Slack and Cyclically Sensitive Inflation

by

Stock and Watson

Discussion

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What happened to the Phillips curve?

- Flattening? Disappearing?
- Or simply lost in noisy data?

➢The answer to this question has important policy implications

➢Difficult empirical problem since an inflation component reflecting the slack in the economy may be dominated by persistent trends influenced by monetary policy and by noise due to shocks such as energy

My discussion – the message

- Exploiting the heterogeneity of PCE components is a smart way to identify the Phillips curve component of inflation and construct an indicator of cyclical pressures on inflation
- Agree with the authors' empirical finding that the Phillips curve is not dead

However some problems :

- The CSI gives excessive weight to housing and energy (indirect effect via food) not clearly reflecting business cycle sensitivity
- This may make it a poor predictor/leading indicator of cyclical inflation

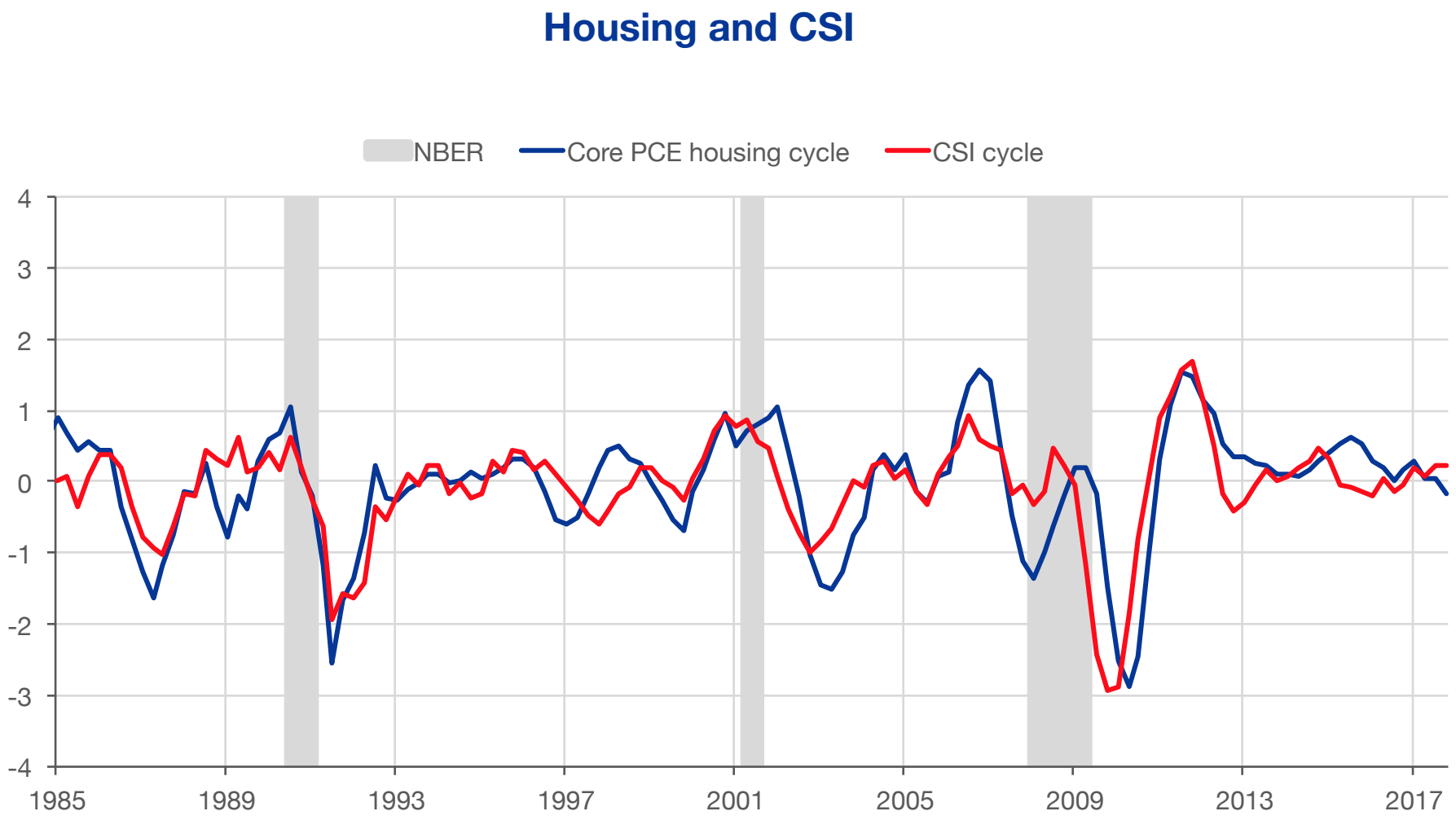
⇒ *Suggest an alternative model in the same spirit as a benchmark*

My discussion – outline

A. A close look at CSI
B. An alternative decomposition which also captures the cyclically sensitive component of inflation but may better suited for forecasting
C. Where are we today?

A. SOME FEATURES OF THE CSI

CSI very strongly correlated with housing



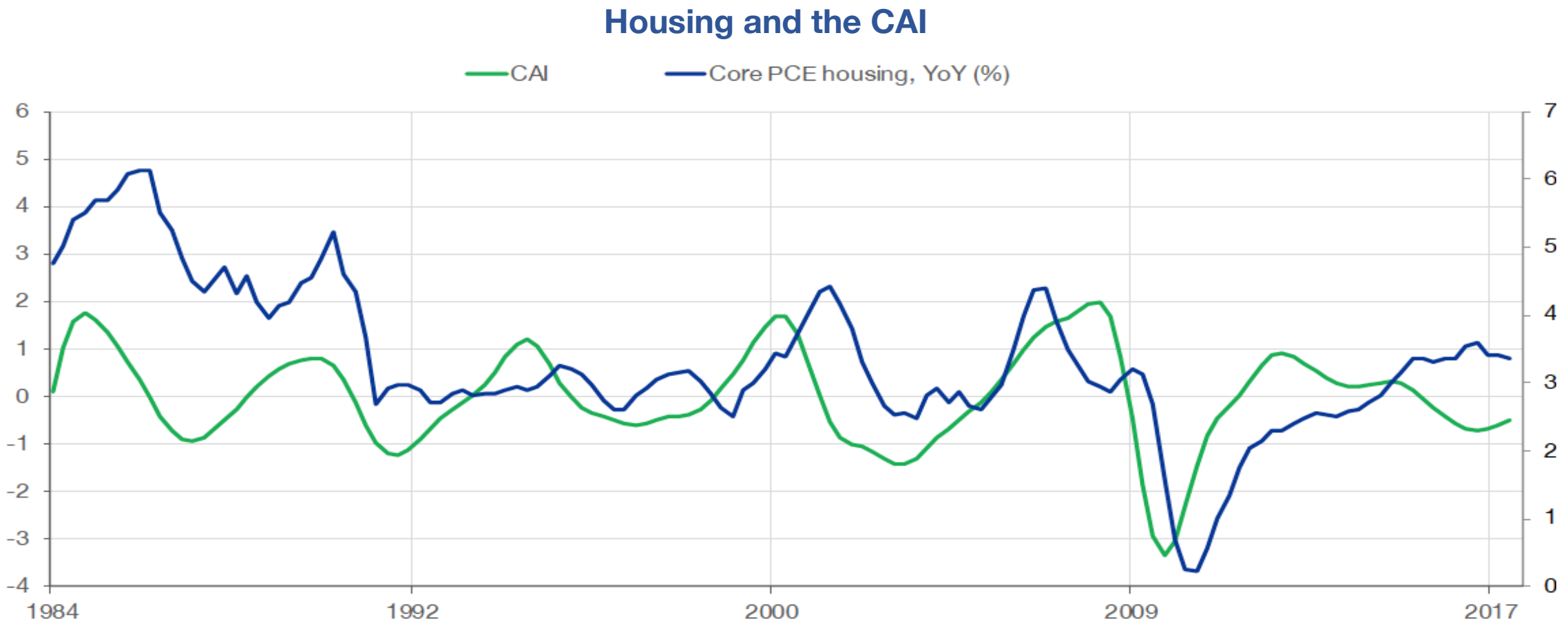
Not surprising! Housing exc gas & electricity weighted 63% in CSI and 23% in PCE

