Wermuth Asset Management
Delivering Sustainable Value

Stocks, bonds, houses – everything is expensive: an analysis of risks and opportunities

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expanded version; updated as of December 14, 2018

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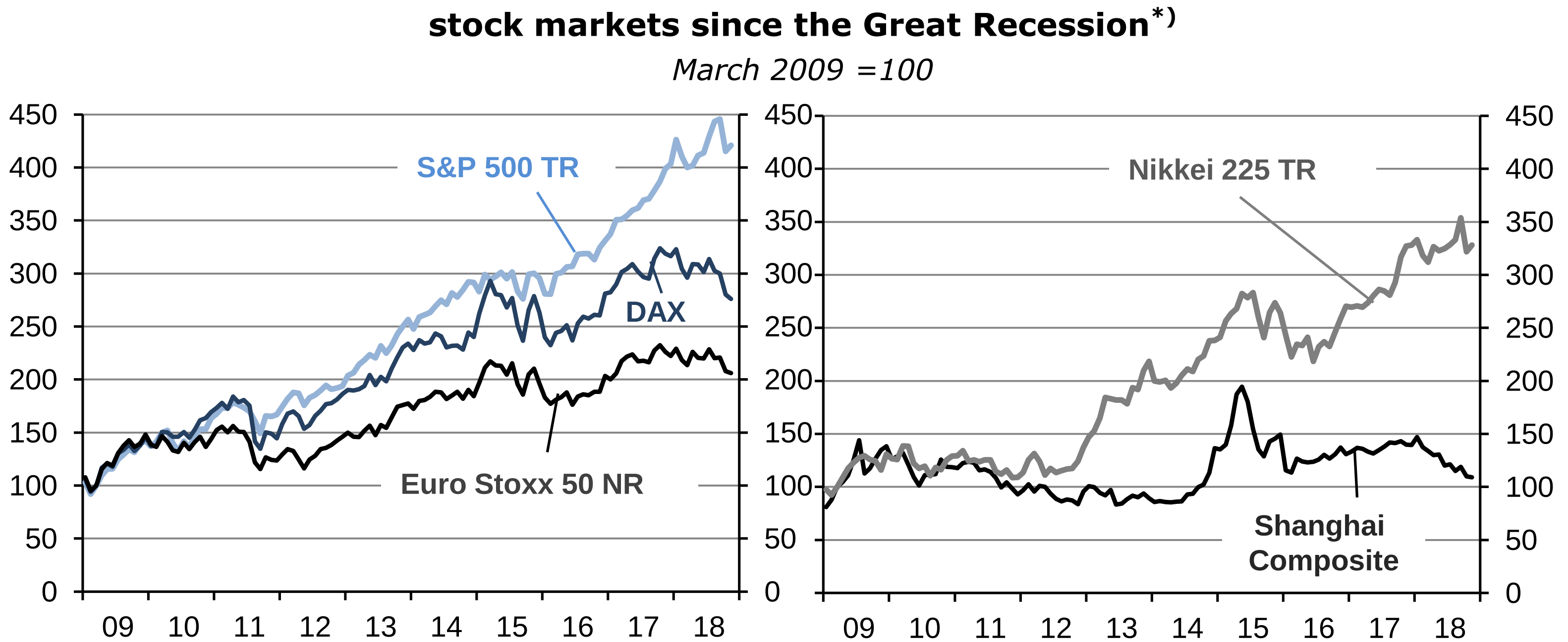
expensive U.S. stocks



sources: Deutsche Bundesbank, Handelsblatt; own calculations

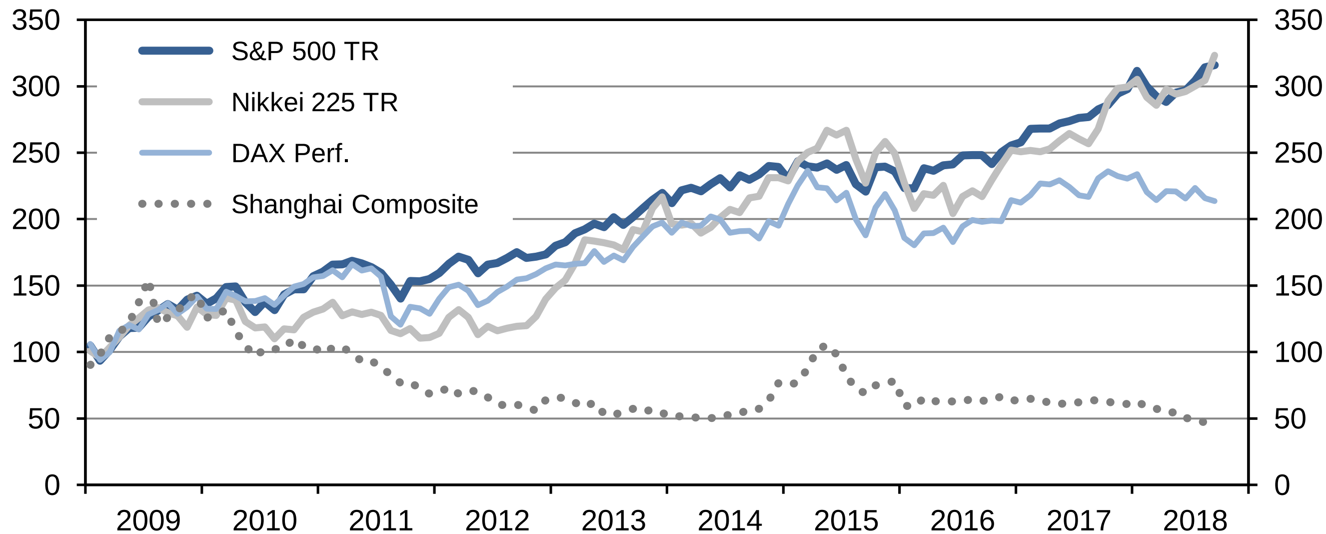
- it has been a great time for the owners of stocks – until recently
- American markets have done particularly well
- China seems to pay the price for capital controls and lack of transparency
- as well as for earlier excesses

*) total return versions of the S&P 500, the DAX, and the Nikkei are used. Euro Stoxx 50 NR is a net return index. No total return version of the SSE Composite is available.

expensive U.S. stocks

performance of stocks relative to nominal GDP*)

2009Q1=100



sources: ECB, Bundesbank, BEA, NBS; own calculations

- U.S. and Japanese stocks have outperformed nominal GDP by a wide margin over the past 10 years
- a clear sign that they are overpriced
- comparatively, German stocks are reasonably priced

*) total return versions of the S&P 500, the DAX, and the Nikkei are used. Euro Stoxx 50 NR is a net return index. No total return version of the SSE Composite is available.

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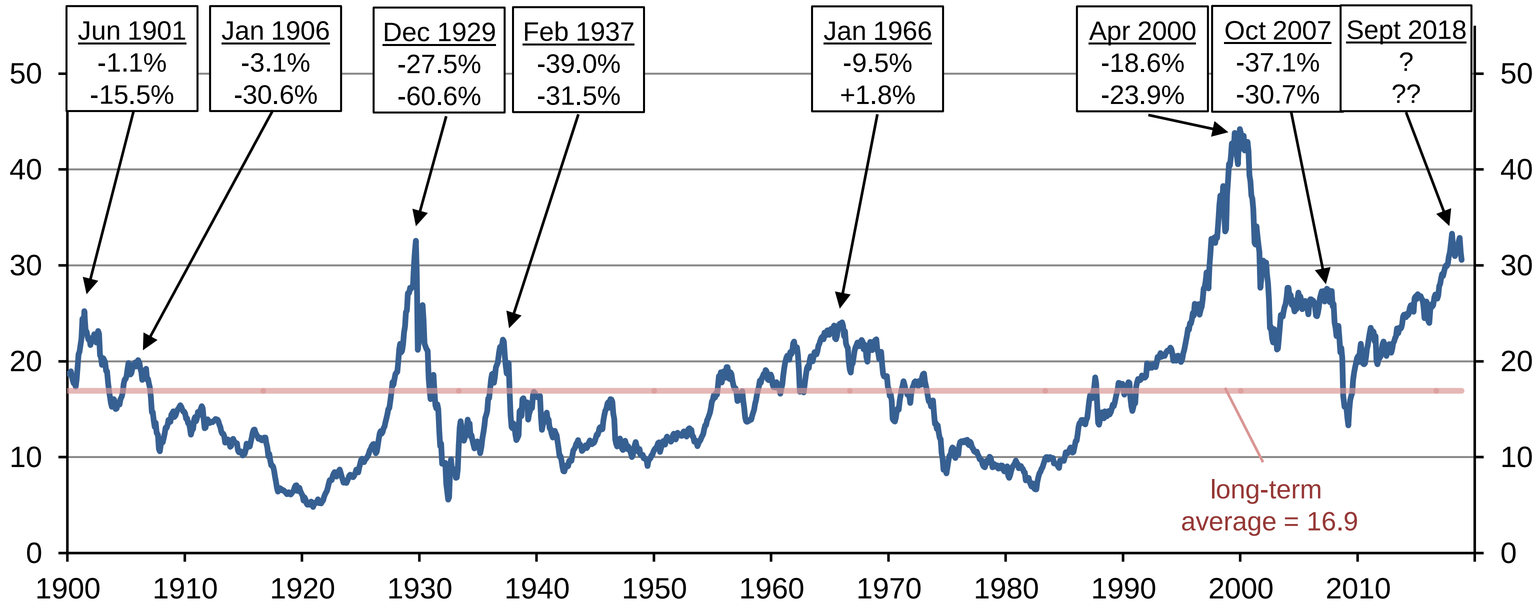
expensive U.S. stocks

cyclically adjusted price-earnings ratio of the S&P 500*



Boxes: Dates indicate month of peak of PE ratios. The first number is the change in S&P 500 index during the following 12 months, the second is the %-change over 24 months.

source: Robert J. Shiller (http://www.irrationalexuberance.com/index.htm); own calculations

- Shiller's cyclically adjusted price earnings (CAPE) ratio is as high as in 1929
- useful indicator for investors with a long time horizon
- not so useful for traders – plenty of wrong signals
- S&P 500 (market cap $24tr) – the bellwether for global stock markets

* price-earning ratios, monthly, Jan 1900 to Nov 2018. Numerator: real (inflation-corrected) S&P 500 stock price index. Denominator: moving average over preceding ten years of real (inflation-corrected) earnings.

