

The Use of EU Business Survey Data for Monetary Policy

Modeling Short-term Interest Rates in the Euro Area using Business Survey Data

(Based on a research paper by Renata Grzeda Latocha and Gernot Nerb
to be published in the forthcoming first edition of the new CIRET/OECD
"Journal of Business Cycle Measurement and Analysis")

I. Abstract

Interest rates play a key role in free market economies. According to the Taylor Rule, short-term interest rates depend on deviations of the current inflation rate from a normative value and deviations of the output gap. Given the difficulty of observing the output gap, we postulate that alternative indicators of pressure on capacity should be monitored, especially those obtained from business surveys.

Our work primarily compares the less popular output gap ratio obtained by asking firms for their own assessment of how intensively production capacity was used with a very popular measure, namely difference between actual and potential GDP (GDP gap) and tries to

assess monetary policy with these two indicators. The analysis of monetary policy is done using a simple single equation framework and a more advanced vector autoregressive model.

Given the fact that survey measures of the output gap captures only the manufacturing sector and omits the important service sector with its high share in value added of the euro area economy, we constructed a more comprehensive measure of capacity utilization (CU*). The new indicator is based on CU in manufacturing industry and on the confidence indicator for services. As our analysis shows, this indicator appears to capture better the capacity utilization in the whole economy and should primarily be used as a benchmark for analyzing ECB monetary policy. Looking, for example, at the impulse response function of the interest rate to these three different measures of the output gap, we see the similarity between the reaction to the GDP gap and to the new indicator, which confirms its role as a good measure of the whole-economy capacity utilization rate, being at the same time real time indicator.

According to the Taylor Rule model, only with CU should the interest rate have been significantly higher at the end of 2002 than implied by the GDP gap. A model with our new indicator CU* rate assesses the current ECB policy as almost fully appropriate with a bias towards further easing.

Some of the main findings of the paper are demonstrated in five charts, followed by a brief paragraph on the forecast based on this new tool and a short summary.

