualidad/1424114459_766802.html

EVOLUCIÓN HISTÓRICA DE LA DEUDA PÚBLICA

En % del PIB



GCE: Guerra Civil Española. SD: Sin datos

Fuente:

EL PAÍS

Evolución histórica de la deuda pública española

En % de PIB



1902-1931
Reinado de Alfonso XIII

1931-1936
Segunda República

1939-1975
Dictadura de Francisco Franco

1975-1982
Transición a la democracia

1982-96
Gobiernos del PSOE
Felipe González.

1996-04
PP
José M^a Aznar

2004-11
PSOE
José Luis Rodríguez Zapatero

2011-15
PP
Mariano Rajoy

1913-21. Eduardo Dato; bienio liberal; regreso de Dato.
1921-23. Coalición conservadora presidida por Manuel Allendesalazar
1923-30. Dictadura de Primo de Rivera (1923-1930)
1930-31. "Dictablanda" del general Dámaso Berenguer (1930-31)
1931. Presidencia del almirante Juan Bautista Aznar y elecciones del 12 de abril. Victoria de las candidaturas republicanas

1977-79. Gobierno de UCE. Presidente, Adolfo Suárez.
1979-81. Nuevo Gobierno de Suárez.
1981-82. Presidencia de Calvo Sotelo.

Spain · Debt to GDP ratio

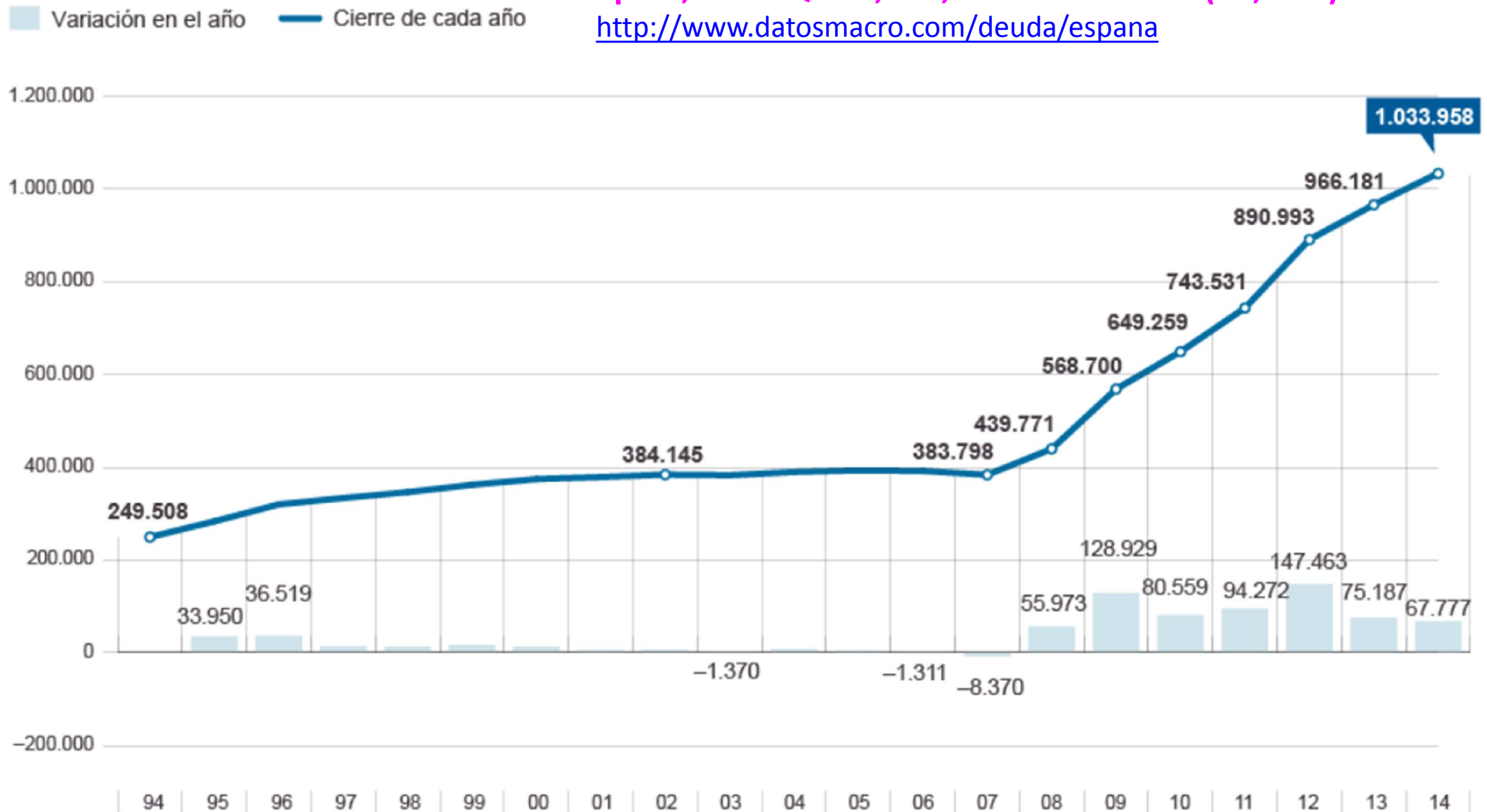
http://cincodias.com/cincodias/2014/12/12/graficos/1418410740_043679.html

Spain · Government debt (EUR million)

http://economia.elpais.com/economia/2015/02/16/actualidad/1424114459_766802.html

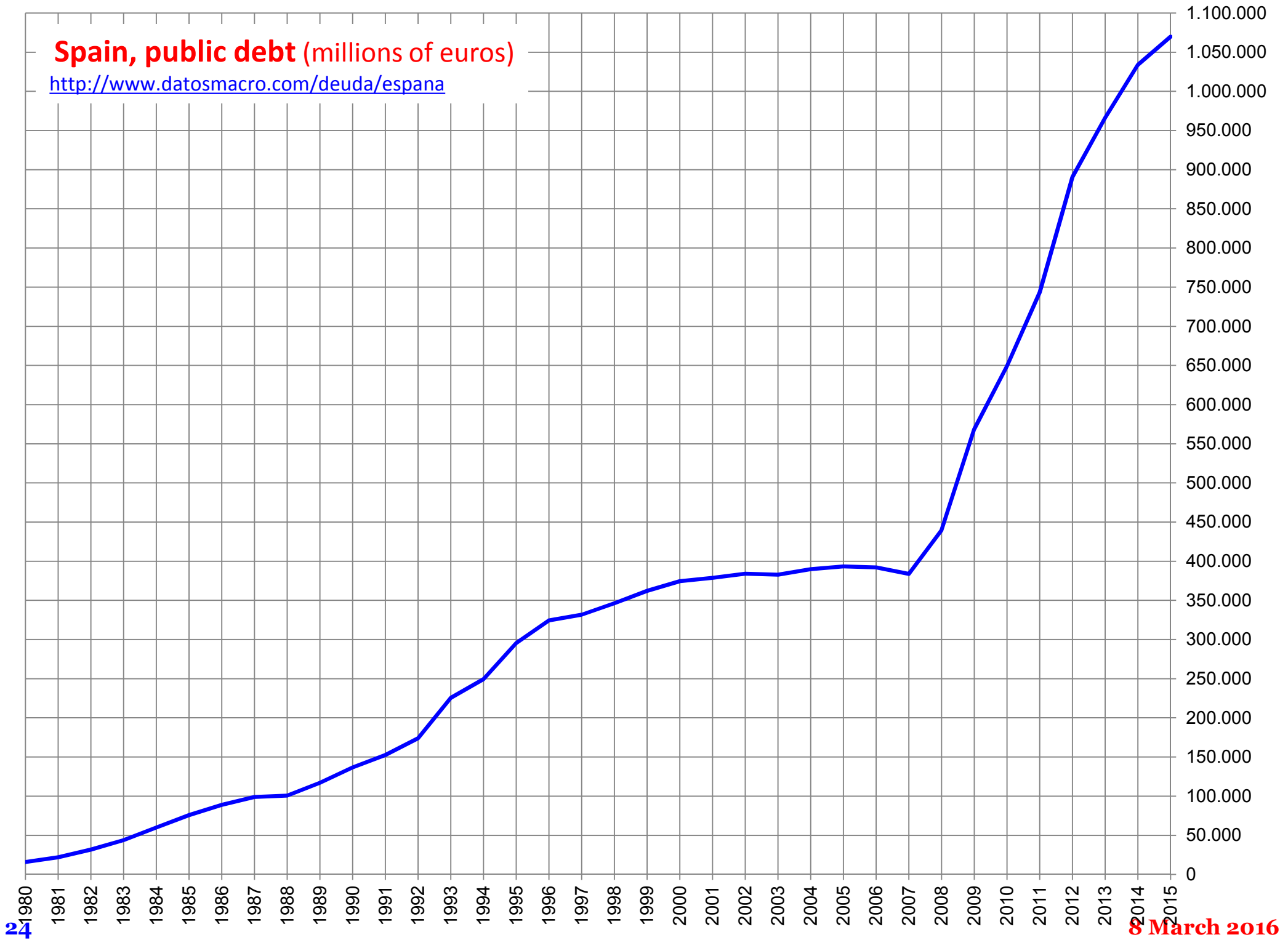
Spain, 2015 Q4 : 1,069,876 EUR million (98,95%)

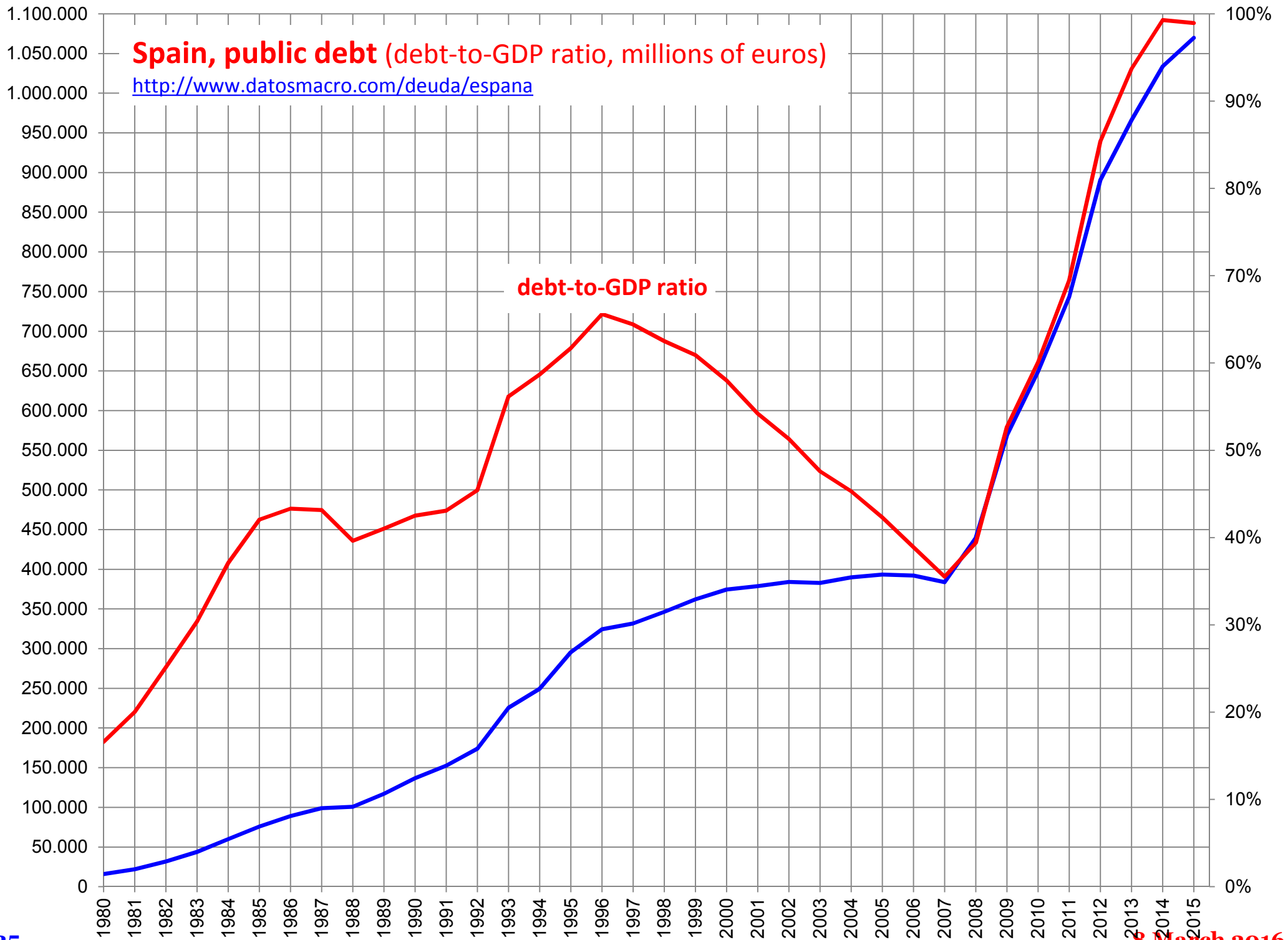
<http://www.datosmacro.com/deuda/espana>



Spain, public debt (millions of euros)

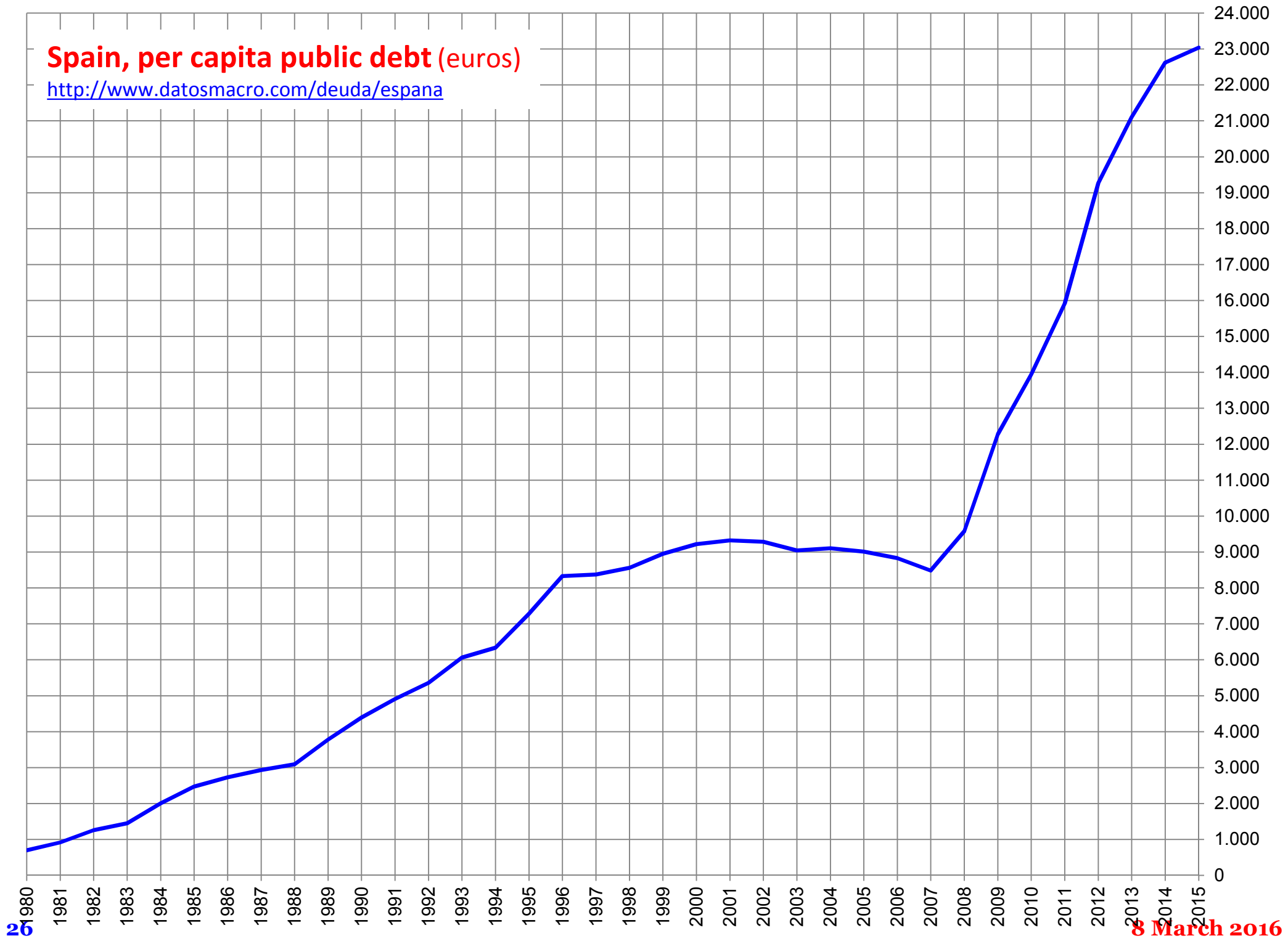
<http://www.datosmacro.com/deuda/espana>





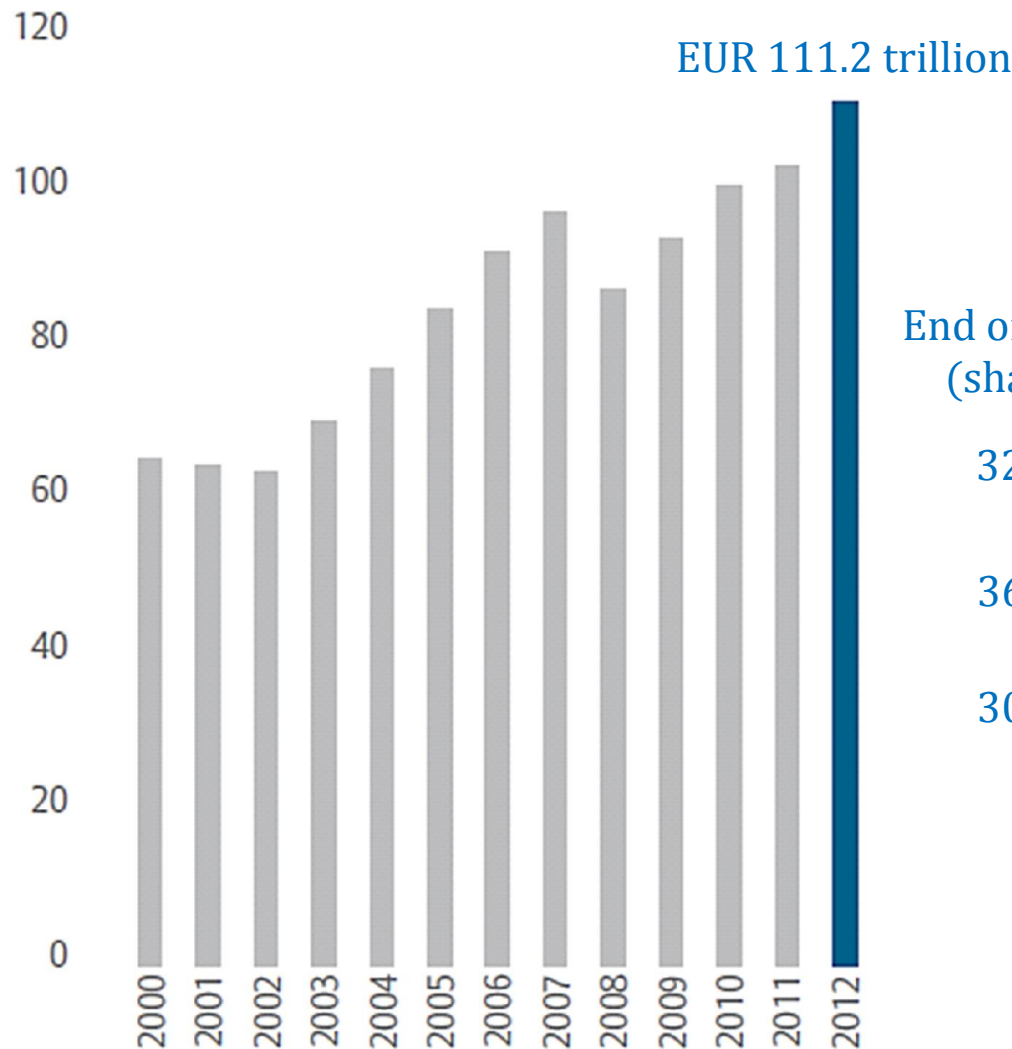
Spain, per capita public debt (euros)

