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Kreissparkasse Göppingen | Burg Staufeneck/Salach, 28. Oktober 2015
„Konjunkturgipfel 2015/2016“

Fragile Weltkonjunktur im Zeichen ultra-expansiver Geldpolitik

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Überblick

- Weltkonjunktur im Überblick

- Risiken der Geldpolitik

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Überblick

- **Weltkonjunktur im Überblick**

- Risiken der Geldpolitik

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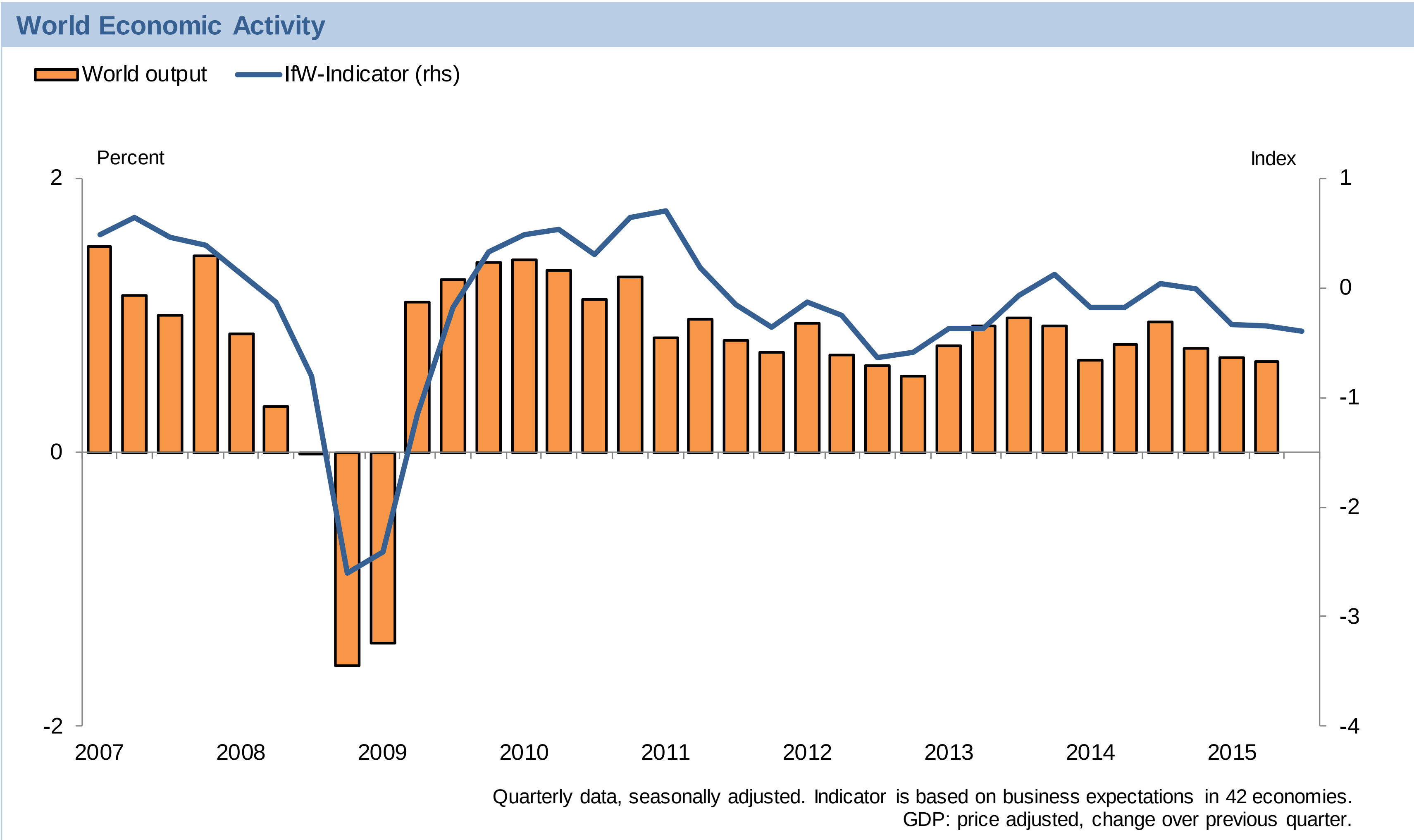
Global activity has been decelerating



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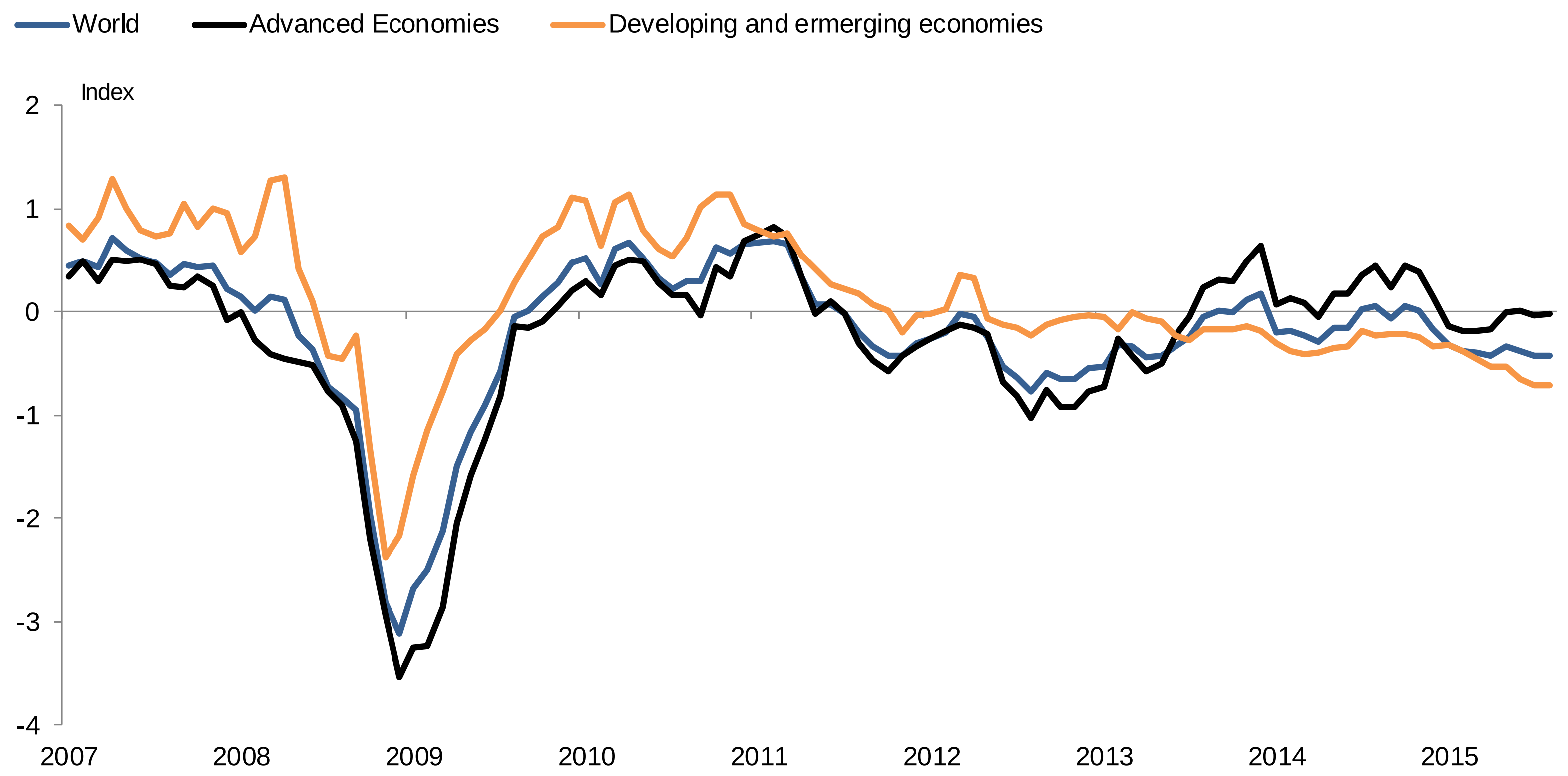
Pronounced weakness in emerging economies

Business expectations by groups of countries



Monthly data, seasonally adjusted. Indicators are based on buisness expectations in 42 countries (34 advanced economies and 8 emerging economies).

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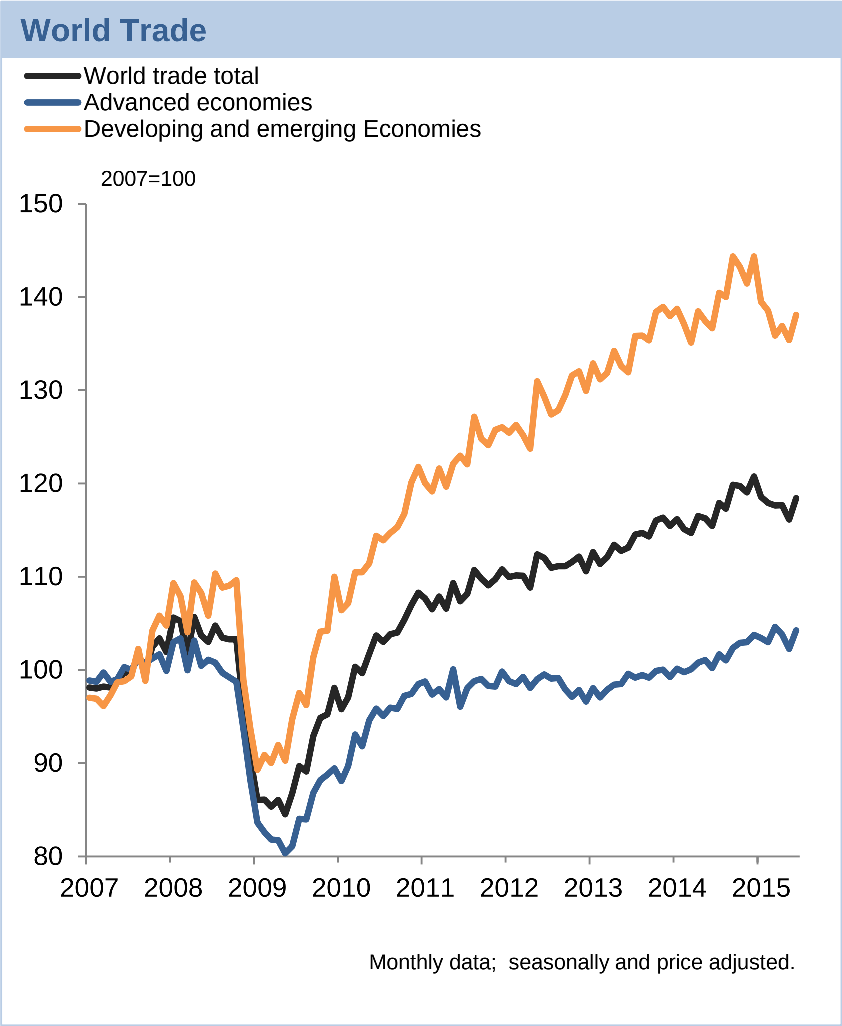
World trade in decline during 2015-H1 due to EE weakness



- World trade growth slowed further actually declining during 2015-H1
- Annual growth poised to slow to around 1 percent in 2015 following already weak growth of around 3 percent in 2013 and 2014
- Elasticity fell further to below 1
- Weakness of trade growth stems mainly from emerging economies

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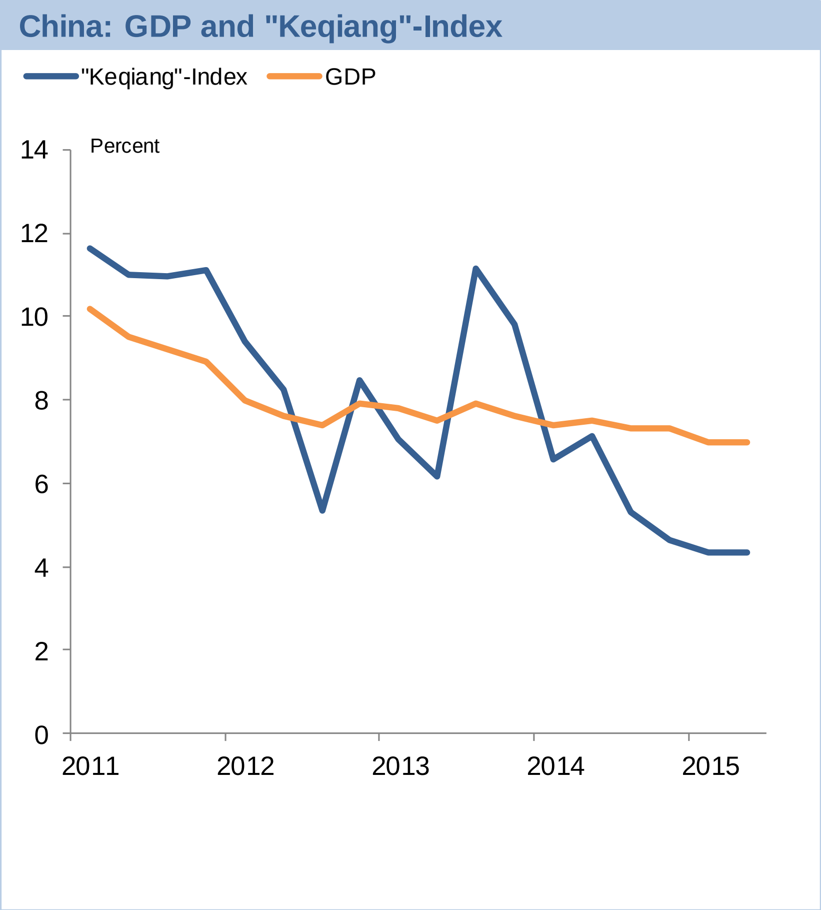
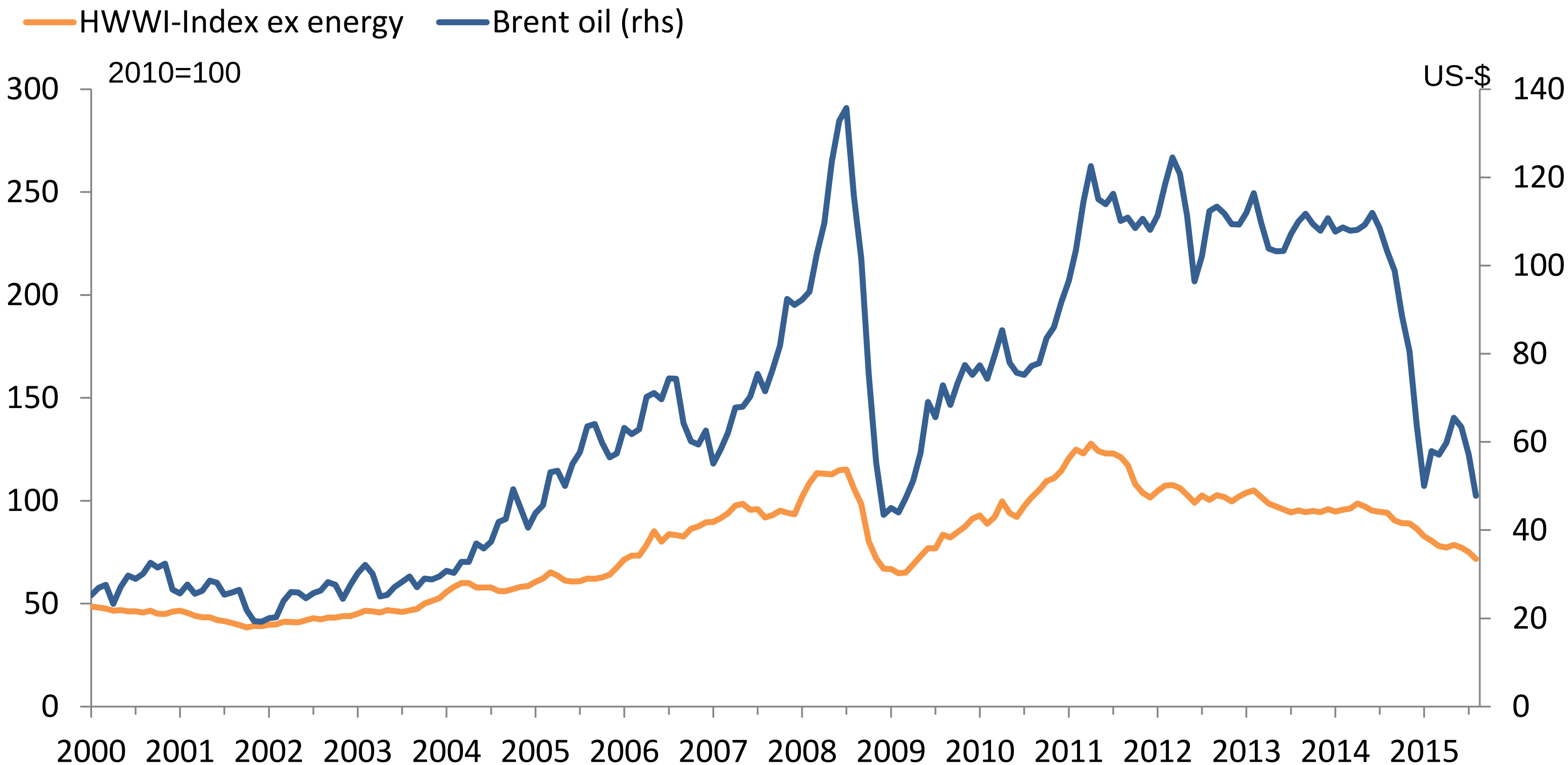
Slowdown in China may be even worse than official GDP data suggest



