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Connecting Markets East & West

The Other Half of Macroeconomics and the Fate of Globalization

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See Appendix A-1
for important disclosures and
the status of non-US analysts.

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Exhibit 1. Politics in Disarray because Economies Are in the Overlooked Other-half of Macro-Economics

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		Borrowers (=investors)	
		Yes	No
Lenders (=savers)	Yes	1	3
	No	2	4

advanced economies are all here

Textbook world (private sector maximizing profits)

Overlooked other-half (private sector minimizing debt)

1. Lenders and borrowers are present in sufficient numbers (textbook world)
   ⇒**Ordinary interest rates**
2. Borrowers are present but not lenders due to the latter's bad loan problems (financial crisis, credit crunch)
   ⇒**Loan rates much higher than policy rate**
3. Lenders are present but not borrowers due to the latter's balance sheet problems and/or lack of investment opportunities (balance sheet recession, "secular" stagnation) ⇒**Ultra-low interest rates**
4. Borrowers and lenders both absent due to balance sheet problems for the former and bad loan problems for the latter (aftermath of a bubble burst) ⇒**Ultra-low interest rates, but only for highly rated borrowers**

Exhibit 2. Private Sector[1, 2, 3] Borrowers Disappeared[5] after 2008

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Average Annual Private Sector Financial Surplus(+) or Deficit(-)

(% of GDP)

	5 years to Q3 2008	**from Q4 2008 to present[4]**	latest 4 quarters
UK	-0.02	**2.11**	-1.32
US	0.53	**4.94**	3.76
Canada	-0.02	**-1.57**[5]	-2.16
Japan	7.68[2]	**8.65**	7.13
Korea	-1.89	**3.94**	3.65
Australia	-7.81	**0.09**	-0.19
Eurozone	1.66	**4.94**	4.25

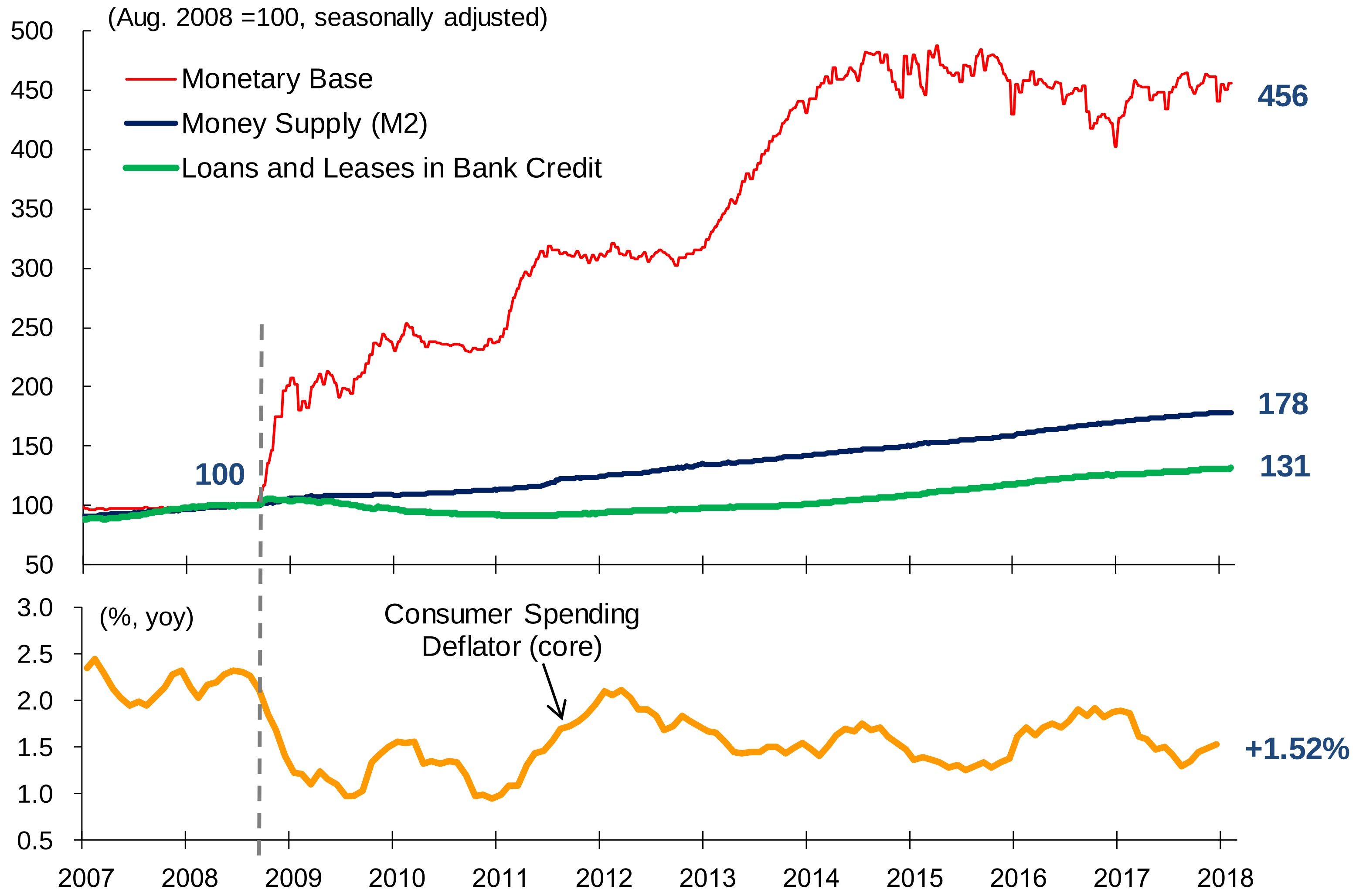
(% of GDP)

	5 years to Q3 2008	**from Q4 2008 to present[4]**	latest 4 quarters
Germany	8.46[3]	**6.41**	7.99
France	2.42	**2.33**[5]	1.21
Italy	1.48	**3.21**	6.71
Spain	-8.03	**6.99**	5.15
Greece	0.39	**1.56**	-0.06
Ireland	-4.88	**7.41**	-2.44
Portugal	-3.97	**4.24**	1.69

1. private sector = household + corporate + financial sectors
2. Entered balance sheet recession in 1990 (see Exhibits 12, 13)
3. Entered balance sheet recession in 2000
4. Until Q3 2017.
5. Except Canada and France

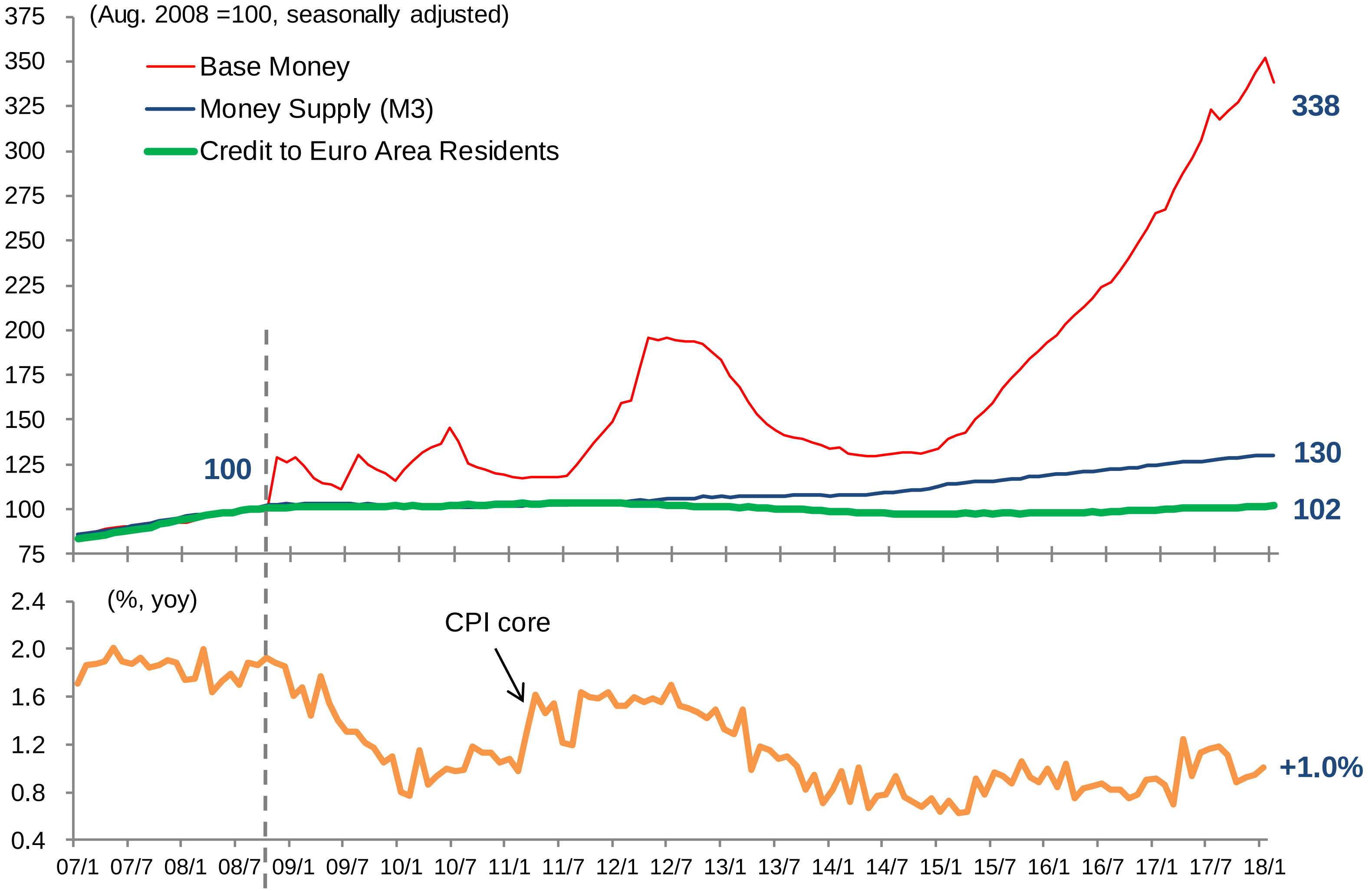
Source: Nomura Research Institute, based on these countries' flow of funds and national accounts data

Exhibit 3. Drastic Liquidity Injections Resulted in minimal Increases in Money Supply and Credit (I): US



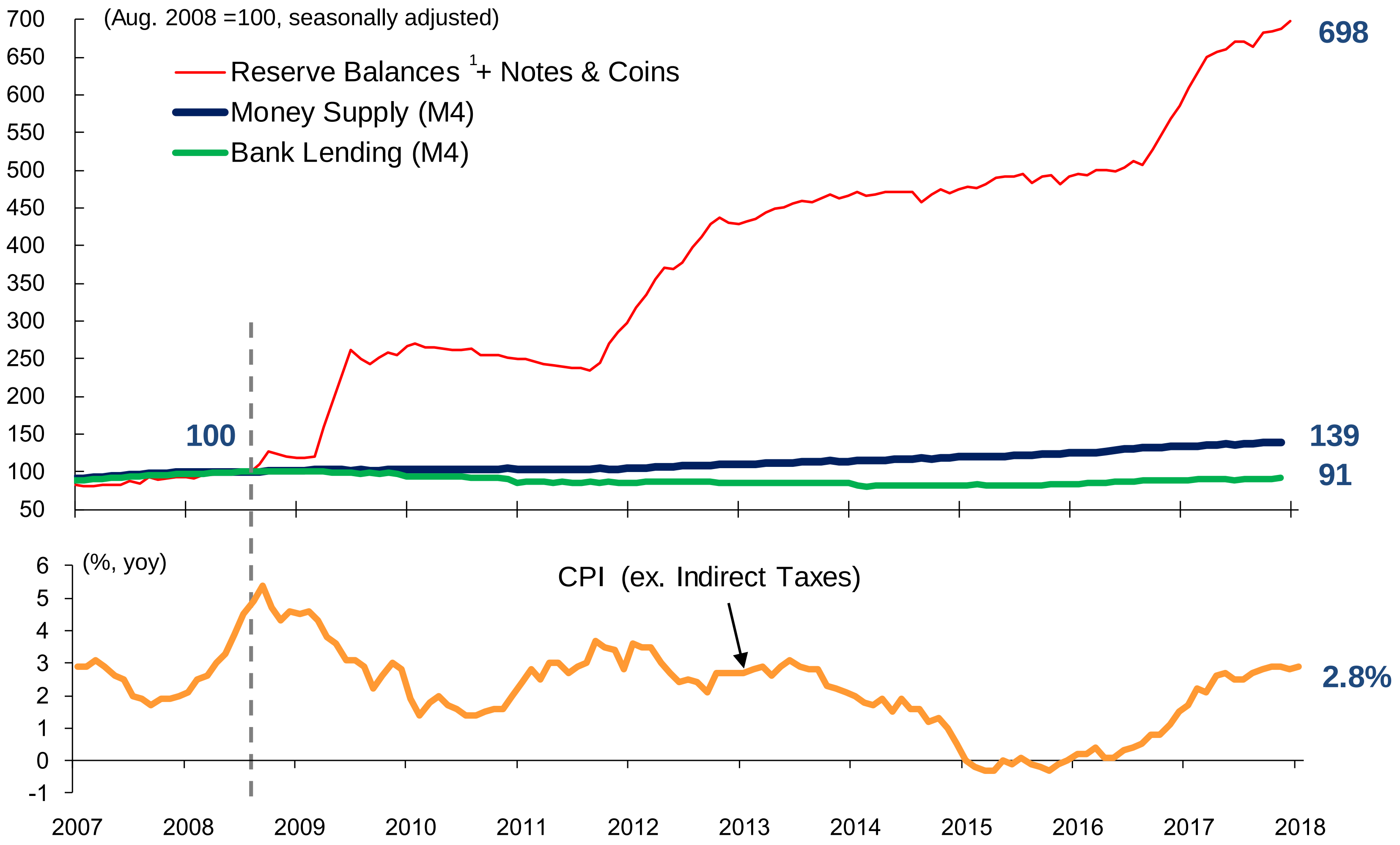
Note: Commercial bank loans and leases, adjustments for discontinuities made by Nomura Research Institute.
Sources: Federal Reserve Board; US Department of Commerce

Exhibit 4. Drastic Liquidity Injections Resulted in minimal Increases in Money Supply and Credit (II): Eurozone



Note: Base money's figures are seasonally adjusted by Nomura Research Institute.
Sources: European Central Bank; Eurostat

Exhibit 5. Drastic Liquidity Injections Resulted in minimal Increases in Money Supply and Credit (III): UK



Notes: 1. Reserve balances data are seasonally unadjusted.