<http://www.datosmacro.com/deuda/espana>



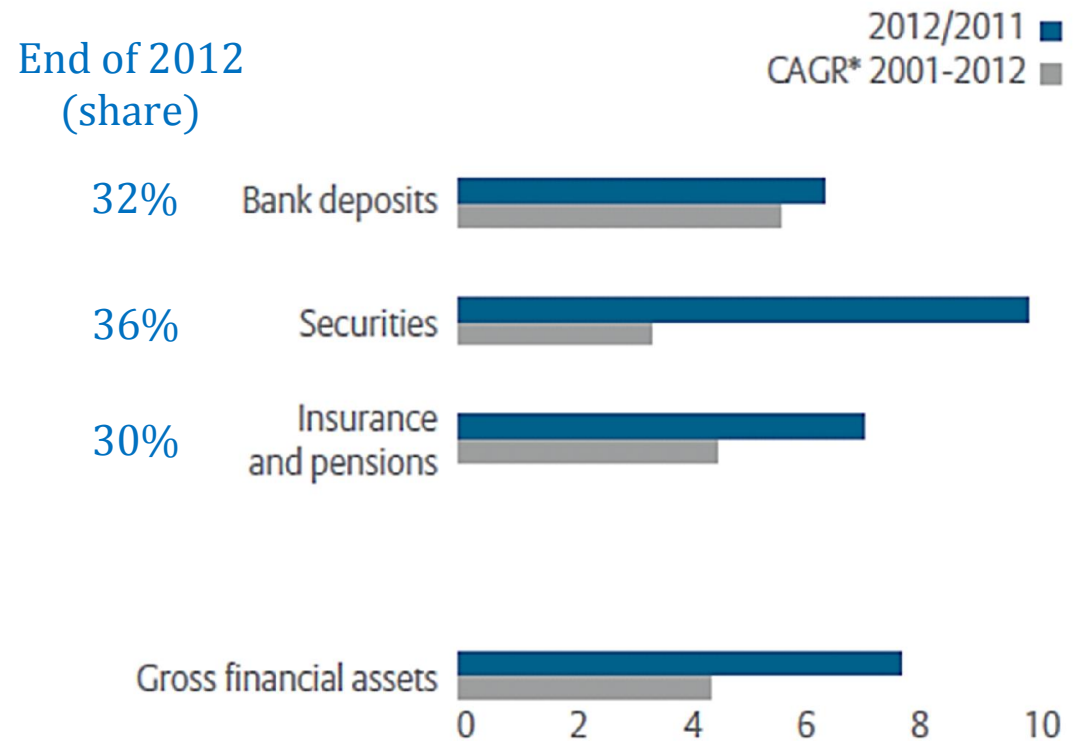
Global financial assets: Strong recovery across all asset classes

Global gross financial assets, in EUR tn



Percentage change of asset classes

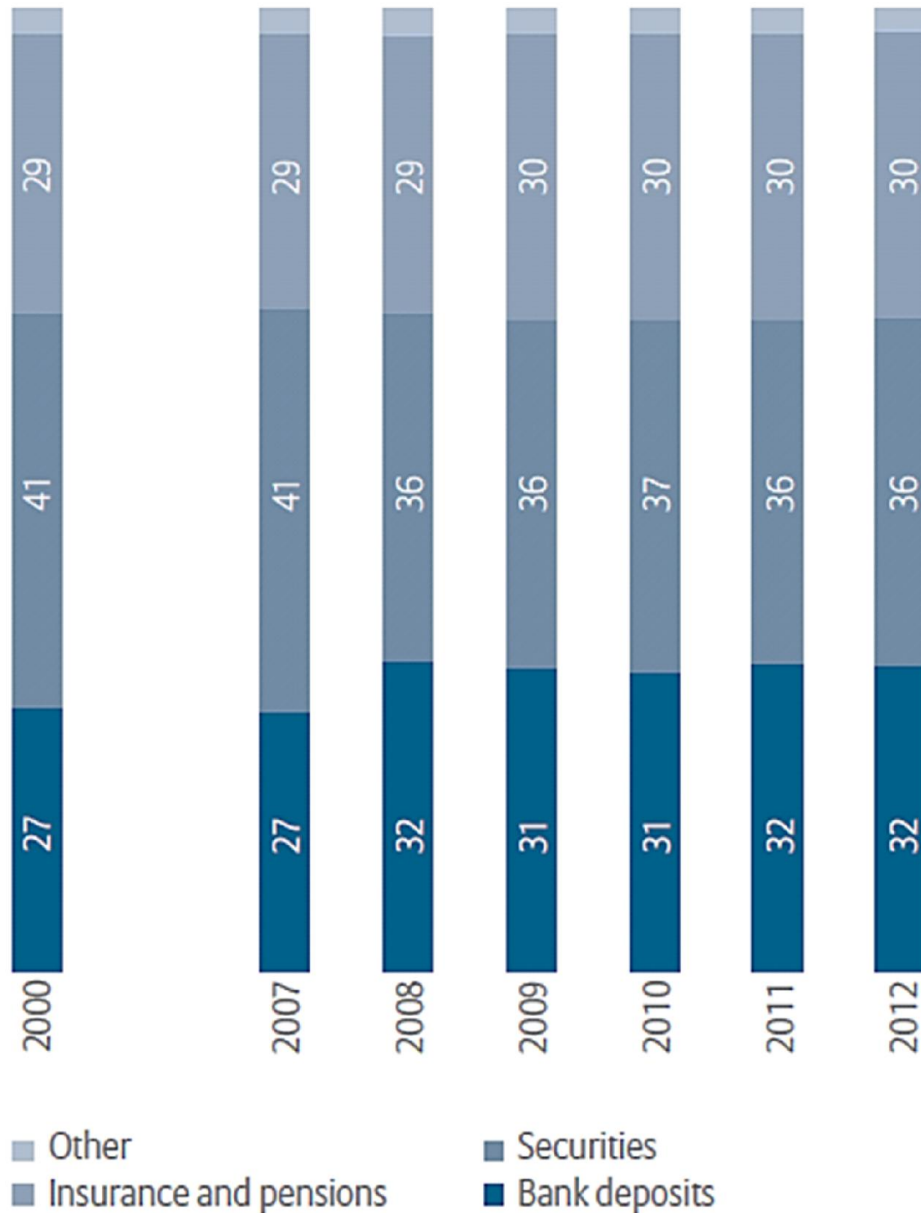
World GDP (2012) \approx USD 72 trillion
 Average rate USD/EUR (2012) = 1.2848
 World GDP (2012) \approx EUR 92.5 trillion



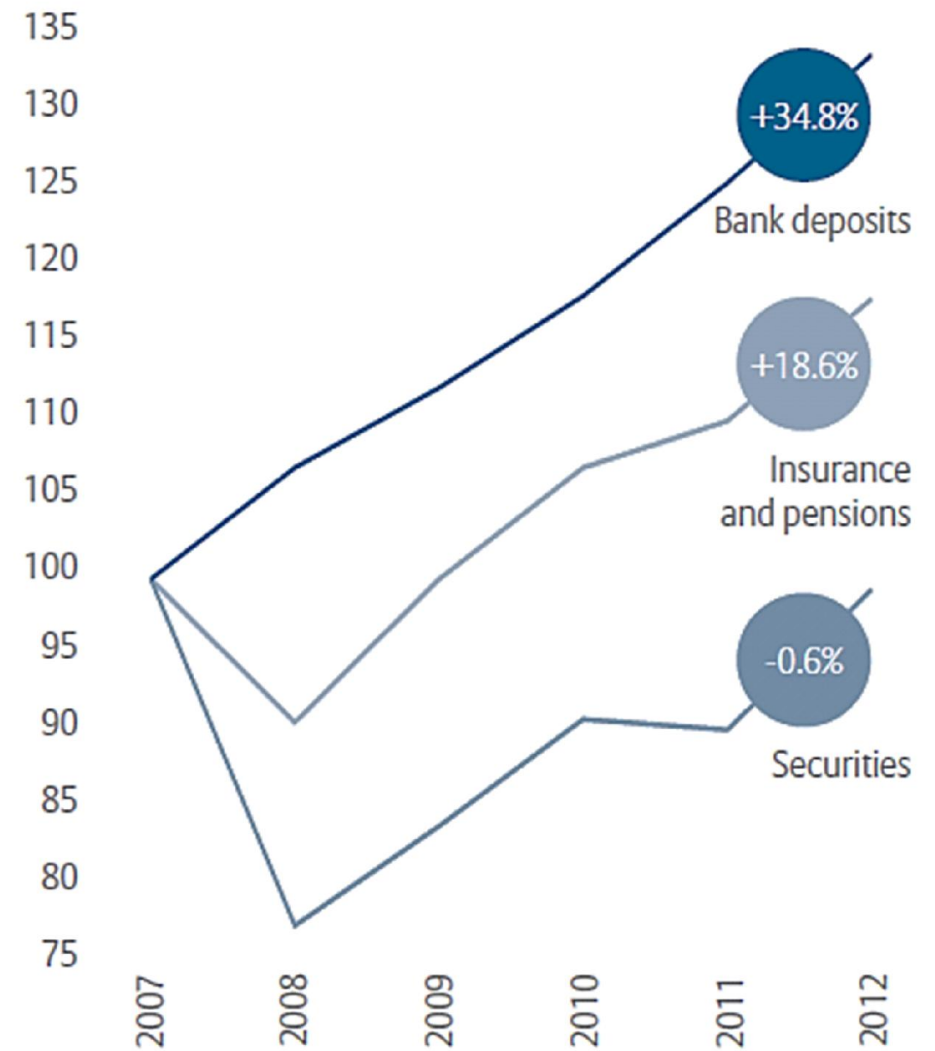
*CAGR = Compound Annual Growth Rate
 Sources: National Central Banks and Statistical Offices, Allianz SE.

Flight into 'safe haven' bank deposits

Asset classes as % of gross financial assets



Growth of the three big asset classes since 2007
Index (2007=100)



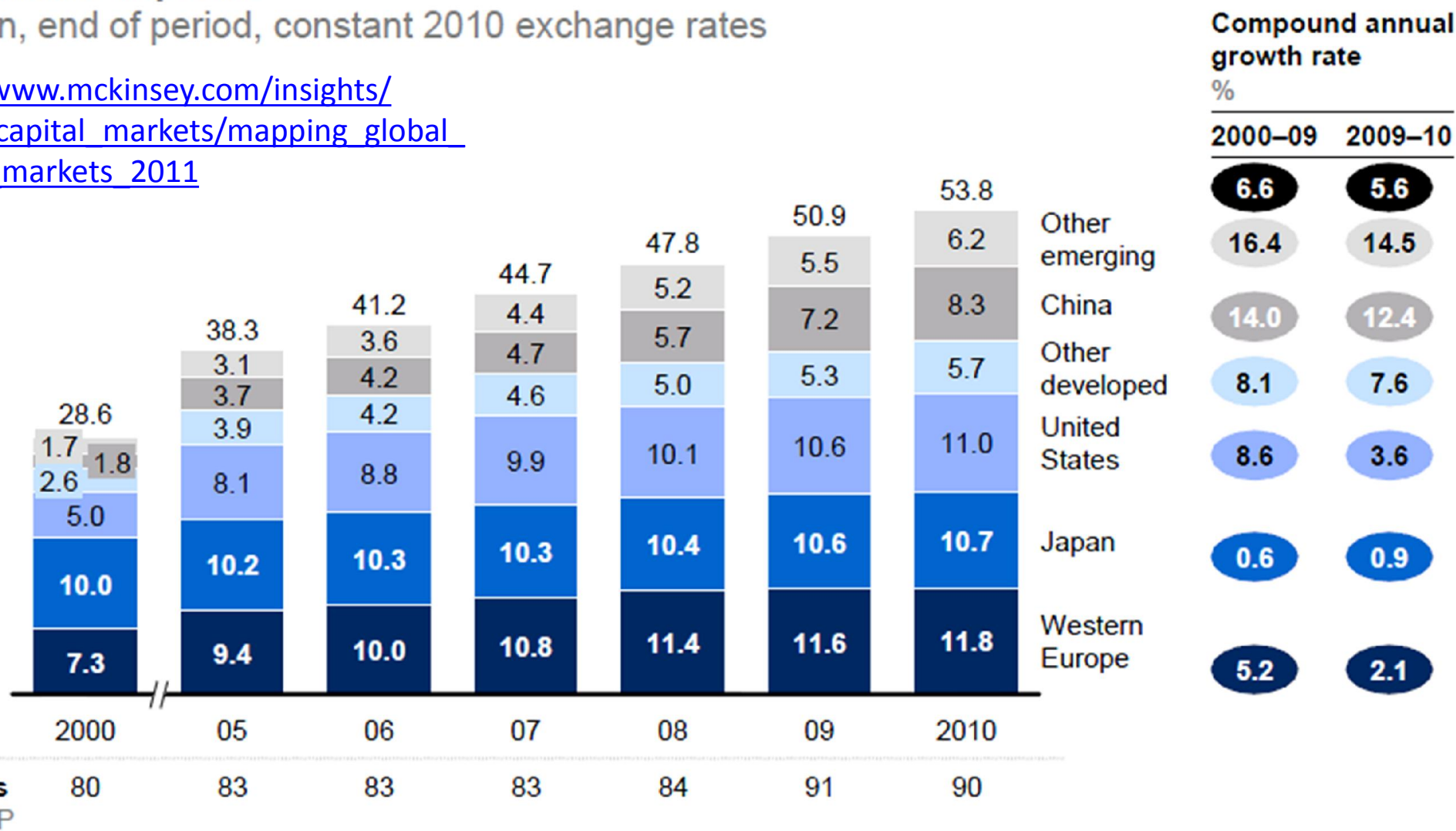
Sources: National Central Banks and Statistical Offices, Allianz SE.

Bank deposits grew by 5.6 percent to total \$54 trillion globally by the end of 2010

Global bank deposits¹

\$ trillion, end of period, constant 2010 exchange rates

http://www.mckinsey.com/insights/global_capital_markets/mapping_global_capital_markets_2011



1 Excludes cash in circulation, money market instruments, and deposits made by nonbank financial institutions with other parts of the banking system.

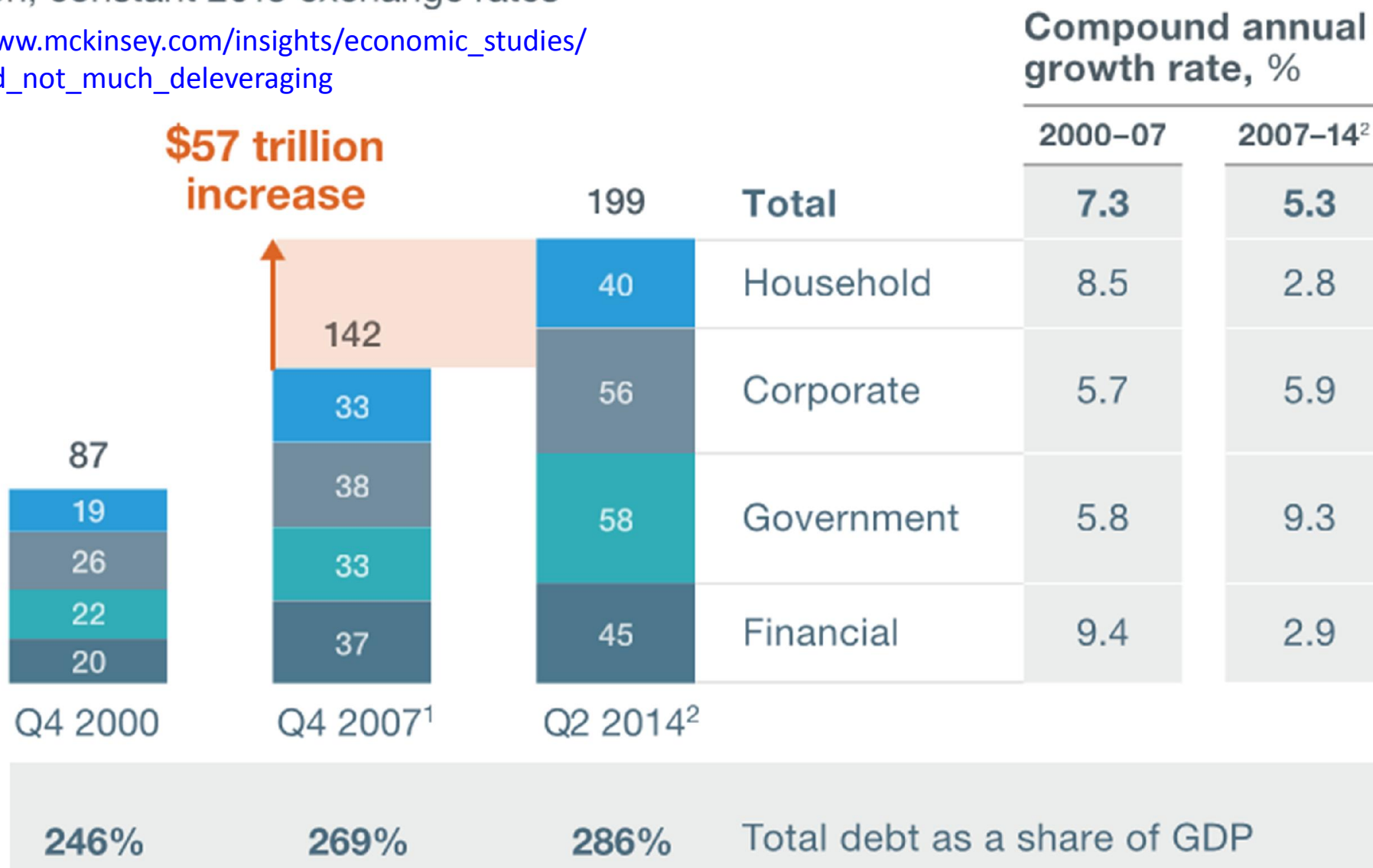
NOTE: Numbers may not sum due to rounding.