European stocks are a lot cheaper (as usual)

a comparison of stock indices

	Euro Stoxx 50	DAX	CAC 40	FTSE MIB	S&P 500	NASDAQ	Nikkei 225
	euro area	Germany	France	Italy	U.S.	U.S.	Japan
% from year-high	-15.4	-19.6	-13.2	-23.0	-10.0	-13.3	-11.0
year-to-date (%)	-11.4	-15.5	-7.8	-13.4	-1.4	1.9	-5.1
dividend yield (%)	3.8	3.4	3.6	4.2	2.0	1.1	2.0
risk premium (bp)	892	1012	850	1113	486	173	805
price-to-book	1.51	1.45	1.49	1.02	3.2	4.5*	1.7

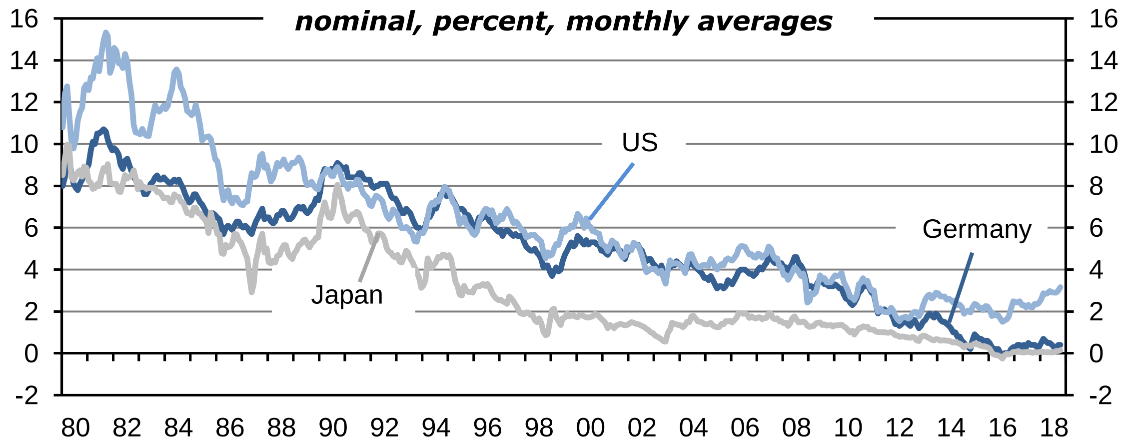
* estimate

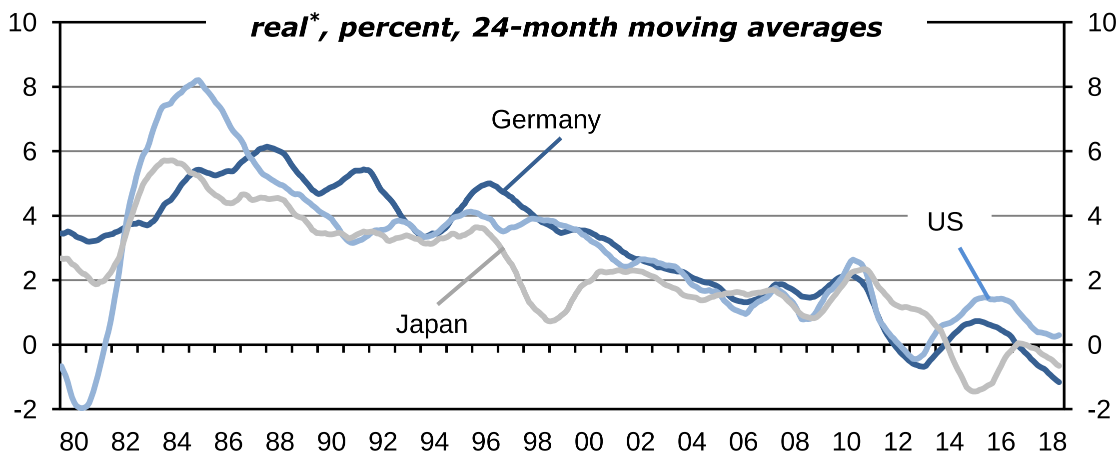
note: as of December 12, 2018

- high dividend yields
- very high risk premiums
  (mostly because of low yields of reference assets – riskless long-term bonds)
- moderate price-to-book ratios

low bond yields

10-year government bond yields





* government bond yield minus annual CPI inflation rate

sources: Federal Reserve, Deutsche Bundesbank, Bank of Japan; own calculations

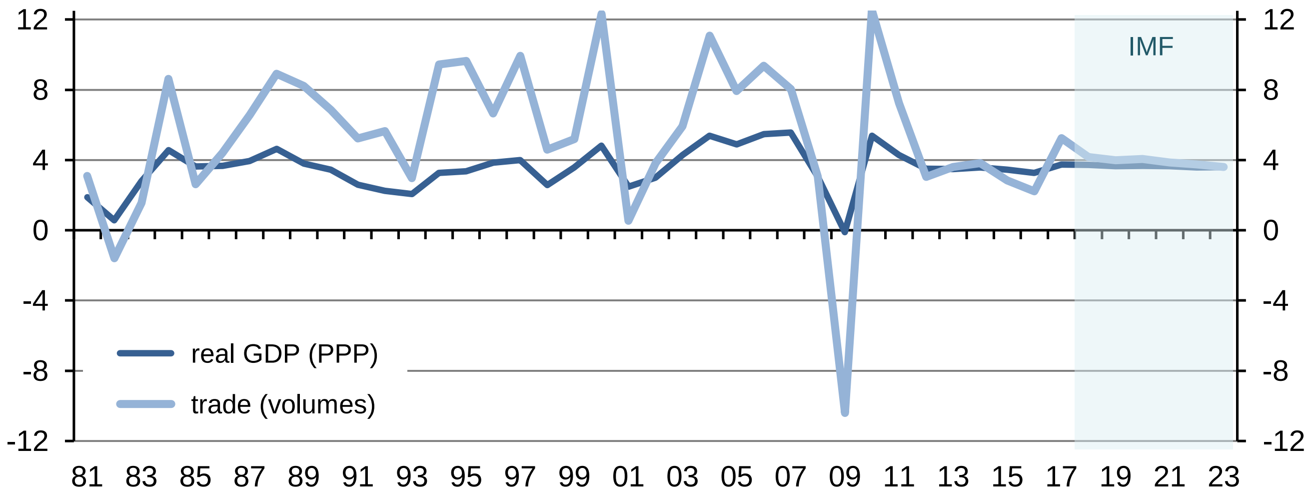
- end of a 35-year bond rally
- fight against inflation has been won
- outlook: capital gains will be very limited

- bond owners have to accept higher risks
- Japan is the new normal – or is it?

low bond yields

global growth and world trade*)

% y/y



*) average annual growth rates (1981-2017): real GDP 3.5%; world trade 5.4%

source: IMF

- bond yields are not in synch with GDP growth
- "normal" long term gov. bond yields: U.S. 4 ½%, Germany 4%, Japan 3 ½%, China 9 ½%
- "monetary repression" continues – borrowers are the winners

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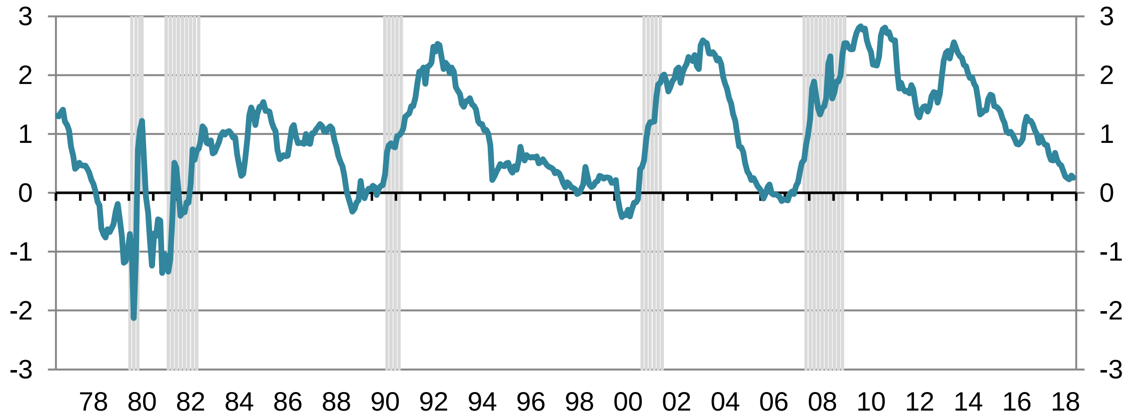
low bond yields

US yield curve inversions and recessions

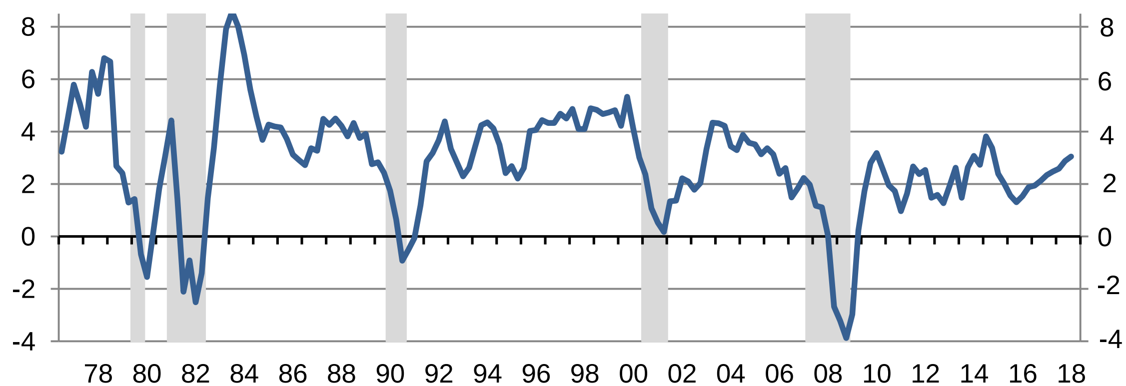
10y Treasuries minus 2y Treasuries; percentage points)*



