

Newspaper-based economic uncertainty indices for Poland

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Introduction

What I do in this paper:

- Develop newspaper-based indices for Poland, designed to measure the level of general as well as category-specific economic uncertainty, following the approach of Baker, Bloom and Davis (2016)
- Assess whether such natural-language-based indices, successfully implemented in the case of other countries, could also be regarded as proxies for economic uncertainty in Poland

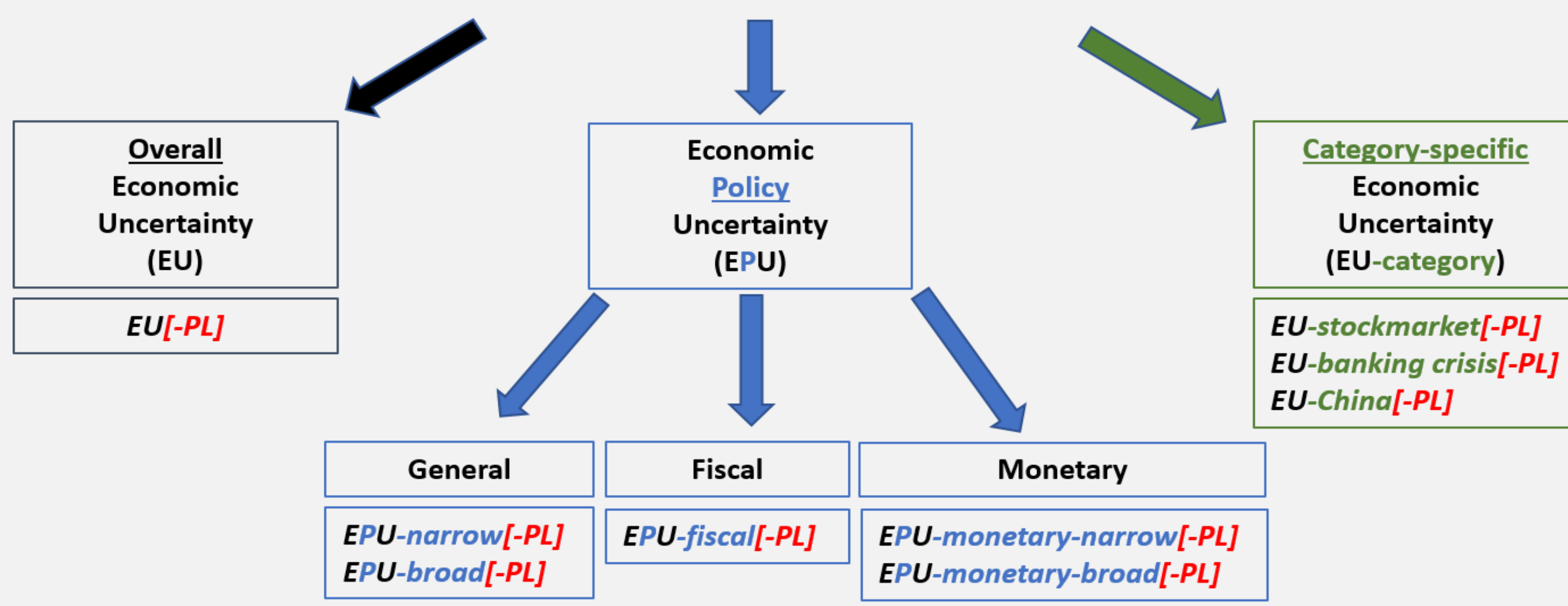
What is new?

- First published (to the best of my knowledge) newspaper-based economic uncertainty measures for Poland stretching back to 1989, much further than any other uncertainty proxies available

Index construction

- Calculate the **relative frequency of articles** about economic uncertainty published in the Polish daily *Gazeta Wyborcza* (GW)
- Search GW's own **online archive** using **Python** (+ Selenium) scripts
- Look for articles in Polish containing at least one word from two term-sets: (U) containing uncertainty terms, and (E) containing terms about the economy**
- Depending on the type of index, require that the article should also contain at least one word from a **third set of e.g. 'policy' (P) terms or 'category-specific' terms** (such as terms related to the stockmarket)