2. Money supply and bank lending data exclude intermmediate financial institutions.

Sources: Bank of England; Office for National Statistics, UK

Exhibit 6. Drastic Liquidity Injections Resulted in minimal Increases in Money Supply and Credit (IV): Japan

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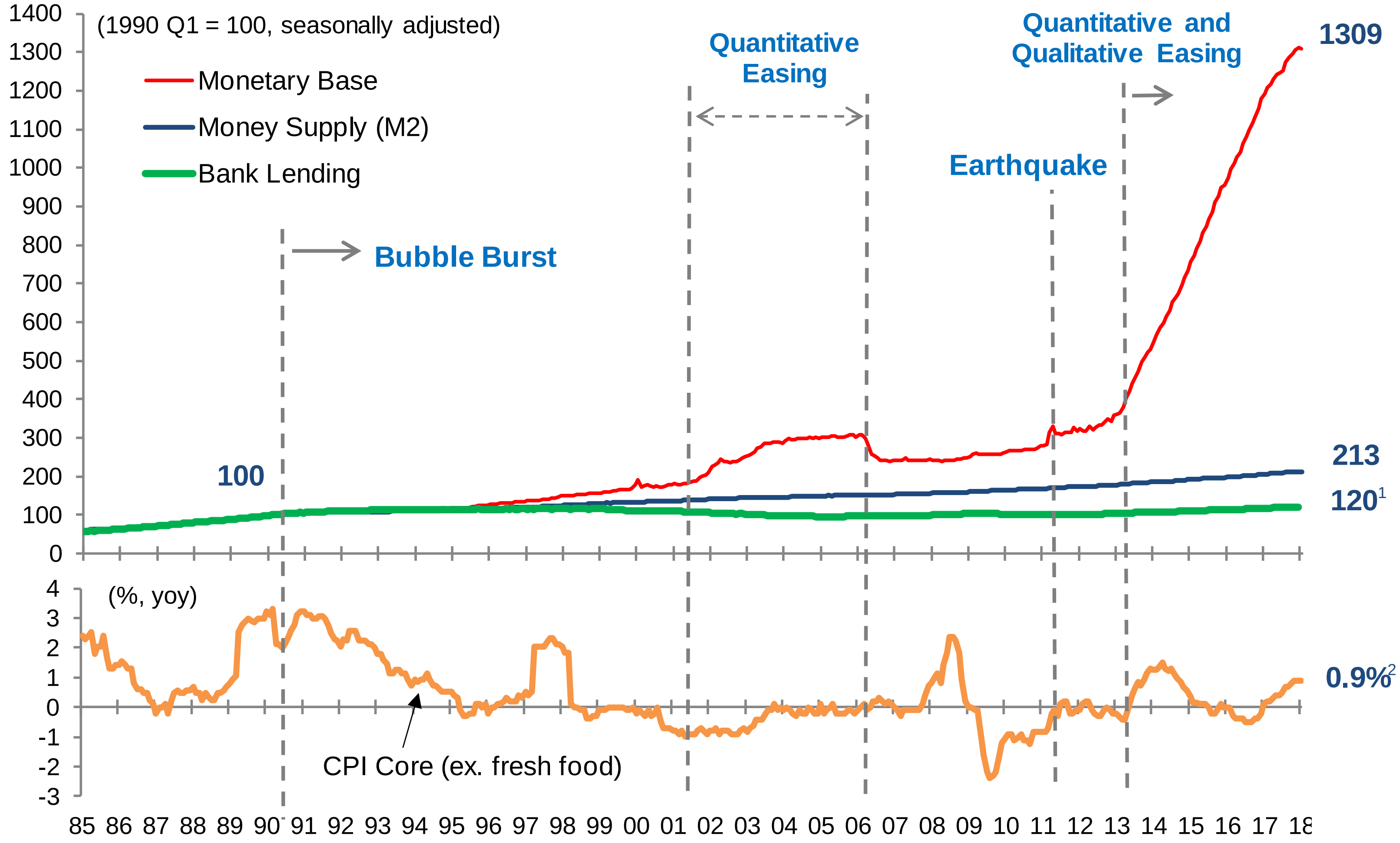
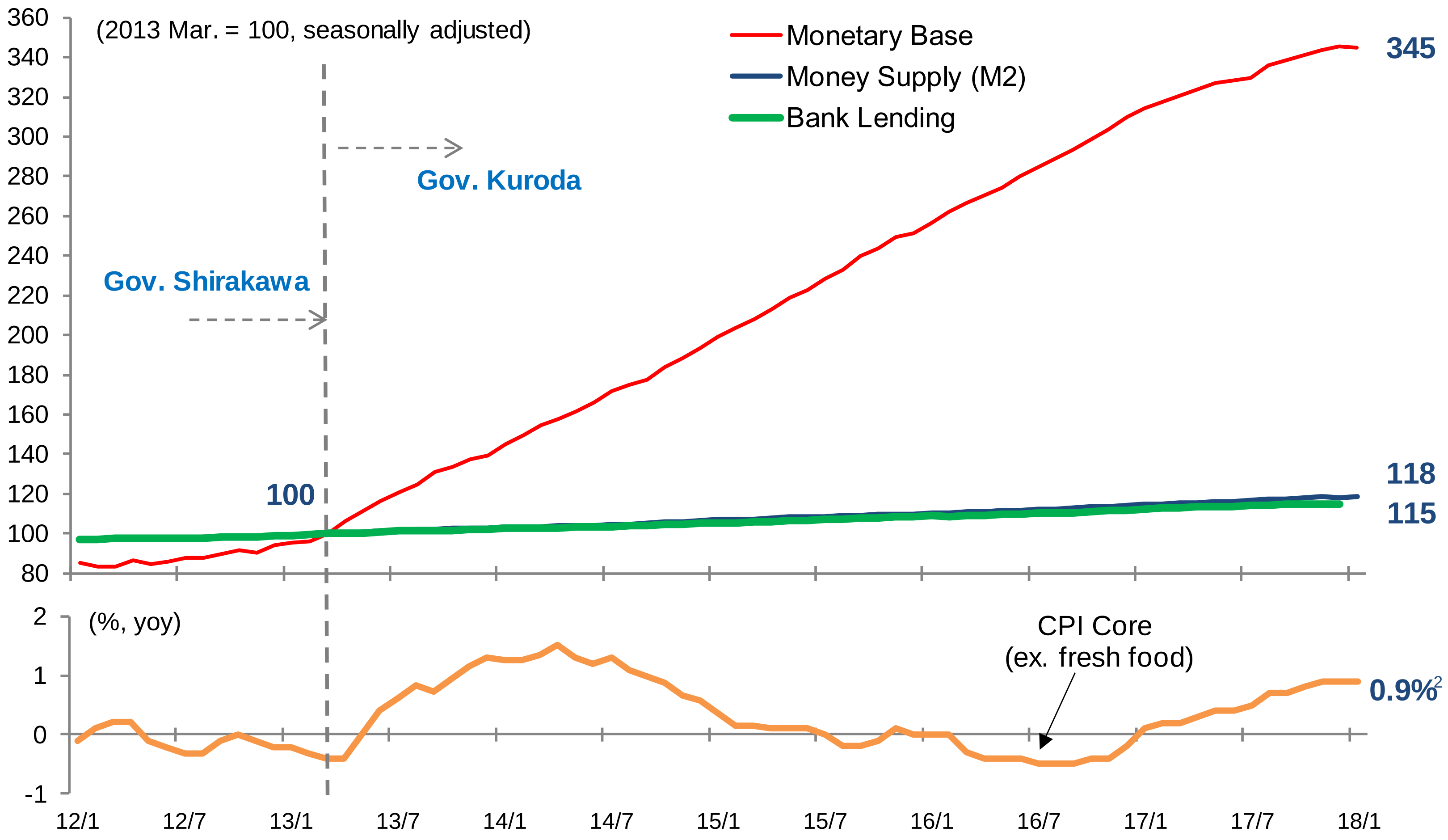


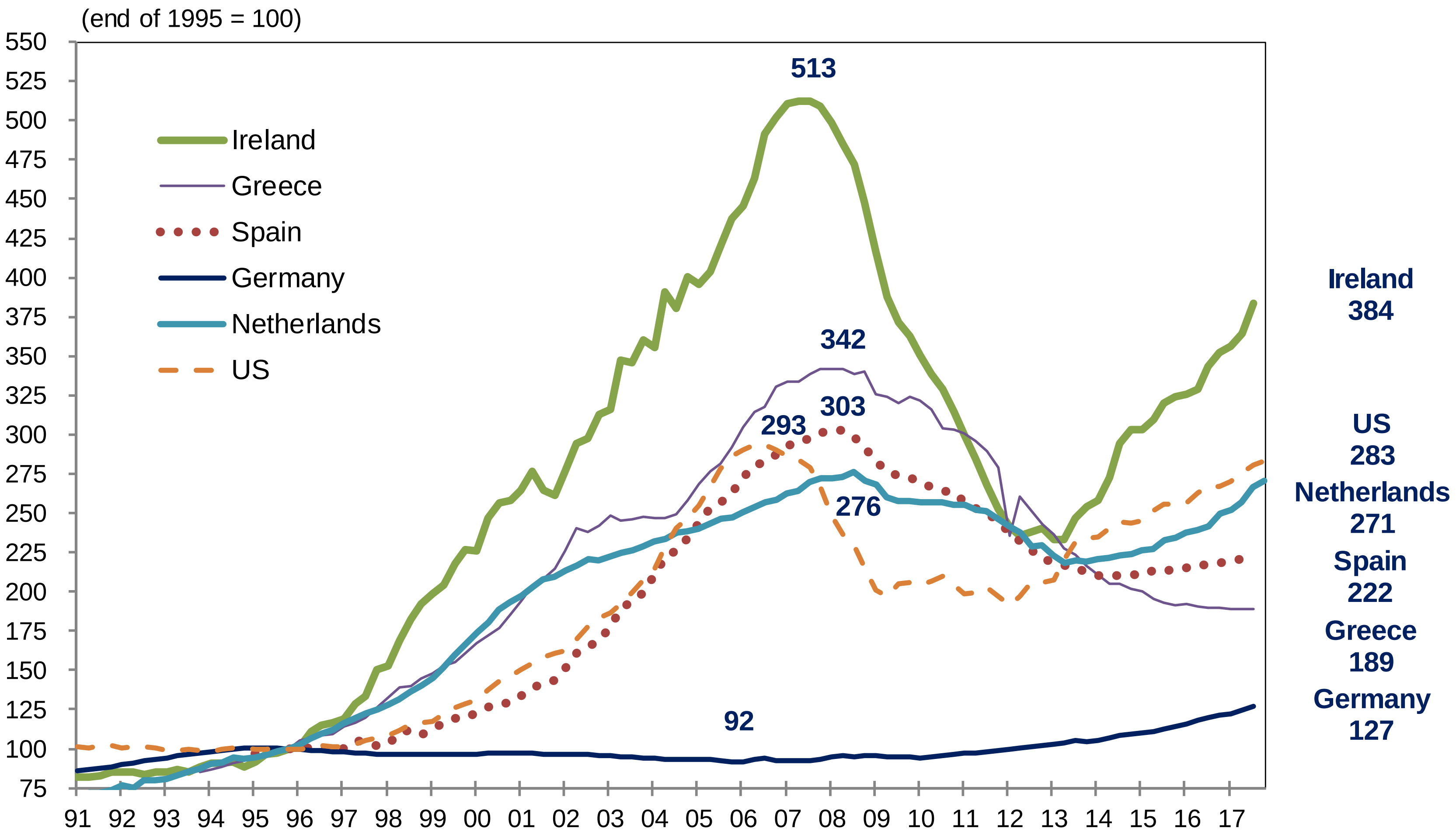
Notes: 1. Figures for bank lending are seasonally adjusted by Nomura Research Institute.
2. Excluding the impact of consumption tax.
Source: Bank of Japan

Exhibit 7. No Acceleration in Private Sector Credit or Money Supply Growth after the BOJ's QQE



Notes: 1. Figures for bank lending are seasonally adjusted by Nomura Research Institute.
2. Excluding the impact of consumption tax.
Sources: Bank of Japan and Ministry of Internal Affairs and Communications

Exhibit 8. Europe & US Experienced House Price Bubbles, except Germany



Notes: 1. Ireland's figures before 2005 are existing house prices only.
2. Greece's figures are flats' prices in Athens and Thessaloniki.
Sources: Nomura Research Institute, calculated from Bank for International Settlements and S&P Dow Jones data.

Exhibit 9. Japan's GDP Grew despite major Loss of Wealth and Private Sector De-leveraging

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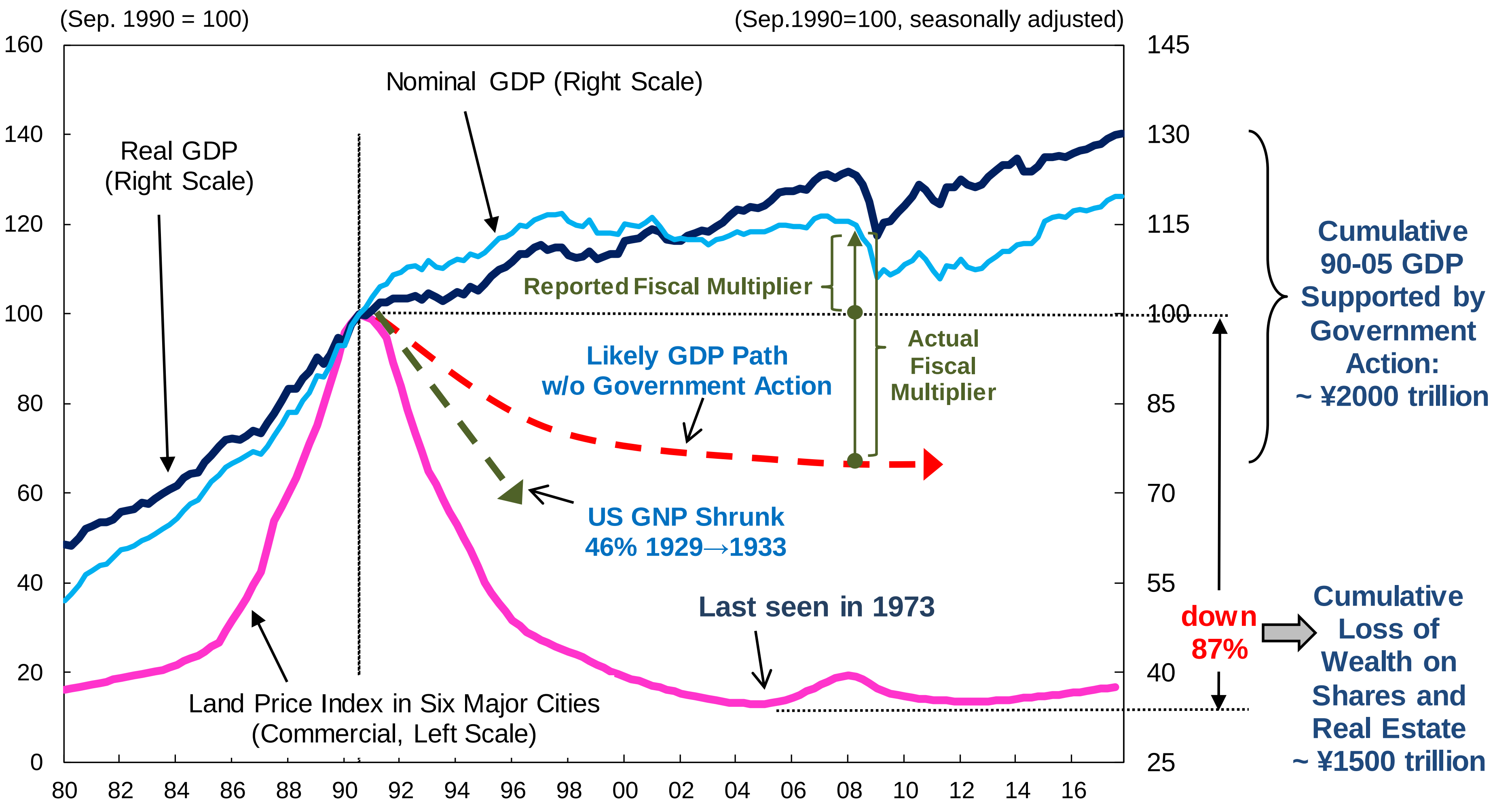

Sources: Cabinet Office,Japan; Japan Real Estate Institute

Exhibit 10. Japan's Challenge: Overcoming Problems of Balance Sheets and Inferior Return on Capital