Table 3.2
Correlations between inflation components and the cyclical activity index, and CSI weights, 1984-2018q1.

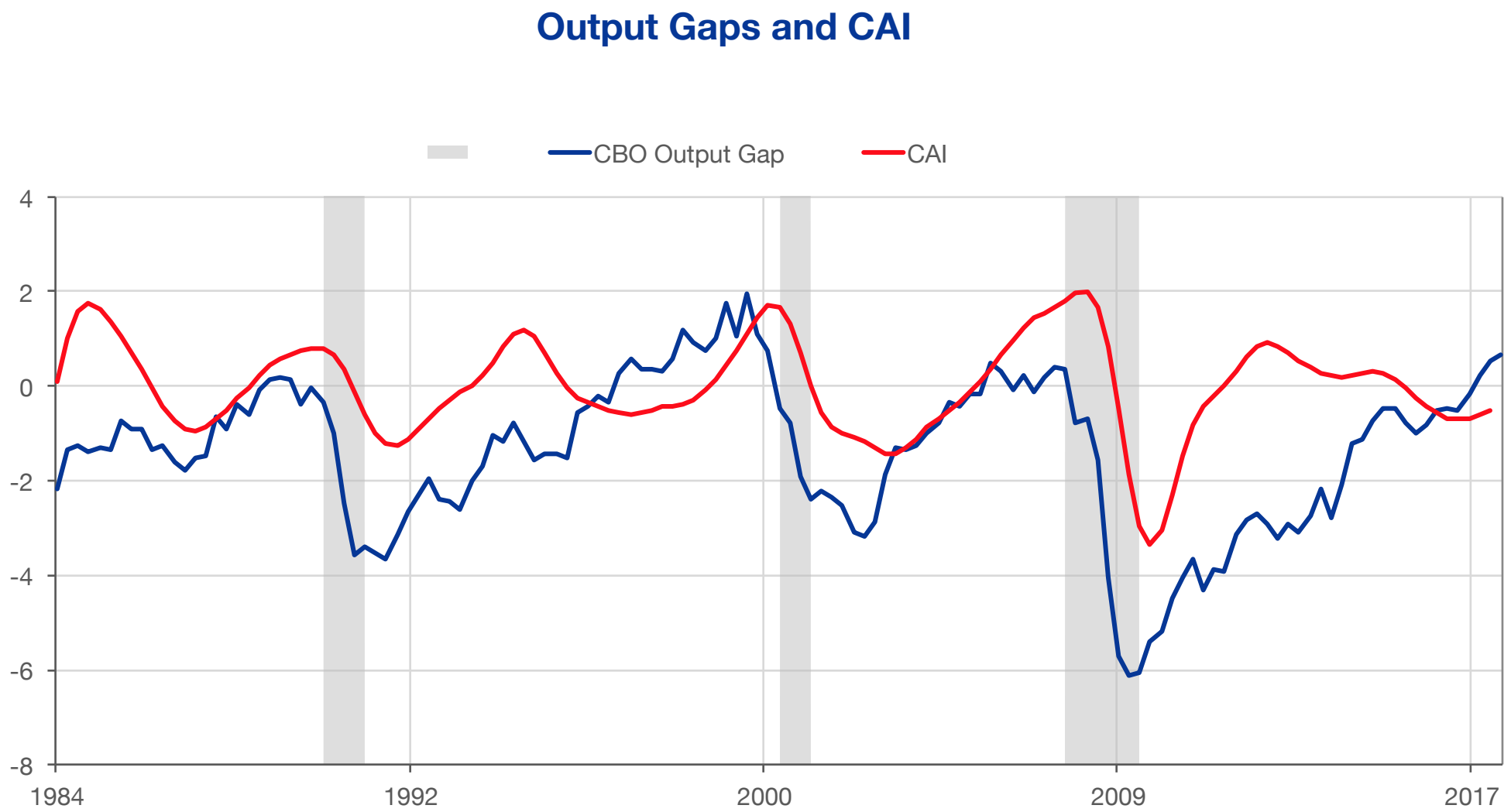
Component	Correlation between cyclical activity index and:		CSI weight (w_i)
	Band-pass inflation	4-qtr change in 4-qtr inflation	
Motor vehicles and parts	-0.24	-0.37	0.000
Furnishings & durable household equipment	0.28	0.10	0.000
Recreational goods and vehicles	0.34	0.25	*excluded*
Other durable goods	0.24	0.10	0.000
Food and beverages purchased for off-premises consumption	0.56	0.43	0.159
Clothing & footwear	-0.03	-0.08	*excluded*
Gasoline & other energy goods	-0.01	-0.04	0.000
Other nondurable goods	0.08	0.06	0.000
Housing excluding gas & electric utilities	0.67	0.48	0.629
Gas & electric utilities	0.23	0.13	0.022
Health care	-0.03	-0.11	0.000
Transportation services	0.04	0.02	0.000
Recreation services	0.41	0.28	0.086
Food services & accommodations	0.67	0.46	0.036
Financial services & insurance	-0.04	-0.12	*excluded*
Other services	0.09	0.15	0.069
NPISH	0.27	0.14	*excluded*

Sources:FRED
Notes: CSI weights are estimated by nonlinear least squares estimation of the regression in Equation (1), using the 13 Category A and B components of PCE inflation.