3 topical groups of economic uncertainty indices



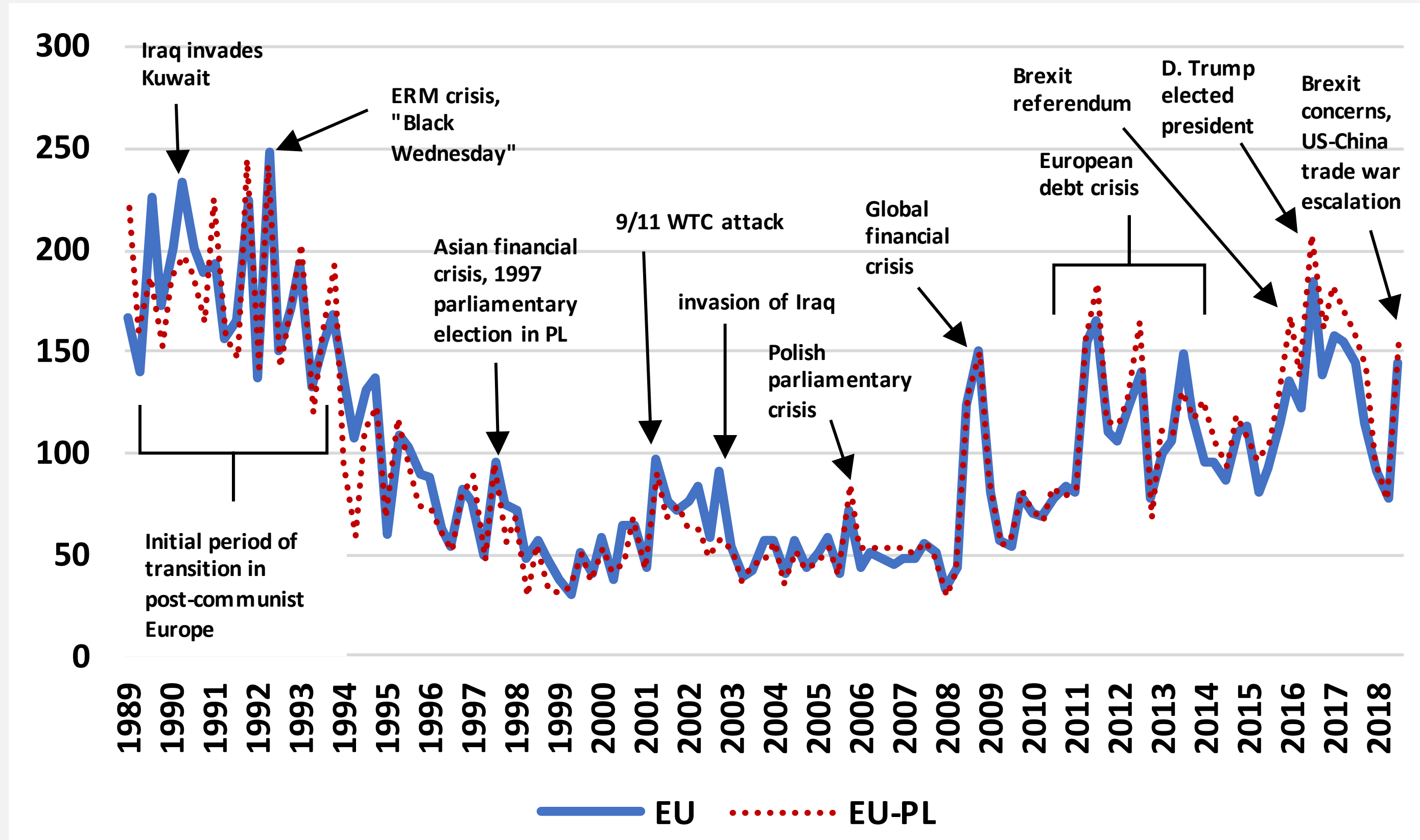
- Example: terms sets for the Polish **economic policy uncertainty (EPU) index** designed to resemble the benchmark EPU index of Baker et al. (2016):

Index	Term set	English translation	Implementation in Polish
EPU[-PL]	E	economic, economy	gospodark*, gospodarc*
	U	uncertainty, uncertain	niepewn*
	P	regulation, deficit, legislation, National Bank of Poland (NBP), government, parliament	regulac*, deficyc*, legislac*, NBP, rząd*, parlamen*
	[PL]	poland, polish	polsk*, polsc*