- GDP growth close to 7% target
- Alternative activity indicators suggest otherwise
- Pronounced weakness in trade
- Car sales growth slowed to a crawl
- Stock market correction
- Fears of a fullblown crisis

Another leg in the decline of oil prices

Commodity prices



Monthly data; commodities prices without energy: HWWA-index based on US-Dollar; oil price: Spot price Brent.

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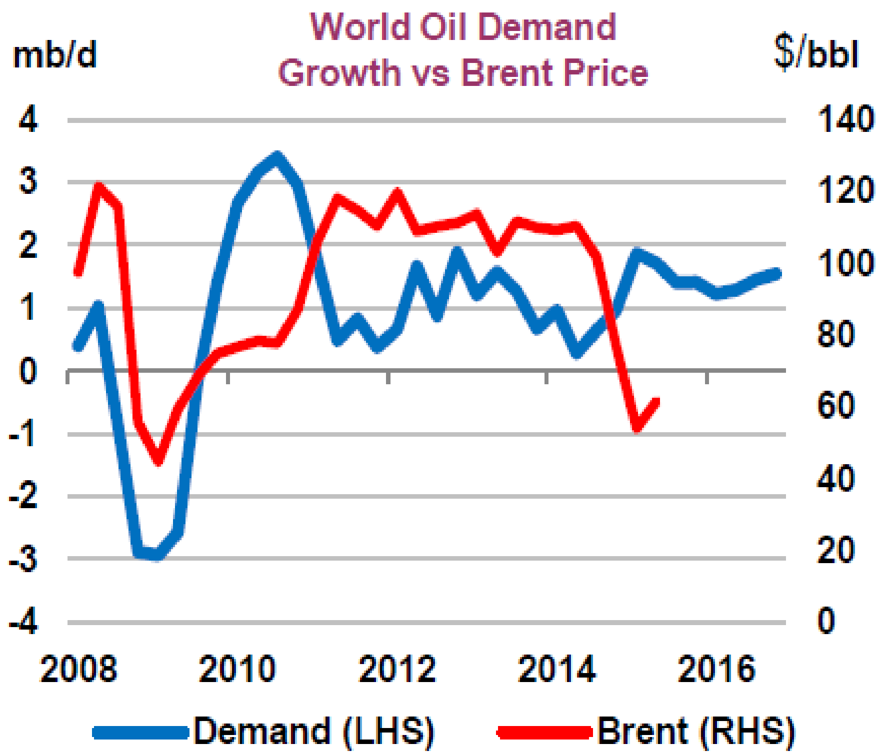
Oil market: Textbook-like demand pattern

- Lower prices triggered additional demand
- Rate of demand growth was diminishing in face of high oil prices in 2011-2014
- Demand growth picked up with the decline in prices despite continued modest growth



Source: IEA, Monthly Oil Market Report. August 2015.

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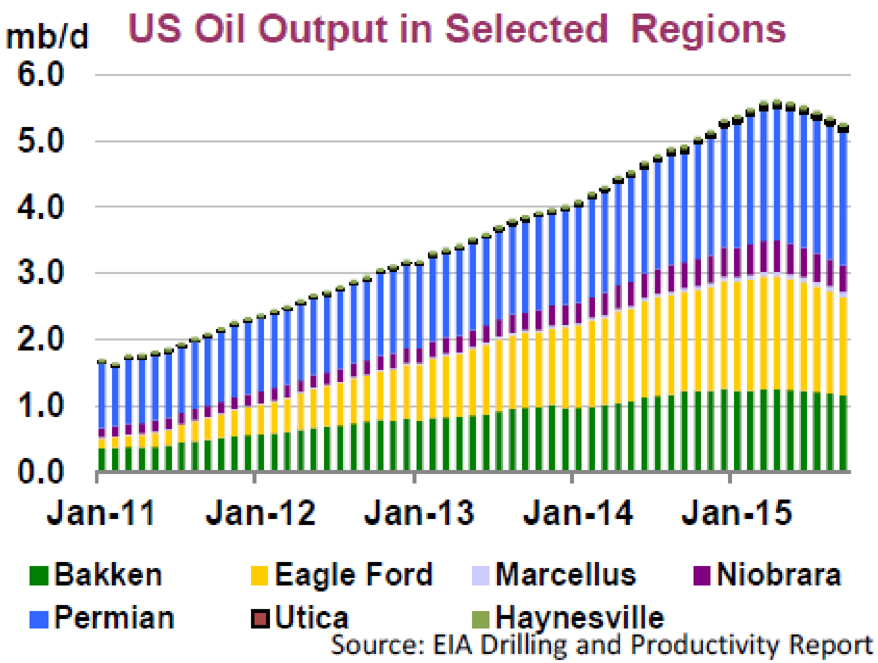
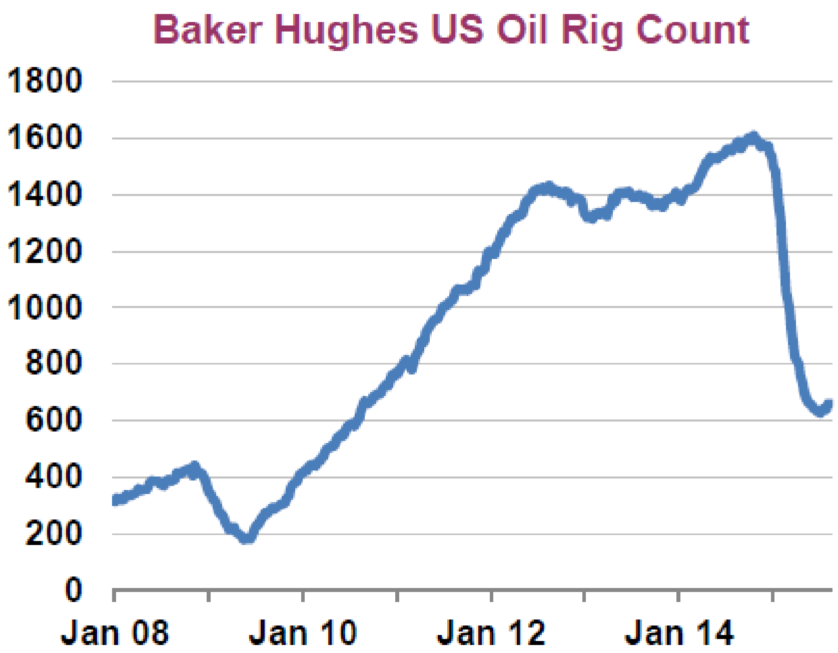
Output response also as expected: US shale oil boom is over

- Collapse of drilling activity (-60%)
- Lagged reaction of production



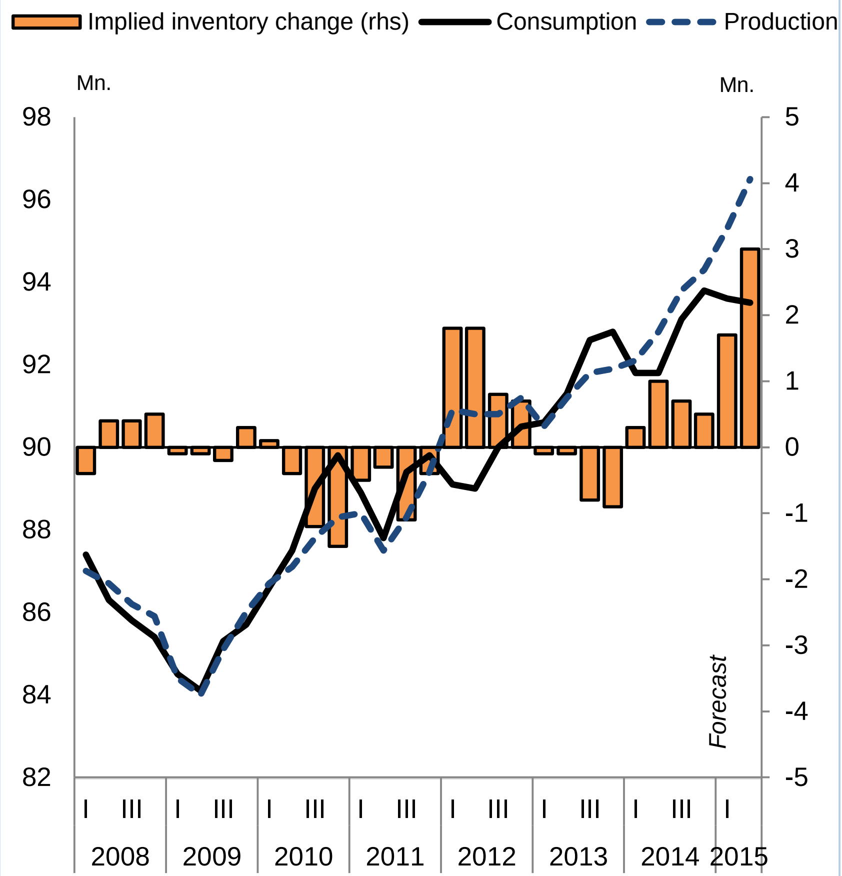


Source: IEA, Monthly Oil Market Report. August 2015.

But: Total oil production kept on increasing

- OPEC continued to ramp up production in 2015-H1
- Production quota were disregarded
- Record output in Saudi Arabia and strong increase in Iraq
- Others kept producing at full capacity
- Iran can be expected back to the market with another 1 mill. b/d over the next year

Global oil market



Quarterly data; barrel per day.
Source: IEA Monthly Oil Market Report

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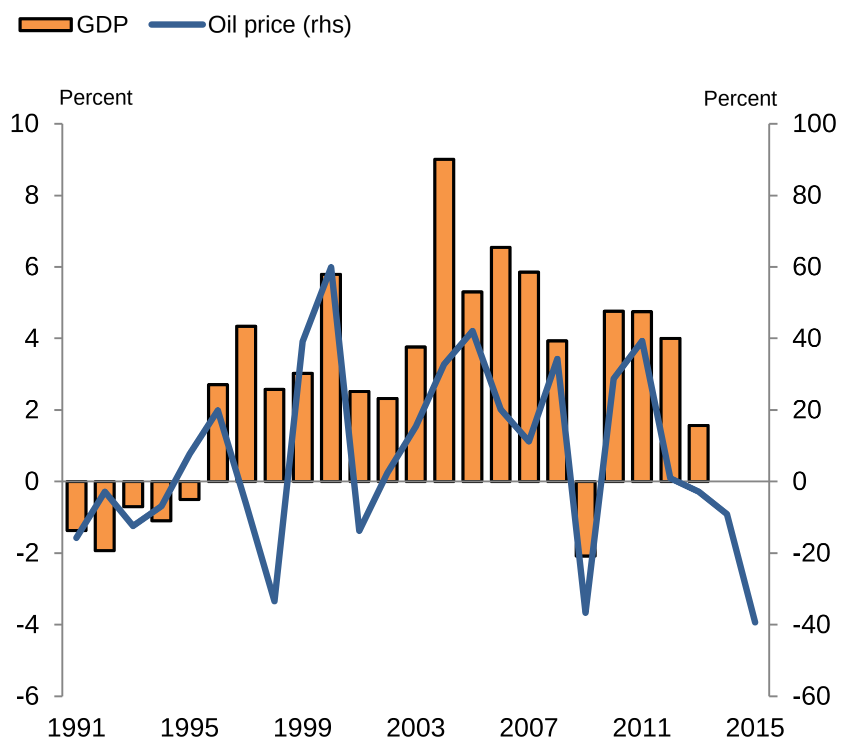
Lower oil prices may stimulate GDP of oil importers …
… but exporters suffer

Oil price and GDP in the 15 largest net oil exporters



Annual data; yoy-change; Oil price: Brent in US-Dollar; GDP: volumes weighted according to nominal GDP in US-Dollar.

Oil exporters: Algeria, Angola, Canada, Kazakhstan, Iraq, Iran, Kuwait, Mexico, Nigeria, Norway, Quatar, Russian Federation, Saudi Arabia, UAE, Venezuela.

