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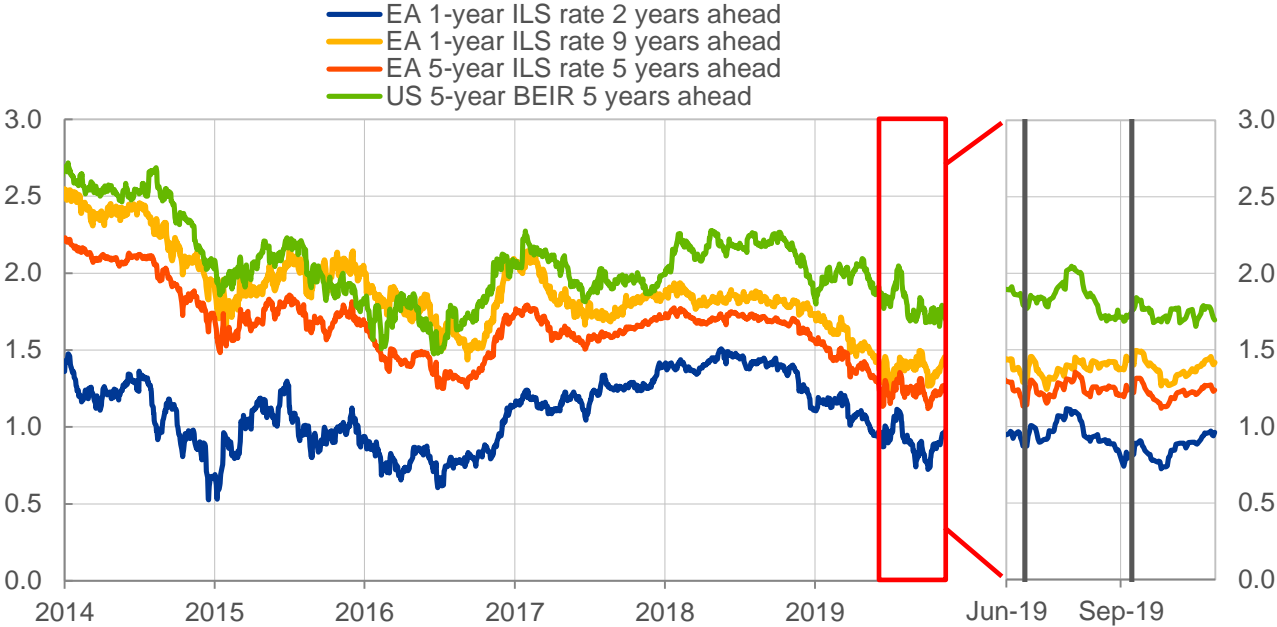
# Recent developments in market-based measures of inflation expectations

BMCG meeting

Frankfurt, 20 November 2019

## EA and US market-based measures of inflation compensation

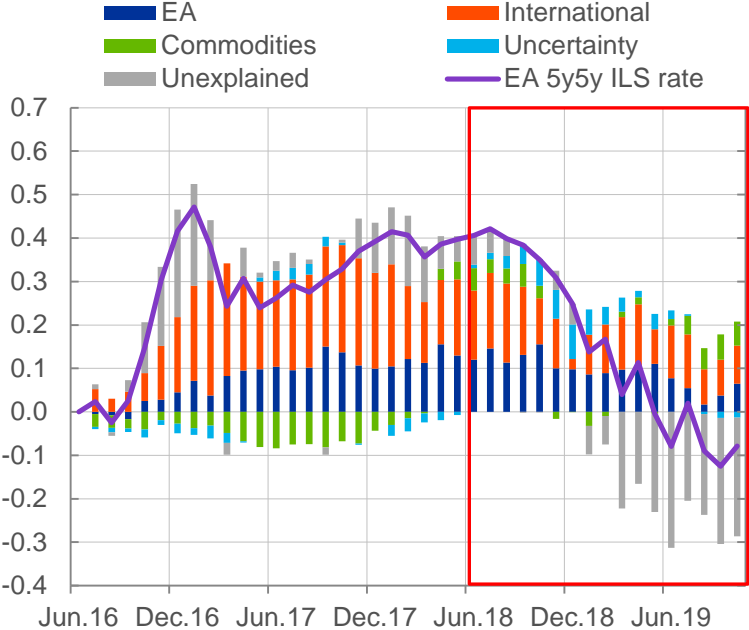
(percentages per annum)



Sources: Bloomberg, Thomson Reuters, and ECB calculations.  
Latest observation: 15 November 2019.