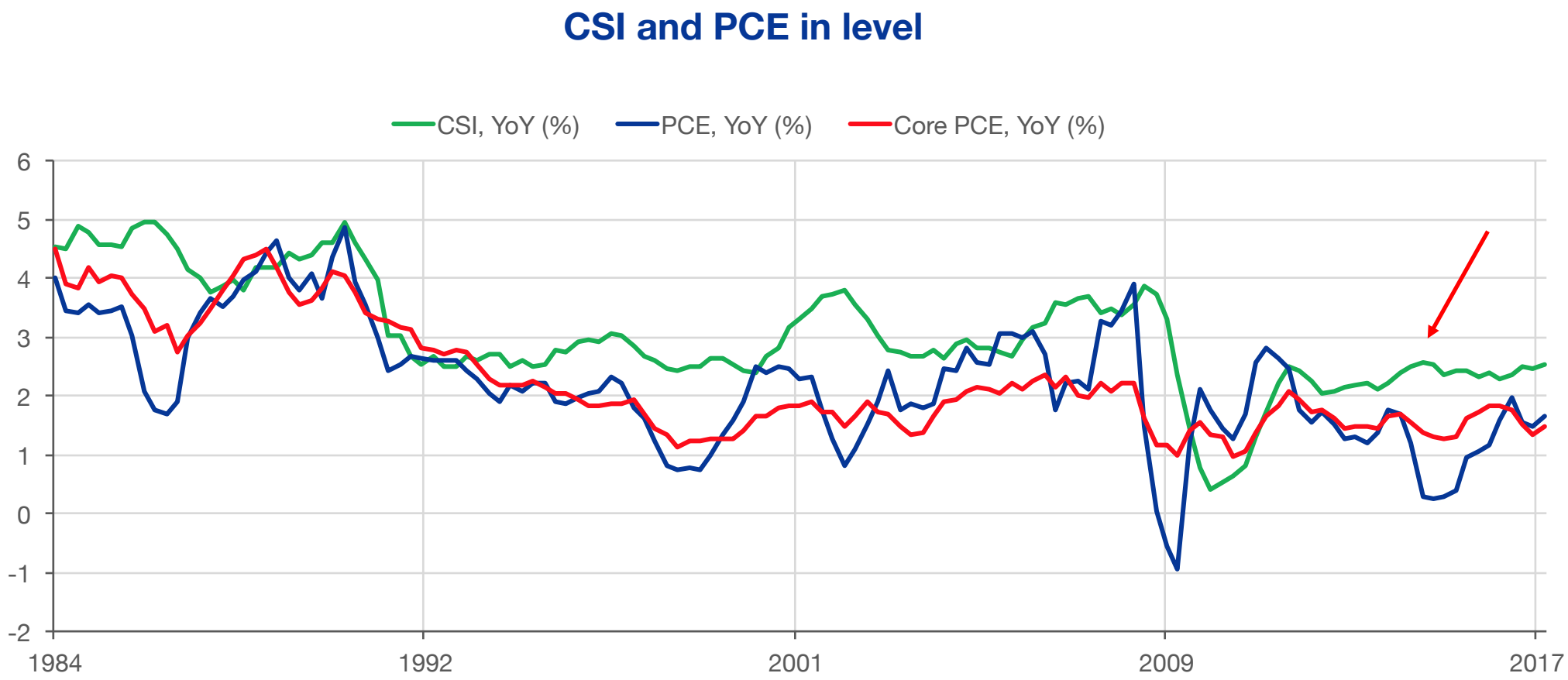
Indeed housing is very correlated with the CAI



PROBLEM 1: why is the CAI so volatile ?



PROBLEM 2: The CSI is persistently higher than PCE

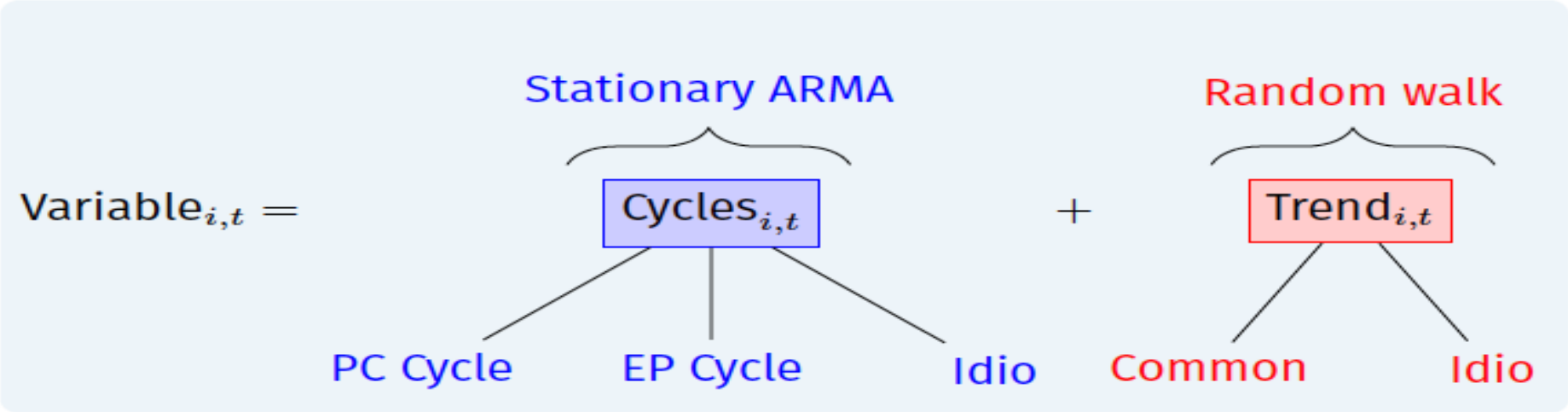


Questions on the CSI

1. How should we interpret the higher level of the CSI with respect to core PCE?
2. Does this reflect the asset price persistent component rather than business cycle?
3. Why have cyclical pressures identified by the CSI since 2012 not showed up in headline inflation up to now?
4. But if they don’t, should we care about the signal?