SOURCE: National central banks; McKinsey Global Banking Pools; McKinsey Global Institute analysis

Financial depth – financial sector size

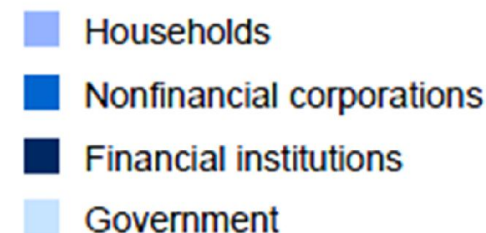
Global stock of debt outstanding,
\$ trillion, constant 2013 exchange rates

http://www.mckinsey.com/insights/economic_studies/debt_and_not_much_deleveraging

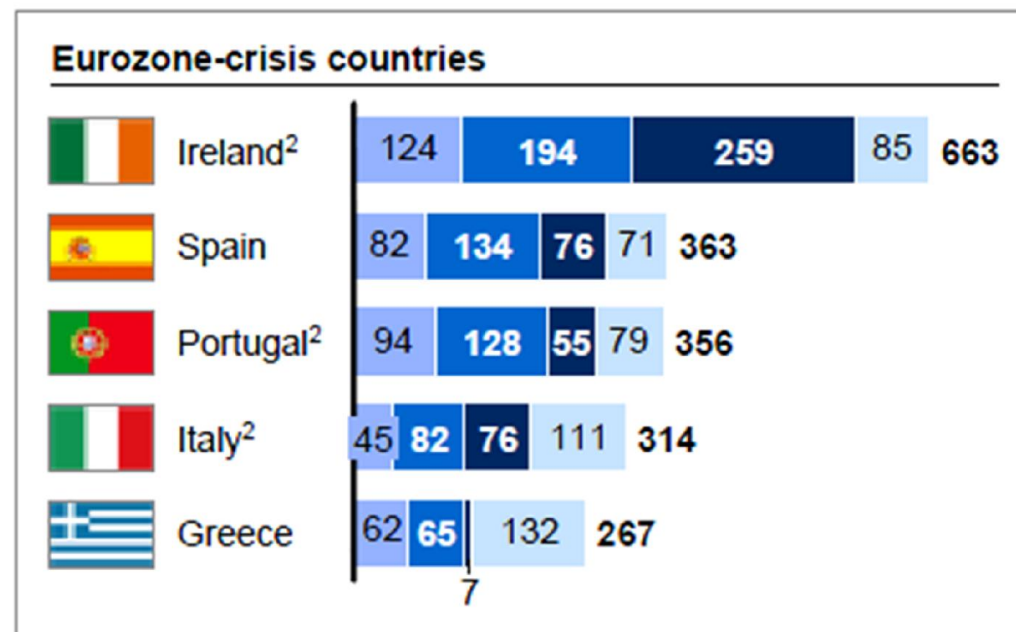
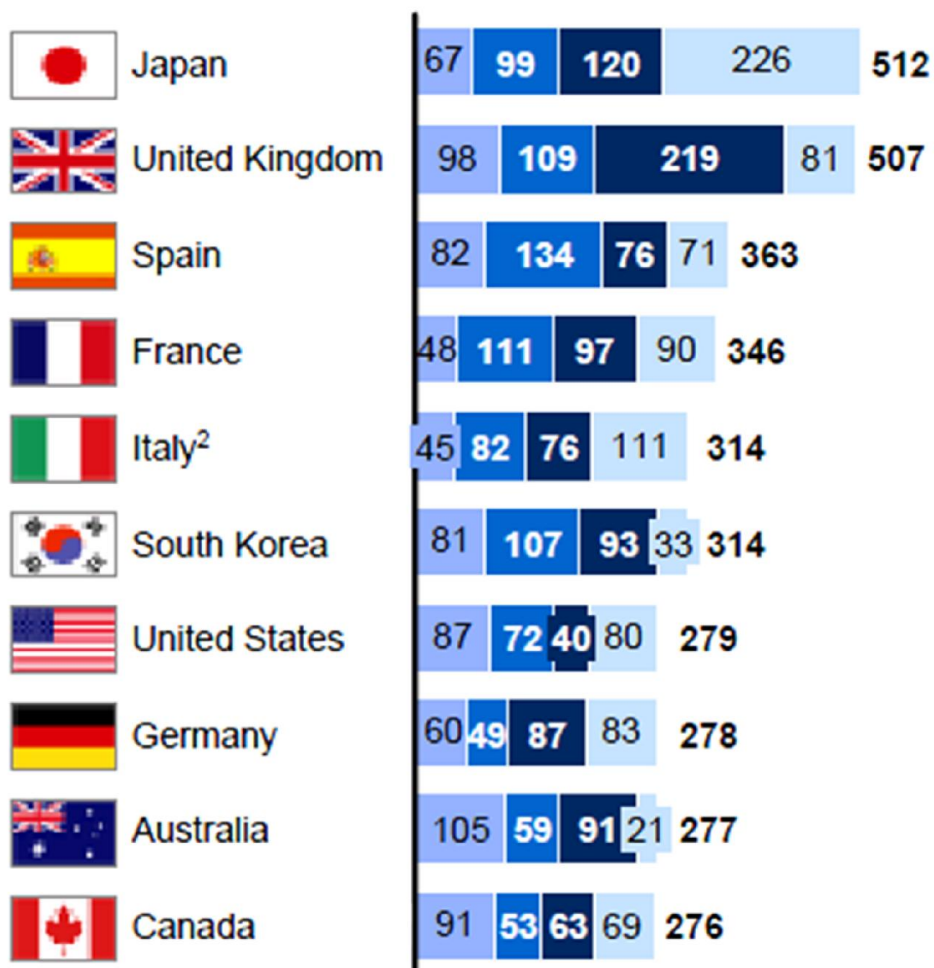


The composition of debt varies widely across countries

Total debt,¹ Q2 2011
% of GDP



10 largest mature economies



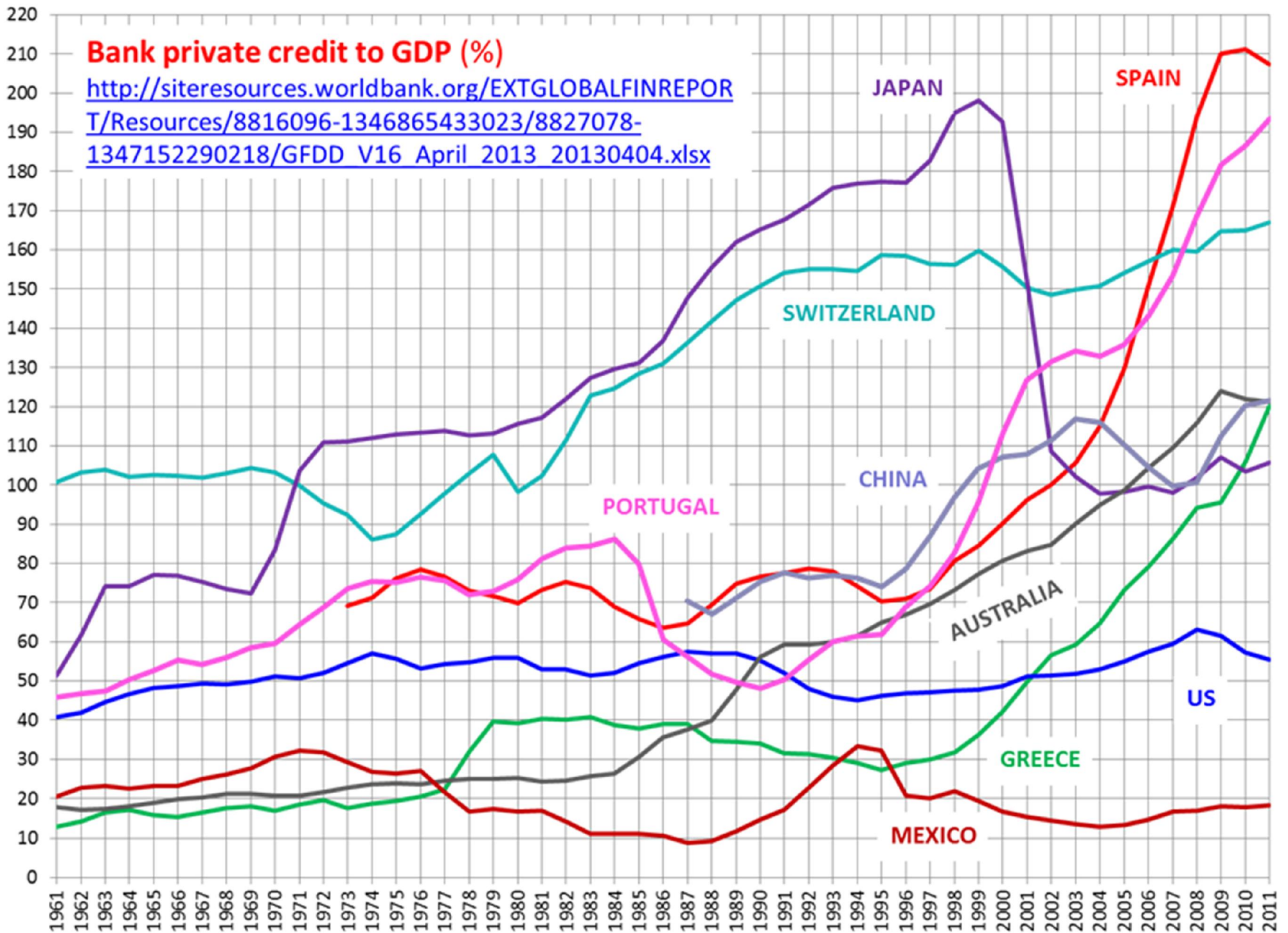
http://www.mckinsey.com/insights/global_capital_markets/uneven_progress_on_the_path_to_growth

1 Includes all loans and fixed-income securities of households, corporations, financial institutions, and government.

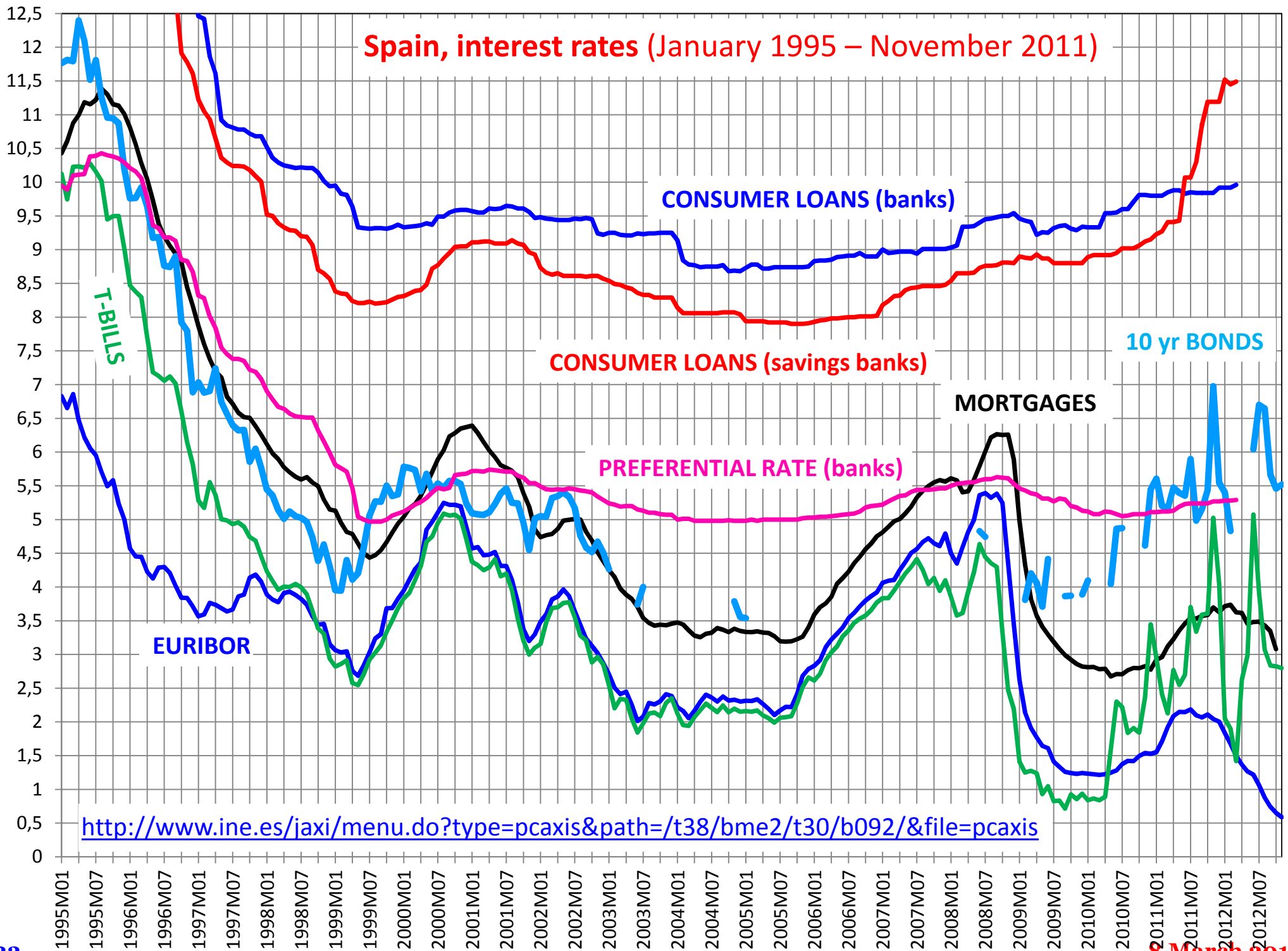
2 Q1 2011 data.

NOTE: Numbers may not sum due to rounding.

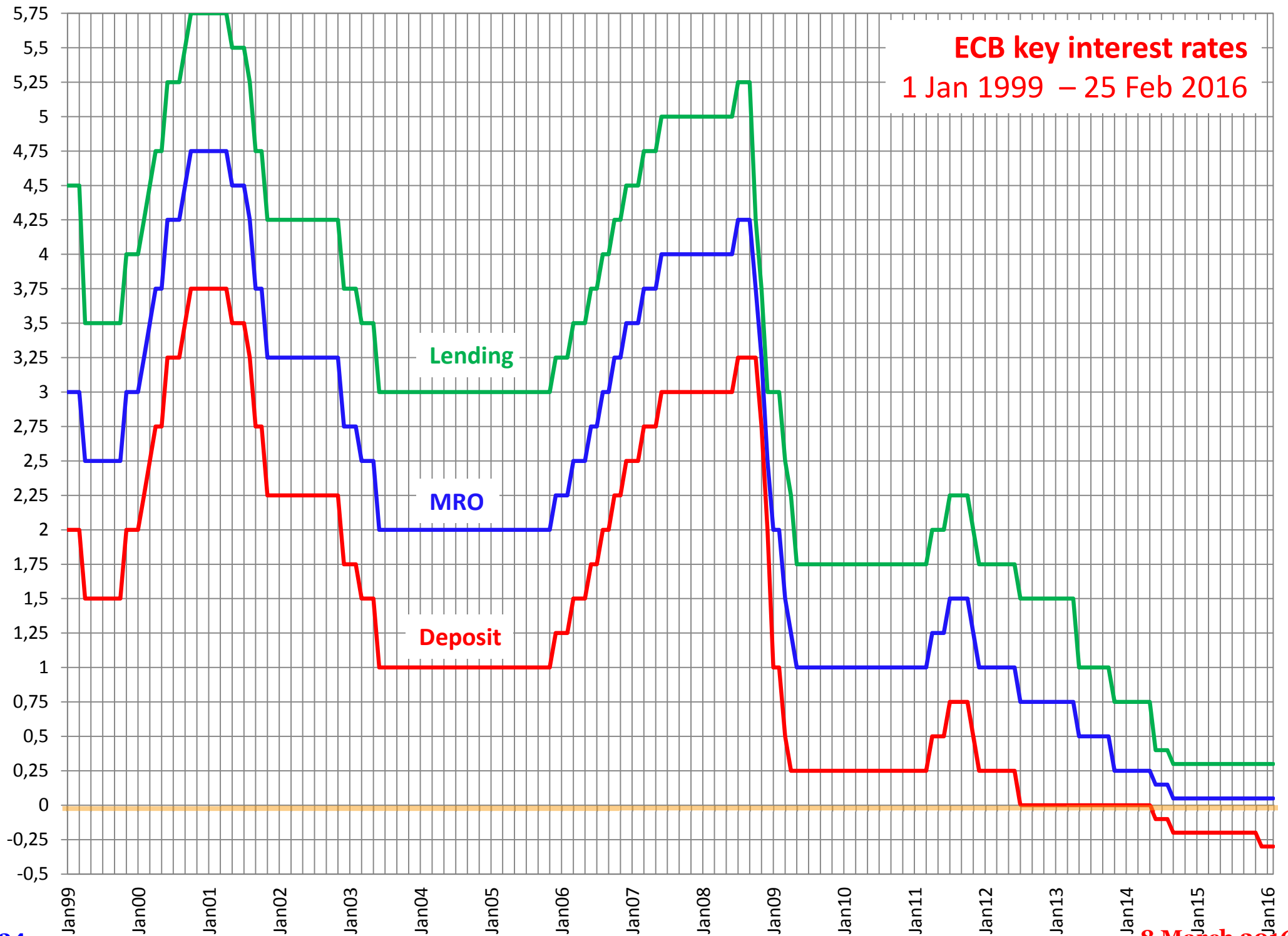
SOURCE: Haver Analytics; Bank for International Settlements; national central banks; McKinsey Global Institute



Spain, interest rates (January 1995 – November 2011)