*) monthly averages

US real GDP growth

4q-moving averages of annualized quarterly growth rates (%)



shaded areas indicate U.S. recessions

sources: Federal Reserve, BEA, NBER; own calculations

- U.S. yield spread 10 – 2 years a reliable leading indicator for recessions
- note the long time lags, though

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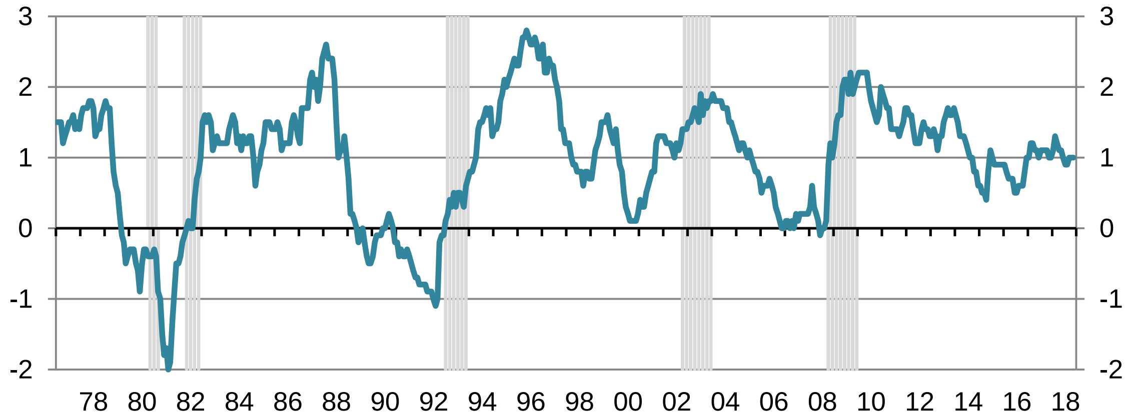
low bond yields

German yield curve inversions and recessions

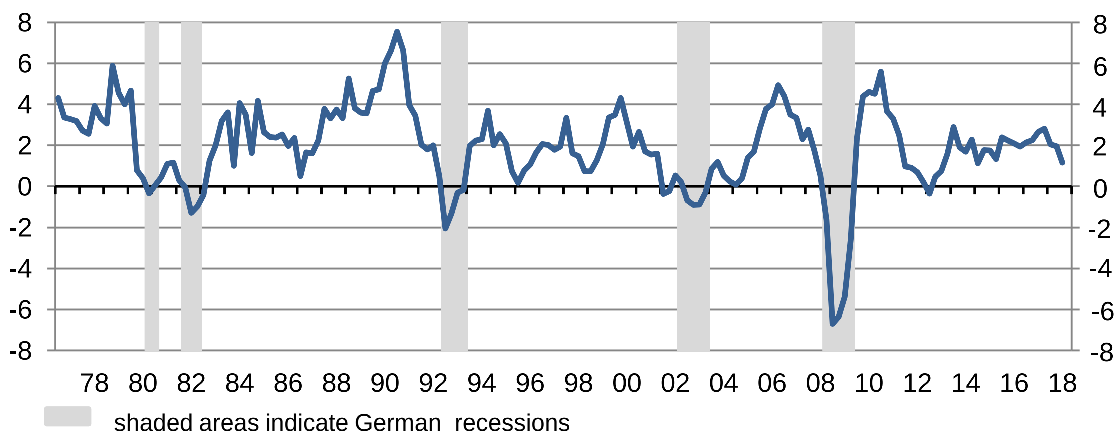
10y Bunds minus 2y Bunds; percentage points)*



*) monthly averages

German real GDP growth

4q-moving averages of annualized quarterly growth rates (%)



sources: Deutsche Bundesbank; own calculations

- so far, as a leading indicator of recessions and weakening growth, such a spread has been useless in Germany
- reason: monetary policy less effective for real economy than in the U.S.
- bank lending rather than capital markets still the key source of external finance

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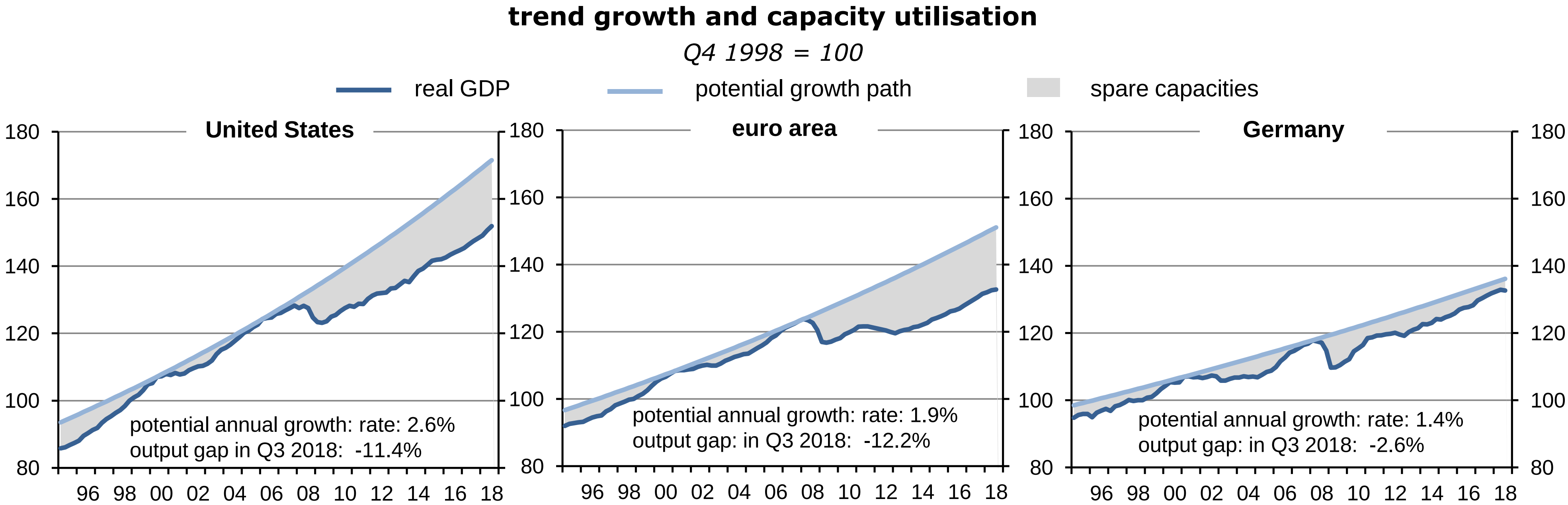
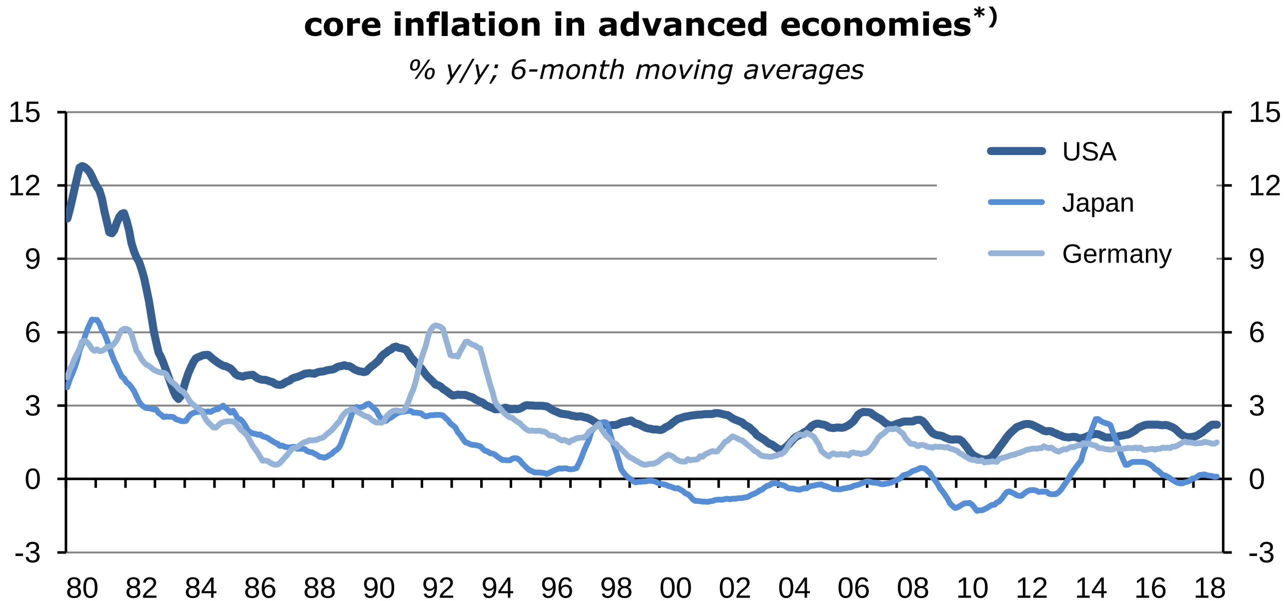
why inflation rates will remain subdued



sources: BEA, Eurostat; own calculations

- huge output gaps (most economists deny that)
- 2009 – the year when the new secular stagnation began
- according to this approach, Germany is fairly close to a full use of capacities
- partly due to slow potential GDP growth

why inflation rates will remain subdued



*) consumer prices excluding food and energy

source: OECD

- core inflation – a leading indicator of headline inflation
- Japan: zero or negative core inflation for 23 years (except for VAT hikes)