## Macroeconomic drivers of EA 5y5y forward inflation-linked swap rate

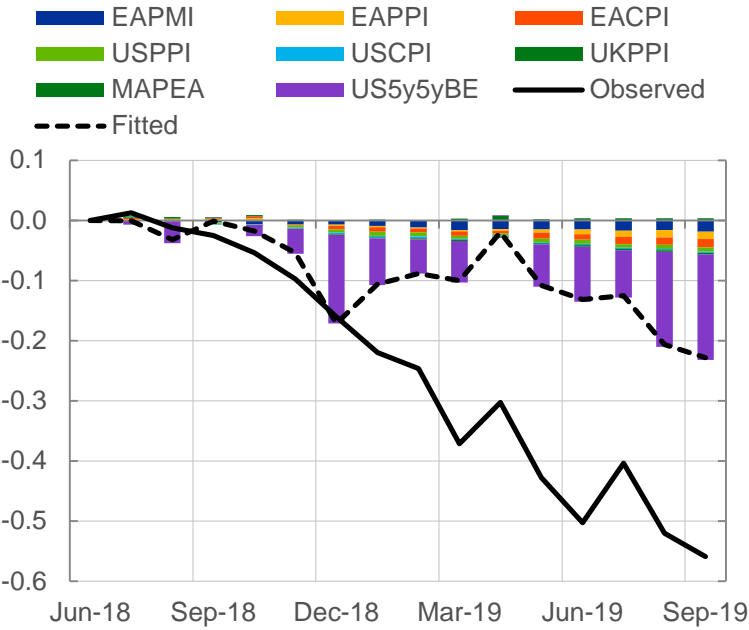
(percent; cumulative change)



Sources: Bloomberg, Thomson Reuters and ECB calculations.  
 Notes: Historical shock decomposition from a large BVAR, estimated over the period 2005 – January 2017. The model includes EA, US and Chinese real and financial variables and is estimated at monthly frequency. Shock identification via Choleski ordering. Cumulative changes since June 2016.  
 Latest observation: October 2019.

## Explaining the EA 5y5y ILS rate based on Bayesian model averaging

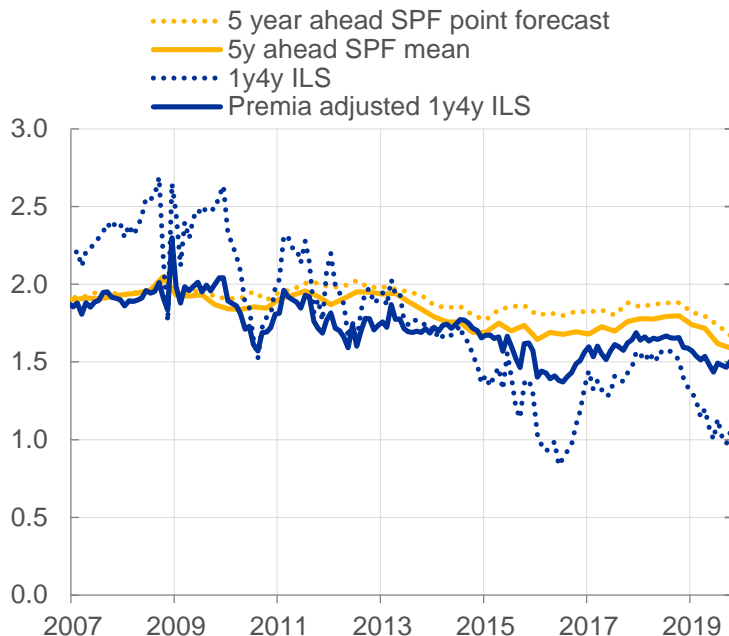
(percent; cumulative change)



Sources: Bloomberg, Thomson Reuters, and ECB calculations.  
 Notes: Fitted cumulated changes and contributions are based on a Bayesian model averaging exercise. The chart depicts the posterior probability weighted fitted cumulated change based on the 10 most likely models. Weights are normalised to add up to one. The estimation sample starts in June 2014.  
 Latest observation: September 2019.