- Uncertain stimulus to oil importers
- size of effect depends on
  - » Source of the shock
  - » Oil intensity of production,
  - » Duration of the shock
  - » External repercussions
  - » …
- Oil exporters imports could decline substantially
- Modest impact on global output

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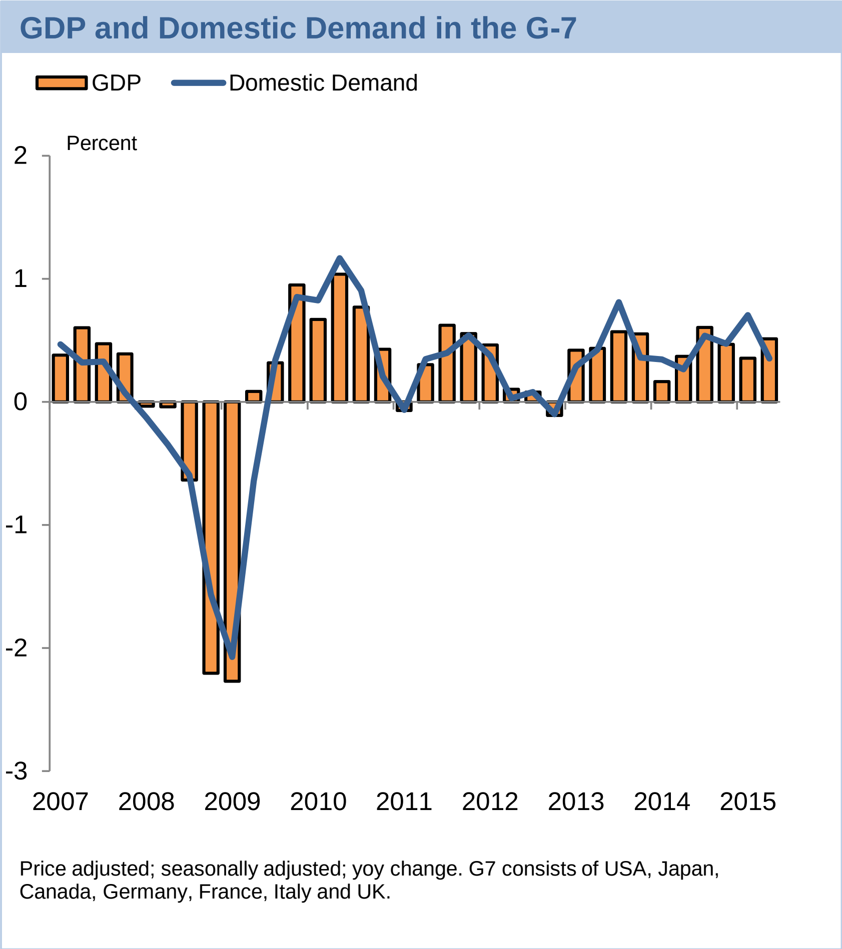
Steady growth in the advanced economies



- G7 output growth in 2015-H1 has proven robust on the whole
- 2015-Q2
  - » Resurgence of US growth
  - » Declining output in Japan
  - » Moderate but robust growth in the euro area
  - » Continued strong expansion in EU ex EA

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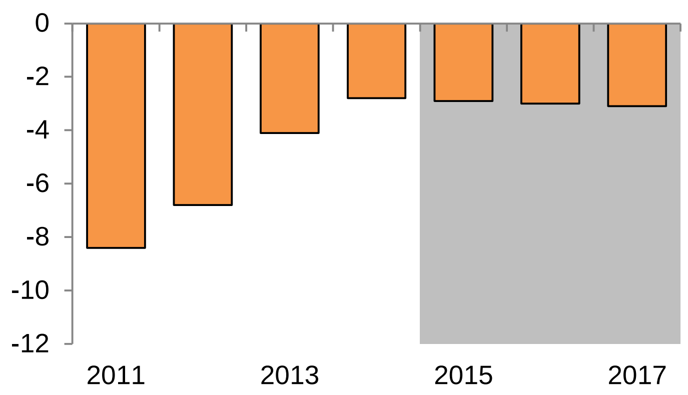
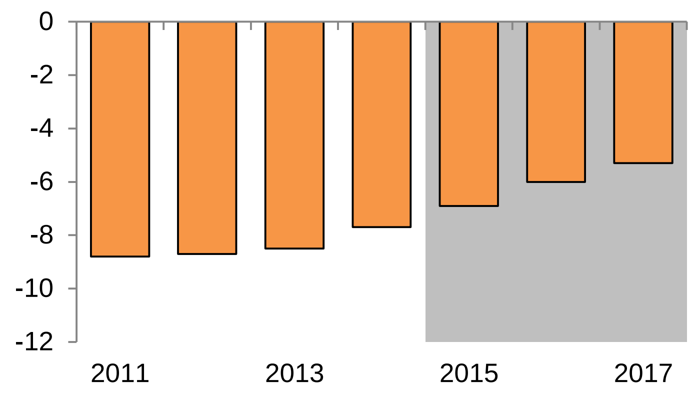
Fading fiscal policy restriction in advanced economies

United States



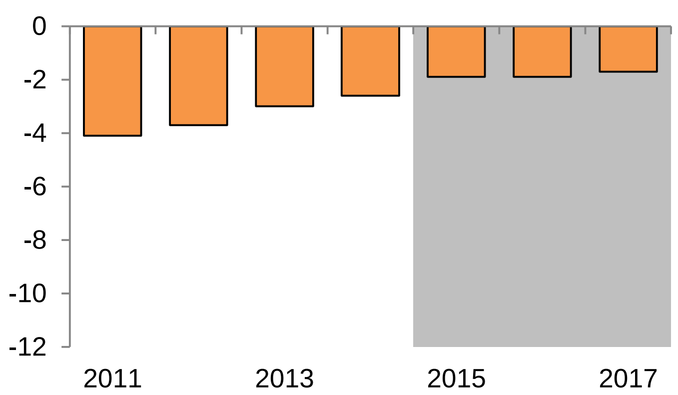
Annual data.; as a percentage of GDP.

Japan



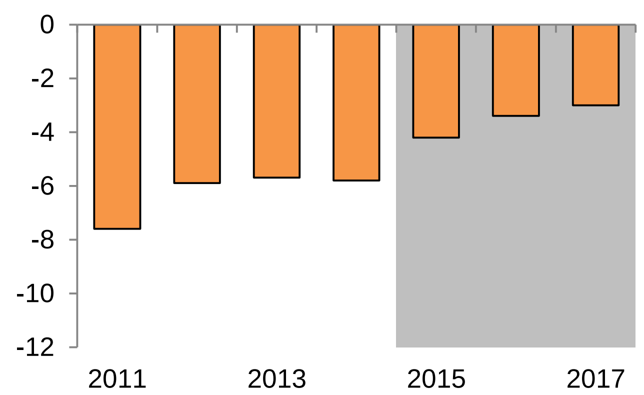
Annual data.; as a percentage of GDP

Euro area



Annual data.; as a percentage of GDP.

United Kingdom



Annual data.; as a percentage of GDP.

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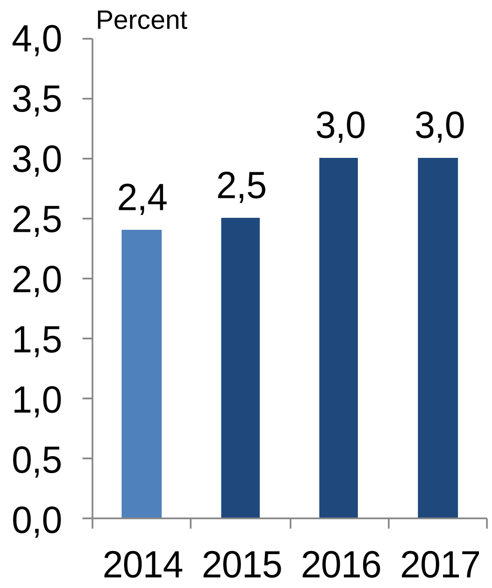
United States: Modest acceleration

Real GDP Growth



- Soft patch at the start of the year proved temporary
  - » Employment growth has slowed down somewhat but is expected to accelerate again
  - » Robust real wage growth although nominal wages have been slowing recently
  - » Recovery in the housing market to continue
  - » Corporate investment to pick up
- Monetary policy is still expected to raise interest rates in winter
  - » MP remains expansive
  - » No severe impact on domestic demand expected
  - » Surprise move would have modest and temporary impact

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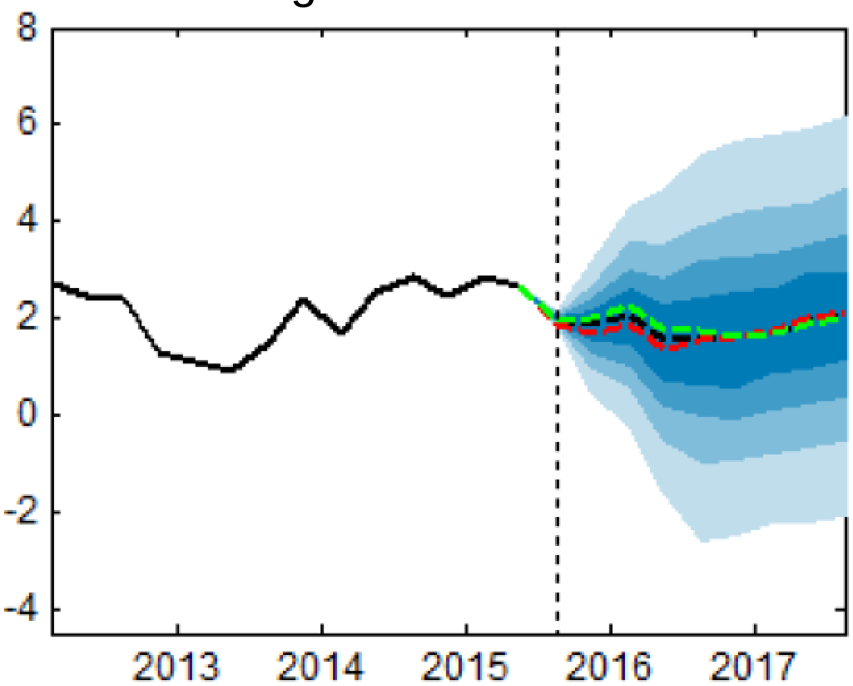
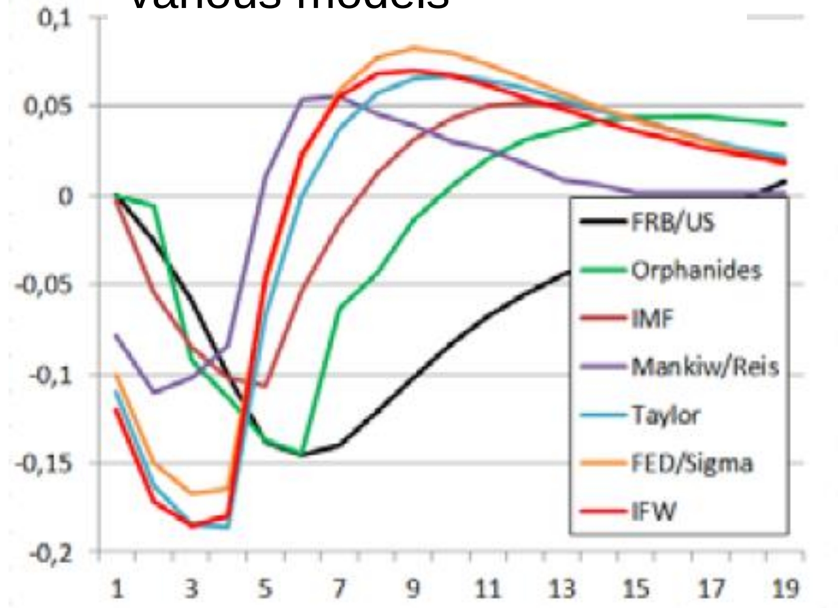
GDP and MP: Response to surprise interest rate move according to model simulations (Macroeconometric Model Base MMB)

- 25 bp increase lowers GDP by 0.2 % in the short term, not significantly in the longer term in a DSGE framework
- Similar results in a number of other (different) models

GDP growth forecast



Impulse response (GDP) various models



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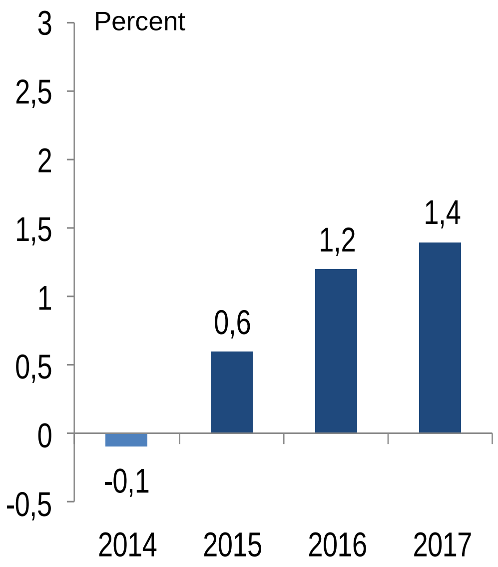
Japan: Moderate recovery

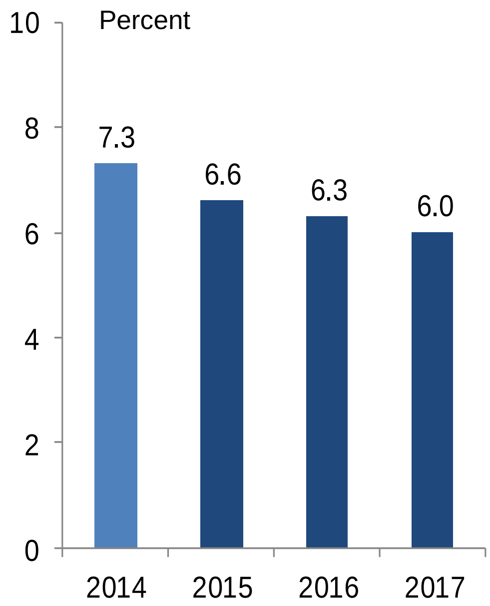
Real GDP Growth



- GDP declined in Q2 due to weakness in exports and a temporary drop in private consumption
- Monetary expansion has continued unabated, level of the yen has remained low
- Exports should gradually strengthen going forward
- Limited progress in structural reforms– moderate decrease of corporate taxes
- Slow progress with fiscal consolidation
- Second VAT increase scheduled for 2017
- Moderate GDP growth expected