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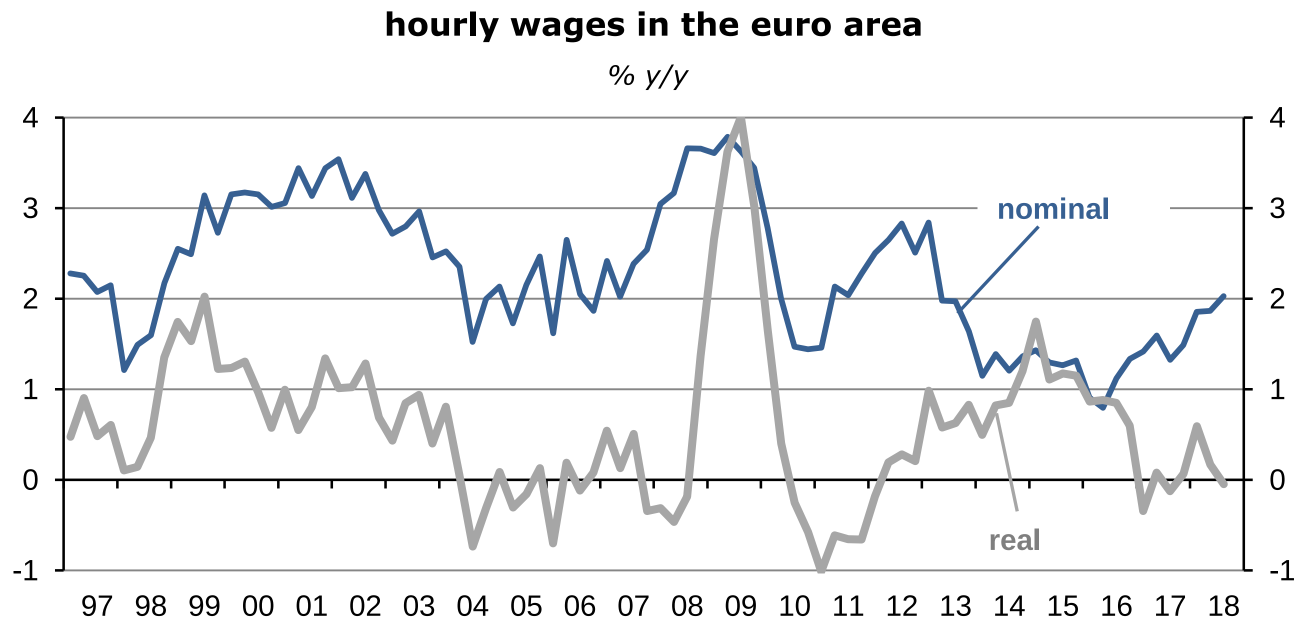
why inflation rates will remain subdued



soucres: ECB; own calculations

- no consumer price inflation without wage inflation
- real wages < productivity
- weak negotiating power of workers

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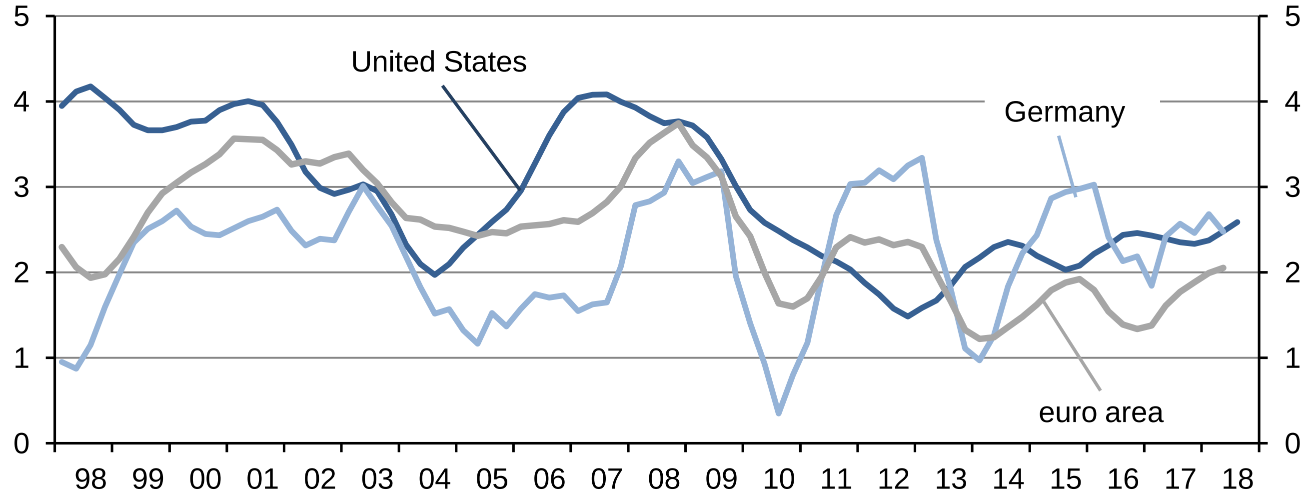
why inflation rates will remain subdued

nominal wage inflation is recovering somewhat

hourly earnings, % y/y , 4-quarter moving averages*



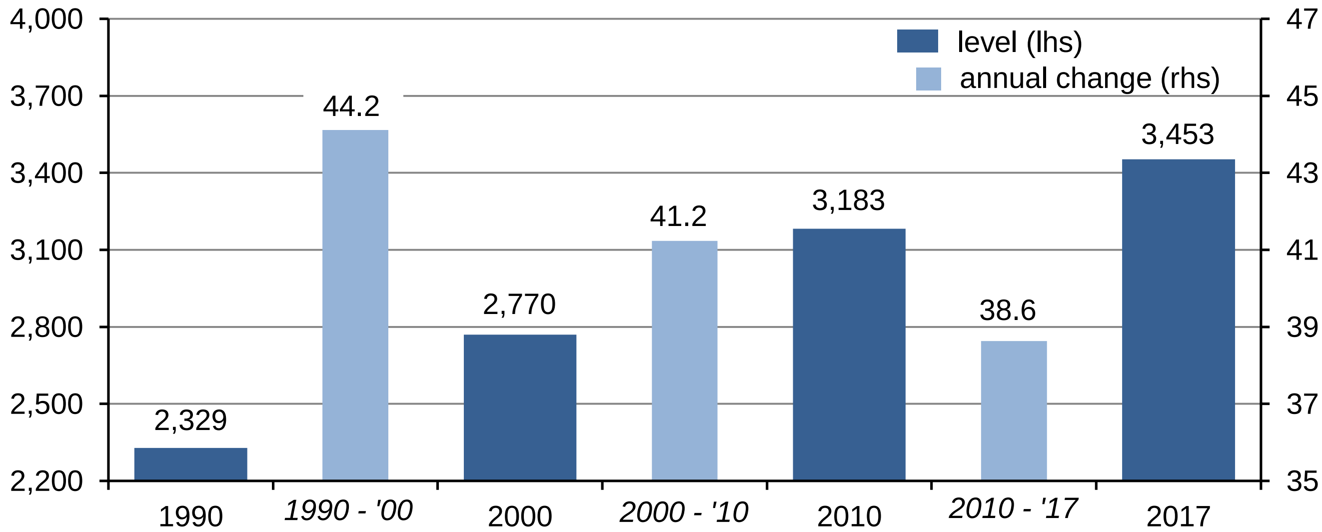
* private sector
source: OECD

- even in America, after an almost-10-year expansion, wage inflation has not accelerated much
- on the road to a global labor market

why inflation rates will remain subdued

level and annual change of the global labor force

millions



source: World Bank, own calculations

- workers move from the countryside to manufacturing regions
- catching-up processes continue
- ie, international wage spreads still large – but declining in relative terms

why inflation rates will remain subdued

per capita GDP and population*

	GDP per capita	population
	€1,000	millions
United States	55.7	328
Japan	34.1	126
Euro area	30.1	341
Germany	41.1	83
Poland	13.6	38
Romania	10.6	20
China	7.8	1397
India	1.8	1334
Indonesia	3.5	265
Brazil	8.2	209
world	10.1	7530

* latest available statistics, current exchange rates

- wage differentials remain very large in absolute terms
- increasingly transparent markets for goods & services
- companies have alternatives
- capital and jobs move easily across borders

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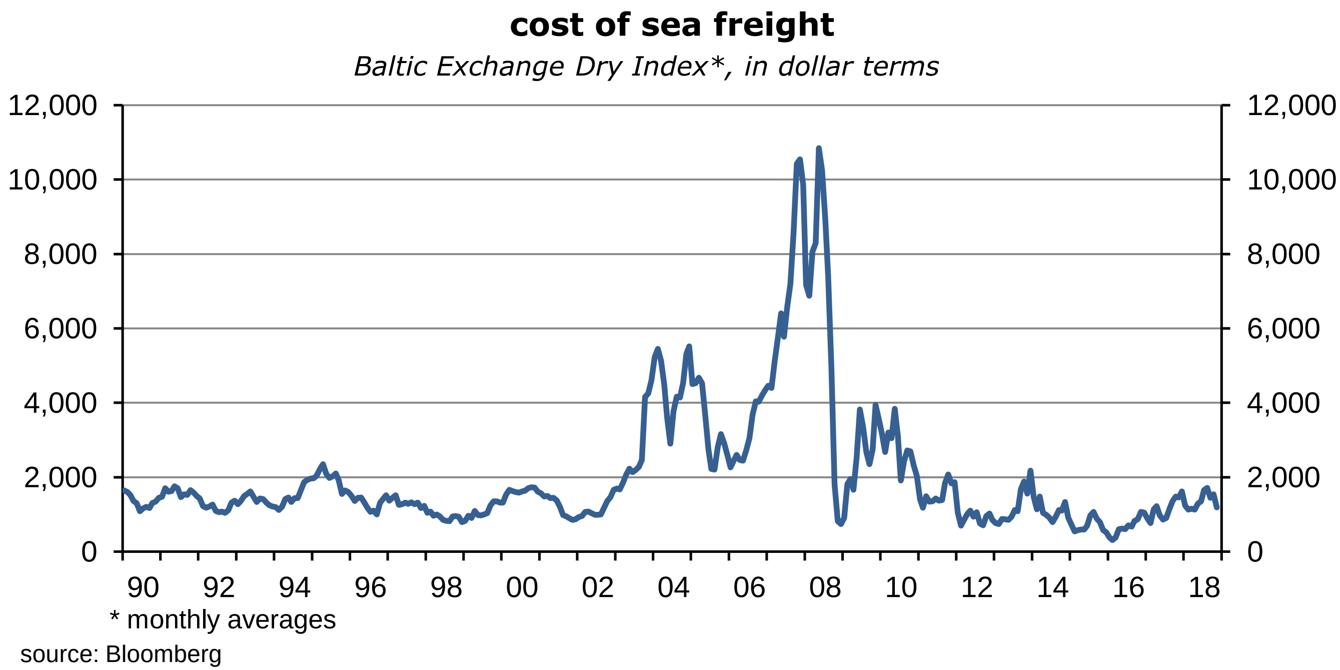
why inflation rates will remain subdued



