Households' Expectations and Macroeconomic Outcomes – Evidence from the Euro Survey

Using evidence from the OeNB Euro Survey, we show that households in Central, Eastern and Southeastern Europe (CESEE) are more optimistic about the development of their own financial situation than the development of their national economies. There are significant cross-country differences regarding the level and volatility of expectations; however, since the onset of the financial and economic crisis, the movements of expectations have become more homogeneous within CESEE. Households' expectations about the economy are positively correlated with subsequent GDP and consumption growth. These results indicate that data on expectations could add predictive power to forecasting models for CESEE, especially if observed at a higher frequency and released without large time lags.

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Countries in Central, Eastern and Southeastern Europe (CESEE) were among those hit hardest by the global financial crisis, with aggregate real GDP falling by 3.6% in 2009 and recording subdued or negative growth since then. Renewed catching-up after the crisis will depend on the external environment and the development of domestic demand. Therefore, from a policymaker's perspective, it is crucial to know how domestic consumption and investment will develop.[1]

Against this background we explore the question whether consumer expectations in CESEE provide an indication of likely future macroeconomic outcomes. We present unique and comparative evidence for ten CESEE countries revealing how consumers think the financial situation of their respective households and national economies will develop. The data used were collected in the course of the semiannual OeNB Euro Survey of households and cover the period before and after the global financial crisis from fall 2007 to fall 2012. We investigate how consumer expectations developed over this time within each country and across countries. We then turn to the question if and how consumer expectations are related to consumption[2] and GDP growth.

We show that consumer expectations dropped sharply in all CESEE countries during the crisis. In line with evidence from other countries, Euro Survey data show that, on average, consumers in CESEE expect their households' situation to develop more favorably than that of the national economy (we will refer to this phenomenon as "household bias" – see Bovi, 2009). Overall, there are significant differences in the level of economic expectations across countries but since 2009 the movements of expectations have become more homogeneous. Moreover, our descriptive results suggest that there is a relationship between expectations regarding the development of the national economy and macroeconomic outcomes.[3] We find that economic expectations are positively correlated with

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[2] In this paper, we will refer to private consumption simply as "consumption."

[3] Due to the relatively short time period and the relatively large survey interval we cannot address this in a full-fledged econometric analysis.

future consumption growth in most countries and future GDP growth in all countries. At the same time, expectations regarding the financial situation of the household do not seem to have an impact on macroeconomic outcomes.

The first section below will present a brief overview of the related literature. We then introduce the data and present descriptive results on expectations regarding the financial situation of the household and the development of the national economy. Section 3 relates these expectations to macroeconomic variables, namely private consumption and GDP growth, before we summarize our results and conclude.

1 Literature Overview

The global financial crisis has also been a crisis of consumer confidence. Therefore, interest in consumer confidence research has increased.[4] A prominent example of related research is the paper by Akerlof and Shiller (2010), who argue that changes in confidence, fairness, corruption and bad faith may trigger changes in economic expectations and should be taken into account for explaining boom-bust cycles.

Consumer confidence surveys are regularly conducted in all developed economies and in many emerging markets as well as in some developing economies. Results from these surveys have been used for a broad spectrum of research – ranging from studies seeking to improve the forecasting properties of standard macroeconomic models to contributions that focus on identifying whether consumer confidence has a causal impact on macroeconomic outcomes. A further strand of literature seeks to explain the dynamics of how expectations are formed. The majority of empirical papers are based on surveys from the United States; for transition economies the literature is scarce. A recent exception is the contribution by Kuzmanović and Sanfey (2012), who study the forecasting power of consumer expectations for a range of macroeconomic variables in Croatia. They find that consumer expectations help to explain retail turnover and imports. Expectations about forthcoming major purchases and imports have strong predictive power with regard to retail turnover, which in turn is highly correlated with quarterly GDP.

Perhaps one of the most obvious research questions is how consumer expectations affect consumption. It is clear that consumer expectations should determine consumption patterns; however, the direction of their impact is not clear. If consumer confidence reflects precautionary savings motives, it should be negatively correlated with consumption *growth* (Ludvigson, 2004). Following this interpretation, consumer confidence reflects lower (higher) uncertainty about the future, which reduces (increases) the need to accumulate precautionary savings and hence increases (reduces) consumption today. Consumers who are more confident regarding the future do not need to accumulate precautionary savings. Thus, they consume more today and this reduces the change in consumption from the present to the future, which means consumption growth will be lower.