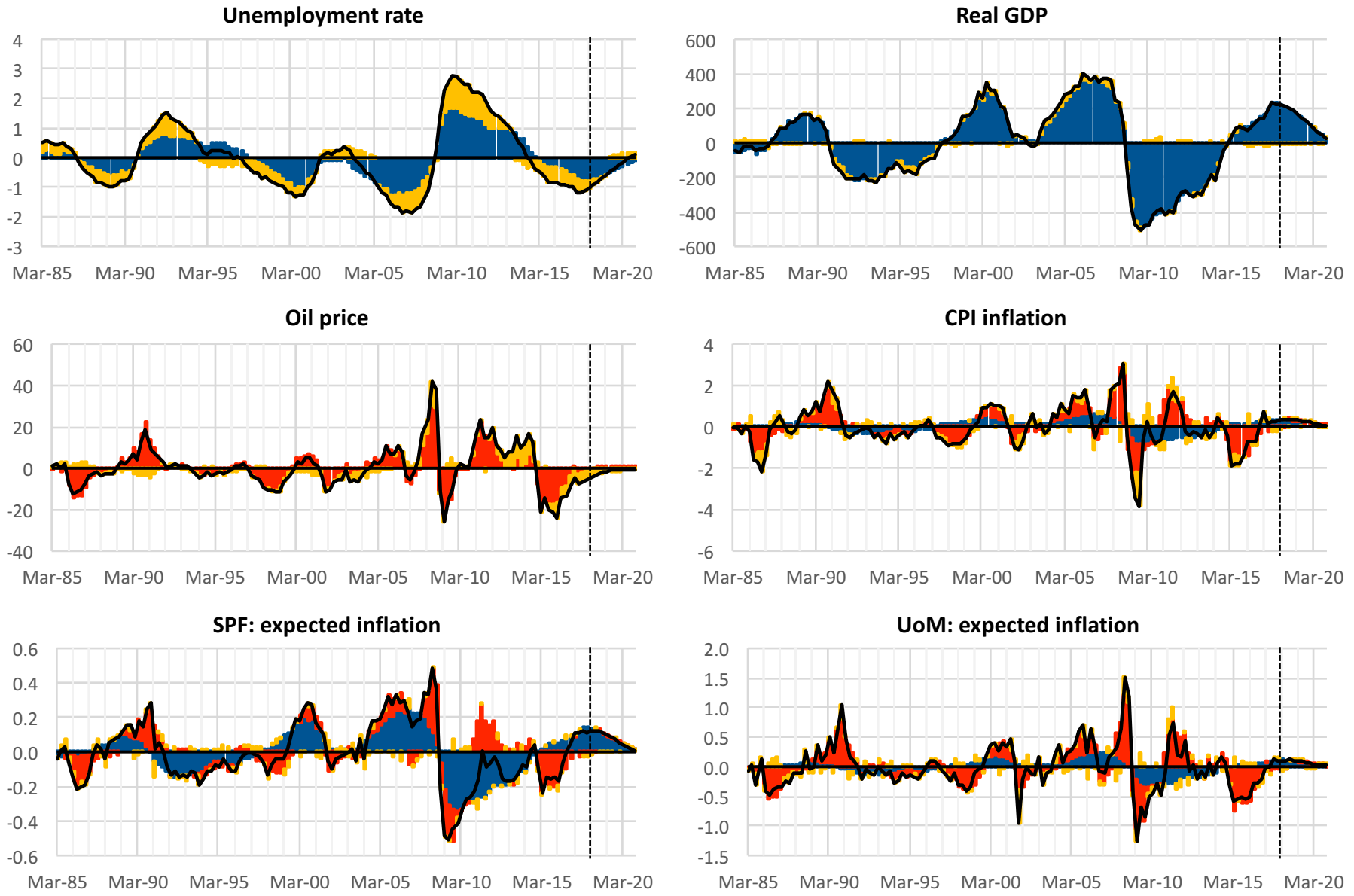
B. READING THE CSI THROUGH THE LENS OF AN ALTERNATIVE METHOD

Alternative approach: **trend-cycle model**

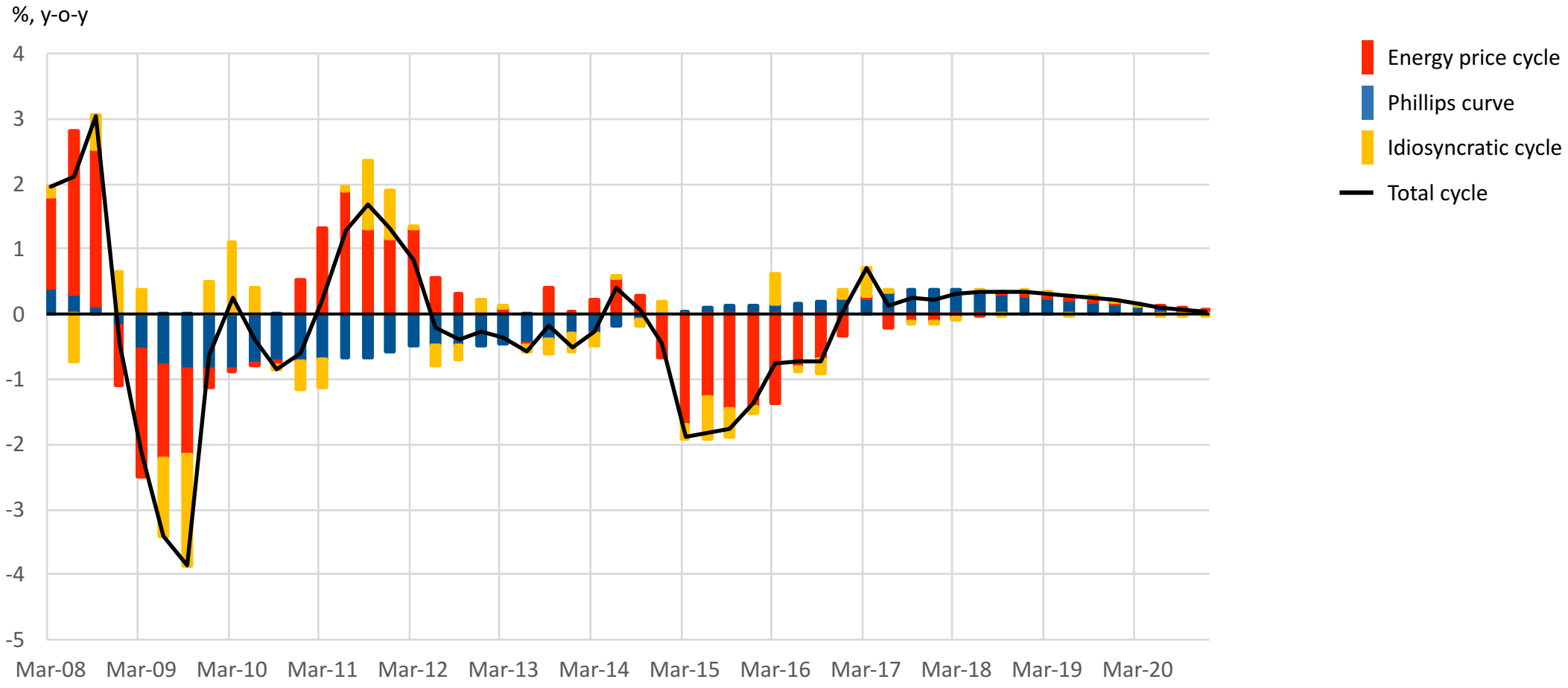


- Phillips Curve Cycle: Unemployment Rate, GDP, inflation expectations and inflation
- Energy Price Cycle: Oil prices, inflation expectations, and inflation
- Common Trend: Expectations and Inflation