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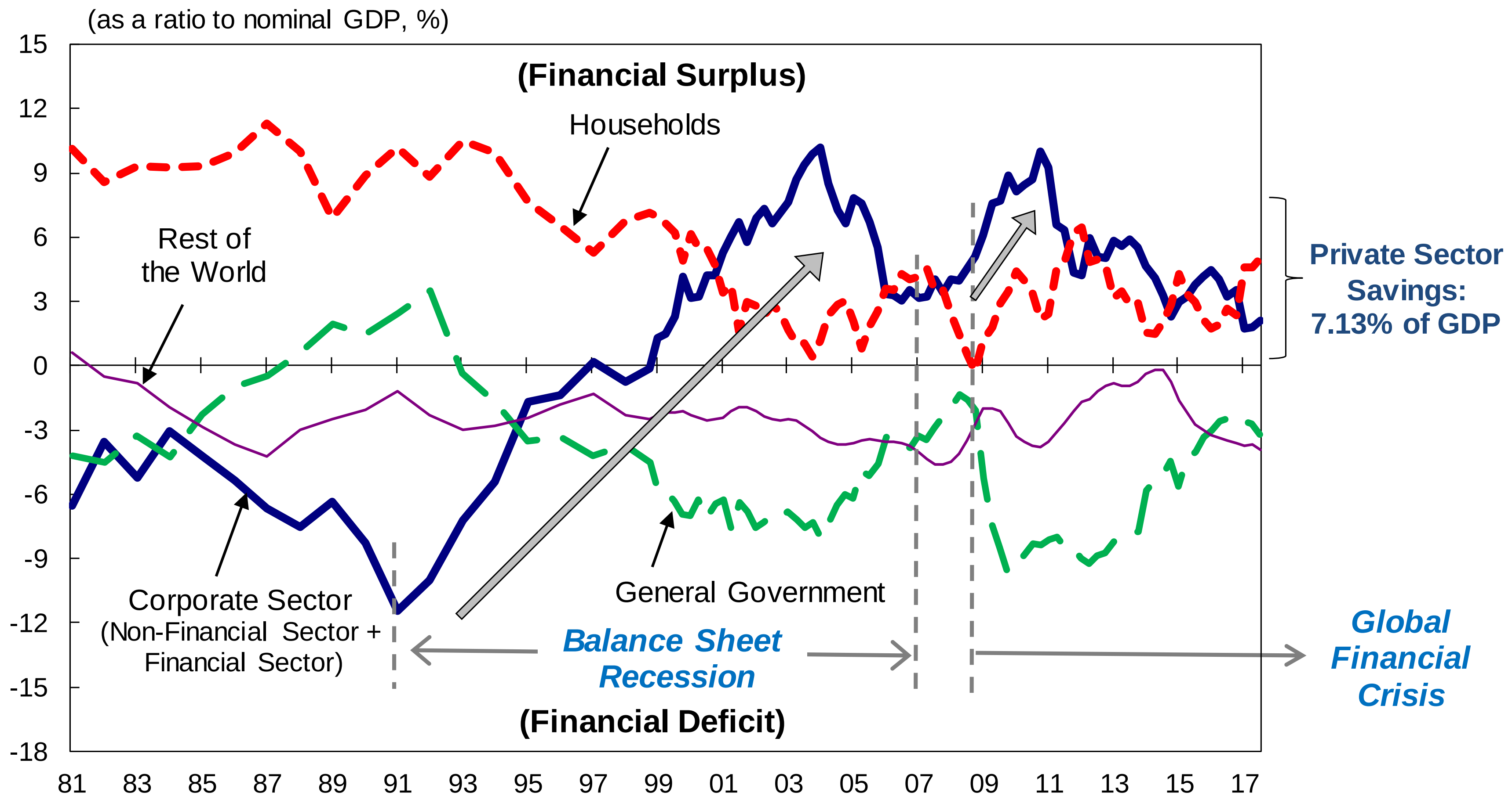
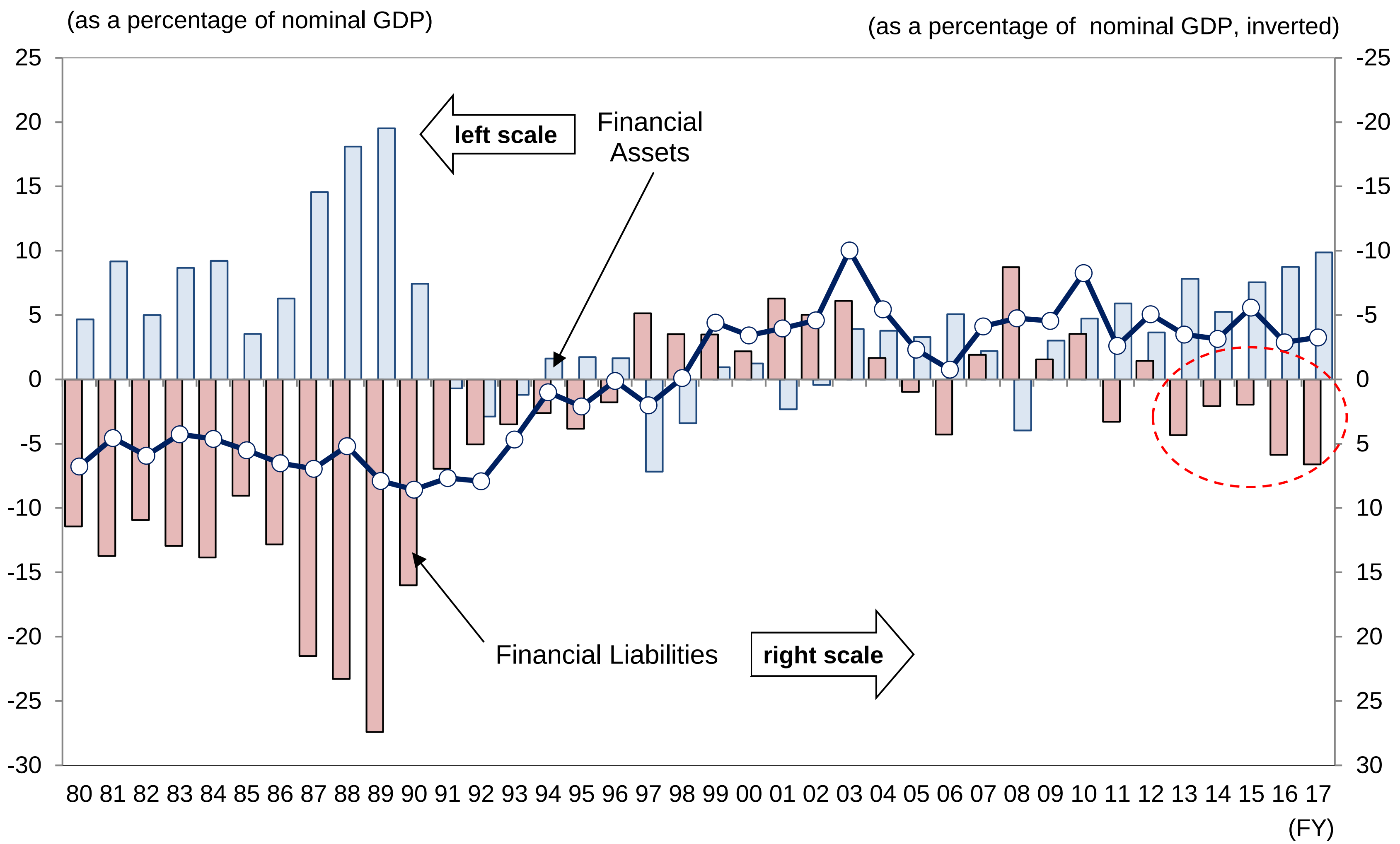
Financial Surplus or Deficit by Sector



Note: All entries are four-quarter moving averages. For the latest figures, four-quarter averages ending in 2017 Q3 are used.
Sources: Bank of Japan, *Flow of Funds Accounts*, and Government of Japan, Cabinet Office, *National Accounts*

Exhibit 11. Japanese Non-financial Companies Are Finally Beginning to Borrow, but Are still Net Savers



Note: For the latest figures, four-quarter averages ending in 2017 Q3 are used.
Sources: Bank of Japan, *Flow of Funds Accounts*, and Government of Japan, Cabinet Office, *National Accounts*

Exhibit 12. Three Stages of Economic Development: Urbanization, Industrialization and Globalization

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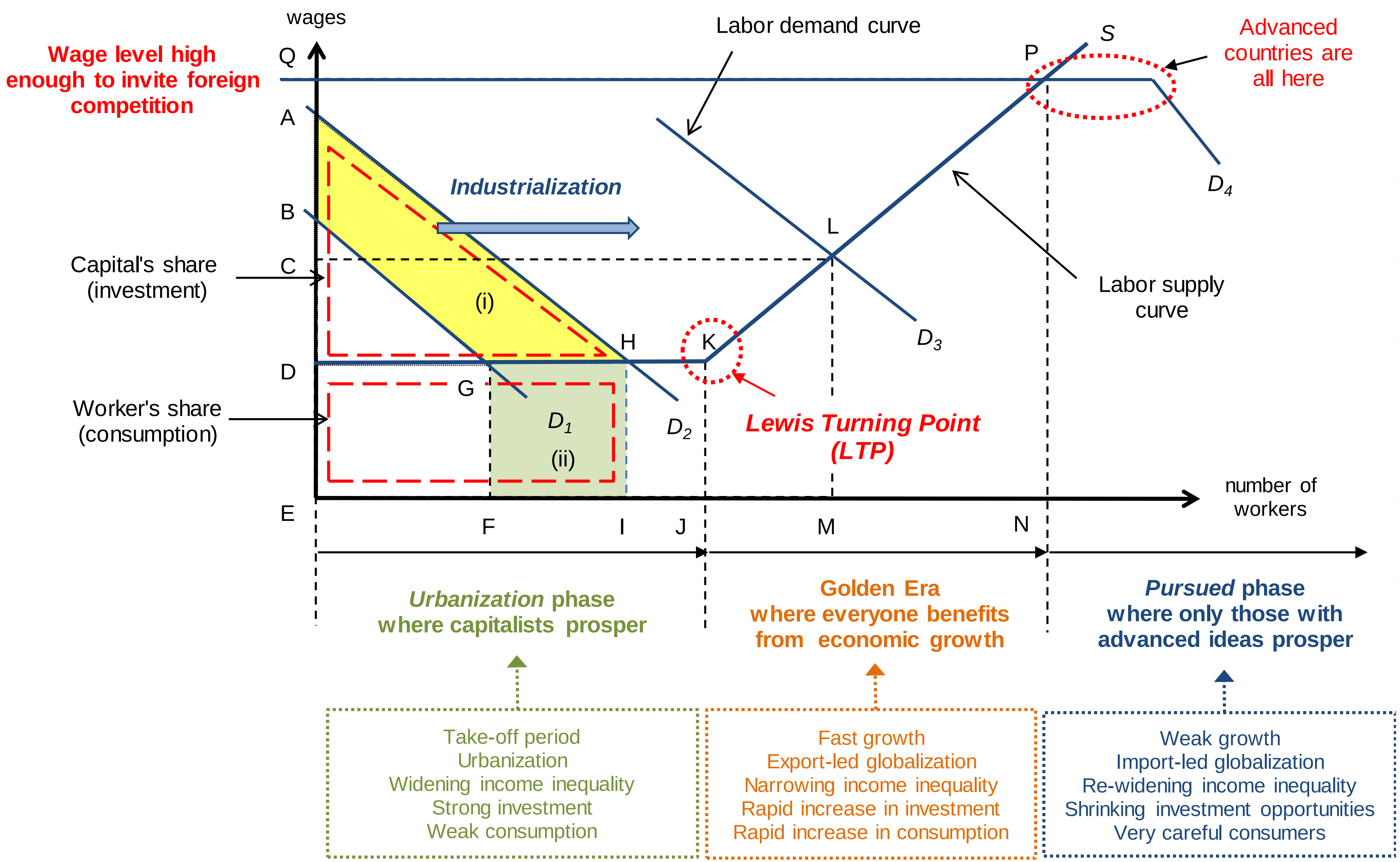

Source: Nomura Research Institute

Exhibit 13. Effectiveness of Monetary & Fiscal Policies in Three Stages of Economic Development

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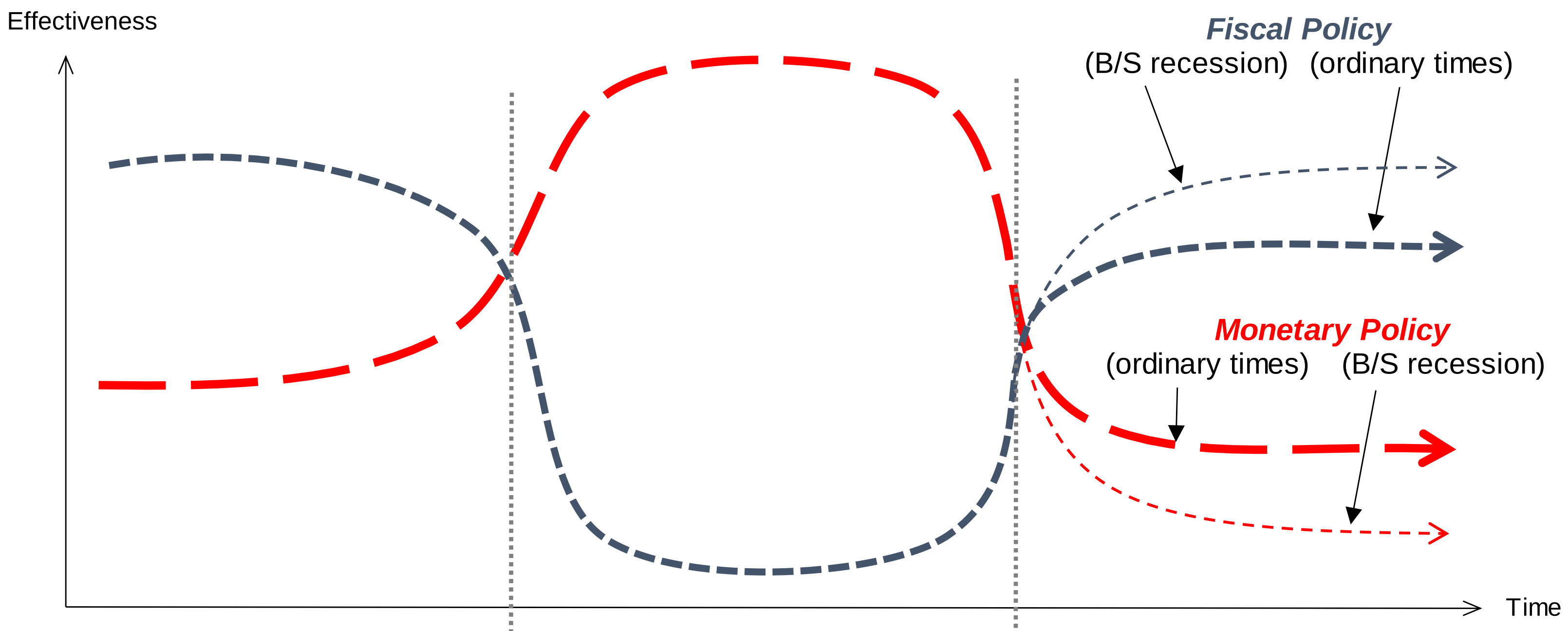


Urbanizing Era

- Flat wages and prices
- Strong demand for funds from public sector for needed infrastructure

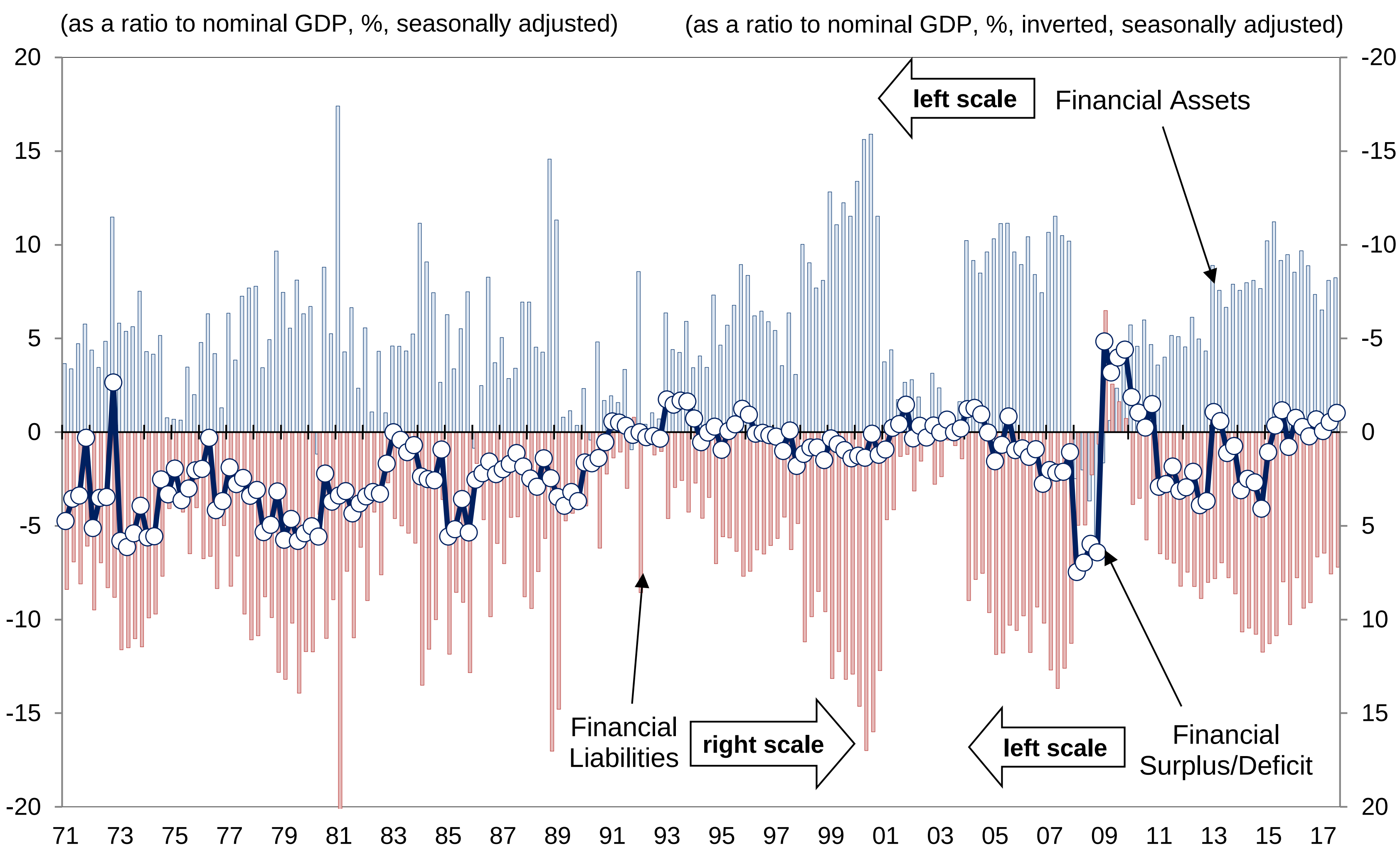
Golden Era

- Rising wages and prices
- Strong demand for funds from businesses for capacity and productivity enhancing investments
- Central bank must remain highly vigilant toward inflation

Pursued Era

- Flat wages and prices
- Return on capital higher abroad but households still saving
- Government must borrow and spend excess private savings on *self-financing* projects

Exhibit 14. US Nonfinancial Companies' Demand for Funds Shrunk after 1990



Notes: Latest figures are for 2017 Q3.
Sources: Nomura Research Institute, based on flow of funds data from FRB and US Department of Commerce