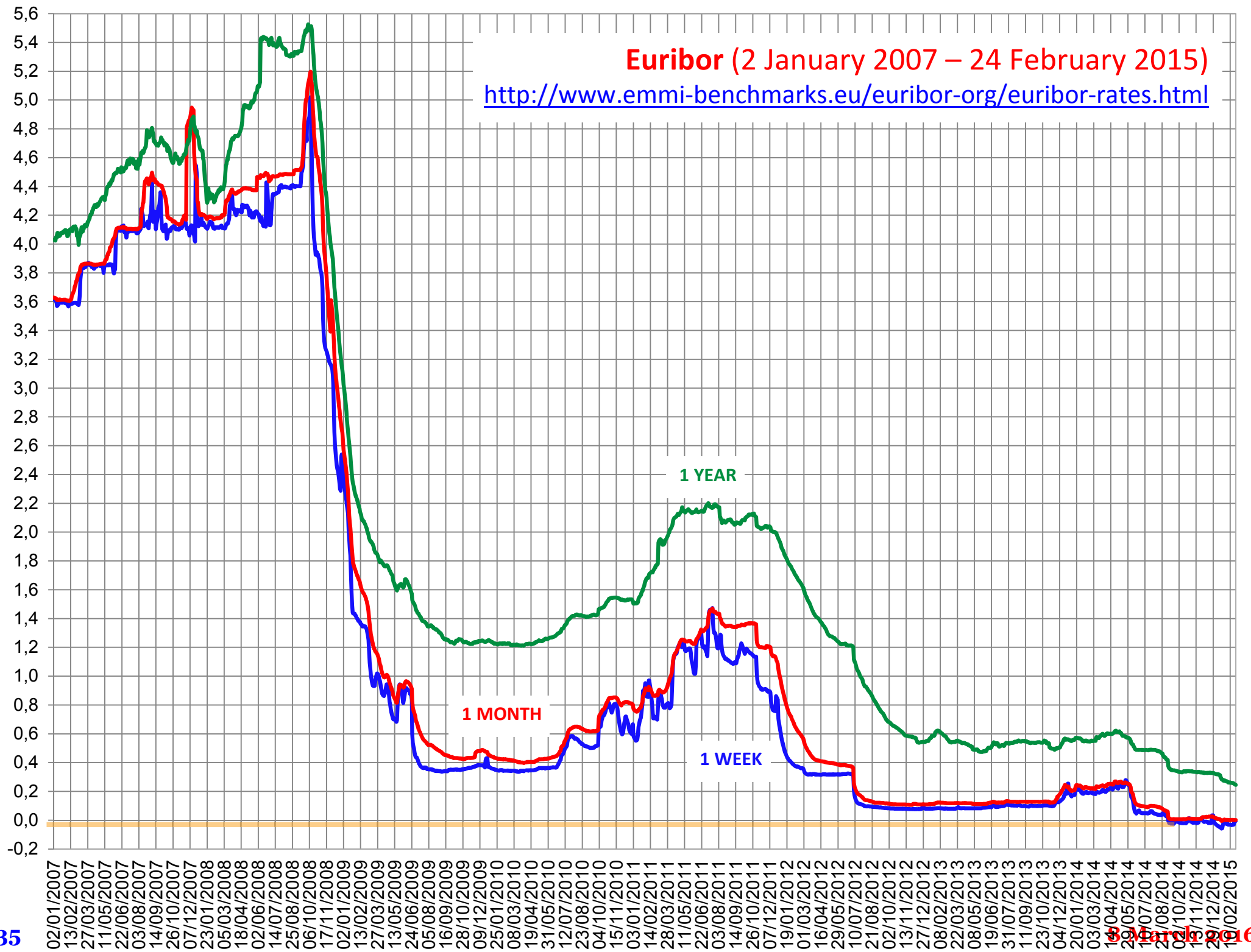


ECB key interest rates
1 Jan 1999 – 25 Feb 2016

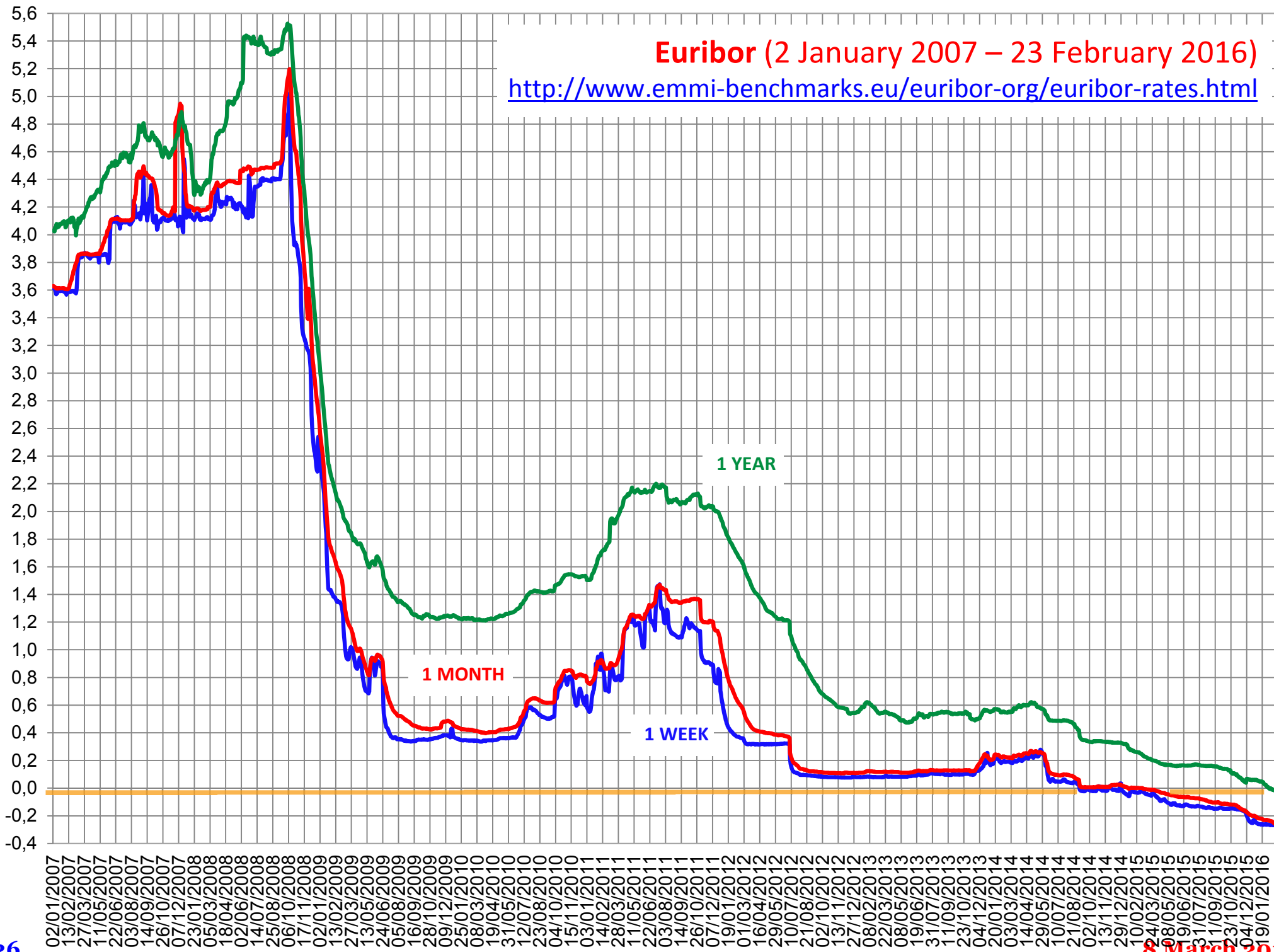


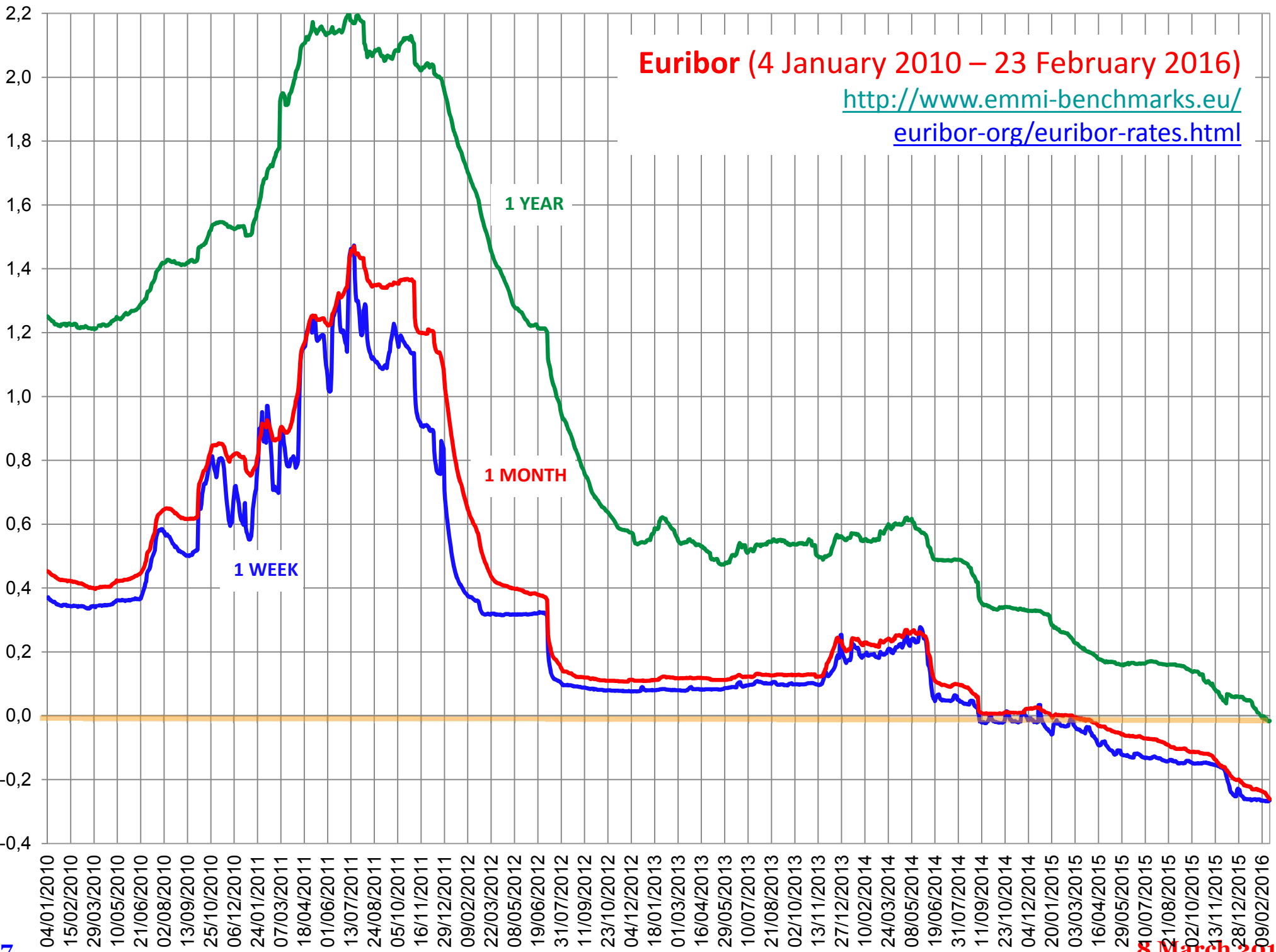
Euribor (2 January 2007 – 24 February 2015)

<http://www.emmi-benchmarks.eu/euribor-org/euribor-rates.html>



Euribor (2 January 2007 – 23 February 2016)
<http://www.emmi-benchmarks.eu/euribor-org/euribor-rates.html>



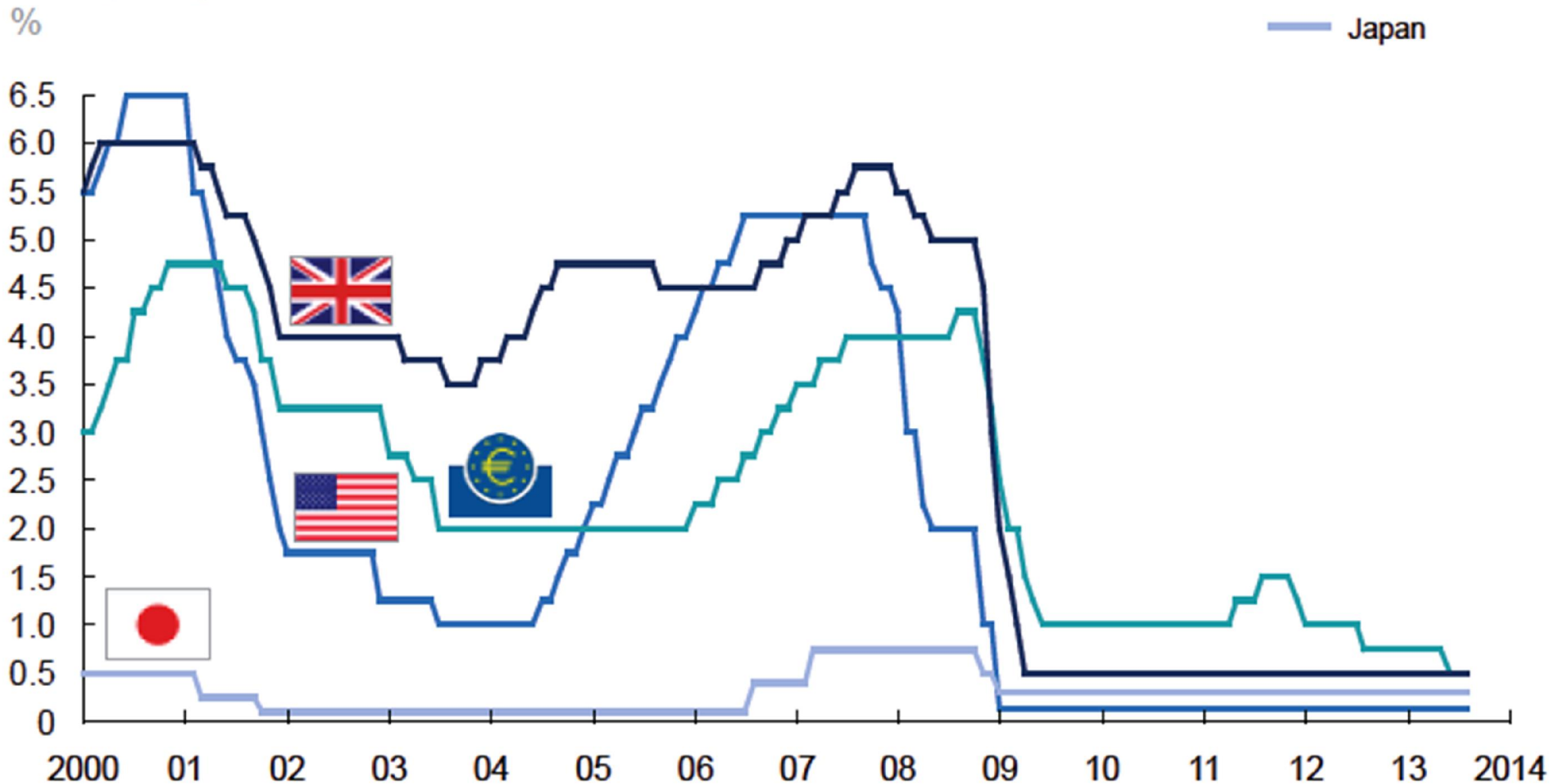


Euribor (4 January 2010 – 23 February 2016)

<http://www.emmi-benchmarks.eu/euribor-org/euribor-rates.html>

Central banks pushed policy rates to ultra-low levels in 2009 and have held them there since

Main policy rates



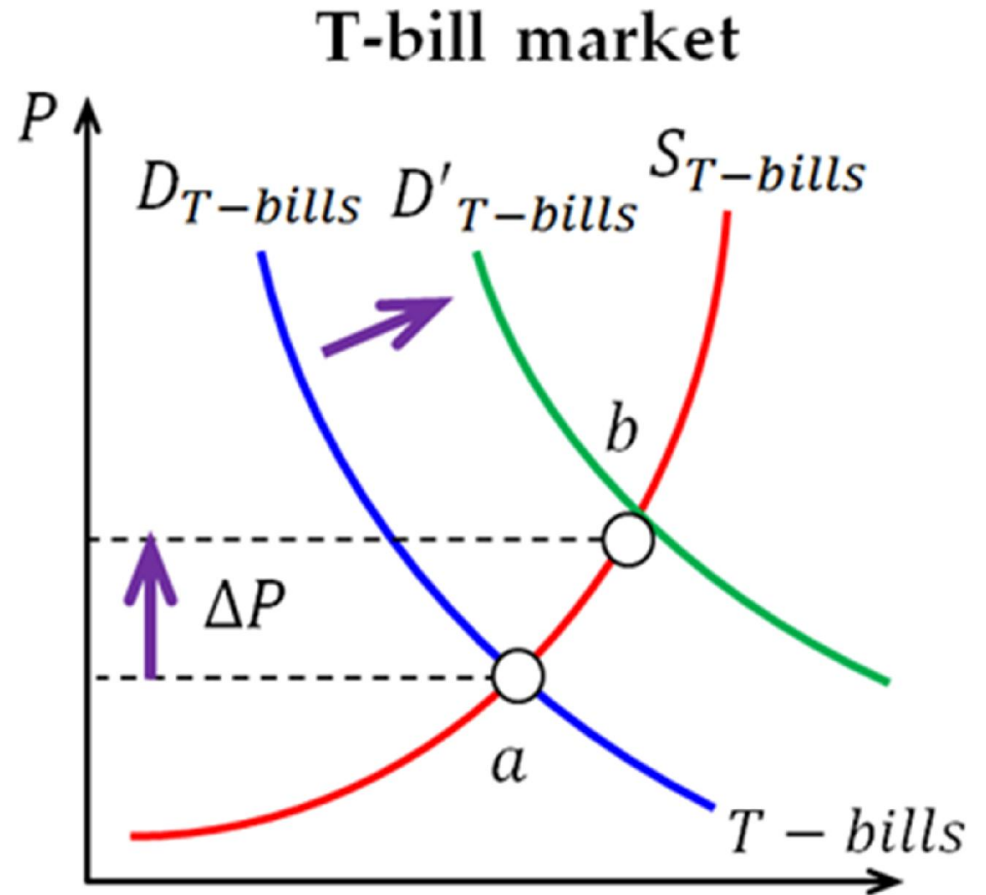
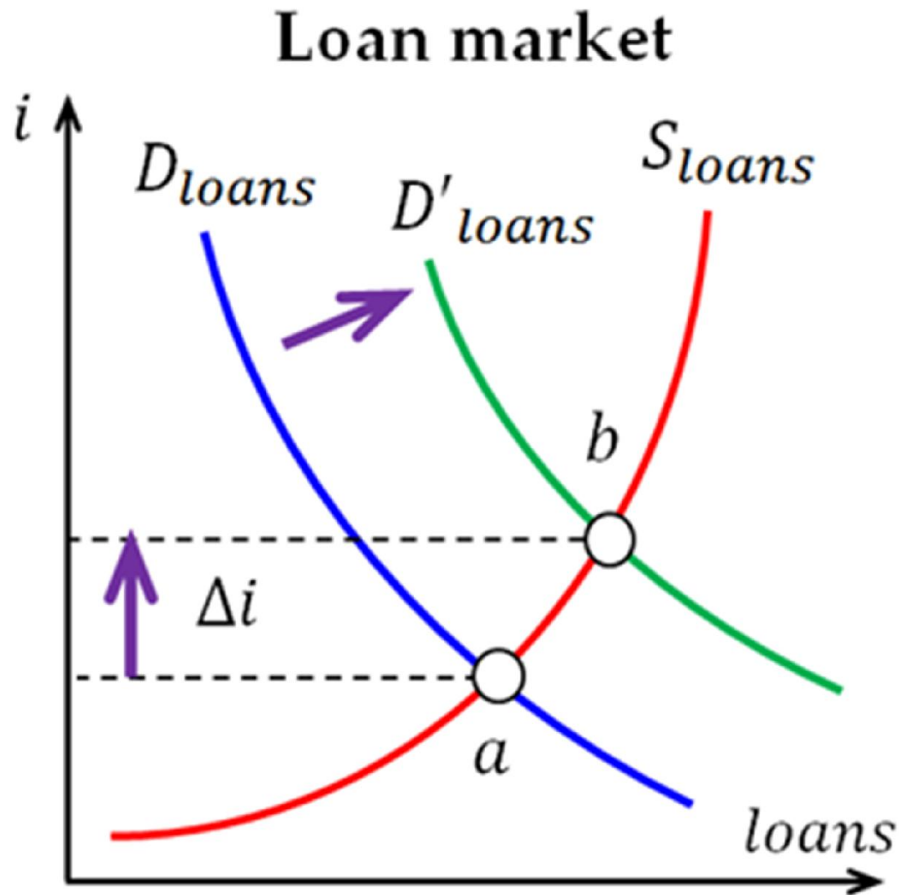
SOURCE: US Federal Reserve; European Central Bank; Bank of England; Bank of Japan; McKinsey Global Institute analysis

http://www.mckinsey.com/insights/economic_studies/ge_and_ultra_low_interest_rates_distributional_effects_and_risks

Prices of financial assets and i

- Justifications of the inverse relationship
 - financial arbitrage
 - prices of financial assets as present values
 - equalization of rates of return

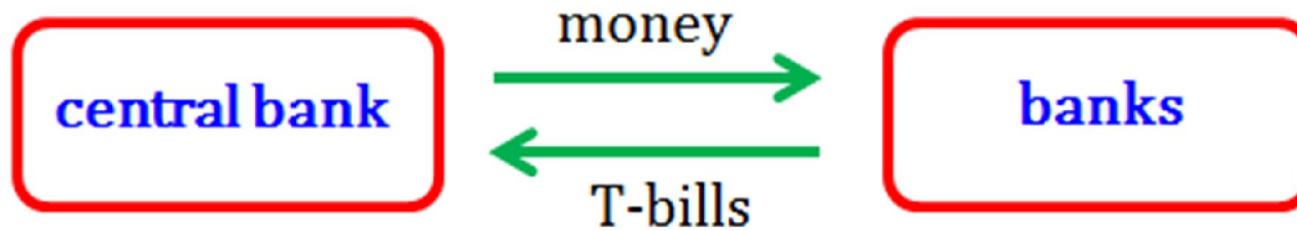
Financial arbitrage



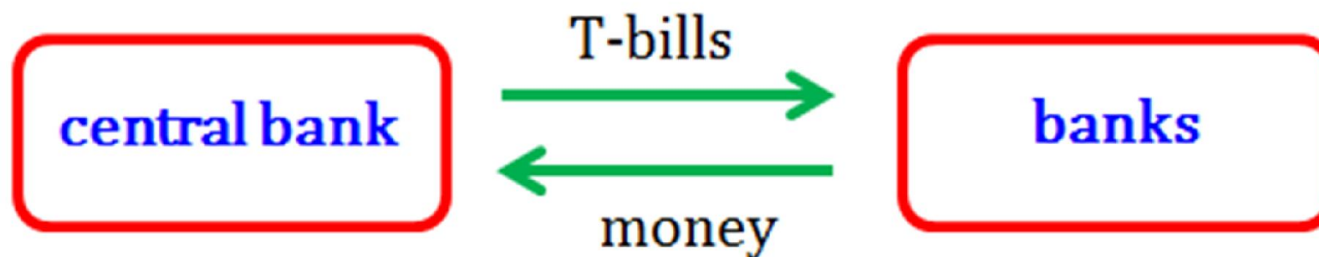
Central bank

- Monetary authority of an economy
- Monetary policy instruments
 - Open market operations
 - Standing facilities: lending / deposit
 - Reserve requirements
 - Policy interest rate
 - Credit controls
- Tension between controlling i and M1