II. Graphs

Figure 1a Actual and potential GDP

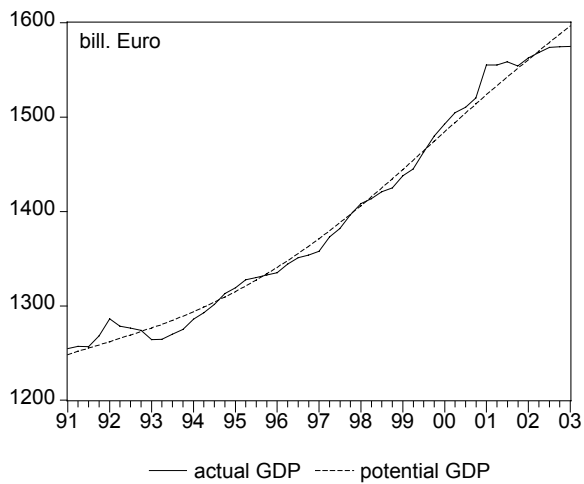


Figure 1b Capacity utilization and GDP gap

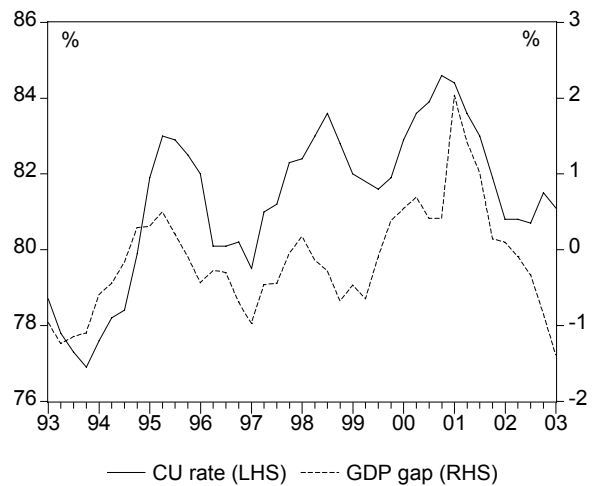


Figure 2a Actual unemployment and NAIRU

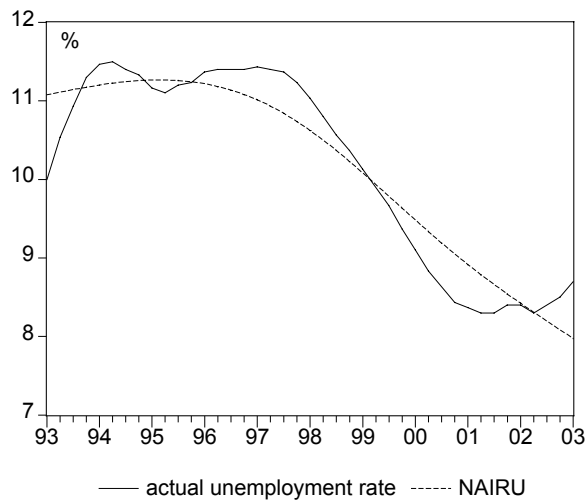


Figure 2b Capacity utilization and unemployment gap

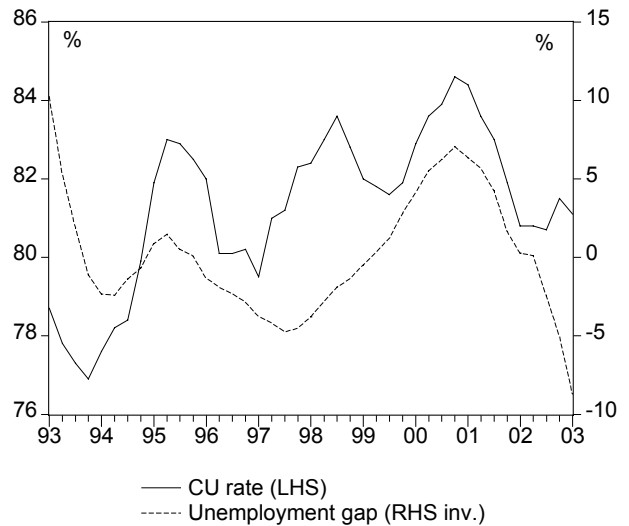


Figure 3a Gross value added (GVA) growth rates

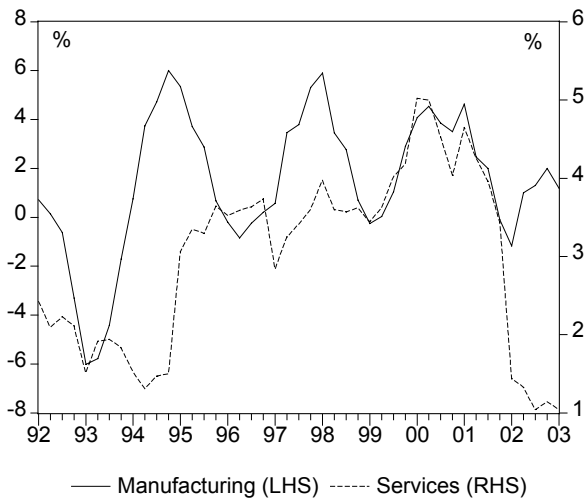


Figure 3b Confidence indicators

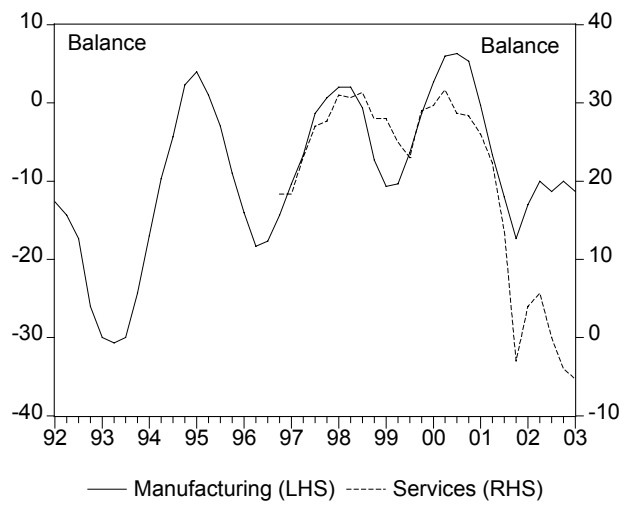


Figure 4 The ECB policy mistakes

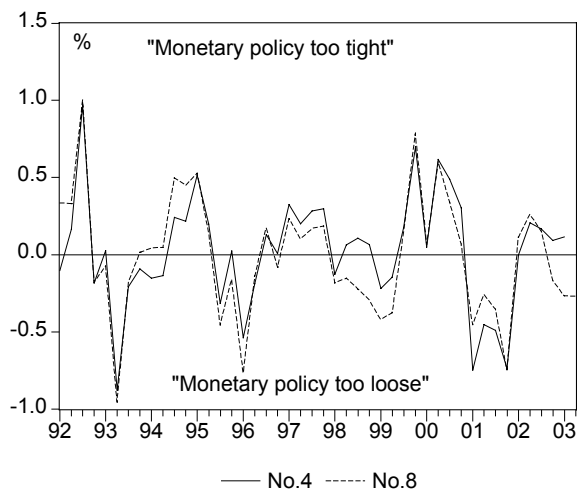


Figure 5a CU rate and CU* rate index

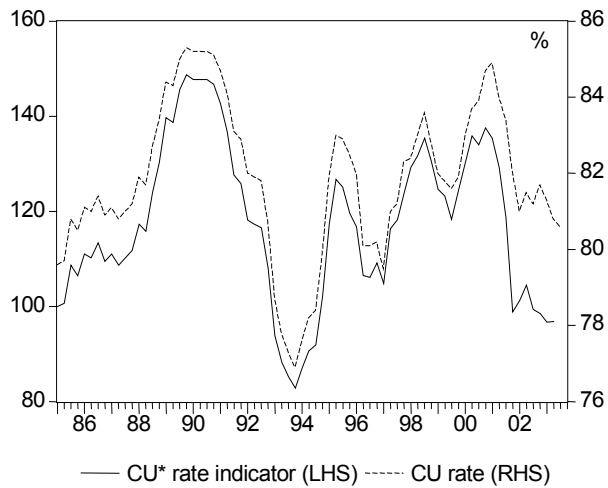
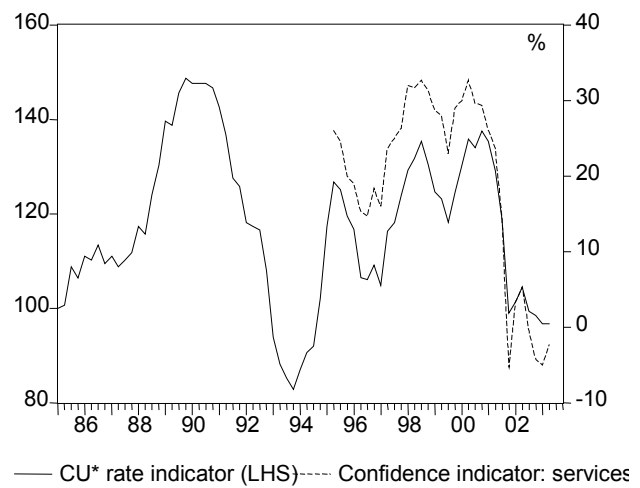


Figure 5b Confidence indicator for services and CU* rate index



III. Forecast

The main interest for the policy makers is not in the historic behavior of interest rate but in the forecast. We generate basic VAR forecast for the short- term interest rate in the euro area without prior assumptions about the likely future paths of one or more of the variables. Therefore our forecast is unconditional. Forecasts are useful both in their own right and to cross-check forecasts produced by traditional macroeconomic models. However, as with other techniques, VAR forecast have several weaknesses. Firstly, they are susceptible to the Lucas critique and more generally are likely to perform poorly following structural breaks. Secondly, the inclusion of too many lags or too many variables can lead to VAR- derived forecasts performing poorly, even though the model fits the data well in the estimation period. This occurs if the lags of variables in the system pick up non- systematic relationship between the variables.

Despite the fact that the forecast from VAR model may be inconsistent and may tend to random values (Philips 1998) we would like to present the dynamic forecast from our models with different measures of output gap.