Exhibit 15. US Monetary Policy Has Grown Less Effective Starting in 1990s

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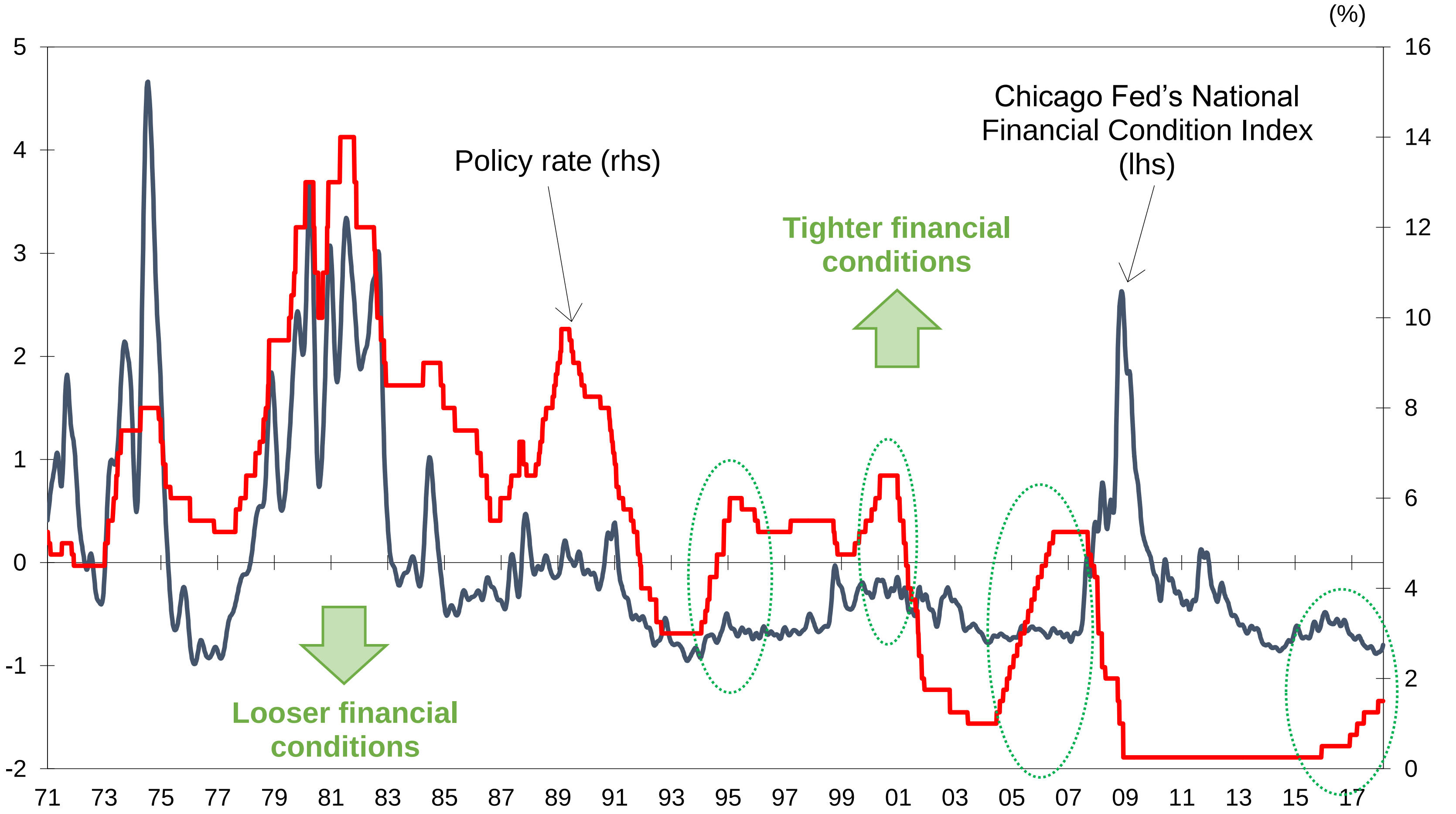

Note: In the Chicago Fed's national financial conditions index (NFCI), 0 represents the average from 1971 to the present.
Prior to 1987, when the Fed began targeting fed funds rate, the policy rate in the graph refers to the official discount rate.
Since the Fed began targeting a corridor of values for fed funds, the graph shows the top end of the Fed's target range.

Source: Board of Governors of the Federal Reserve System, The Federal Reserve Bank of Chicago, "National Financial Conditions Index"

Exhibit 16. US Private Sector Has Been Saving 4.94% of GDP on Average with Zero Interest Rates since 2008

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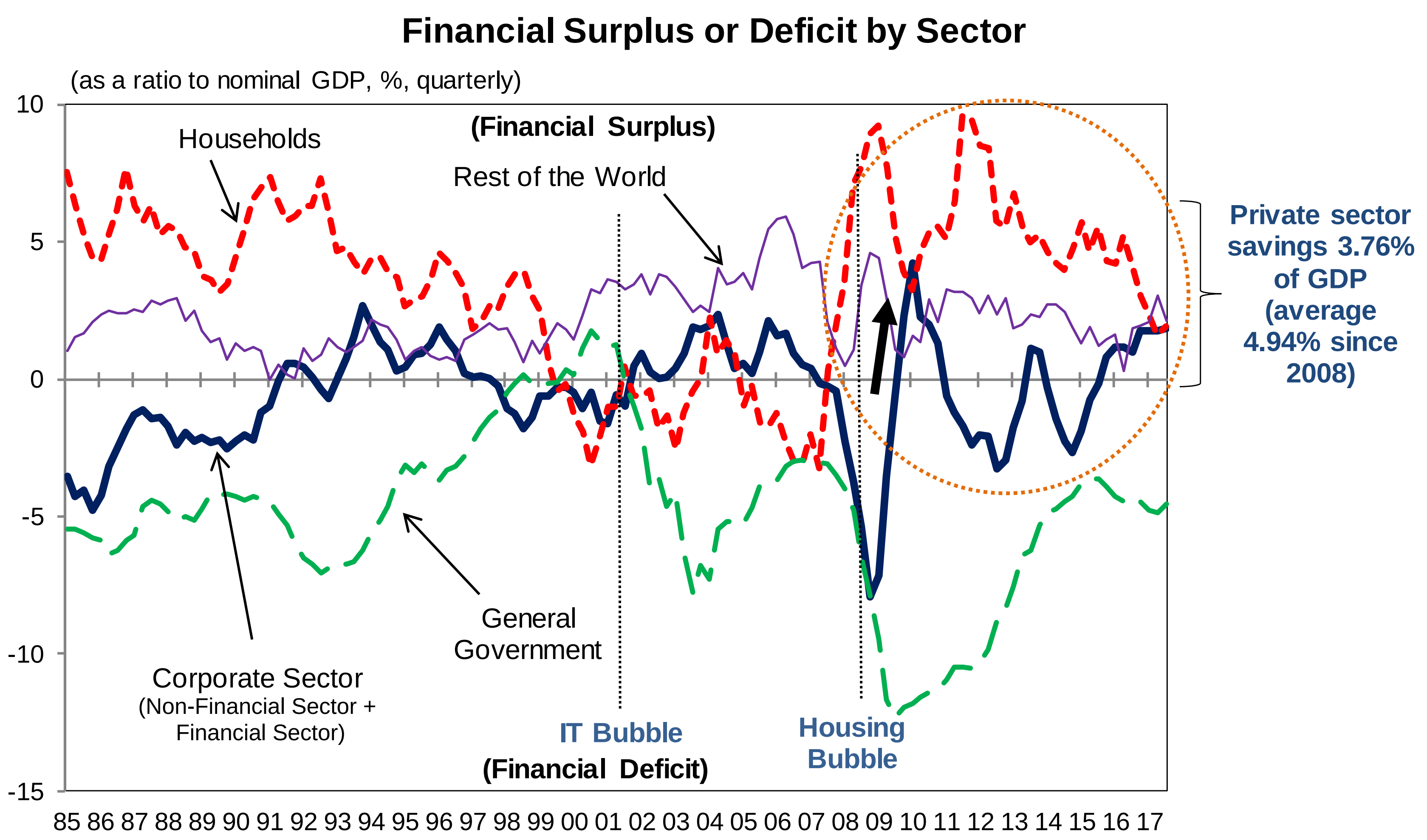

Note: All entries are four-quarter moving averages. For the latest figures, four-quarter averages ending in 2017 Q3 are used.
Sources: FRB, US Department of Commerce

Exhibit 17. Some US Households Are Starting to Borrow Money

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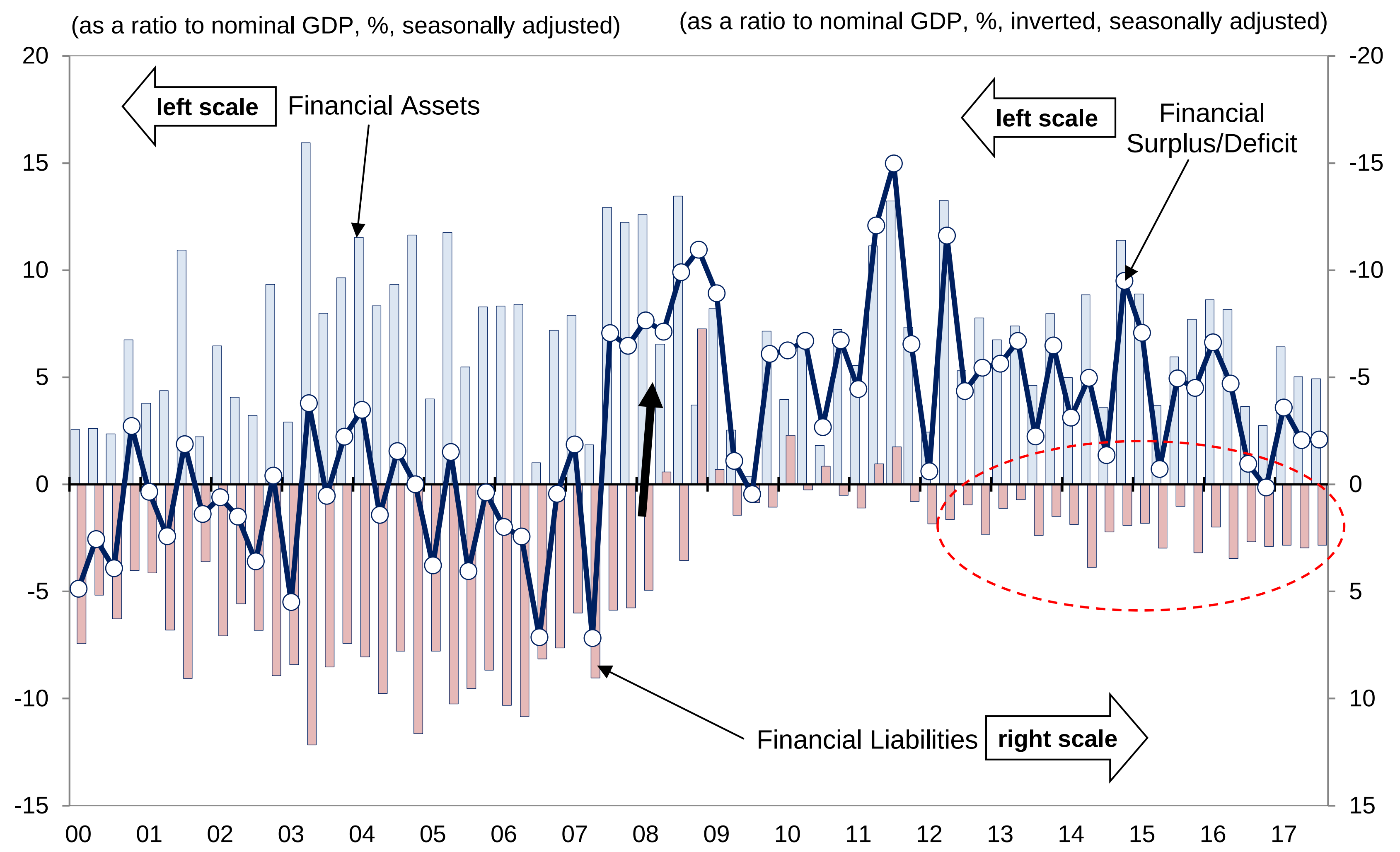
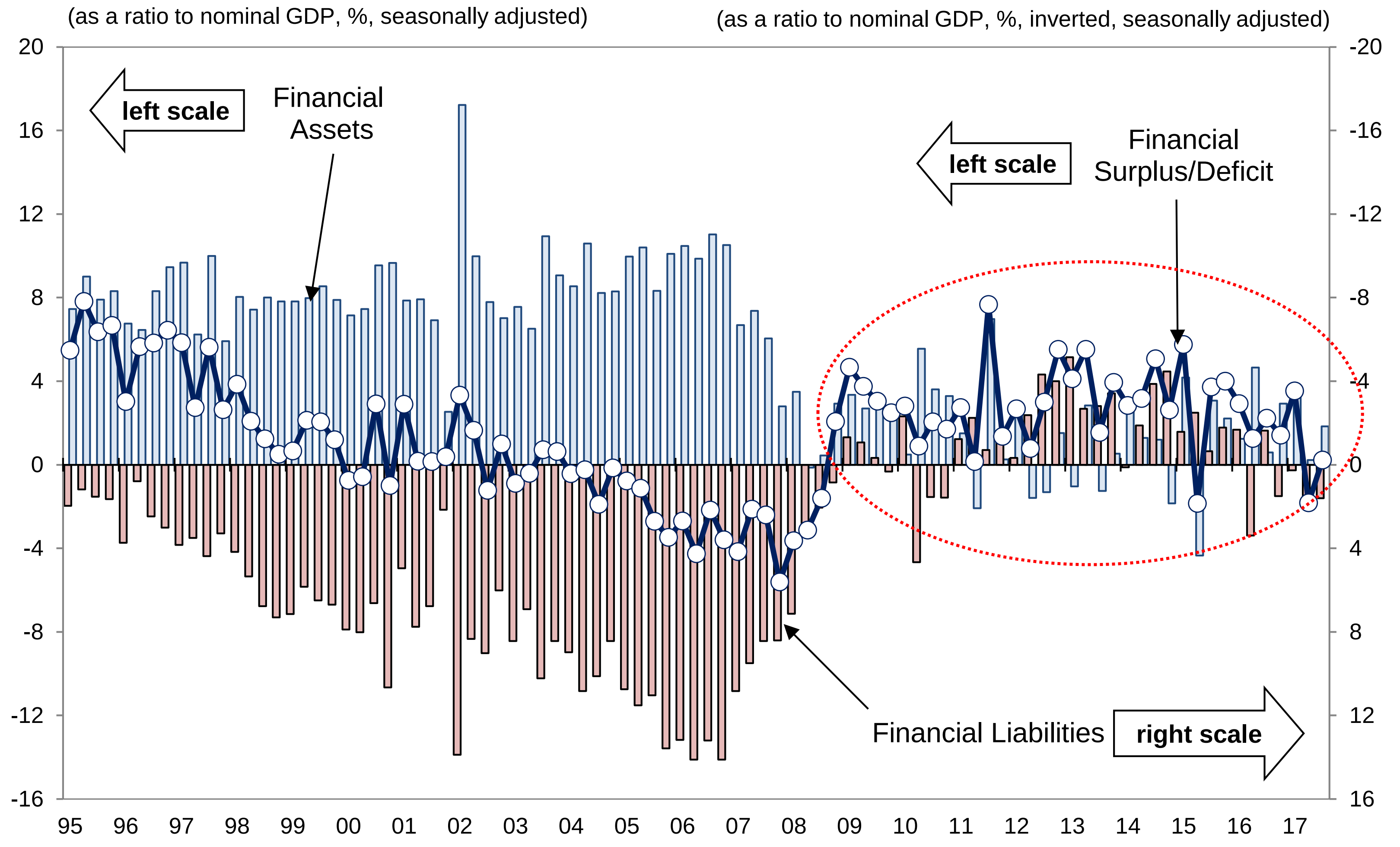