- cost of freight not higher than 30 years ago
- but down significantly relative to nominal global GDP
- world increasingly looks like a domestic market

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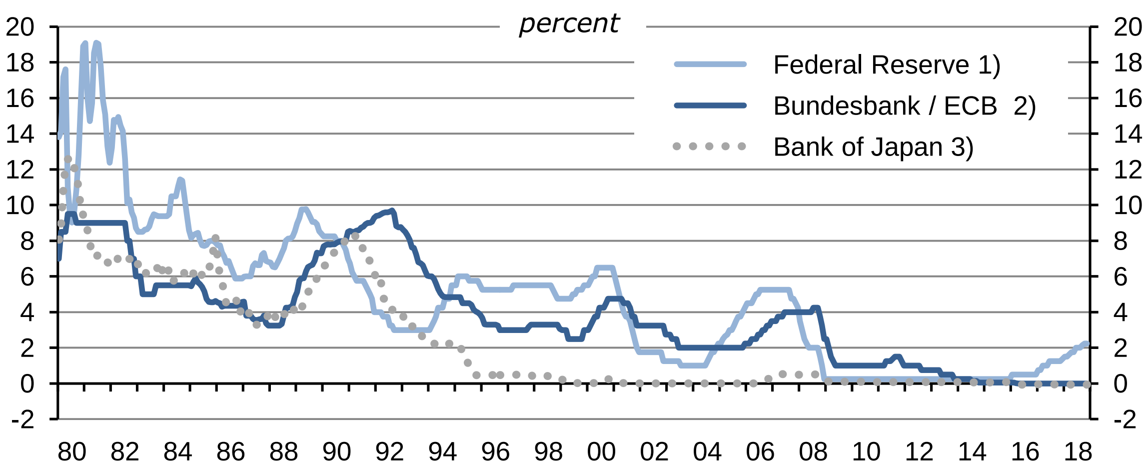
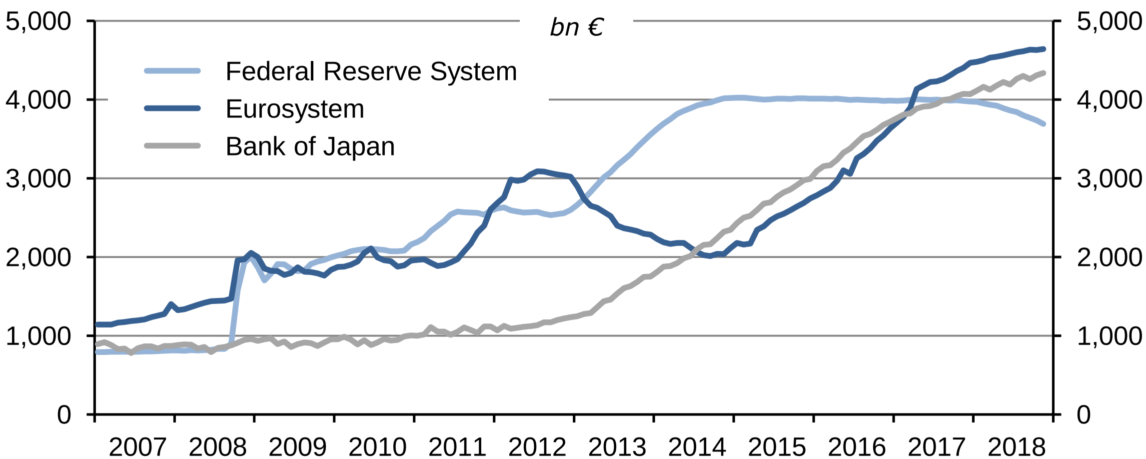
central banks eager to “normalize” interest rates

policy rates



central bank balance sheets*



sources: Federal Reserve, ECB, Bank of Japan; own calculations

- Fed in tightening mode since Dec 2015
- ECB prepares ground for higher rates as well
- Fed has begun to shrink balance sheet
- after blowing it up 4 ½ times since early 2007
- so far, ECB and BoJ remain expansionary
- European economic recovery 4 years younger than America’s

1) Federal Funds Rate , since Dec 2008 upper limit – 2) 1970-1984 Lombardsatz of the Bundesbank 1985-1998 Wertpapierpensionssatz of the Bundesbank, since 1999 MRO of the ECB – 3) Overnight Call Rate – * total assets; translated at 1.13$/€ and 128.1¥/€

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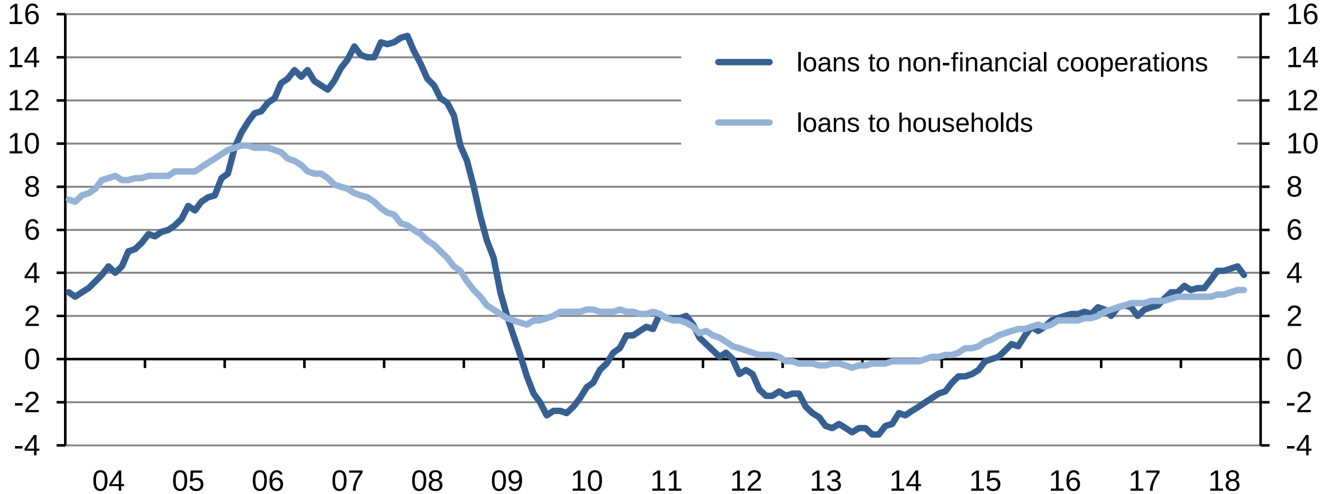
central banks eager to "normalize" interest rates

recovery of European bank lending*

annual growth rates



* adjusted for sales and securitisation

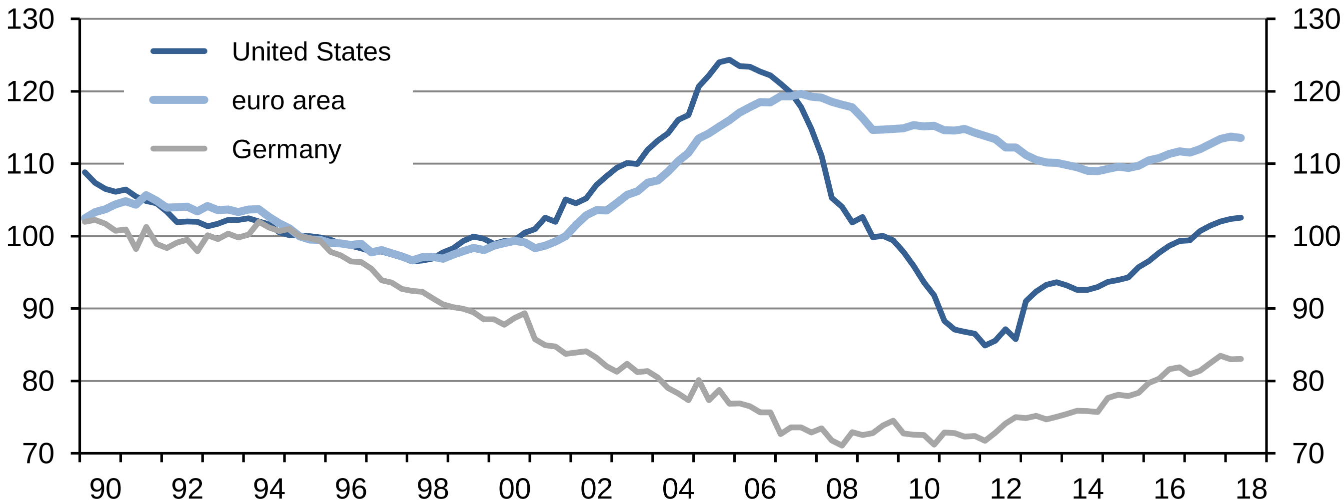
source: ECB

- ECB pleased by rebound of lending activity
- but it is still quite low and less than "normal"

no new real estate bubbles

house price to income ratio*

1995 = 100



* ratio of nominal house prices to nominal household disposable income per capita

source: OECD, own calculations

- U.S. house prices not excessive relative to income
- means: there is no bubble that could burst
- European houses are affordable (especially in Germany)