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[4] *In this paper, we will use "consumer confidence" to describe consumers' trust and certainty regarding both their current situation and their future. The term "expectations" on the other hand only refers to perceptions of future events and assessments of likely future developments in this study.*

If consumer confidence is based on expectations regarding future income and wealth, it should be positively correlated with consumption growth. However, the permanent income hypothesis, which in its empirical application assumes rational expectations, would predict a positive correlation between expectations and consumption.

Ludvigson (2004) investigates these two competing hypotheses with U.S. data and finds little support for the precautionary savings interpretation. Instead, he finds that changes in consumer confidence are related to income and wealth growth but also directly to consumption. Souleles (2004) also tests the permanent income hypothesis, but allows for heterogeneity in the importance of confidence shocks. He shows that high- and low-income households are affected differently by shocks, stressing the role of time-varying group-level shocks. However, he finds that the reaction in consumption to consumer confidence shocks, which goes beyond that predicted by the permanent income hypothesis, cannot be fully explained by the heterogeneous effect of shocks on different sociodemographic groups.

2 Data and Measurement

The data analyzed in this paper have been taken from the OeNB Euro Survey, which is carried out semiannually on behalf of the OeNB in Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, FYR Macedonia[5], Hungary, Poland, Romania and Serbia.[6] In each survey wave a representative sample of 1,000 respondents aged 14 years and older is polled in every country. The survey collects information on households' saving and loan decisions as well as their economic expectations. We will focus on two questions about expectations regarding the households' financial situation and the national economy. Respondents are asked whether they agree or disagree with the following statements on a scale from 1 (strongly agree) to 6 (strongly disagree):

1. "Over the next five years, the economic situation of [my country] will improve."
2. "Over the next 12 months, I expect the financial situation of my household to get better."

We will refer to results gained from the first question as "expectations regarding the national economy" and those derived from the second question as "expectations regarding the households' financial situation." For the first question, we have a continuous time series from fall 2007 to fall 2012. The second question has only been asked since spring 2009.[7] The questions are very similar to those used in other surveys, the main differences between the questions being the scale and the time horizon. Of course, one could argue that the time horizon of one year versus five years in expectations in the two questions above makes for a big difference. However, additional evidence from the Euro Survey regarding exchange rate expectations provides support for our assumption that the difference in time horizon does not matter to such an extent that we cannot compare the results for expectations regarding the national economy over five years and expectations regarding

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[5] *Former Yugoslav Republic of Macedonia.*

[6] *For more information on the OeNB Euro Survey, please visit: ceec.oenb.at.*

[7] *Neither question was included in the spring wave of 2012.*

the households' financial situation over one year.[8] Furthermore, Bovi (2009) also compares expectations regarding the national economy and regarding the households' financial situation with a time horizon of one year for both questions and gets similar results overall, in particular regarding the "household bias," which we will discuss later. For our analysis, we exclude respondents answering "Don't know" and "No Answer," assuming that nonresponse is random. We think this assumption is reasonable because the overall nonresponse rate is below 10%.

In order to compare expectations over time and between countries and analyze the link to macroeconomic developments, we compute the following balance statistics:

Balance statistic = (strongly agree + 0.7 * agree + 0.3 * somewhat agree) –
(0.3 * somewhat disagree + 0.7 * disagree + strongly disagree)

where the levels of agreement are percentages of respondents choosing the respective answer. Therefore, balance statistics range from 100 (all respondents "strongly agree") to –100 (all respondents "strongly disagree"). Positive values indicate that on average households expect their national economy to improve[9] or their own financial situation to get better,[10] whereas negative values indicate the opposite. The weights for the respective response categories are arbitrary, of course. Therefore, we also computed unweighted balance statistics. This does not change the pattern of expectations over time.