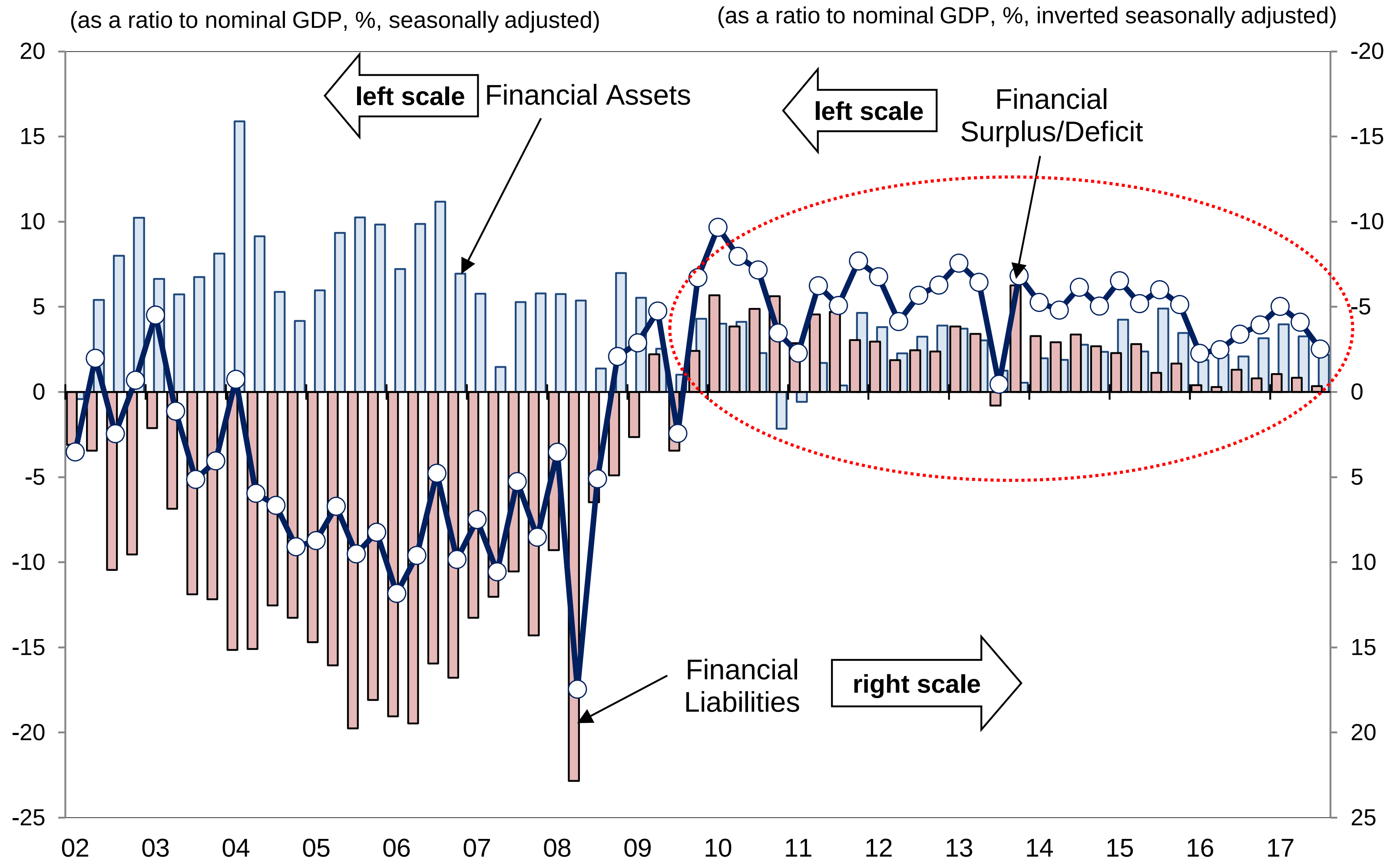
Notes: Latest figures are for 2017 Q3.
Sources: Nomura Research Institute, based on flow of funds data from FRB and US Department of Commerce

Exhibit 18. Spanish Households Have Been Deleveraging since 2008



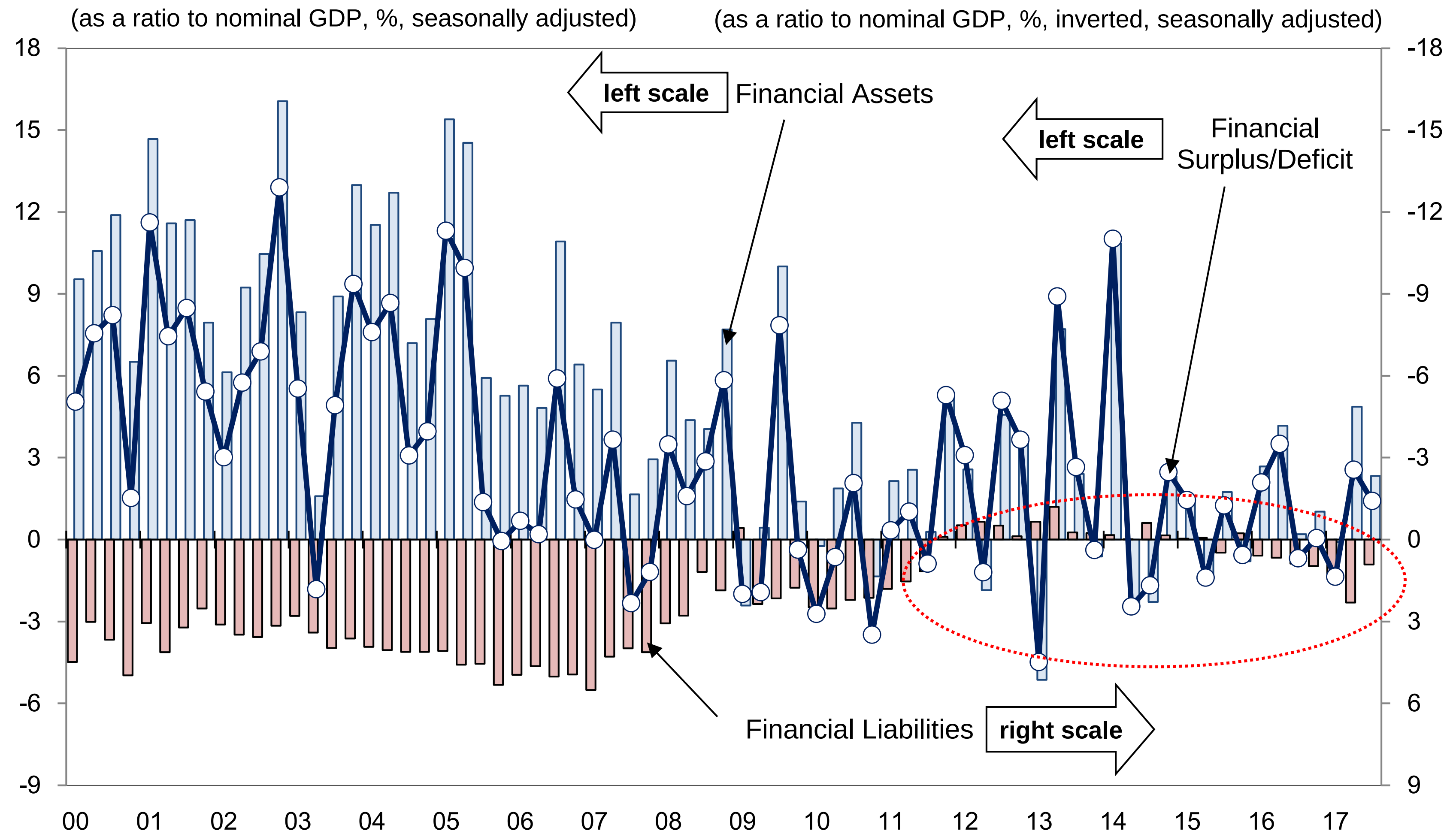
Notes: Seasonal adjustments by Nomura Research Institute. Latest figures are for 2017 Q3.
Sources: Nomura Research Institute, based on flow of funds data from Banco de España and National Statistics Institute, Spain

Exhibit 19. Irish Households Increased Borrowings after the Dotcom Bubble: Now They Are Deleveraging



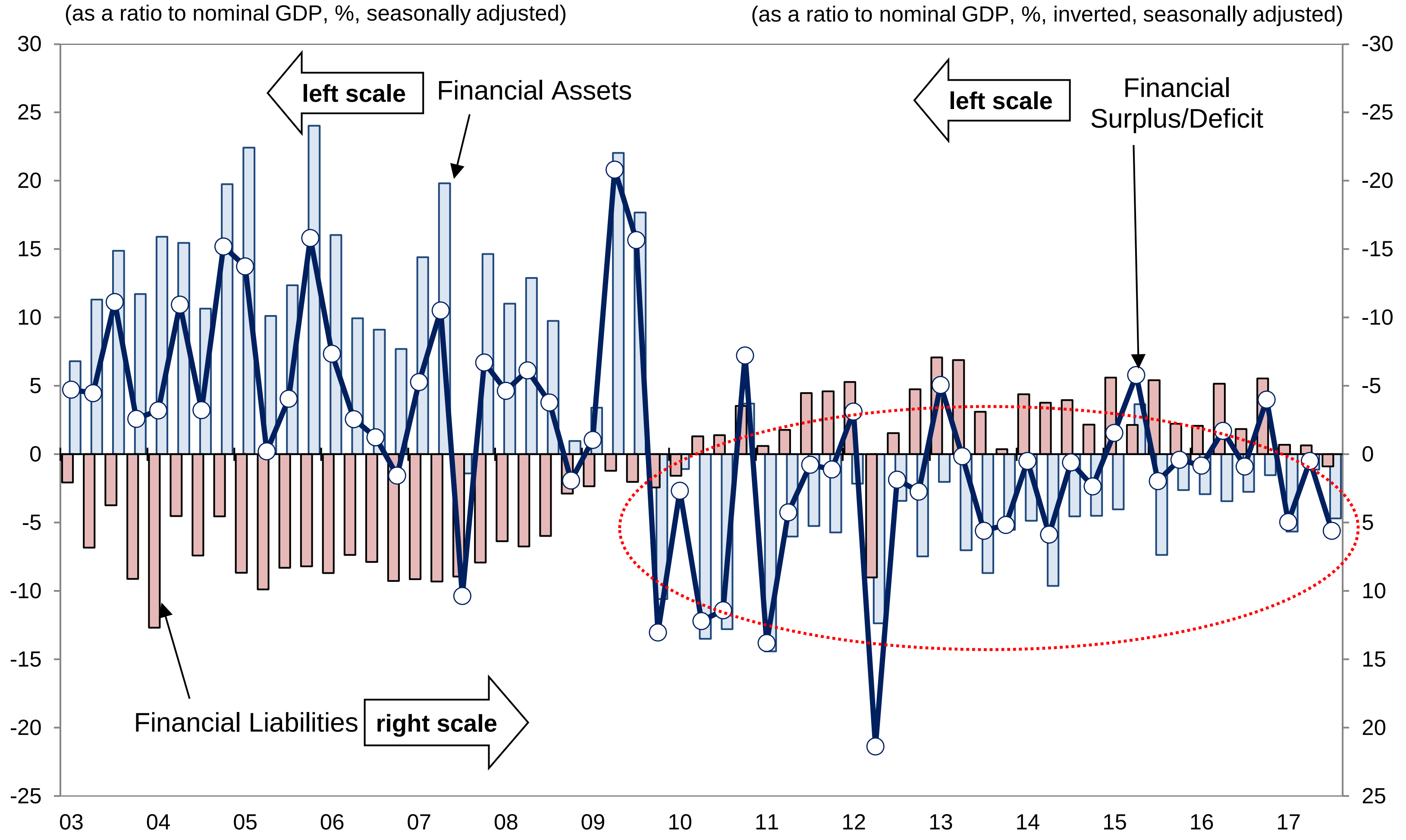
Notes: Seasonal adjustments by Nomura Research Institute. Latest figures are for 2017 Q3.
Source: Nomura Research Institute, based on flow of funds data from Central Bank of Ireland and Central Statistics Office, Ireland

Exhibit 20. Italian Households Stopped Borrowing Money after 2011



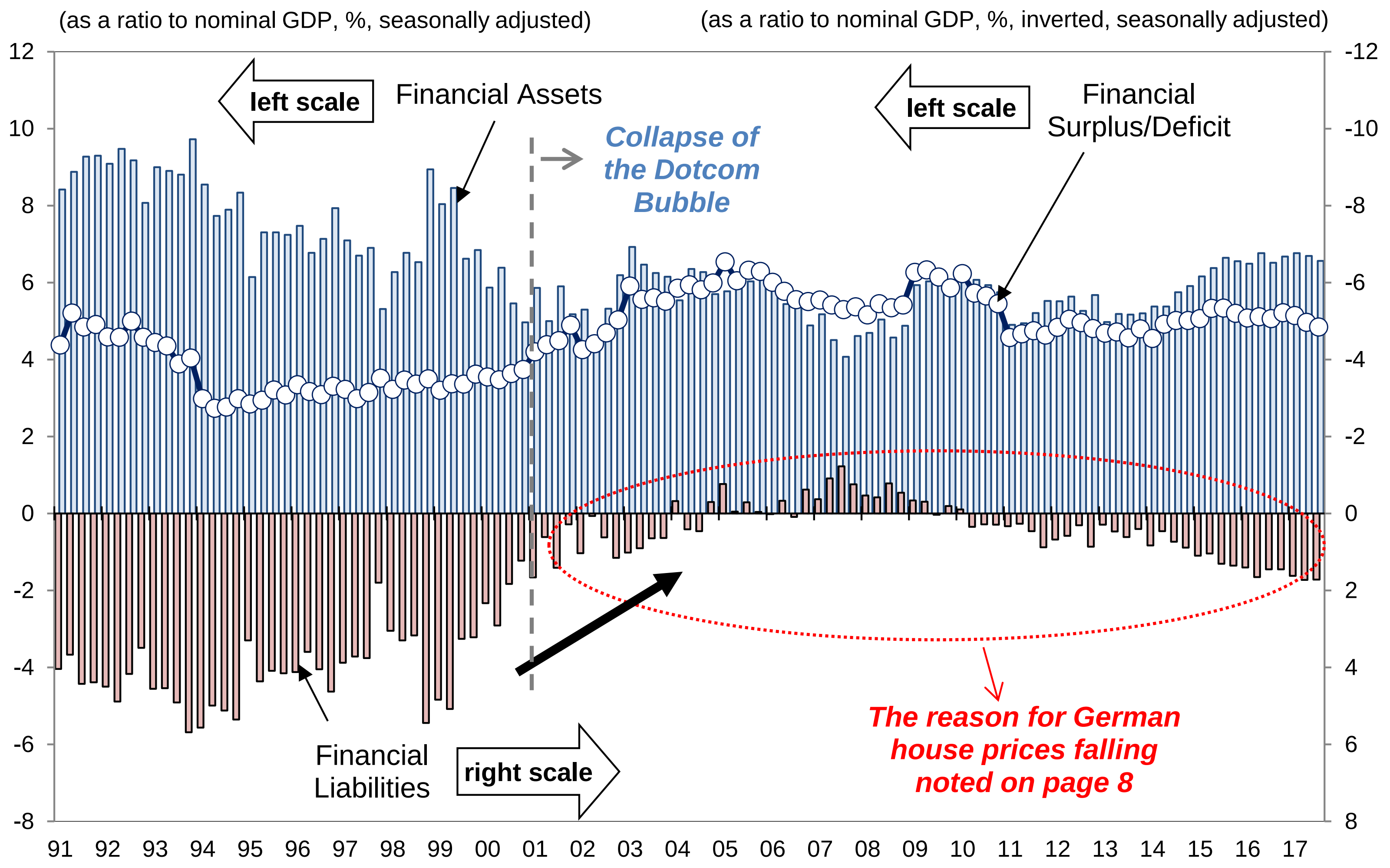
Notes: Seasonal adjustments by Nomura Research Institute. Latest figures are for 2017 Q3.
Source: Nomura Research Institute, based on flow of funds data from Banca d'Italia and Italian National Institute of Statistics

Exhibit 21. Greek Households Are Deleveraging but also Withdrawing Past Savings to Survive



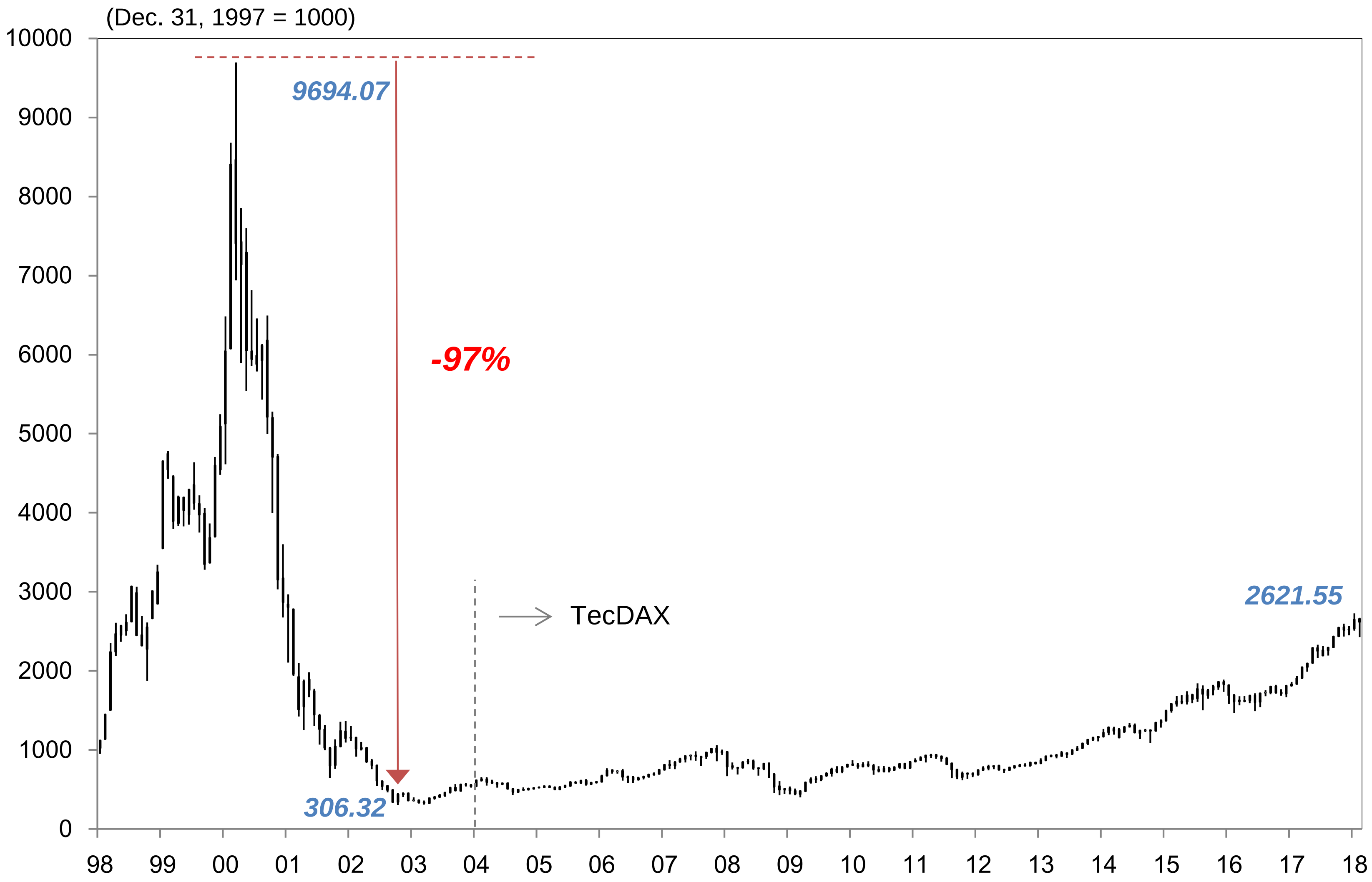
Notes: Seasonal adjustments by Nomura Research Institute. Latest figures are for 2017 Q3.
Sources: Nomura Research Institute, based on flow of funds data from Bank of Greece and Hellenic Statistical Authority, Greece