- Relative frequency of articles **standardized and normalized** to a mean of 100 over 1989q2-2018q4

Results

- Indices **spike** around uncertainty-laden events or periods
- Overall economic uncertainty in Poland **elevated in the early 1990s and post-2008**, since mid-1990s driven largely by events abroad

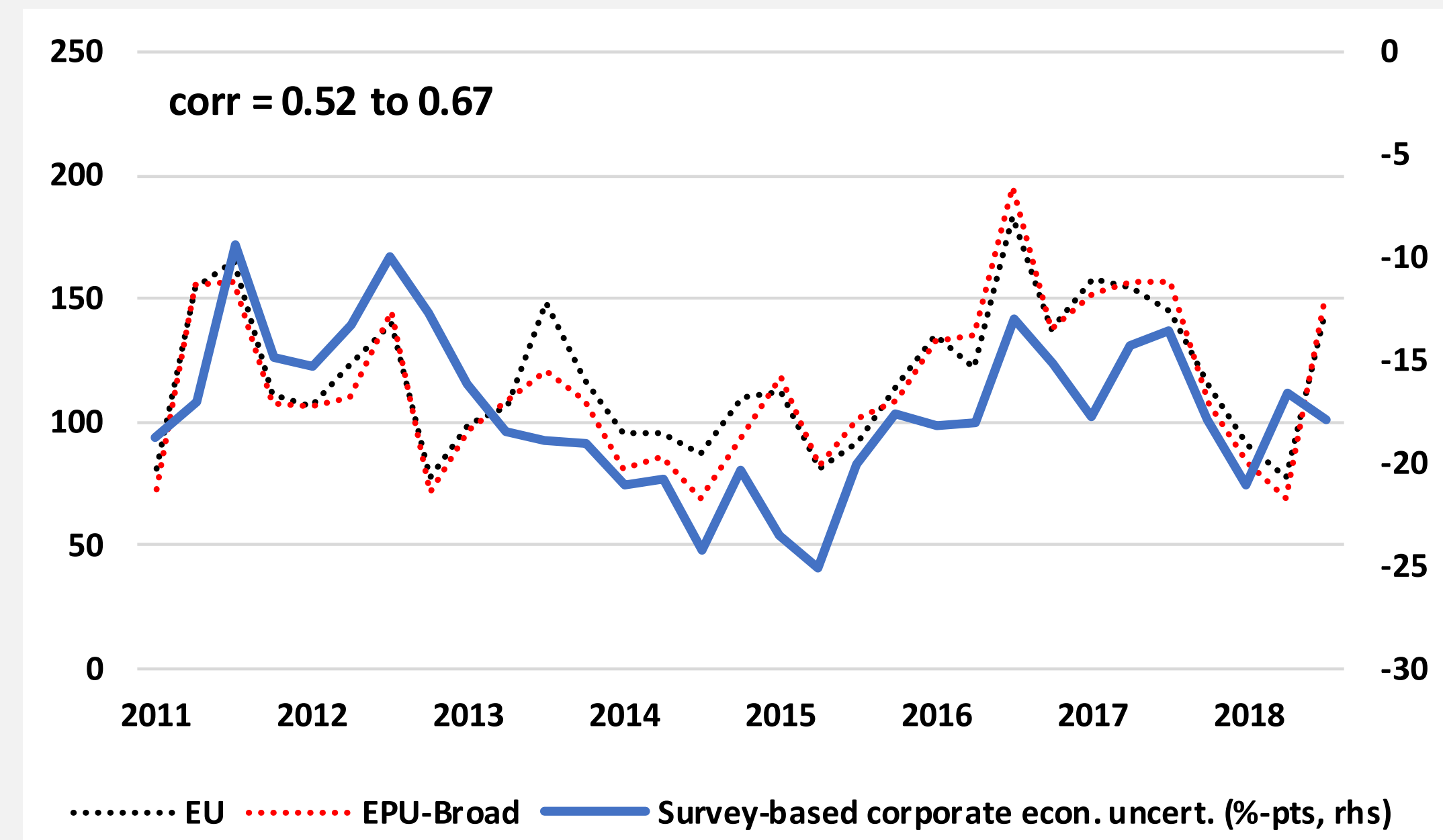


Index evaluation

- Correlation with **survey-based measures of econ. uncertainty**

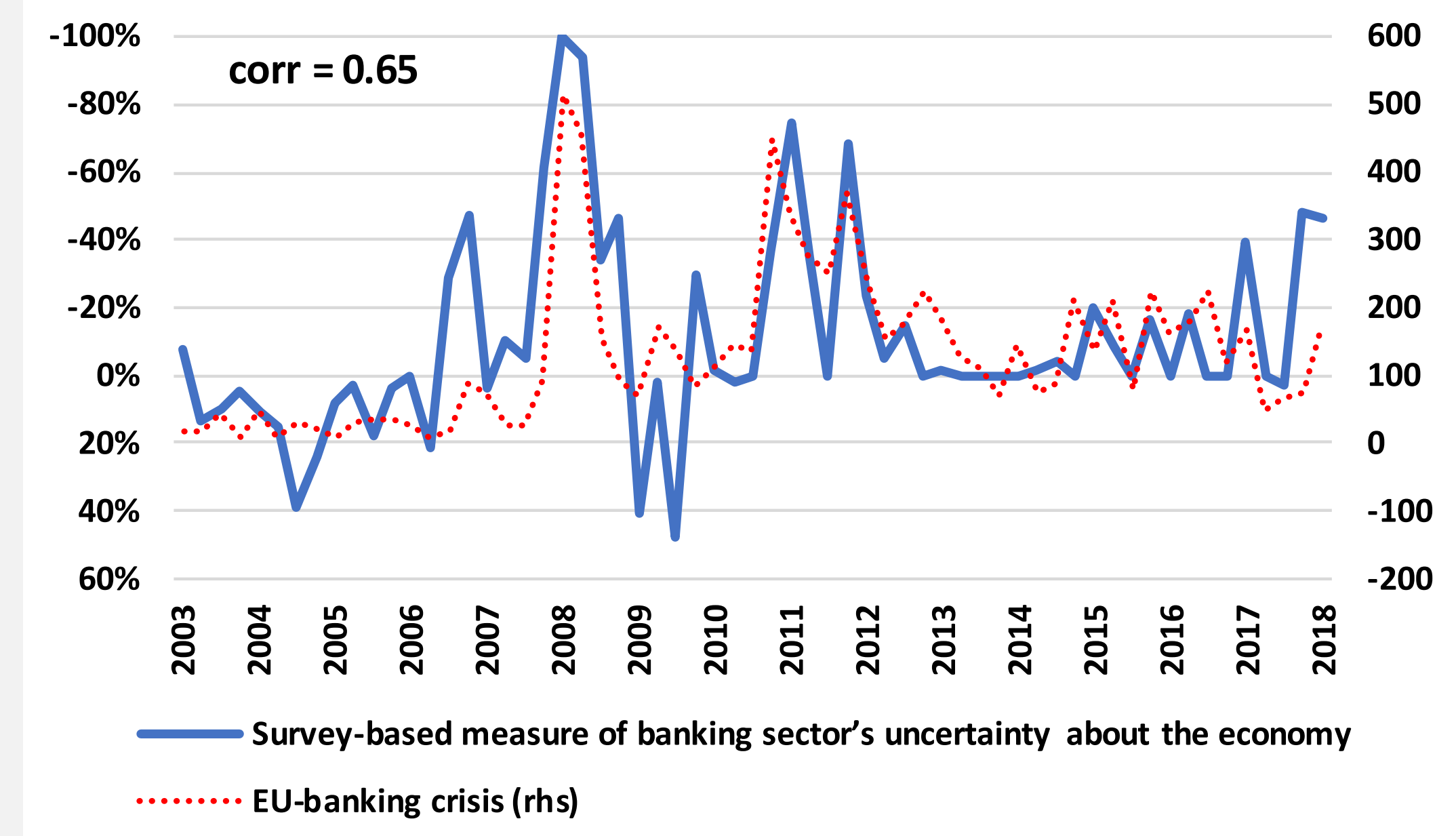
NBP survey of Polish non-financial corporations