3 Expectation Patterns – Some Stylized Facts

Chart 1 presents the balance statistics for the two questions over time broken down by country. In some countries the balance statistics have decreased constantly since the beginning of the survey (e.g. Poland and to a lesser extent the Czech Republic), while in other countries expectations started to improve again in early 2011 (Romania, Serbia). Interestingly, the development of expectations over time in Hungary resembles a hump-shaped pattern with a peak in 2009, when the Hungarian economy contracted by 6.6%.[11]

Expectations regarding the households' financial situation and those regarding the national economy are highly correlated in all countries (chart 1). When comparing the results for the two questions it is striking that in most countries the financial future of the household is perceived to be brighter than the future of the whole economy. Notable exceptions are households in the Czech Republic and Hungary (chart 1), where respondents are more optimistic about the future of the economy than the future of their household. However, if we compute the balance statistics for expectations regarding the national economy and the financial situation

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[8] *The Euro Survey elicits data on expectations about exchange rate developments over one year and over five years. If we compare the exchange rate expectations for the two time horizons we find that expectations do not differ a great deal. Detailed results are available from the authors upon request.*

[9] *From a household's perspective, an improvement of the national economy could refer to a range of factors, i.e. GDP growth, less volatile inflation or exchange rates, greater stability of the financial system, etc. What exactly "improvement" refers to most likely depends on the individual respondent's situation and experience. Exploring this at an individual level would amount to a research question in its own right.*

[10] *Improvement of the household's situation – as with expectations regarding the national economy – could mean a number of things, e.g. being able to consume or save more, or struggling less to repay a loan. Understanding the individual connotations of the answers would require separate research and, most likely, additional survey questions.*
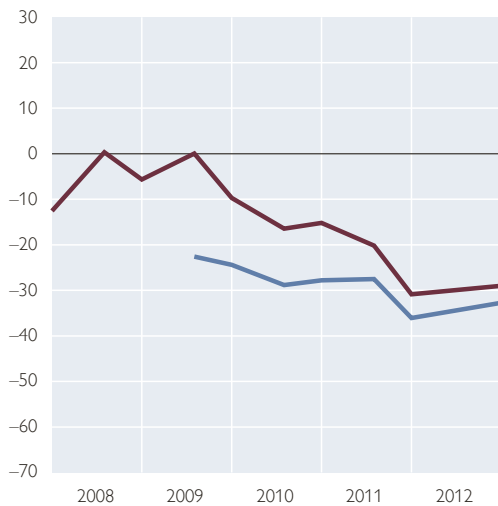
[11] *Interestingly, this hump shape found for Hungary is similar for expectations regarding the national economies in the European Union as collected by the Eurobarometer.*

Chart 1

Development of Expectations regarding the Households' Financial Situation and regarding the National Economy
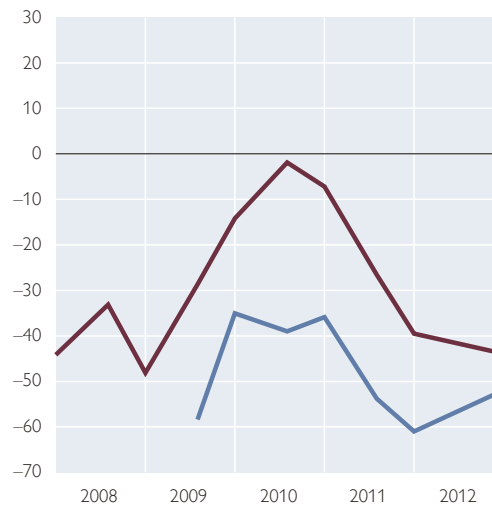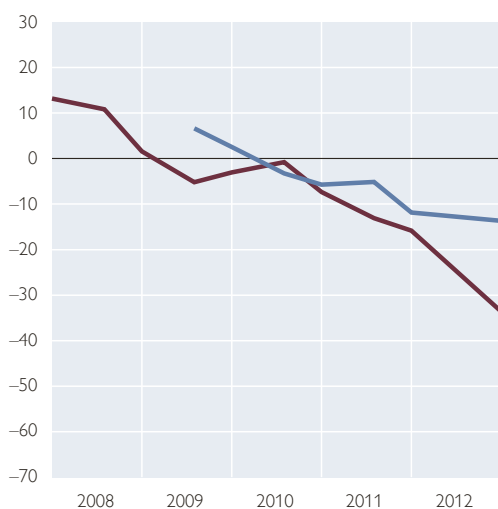
Czech Republic