The results obtained are interesting and each one of them reflects the nature of the chosen output gap. Because the CU* rate and GDP gap show a more pronounced deterioration in the latest cyclical downturn than the CU rate, the first two models suggest a lower interest rate at the end of 2003 than the model based on the CU rate in manufacturing industry (Table).

Table **Dynamic forecast for the interest rate in the euro area from SVAR models**

	Actual	Model		
		with CU rate	with GDP gap	with CU* rate
2003/Q1	2.68			
2003/Q2	2.23			
2003/Q3	*	3.1	2.0	1.8
2003/Q4	*	2.5	1.5	1.8

IV. Summary

In our paper we propose a survey based measure of output gap for interest rate modeling. Our analysis provides evidence that the capacity utilization in manufacturing (CU) rate may be used as a proxy for the output gap. The cyclical profiles of the survey-based CU figures and the GDP gap data are rather similar. However, the extent of excess CU appears to be substantially larger than implied by the GDP gap. A main advantage of this approach is the fact that business survey data have at least an informational lead as the official GDP data are published as a rule with a rather long time lag and are subsequently often revised substantially.

However, as experience in the last years has shown that the cyclical variability of the service sector has increased, it is proposed to use in addition to CU a confidence indicator for business services as a proxy for the not existing measure of capacity utilization in this sector. Given the high share of services in value added this new indicator appears to capture better the capacity utilization in the whole economy and should primarily be used as a benchmark for analyzing ECB monetary policy.

Whereas the Taylor rule model with CU the interest rate shows some weaknesses particularly at the end of 2002 due to the underestimation of the output gap, a model with the new indicator CU* rate assesses the current ECB policy as almost fully appropriate.

Given the model with the new indicator CU*, which appears to be superior to the one with the industrial CU rate alone, we expect the ECB policy rate to continue to decline slightly in late autumn 2003 (to about 1.75) and stay at that low level till early next year before starting to pick up in mid 2004.