

# Trust no more?

The impact of the crisis on citizens' trust in central banks

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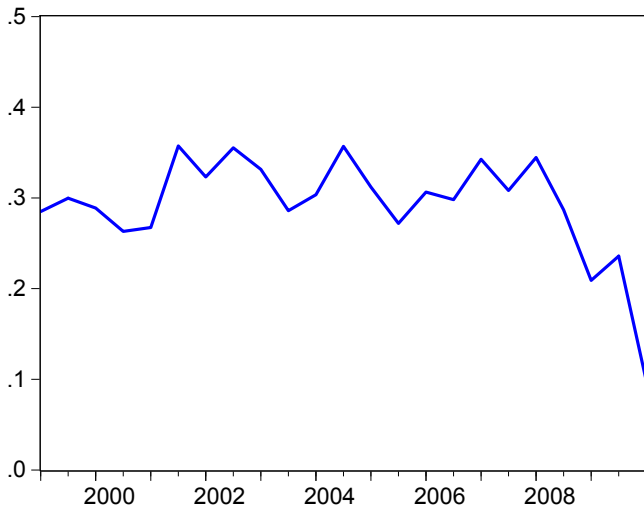
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# Motivation

- ▶ Survey results show that citizens' trust in economic institutions, including central banks, has generally declined since the onset of the crisis.
- ▶ A Financial Times/Harris Poll was conducted in the United Kingdom, France, Italy, Spain, Germany and the United States in June 2009. People were asked: *Do you feel the European Central Bank/Bank of England/Federal Reserve has responded appropriately to the challenges of the economic downturn and its consequences?* In each of these countries, a majority of citizens answered no.
- ▶ Standard Eurobarometer surveys ask EU citizens whether they tend to trust the ECB (among others) or not. Net trust, the difference between those who answer yes and those who answer no, fell substantially during the crisis throughout most of the euro area.

# Motivation



# Motivation

- ▶ What are the determinants of net trust in the ECB, in particular since the onset of the crisis?
- ▶ Is the decline in trust related to movements in inflation and unemployment since the beginning of the crisis?
- ▶ Is this decline also related to other country-specific developments during the crisis, such as sharply diverging sovereign bond yields or banking crises?
- ▶ The crisis brings about significant time variation in the data on net trust and macroeconomic variables, thereby making the use of panel data techniques (fixed-effects estimation) appealing.

## Econometric specification

- ▶ Eurobarometer surveys are conducted twice a year. The dependent variable is net trust in country  $i$  at survey  $t$ .

$$\text{Trust}_{i,t} = \alpha_i + \lambda_t + \beta\pi_{i,t} + \gamma U_{i,t} + \delta X_{i,t} + \varepsilon_{i,t}$$

where  $\pi_{i,t}$  measures deviations of inflation from some optimal level in country  $i$  at survey  $t$ ,  $U_{i,t}$  stands for the rate of unemployment in country  $i$  at survey  $t$ , and  $X_{i,t}$  comprises other macroeconomic variables of interest (banking crisis, sovereign bond yields, economic activity).

- ▶ Should we use survey fixed effects? On the one hand, survey fixed effects will capture unobserved variation in net trust common to all countries. On the other hand, survey fixed effects will eat up all the variation in macroeconomic variables with similar patterns over time.

# Data

- ▶ Eurobarometer surveys consist of approximately 1000 interviews for each EU member state at each survey.
- ▶ Question: *And, for each of them, please tell me if you tend to trust it or tend not to trust it?* The list of institutions includes the European Central Bank.
- ▶ Net trust = share of respondents in a country during a given survey which answer they trust the ECB, minus the share of respondents who do not trust.
- ▶ Twelve member states who adopted the euro early on, waves EB51 (Spring 1999) to EB73 (Spring 2010).
- ▶ The construction of explanatory variables is complicated due to the irregular occurrence of the fieldwork.
- ▶ Information set: average value of a given explanatory variable between the month just preceding the current fieldwork back to the first month of the previous fieldwork.

# Explanatory variables



# Explanatory variables

- ▶ Suppose that net trust depends only on inflation and unemployment:

$$\text{Trust}_{i,t} = \alpha + \beta\pi_{i,t} + \gamma U_{i,t} + \varepsilon_{i,t}$$

- ▶ For example, the variable  $\pi_{i,t}$  is really the average inflation rate in country  $i$  between the month before the fieldwork  $t$  and the first month of the previous fieldwork  $t - 1$ .
- ▶ Taking first differences, we get

$$\Delta \text{Trust}_{i,t} = \beta\Delta\pi_{i,t} + \gamma\Delta U_{i,t} + (\varepsilon_{i,t} - \varepsilon_{i,t-1})$$

- ▶ Any change in the level of trust between two surveys is explained by changes in the explanatory variables between these two surveys. Any information which was already available before is already reflected in the level of trust obtained at the fieldwork  $t - 1$ .