Balance statistics
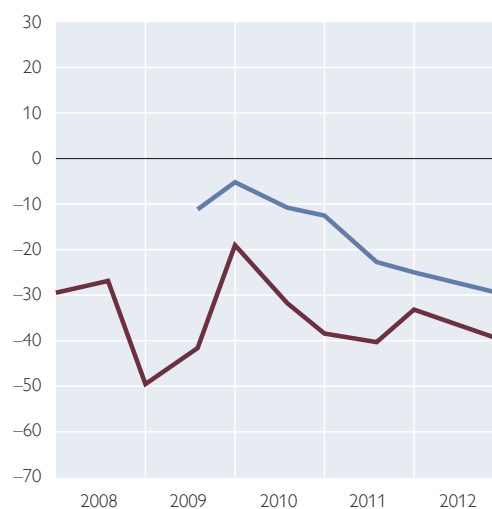
Hungary

Balance statistics

Poland

Balance statistics

Bulgaria

Balance statistics

Households' financial situation   National economy

Source: OeNB Euro Survey (authors' calculations).

Note: The years indicate the year in which the survey was carried out, with the spring wave recorded at the grid line and the fall wave between grid lines.

of the household based on the Eurobarometer data for these two countries, we find that – as in all other countries – households are more optimistic about their own financial situation. This result that households are biased in their expectations is in line with Bovi (2009). He finds the same pattern to be valid for ten Western European countries over 22 years.

What could be the reason for the more optimistic bias of expectations toward the situation of one's own household? There are three possible explanations: Households might misjudge the future development of the economy, that of their

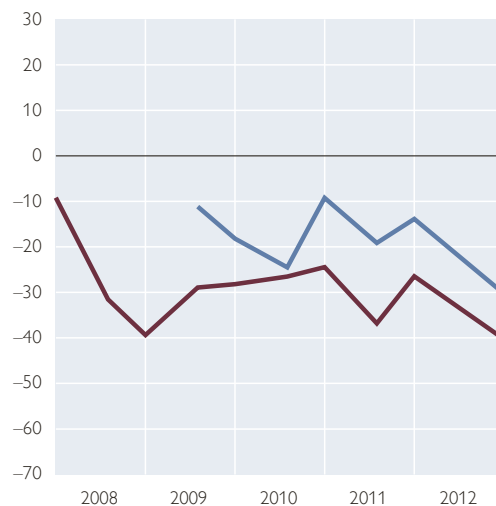**Development of Expectations regarding the Households' Financial Situation and regarding the National Economy**
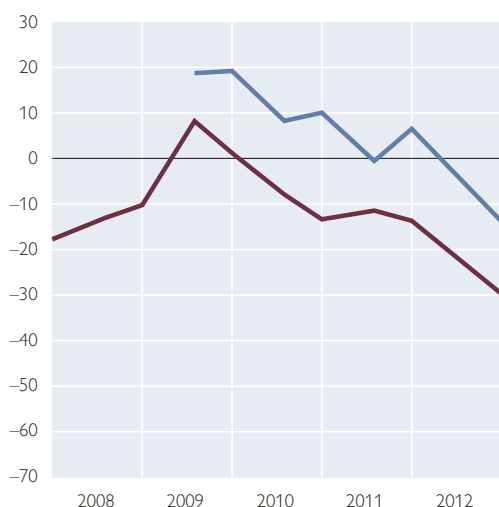
Romania