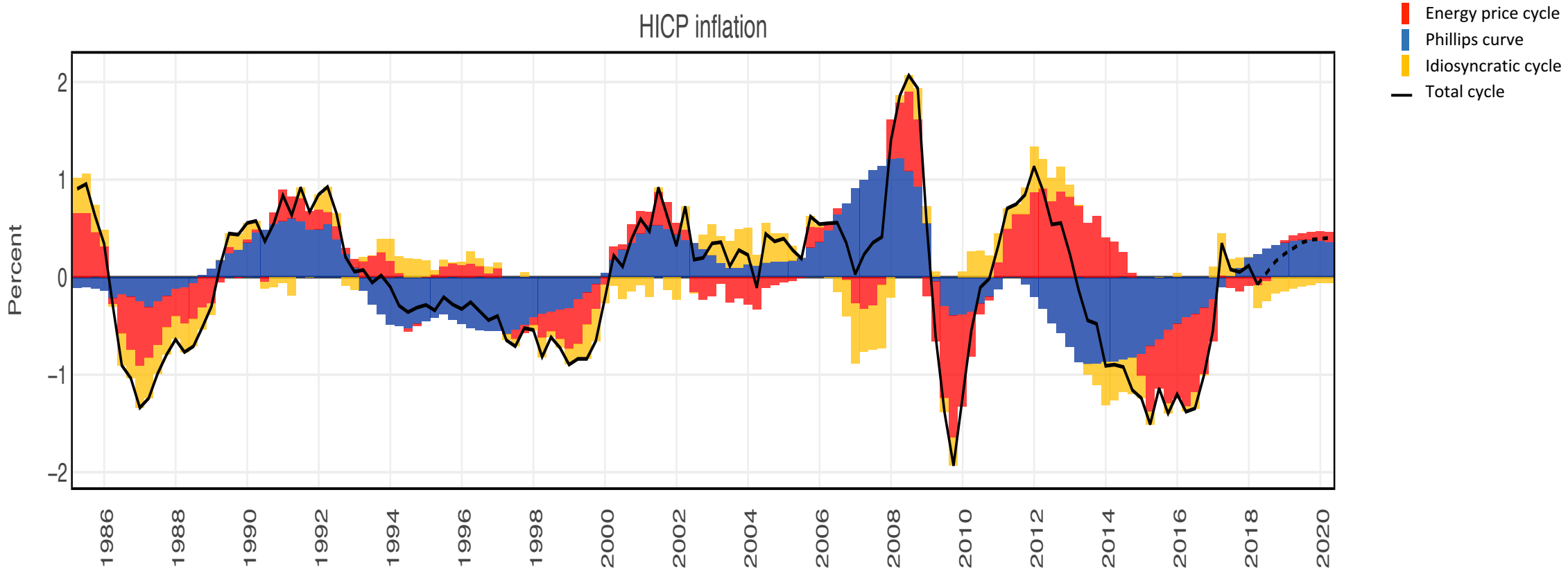
Historical decomposition of the cycles - US



