KIEL INSTITUTE
FOR THE WORLD ECONOMY

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Weltwirtschaft, deutsche Konjunktur und wirtschaftspolitische Herausforderungen

Prof. Dr. Stefan Kooths
Prognosezentrum und Büro Berlin

Überblick

- Globale Perspektive
- Euroraum
- Deutschland
- Harte Landung in China?

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- **Globale Perspektive**
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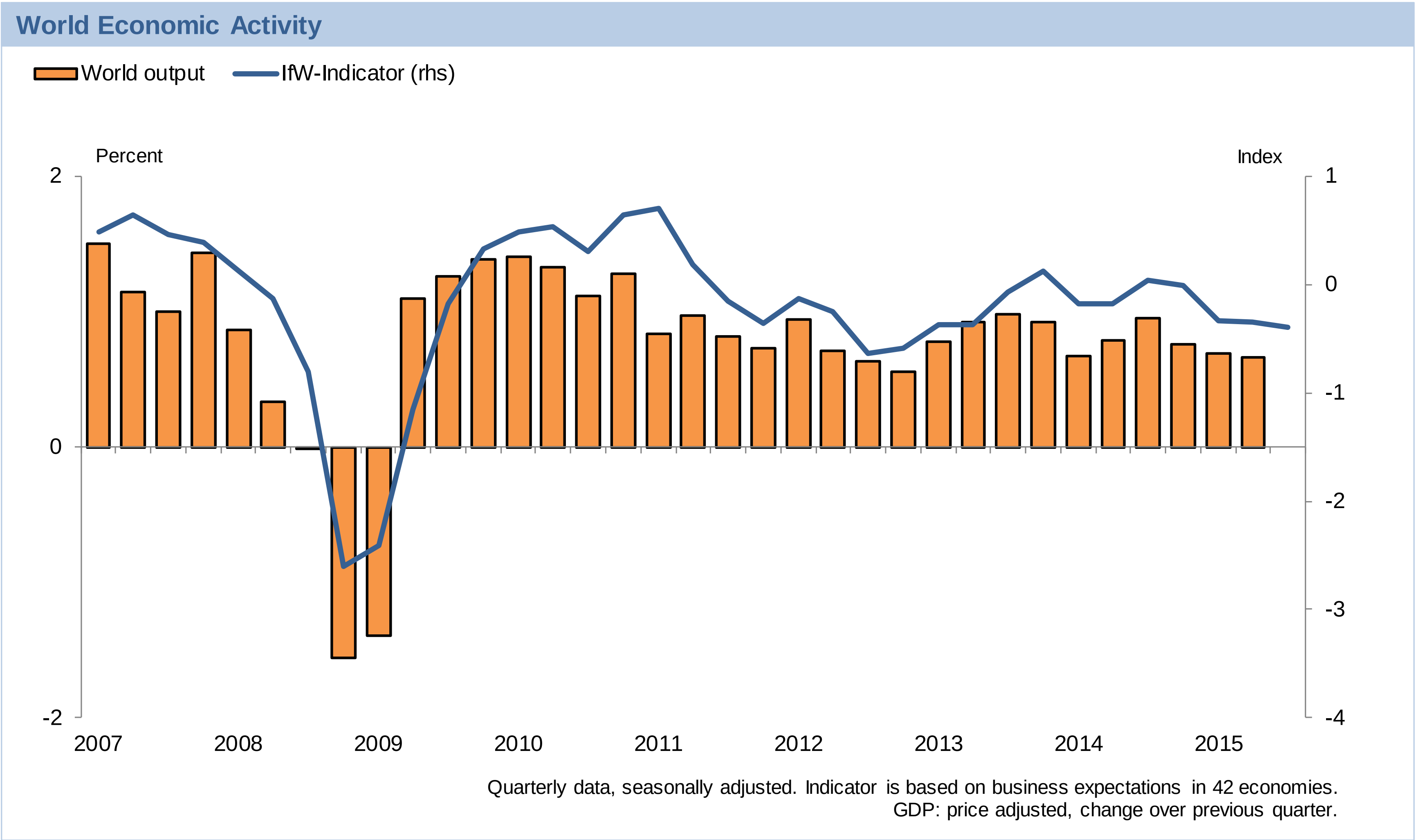
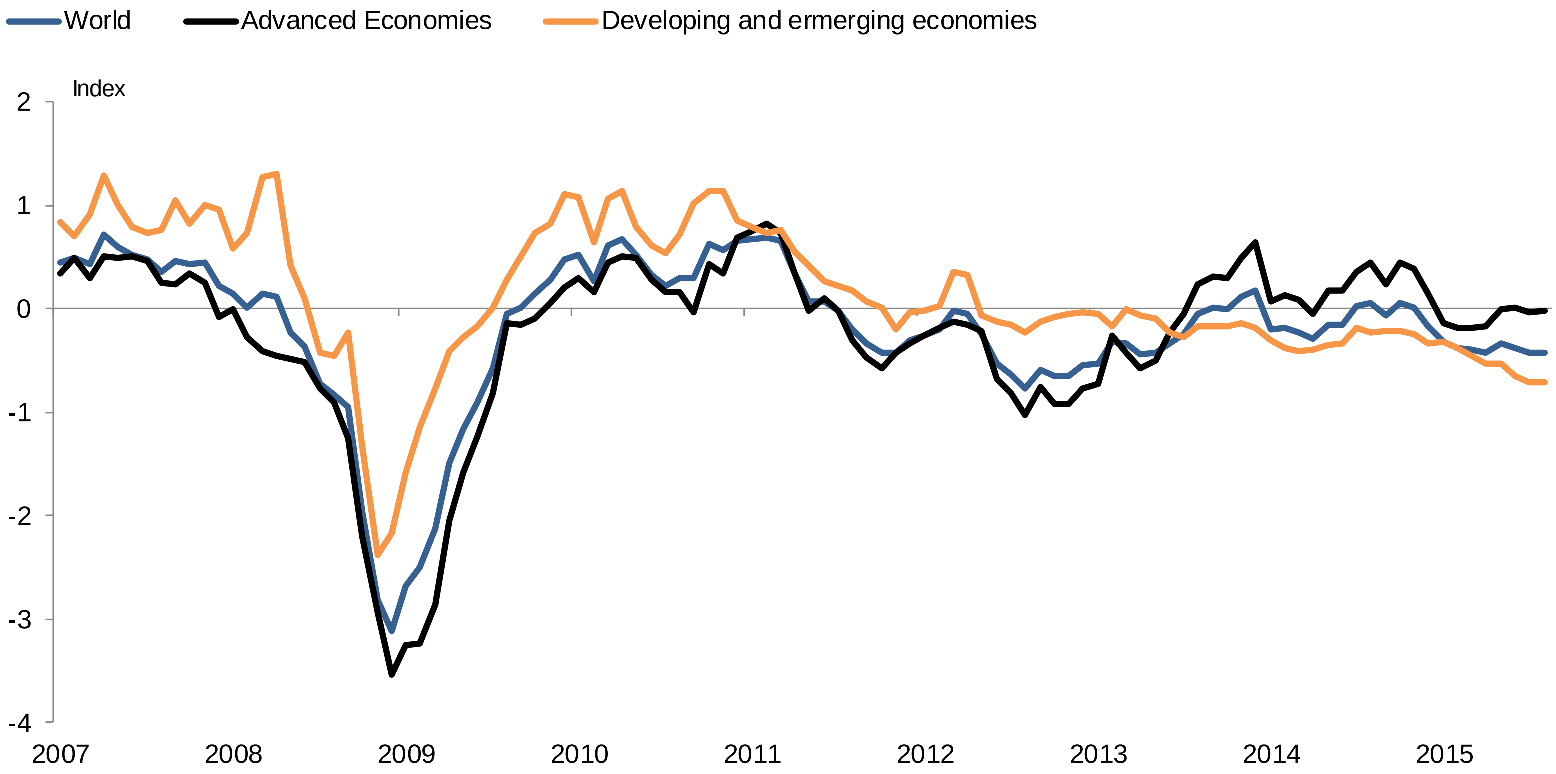
Global activity has been decelerating



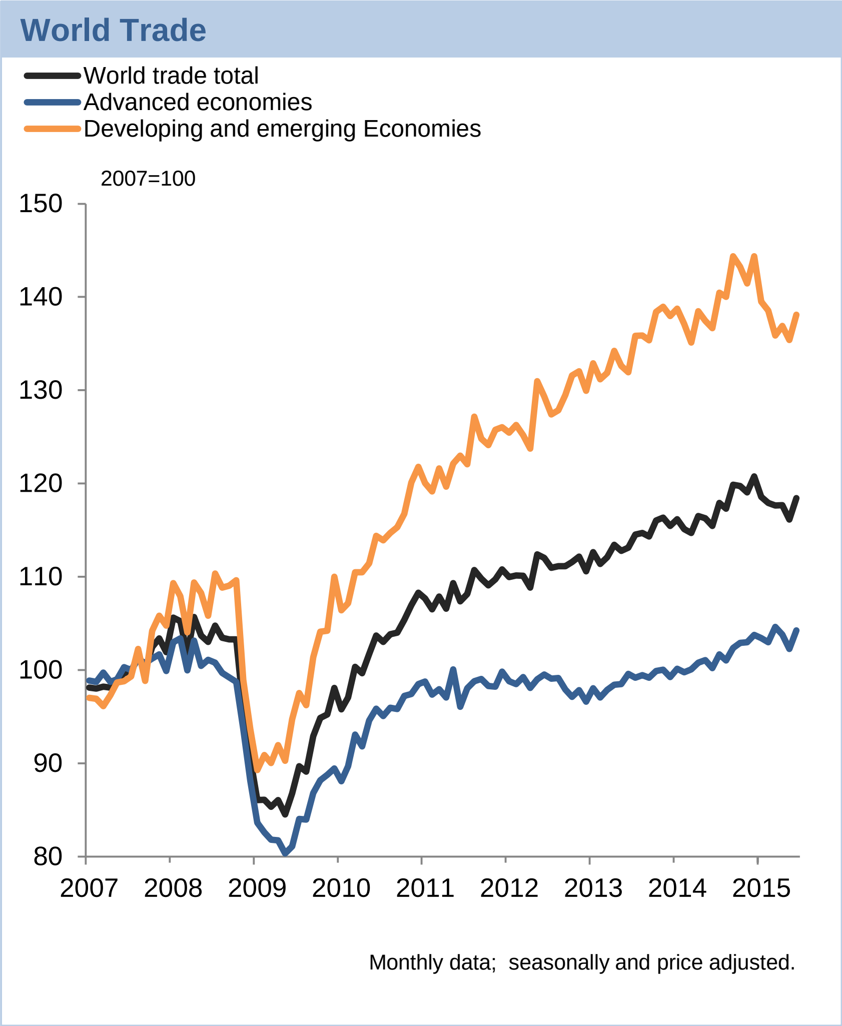
Pronounced weakness in emerging economies

Business expectations by groups of countries



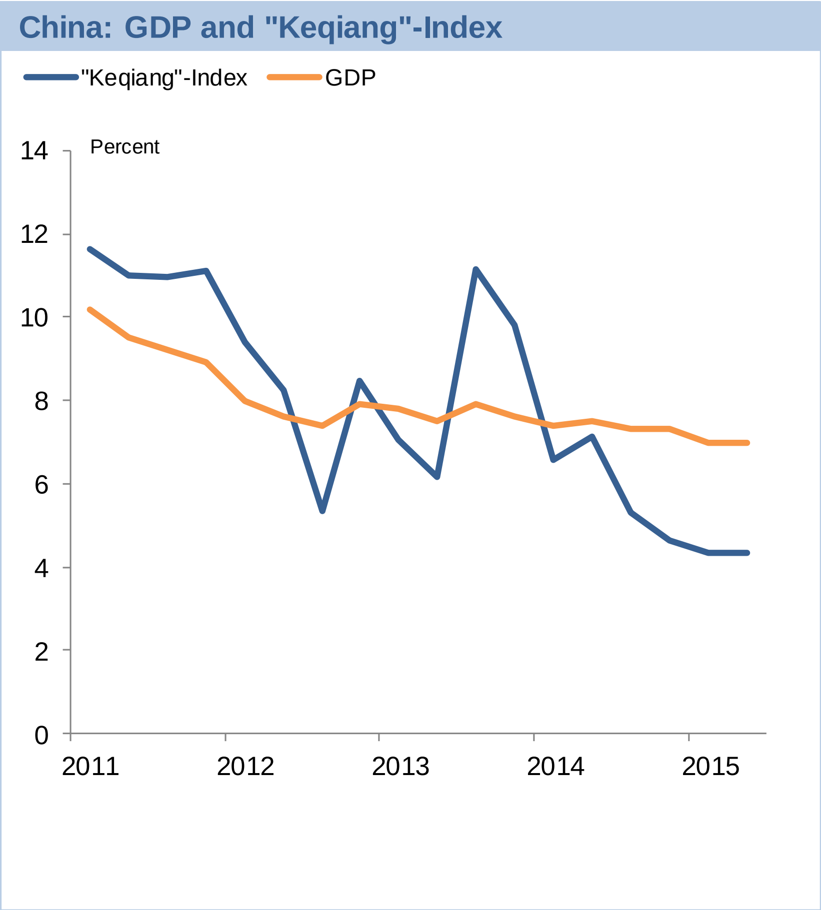
Monthly data, seasonally adjusted. Indicators are based on buisness expectations in 42 countries (34 advanced economies and 8 emerging economies).

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

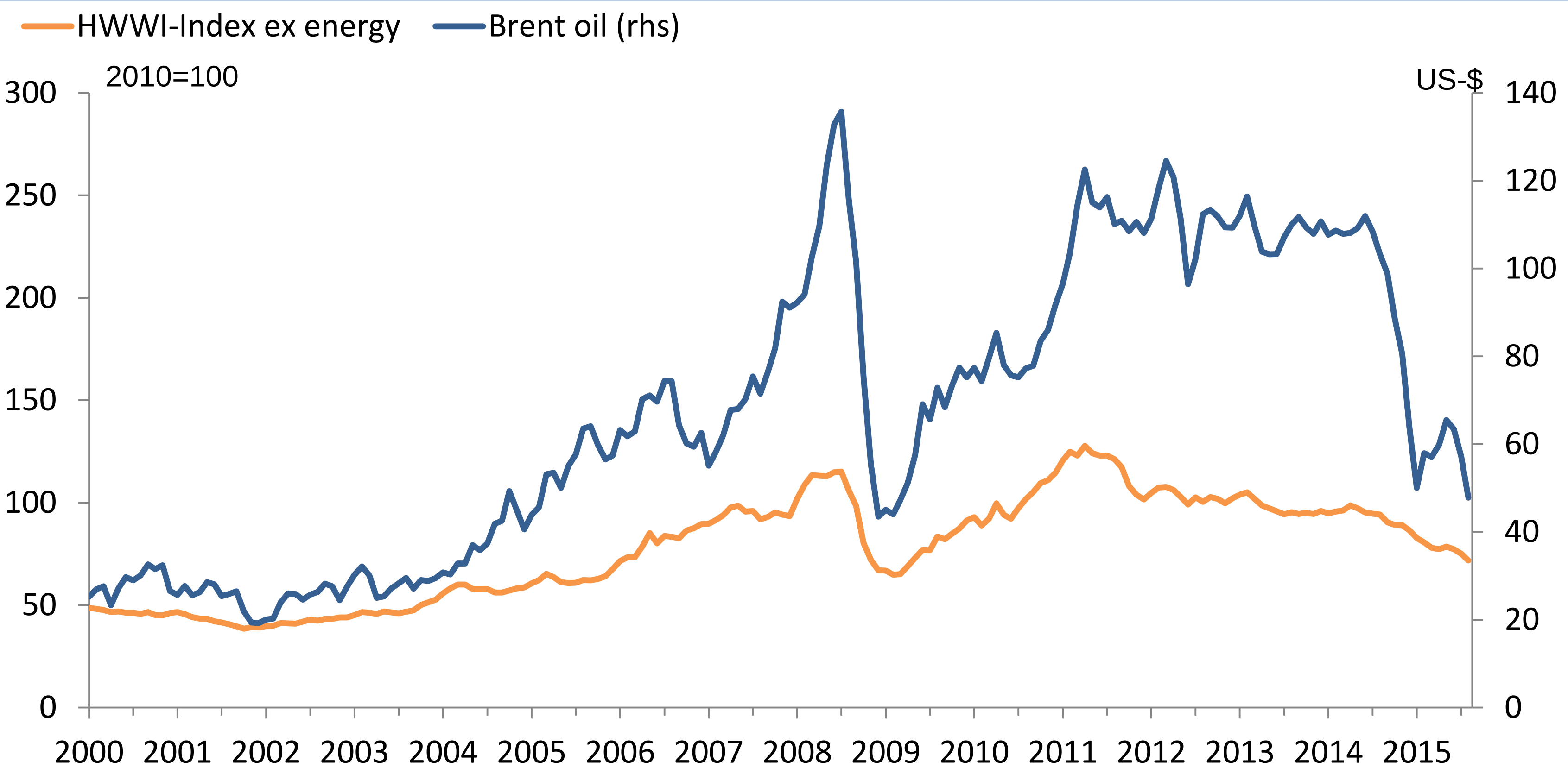
Slowdown in China may be even worse than official GDP data suggest



- 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

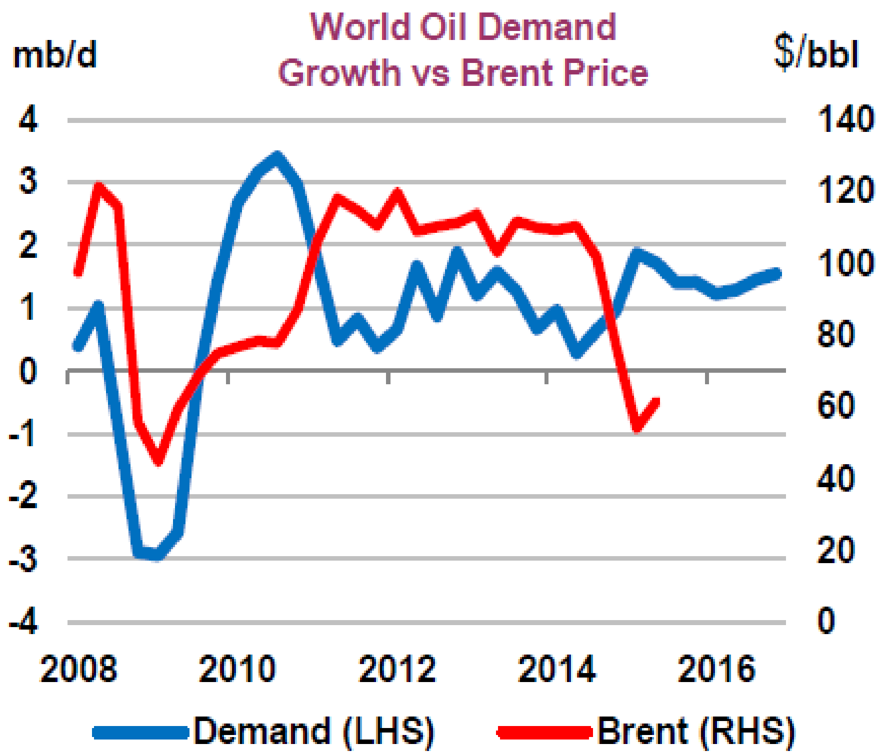
Commodity prices



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

Oil market: Textbook-like demand pattern

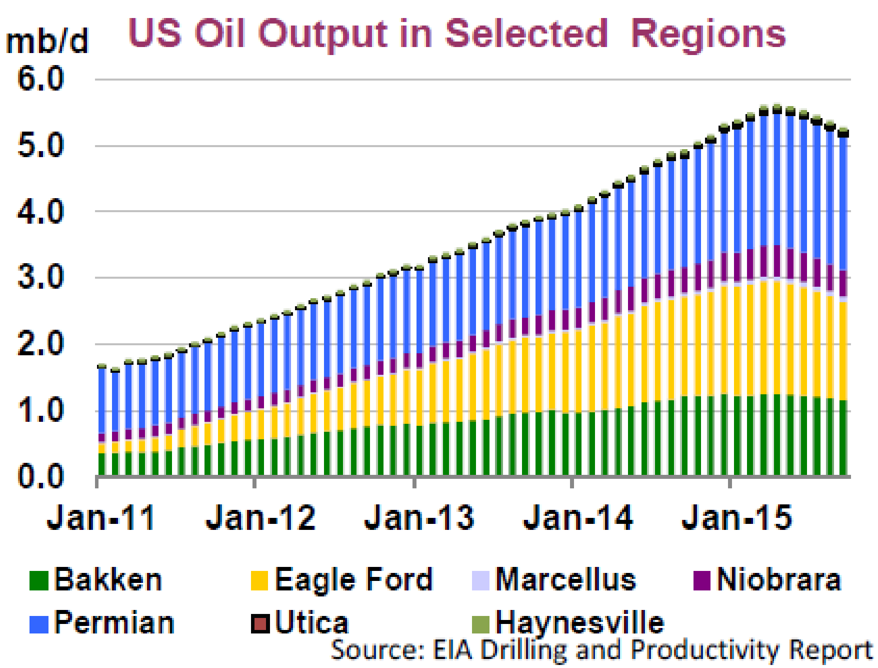
- Lower prices triggered additional demand
- Rate of demand growth was diminishing in face of high oil prices in 2011-2014
- Demand growth picked up with the decline in prices despite continued modest growth

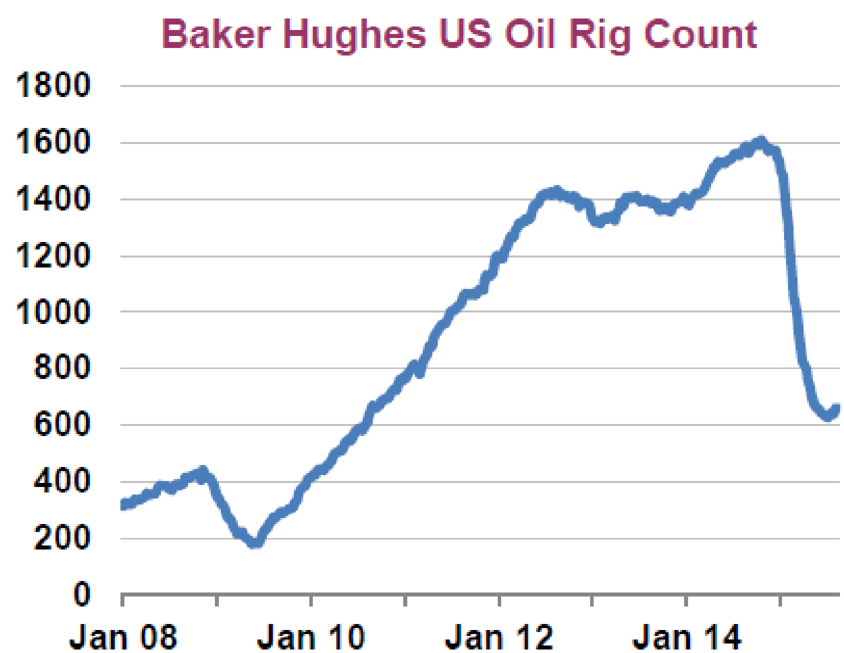


Source: IEA, Monthly Oil Market Report. August 2015.