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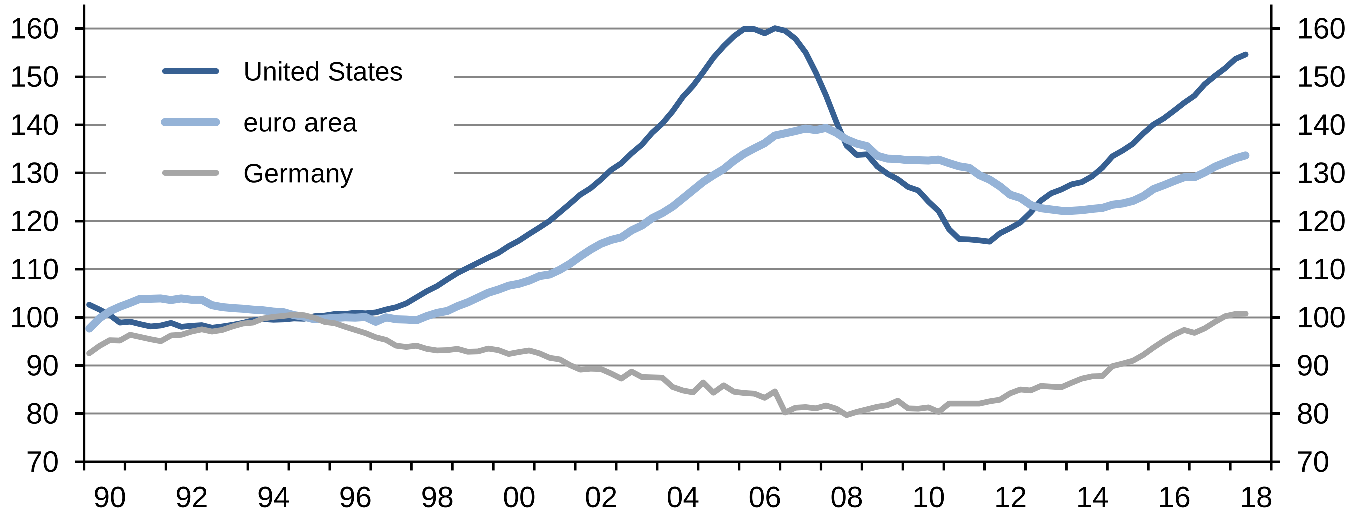
no new real estate bubbles

real house prices*
1995 = 100

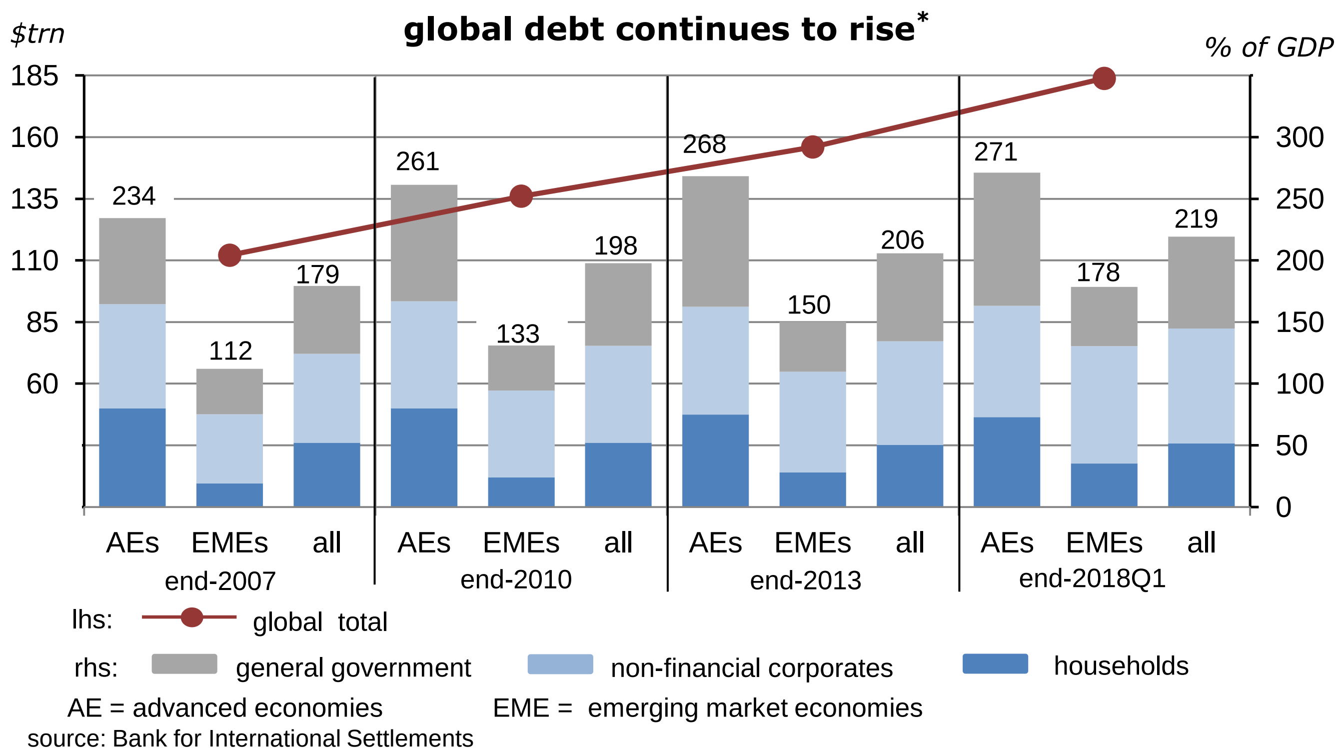


* deflated by consumer price indices

source: OECD

- lucky the family who owns a house
- relative to consumer prices house prices rise faster – why?
- by this metric, U.S. housing market again at risk

leverage has increased since 2007



- total debt has increased by $72 to $184tr since 2007
- strongest growth has been in emerging market economies
- a Minsky moment cannot be excluded

* weighted averages based on GDP and PPP exchange rates

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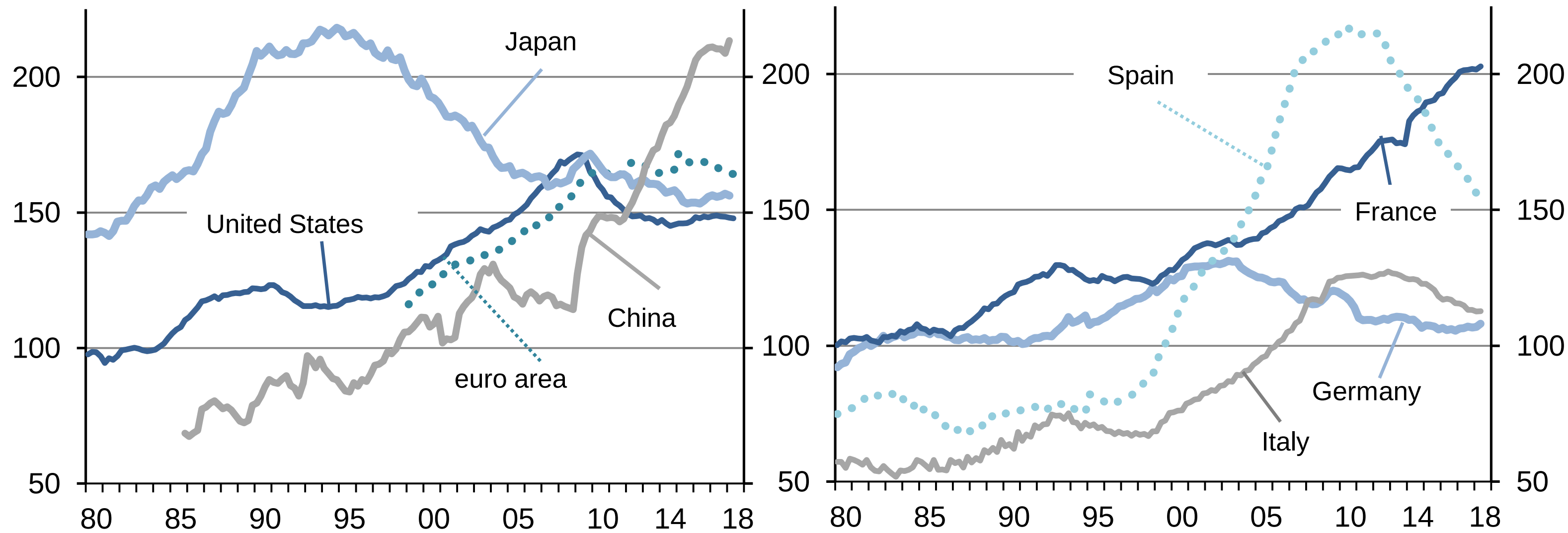
leverage has increased since 2007