The survey-based corporate economic uncertainty indicator takes values from -100 (all firms judge uncertainty as low or very low) to +100 (all firms judge uncertainty as high or very high). Thus an increase in the indicator's value represents an increase in the perceived level of uncertainty

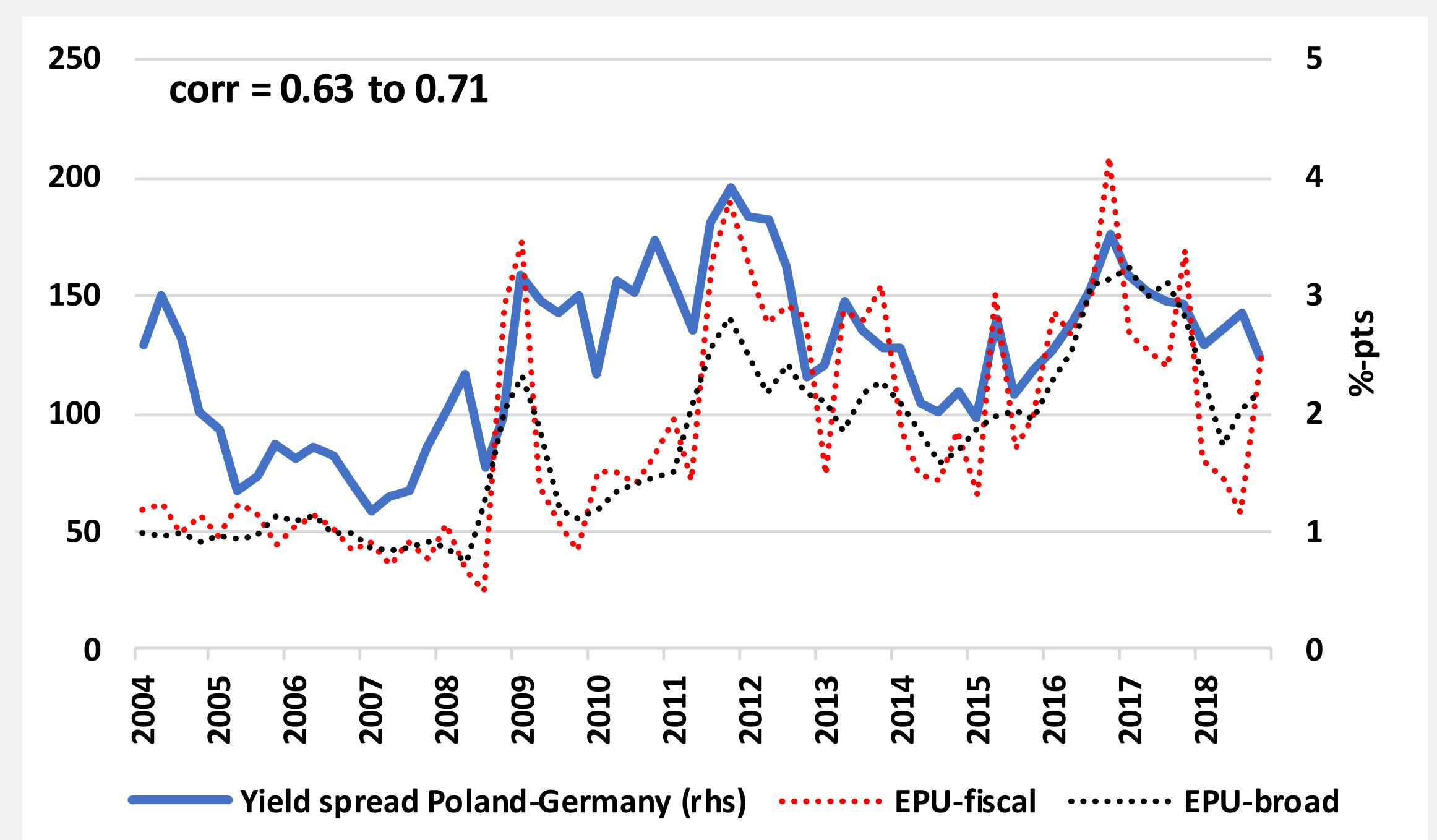


NBP survey of Polish banks

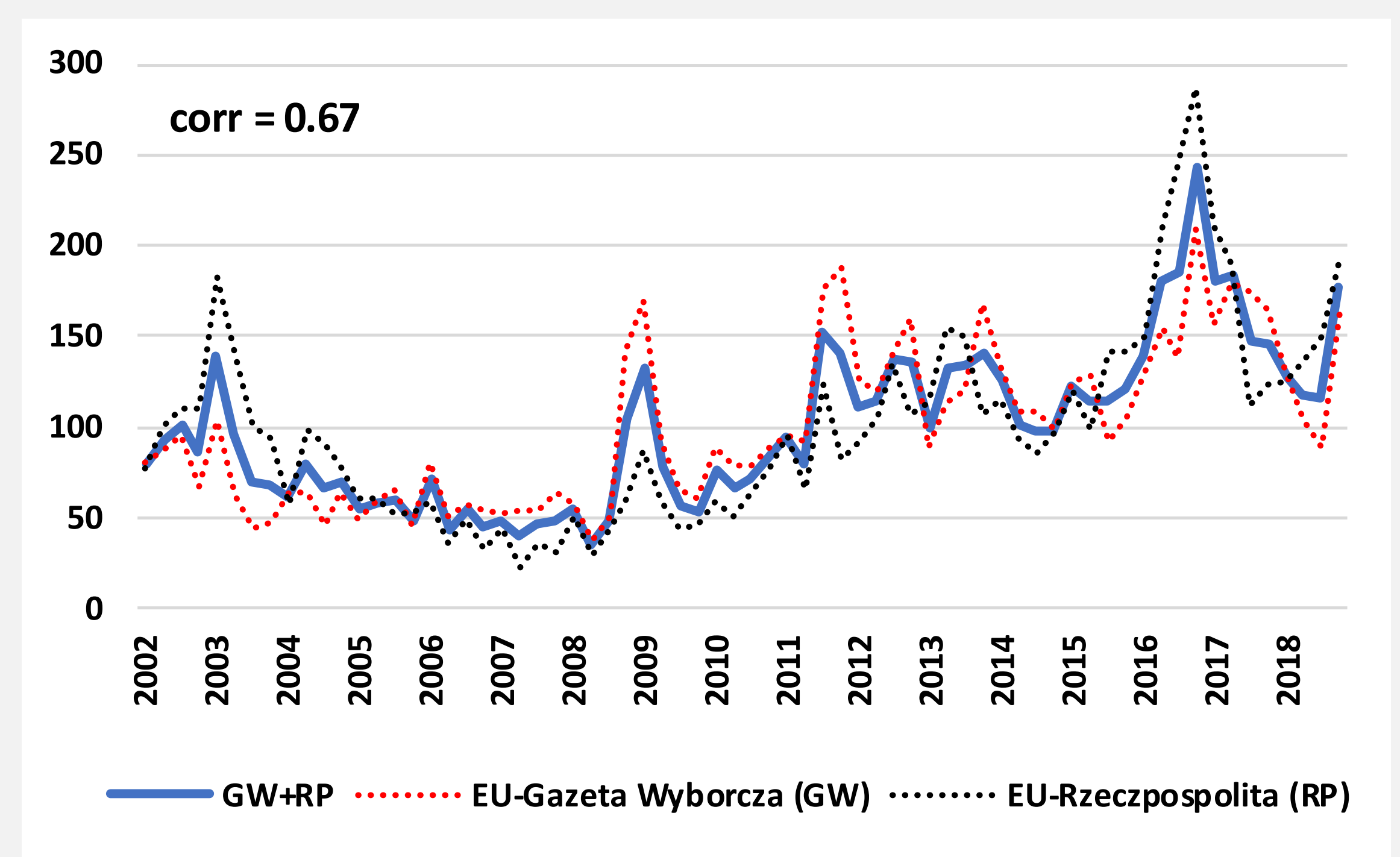
Net percentage of banks indicating risk related to the expected general economic situation as a reason for easing their policies with respect to housing loans. A negative value means that this risk on balance contributed to the tightening of lending policies



- Correlation with relevant **financial-market data** (bond-yield and CDS spreads; option-implied FX vol and share-price vol)



- Correlation with uncertainty measures based on **other Polish textual data** (*Rzeczpospolita* articles + minutes of the Monetary Policy Council)



- Correlation with the **EPU-indices of Baker et al. (2016)**