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

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



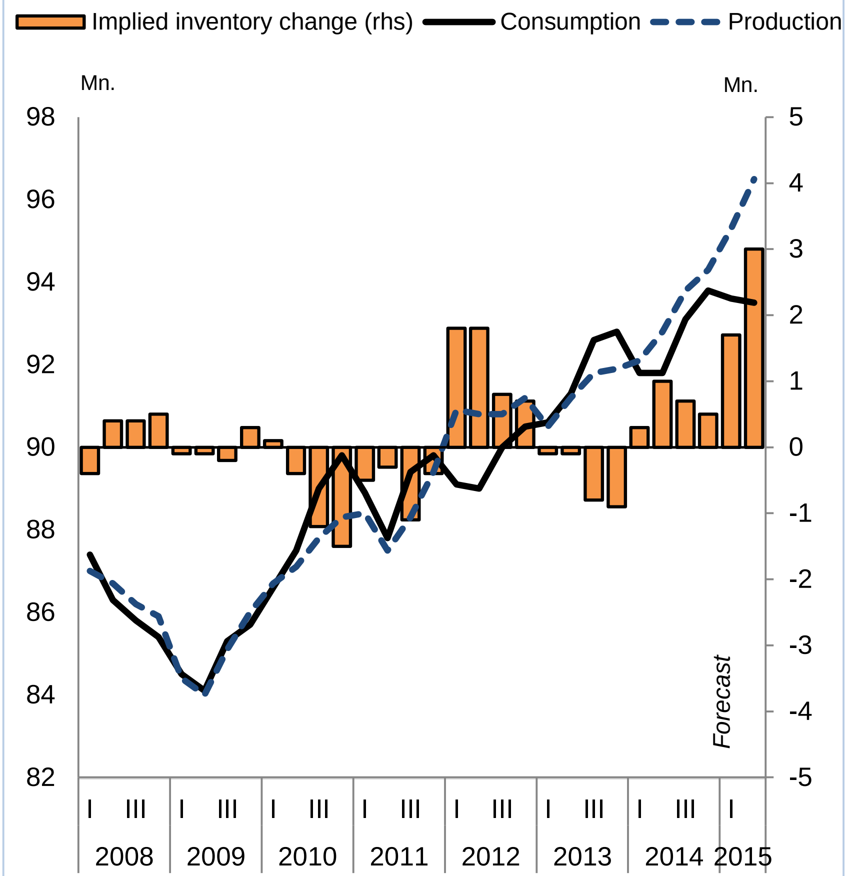


Source: IEA, Monthly Oil Market Report. August 2015.

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

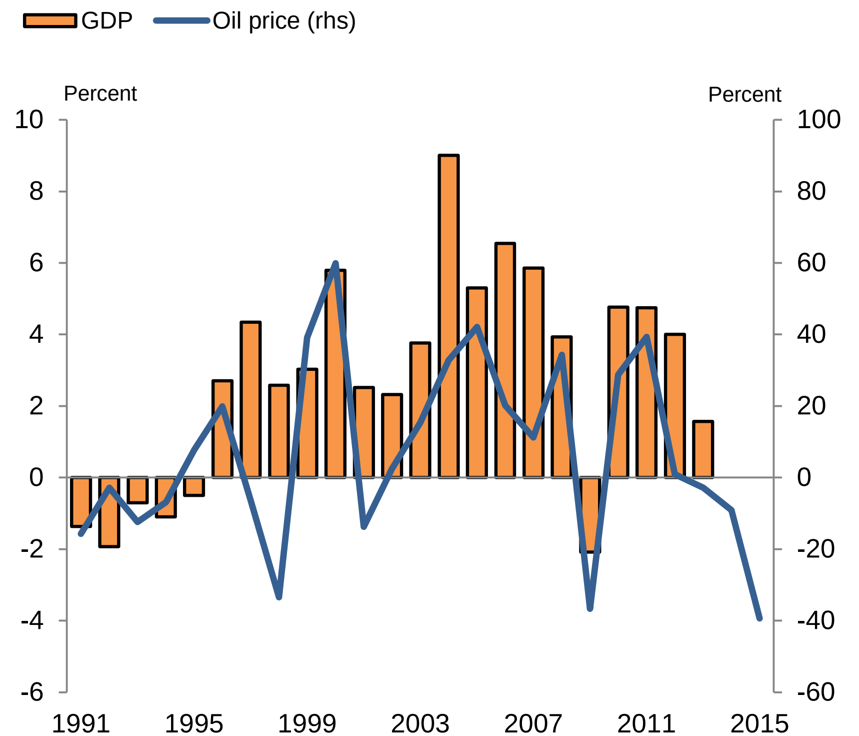
Global oil market



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

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

Oil price and GDP in the 15 largest net oil exporters



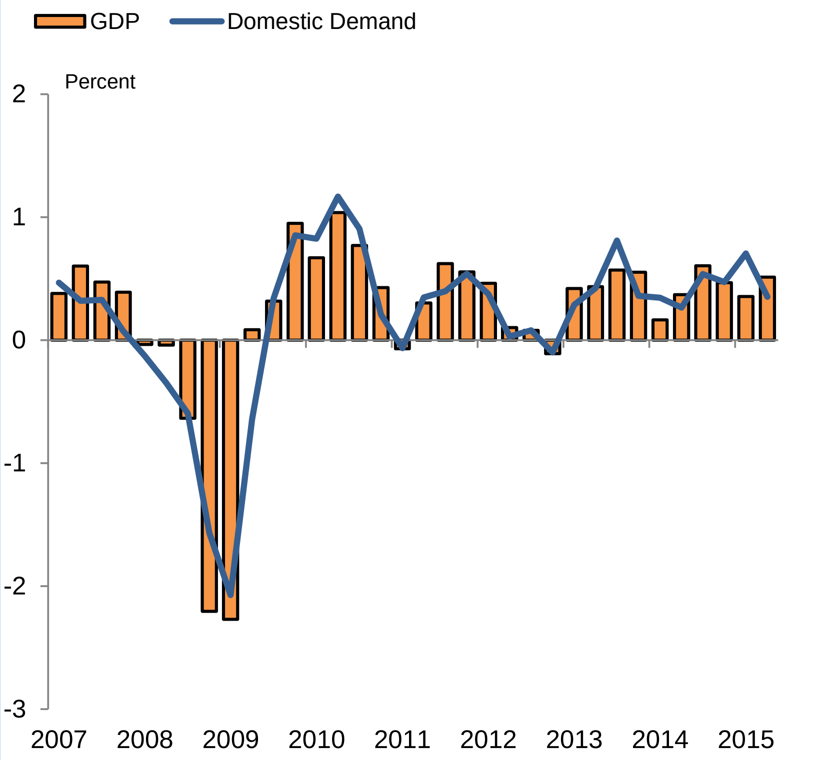
Annual data; yoy-change; Oil price: Brent in US-Dollar; GDP: volumes weighted according to nominal GDP in US-Dollar.

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

Steady growth in the advanced economies

GDP and Domestic Demand in the G-7



Price adjusted; seasonally adjusted; yoy change. G7 consists of USA, Japan, Canada, Germany, France, Italy and UK.

- 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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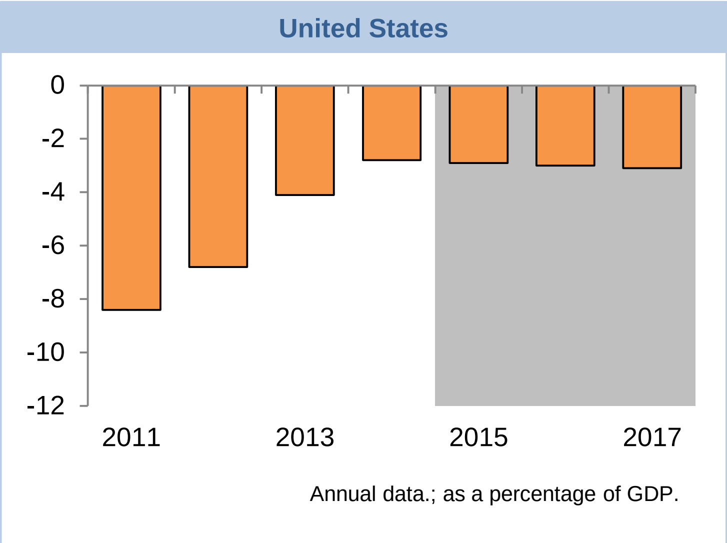
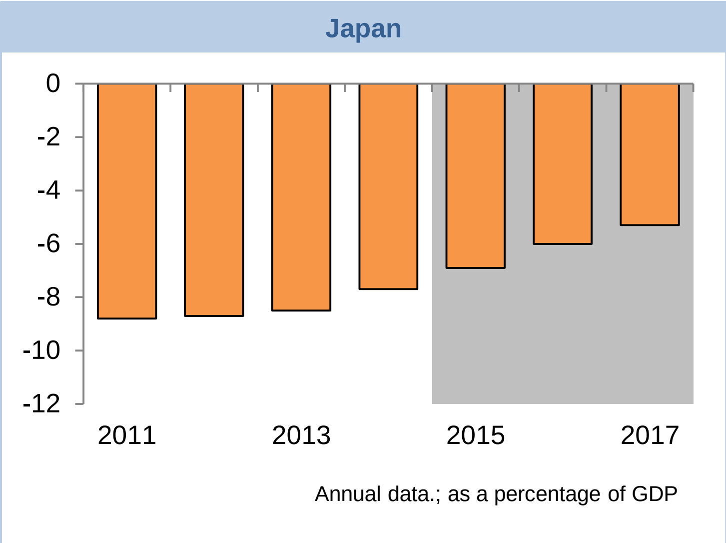
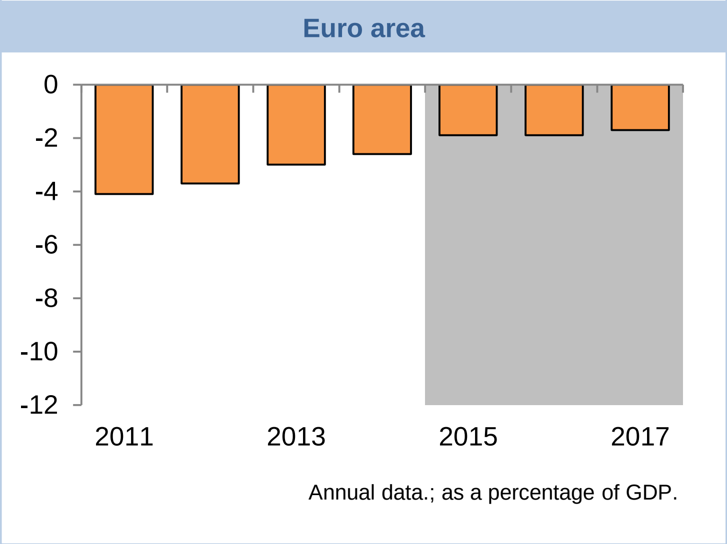
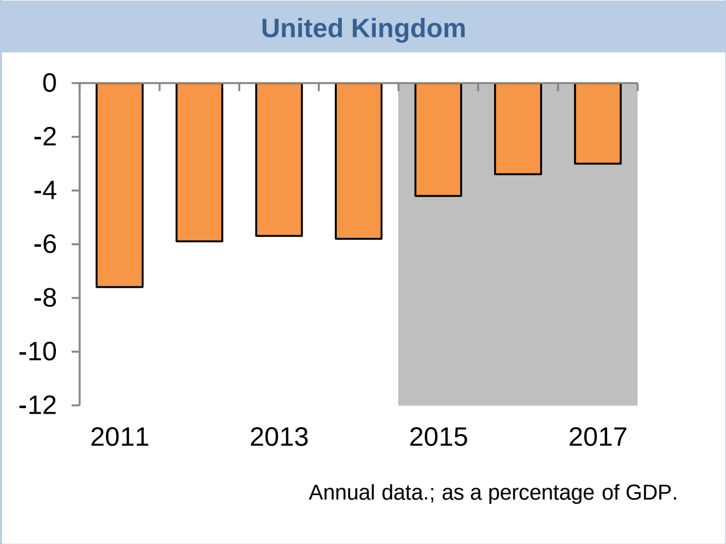
Fading fiscal policy restriction in advanced economies

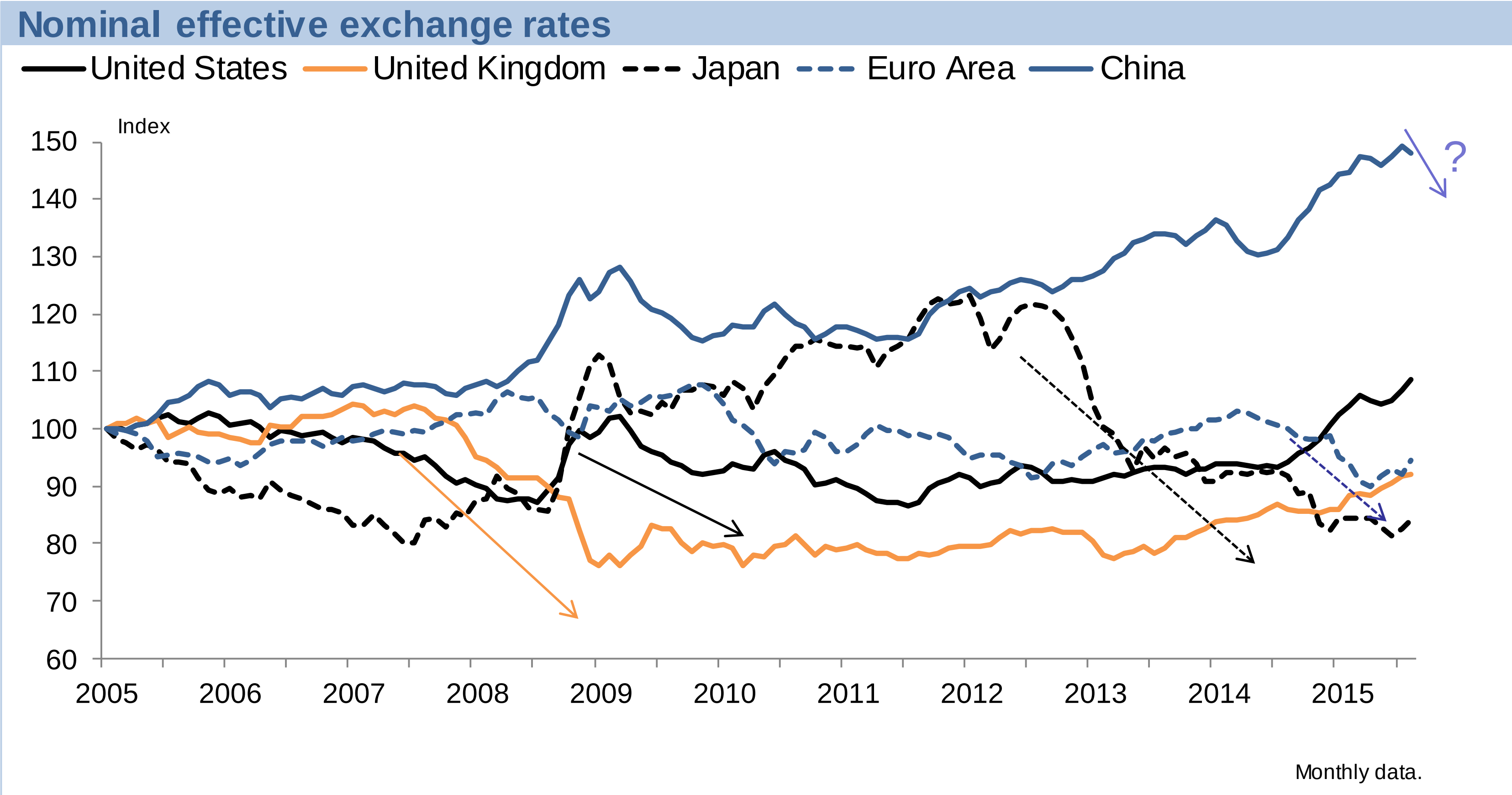






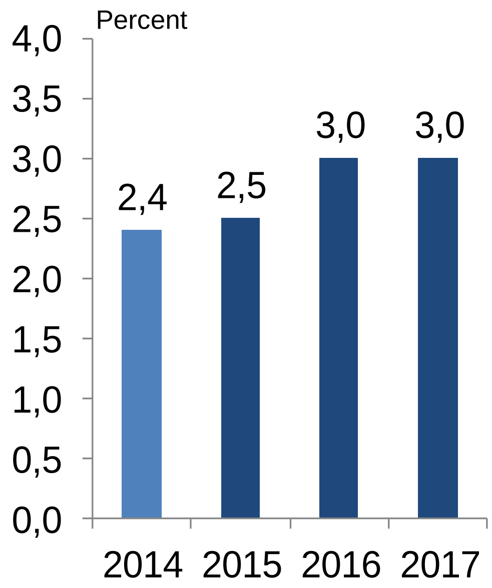


„Currency war“ as a result of a succession of expansive monetary policy decisions



United States: Modest acceleration

Real GDP Growth

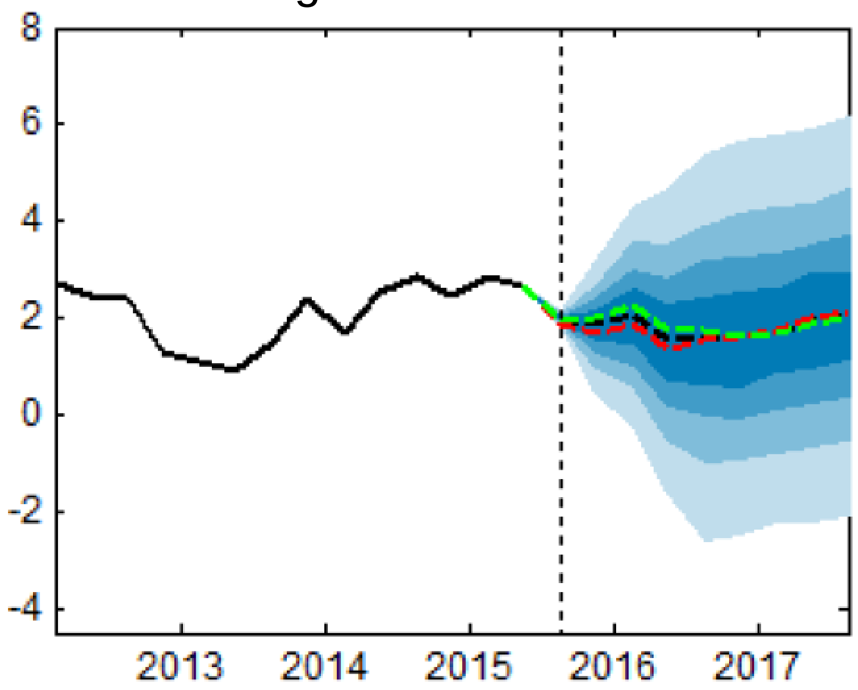


- Soft patch at the start of the year proved temporary
  - Employment growth has slowed down somewhat but is expected to accelerate again
  - Robust real wage growth although nominal wages have been slowing recently
  - Recovery in the housing market to continue
  - Corporate investment to pick up
- 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

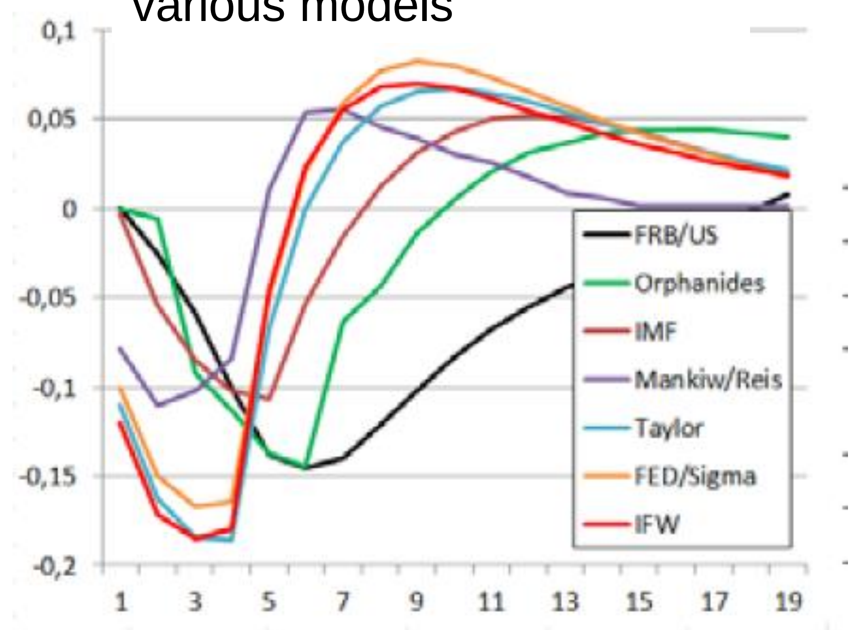
GDP and MP: Response to surprise interest rate move according to model simulations (Macroeconometric Model Base MMB)