Balance statistics
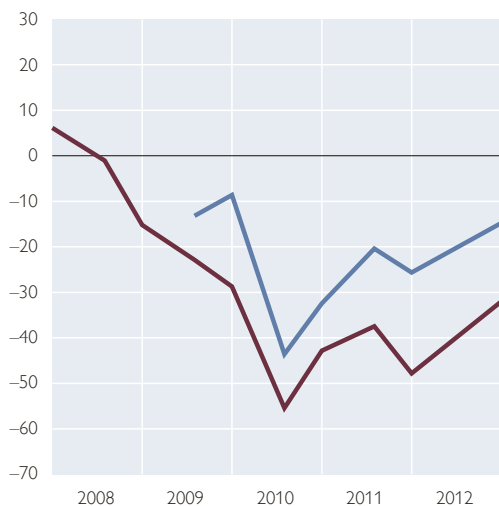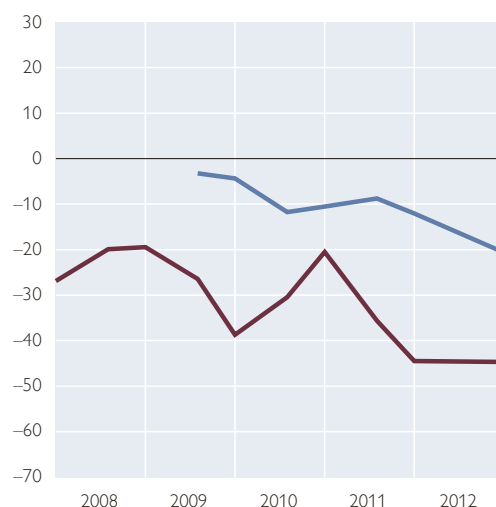

Croatia

Balance statistics

Albania

Balance statistics

Bosnia and Herzegovina

Balance statistics

Households' financial situation — National economy

Source: OeNB Euro Survey (authors' calculations).

Note: The years indicate the year in which the survey was carried out, with the spring wave recorded at the grid line and the fall wave between grid lines.

own household finances, or possibly both. Bovi (2009) refers to the distortion in households' expectations as "illusion of control" and argues that people think that "their own future situation will get better against all odds."[12]

[12] *Another reason for the incongruity of expectations could be the different time horizons, since respondents in the Euro Survey are asked what they expect within the next year for their household situation and within the next five years with regard to economic development. However, Bovi (2009) asks both questions for the same time horizon (one year) and obtains similar results.*

Chart 1 continued

Development of Expectations regarding the Households' Financial Situation and regarding the National Economy
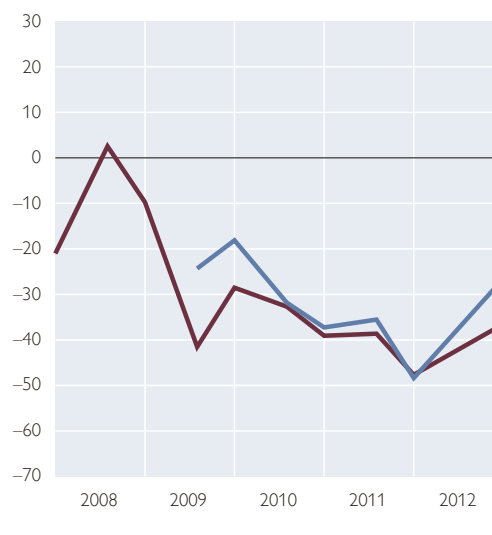
FYR Macedonia

Balance statistics

Serbia

Balance statistics

— Households' financial situation   — National economy

Source: OeNB Euro Survey (authors' calculations).

Note: The years indicate the year in which the survey was carried out, with the spring wave recorded at the grid line and the fall wave between grid lines.

Previous research highlights heterogeneities in economic expectations within countries across sociodemographic groups (Souleles, 2004). These heterogeneities are also present in our sample of CESEE countries: In all ten CESEE countries high-income households on average are more optimistic regarding the future of the economy than low-income households. However, this difference is not observed for different levels of education. Respondents with a higher level of education are not always more optimistic about the future of the economy.[13]

Given that some countries in our sample show significant regional differences in terms of economic development, we also look at expectations within the country. Somewhat surprisingly, we do not find that expectations vary a great deal across regions. The one exception in this respect is Bosnia and Herzegovina.

Table 1

Summary Statistics on Expectations regarding the National Economy

	Mean	Standard deviation
Czech Republic	−13.92	10.79
Hungary	−28.73	16.27
Poland	−5.33	13.55
Bulgaria	−35.01	8.73
Romania	−27.71	19.86
Croatia	−29.17	8.99
Albania	−10.78	10.23
Bosnia and Herzegovina	−30.72	9.74
FYR Macedonia	−6.22	9.33
Serbia	−29.29	15.63

Source: OeNB Euro Survey (authors' calculations).