Exhibit 22. German Households Stopped Borrowing altogether after the 2000 Dotcom Bubble



Note: Seasonal adjustments by Nomura Research Institute. Latest figures are for 2017 Q3.
Sources: Nomura Research Institute, based on flow of funds data from Bundesbank and Eurostat

Exhibit 23. The Collapse of Neuer Markt in 2001 Pushed the German Economy into Balance Sheet Recession



Source: Bloomberg, as of February 27, 2018

Exhibit 24. Peripheral Eurozone Countries Are Doing Better Because of Fall in Wages

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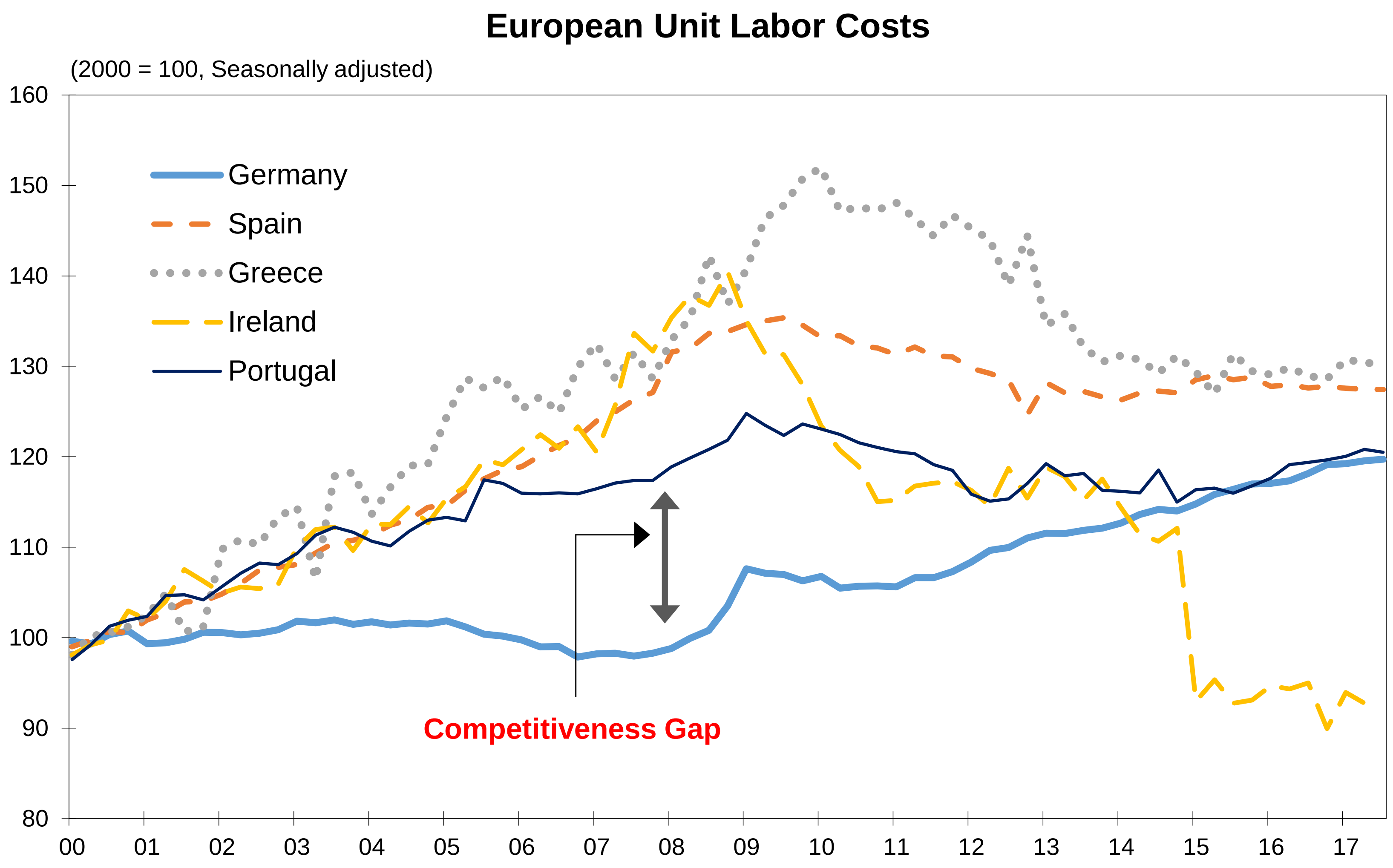
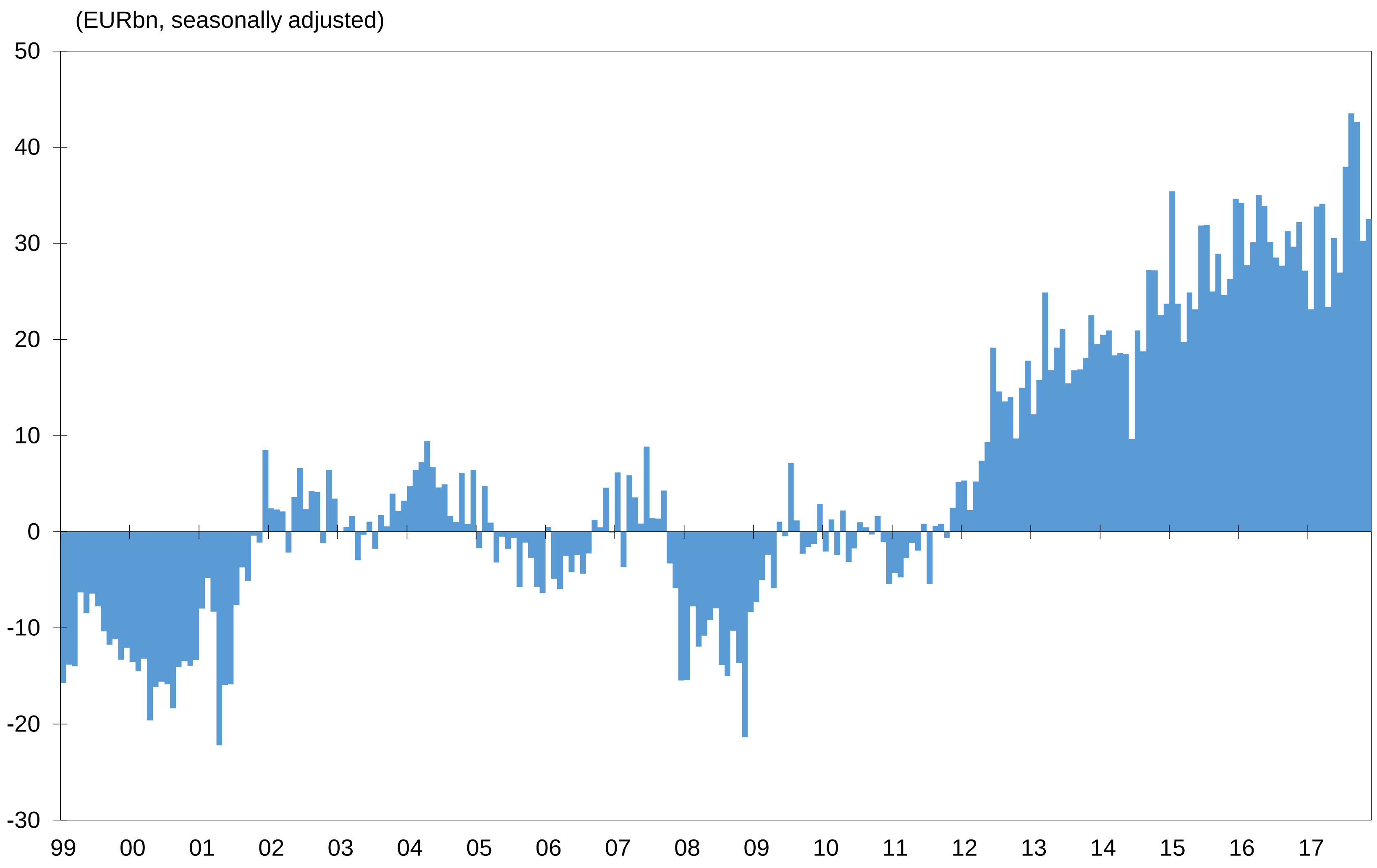


Source: Nomura Research Institute, based on OECD data

Exhibit 25. Eurozone Economy Supported by External Surplus



Source: Eurostat

Exhibit 26. QE Exit Is more difficult than QE Entrance: QE Central Banks Must Retract Reserves to Avoid Credit Explosion

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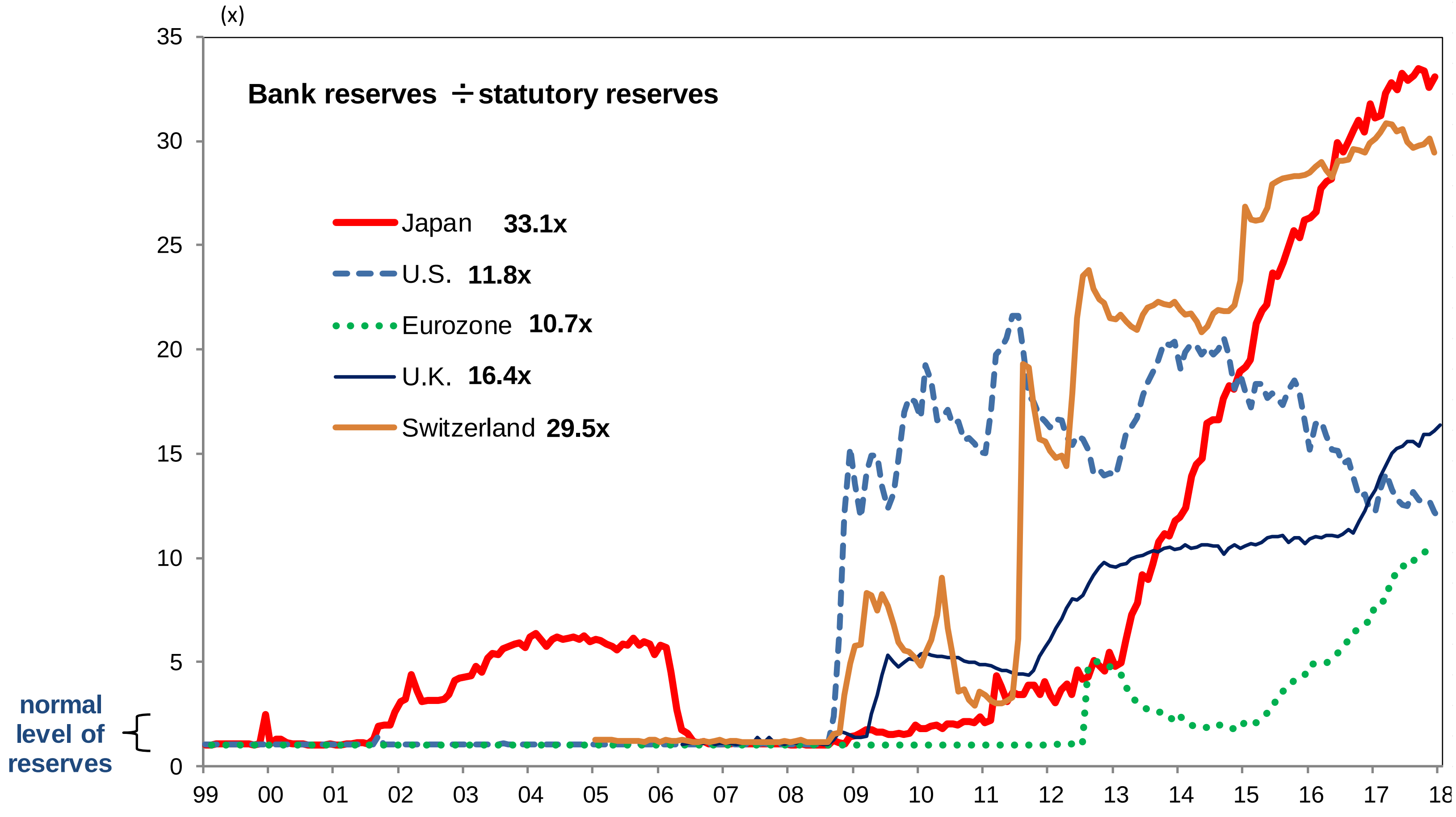
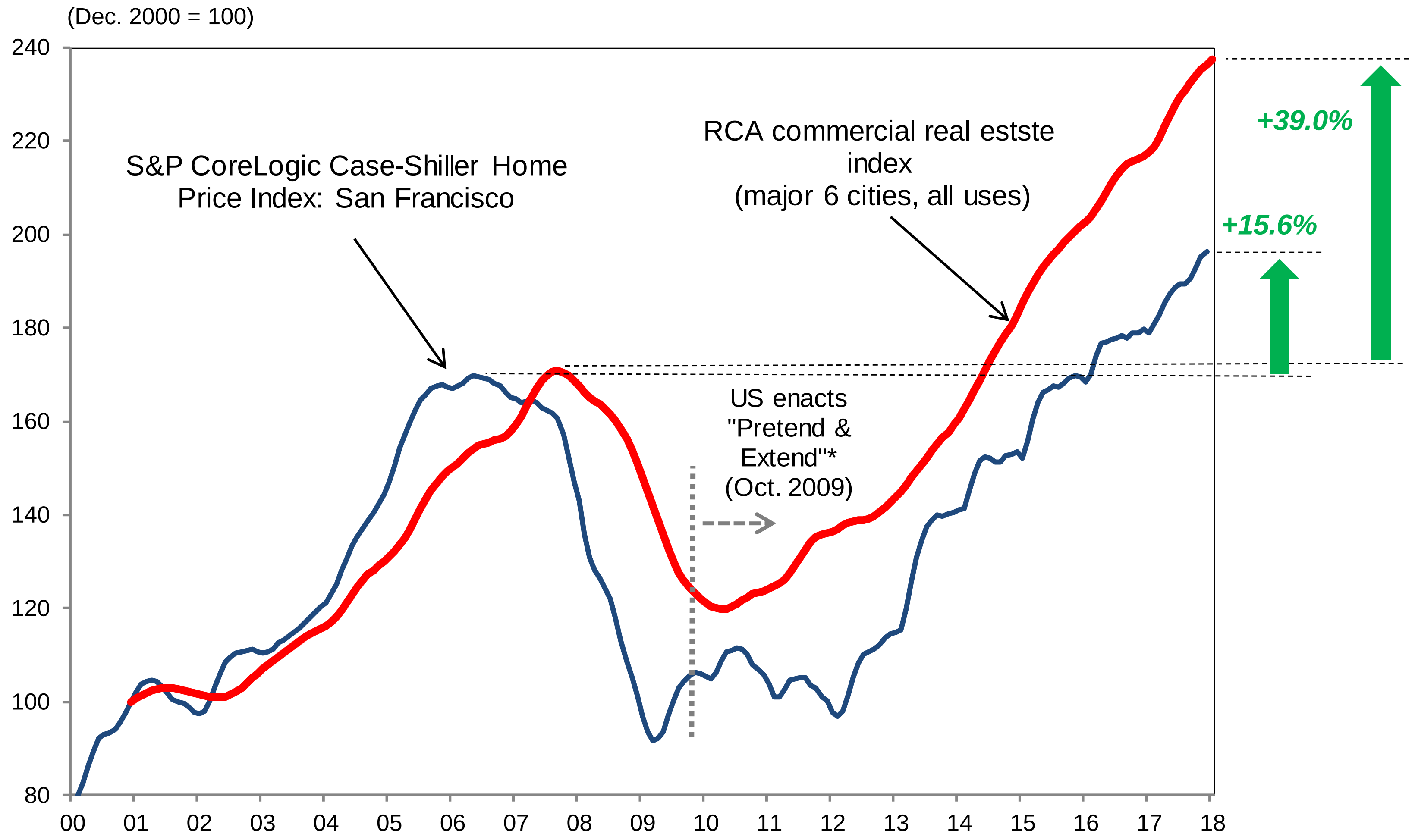
Bank Reserves as Multiples of Required Reserves