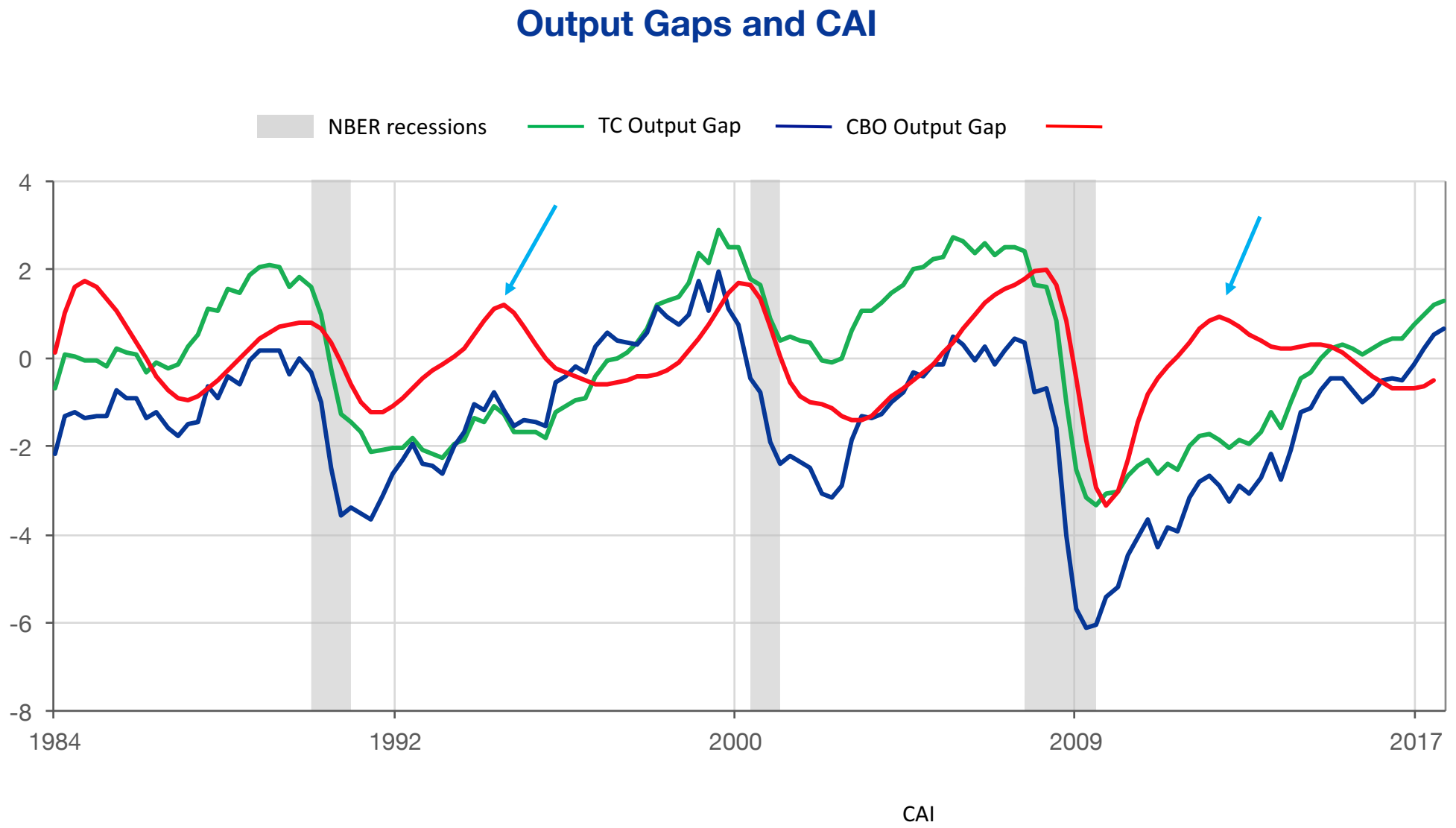
Zoom – CPI inflation



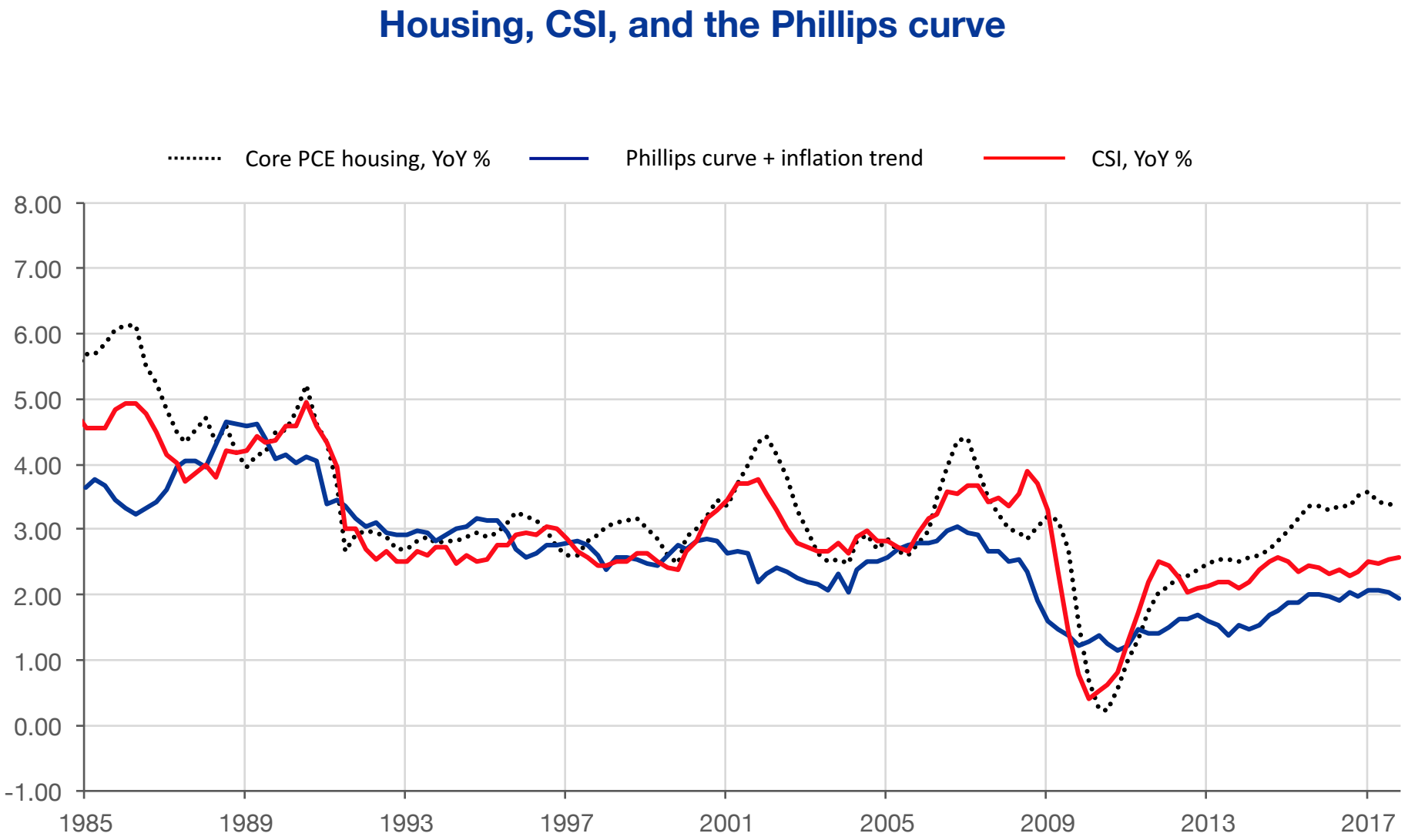
Historical decomposition – Euro area HICP