private non-financial sector debt*

% of GDP

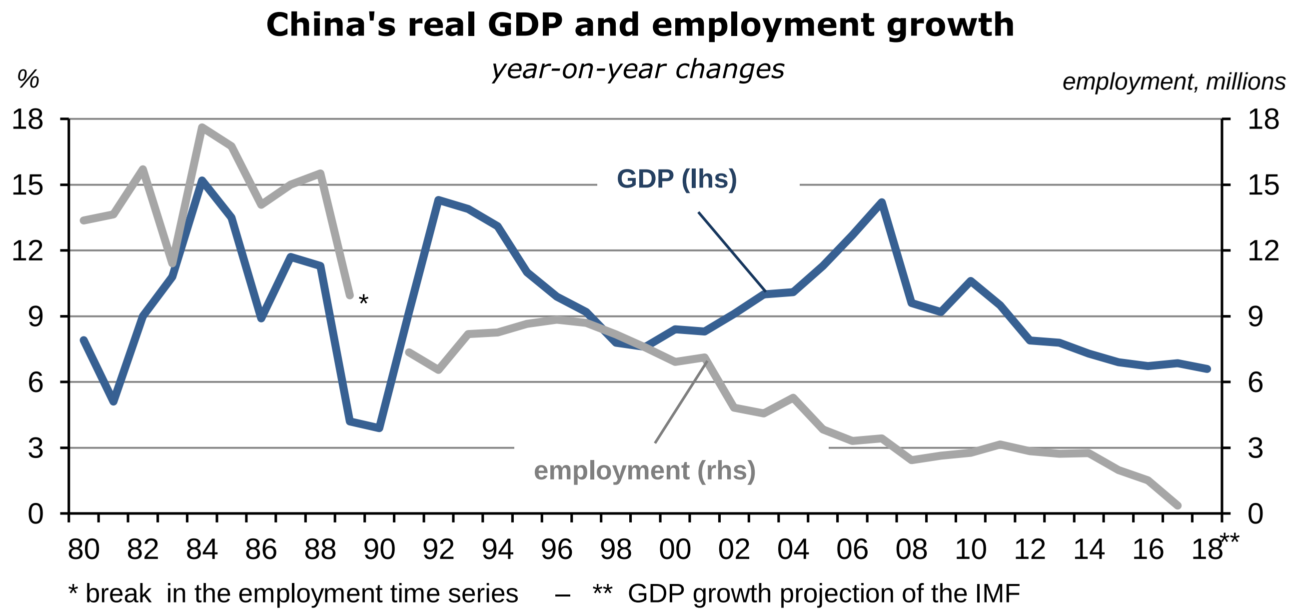


sources: Federal Reserve, ECB, BIS; own calculations

- China and France at risk
- Spain and Italy have impressively reduced leverage
- Japan has been deleveraging since the mid-nineties
- Germany and Italy least indebted

* latest data for Q2 2018;(Japan, China: Q1 2018)

China – the great unknown



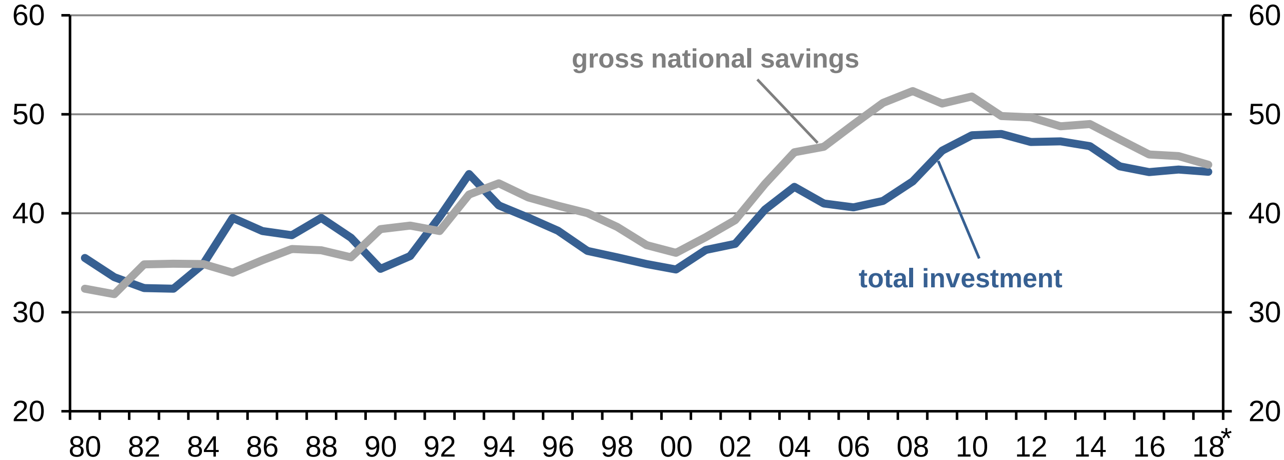
sources: IMF, NBS, own calculations

- growth rates on the way down
- employment growth has ended
- structural change toward consumption and services
- productivity growth still strong
- no secular stagnation

China – the great unknown

China's investment and savings ratios

percent of GDP



* IMF projections

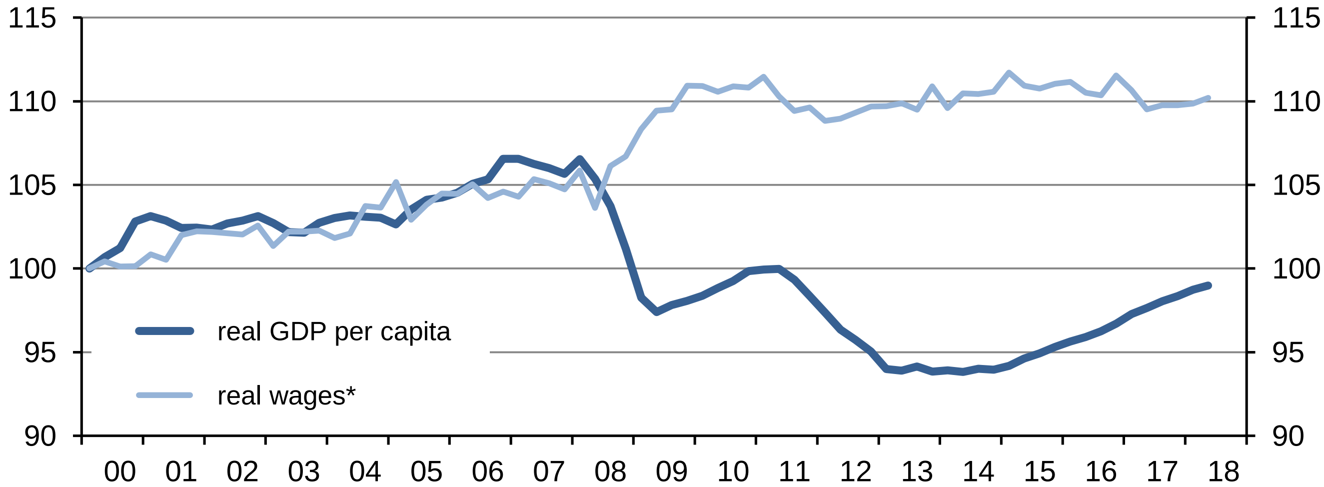
source: IMF

- likely: a significant misallocation of resources
- large financial reserves
- China's capital markets not tightly integrated into the world economy

Italy – still quite alive

Italian GDP per capita and real wages

2000Q1=100



* hourly earnings; private sector; CPI-deflated

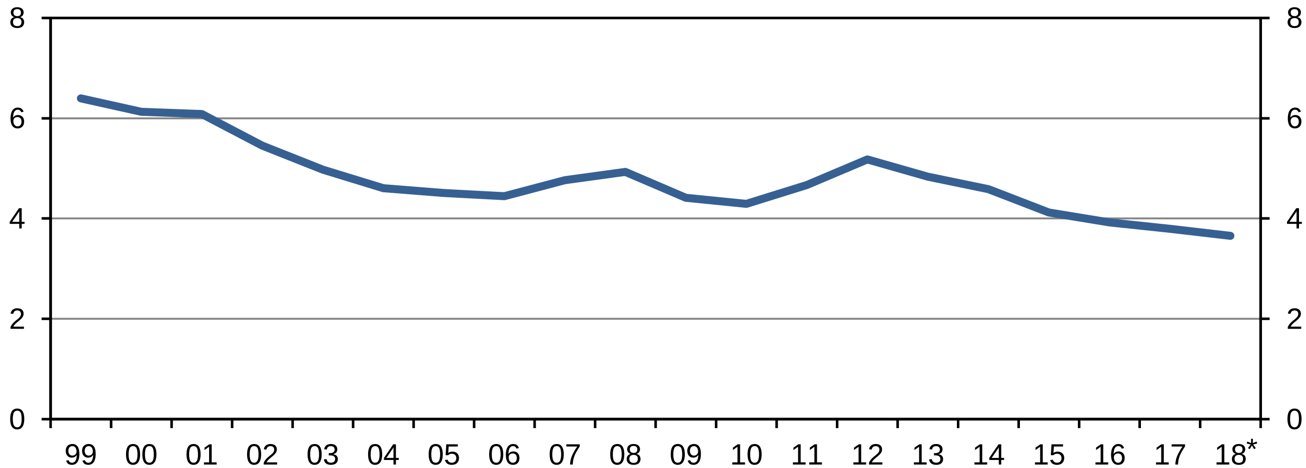
sources: OECD, Eurostat, own calculations

- Italian workers cannot like the EU, given their income situation
- output gap must be very large
- below-average inflation rates

Italy – still quite alive

Italy: interest on government debt

% of GDP



* projection of the European Commission as of November 2018

source: AMECO

- debt service not a problem
- in spite of large debt relative to GDP
- duration less than 7 years (average residual maturity 7.3 years)
- most of government debt is held domestically

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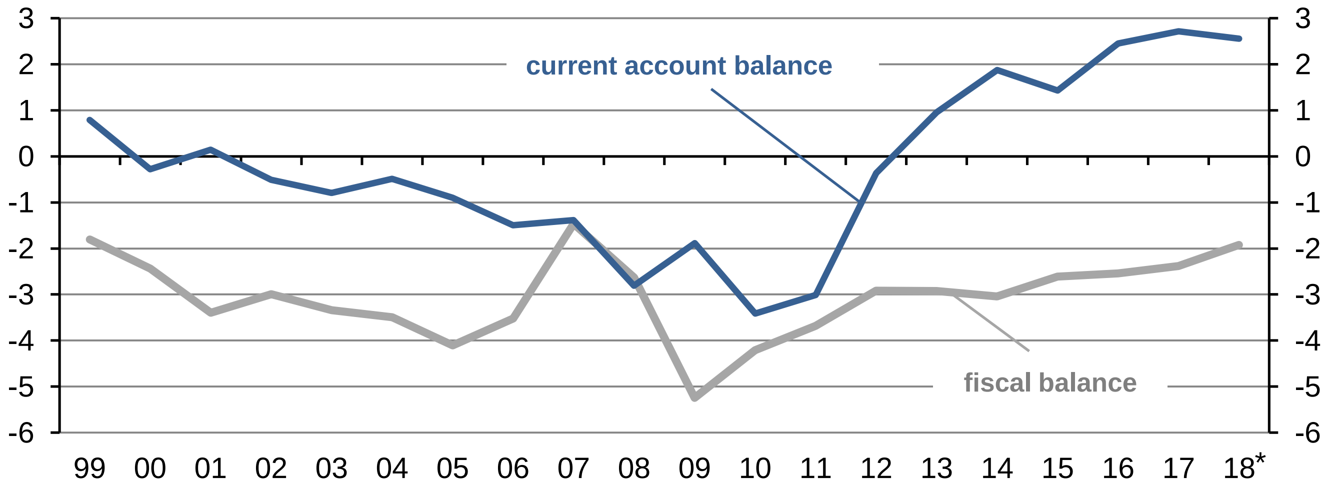
Italy – still quite alive