China: Slowdown continues

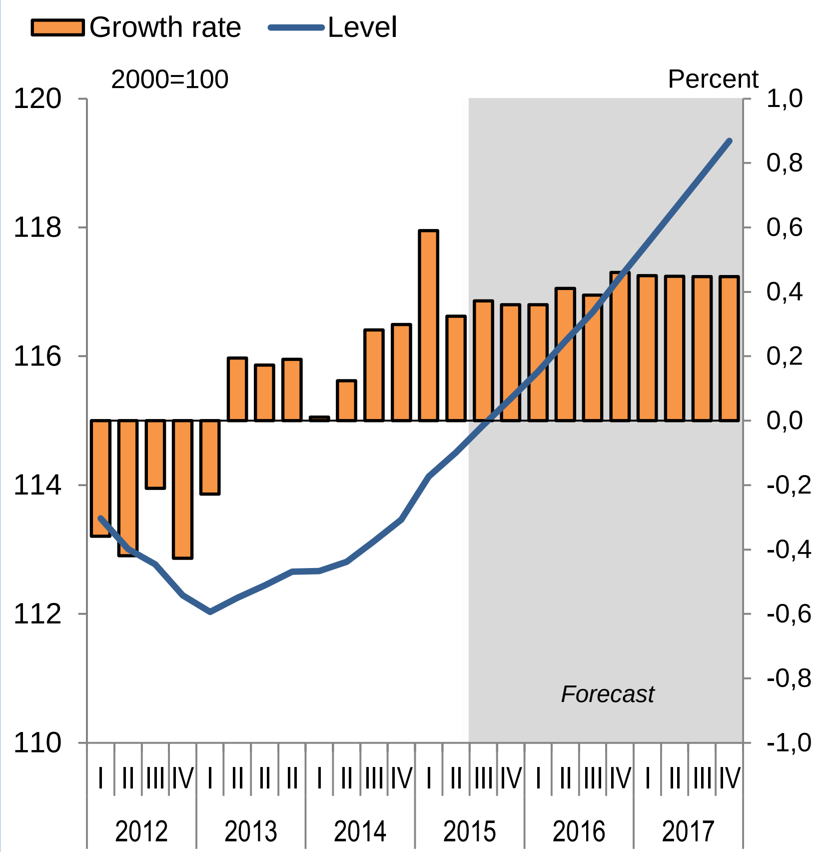
Real GDP Growth



- Continued transition to a lower growth trajectory
- Cyclical downturn expected to be controlled with the help of monetary and fiscal stimulus
- Growth in credit has been reigned but debt remains high
- Property market shows signs of stabilization but remains a risk
- No sustained acceleration of growth expected

Outlook for the Euro Area ex Germany (GDP)

GDP in the Euro Area ex Germany

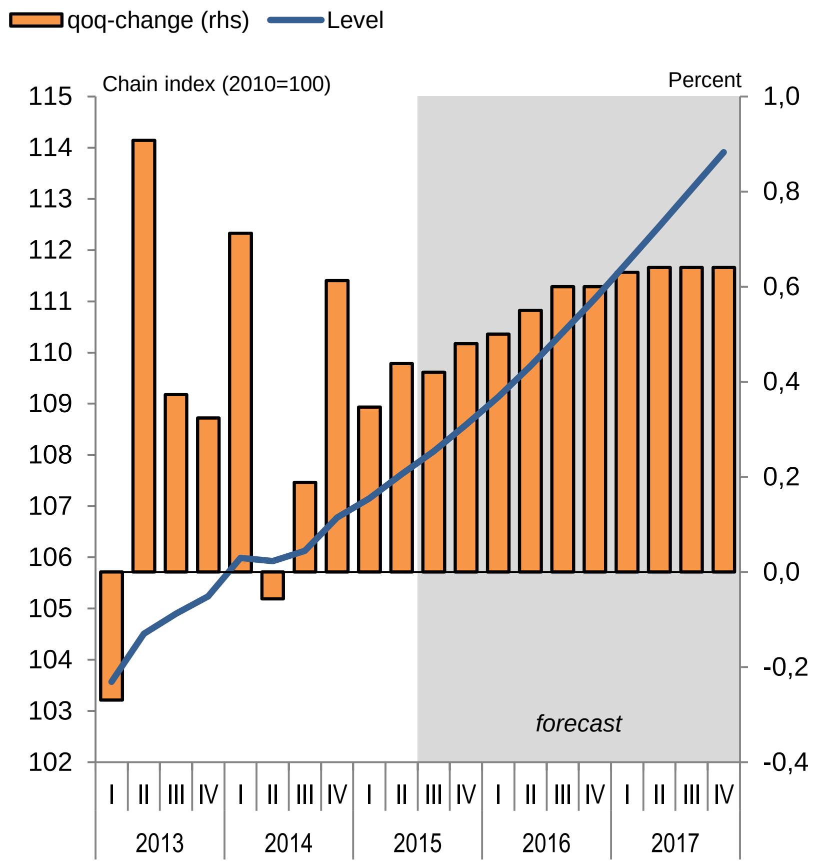


Quarterly data, seasonal and working-day adjusted; qoq-change.

- 2014: 0.6 percent
- 2015: 1.4 percent
- 2016: 1.5 percent
- 2017: 1,8 percent

Germany: GDP growth is accelerating

Gross domestic product



Quarterly data, volumes, seasonally and working-day adjusted.

- 2015: +1.8 %
- 2016: +2.1 %
- 2017: +2.3 %

- GDP is expected to grow by 0.4 percent in 2015-Q3
- GDP growth is expected to accelerate

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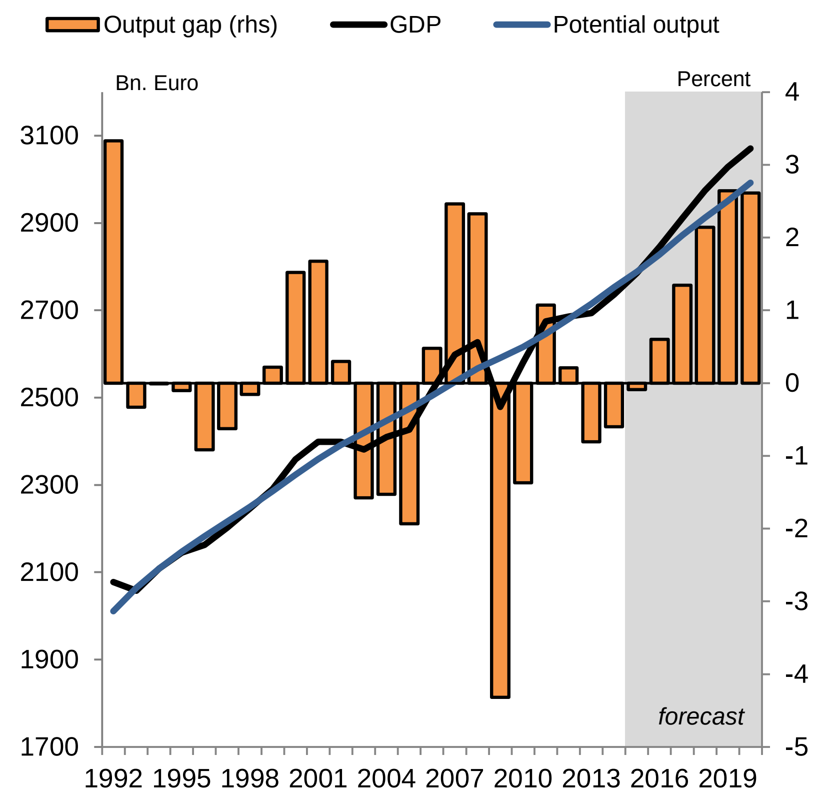
Germany: On the verge of overheating

Production and potential output



Yearly data;
GDP, Potential output: price adjusted (chain index volumes, 2005=100).

- Potential growth is expected to grow on average with 1.4 percent per year
- GDP to grow faster than potential for several years, e.g., due to expansionary monetary policy.
- Output gap is approaching its largest value since the reunification
- Risks for economic and financial stability are increasing

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Germany: Key Indicators

Key indicators 2014–2017

	2014	2015	2016	2017
Gross domestic product (GDP), price-adjusted	1,6	1,8	2,1	2,3
Gross domestic product, deflator	1,7	2,0	1,9	2,1
Consumer prices	0,9	0,3	1,1	2,0
Labor productivity (per hour worked)	0,4	0,8	1,5	1,3
Employment (1000 persons)	42.703	42.903	43.220	43.675
Unemployment rate (percent)	6,7	6,4	6,2	5,6
in relation to nominal GDP				
Public sector net lending	0,3	1,0	0,5	0,7
Gross public debt	74,4	70,5	66,9	62,8
Current account balance	7,6	8,8	9,0	9,0

GDP, consumer prices, labor productivity: percentage change on previous year; unemployment rate: as defined by the Federal Employment Agency.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2*; Federal Employment Agency, *Monthly Bulletin;* Federal Employment Agency, *Employment Statistics*; shaded: IfW forecast.

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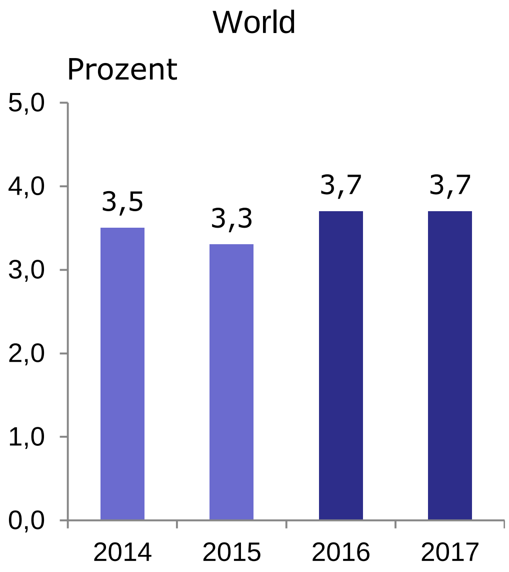
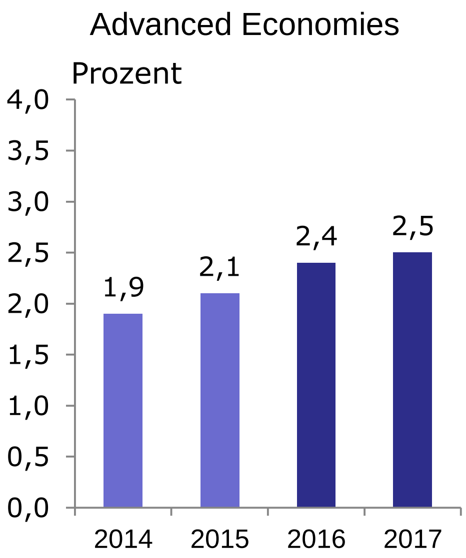
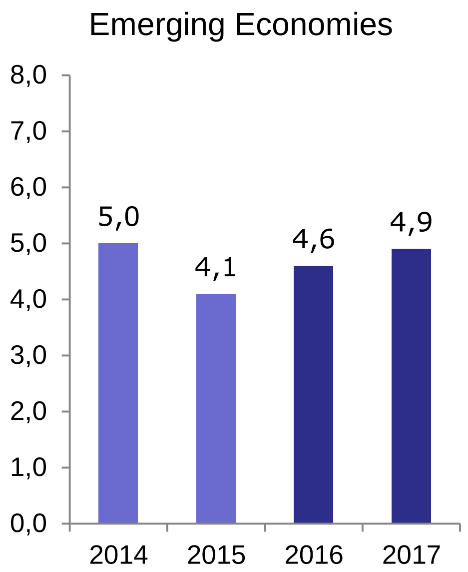
The global picture







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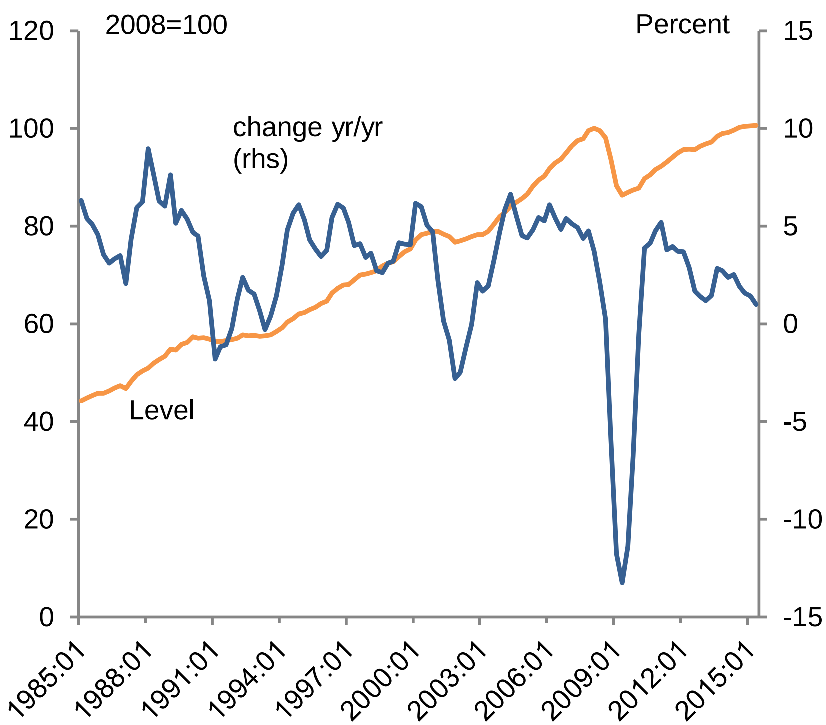
Global investment: Disappointing after 2009 and decelerating lately

World GFCF (ex China)



Quarterly data; price and seasonally adjusted; yoy-change. Indicator is based on Gross Fixed Capital formation in 45

- Level shift after the crisis in line with historical experience
- Recent slowdown mainly driven by emerging economies
- Commodity sector adjustment
- Structural correction of commodity prices heralds continued weak investment in commodity sector
- Change in Chinese growth model suggests that moderation in Chinese investment may be persistent