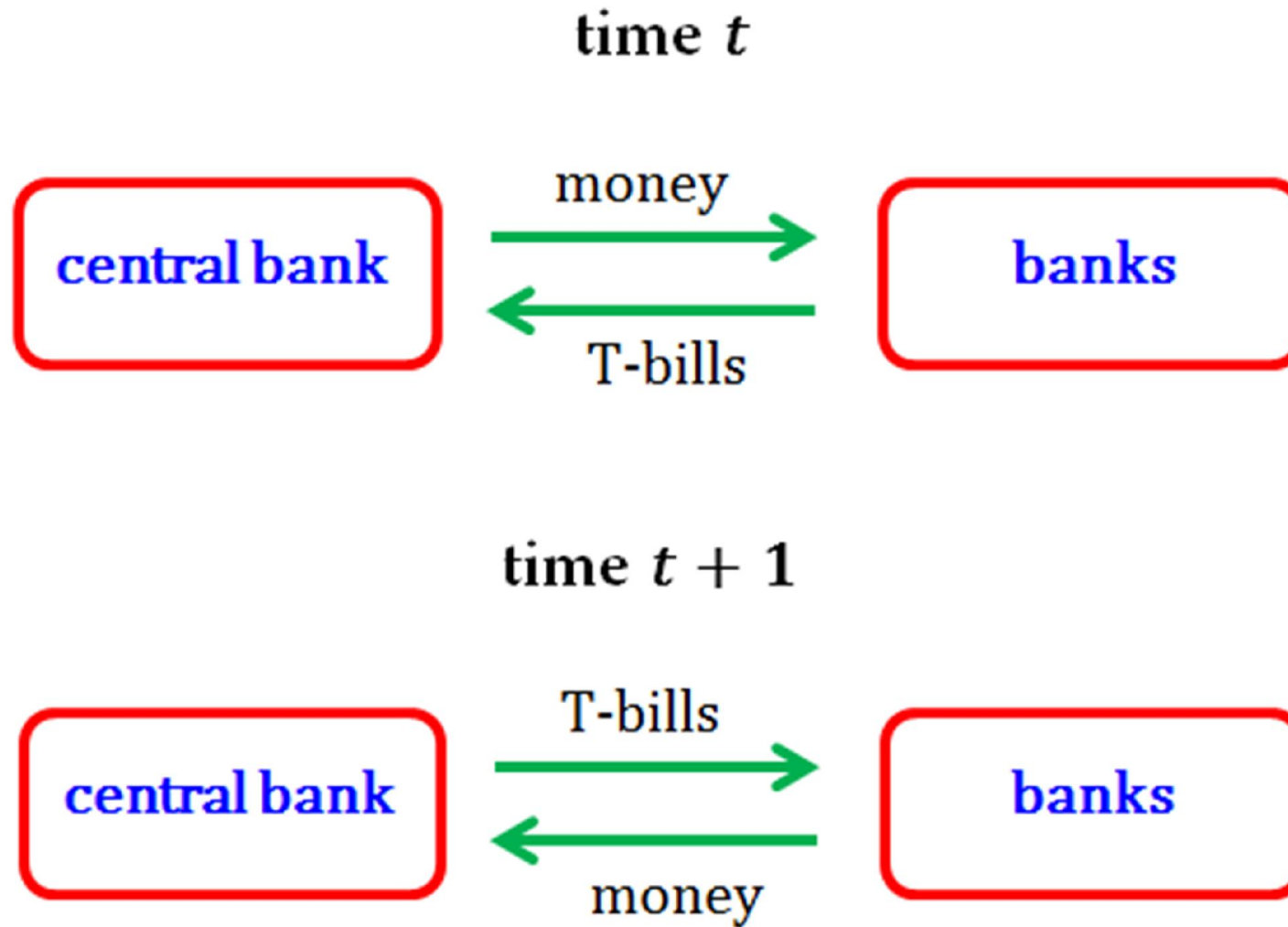
Expansionary OMO



Contractionary OMO

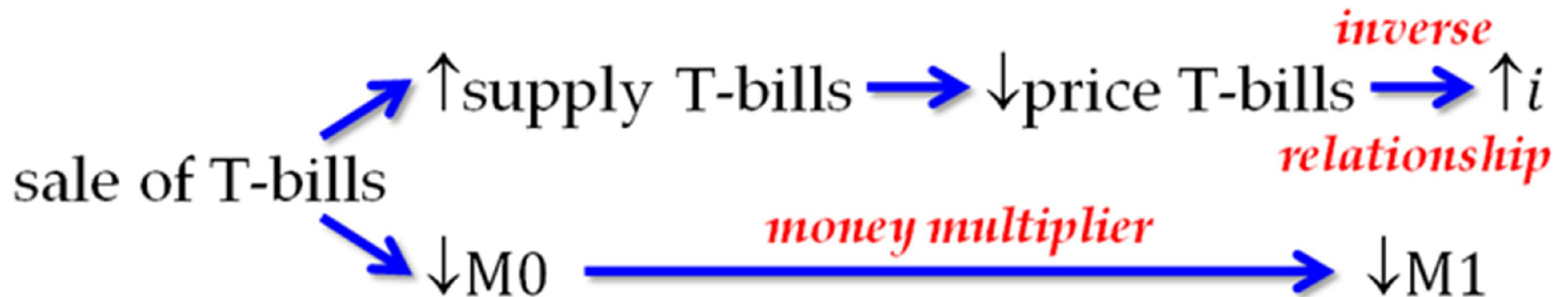


Reverse-repo

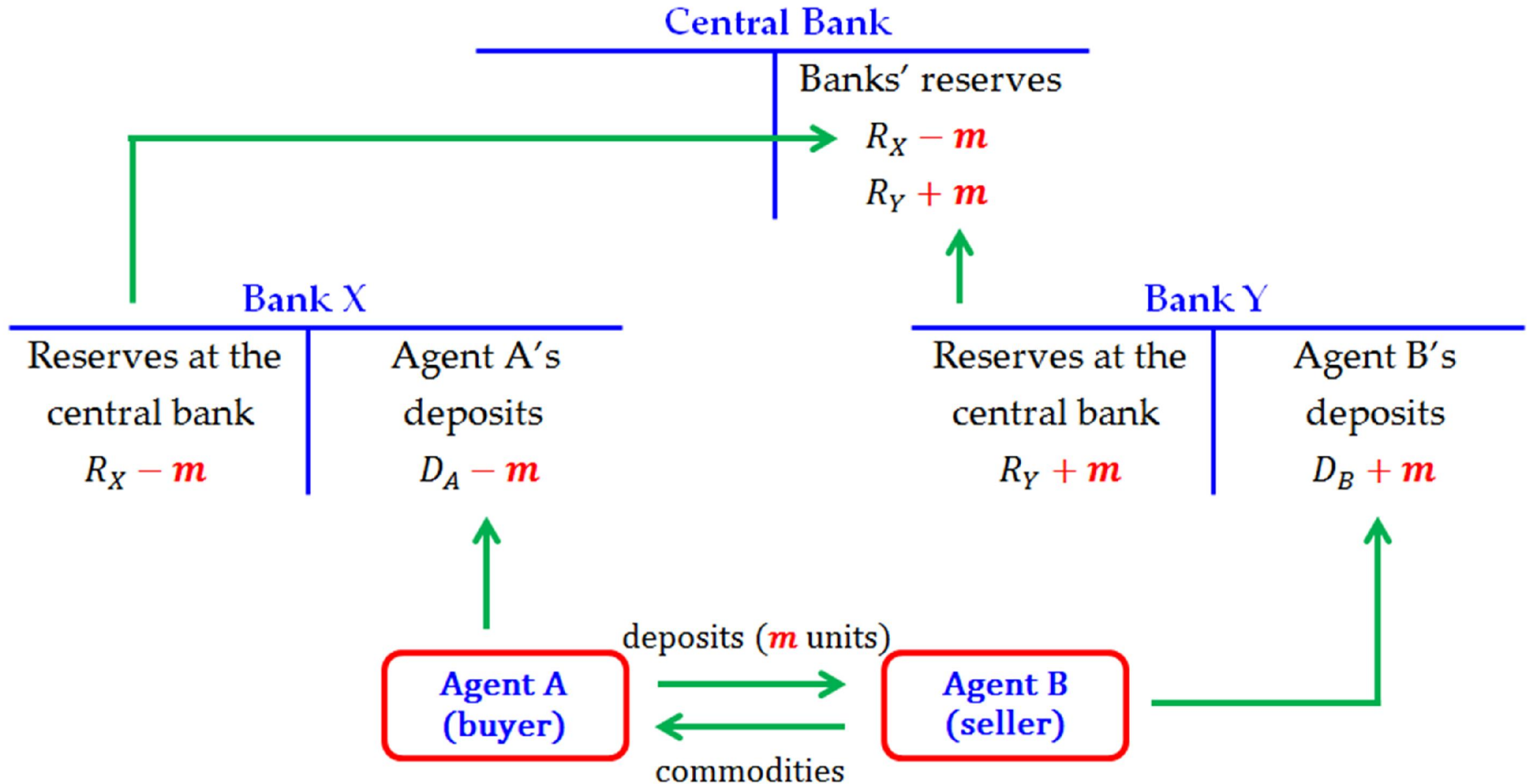


Effects of a contractionary OMO

- The central bank cannot simultaneously control M1 and the interest rate.

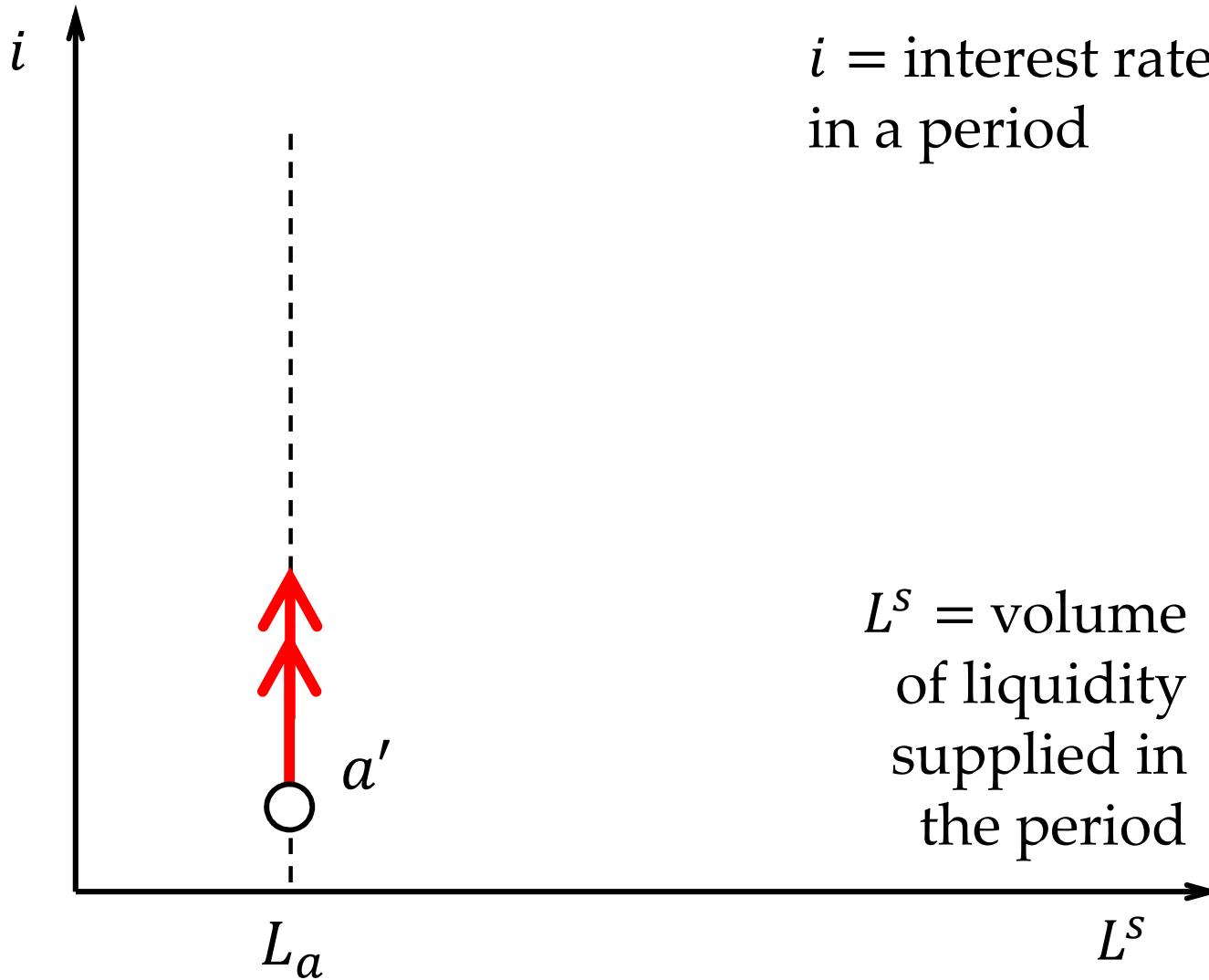


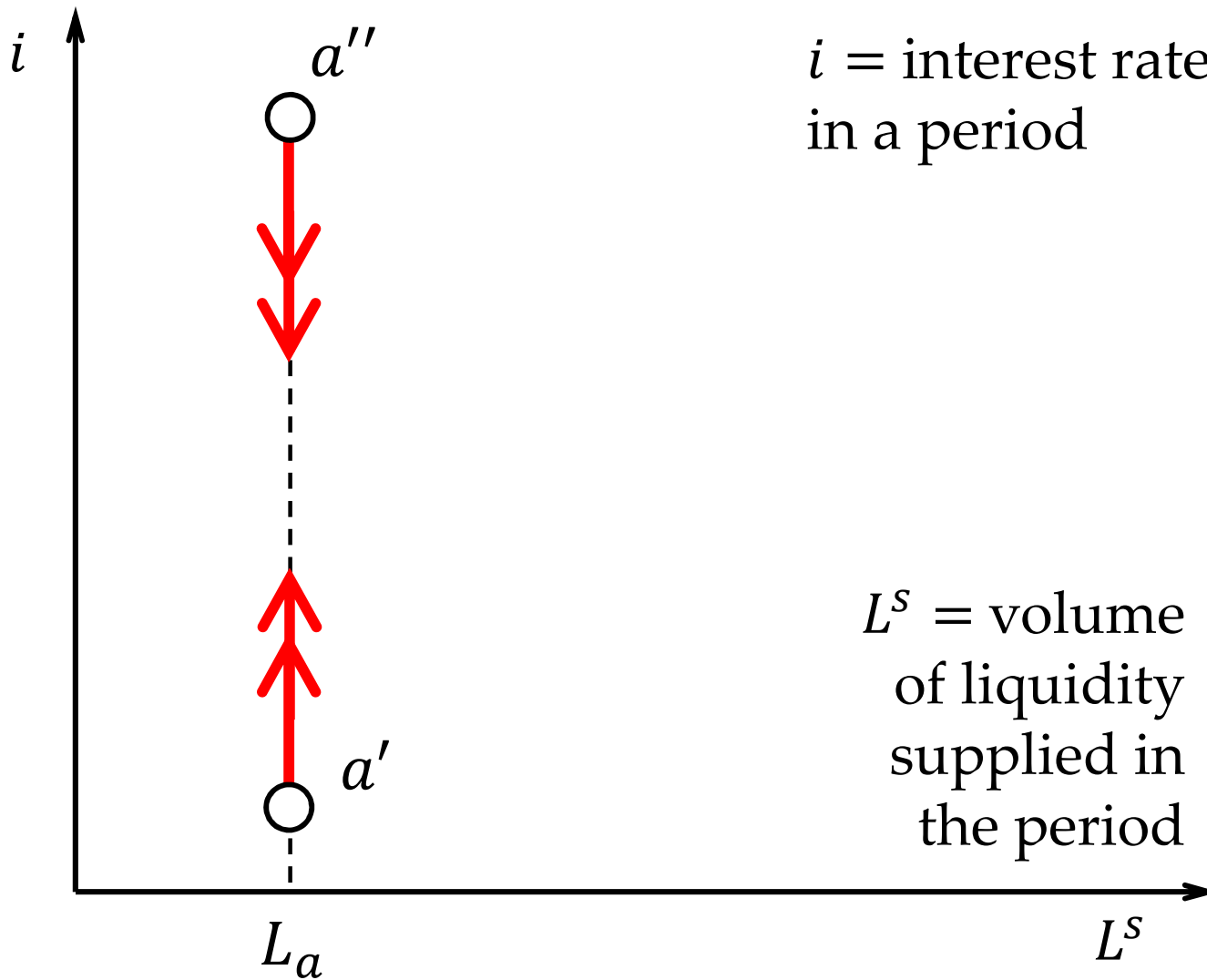
Central bank and the payment system



A liquidity market model

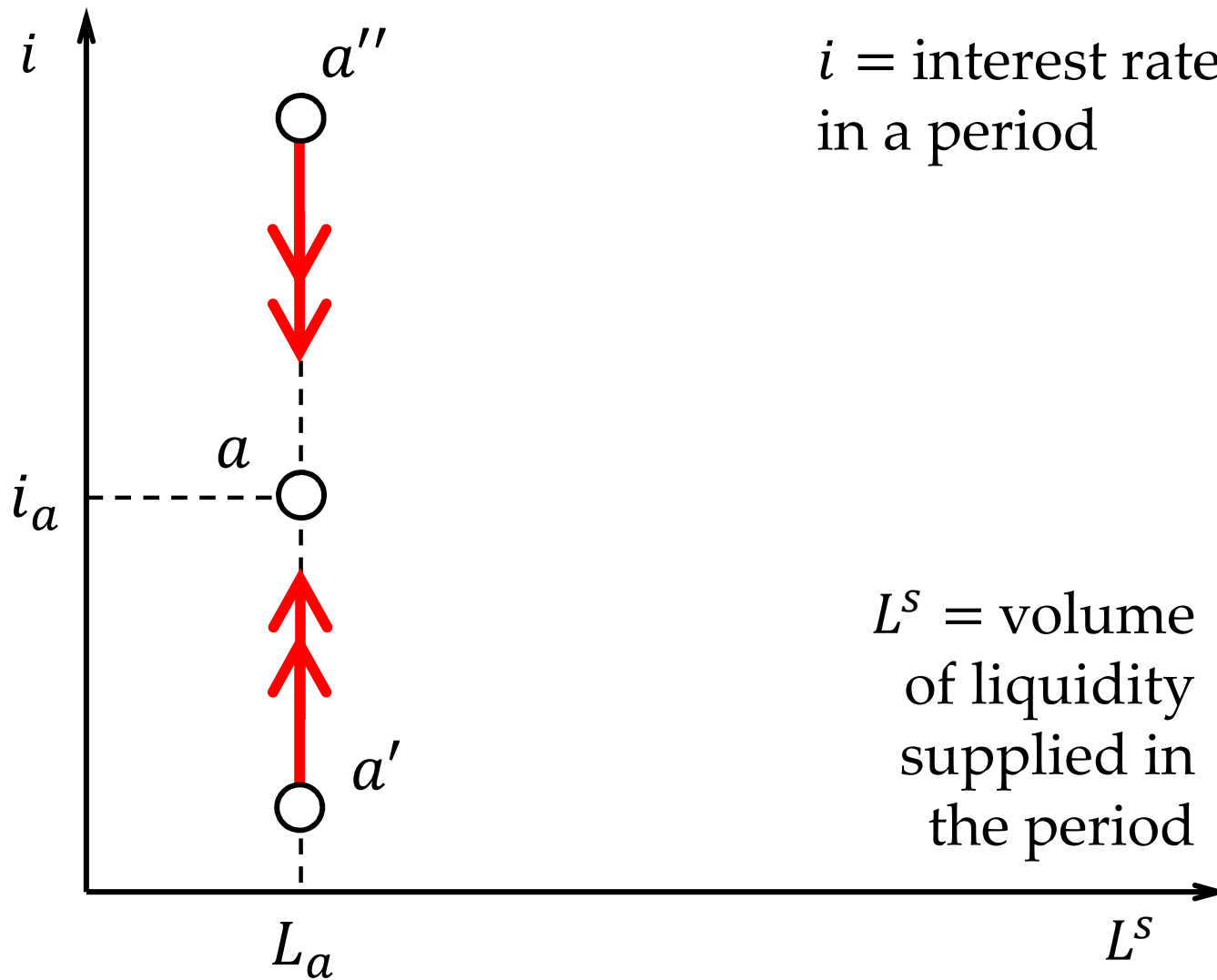
- Supply of liquidity: direct / indirect
- Supply of liquidity function
- Demand for liquidity: direct / indirect
- Demand for liquidity function
- Market equilibrium
- Comparative statics