- 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

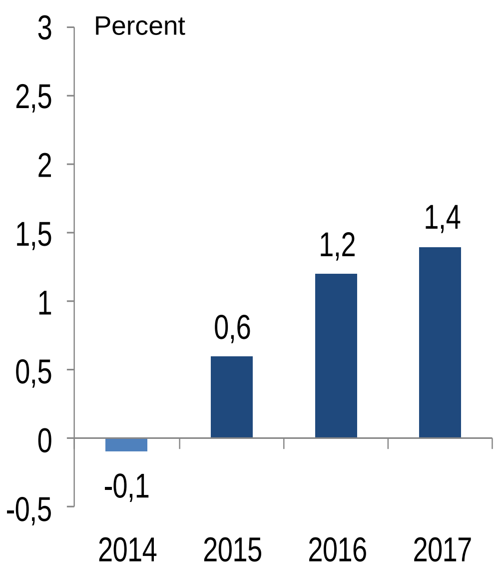


Impulse response (GDP) various models



Japan: Moderate recovery

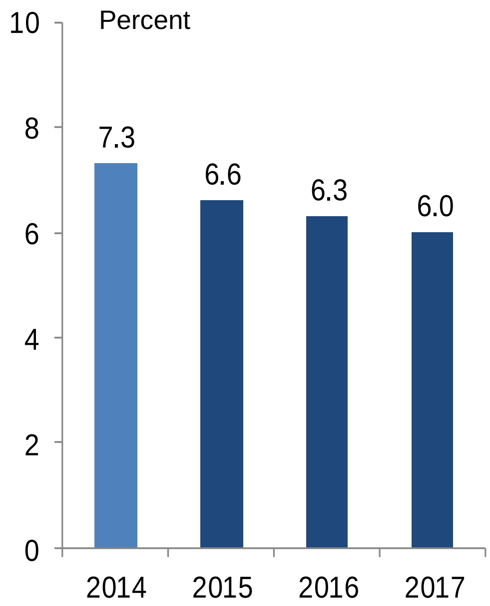
Real GDP Growth



- 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

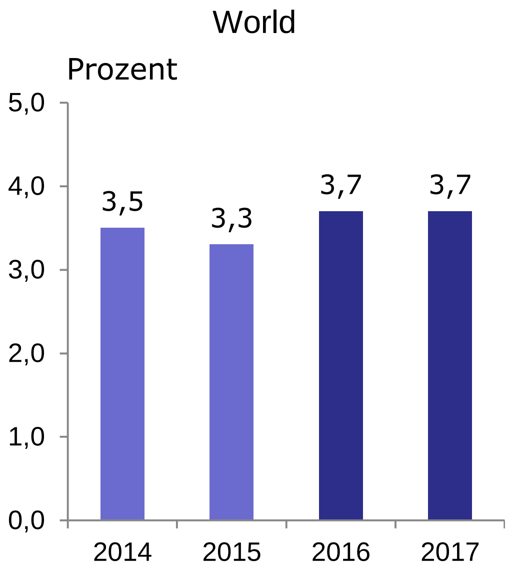
China: Slowdown continues

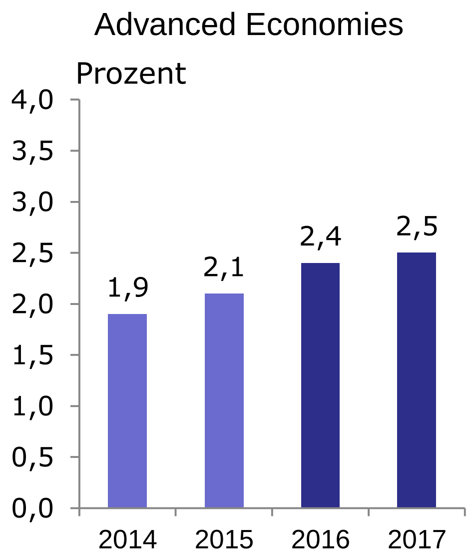
Real GDP Growth

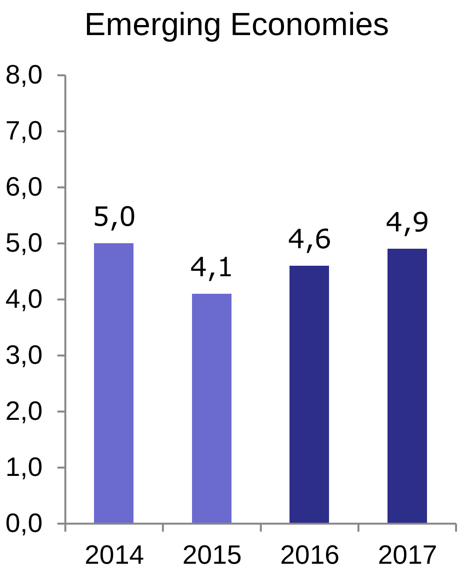


- Continued transition to a lower growth trajectory
- Cyclical downturn expected to be controlled with the help of monetary and fiscal stimulus
- Growth in credit has been reigned but debt remains high
- Property market shows signs of stabilization but remains a risk
- No sustained acceleration of growth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

The global picture

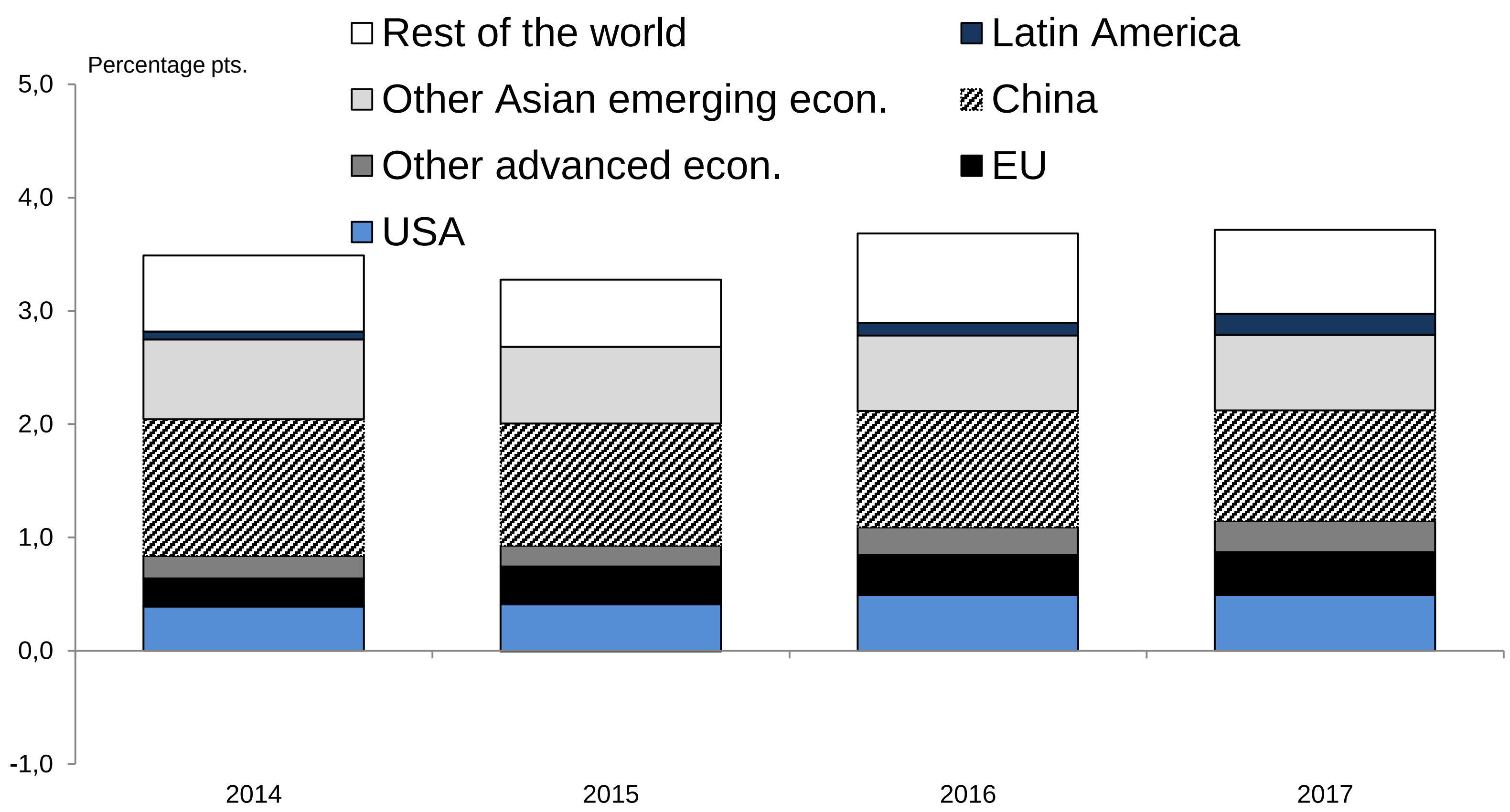






Contribution to global growth

Contribution to global growth by region in percentage points



Annual data, volumes. Rate of increase of GDP weighted according to share in global output at Purchasing Power Parities.

Global investment has been disappointing after 2009 and decelerating lately

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

Überblick

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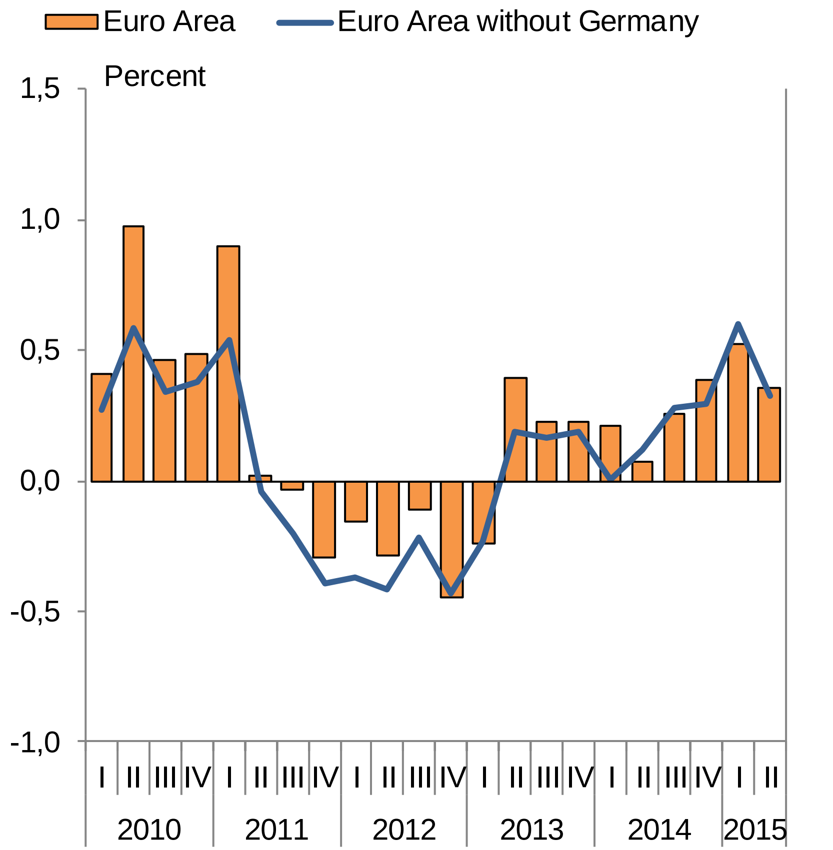
Gross domestic product

Gross Domestic Product in the Euro Area and the Euro Area without Germany

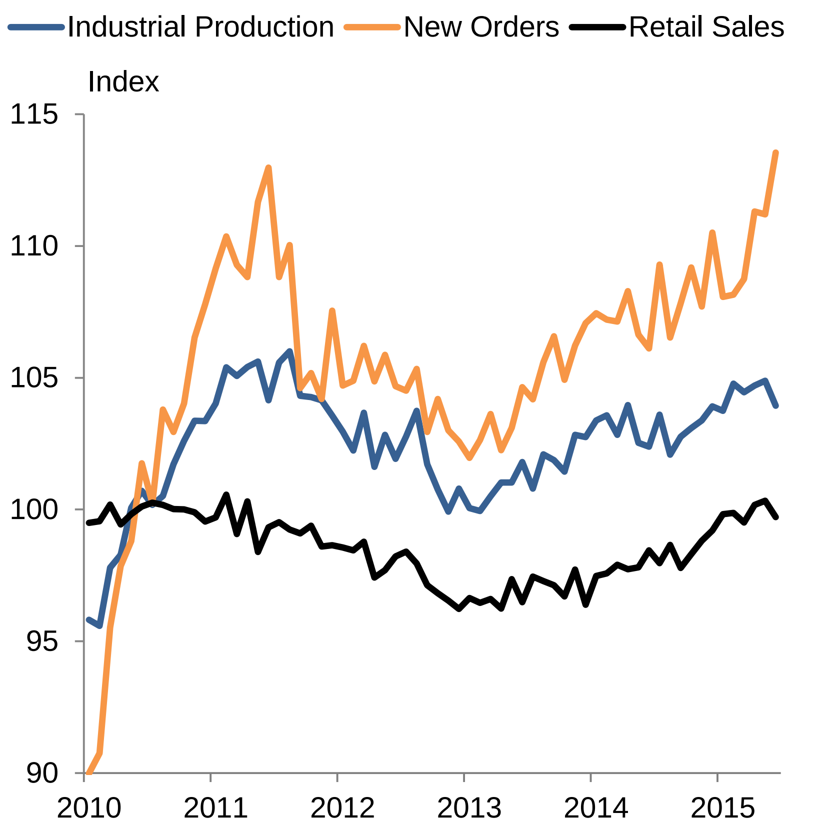


Quarterly data; seasonally and working-day adjusted; qoq-change.

- qoq change
  - » 2015-Q1: +0.5 percent
  - » 2015-Q2: +0.4 percent (net export contr.: 0.3 pp)
- Moderate recovery since 2013
  - » qoq: 0.1 percent to 0.5 percent
  - » 2014: + 0.9 percent

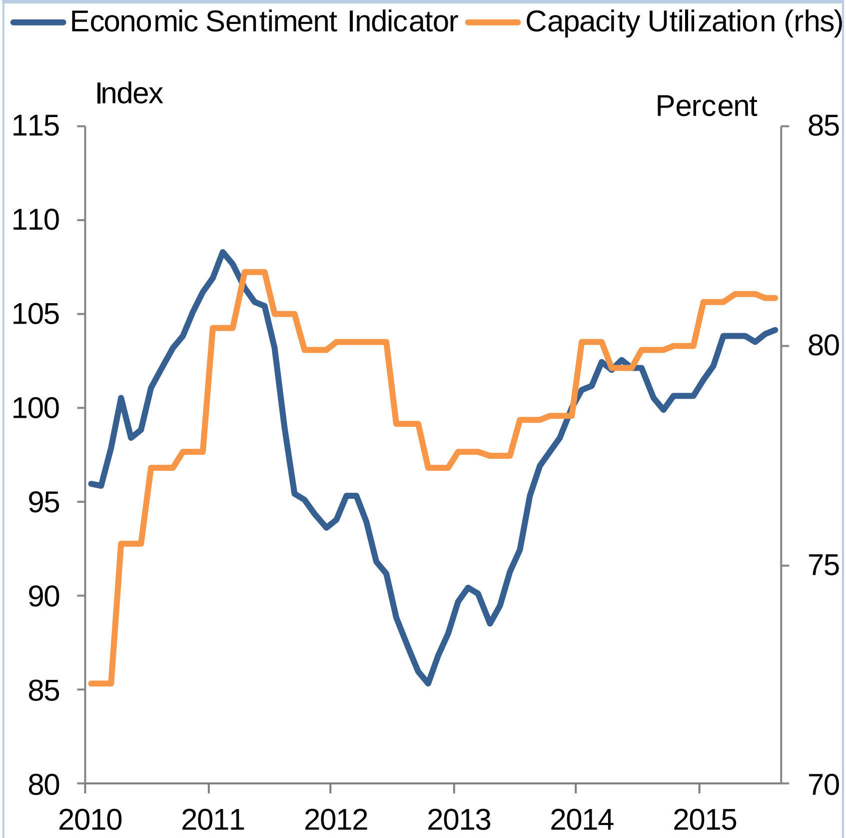
Early activity indicators and business climate

Industrial Production, New Orders and Retail Sales



Monthly data, volume, seasonally adjusted.

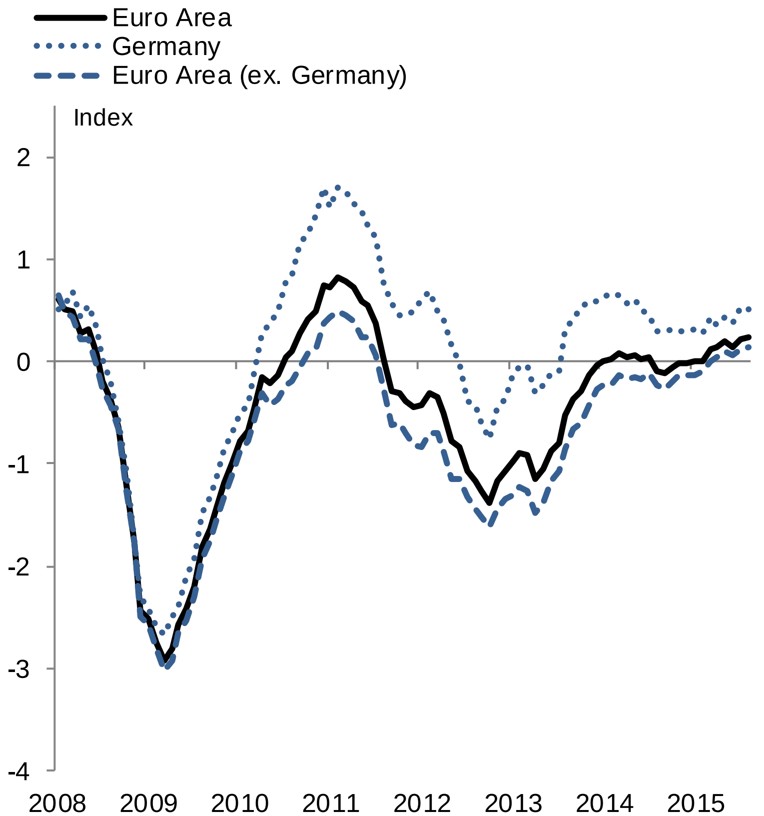
Economic Sentiment and Capacity Utilization



Monthly data, seasonally adjusted.

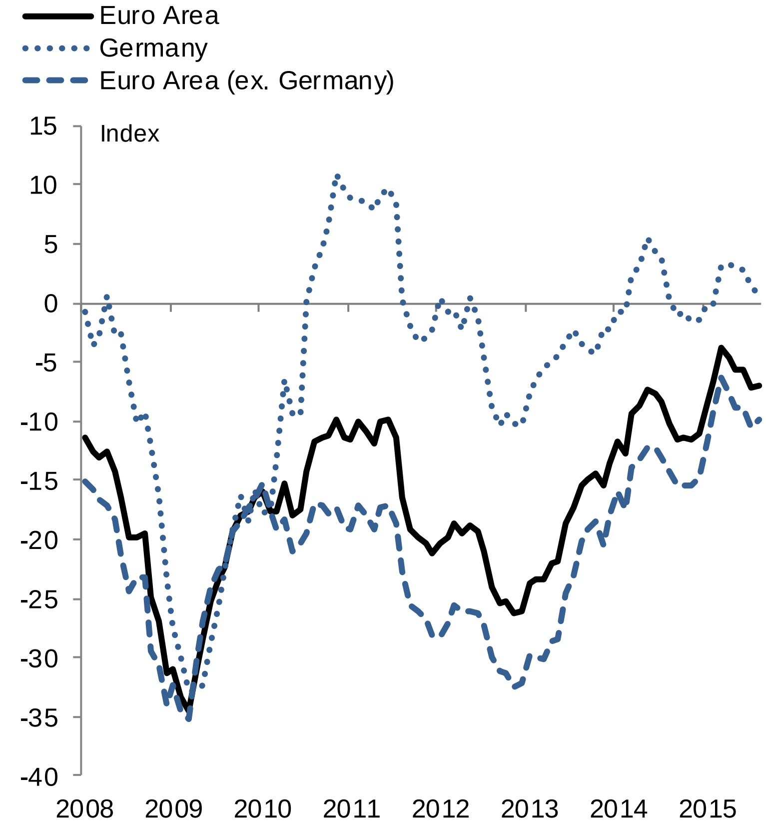
Economic Sentiment

Business



Monthly data, seasonally adjusted.

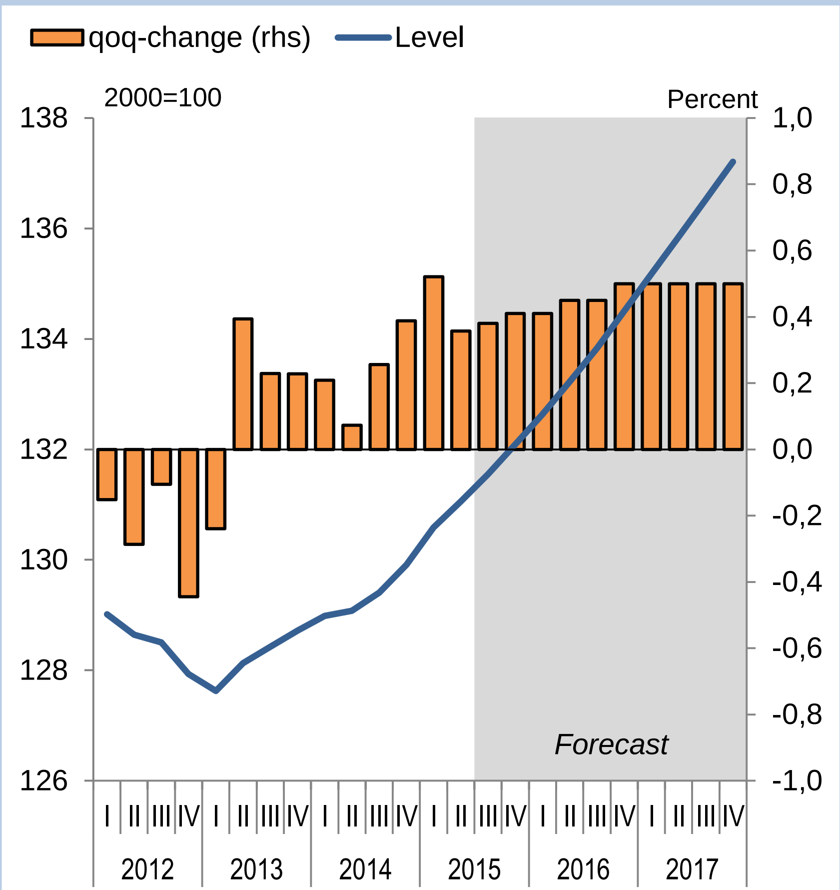
Consumer



Monthly data, seasonally adjusted.