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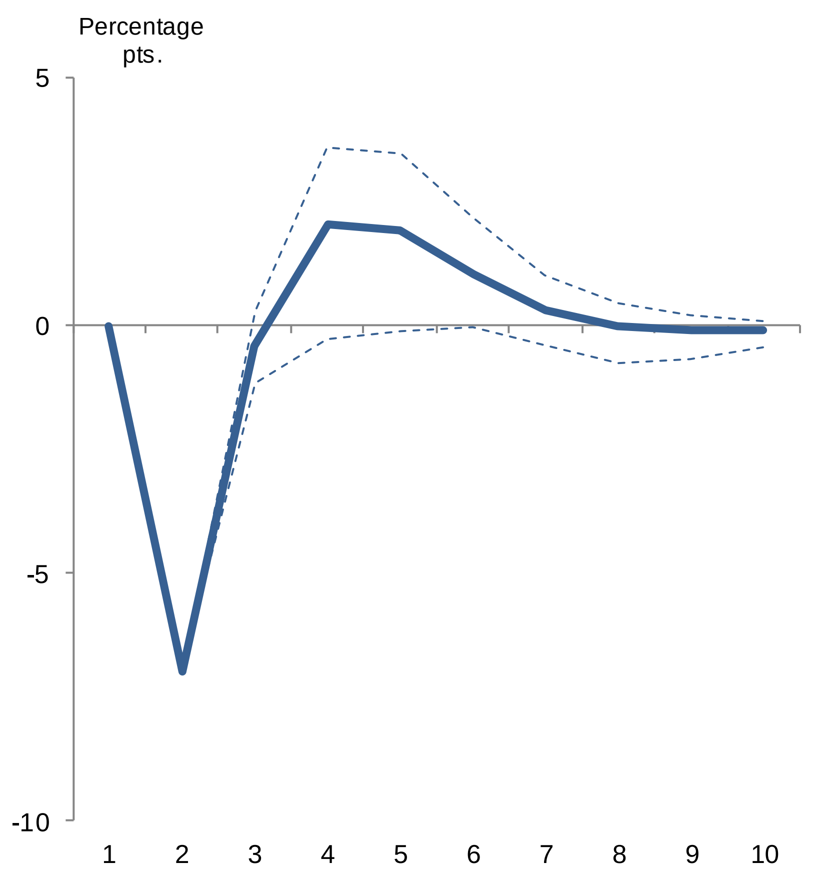
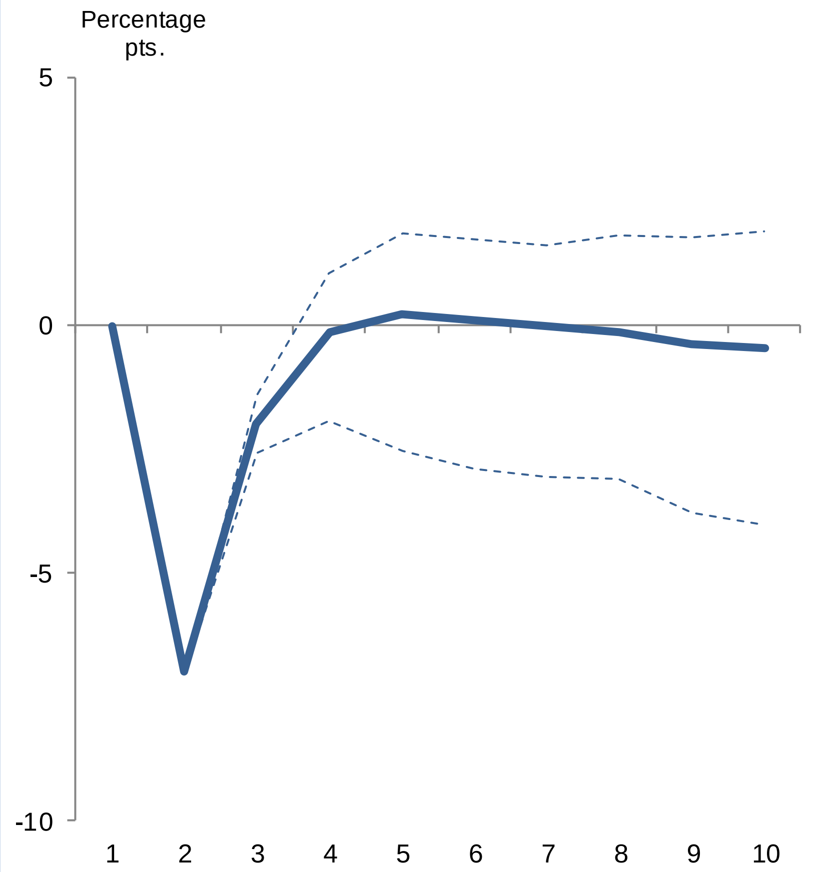
Box: Post-recession investment (yoy change)

A. Normal recessions (growth rate)



B. Financial crisis (growth rate)



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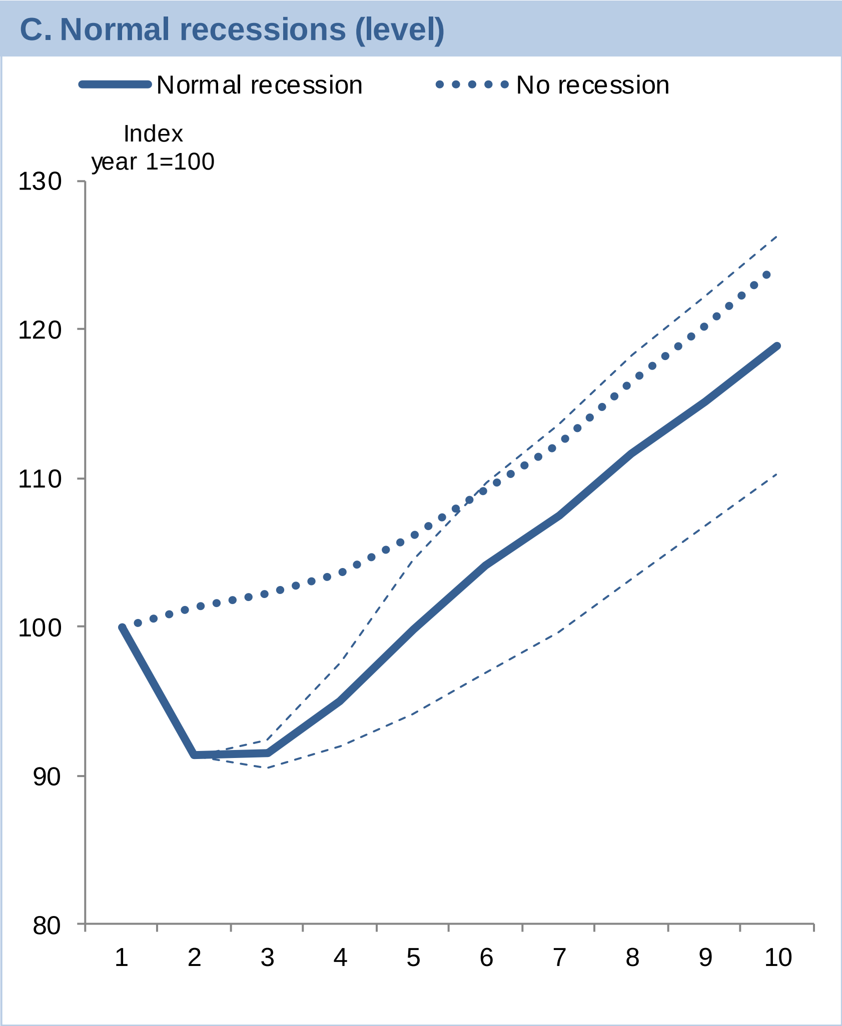
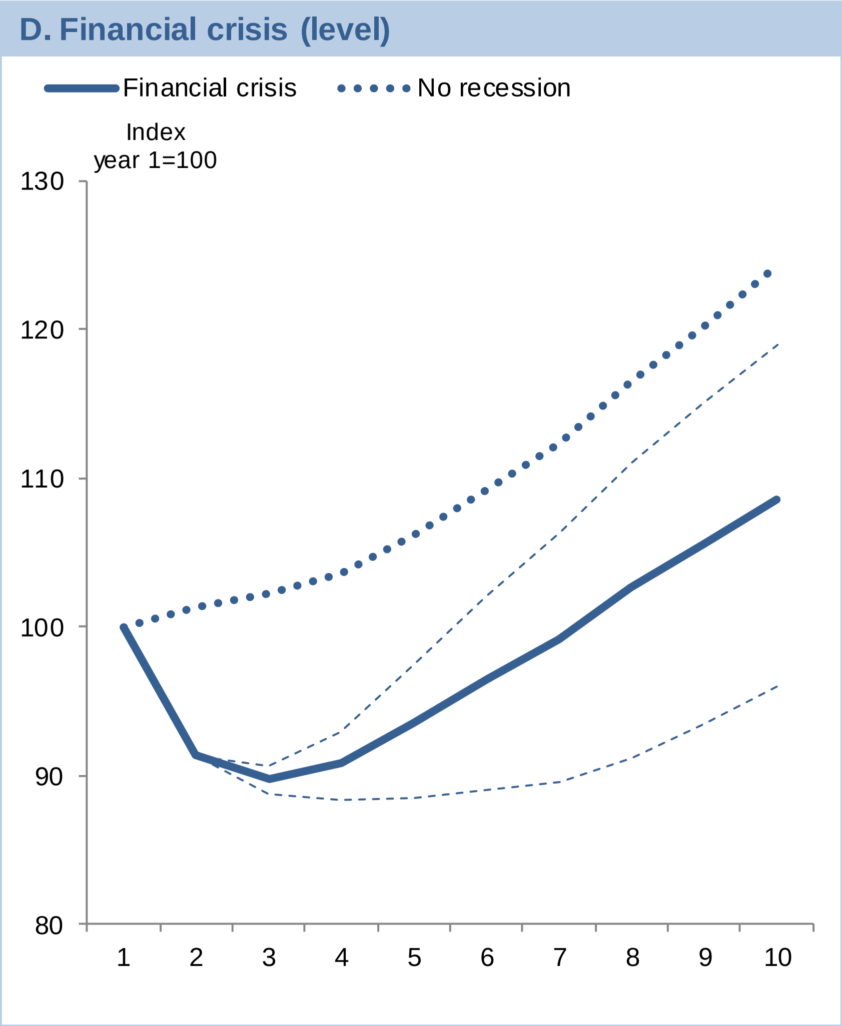
Box: Post-recession investment (level)





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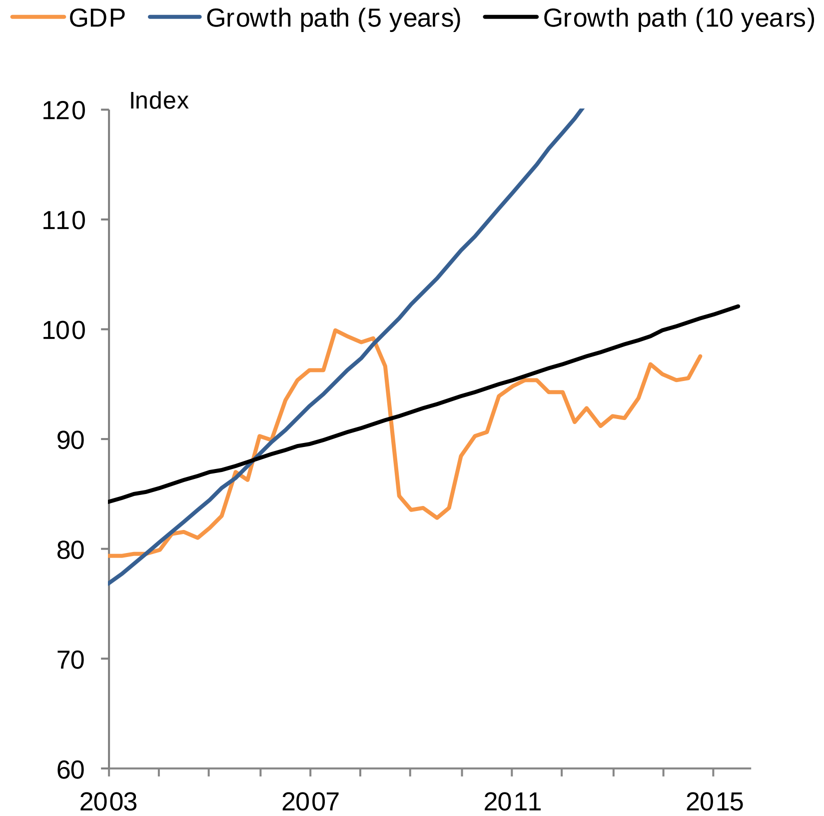
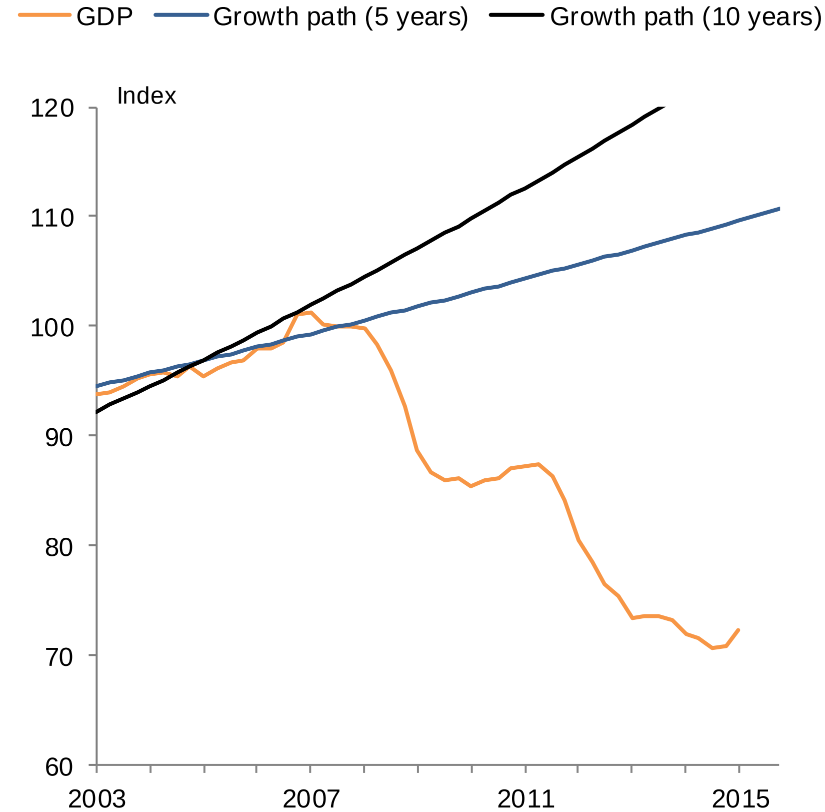
Box: Post-crisis investment (Germany and Italy)

Germany



Quartalsdaten; Unternehmensivestitionen viertes Quartal 2007=100; Wachstumstrend wurde anhand eines log-linearen Trends in den 5 bzw. 10 Jahren vor Beginn der Krise im vierten Quartal 2007 geschätzt.