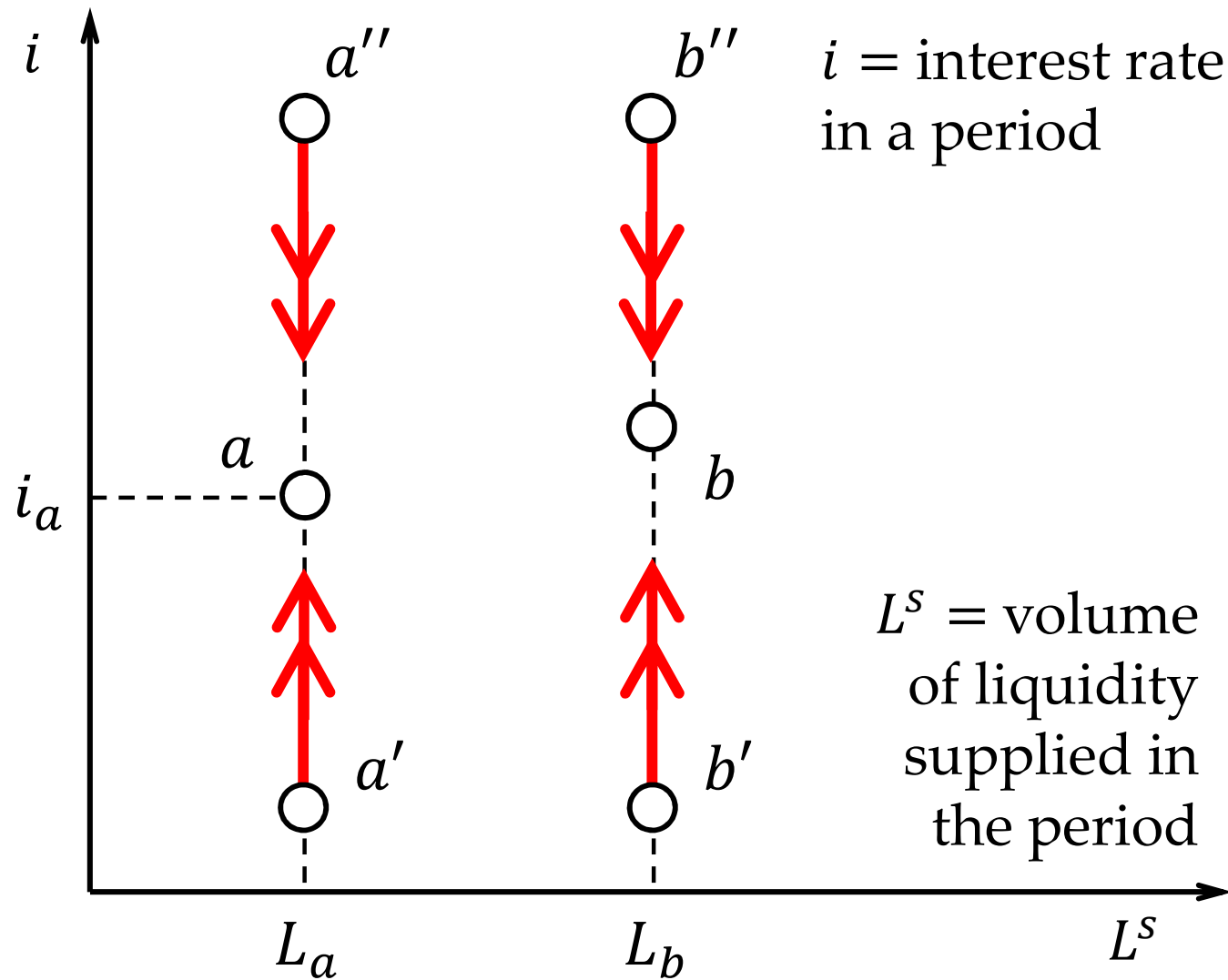


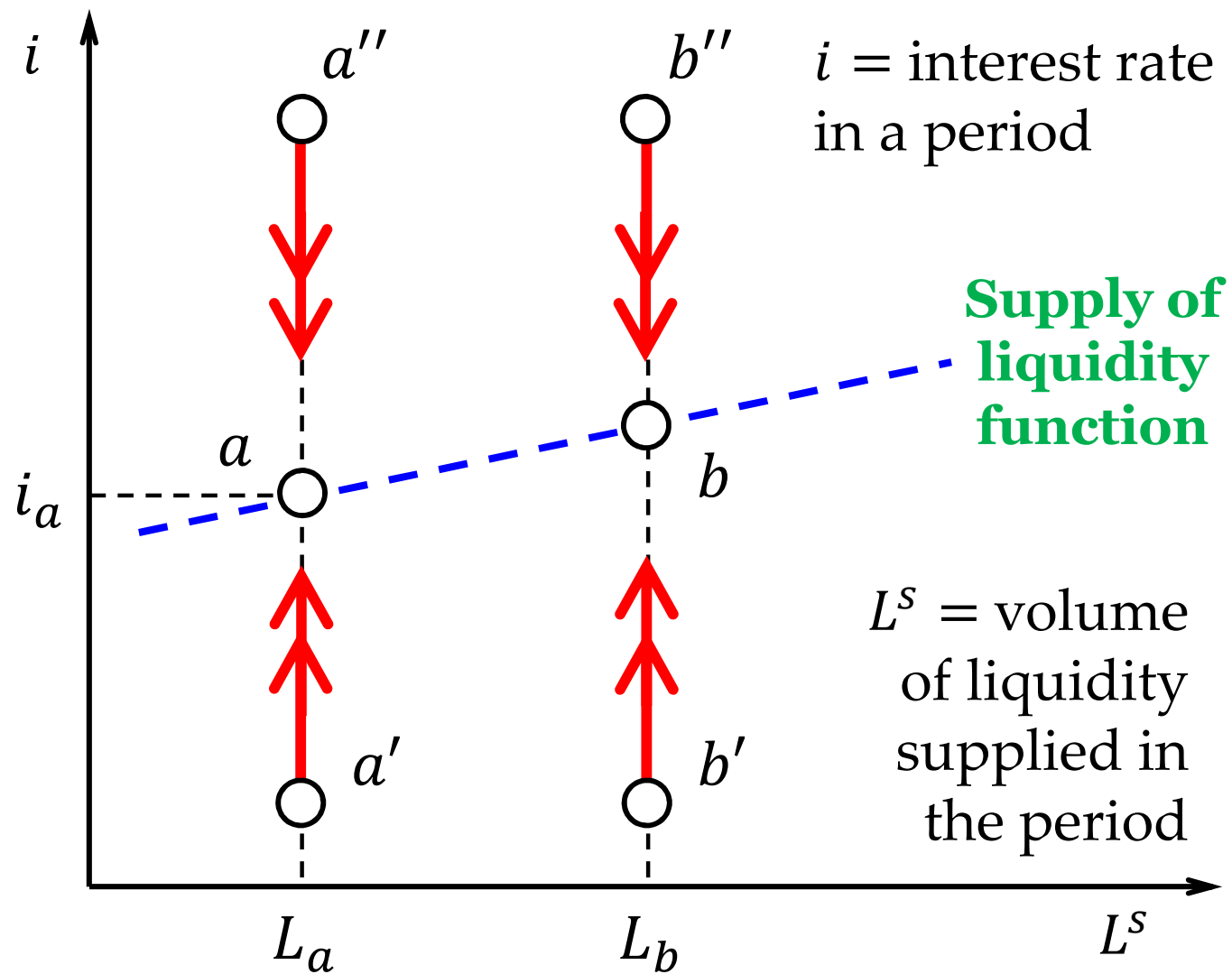


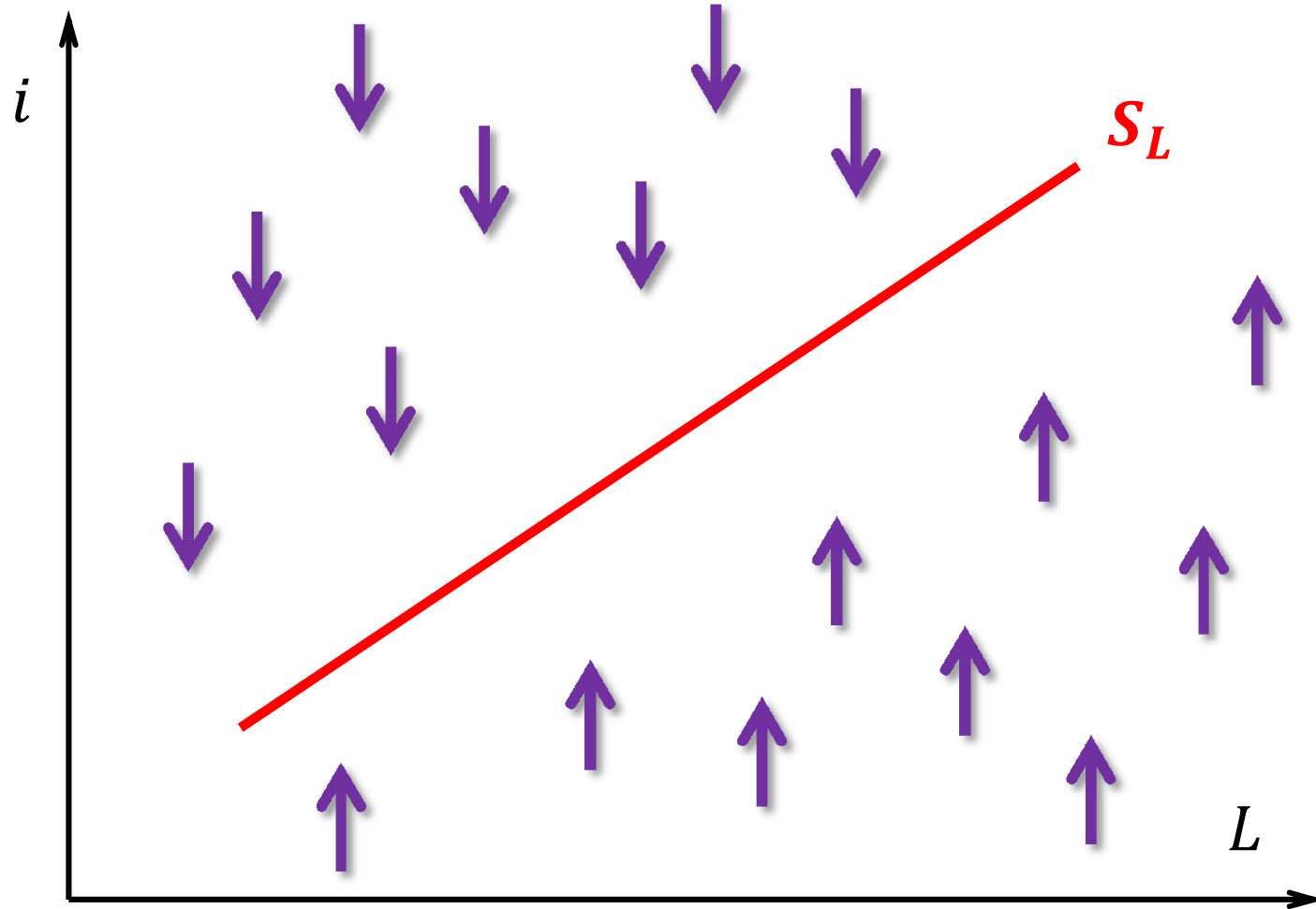
i = interest rate
in a period

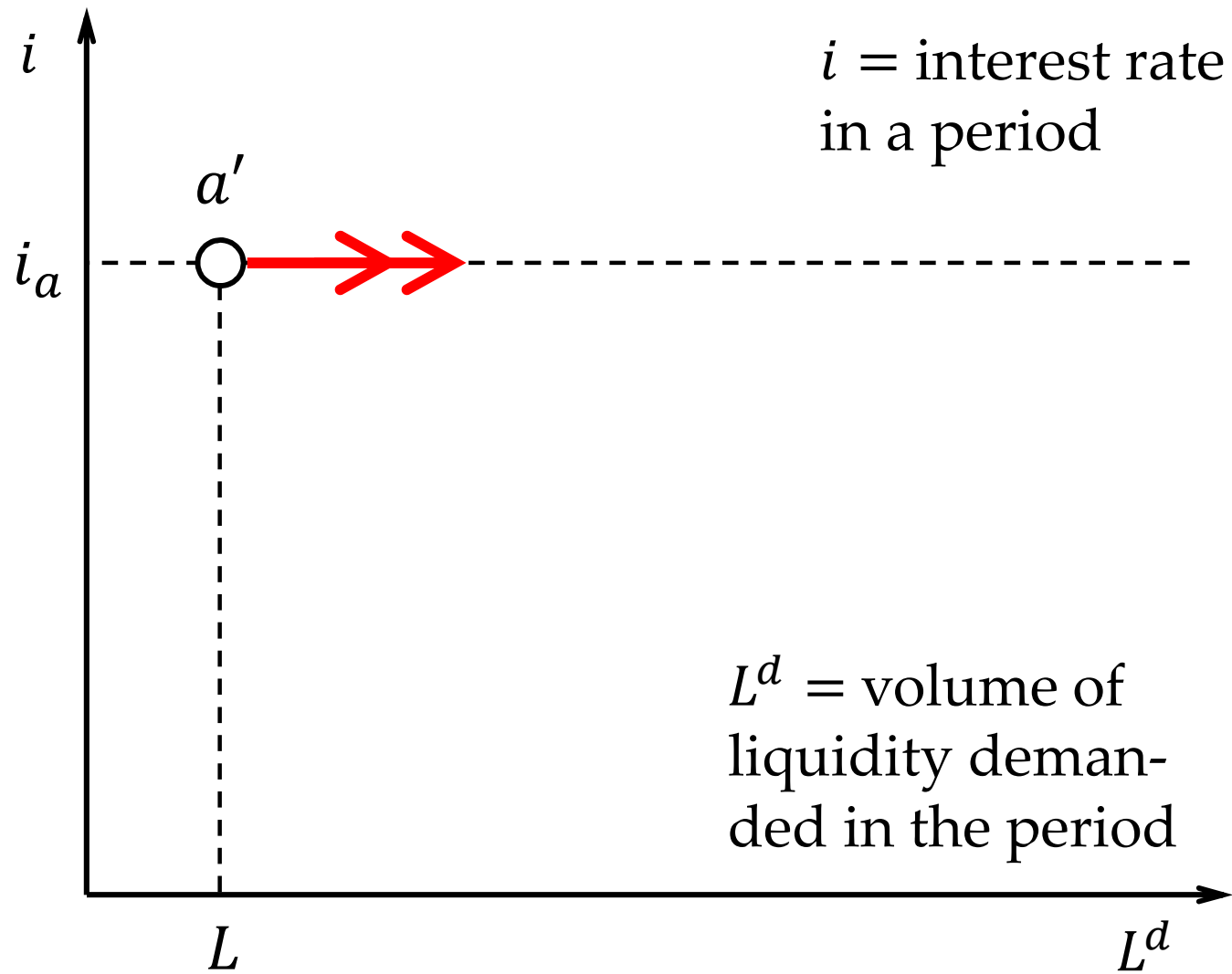
L^S = volume
of liquidity
supplied in
the period