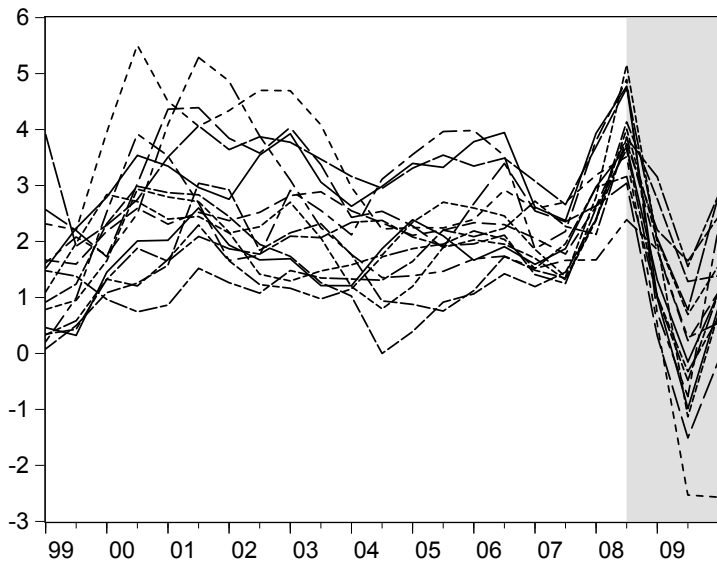
# Results: without survey effects

	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)
Inflation	-1.669** (0.733)	-1.638** (0.763)	-1.590* (0.869)	-1.647** (0.837)	-1.928** (0.830)	-1.416* (0.774)	-1.384* (0.769)	-1.453* (0.803)
Unemployment	-1.184*** (0.397)	-1.209*** (0.417)	-1.198*** (0.396)	-1.187*** (0.394)	-1.110*** (0.393)	-1.067*** (0.416)	-1.049** (0.415)	-0.870** (0.418)
Bond yield		-0.355 (0.993)						
Banking index return			0.008 (0.027)					
Financial index return				0.003 (0.027)				
Stock index return					-0.030 (0.028)			
Industrial production incl. construction						0.150 (0.107)		
Industrial production excl. construction							0.174 (0.111)	
Construction								0.182** (0.081)
Observations	272	272	272	272	272	272	272	256
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Survey fixed effects	No	No	No	No	No	No	No	No
R-squared (within)	0.059	0.060	0.060	0.059	0.066	0.068	0.069	0.085
F statistic	7.09***	4.81***	5.41***	5.41***	4.88***	6.35***	6.38***	7.42***

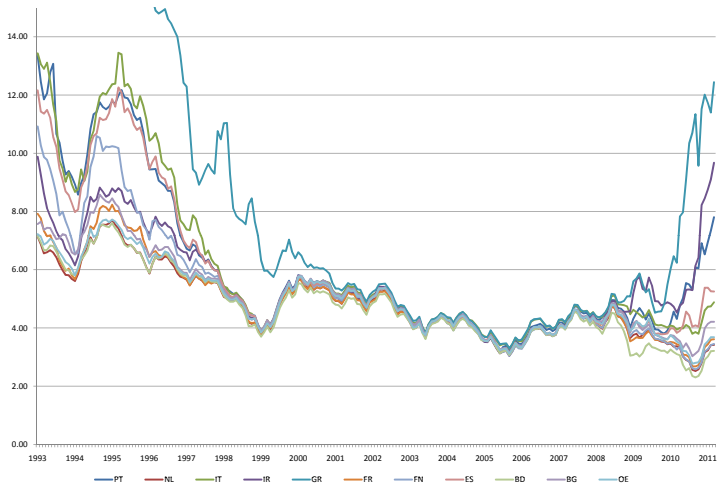
# Results: with survey effects

	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)
Inflation	-0.785 (0.845)	-0.891 (0.754)	-0.717 (0.858)	-0.845 (0.857)	-0.771 (0.844)	-0.771 (0.851)	-0.785 (0.849)	-0.926 (0.953)	-0.826 (0.764)	-0.944 (0.765)
Unemployment	-0.107 (0.370)	0.264 (0.354)	-0.132 (0.372)	-0.053 (0.370)	-0.063 (0.366)	-0.123 (0.371)	-0.110 (0.372)	0.150 (0.387)	0.235 (0.363)	0.304 (0.363)
Bond yield		-9.224*** (2.058)							-9.084*** (2.041)	-8.979*** (2.003)
Banking index return			0.074** (0.035)						0.070** (0.033)	
Financial index return				0.100*** (0.038)						0.092*** (0.035)
Stock index return					-0.039 (0.044)					
Industrial production incl. construction						-0.116 (0.196)				
Industrial production excl. construction							-0.014 (0.177)			
Construction								0.054 (0.068)		
Observations	272	272	272	272	272	272	272	256	272	272
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Survey fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared (within)	0.353	0.399	0.365	0.370	0.356	0.354	0.353	0.375	0.410	0.415
F statistic	5.33***	9.30***	5.27***	5.66***	5.12***	5.29***	5.22***	5.61***	8.65***	8.63***

# Year-on-year inflation



# Long-term sovereign bond yields



## Concluding remarks

- ▶ This paper studies the determinants of citizens' trust in the ECB, in particular during the crisis.
- ▶ Higher unemployment and inflation deviations from the social optimum, two typical arguments in social loss functions in macroeconomics, reduce net trust.
- ▶ But country-specific developments, namely banking crises and sovereign debt turbulence, also affect net trust... despite the fact that the ECB has no formal mandate in both these areas.