Outlook for the Euro Area (GDP)

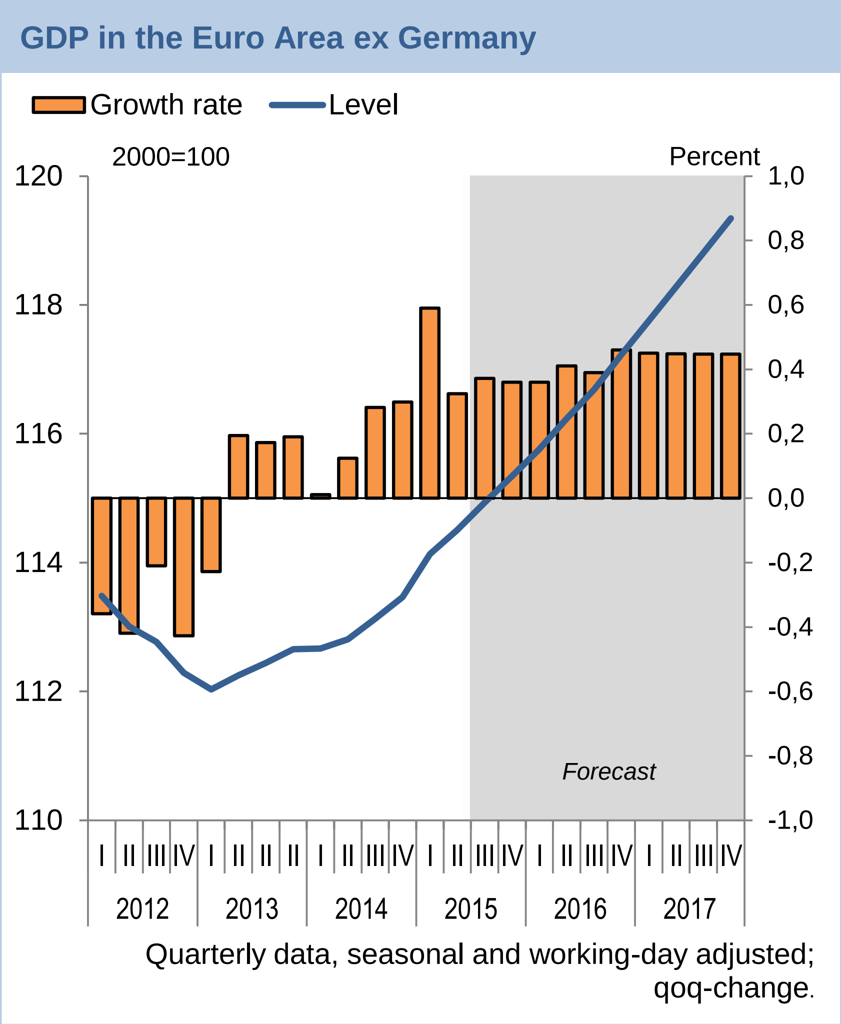
GDP in the euro area



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

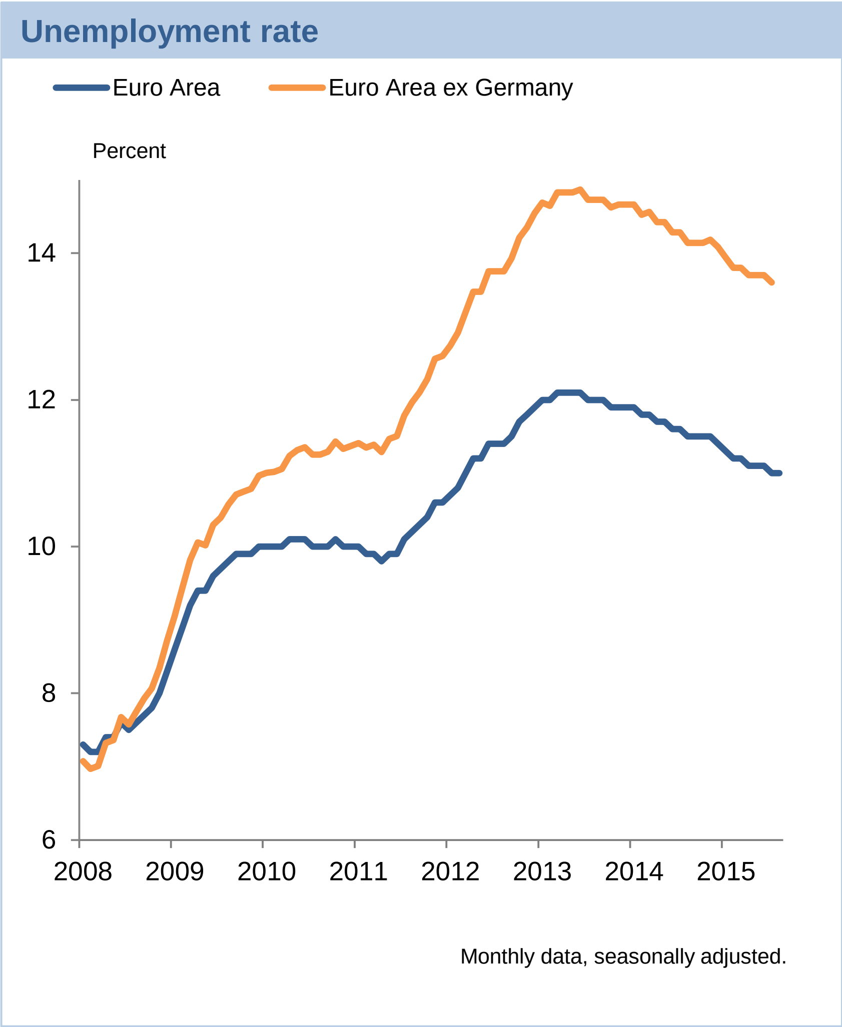
- 2014: 0.9 percent
- 2015: 1.5 percent
- 2016: 1.7 percent
- 2017: 2.0 percent

Outlook for the Euro Area ex Germany (GDP)



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

Labor market: Unemployment



- 2014: 11.6 percent
- 2015: 11.0 percent
- 2016: 10.5 percent
- 2017: 9.9 percent

Labor market: Employment and migration in distressed countries (2012-2014)

- Greece
  - Active population: -100 T
  - Net Migration: -117 T
  - **Employment: -62 T**
  - Unemployment: -37 T
- Portugal
  - Active population: -87 T
  - Net Migration: -72 T
  - **Employment: +81 T**
  - Unemployment: -81 T
- Ireland
  - Active population: -0 T
  - Net Migration: -61 T
  - **Employment: +81 T**
  - Unemployment: -81 T
- Spain
  - Active population: -314 T
  - Net Migration: -362 T
  - **Employment: +249 T**
  - Unemployment: -564 T

Wages

percentage change over previous year

	2014	2015[b]	2016[b]	2017[b]
Germany	2.6	3.0	2.2	3.1
France	1.4	1.3	1.2	1.2
Italy	0.7	1.4	0.7	1.0
Spain	-0.3	0.4	0.6	0.8
Netherlands	2.0	1.9	2.0	2.2
Belgium	1.0	0.6	1.5	2.0
Austria	1.7	1.9	2.1	2.3
Finland	1.4	1.0	0.8	1.0
Greece	-1.6	-0.8	0.0	0.5
Portugal	-1.4	1.6	1.5	2.0
Ireland	1.8	1.1	1.5	2.0
Slovakia	3.4	3.0	4.0	4.5
Luxembourg	1.9	1.0	2.0	2.5
Slovenia	1.1	0.8	1.0	1.1
Lithuania	4.8	4.4	5.0	5.2
Latvia	8.2	5.4	5.5	6.0
Estonia	7.7	6.2	7.0	7.5
Cyprus	-4.7	-2.7	-1.0	0.0
Malta	0.1	0.8	1.5	2.0
Euro area	1.5	1.8	1.5	1.9
Euro area excl. Germany	1.0	1.2	1.2	1.4

[a]Compensation per employee. — [b]Forecast.

Wages, productivity, unit labor costs

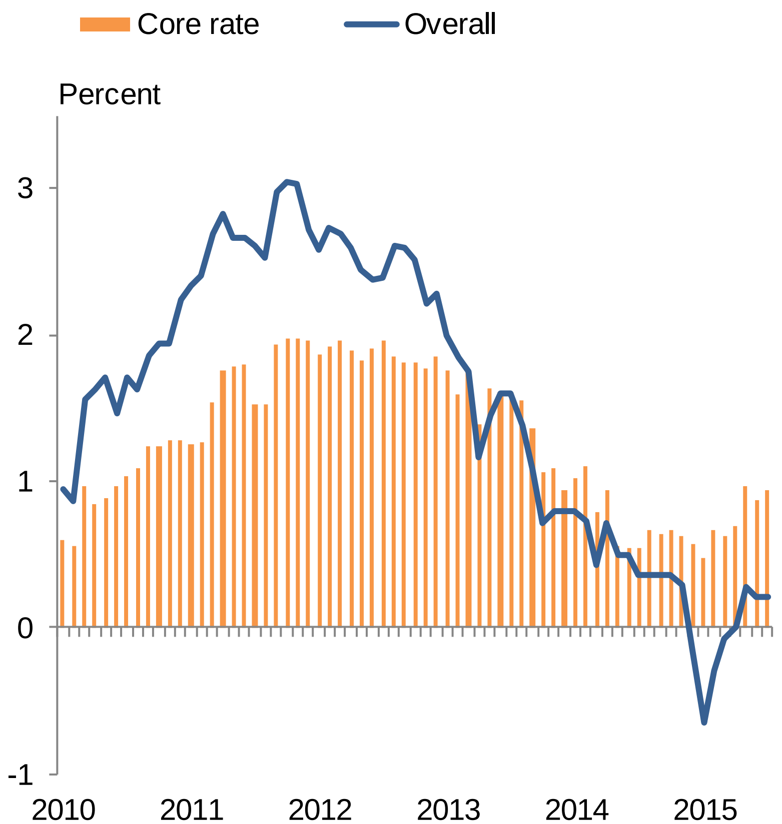
percentage change over previous year

	2014	2015[a]	2016[a]	2017[a]
Compensation per employee				
Euro area	1.5	1.8	1.5	1.9
Euro area excl. Germany	1.0	1.2	1.2	1.4
Productivity				
Euro area	0.3	0.8	1.1	1.1
Euro area excl. Germany	0.1	0.9	1.1	1.0
Unit labor costs				
Euro area	1.2	0.9	0.4	0.8
Euro area excl. Germany	0.9	0.3	0.1	0.4

[a]Forecast.

Inflation

Consumer prices

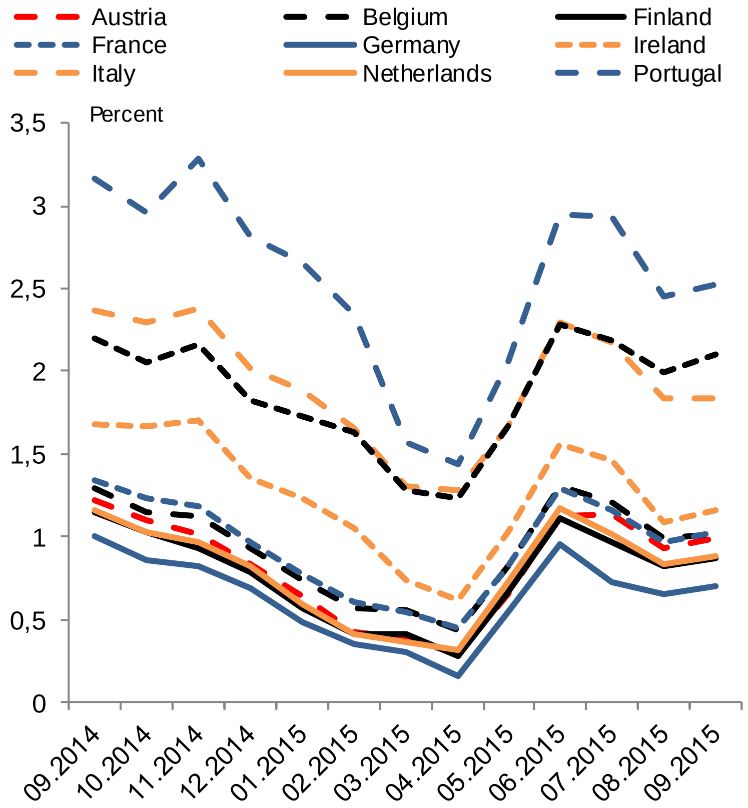


Monthly data, not seasonally adjusted; change over previous year.

- Data edge
  - » CPI inflation about to dip again due to sharp drop of oil prices
- Expected increase of inflation by the end of 2015
  - » 2014: 0.4 percent
  - » 2015: 0.0 percent
  - » 2016: 0.9 percent
  - » 2017: 1.8 percent
- Core inflation rate at ~1 %

Inflation: Expectations

Bond interest rates



10year government bonds; monthly data; right hand scale: Greece.

- Yields of government bonds on record-low levels at the start of QE program
- Rising yields since April (increase in inflation expectations)

Outlook: Upswing increasingly driven by domestic demand

- **Supporting factors** for economic activity
  - Low oil prices, low interest rates, low external value of the euro
- **Labor market** conditions improve further, thus stimulating consumption
- **Private investment** benefits from decrease in overall uncertainty
- **Budget**: Fiscal consolidation eases. Only slight improvement of budgets due to favorable financial conditions and recovery
  - 2014: -2,5 percent
  - 2015: -1,9 percent
  - 2016: -1,9 percent
  - 2017: -1,7 percent
- **External trade** will accelerate
  - Exports (low euro) and imports (domestic forces) both increase
  - Contribution of net exports to growth will be rather small

Budget Balances in the Euro Area

	2014	2015[b]	2016[b]	2017[b]
Germany	0.3	1.0	0.5	0.7
France	-4.0	-3.8	-3.8	-3.5
Italy	-3.0	-2.5	-2.0	-2.2
Spain	-5.8	-4.5	-3.7	-3.3
Netherlands	-2.3	-1.5	-1.3	-1.1
Belgium	-3.2	-2.5	-2.3	-2.1
Austria	-2.4	-1.9	-1.9	-1.7
Finland	-3.2	-3.6	-3.4	-3.1
Greece	-3.5	-2.2	-3.0	-2.9
Portugal	-4.1	-2.4	-2.4	-2.5
Ireland	-4.5	-3.1	-3.0	-2.8
Slovakia	-2.9	-2.7	-2.6	-2.5
Luxembourg	0.6	0.5	0.1	0.1
Slovenia	-4.9	-2.7	-2.4	-2.4
Lithuania	-0.7	-1.9	-0.8	-0.5
Latvia	-1.4	-1.2	-1.5	-1.5
Estonia	0.6	-0.4	-0.2	0.1
Cyprus	-8.8	-0.3	0.3	0.5
Malta	-2.1	-2.0	-1.7	-1.5
Euro area	-2.5	-1.9	-1.9	-1.7
Euro area excl. Germany	-3.7	-3.0	-2.8	-2.7

[a]Percent of GDP. — [b]Forecast.

Outlook for the Euro Area

Euro Area 2014–2017

	2014	2015	2016	2017
Gross domestic product	0,9	1,5	1,7	2,0
Domestic demand	0,8	1,4	1,5	2,1
Private consumption	0,9	1,7	1,6	1,9
Public consumption	0,8	1,3	1,4	1,8
Fixed capital formation	1,3	1,8	2,1	3,3
Change in stocks	-0,1	-0,2	-0,2	-0,1
Net exports	0,1	0,2	0,2	0,0
Exports	3,9	4,9	5,0	5,5
Imports	4,1	5,0	4,9	6,2
Consumer prices	0,4	0,0	0,9	1,8
Unemployment rate	11,6	11,0	10,5	9,9
Current Account	2,0	2,4	2,7	2,7
Budget Balance	-2,5	-1,9	-1,9	-1,7

Gross Domestic product: volume; change over previous year. — Change in stocks, net export: contribution to GDP growth. — Consumer Prices: Harmonized Index of Consumer Prices (HICP). — Unemployment rate: ILO. — Budget Balance: in relation to GDP.

Source: Eurostat, *National Accounts*; own calculation; gray: forecast of IfW.

Outlook for the Euro area

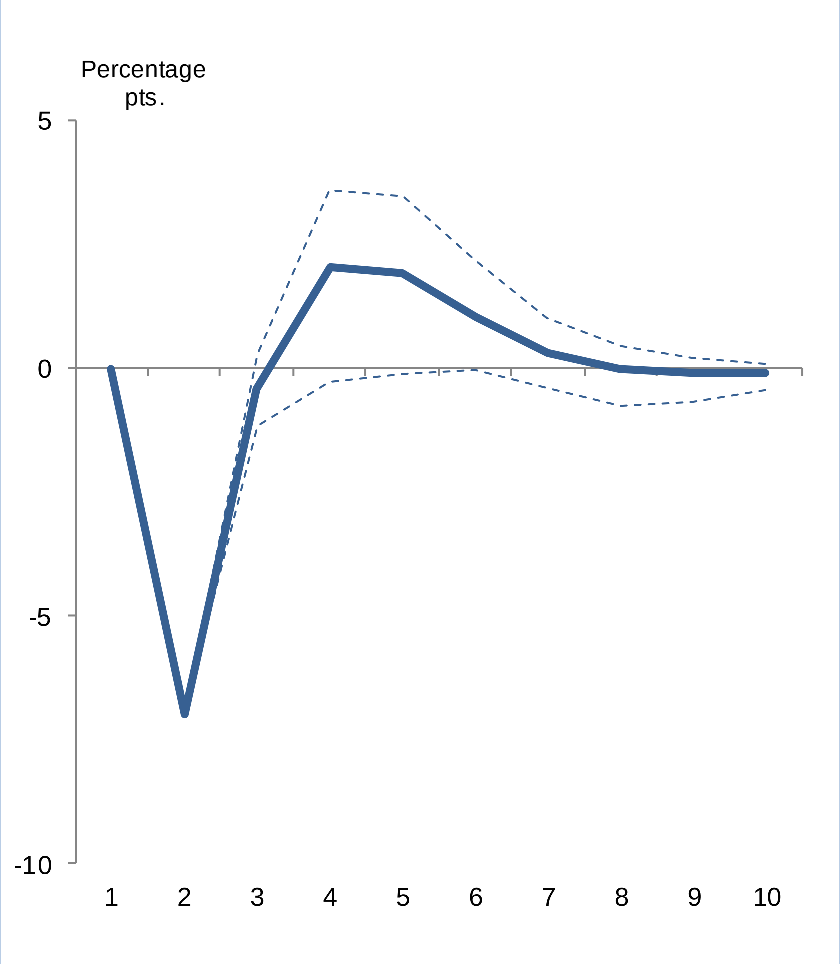
Real GDP, Consumer Prices and Unemployment Rates in the Euro Area 2015–2017

	Weight	GDP			Consumer Prices			Unemployment rate		
		2015	2016	2017	2015	2016	2017	2015	2016	2017
Germany	28,3	1,5	2,1	2,3	0,2	1,0	2,1	4,7	4,5	3,9
France	21,3	1,1	1,2	1,6	0,1	0,9	1,8	10,4	10,3	9,8
Italy	16,2	0,8	1,5	1,6	0,0	0,7	1,5	12,2	11,8	11,2
Spain	10,6	3,3	3,2	2,5	-0,5	0,7	1,7	22,3	21,1	20,0
Nettherlands	6,5	2,0	1,5	1,6	0,0	0,9	1,8	7,0	6,5	6,2
Belgium	4,0	1,3	1,6	1,6	0,2	1,1	2,0	8,5	8,2	7,8
Austria	3,2	1,0	1,8	1,8	0,9	1,9	2,9	5,5	5,2	4,9
Finland	2,0	0,3	1,2	1,5	0,0	0,7	1,7	9,5	9,4	9,1
Greece	1,8	-0,2	0,7	2,7	-2,1	-1,3	-0,1	25,8	24,6	24,0
Portugal	1,7	1,6	1,6	1,5	0,4	1,2	2,0	12,6	11,5	10,9
Ireland	1,8	5,1	3,6	3,0	-0,3	0,9	2,4	9,5	8,3	7,5
Slovakia	0,7	3,1	3,2	3,6	-0,2	1,1	2,5	11,5	10,2	8,8
Luxembourg	0,5	4,5	3,1	2,9	0,0	1,2	2,4	5,7	5,5	5,3
Slovenia	0,4	2,8	2,9	2,7	-0,6	0,5	1,5	9,2	8,8	8,5
Lithuania	0,4	1,6	3,0	3,6	-0,6	0,6	1,7	9,3	7,9	7,1
Latvia	0,2	2,6	3,1	3,8	0,5	1,6	2,9	9,7	9,0	8,5
Estonia	0,2	1,8	2,5	3,1	0,1	1,2	2,4	6,0	5,4	4,9
Cyprus	0,2	1,7	2,4	2,7	-1,1	0,1	1,0	16,0	15,3	14,5
Malta	0,1	3,1	2,6	2,4	0,9	1,7	2,7	5,4	5,0	4,8
Euro area	100,0	1,5	1,8	2,0	0,0	0,9	1,8	11,0	10,5	9,9
Euro area w/o Germany	71,7	1,4	1,5	1,8	-0,1	0,8	1,8	13,2	12,6	12,0

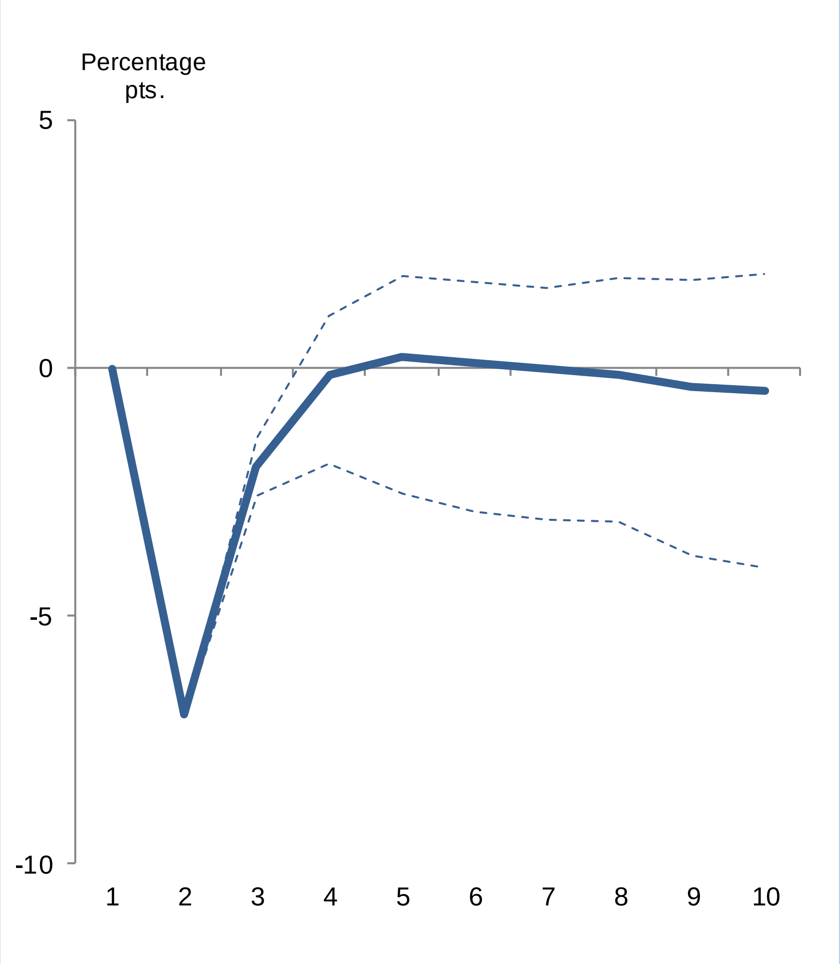
Weights: Based on nominal GDP in 2013. — Percentage change over previous year— 2015 and 2016 forecast. — Source: Eurostat, National Accounts, Price Statistics, Labor Statistics; own calculations.