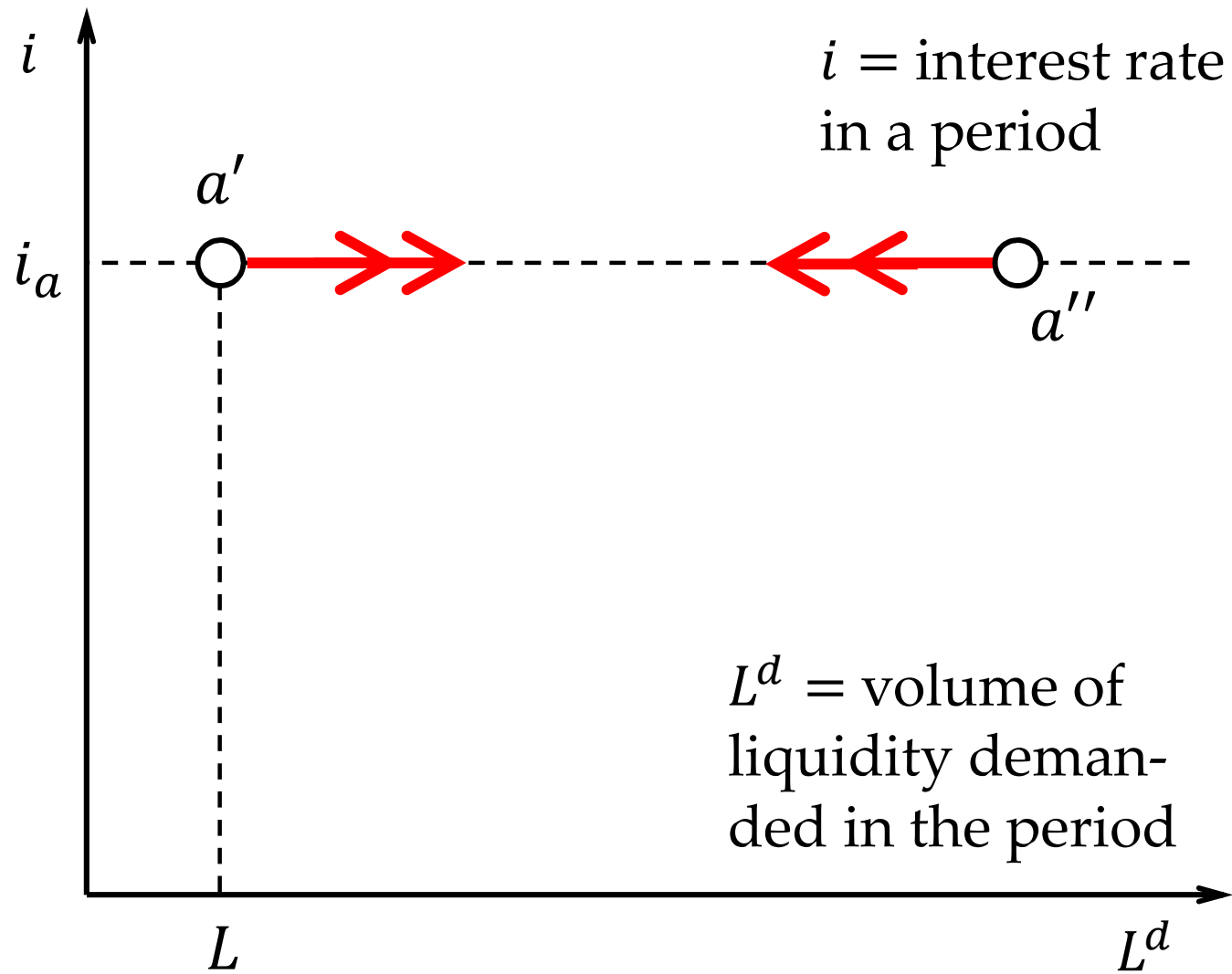


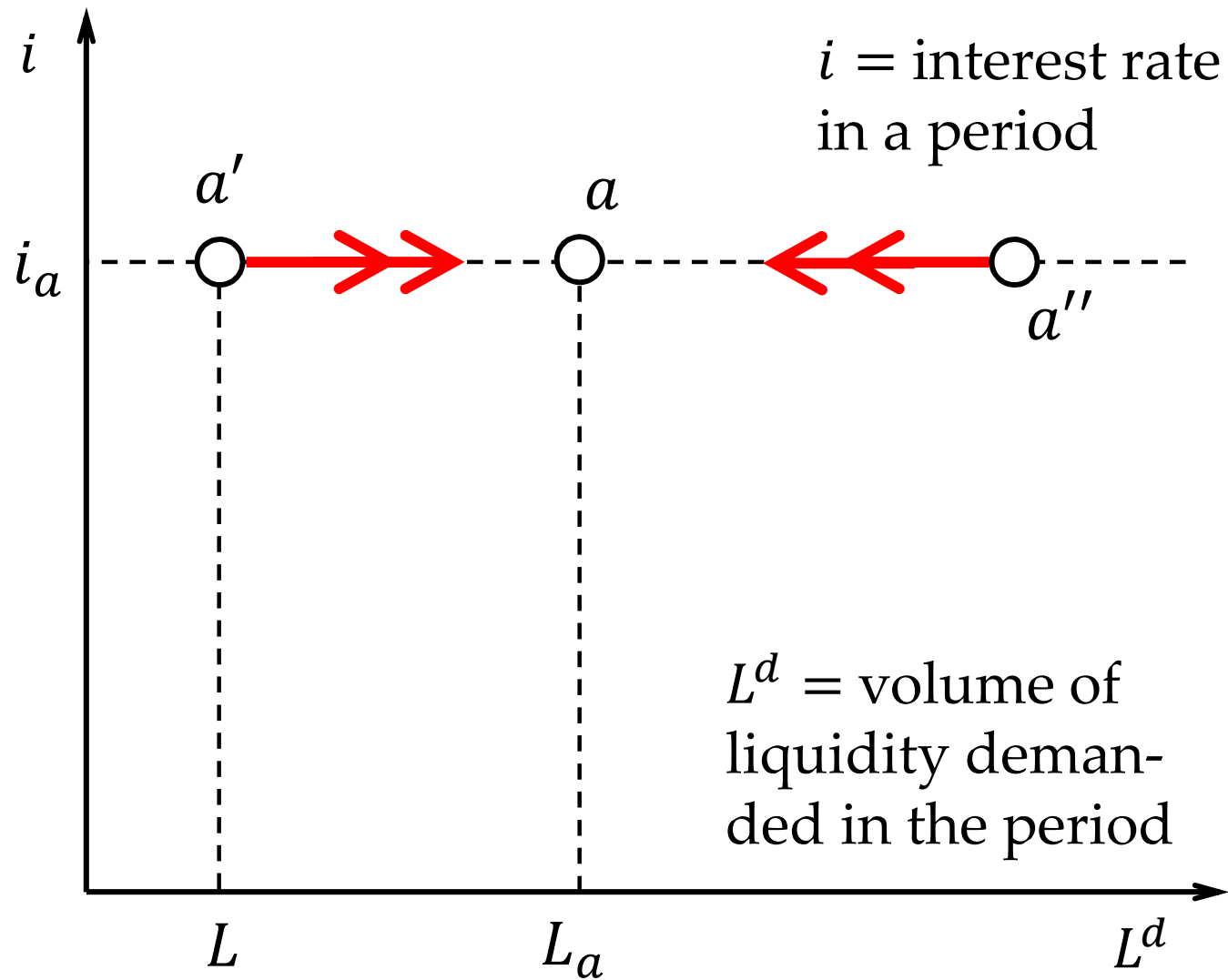


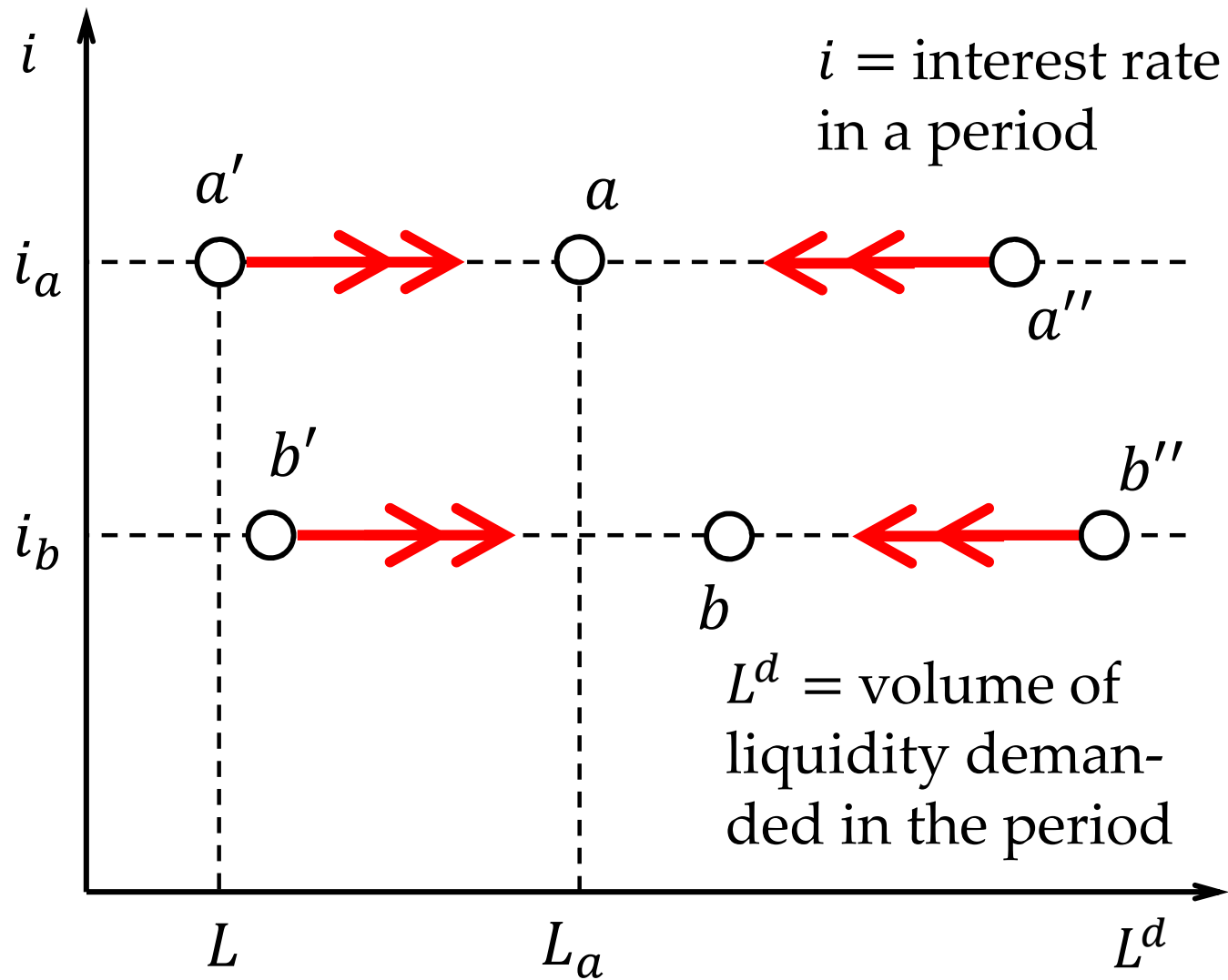


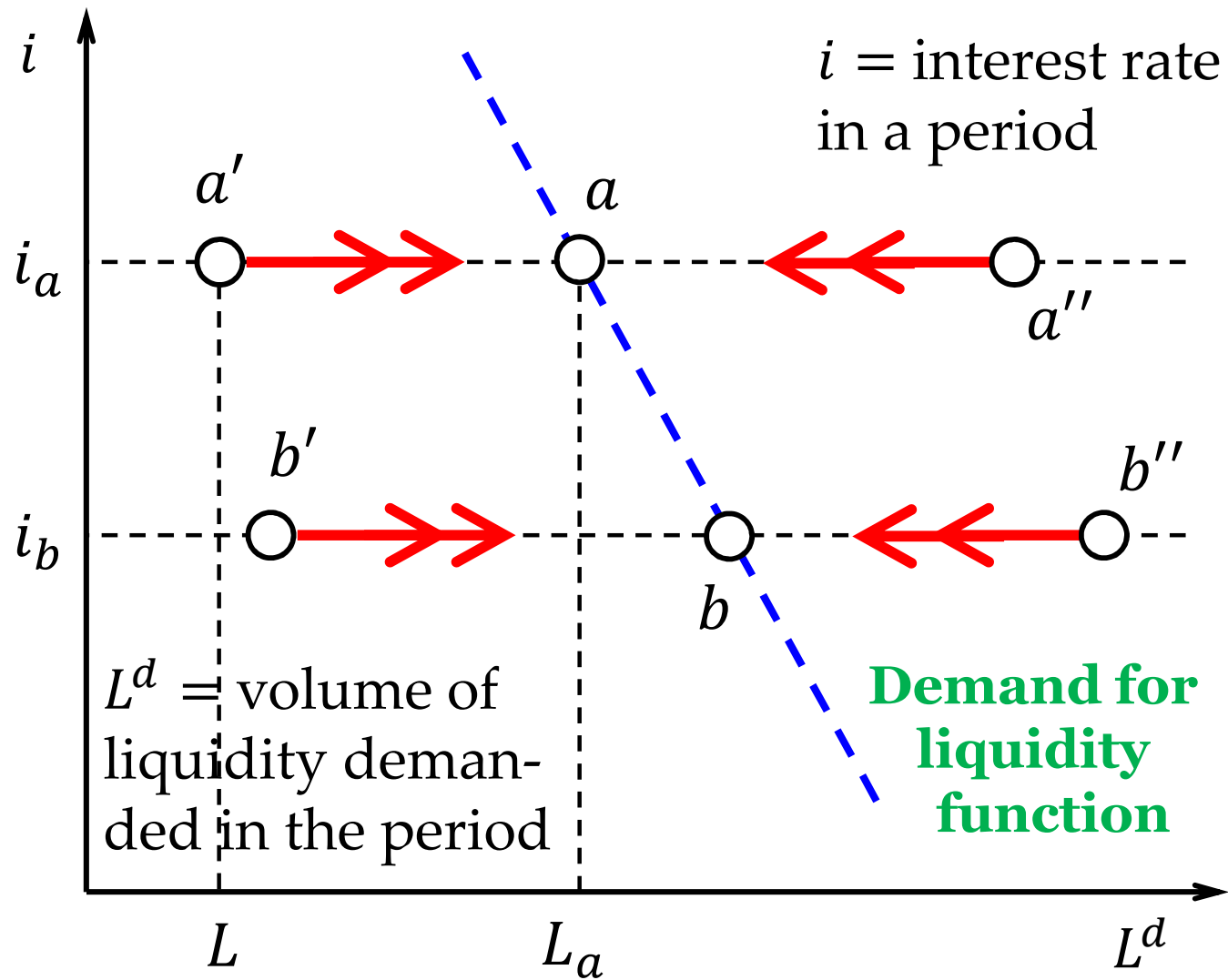


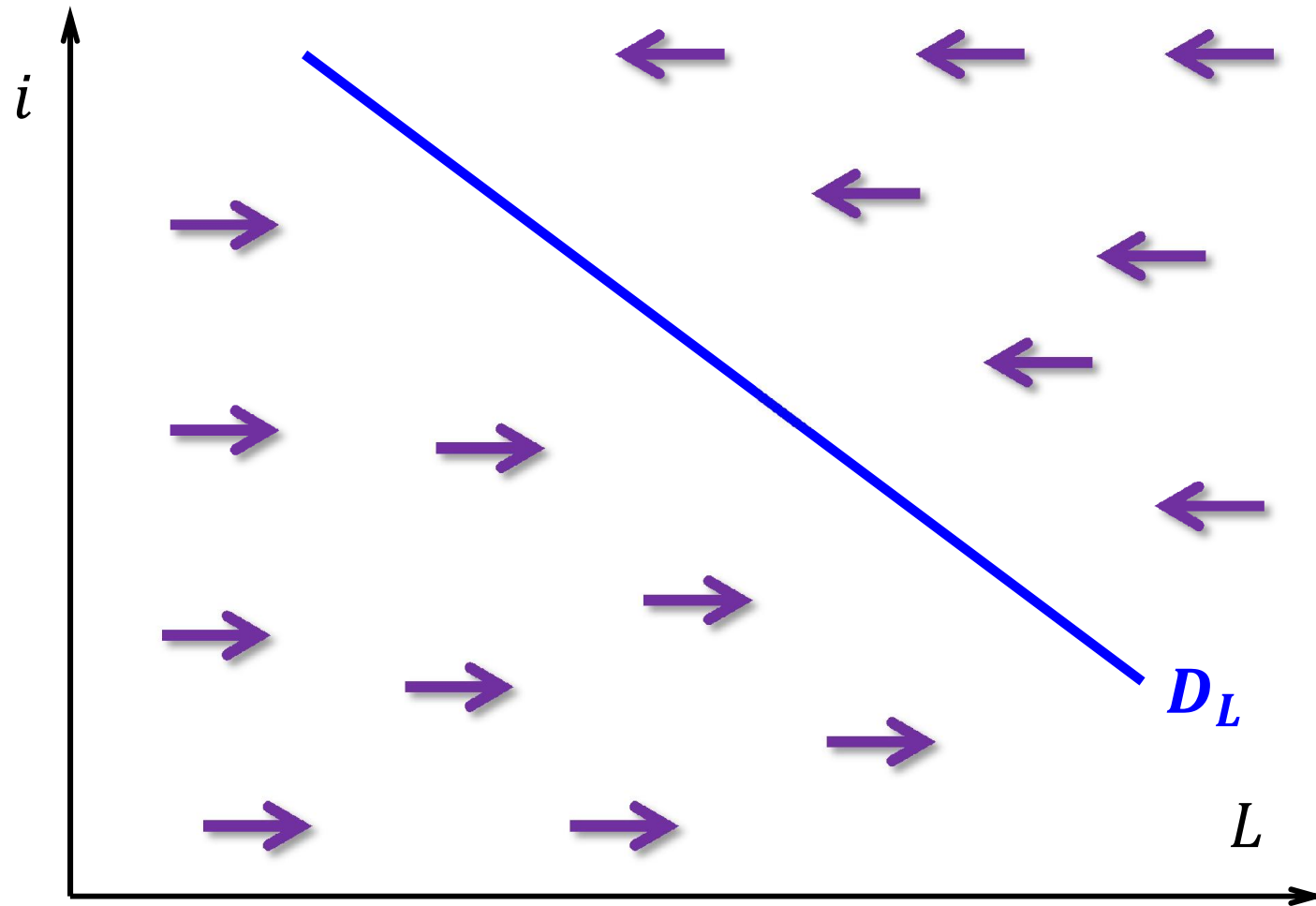


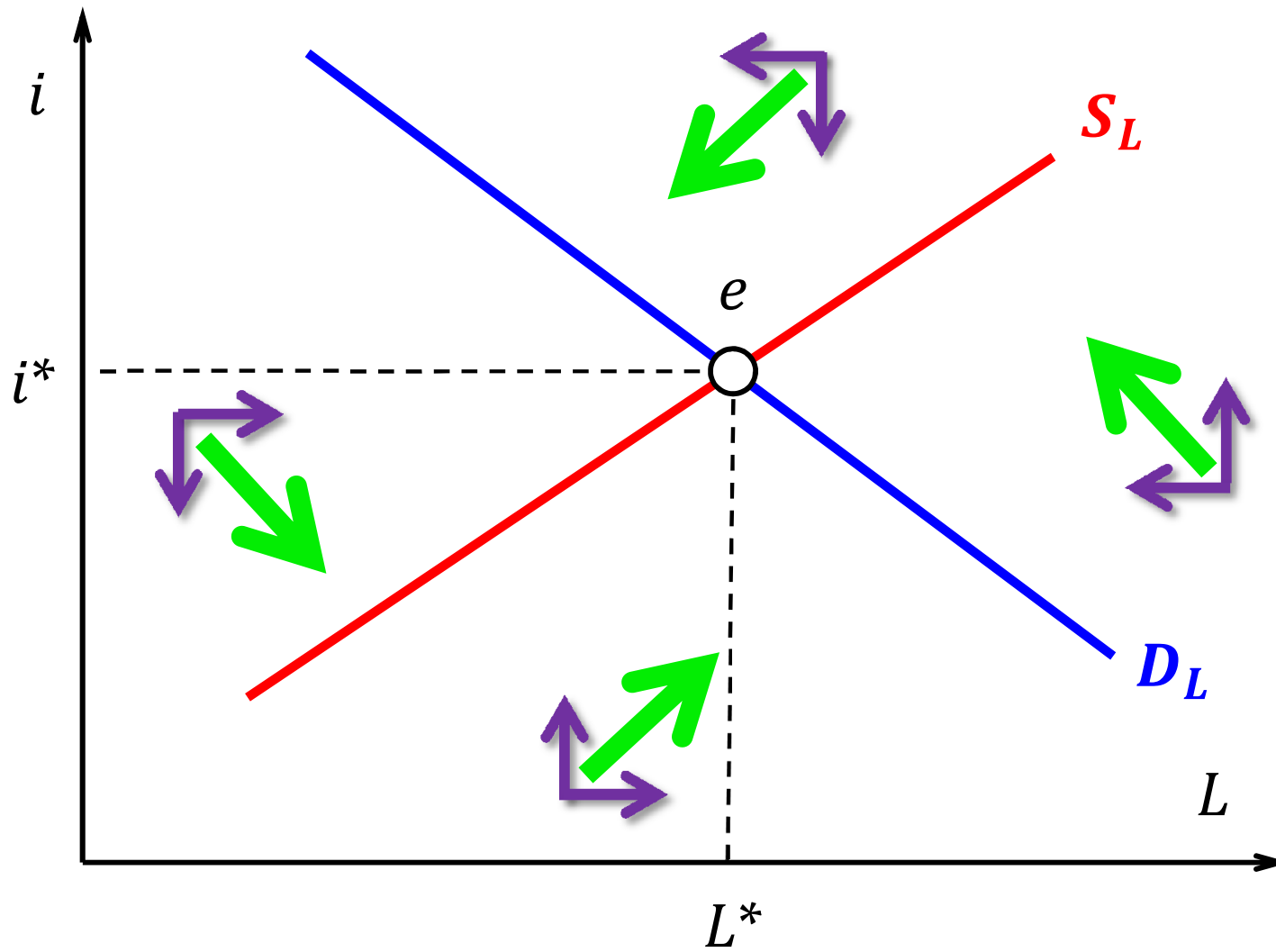


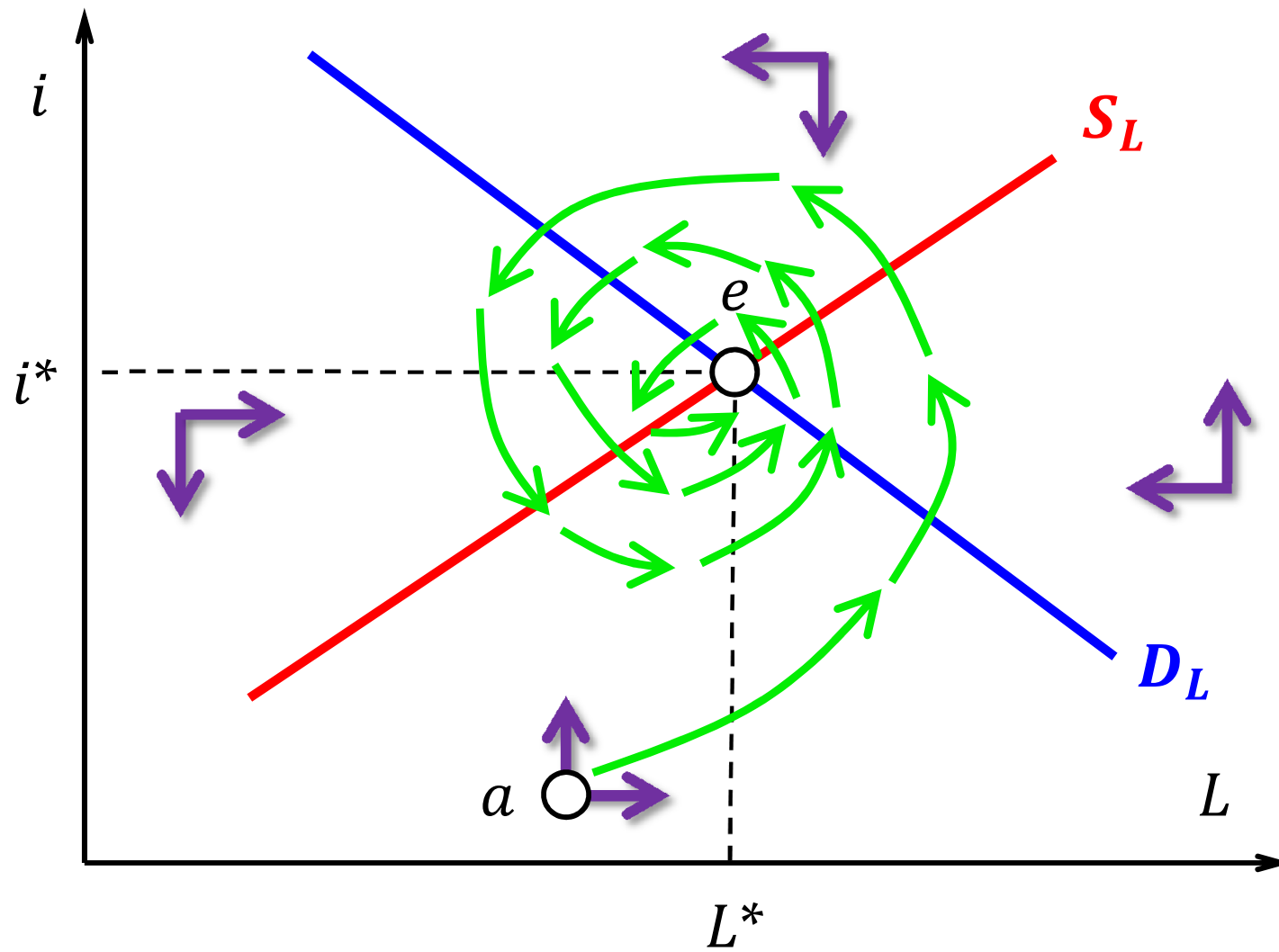




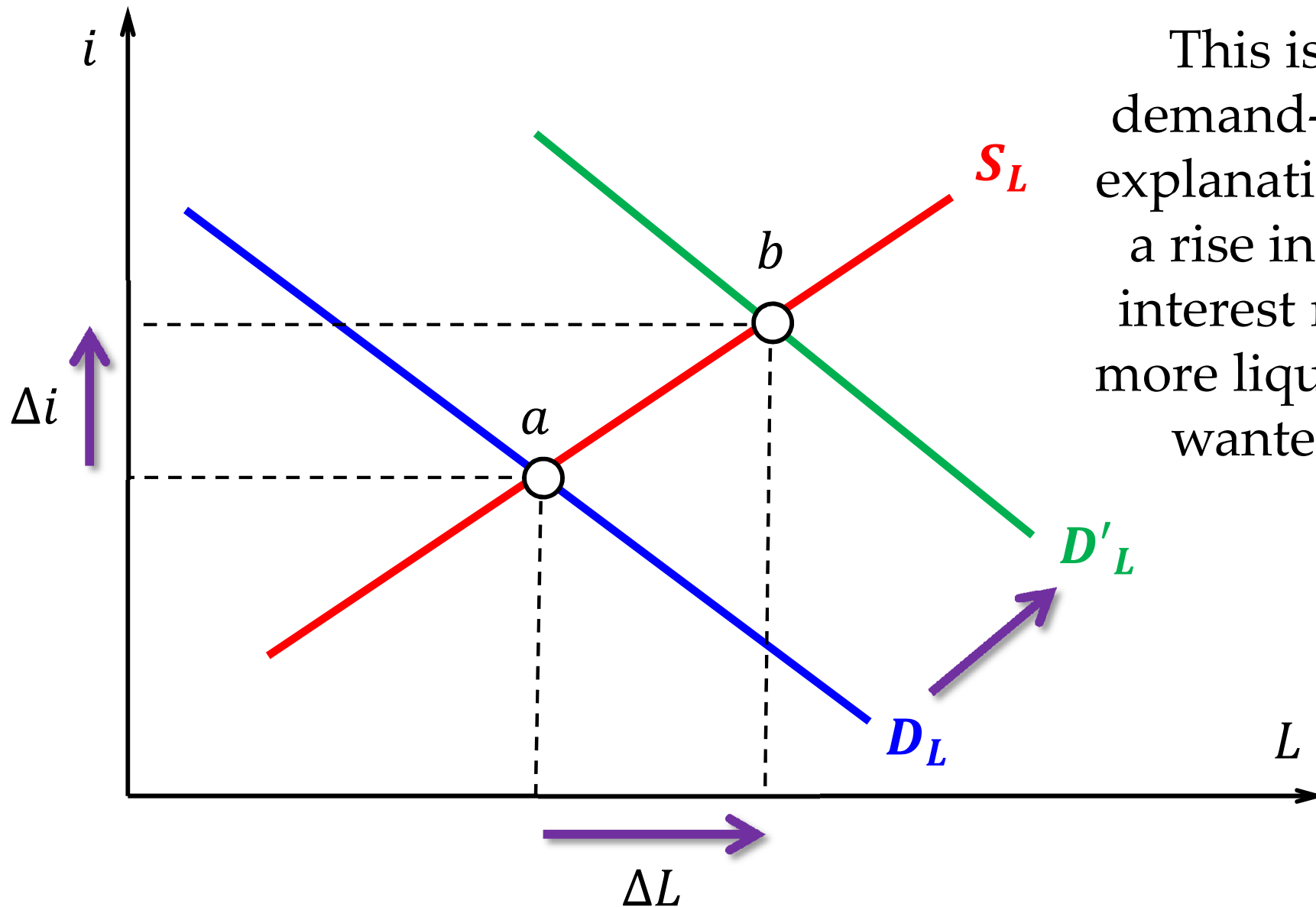






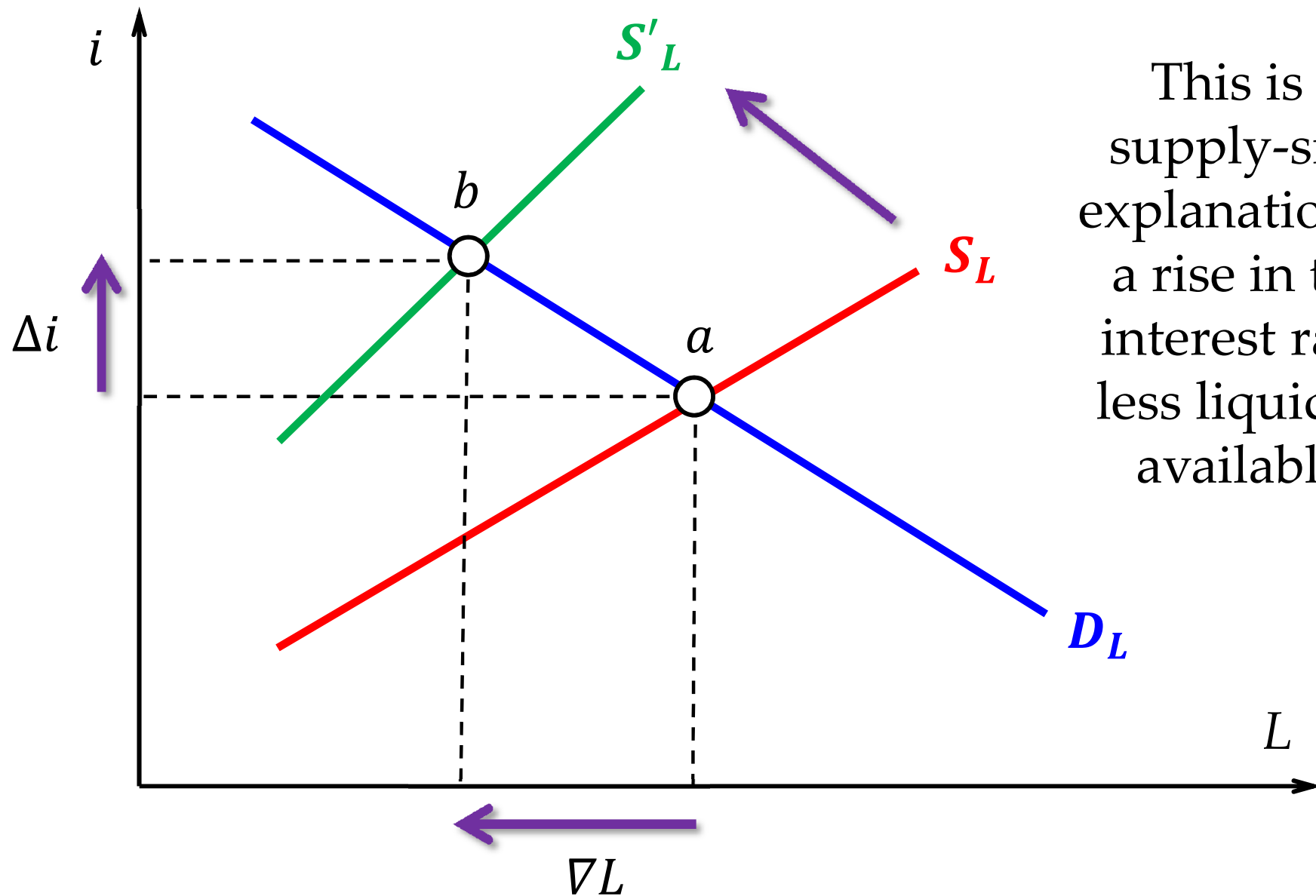


Equilibrium effect of a demand shift



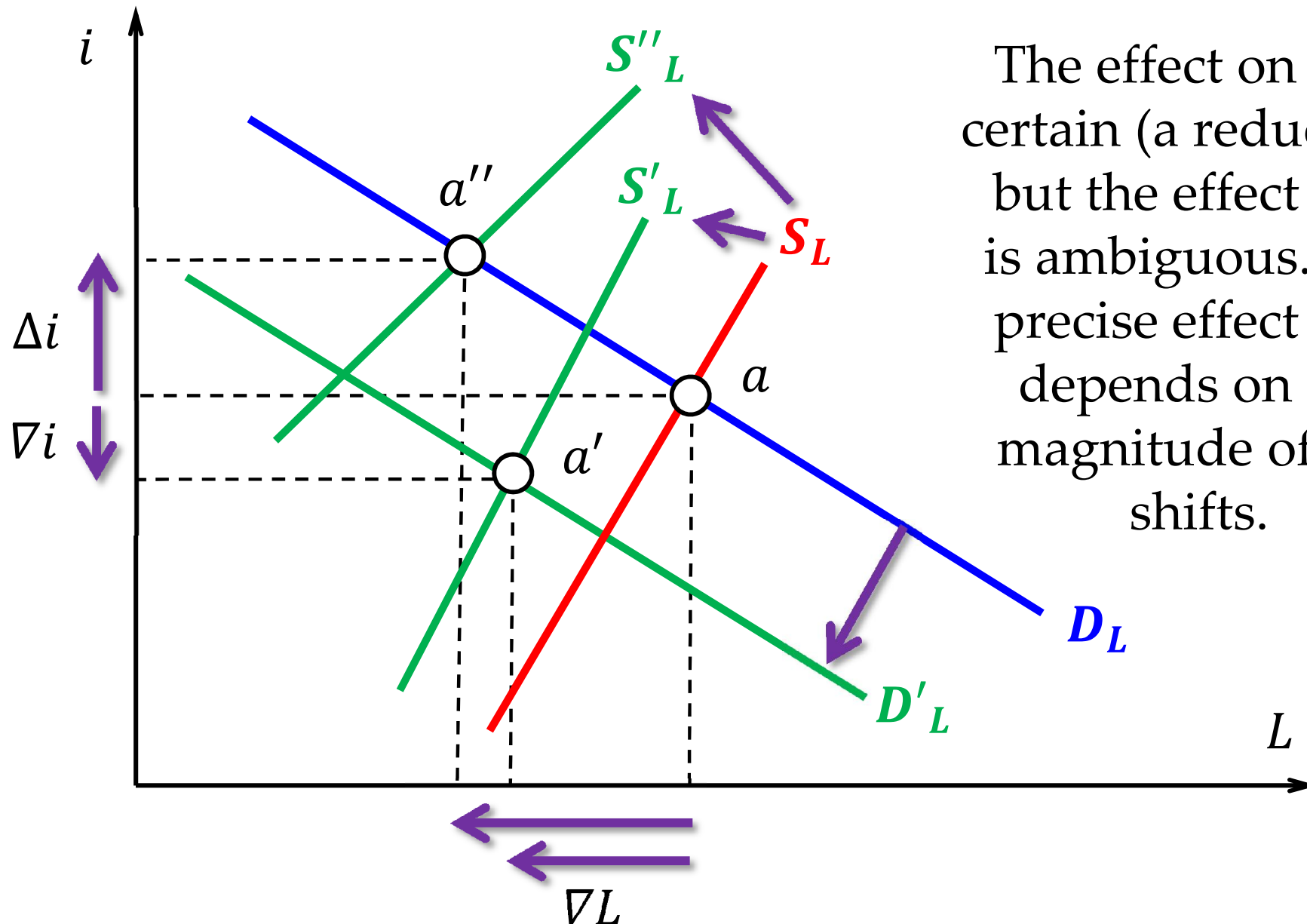