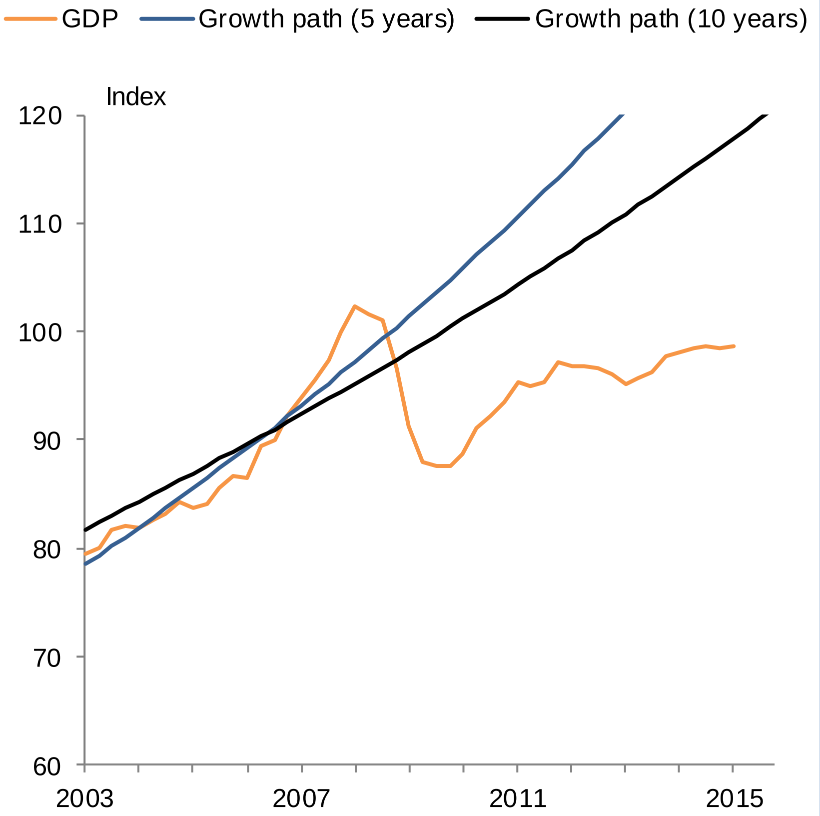
Italy



Quartalsdaten; Unternehmensivestitionen viertes Quartal 2007=100; Wachstumstrend wurde anhand eines log-linearen Trends in den 5 bzw. 10 Jahren vor Beginn der Krise im vierten Quartal 2007 geschätzt.

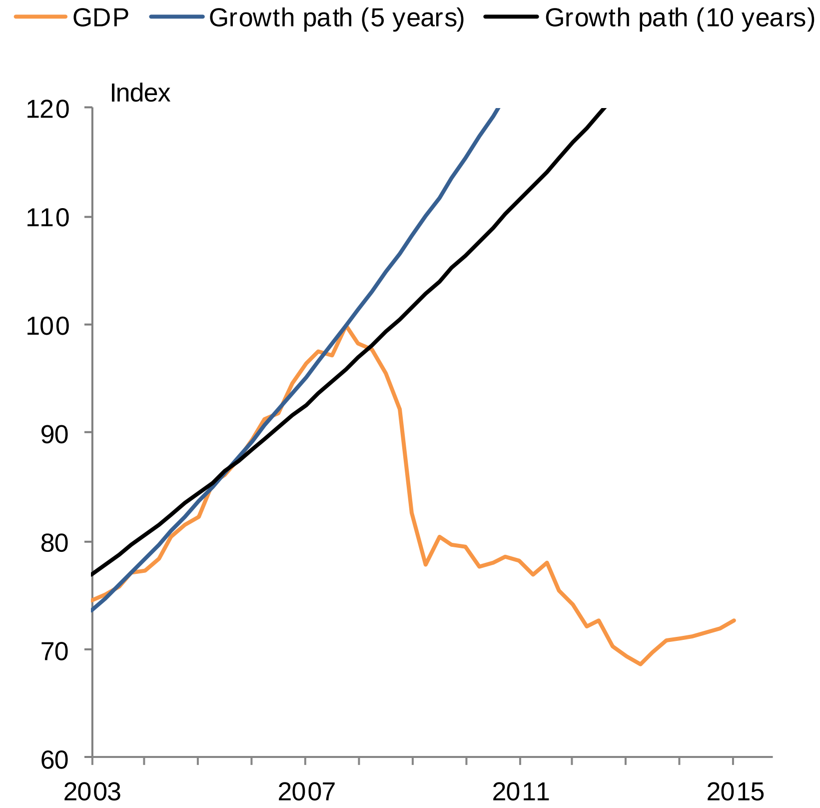
Box: Post-crisis investment (France and Spain)

France



Quartalsdaten; Unternehmensivestitionen viertes Quartal 2007=100; Wachstumstrend wurde anhand eines log-linearen Trends in den 5 bzw. 10 Jahren vor Beginn der Krise im vierten Quartal 2007 geschätzt.

Spain



Quartalsdaten; Unternehmensivestitionen viertes Quartal 2007=100; Wachstumstrend wurde anhand eines log-linearen Trends in den 5 bzw. 10 Jahren vor Beginn der Krise im vierten Quartal 2007 geschätzt.

Überblick

- Weltkonjunktur im Überblick

- **Risiken der Geldpolitik**

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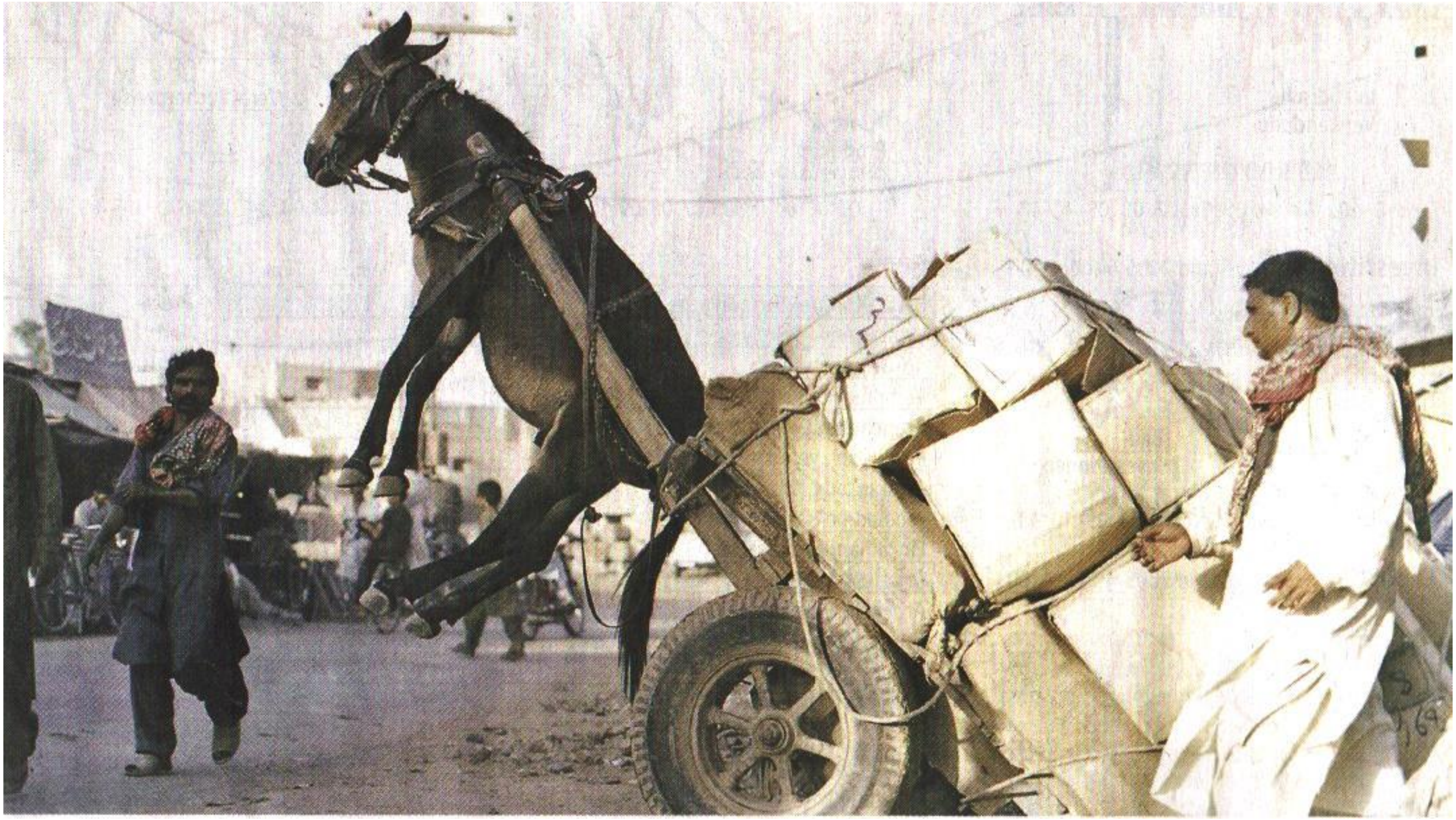
Monetary policy: Overloaded



Quelle: FAZ, 26. Oktober 2011, S. 11

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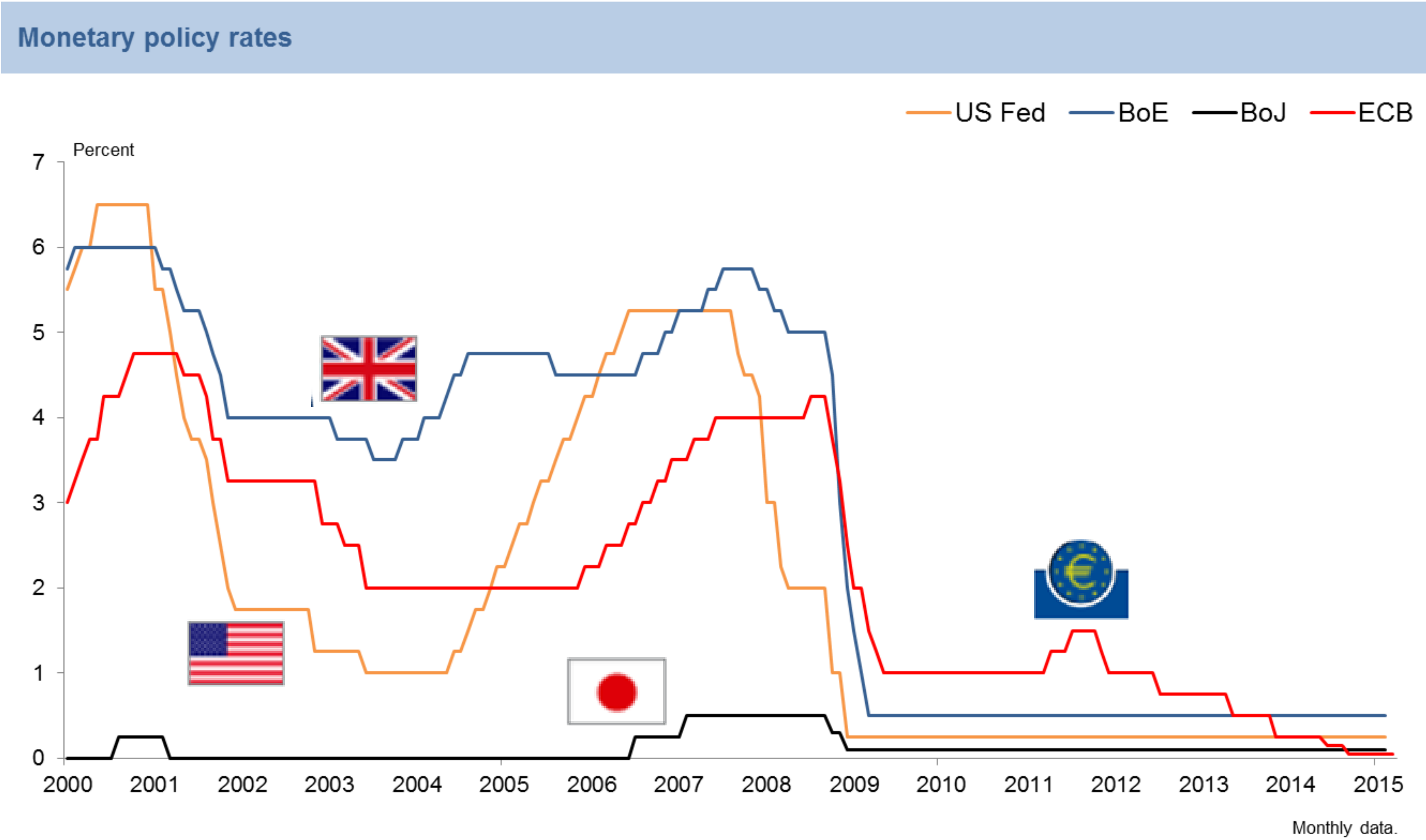
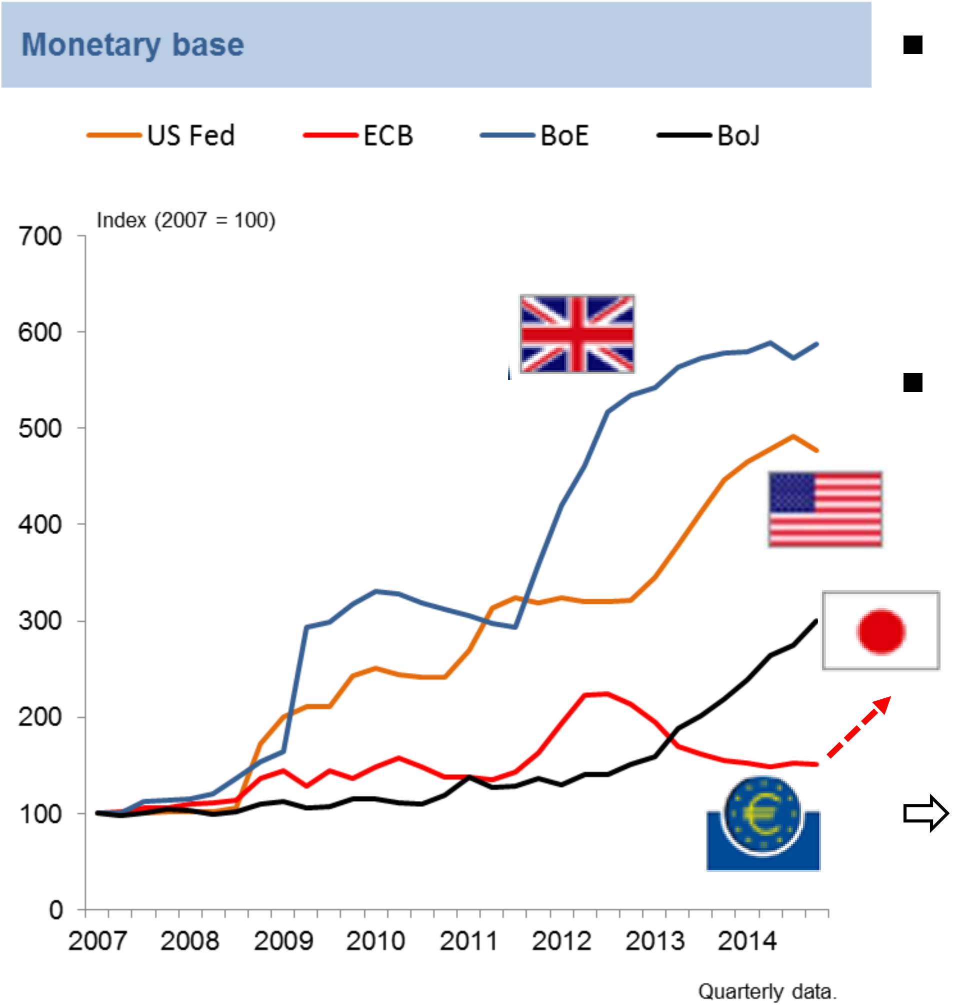
Monetary policy: General remarks from a global viewpoint

- Global landscape
  - » Mankind‘s largest monetary experiment of all peace times
  - » Potentially misleading signals from „Inflation targeting“
- Experience from „Quantitative Easing“
  - » Extremely heterogeneous (theoretically and empirically)
  - » Story not over yet: Exit experience is missing
- Financial crisis and capital stock distortions
  - » Macro-analysis prone to misleading results (structural problems)
  - » Underlying mismatches are non-monetary by their very nature
- Role of interest
  - » Aligning time preferences and production structures …
  - » … or just another macro policy instrument?