Box: Post-recession investment (yoy change)

A. Normal recessions (growth rate)

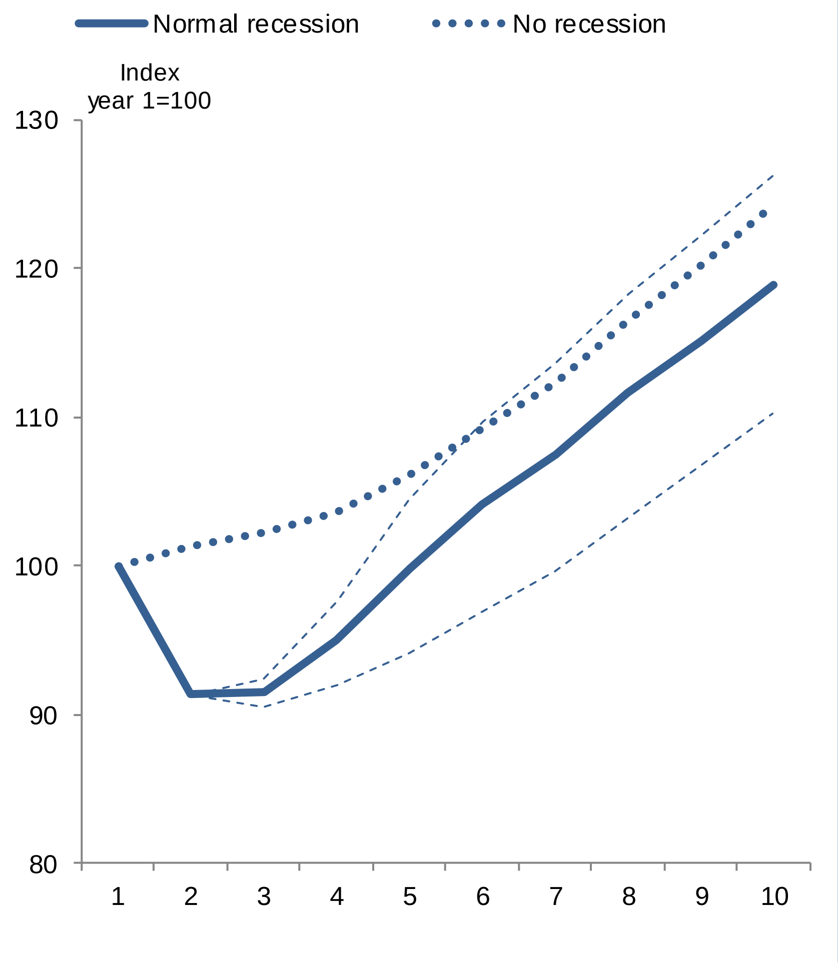


B. Financial crisis (growth rate)

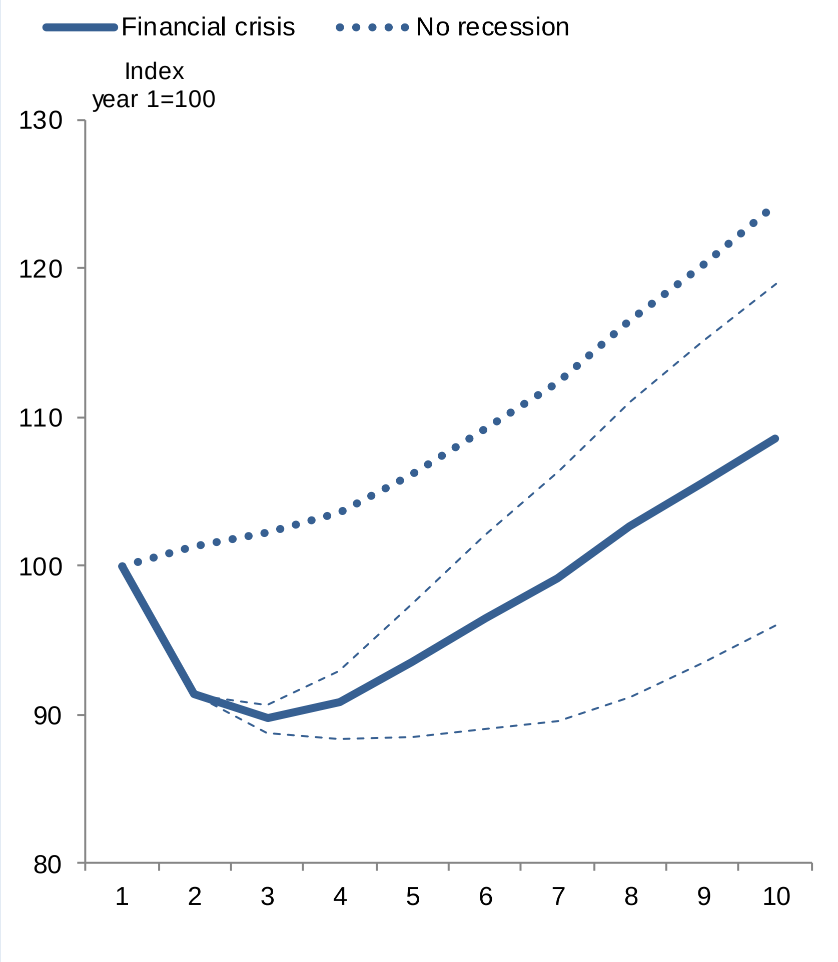


Box: Post-recession investment (level)

C. Normal recessions (level)

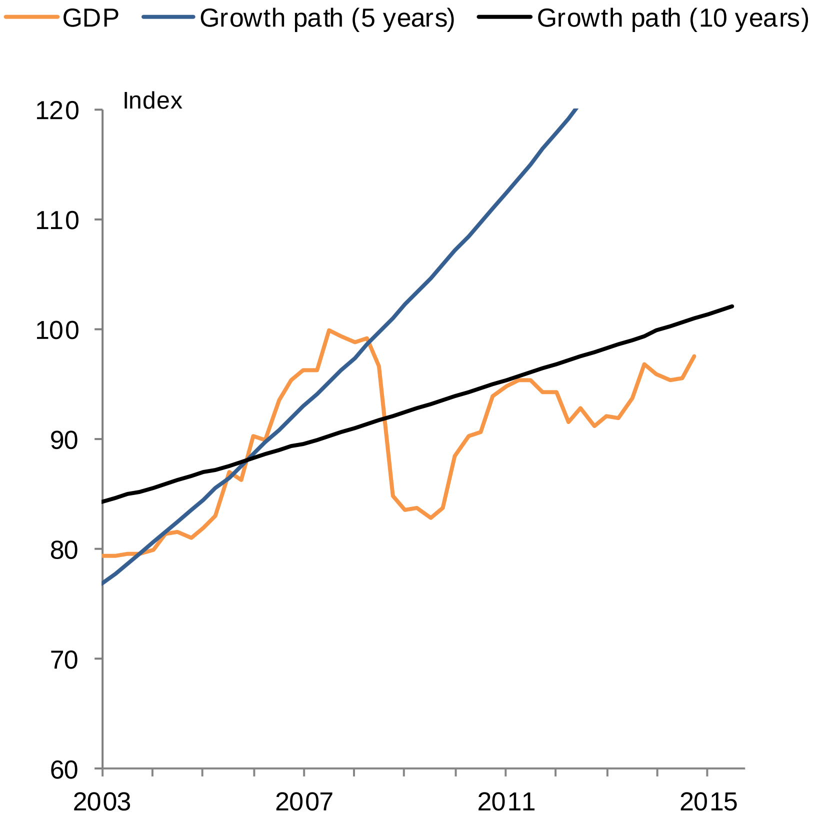


D. Financial crisis (level)



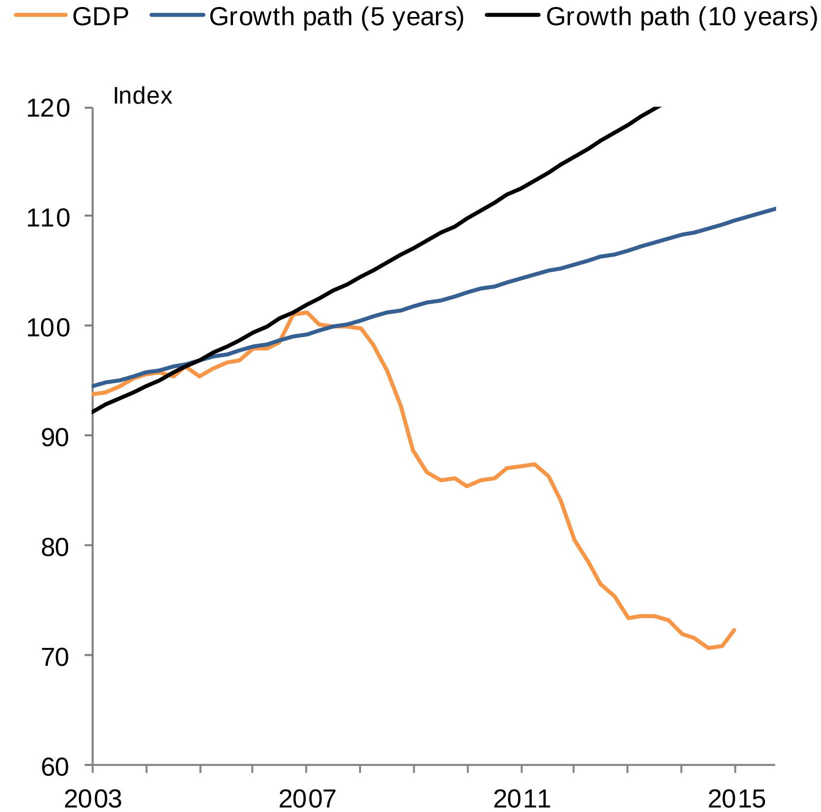
Box: Post-crisis investment (Germany and Italy)

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.

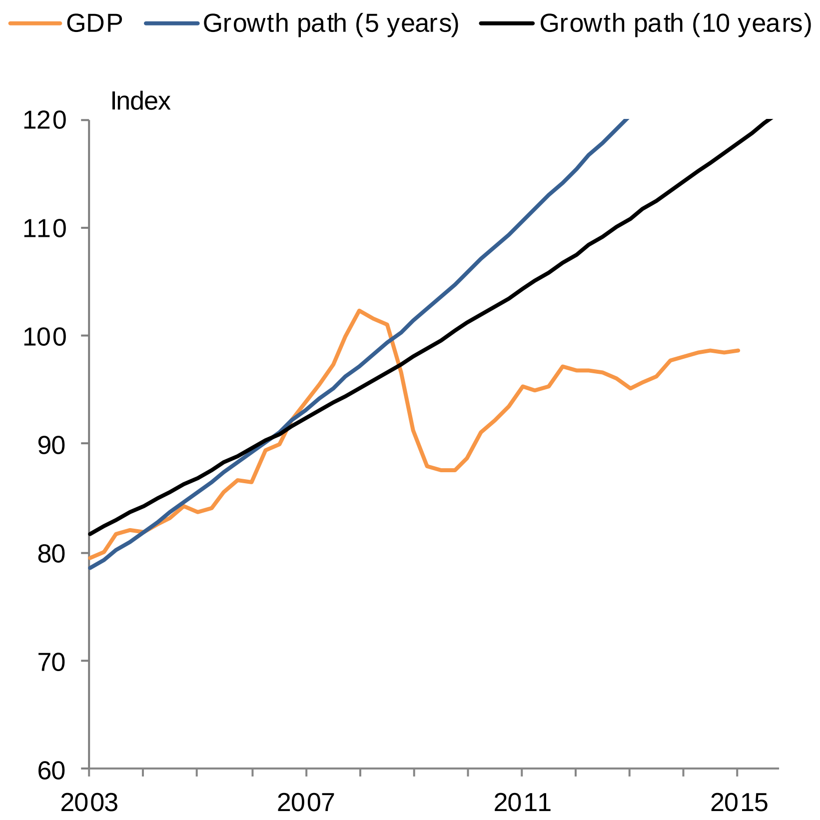
Italy



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.

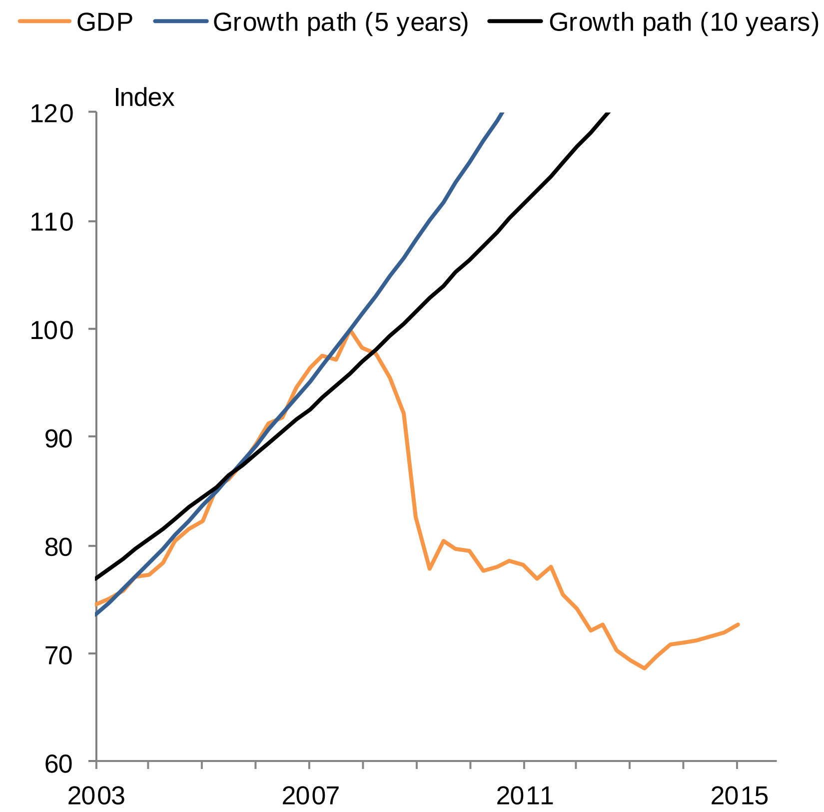
Box: Post-crisis investment (France and Spain)

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

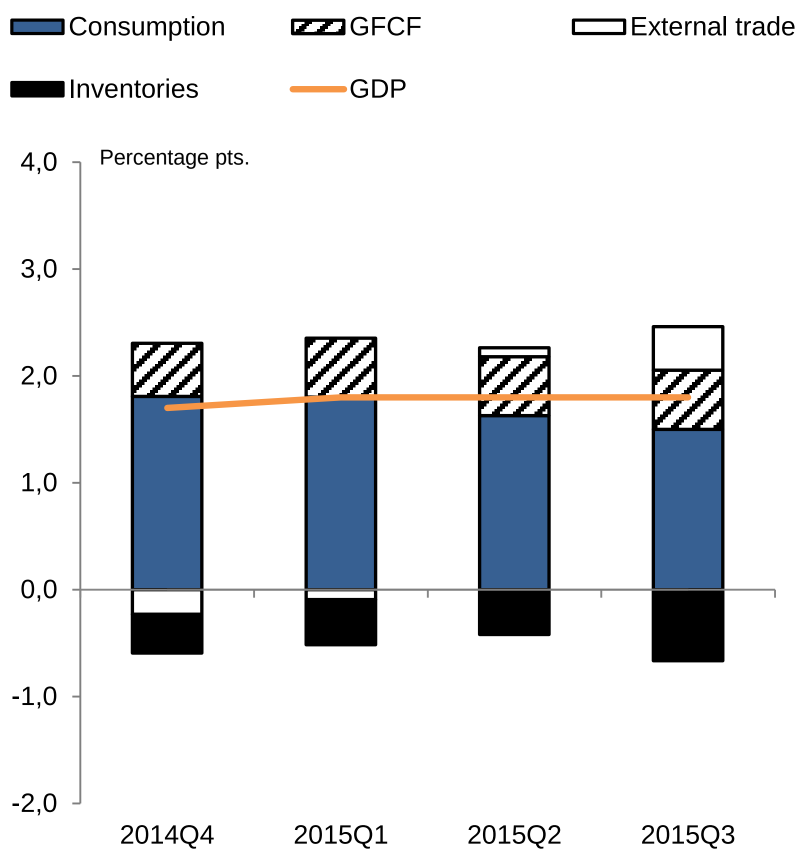
- Globale Perspektive
- Euroraum
- **Deutschland**
- Harte Landung in China?

Overview

- German GDP is expected to increase by 1.8 percent (2015), 2.1 percent (2016), and 2.3 percent (2017).
- The uncertain international environment did not have strong dampening effects so far
- Private consumption is one of the main growth engines
- Investment to become a second growth pillar
- Imports are expected to grow faster than exports
- Economy dives into overutilization – overheating on the horizon

GDP growth forecasts for 2015 stable since 2014 Q4

GDP growth forecasts and expenditure components for 2015

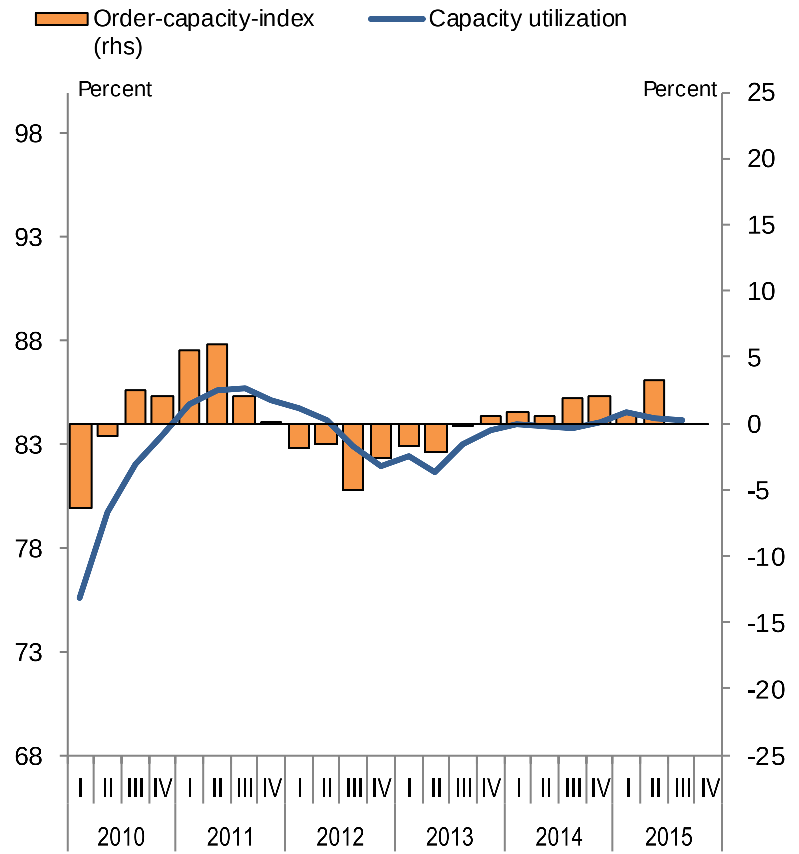


Annual data; price-adjusted, Lundberg components.
x-axis: quarter when the forecast for GDP growth in 2015 was made.

- GDP growth forecast of 1.8 percent for 2015 has been rather stable
- Contribution to GDP growth of consumption is currently expected to be somewhat lower than in 2014-Q4
- Contribution to GDP growth of net exports is currently expected to be somewhat larger than in 2014-Q4

Output gap is by and large closed

Capacity utilization

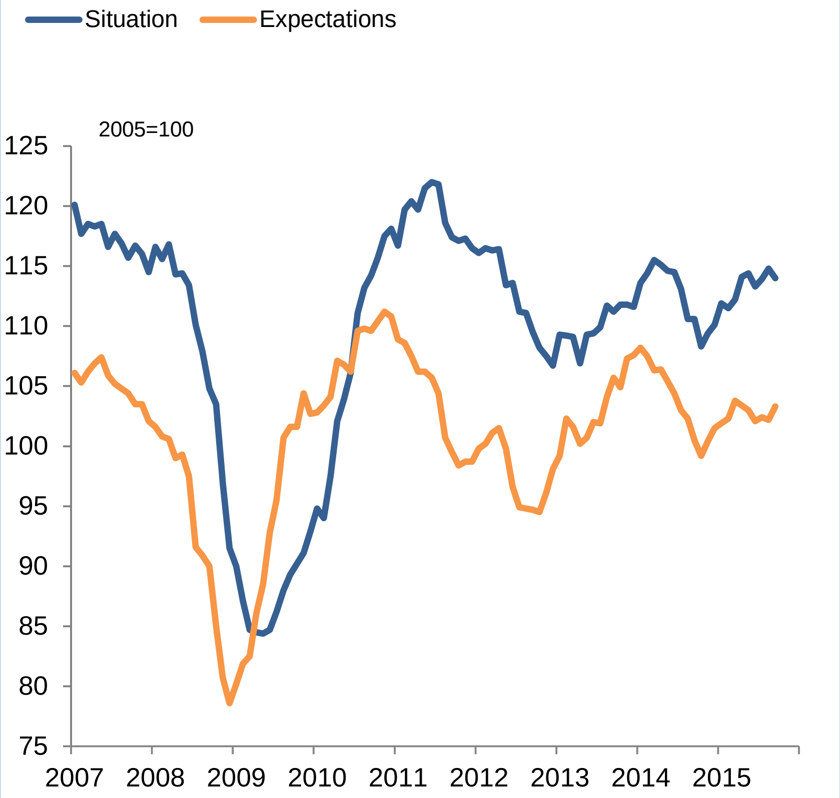


Quarterly data, seasonally adjusted; capacity utilization in manu-facturing (axes cross at normal capacity utilization).

- Capacity utilisation is at normal levels
- Incoming orders are higher than production capacities for manufacturing firms for nearly two years

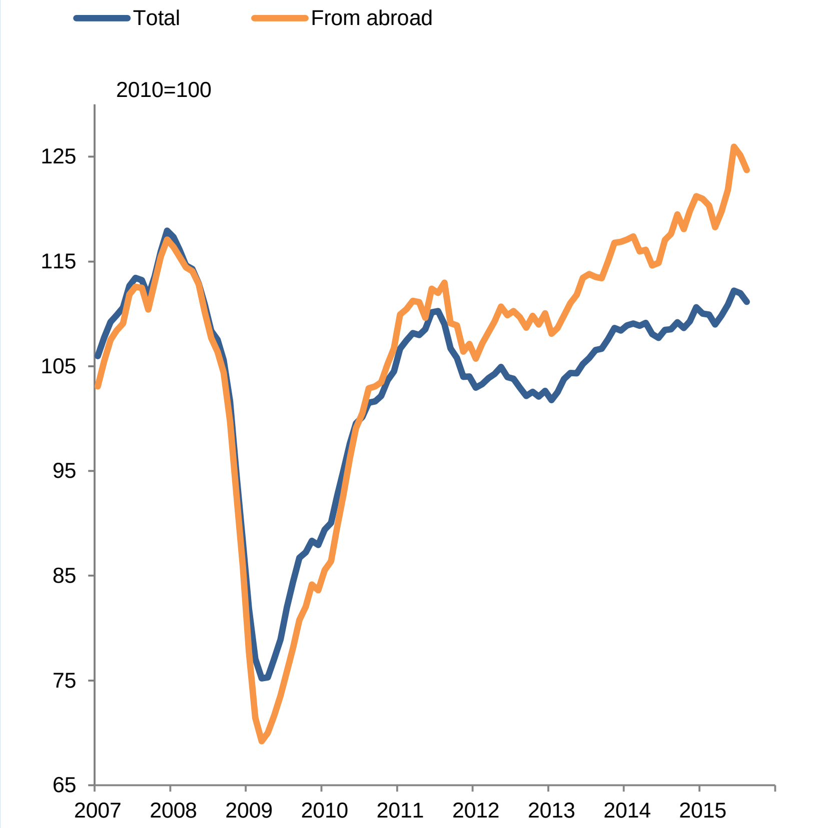
Business situation improving, order inflow calming

Business climate



Monthly data, seasonally adjusted;
incoming orders in manu-facturing and production: 3-month moving average.