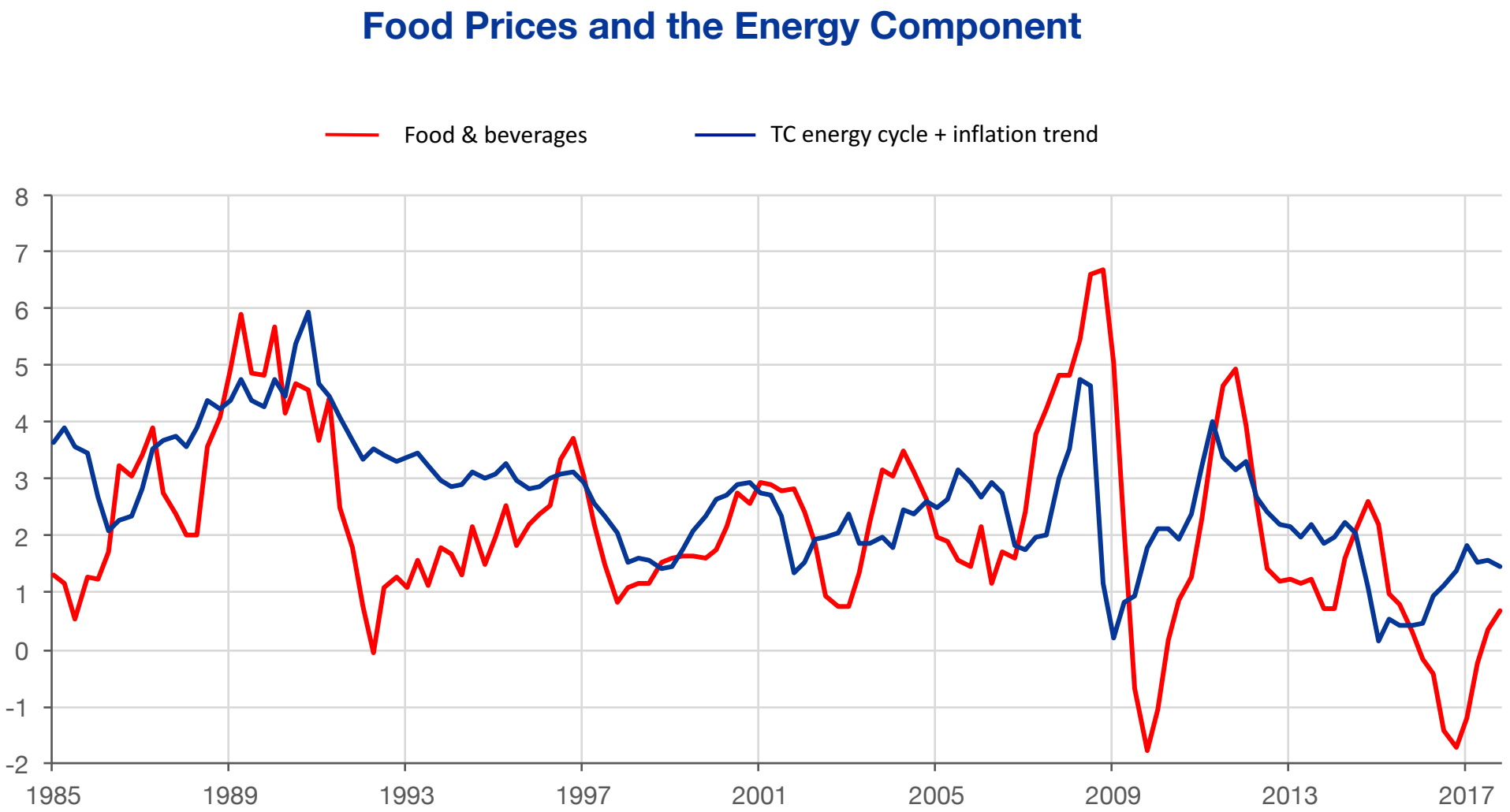
Output gap comparison- the US



Phillips curve and CSI in level: comparison

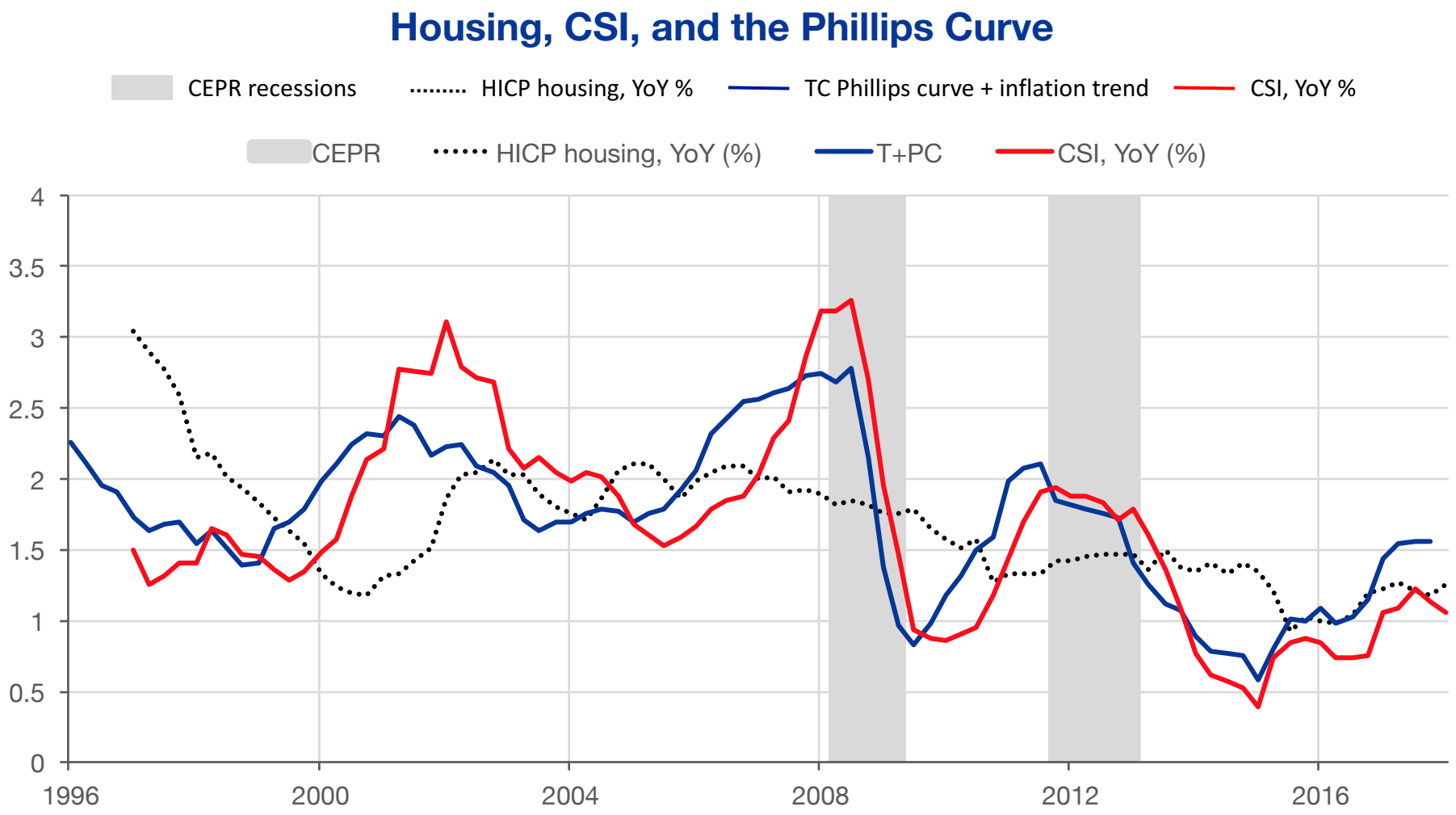


Compare food (second most important component in CSI) and energy component from trend-cycle model



Now the Euro area

No housing cycle – closer correlation between CSI and TC-PC



C. DOES IT MATTER?

Where are we today?