Policy rates of major central banks at ultra-low levels



„Quantitative Easing “



- Type 1:
  Liquidity provision in times of financial turmiol

- Type 2:
  Stimulating at the zero lower bound

⇨ **Exit-Strategy?**

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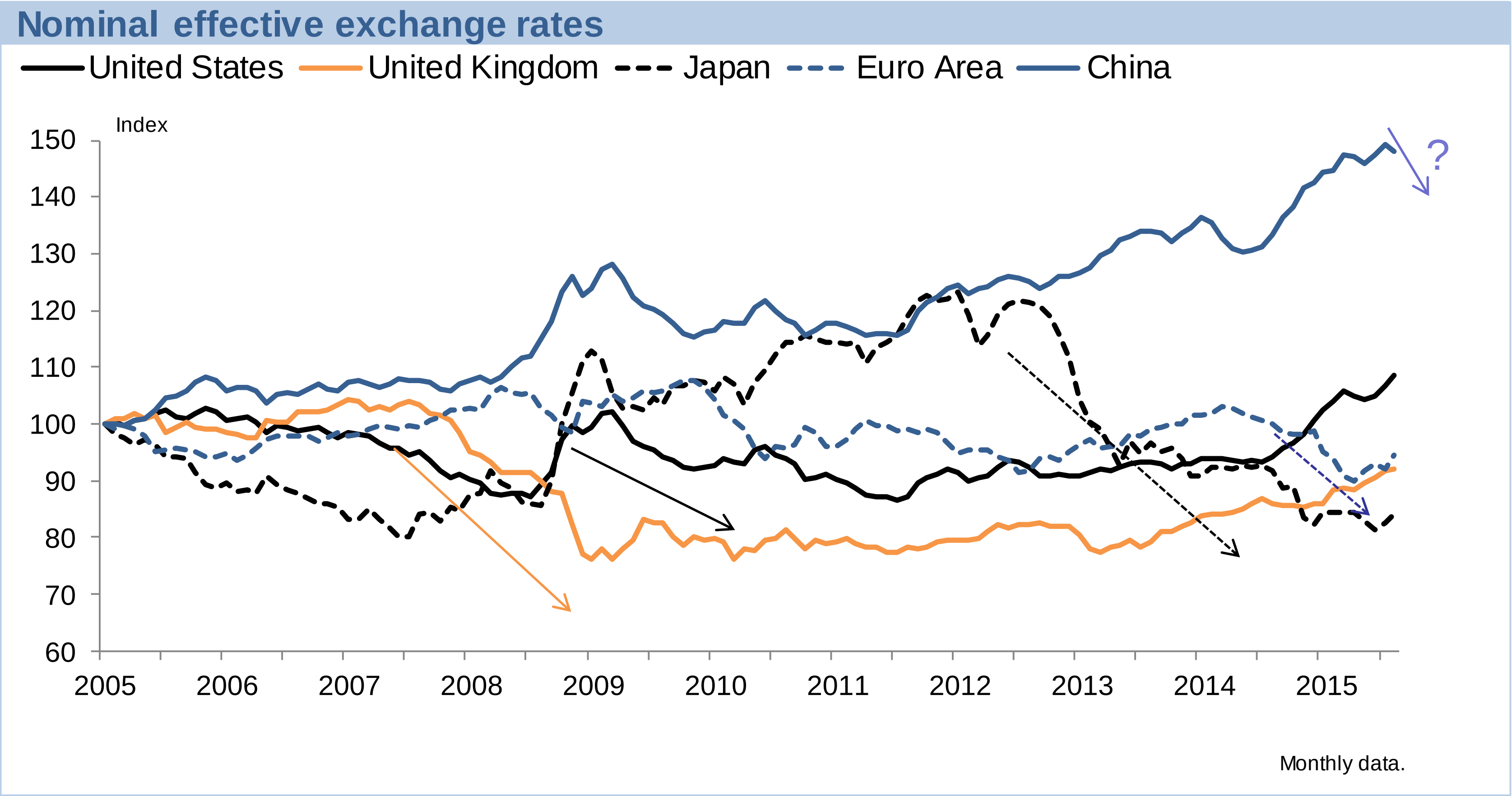
„Currency war“: Succession of expansive monetary maneuvers



Role of central banks

- „In many respects, central banks have been the **heroes of the global financial crisis**.“

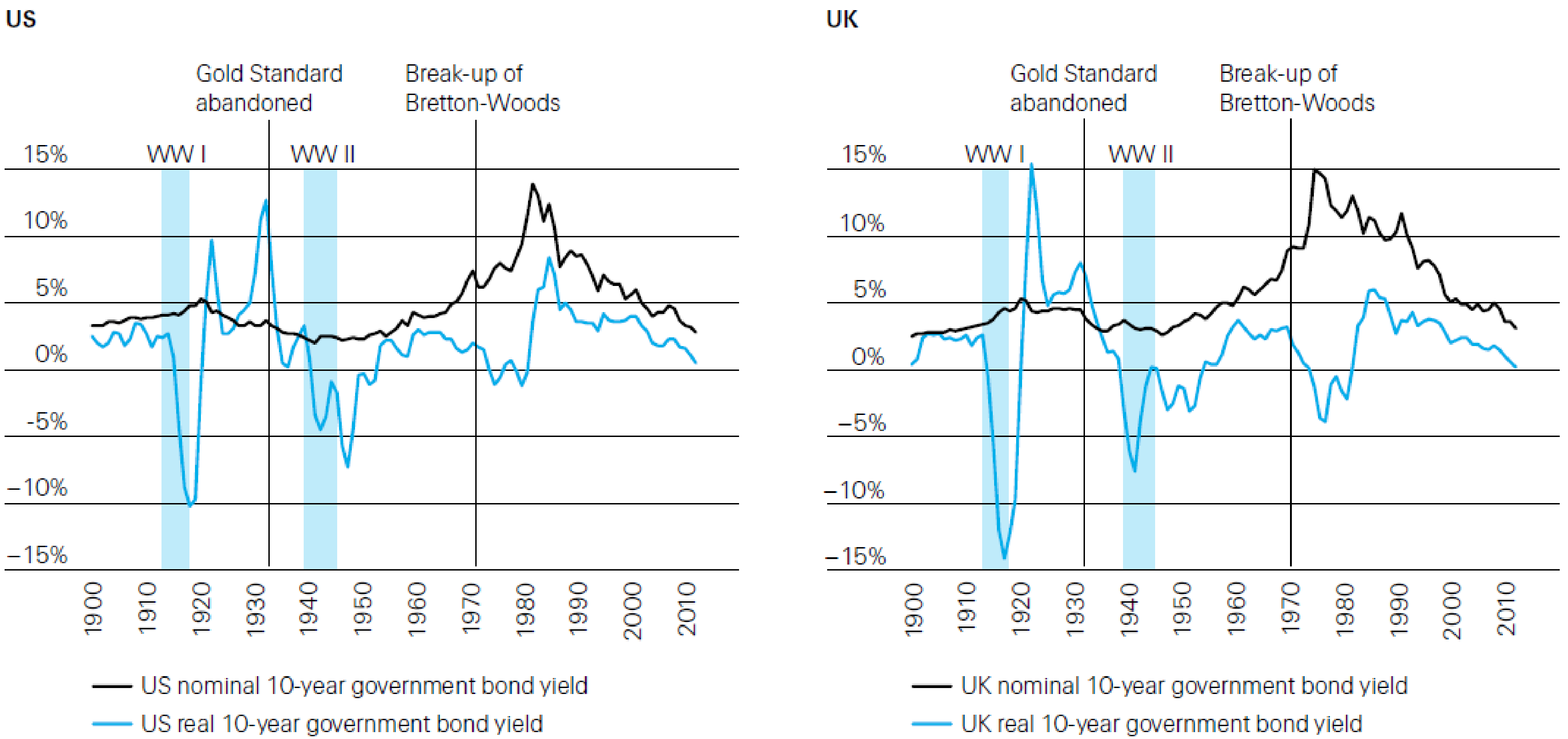
  Christine Lagarde, IWF

- „Ich halte es für keine gute Entscheidung, dass die EZB sich jetzt zum umfangreichen Kauf von Staatsanleihen entschlossen hat. **Geldpolitik kann nur Zeit** dafür **kaufen**, die Voraussetzungen für langfristiges Wachstum zu schaffen - aber nicht die dazu nötigen Strukturreformen ersetzen.“

  Christoph Schmidt, SVR

Interest rates: A centenary perspective

Nominal und real yields on 10-year government bonds 1900-2011



Sources: Datastream; Homer Sidney and Richard Sylla, A History of Interest Rates (New Jersey: Wiley Finance, 2005); Swiss Re Economic Research & Consulting

QE made by ECB: The Public Sector Purchase Programme

- Extended Asset Purchase Programme (EAPP)

	monthly
» Asset-Backed Securities Purchase Programme (ABSPP) » Covered Bond Purchase Programme (CBPP3)	10 bn
» Public Sector Purchase Programme (PSPP)	50 bn

⇨ 1.1 trillion in assets in total until September 2016
(approx. + 50 % of Eurosystem's consolidated balance sheet)

- PSPP

» March 2015 to September 2016 (or later)	
» Assets of supranational institutions (explicit risk sharing)	6 bn
» Central government bonds, securities of national agencies	
– Held by ECB (explicit risk sharing)	4 bn
– Held by National Central Banks (no explicit risk sharing)	40 bn

Eligibility criteria and quantitative limits

- Eligibility criteria for sovereign bonds
  - » Remaining maturity of 2 to 30 years
  - » Collateral quality for ECB monetary policy operations
    - – High credit rating
    - – EU financial assistance programme (not under review)
  - » Yielding at least ECB deposit rate (currently -0.2 percent)

- Limits (for Eurosystem as a whole)
  - » Not more than **33 percent** of the debt of any single issuer
  - » Not more than **25 percent** of any given issue (no blocking minority)
  - ⇨ **Irrelevant with respect to monetary financing**

Risk separation

- Credibility
  - » Loss absorption capacity of NCBs
  - » Recapitalization rules for national central banks
  - ⇨ **Central bank equity matters**

- Central bank independence
  - » “In the event of an NCB’s net equity becoming less than its statutory capital or even negative would require that the respective Member State provides the NCB with an appropriate amount of capital at least up to the level of the statutory capital within a reasonable period of time so as to comply with the principle of financial independence.” (ECB, 2010 Convergence Report)

Quantitative feasibility (1/2)

- Aggregate euro-area bond market

» Outstanding debt issued by central governments	6,666 bn
» … of which 25 percent (issue limit)	1,666 bn
» … SMP programme (prior to PSPP)	194 bn
» … Bonds held by NCBs (prior to PSPP)	240 bn
» **Gross eligible central government debt**	**approx. 1,250 bn**
» Outstanding securities issued by national agencies	350 bn
» Securities issues by supranational institutions	567 bn
» **Gross total eligible securities**	**approx. 2,150 bn**

⇨ Not binding until September 2016 (but increasingly so after)

– Maturity spectrum hardly relevant

– Currently market values higher than nominal values, and minimum yield limit not binding

Quantitative feasibility (2/2

- Country-specific bond markets

Small countries without "sufficiently" high issued debt	Luxembourg, Lithuania, Latvia, Estonia
Highly indebted countries without sufficiently high eligible outstanding debt	Greece, Ireland, (Portugal)
Large countries (80 percent of euro-area sovereign bond market)	Italy, France, Germany, Spain

⇨ **Limiting criteria binding for small countries only**

⇨ **By and large, the programme can be carried out as foreseen**

⇨ **Enlarging the programme would face relevant limits (e.g. German bonds, supranational institutions)**

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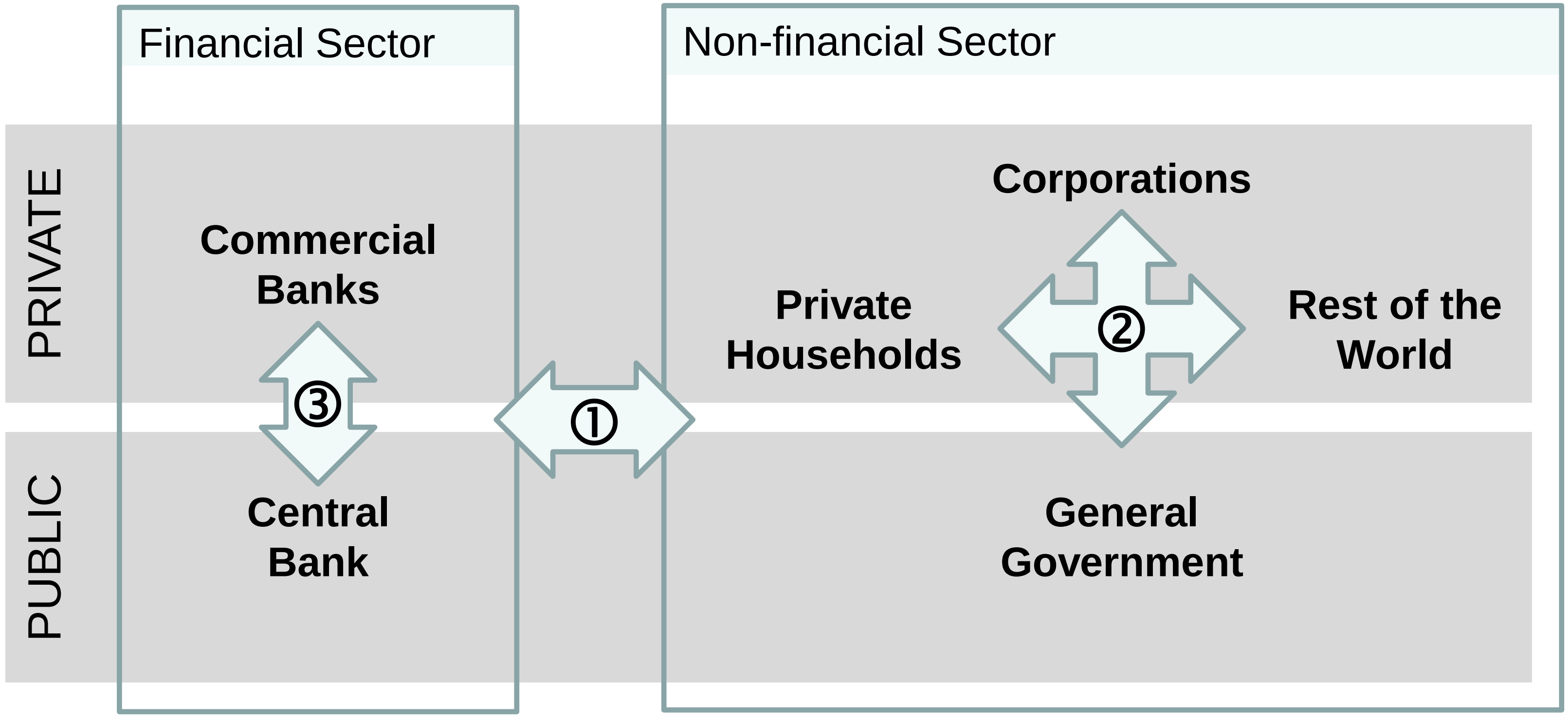
Financial risks for the Eurosystem