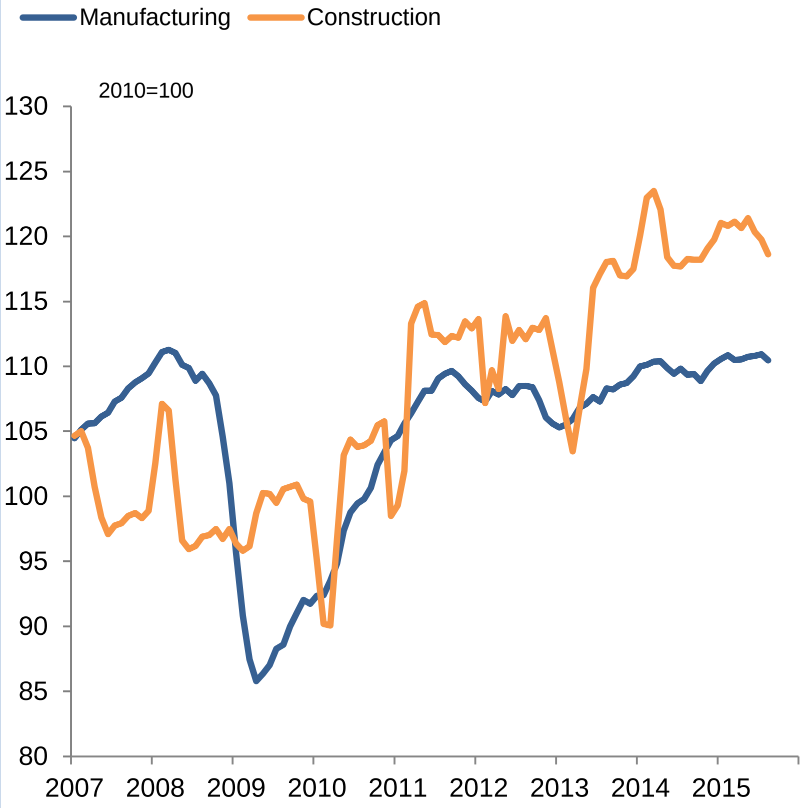
Incoming orders in manufacturing



Monthly data, seasonally adjusted;
incoming orders in manu-facturing and production: 3-month moving average.

Quiet industrial production

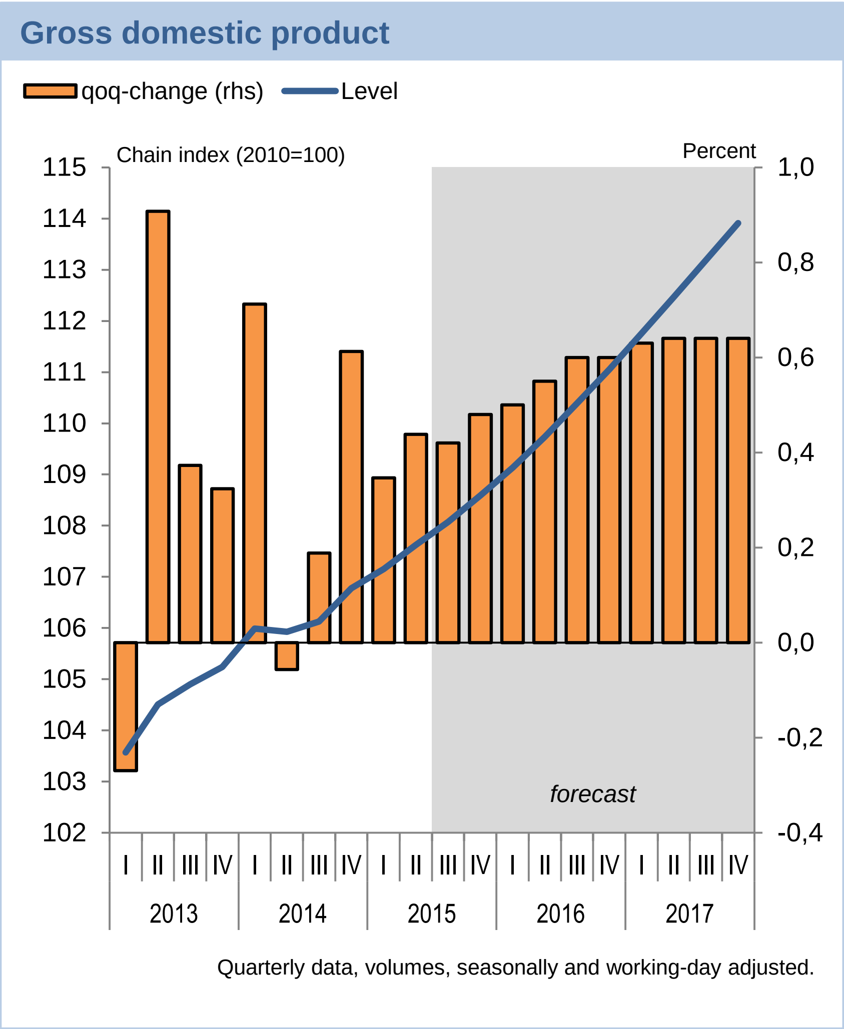
Production



Monthly data, seasonally adjusted;
incoming orders in manu-facturing and production: 3-month moving average.

- Business situation is still improving while expectations have detoriated somewhat
- Strong incoming orders
- Stagnating manufacturing production
- Weather conditions may have contributed to recent decline in construction activity

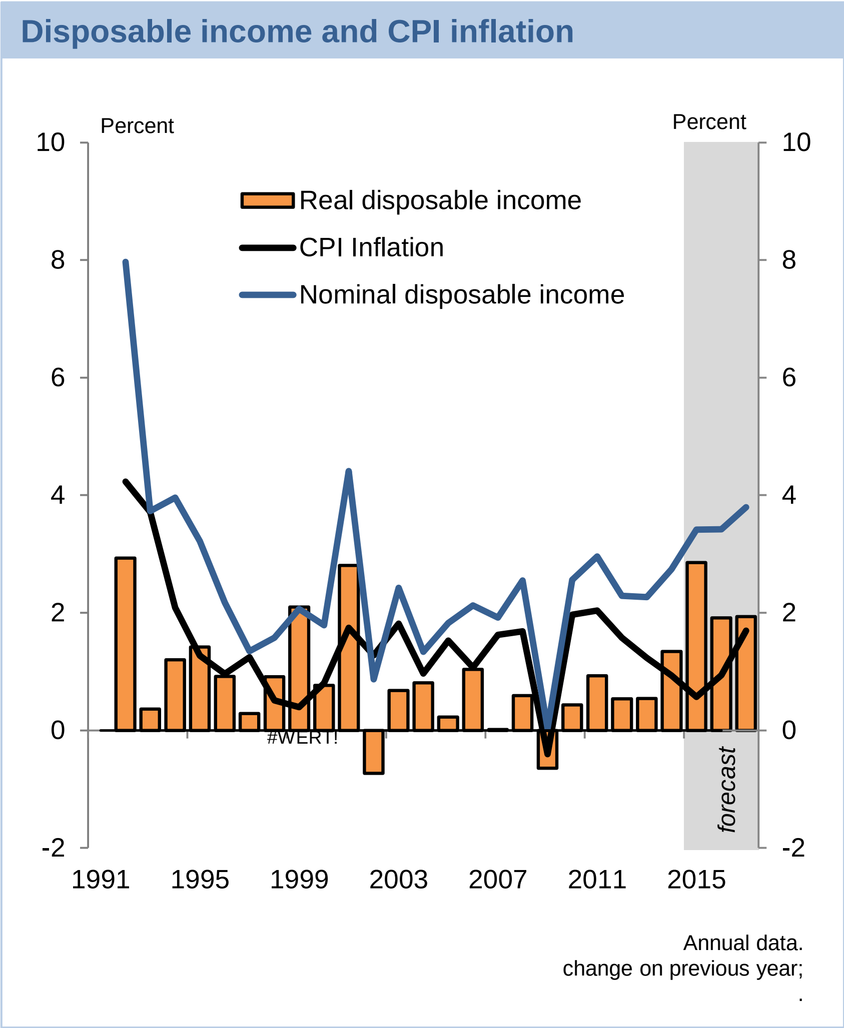
GDP growth is accelerating



- 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

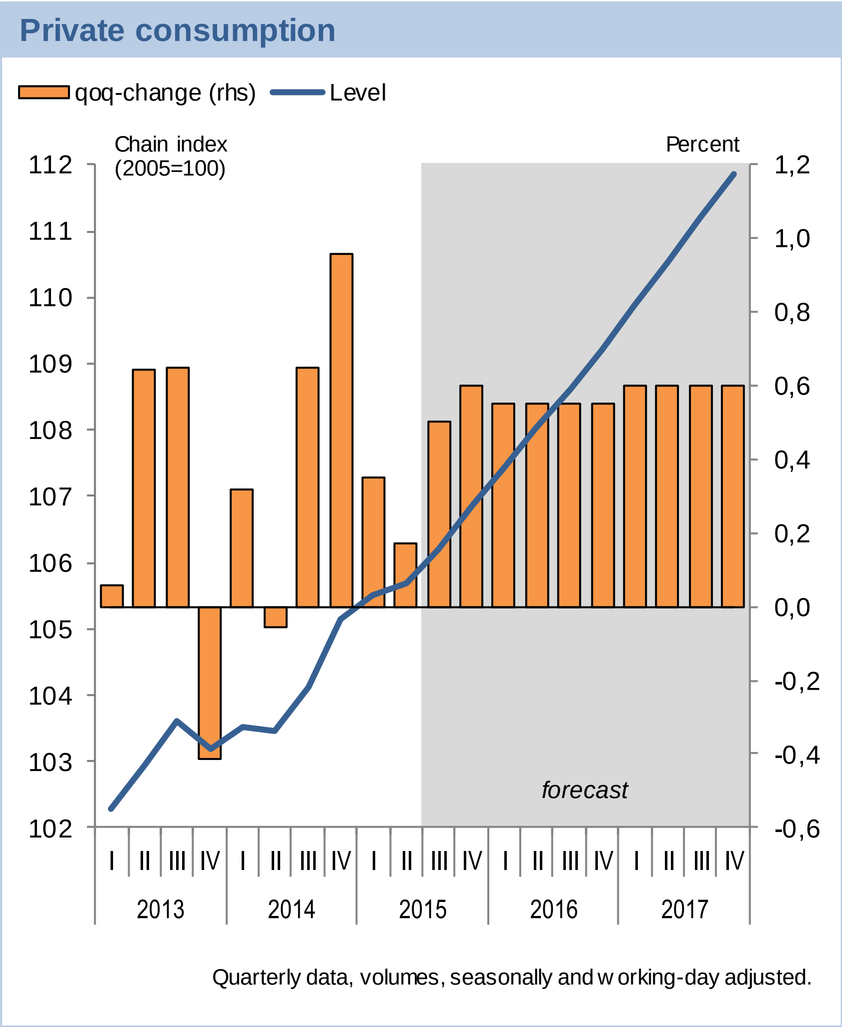
Strong increases in real disposable income



- 2015: +2.9 %
- 2016: +1.9 %
- 2017: +1.9 %

- Temporary effects (oil prices, expanded social transfers, minimum wage) boost income growth in 2015

Private consumption is growing with highest rates since 2000

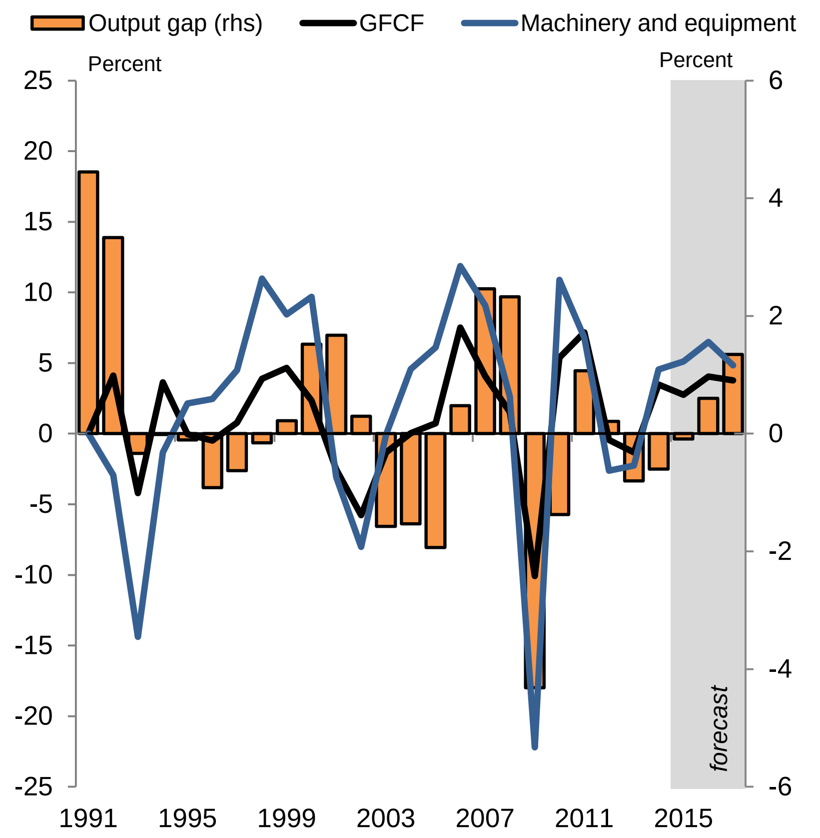


- 2015: +2.0 %
- 2016: +2.3 %
- 2017: +2.2 %

- Savings rate is expected to decline after 2015
  - » 2015: 10.0 %
  - » 2016: 9.9 %
  - » 2017: 9.6 %

Gross Fixed Capital Formation and output gap

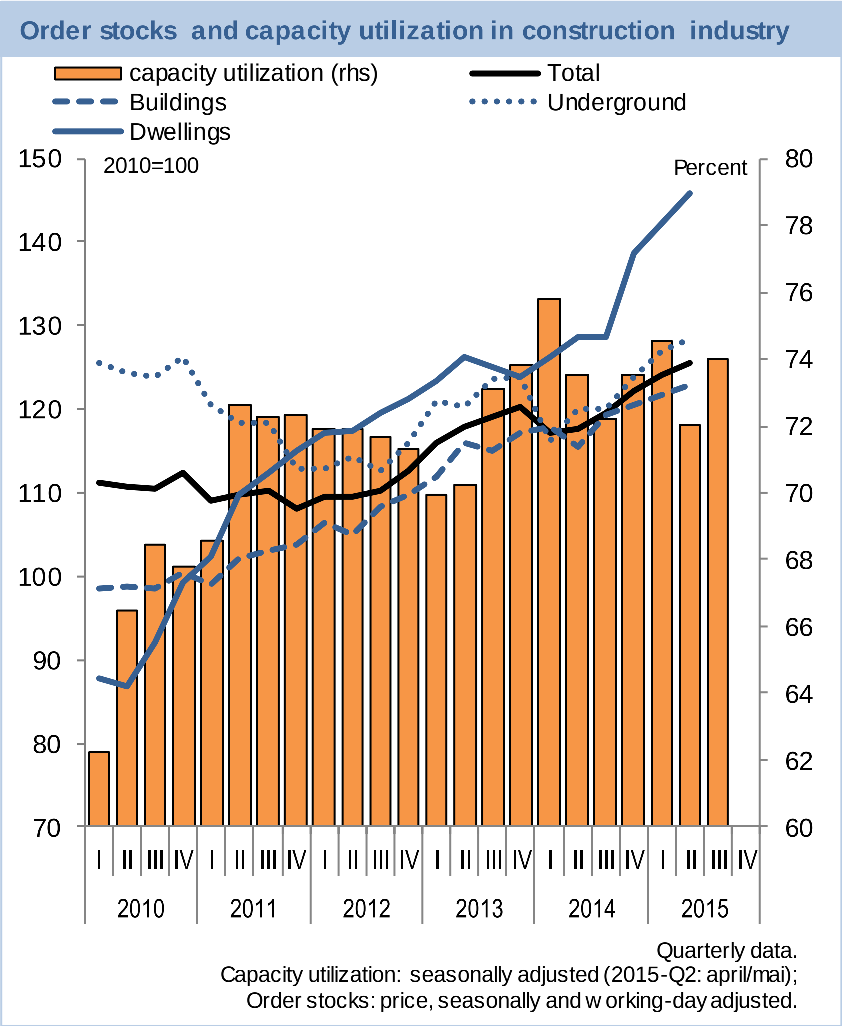
Investment cycles



Annual data.
GFCF, machinery and equipment: volumes, change on previous year;
Output gap: in percent of potential output.

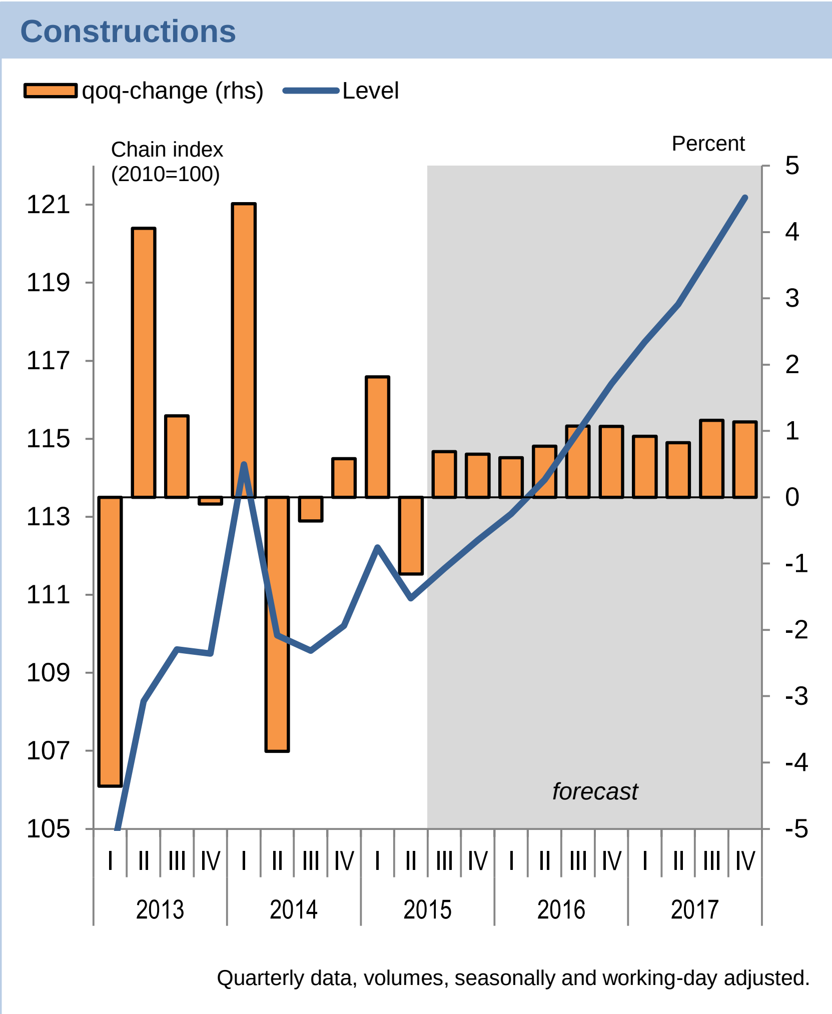
- Growth in GFCF will accelerate with increasing capacity utilisation
- Growth in all GFCF components is expected to accelerate in 2016
- GFCF is expected to become a second growth pillar

Order stocks and capacity utilization in construction industry



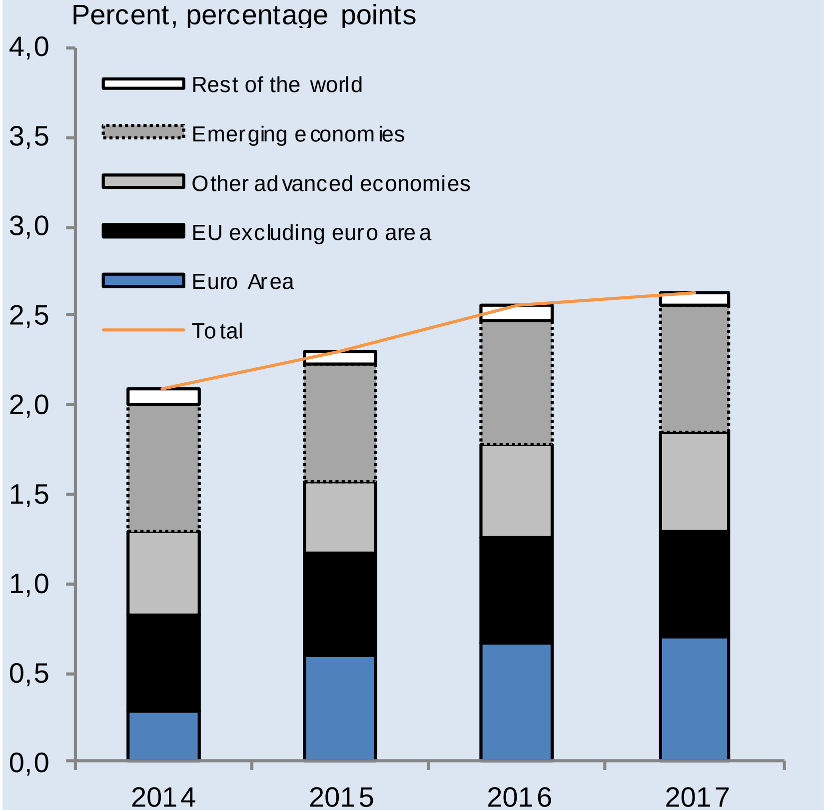
- Order stocks are increasing and are at high levels
- Increase in capacity utilisation indicates that construction will grow again in Q3

Very stimulating enviroment for constructions



- Very stimulating enviroment for constructions:
  - » Low interest rates
  - » Strong income growth
  - » High government revenues
  - » Increasing capacity utilisation
- Growth in private residential investment and infra-structures is expected to pick up

GDP growth in German export markets



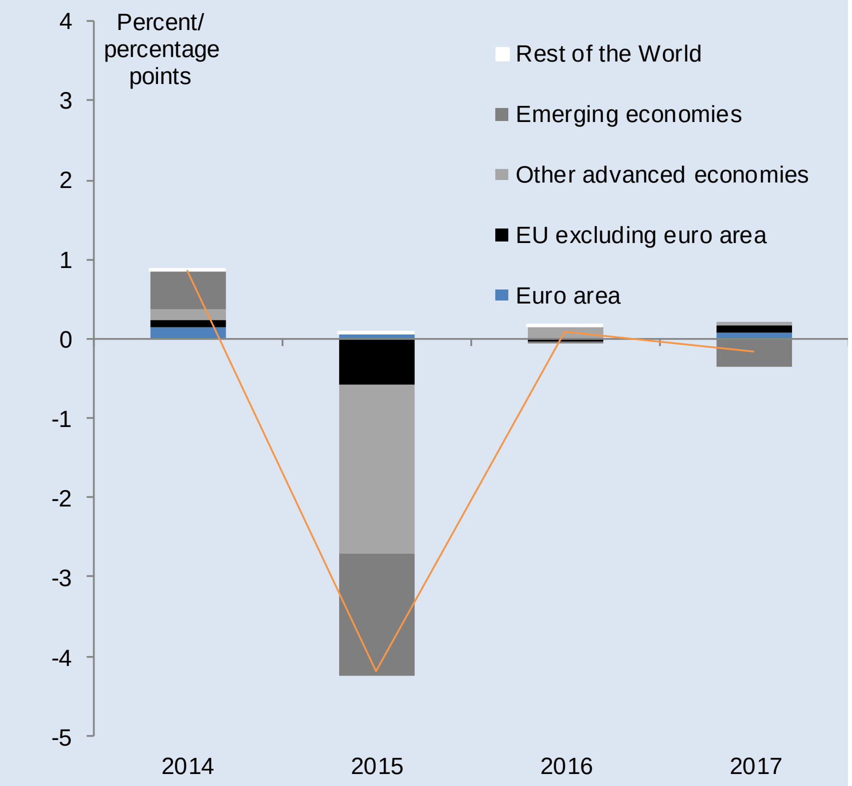
Annual data, volumes; GDP growth in 59 countries, weighted with shares in German exports.