This is a demand-side explanation of a rise in the interest rate: more liquidity wanted.

Equilibrium effect of a supply shift



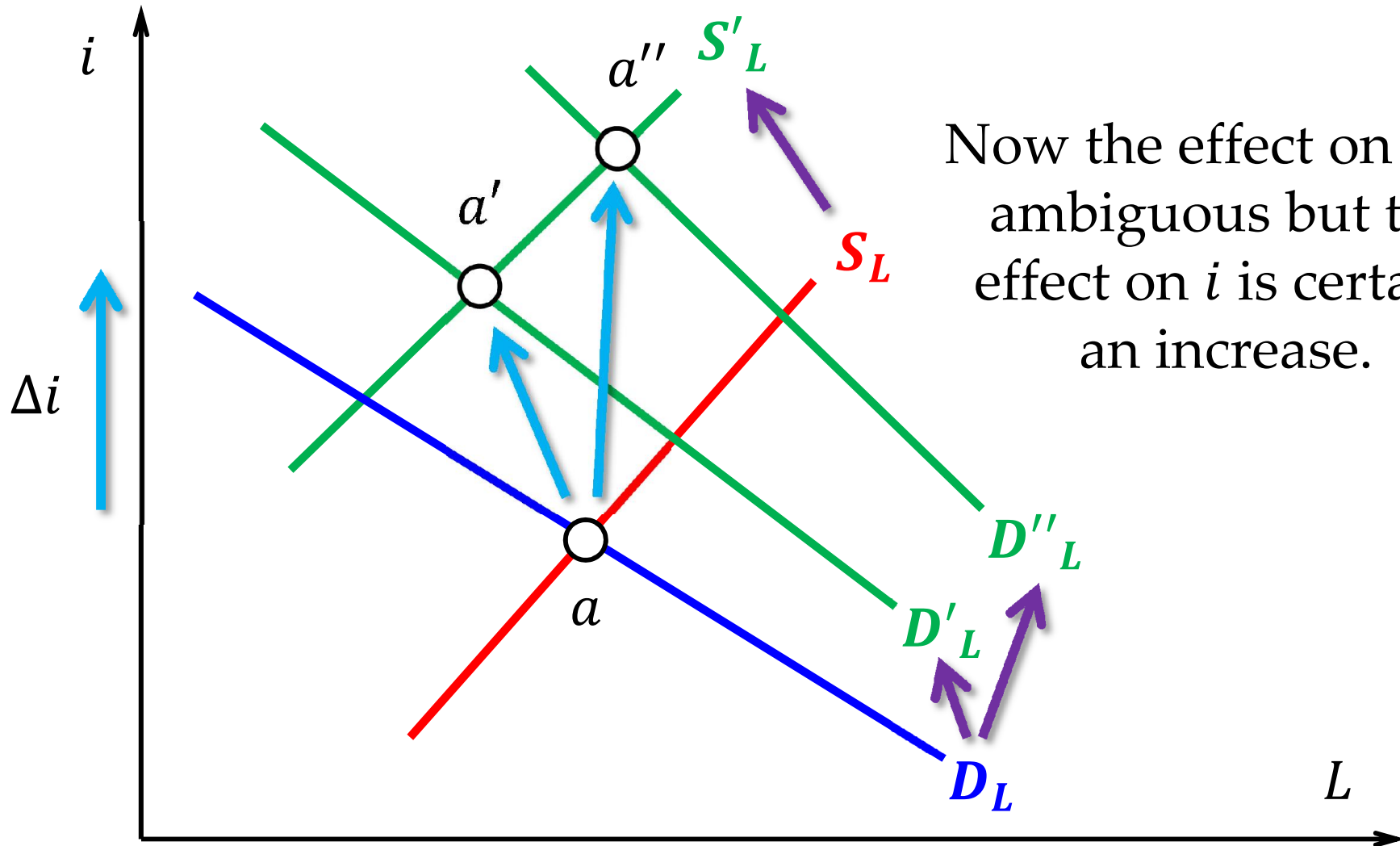
This is a supply-side explanation of a rise in the interest rate: less liquidity available.

Effect of simultaneous shifts /1



The effect on L is certain (a reduction) but the effect on i is ambiguous. The precise effect on i depends on the magnitude of the shifts.

Effect of simultaneous shifts /2



Now the effect on L is ambiguous but the effect on i is certain: an increase.