[13] *This is somewhat surprising given that education and income are generally thought to be highly correlated. As expected, we find a positive correlation between education and income but it is not very high. However, a higher level of education is correlated with greater financial literacy, which in turn is negatively correlated with expectations.*

As can be seen in chart 1, the levels of expectations differ substantially across countries. Table 1 presents the summary statistics on expectations regarding the national economy.

Average expectations regarding the national economy are negative in all countries, Bulgaria being the most pessimistic country with a balance statistic of roughly –35. The most optimistic countries are the Czech Republic, Albania and FYR Macedonia. Regarding households' financial situation (results not shown in the table), we find that households in Hungary have the most pessimistic expectations.

Apart from the high heterogeneity in levels, the development of expectations over time also differs across countries, both in terms of direction and in terms of volatility (as can be seen from the standard deviations in table 1). It would be interesting to know whether expectations have moved in a more uniform direction since the onset of the financial crisis, which – as an external factor – could also have driven swings in expectations at the CESEE level.

Chart 2 shows the development of standardized balance statistics on expectations regarding the national economy corrected by country-specific levels and standard deviations (given the different levels and volatilities of expectations among the countries this allows a better comparison). The chart reveals a downward trend in most countries' expectations starting in 2009 and intensifying around 2010. This downward trend is not surprising given the outbreak of the financial and economic crisis in 2008 and the subsequent sovereign debt crisis from 2010 onward, which became an additional influence next to the country-specific factors that had dominated the development of expectations before.

Chart 2

Standardized Balance Statistics on Expectations regarding the National Economy's Development over the Next Five Years

Standardized balance statistics
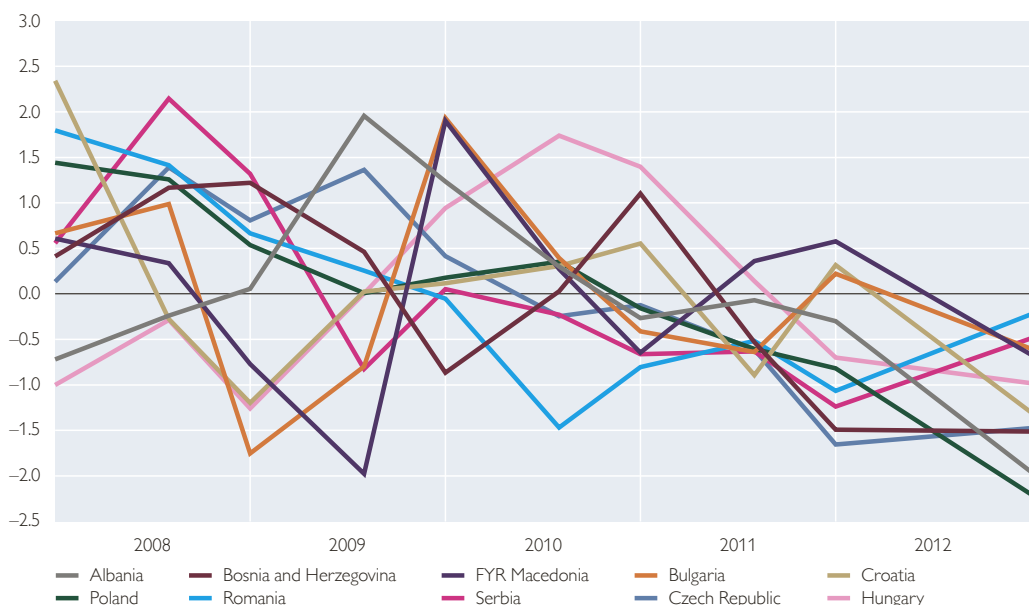
Source: OeNB Euro Survey (authors' calculations).

Note: Values are standardized balance statistics (balance statistics minus mean and divided by standard deviation). The years indicate the year in which the survey was carried out, with the spring wave recorded at the grid line and the fall wave between grid lines.

Does the importance of external factors mean that expectations only mirror global economic developments and are thus less relevant for national policymakers? To explore this question, we will now focus on the relation between expectations and macroeconomic outcomes.