Sorces: Statistisches Bundesamt; national sources; 2015–2017: IfW forecast.

- 2015: +2.3 %
- 2016: +2.6 %
- 2017: +2.6 %

- GDP growth is expected to accelerate somewhat in advanced economies in 2016
- No additional impulses from emerging economies

Price Competitiveness



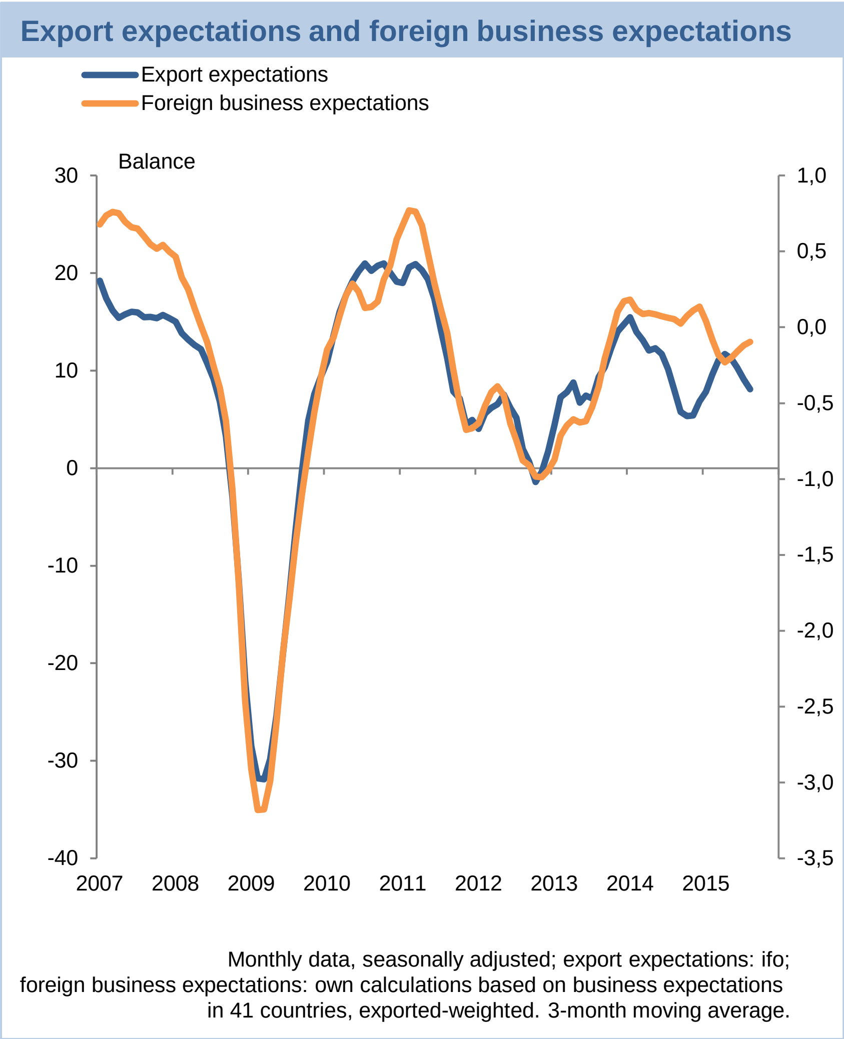
Annual data; Against 56 countries based on consumer prices; Weights according to German's price competitiveness indicator against 56 trading partners based on consumer price indices of the Deutsche Bundesbank.

Source: Deutsche Bundesbank; national sources; 2015–2017: IfW forecast .

- 2015: –4.2 %
- 2016: +0.1 %
- 2017: –0.2 %

- Price competitiveness is improving due to euro depreciation in the current year
- In 2016 and 2017 it is expected to remain largely unchanged

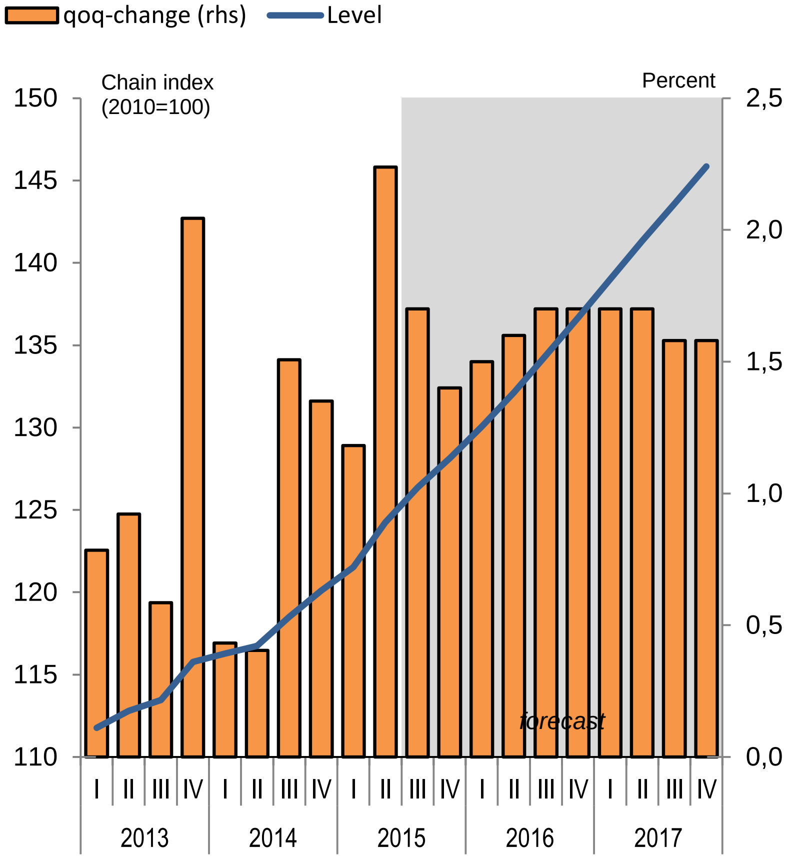
Exports expectations and foreign business expectations



- Export expectations have detoriated recently
- Foreign business expectations were relatively stable
- We expect strong export growth in Q3 (1.7%; strong export data in July) and somewhat weaker export growth in Q4

Exports are growing with solid rates

Exports

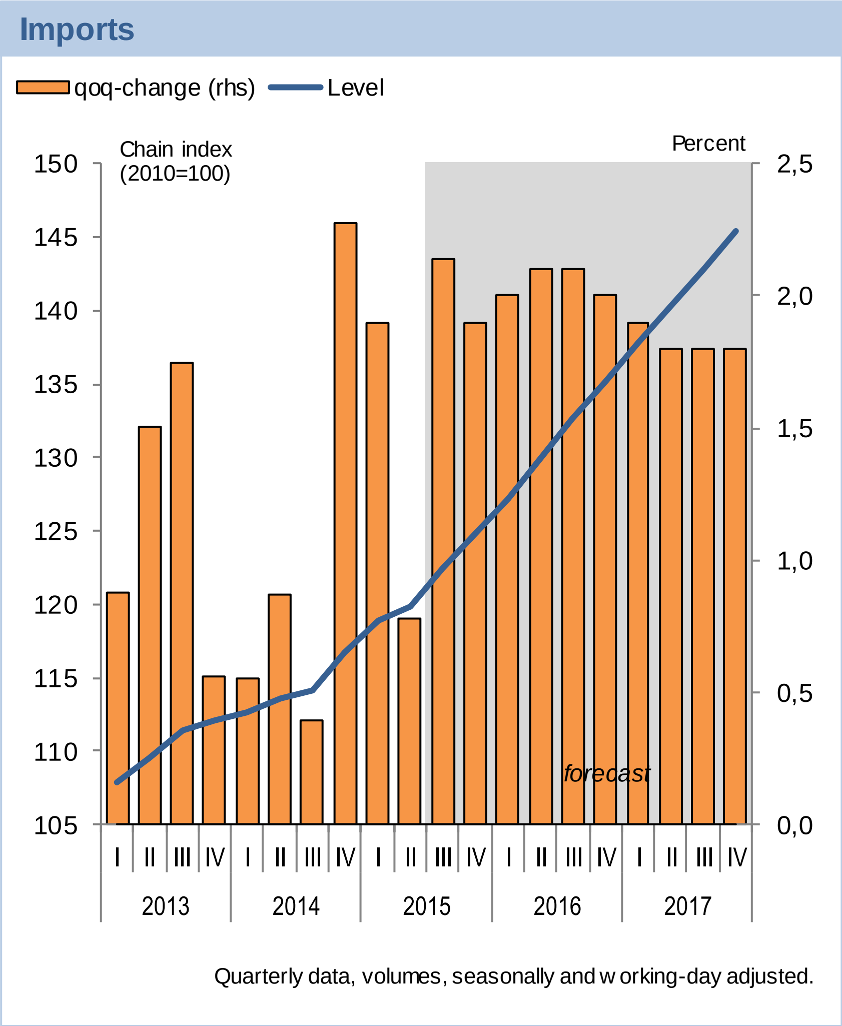


Quarterly data, volumes, seasonally and working-day adjusted.

- 2015: +6.6 %
- 2016: +6.8 %
- 2017: +6.4 %

- Higher growth in exports to euro area countries will compensate for lower growth in exports to emerging markets

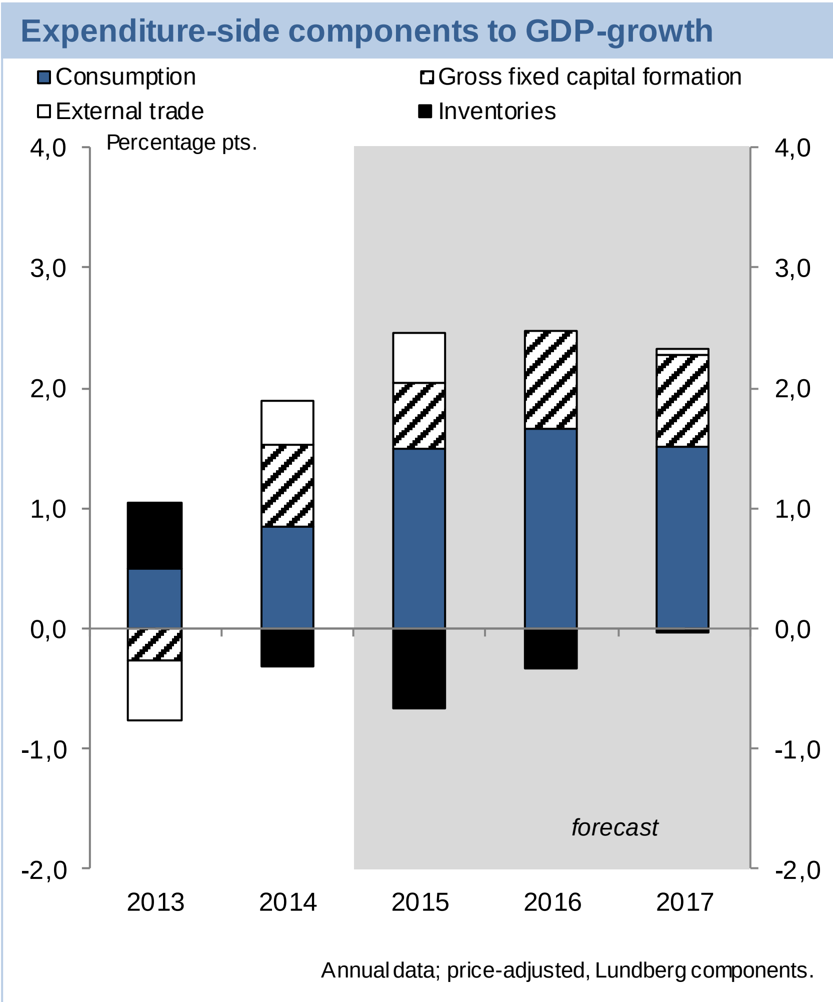
Imports are growing faster than exports



- 2015: +6.7 %
- 2016: +8.1 %
- 2017: +7.6 %

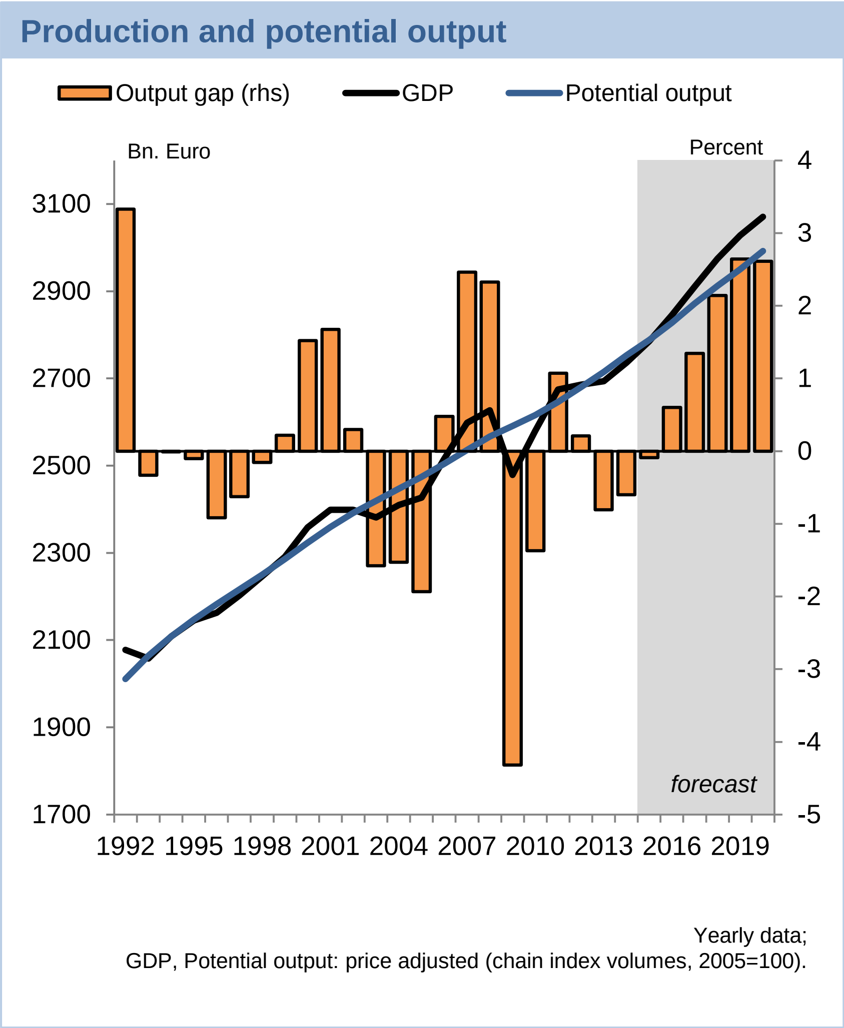
- Strong domestic demand and solid export growth will stimulate imports further
- Improvement in Terms of Trade

Growth contributions



- 2015-2017: GDP growth feeds into private consumption
- 2016: GFCF to become second growth pillar
- Due to strong import growth contributions of net exports are expected to be close to zero

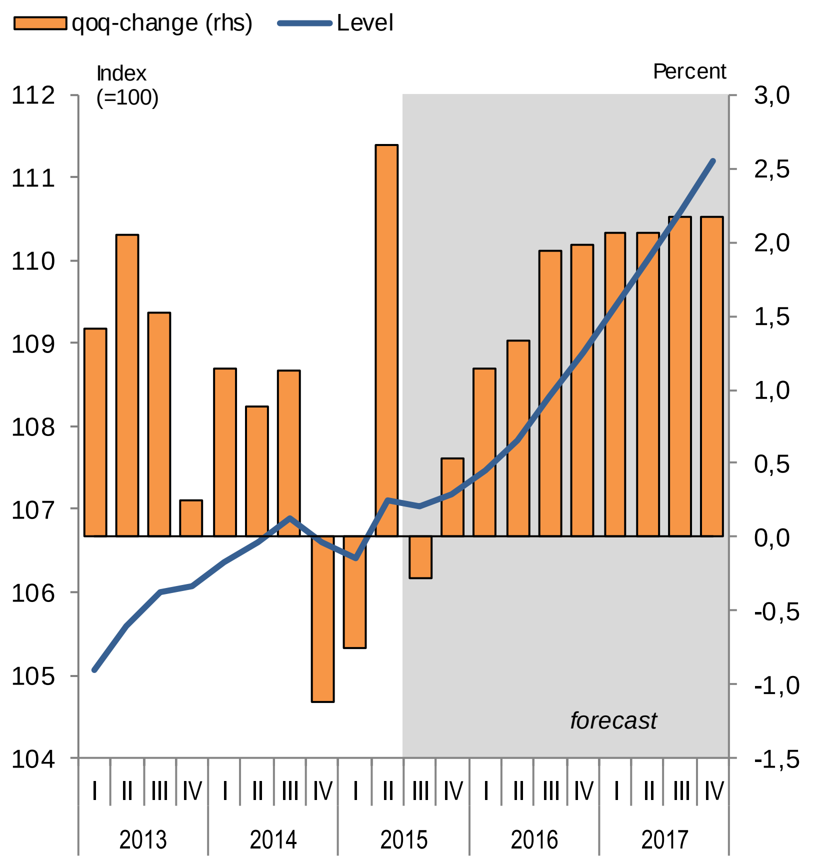
Potential output and production



- 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

Consumer Prices

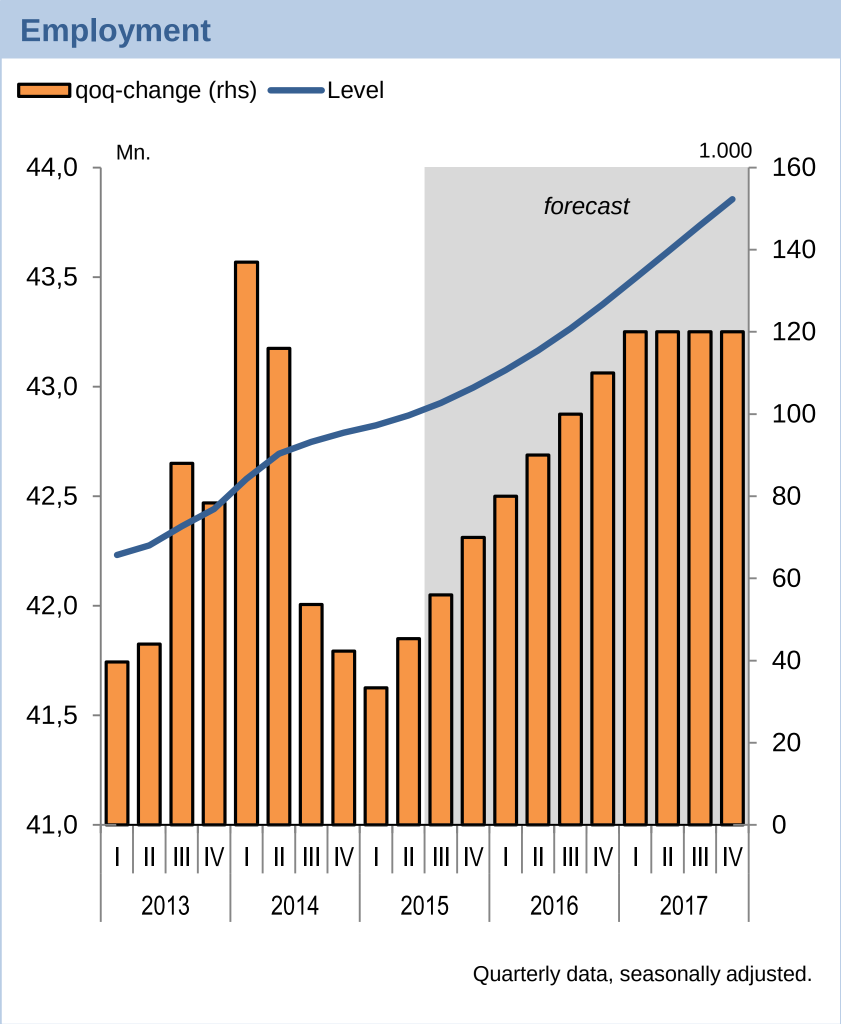
Consumer price index



Quarterly data, seasonally adjusted.

- **CPI inflation:**
  - 2015: 0.3 %
  - 2016: 1.1 %
  - 2017: 2.0 %
- **GDP deflator**
  - 2015: 2.0 %
  - 2016: 1.9 %
  - 2017: 2.1 %

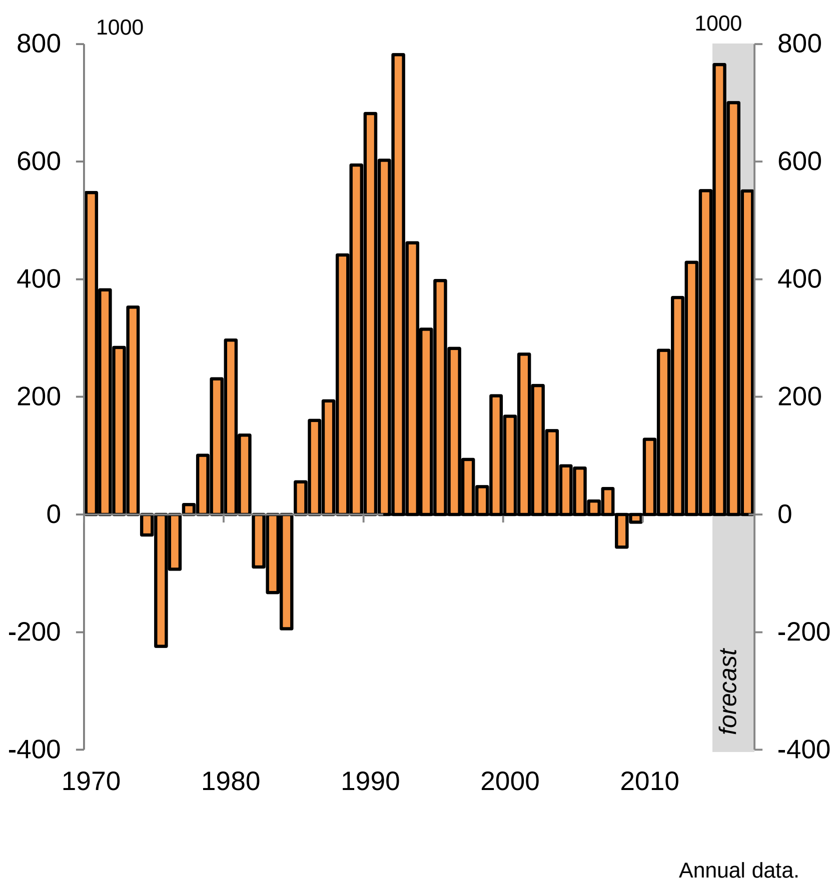
Labor market remains in good shape



- Temporary weakness in employment growth due to minimum wage.
- Loss of 200,000 mini jobs in the last 12 months (most of them in 2015-Q1)
- Labor force is increasing due to net migration.