Italy: current account and fiscal balance

% of GDP



* projection of the European Commission as of November 2018
source: AMECO

- current account surplus = net exporter of capital
- government: large and rising primary budget balance
- impressive turnarounds – homework done on macro front

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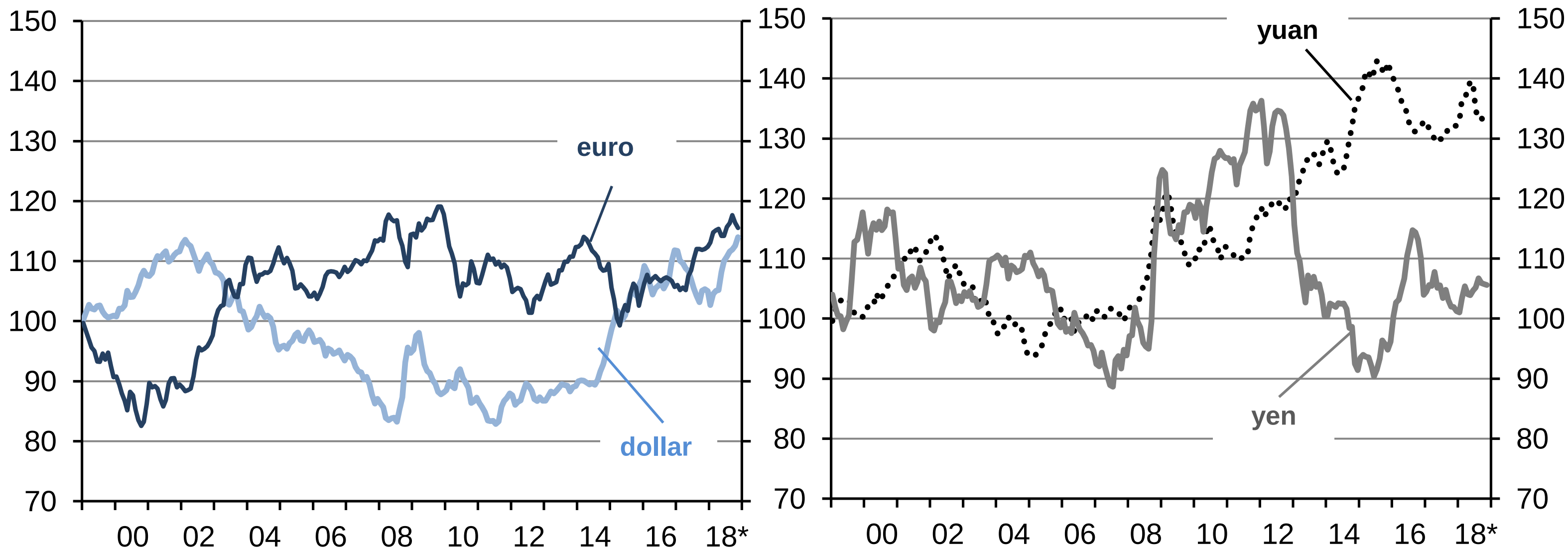
other risks are also manageable

nominal effective exchange rates

Dec 1998 =100

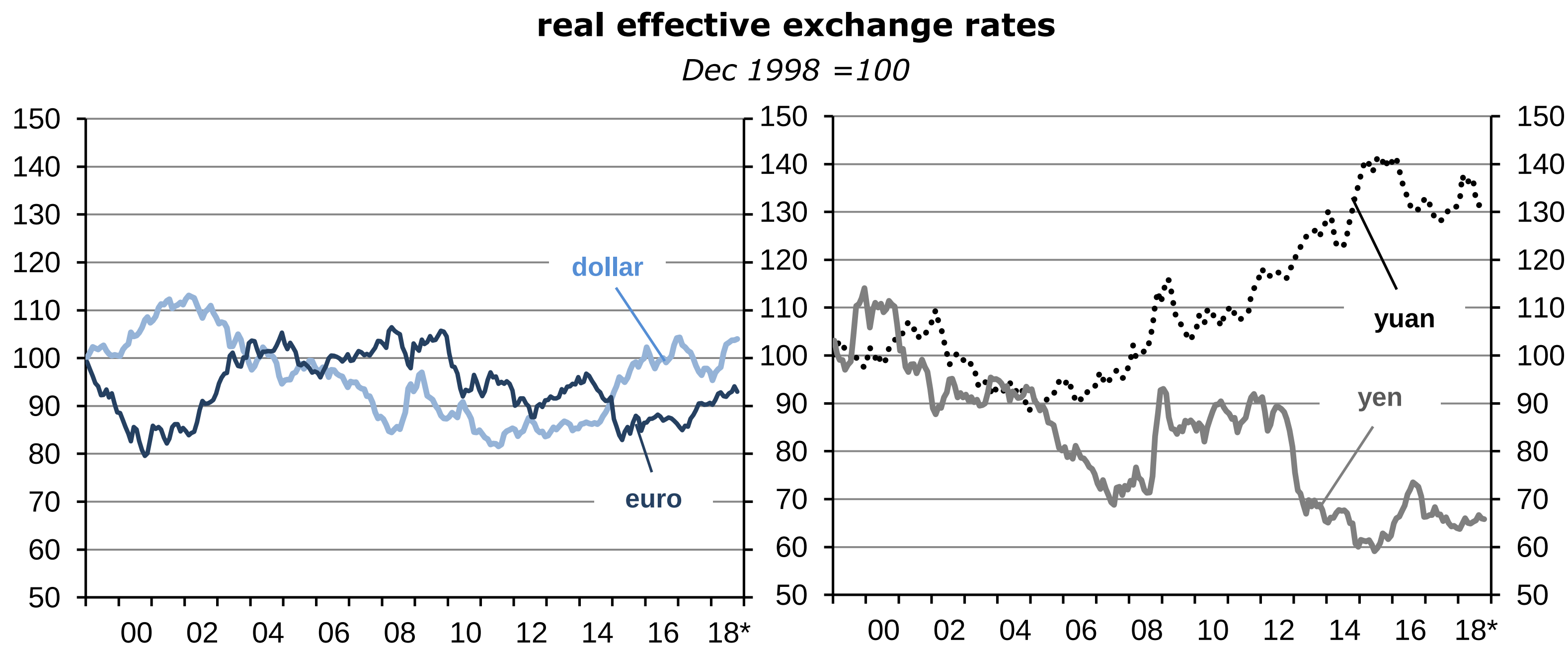


source: Bank for International Settlements; own calculations

- strong relative depreciation of the euro against the dollar
- some of Europe's fundamentals are better than America's
- a large euro appreciation – a major risk

* latest data for November 2018

other risks are also manageable

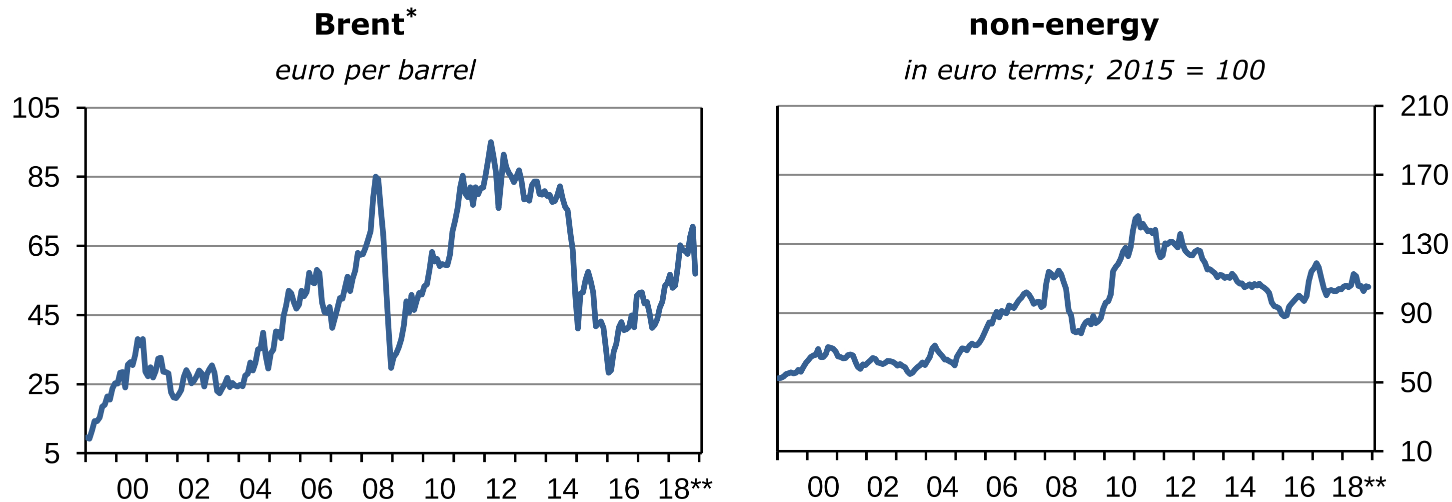


source: Bank for International Settlements; own calculations

- European firms very price competitive
- in spite of weak euro no import of inflation

other risks are also manageable

commodity prices



* monthly averages – ** latest data for November 2018

sources: Thomson Reuters, HWWI; own calculations

- lower oil prices boost purchasing power in importing countries
- stabilize world economy
- will also lead to lower headline inflation – and lower bond yields

conclusions