4 Expectations and Macroeconomic Outcomes

To what extent are expectations related to macroeconomic outcomes? As our survey is only carried out semiannually we only have ten balance statistics observations. Based on this limited amount of data it is not possible to answer the above question using VAR estimations or other standard econometric techniques. However, we can approach this question descriptively.

We use data on year-on-year growth in consumption and GDP in real terms. The literature does not reach a conclusive result regarding the relation between consumption/GDP growth and expectations, although it does indicate, at least for the U.S.A., that the effect runs from expectations to consumption and not vice versa. We study both the relation between expectations and previous consumption/GDP growth (i.e. the difference of the half-year preceding the survey against the prior half-year) and the relationship between expectations and future consumption/GDP growth (i.e. the difference of the half-year following the survey against the prior half-year) by computing Spearman correlation coefficients. We employ the Spearman correlation because the balance statistics are based on ordinal data, which we do not assume to be normally distributed.

Table 2 shows some interesting results: The correlation of subsequent consumption growth with expectations regarding the national economy is positive for most countries, except for Hungary and Romania. Previous consumption growth is also correlated with expectations regarding the national economy but the pattern is weaker and overall the picture is less clear. Subsequent GDP growth is positively correlated with expectations in all countries. Again, the relationship between past developments and expectations is less clear. The negative correlation in some countries is somewhat surprising but weak.

Table 2

Correlation of Expectations regarding the National Economy with Subsequent and Previous Consumption and GDP Growth (Spearman Correlation Coefficients)

	Subsequent consumption growth	Subsequent GDP growth	Previous consumption growth	Previous GDP growth
Czech Republic	0.357	0.042	0.515	0.176
Hungary	−0.321	0.515	−0.612	−0.164
Poland	0.679	0.503	0.661	0.539
Bulgaria	0.107	0.176	−0.055	−0.067
Romania	−0.536	0.321	0.491	0.576
Croatia	0.571	0.43	0.03	−0.006
Bosnia and Herzegovina	. .	0.667	. .	0.697
FYR Macedonia	0.5	0.317	−0.03	−0.006
Serbia	0.357	0.358	0.442	0.394

Source: OeNB Euro Survey (authors' calculations).

Note: No quarterly consumption data available for Bosnia and Herzegovina; no data available for Albania. The number of observations per country is ten.
   "Subsequent" refers to the two quarters following the survey whereas "previous" refers to the two quarters preceding the survey.

These correlations allow two conclusions. The extent to which expectations and macroeconomic outcomes are related varies strongly across countries. Overall, however, the correlation between subsequent economic outcomes and expectations is somewhat stronger than in the case of previously observed growth. Hence, expectations regarding the national economy could have some predictive power for consumption and GDP growth.

The positive correlation between consumption growth and expectations could provide some indication that the permanent income hypothesis holds for most CESEE countries. By extension, this positive correlation would then indicate that our measure of expectations regarding the national economy captures expectations regarding future income and wealth.
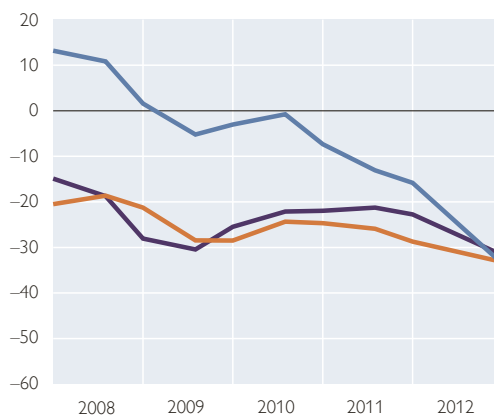
For Romania and Hungary, the negative correlation between consumption growth and expectations could point to the precautionary savings hypothesis,