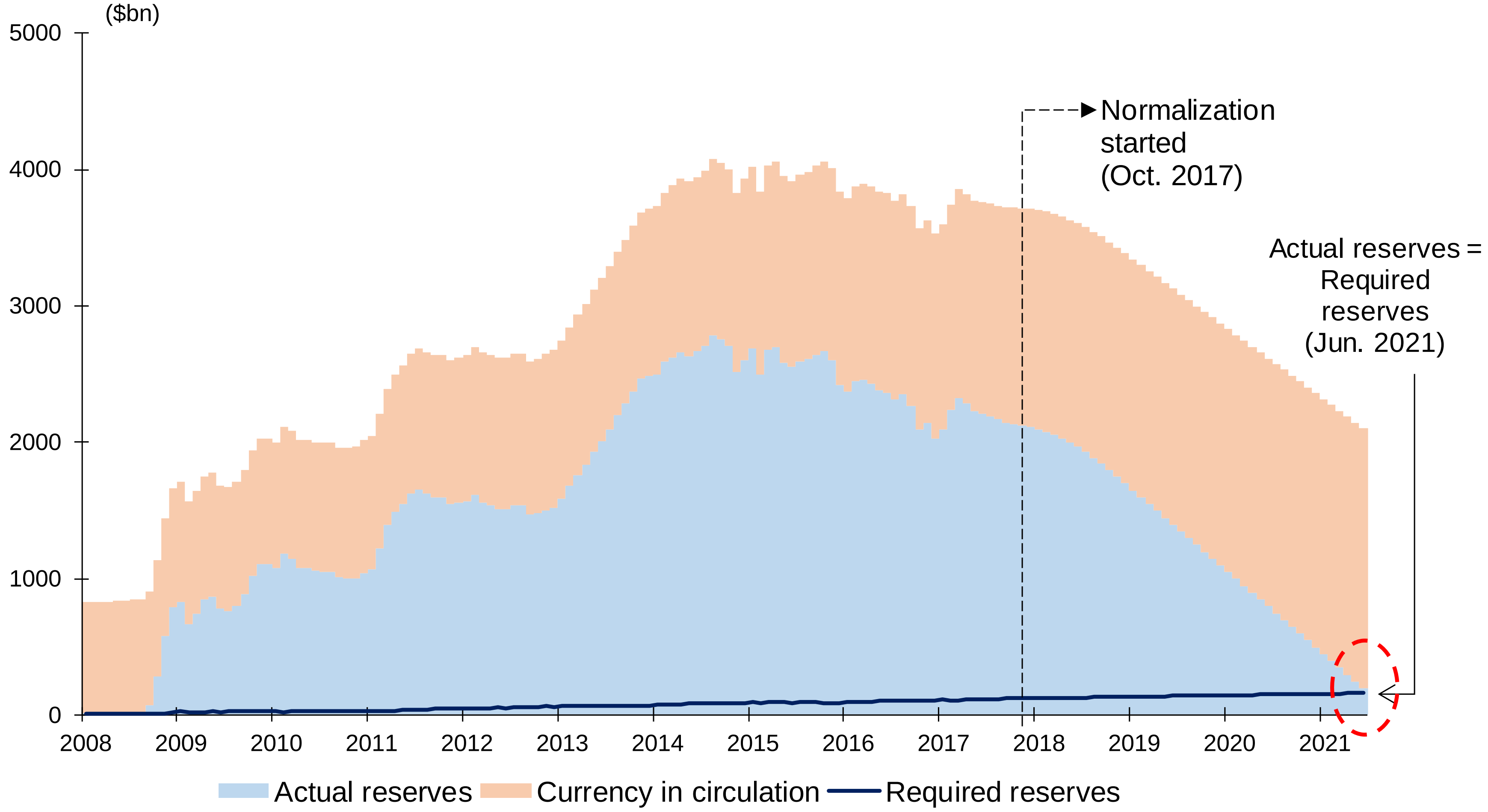
Note: The Bank of England has suspended reserve requirement in March 2009. The post-March 2009 figures are based on the assumption that the original reserve requirement is still applicable.
Sources: Nomura Research Institute, based on BOJ, FRB, ECB, BOE and SNB data

Exhibit 27. Asset Price Bubbles Are also Prompting the Fed to Normalize Monetary Policy



Note: "Policy Statement on Prudent Commercial Real Estate Loan Workouts" (October 30, 2009)
Source: Nomura Research Institute, based on the data from Real Capital Analytics; "Moody's/REAL CPPI," and S&P Dow Jones Indices; "S&P CoreLogic Case-Shiller Home Price Indices"

Exhibit 28. Fed's Balance Sheet Normalization Process



Note: Reserve balances, currency in circulation, and required reserves are assumed to follow the trends observed from January 2015 to May 2017.
Source: Nomura Research Institute, based on Fed data; estimates by Nomura Research Institute

Exhibit 29. Additional Private Savings Required as Fed Stops Reinvesting in USTs and MBS

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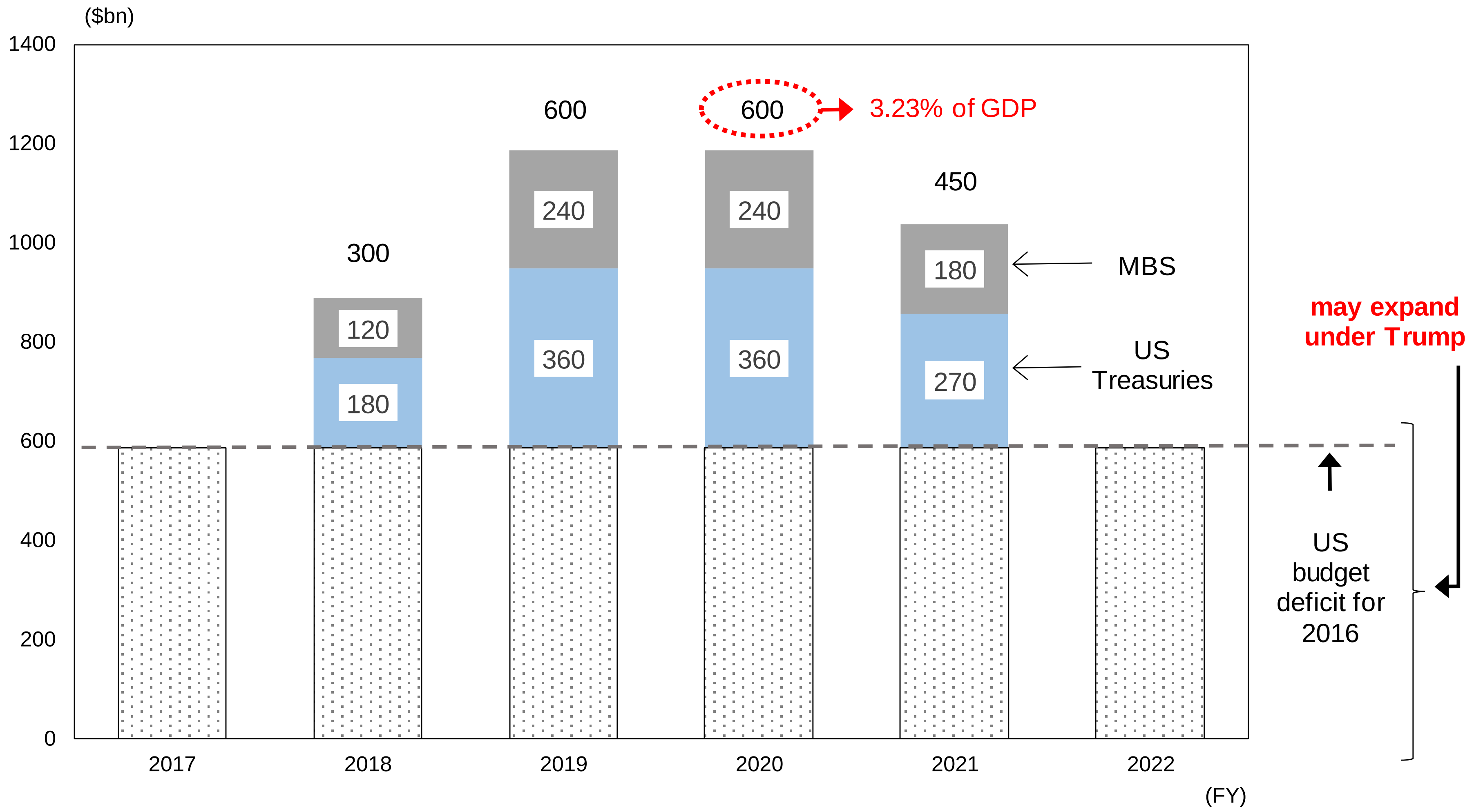

Notes: US fiscal accounting year runs from October to following September.
MBS = mortgage backed secirities
Source: Nomura Reserch Institute

Exhibit 30. Additional Private Savings Required if ECB Stops Reinventing

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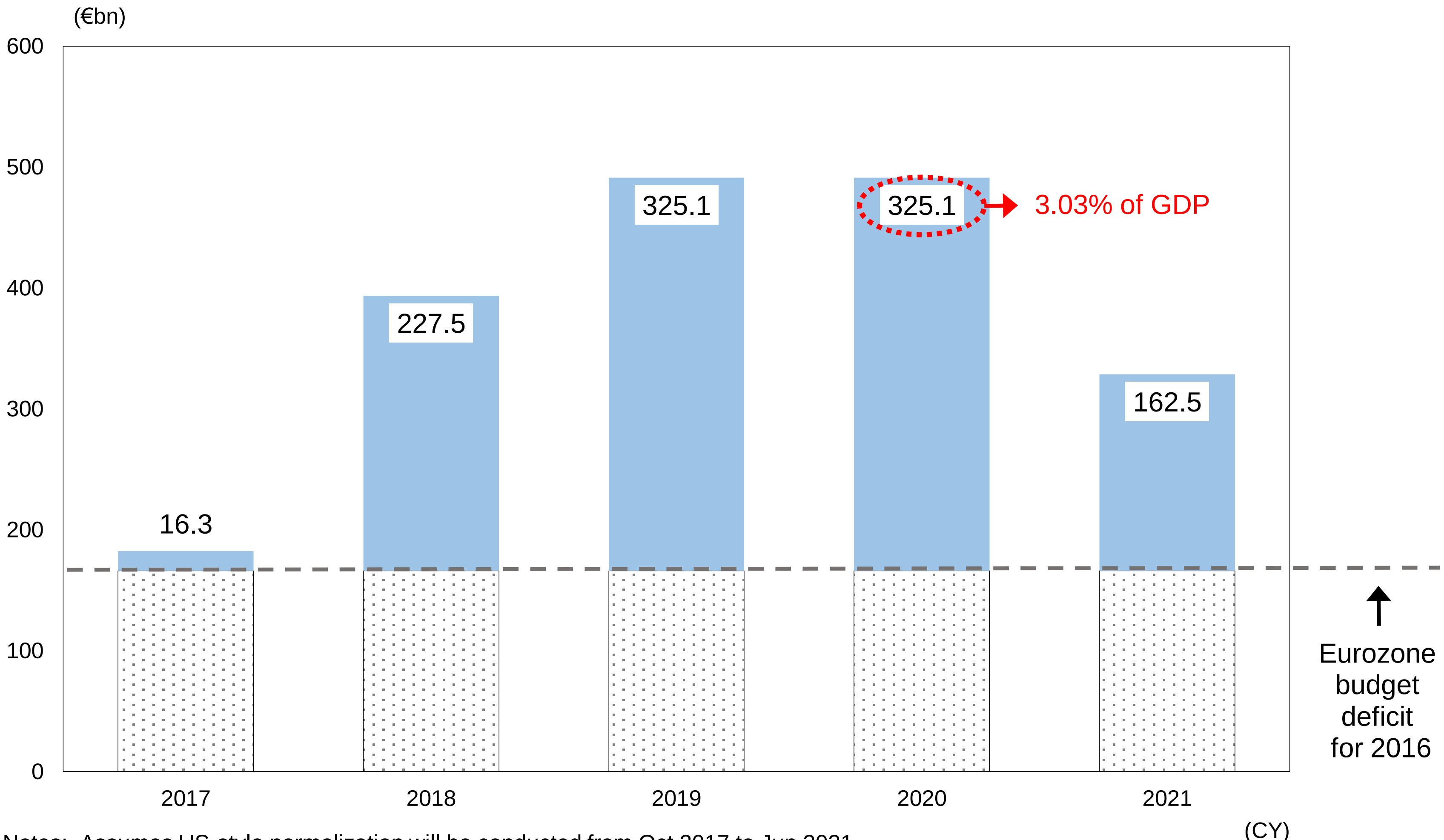

Notes: Assumes US-style normalization will be conducted from Oct 2017 to Jun 2021.
Fiscal deficit represents net borrowings of general government.
Source: Nomura Reserch Institute based on ECB and Eurostat data