## SPF inflation expectations and risk premium-adjusted 1y-in-4y ILS rate

(percentages per annum)



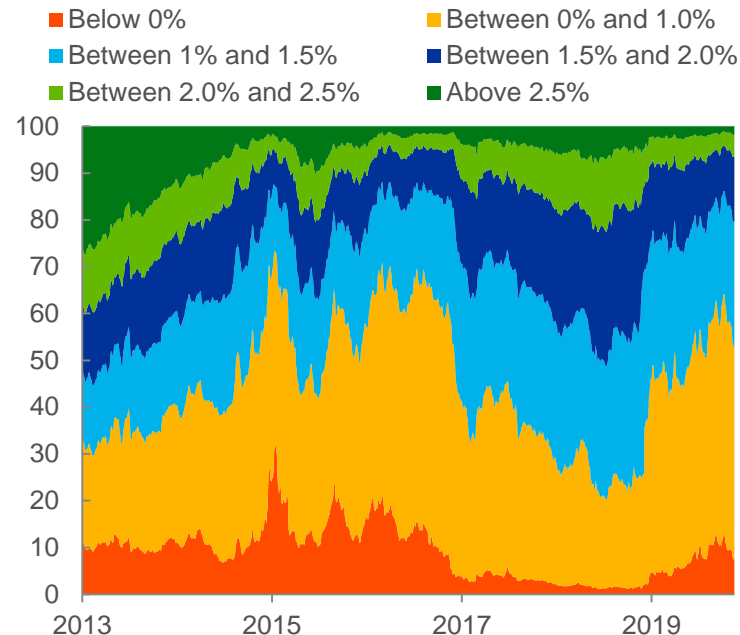
Sources: Bloomberg, Thomson Reuters, and ECB calculations.

Note: The risk adjusted 1y4y ILS rate is based on the decomposition of an affine term structure model and fitted to the euro area zero-coupon ILS curve. Survey expectations from the Survey of Professional Forecasters (SPF) refer to the point estimate and mean, respectively, of the reported probability distributions for year-on-year expectations 5 years ahead.

Latest observation: 2019 Q4 (SPF), October 2019 (market data).

## Option-implied distribution of average inflation over the next five years

(percentages)



Sources: Bloomberg, Thomson Reuters, and ECB calculations.

Notes: Probabilities implied by five-year zero-coupon inflation options, smoothed over five business days. Risk-neutral probabilities may differ significantly from physical, or true, probabilities.

Latest observation: 15 November 2019.

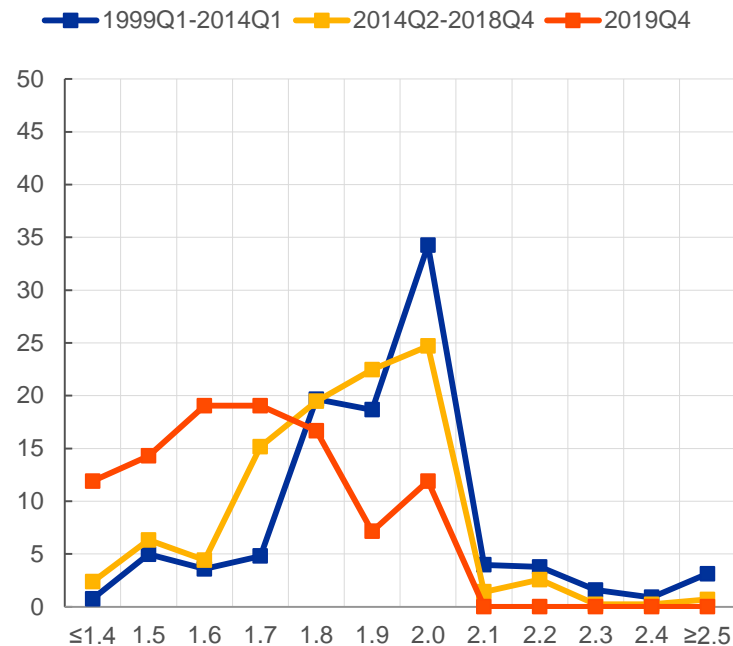
## Short-, medium- and long-term inflation expectations from the ECB SPF

(annual % changes)



Sources: ECB Survey of Professional Forecasters (SPF), ECB staff calculations.  
 Notes: Every marker corresponds to a SPF round. Long-term expectations refer to 5 years ahead (currently 2024).  
 Latest observation: SPF 2019Q4.

## Distribution of long-term inflation expectations (percent of replies)



Sources: ECB Survey of Professional Forecasters, ECB staff calculations.  
 Notes: The SPF asks respondents to report their point forecasts and to separately assign probabilities to different ranges of outcomes. This chart is based on the point forecast responses.  
 Latest observation: ECB SPF 2019Q4 (survey conducted 1-7 October 2019).