- Central banks
  - » Technical insolvency vs. political insolvency
  - » Strong financial health is a key factor to ensure independence
- Money
  - » Functions as a general means of exchange
  - » Excessive money creation destroys this function
- Default risks and loss absorption capacity of NCBs
  - » Eurosystem strong enough to deal with even a 100 percent default
- Interest rate risks and accounting principles
  - » QE operations necessarily earmarked as “held to maturity” (otherwise substantial capital provision to cushion against QE)
  - » Significant losses under a fairly broad range of assumptions

Economic sectors, money creation, and financing



① Liquidity provision: money demand vs. money supply (and financial intermediation)
② Financing: saving (lending) vs. investment (borrowing)
③ “Quantitative Easing”: monetary base

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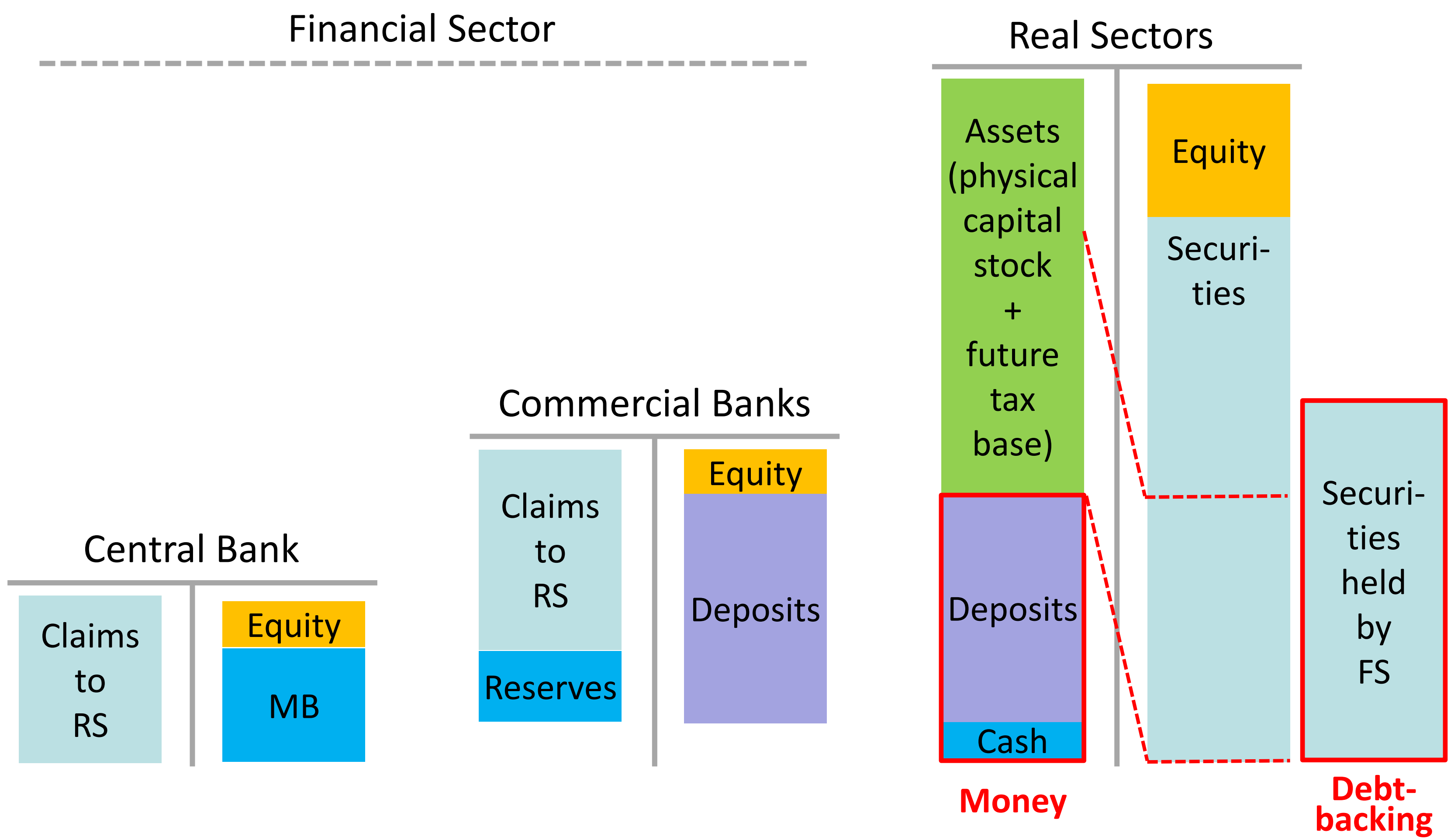
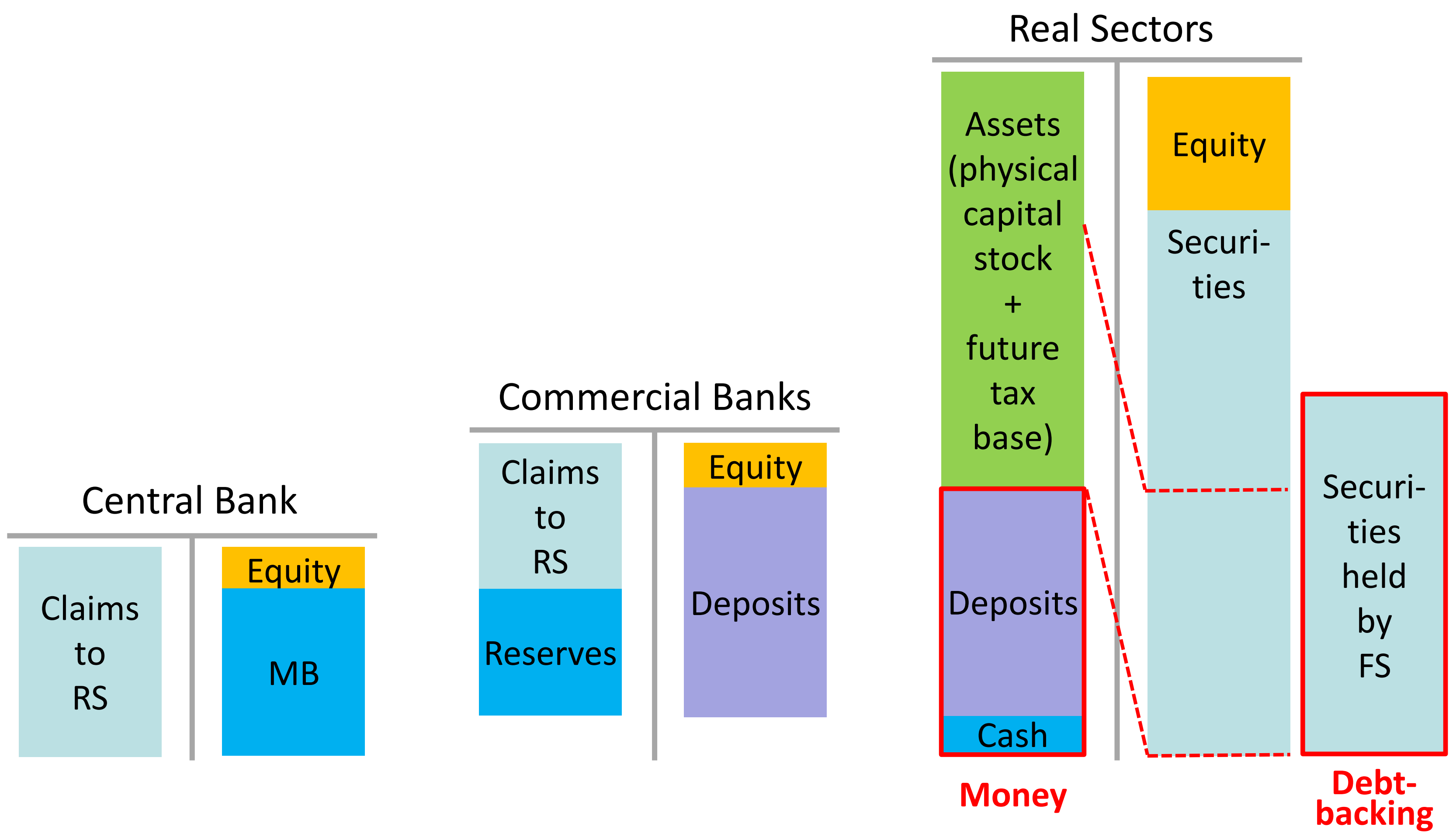
Financial framework of a debt-backed monetary system



"Quantitative Easing" inflates central bank's balance sheet



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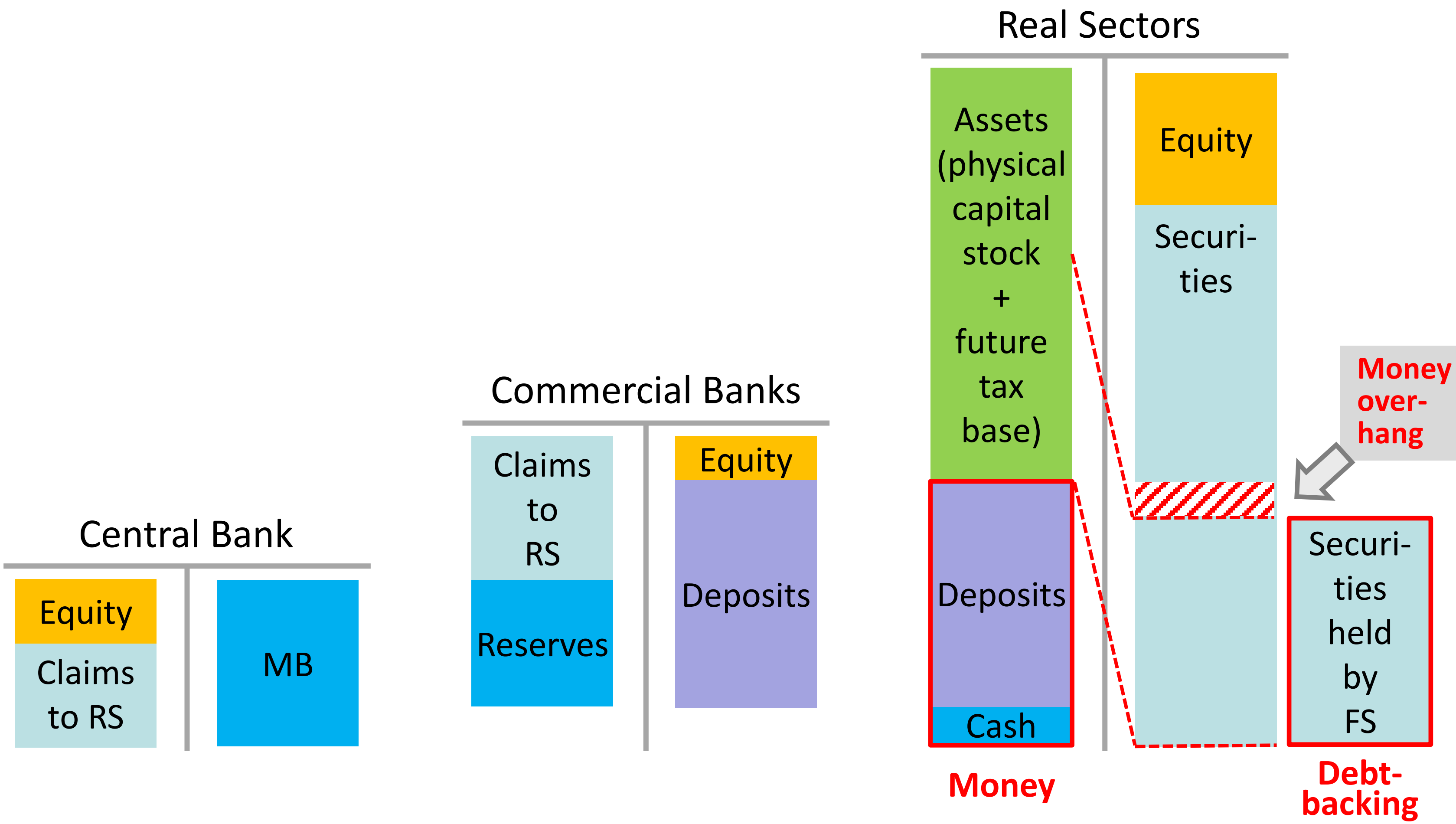
Serious default scenario



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Overall implications for monetary policy

- Increased risk of policy insolvency
  - » Stronger incentives to choose a too-accommodative monetary policy stance
- Central bank independence
  - » May weaken the independence of the ECB by making the Eurosystem more dependent on the fiscal soundness of member states
- Signalling
  - » Financial risks may be perceived by market participants as a signal that interest rates will remain low for an even longer period than they would otherwise be
- Price stability
  - » In extreme scenarios, the financial health of the Eurosystem could be significantly harmed, reducing its capacity to ensure price stability
- Market distortions
  - » Higher volatilities in bond markets (due to less market depth), associated with the risk of asset price bubbles
- Future room for manoeuvre
  - » Future attempts to expand its asset purchase programmes may force the ECB to loosen current limits and eligibility criteria


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