Chart 3

Expectations regarding the National Economy, Consumption and GDP Growth for Selected Countries
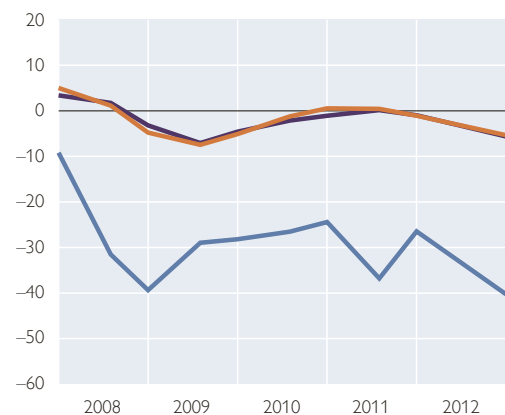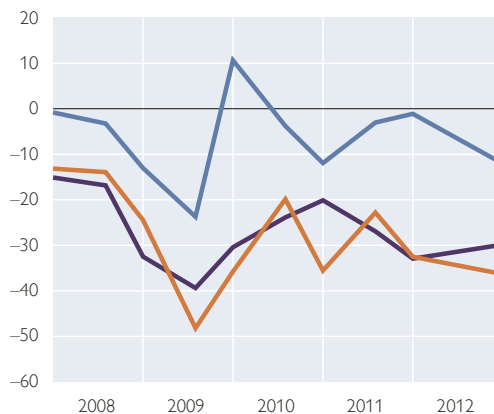

Poland

Balance statistics

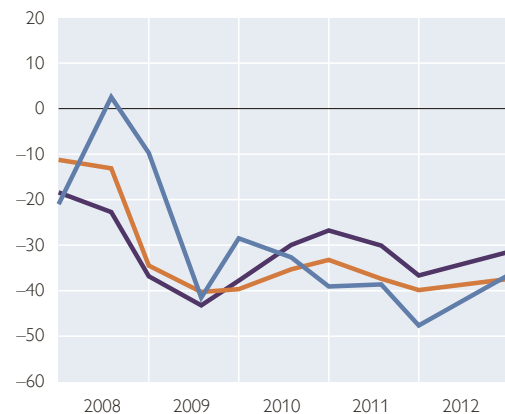**Croatia**

Balance statistics

FYR Macedonia

Balance statistics

Serbia

Balance statistics

— Expectations (left-hand scale)   — Consumption growth (right-hand scale)   — GDP growth (right-hand scale)

Source: OeNB Euro Survey (authors' calculations), Eurostat, NCBs.

Note: The years indicate the year in which the survey was carried out, with the spring wave recorded at the grid line and the fall wave between grid lines.

which would suggest that better expectations regarding the future increase consumption today and hence reduce subsequent consumption growth.

Chart 3 plots the development of expectations regarding the national economy, consumption and GDP growth for Poland, Croatia, FYR Macedonia and Serbia, for which the correlations are especially strong. Confirming the correlation results, there is a clear co-movement of expectations and subsequent consumption and GDP growth and some indication for the leading role of expectations.

5 Summary

Using evidence from the OeNB Euro Survey, we show that households in most CESEE countries are more optimistic about the development of their own finances than about the development of their national economies. This "household bias" is in line with results presented in existing literature on other countries. Within the CESEE region, high-income households are more optimistic about the future of their national economy than low-income households.

We find that the levels of expectations differ substantially across countries in CESEE; however, since the onset of the financial and economic crisis the movements of expectations have become more homogeneous within CESEE.

Regarding the link between expectations and macroeconomic outcomes, we find a positive correlation between households' expectations regarding the national economy and future GDP growth. For consumption growth, the correlation is also positive with the exception of two countries. Our descriptive analysis, of course, cannot identify whether expectations drive these macroeconomic variables or vice versa. What we can say is that the correlation of expectations with subsequent consumption and GDP growth across countries is more clear-cut than that of expectations with previous growth.

Altogether, these results might indicate that expectations, especially if observed at a higher frequency and released without large time lags, could add predictive power to forecasting models for CESEE. By extension, policymakers could possibly gain insights into likely future developments by monitoring expectations. Also, by keeping track of expectations, policymakers might obtain a greater understanding of the volatility in expectations, which may also indicate a strong sensitivity to certain news and announcements. However, our results – as the general results from the literature – are still inconclusive and further research is needed. For policymakers it would be important to also better understand the determinants of expectations in CESEE countries. In particular, understanding heterogeneities in expectations across sociodemographic groups would be a next step toward designing targeted policy measures. Furthermore, it would be useful to understand which events trigger swings in expectations.

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