Net migration will stay at high levels

Net migration



- Increasing net migration is a factor in current labor market developments: 66% of increase in employment in the past 12 months.
- Most important is migration from Eastern Europe (freedom of movement)
- Effects due to increased number of asylum applicants is currently relative small, but is expected to become larger in the medium-run

Net Migration

- Government expenditures are expected to increase by 5 bn. in 2015 and by 4 bn. in 2016 due to increased number of asylum seekers
- Rough estimates may indicate visible increases in private consumption and construction
- However, net effects are difficult to estimate (e.g., due to potential crowding out of alternative investment projects at the local level)
- Currently, due to net migration the labor force is increasing instead of decreasing
- From about 500,000 asylum seekers in the current year, by far less than 100,000 enter the labor force
- Additional asylum seekers may have visible (but small) effects on potential output

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.

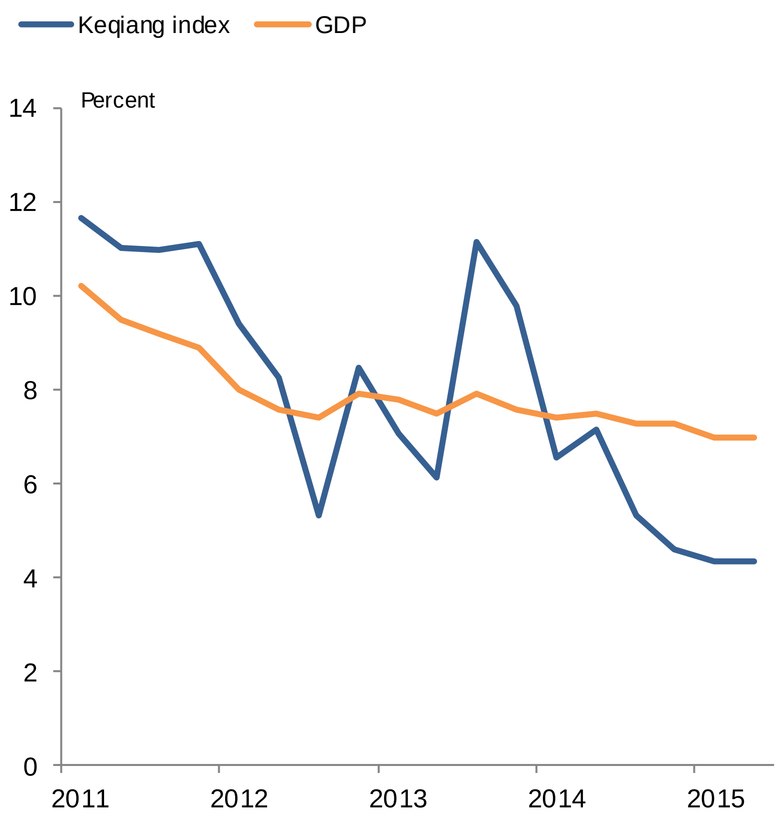
Source: Federal Statistical Office, *Fachserie 18, Series 1.2* ; Federal Employment Agency, *Monthly Bulletin;* Federal Employment Agency, *Employment Statistics* ; shaded: IfW forecast.

Überblick

- Globale Perspektive
- Euroraum
- Deutschland
- **Harte Landung in China?**

China – Current economic situation (1)

China: GDP and Keqiang index



Quarterly data. GDP: y-o-y- growth rate.
Keqiang index: arithmetic mean of outstanding credit, railway freight cargo and electricity consumption; y-o-y growth rate.

- Gradual economic slowdown from double-digit growth to currently 7 per cent y/y (in 2015-Q2)
- Doubts regarding reliability and accuracy of official data
- Keqiang index points to a pronounced slowdown since 2014-H1
- Weak imports and industrial production, declining car and smartphone sales, …

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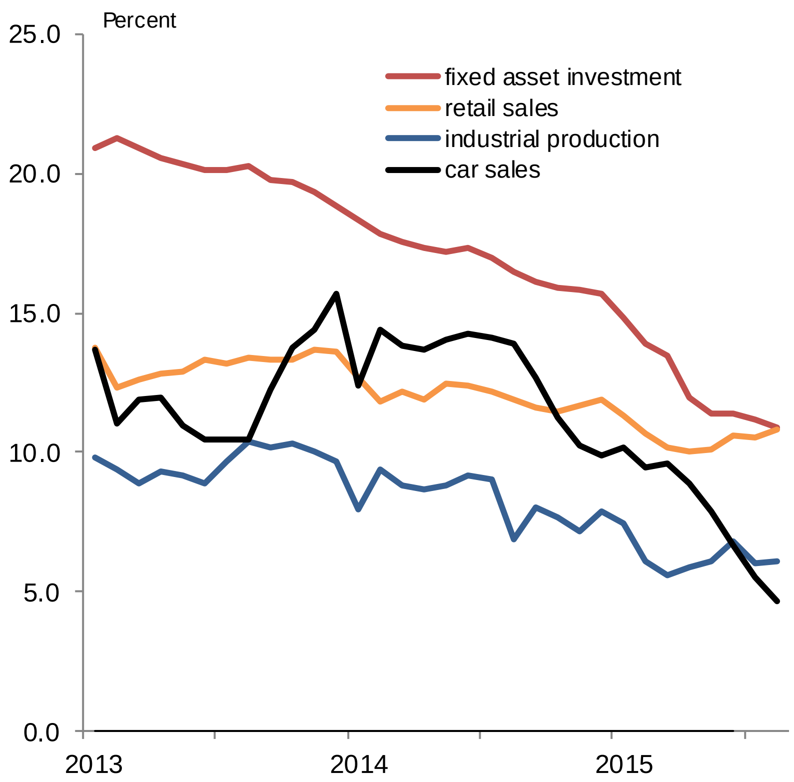
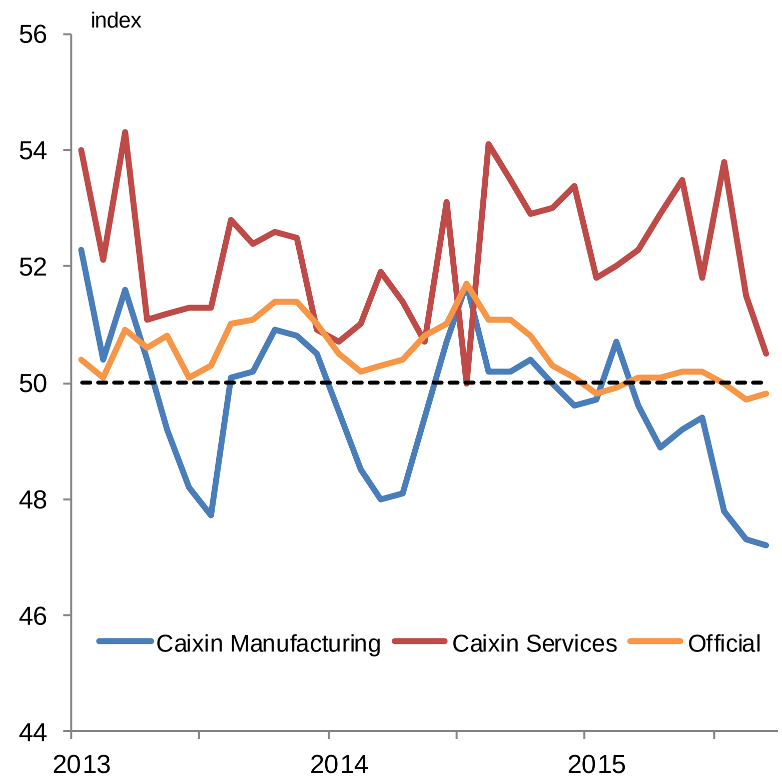
China – Current economic situation (2)

China: monthly indicators



Monthly data. Industrial production and retails sales: y-o-y growth rates.
FAI: year-to-date growth rate. Car sales: 12 MM, y-o-y growth rate.
Source: National Bureau of Statistics

China: Purchasing managers' indices

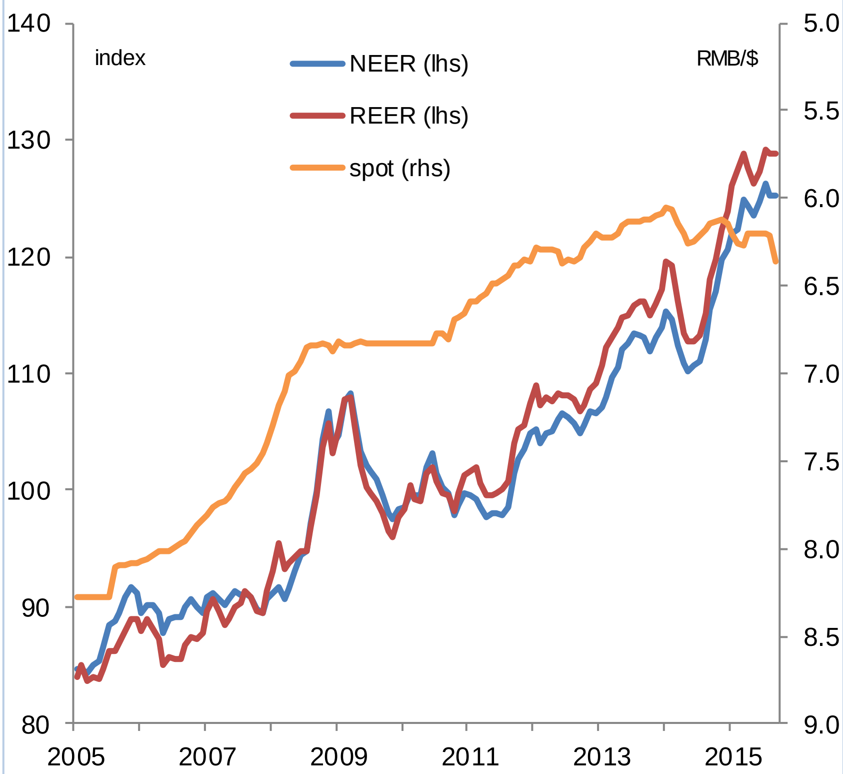


Monthly data.
Source: Markit, National Bureau of Statistics

China – Devaluation of the renminbi (1)

- Historic devaluation of RMB in August -> market forces to play a greater role
- Strong effective appreciation since H2 2014 -> both real and nominal
- Poor communication added to doubts about economic prospects
- Massive interventions to stabilize RMB are unsustainable given further depreciationary pressures

China: exchange rates

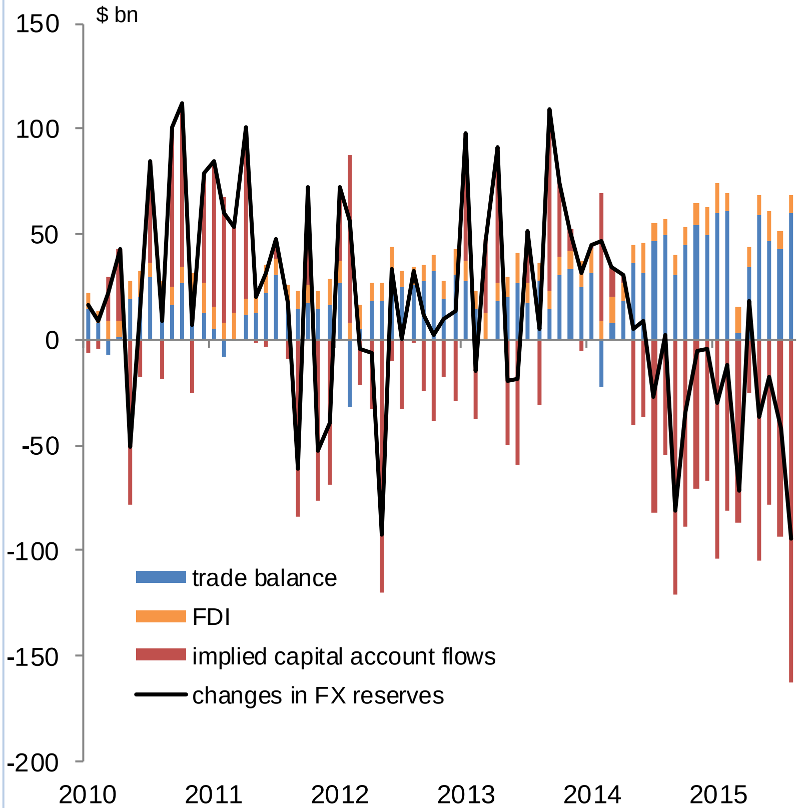


Monthly data. *Source: JP Morgan, Datastream*.

China – Devaluation of the renminbi (2)

- PBoC intervened heavily in the markets in August to defend the new „peg“
- Capital outflows are putting further downward pressure on RMB
- Caveat: changes in FX reserves are an imperfect proxy -> changes in valuation of non-dollar assets and portfolio preferences of firms also play a role

China: Capital outflows



Monthly data.
Source: NBS, SAFE,MOFCOM, China Customs.

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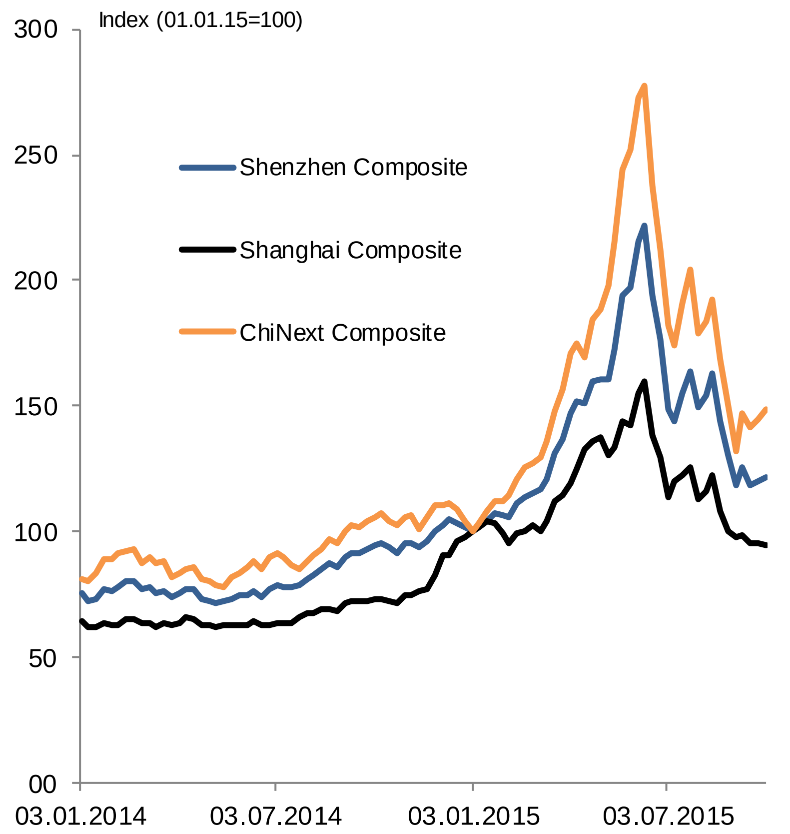
China – Devaluation of the renminbi (3)

- We simulate a 30 per cent devaluation of the RMB in NiGEM
- Significant effects on the world economy with growth momentum shifting back towards China
- Scenario assumes no retaliatory exchange rate or monetary policy responses

	Year 1	Year 2
World	**-0,3**	**-0,9**
Advanced Economies		
Germany	-0,4	-1,2
Euro area	-0,4	-1,2
Japan	-0,9	-2,3
South Korea	-0,9	-2,7
UK	-0,6	-1,7
USA	-0,4	-0,9
Emerging Economies		
Brazil	-0,5	-1,4
China	0,7	1,2
India	-0,6	-2,0
Indonesia	-0,7	-2,5
Mexico	-0,3	-0,9
Russia	-0,6	-1,9

China – Price correction in equity markets

China: Stock markets



Weekly data.
Source: Datastream.

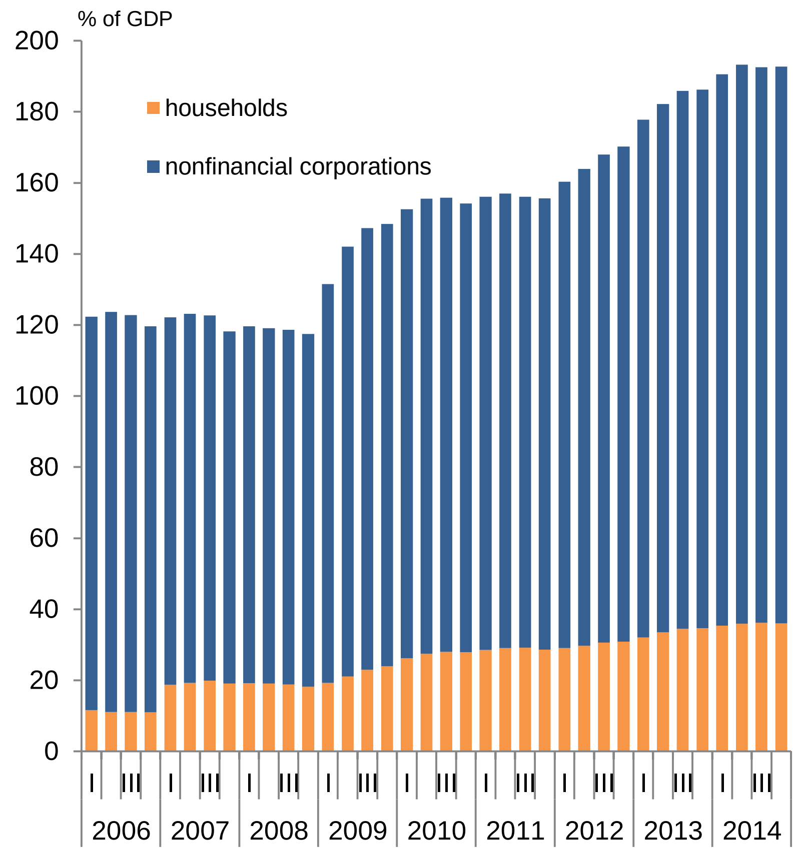
- Sharp correction in stock prices since June
- Initially, government resisted and intervened heavily
- Direct impact on real economy should be limited
- More important are developments in the housing sector -> roughly 50 per cent of outstanding loans directly or indirectly linked to real estate

China – Are we in for a hard landing?

China: House prices

Residential property prices in 67 cities. Monthly data.
Source: National Bureau of Statistics.

China: private sector debt



Quarterly data. *Source: BIS.*

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China – Hard landing: modelling approach

- We use two - conceptually distinct – models
  - » **NiGEM** (structural macroeconometric model)
  - » **GVAR** (global vector autoregressions)

- For comparison, we interpret a hard landing as **reduction of Chinese GDP by 3 per cent** in both models

- However, shock is implemented differently
  - » GVAR: initial impulse and model „takes over“ dynamics
  - » NiGEM: calibrated reduction in domestic demand in the first year and then slowly let it return to baseline

China – Hard landing: global impact (1)

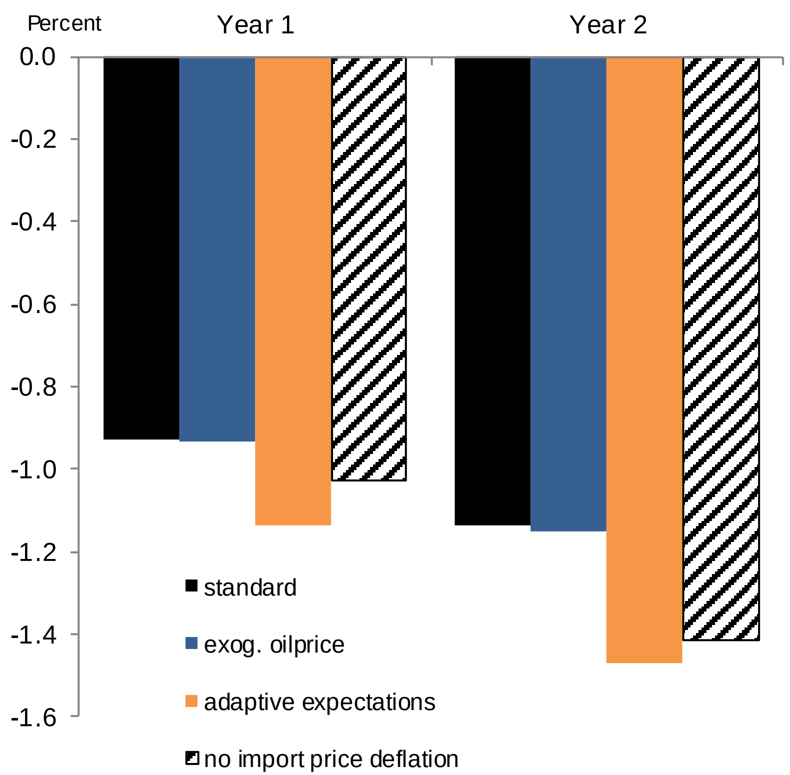
Year after shock	GVAR			NiGEM		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
World						
GDP	-0,7	-0,9	-1,0	-0,9	-1,1	-0,7
World trade	-	-	-	-2,7	-2,0	-0,3
Oil price	-1,3	-2,7	-3,0	-0,4	-1,0	-1,2
World excl. China						
GDP	-0,3	-0,4	-0,5	-0,5	-0,5	-0,3
Advanced Economies (GDP)						
Germany	-0,4	-0,5	-0,5	-0,4	-0,3	0,0
France	-0,1	-0,2	-0,2	-0,3	-0,2	0,0
Japan	-0,5	-0,7	-0,7	-0,9	-1,1	-0,8
South Korea	-0,6	-0,9	-1,0	-1,3	-1,9	-1,7
UK	-0,2	-0,3	-0,3	-0,3	-0,2	-0,1
USA	-0,3	-0,5	-0,5	-0,1	0,3	0,5
Emerging Economies (GDP)						
Brazil	-0,1	-0,2	-0,2	-0,8	-0,8	-0,2
China	**-3,0**	**-3,3**	**-3,4**	**-3,0**	**-3,8**	**-2,7**
India	0,2	0,2	0,2	-0,6	-1,1	-1,1
Indonesia	-0,3	-0,7	-0,8	-1,1	-2,1	-1,9
Mexico	0,0	0,3	0,4	-0,2	-0,1	-0,1
Russia	-	-	-	-0,7	-1,0	-0,5
Regions (GDP)						
Euro area	-0,2	-0,4	-0,4	-	-	-
Rest of Asia	-0,4	-0,7	-0,8	-	-	-
Latin America	-0,1	-0,1	-0,1	-	-	-

China – Hard landing: global impact (2)

- Broadly robust results across both models
- Relative order also robust across country -> Germany more severely affected than UK or France due to stronger trade links with China
- Emerging markets generally affected more adversely in NiGEM than in GVAR
- Biggest difference: United States! US economy actually benefits from hard landing in NiGEM -> income effect from cheaper imports

China – Hard landing: sensitivity analysis

NiGEM: sensitivity analysis



Global GDP. Percentage deviation from baseline.
Source: Kiel Institute calculations with NiGEM.

- Results virtually unchanged if oil prices are held fixed
- Effectiveness of monetary policy at the ZLB might be overestimated in NiGEM: under adaptive expectations hard landing lowers global GDP by an additional 0.2 pp in the first year
- Exogenizing Chinese import prices leads to similarly stronger negative impact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