Exhibit 31. Additional Private Savings Required if BOE Stops Reinventing

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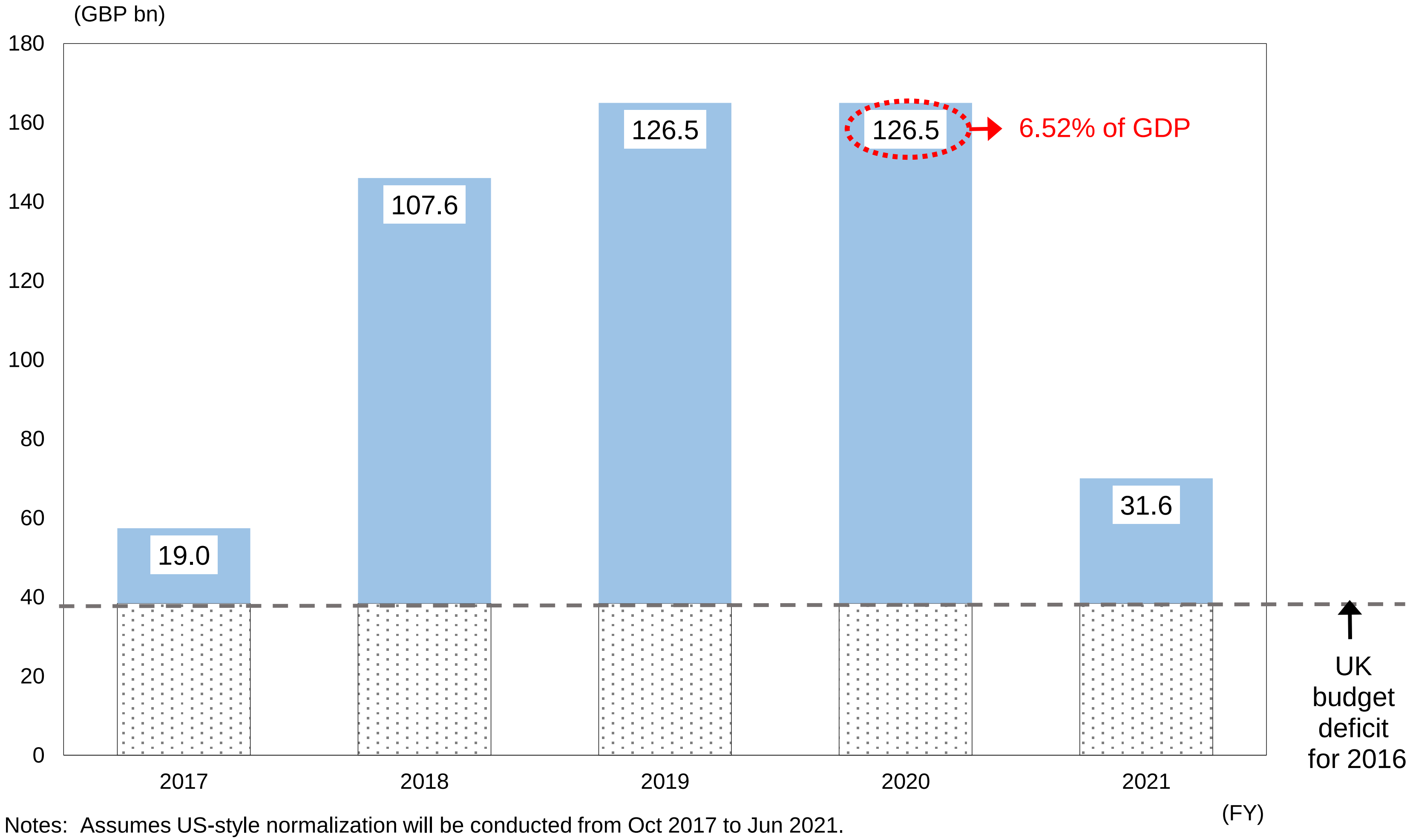
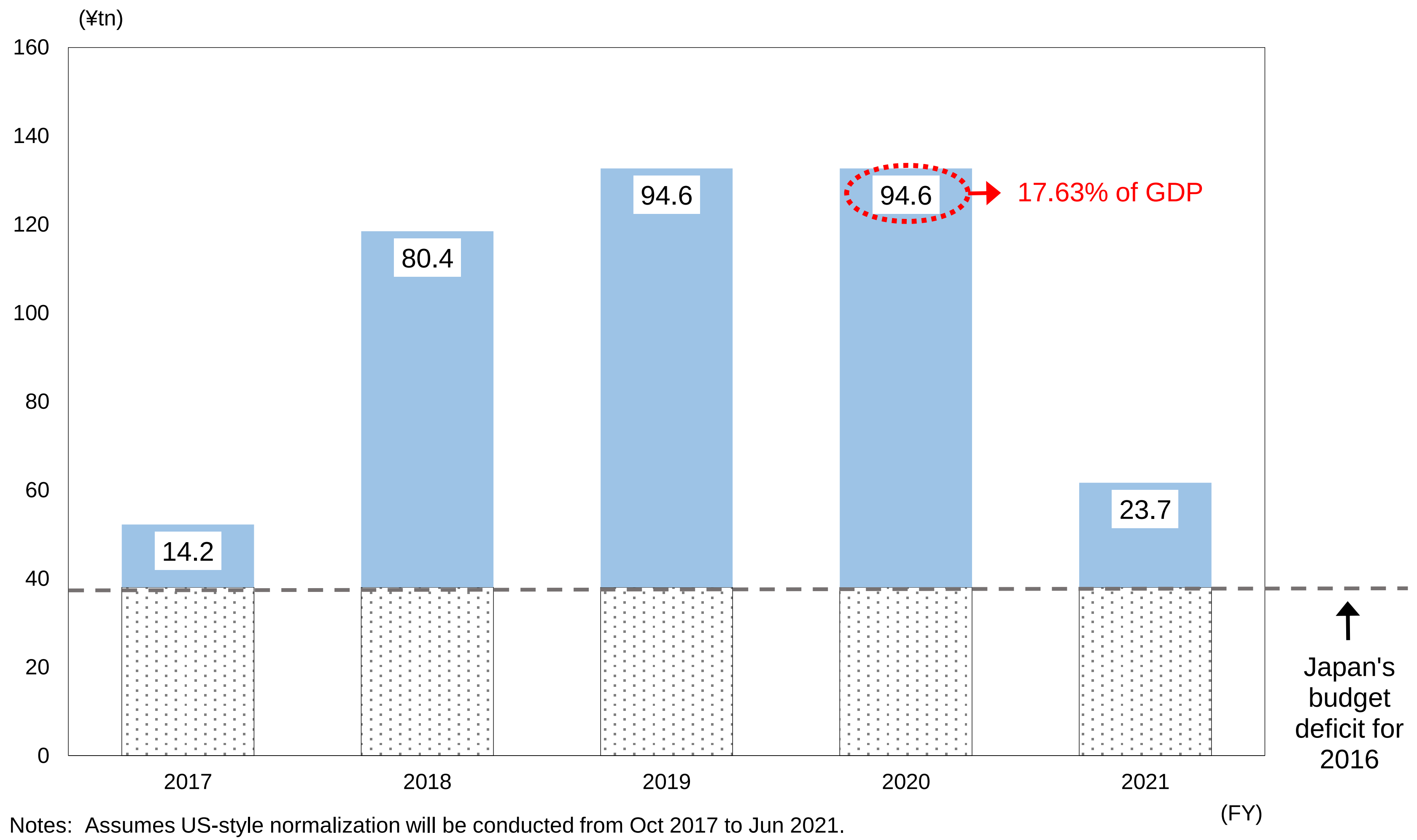


Notes: Assumes US-style normalization will be conducted from Oct 2017 to Jun 2021.
UK fiscal accounting year runs from April to following March.
Fiscal deficit represents net borrowings of national government

Source: Nomura Reserch Institute

Exhibit 32. Additional Private Savings Required if BOJ Stops Reinventing



Notes: Assumes US-style normalization will be conducted from Oct 2017 to Jun 2021.
Japan's fiscal accounting year runs from April to following March.
Source: Nomura Reserch Institute, based on MOF and BOJ data

Exhibit 33. QE 'Trap': Long-term Interest Rates or Exchange Rates Could Go sharply higher when the QE Is Unwound

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Images of Long-term Interest Rates with and without QE

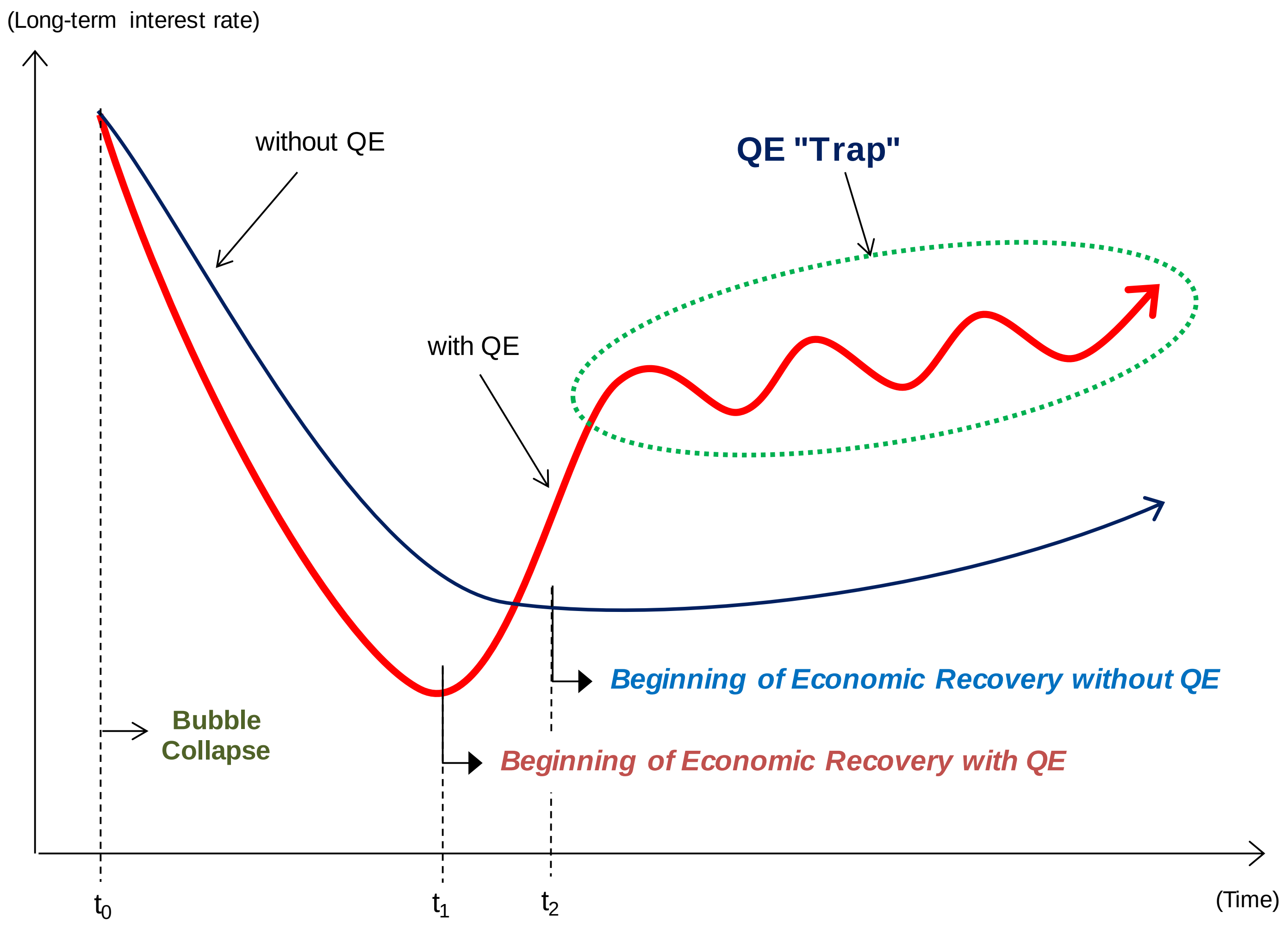

Exhibit 34. Fed and BOJ Losses under Various Yield Scenarios as % of GDP

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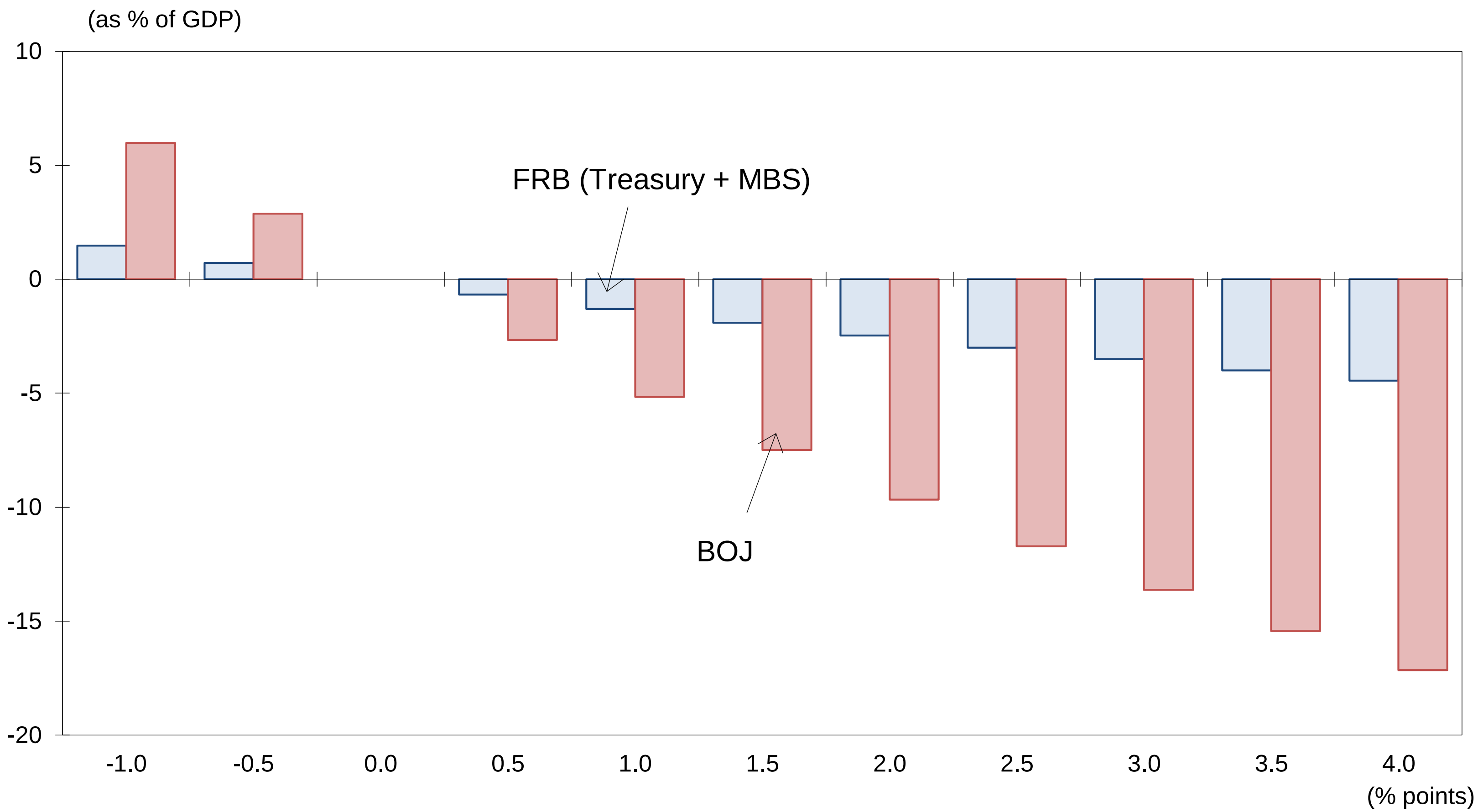

Sources: Nomura Research Institute, based on the data from FRB, "Factors Affecting Reserve Balances of Depository Institutions and Condition Statement of Federal Reserve Banks (as of June 28, 2017)", "Federal Reserve Banks Combined Quarterly Financial Report (as of June 30, 2017)," Federal Reserve Bank of New York, "System Open Market Account Holdings (as of June 28, 2017)," US Economic Analysis, "Gross Domestic Product," BOJ, "Bank of Japan Accounts" and "Japanese Government Bonds Held by the Bank of Japan" as of November 10, 2017; and Cabinet Office, Report on National Accounts.

Exhibit 35. Trump May Run into Capital Flight Problem if He Pushes Dollar down too far

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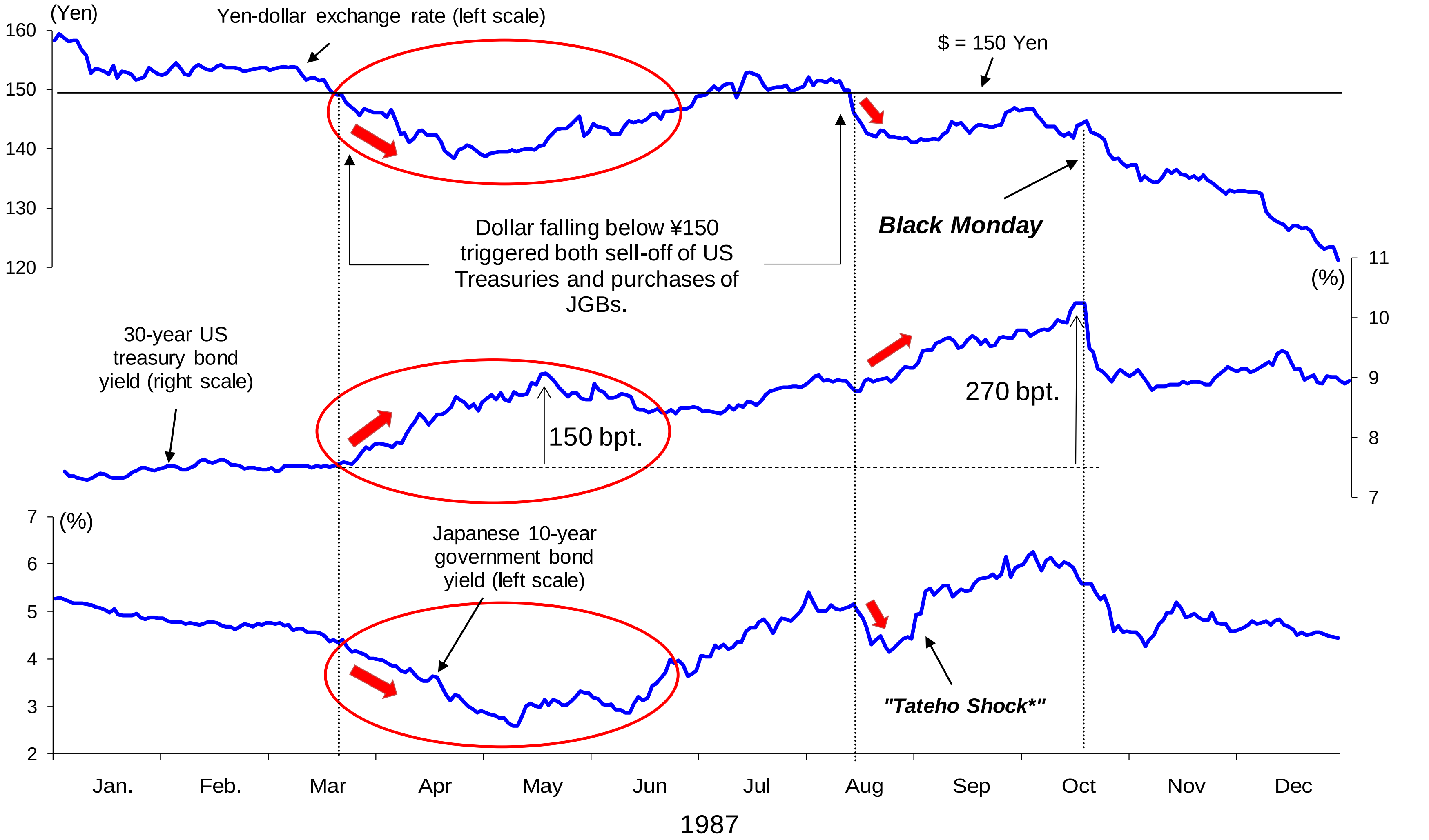

*: Japanese chemical company Tateho loses massively in JGB futures trading, triggering panic in the JGB market.
Sources: Federal Reserve Bank of New York, Board of Govenors of the Rederal Reserve, Japan Bond Trading Company

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