The US

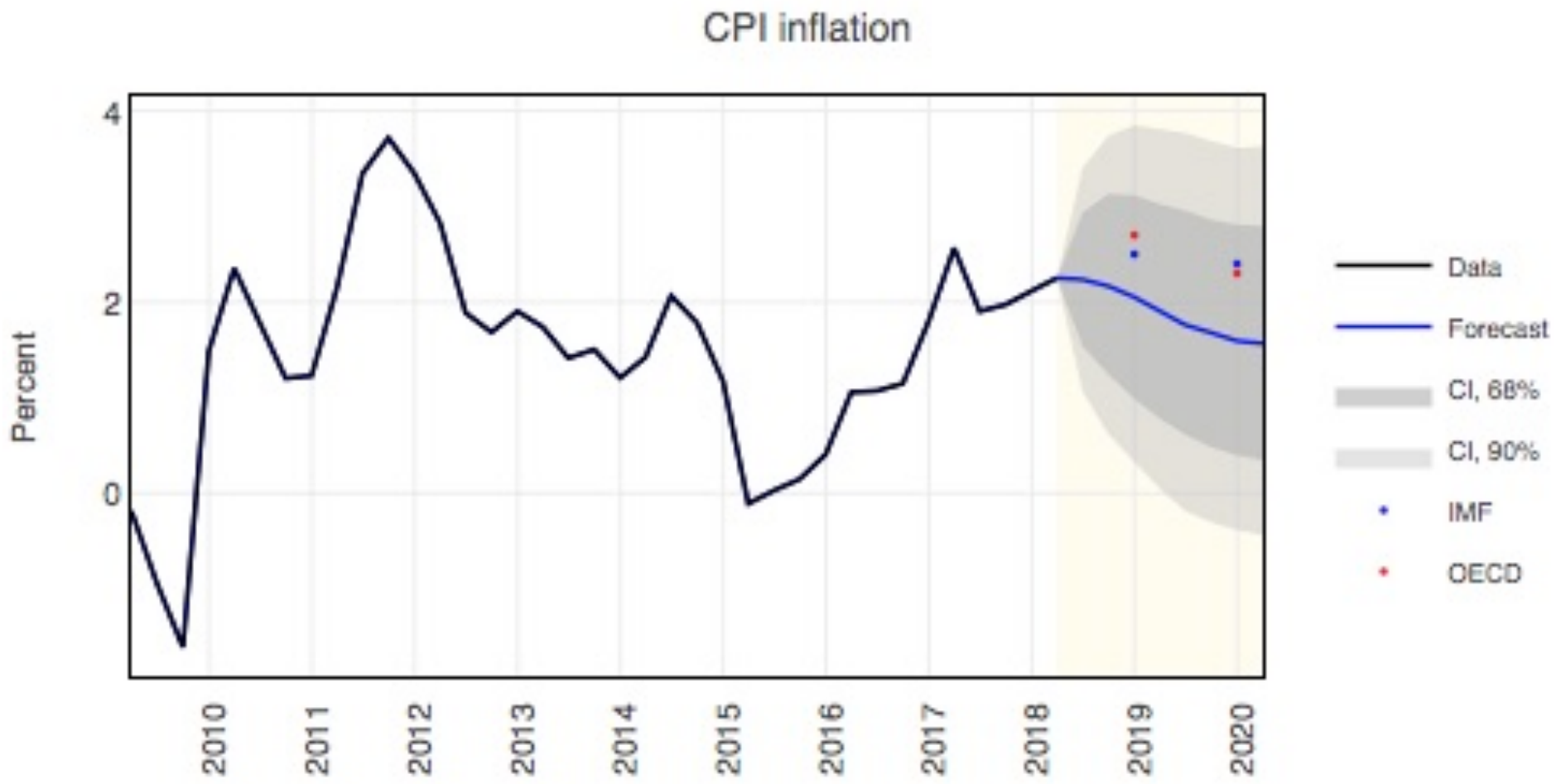
- The CSI: positive cyclical pressure from inflation more or less constant since 2012
- The trend-cycle model: upward pressure from 2015 has now peaked

The Euro Area

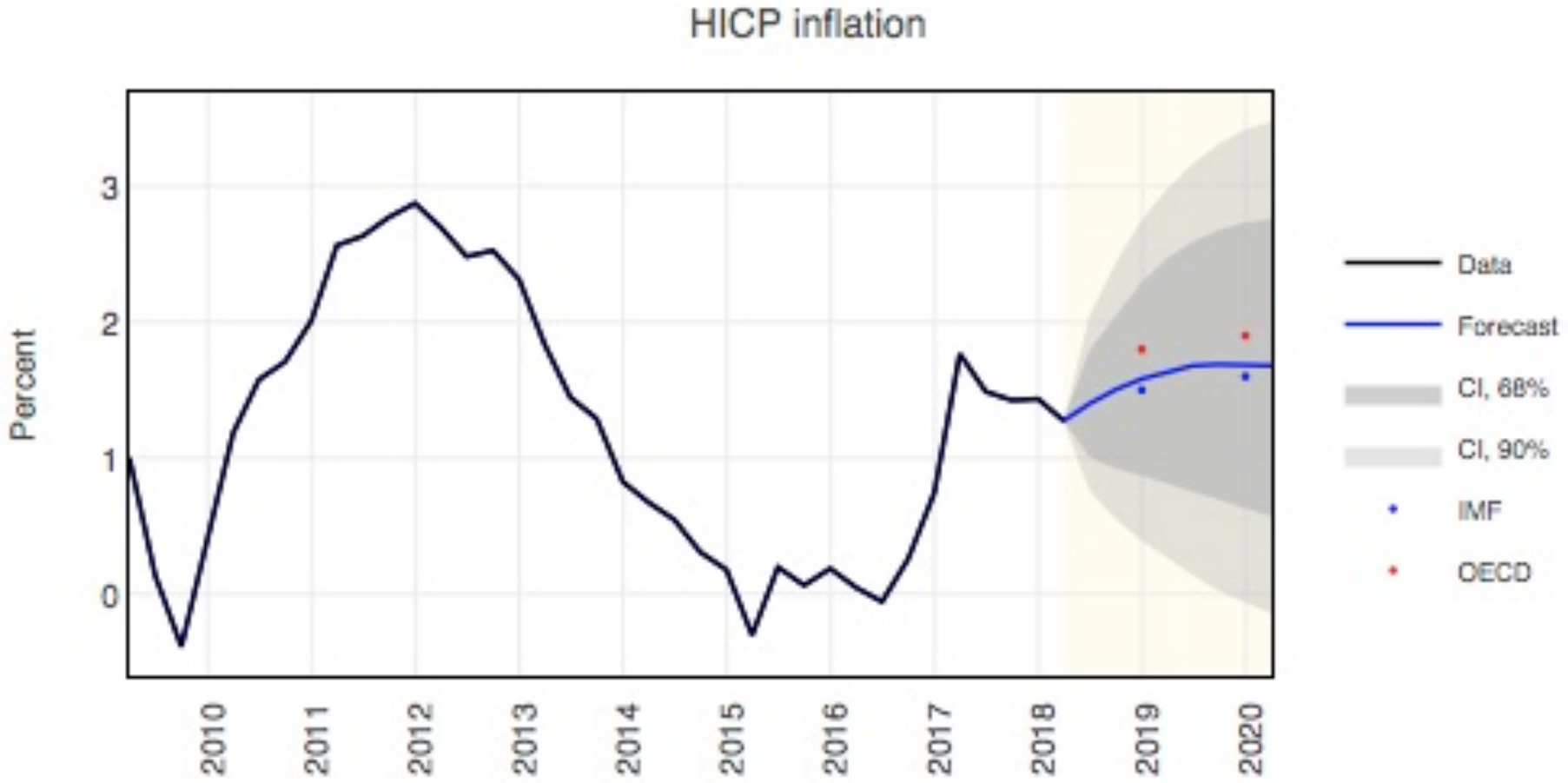
- The CSI: neutral pressure
- The trend-cycle model: upward pressure since 2017

→ *Implication for forecasting?*

Quarterly forecast - US



Quarterly forecast – the EA



Conclusions

- Some doubts about the model specification
- However agree with Stock and Watson’s fundamental conclusion: there is a cyclical component of inflation hidden in the data
- This indicates that the Phillips curve is alive and well but needs to be found

Finding the Phillips curve is like finding a needle in a haystack – but it is hidden there somewhere!