# **ECONOMIC RESEARCH BULLETIN**

Monetary Policy Analysis in a Central Bank Volume 9, Number 1, April 2011



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# **Monetary Policy Analysis in a Central Bank**

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### **EDITORIAL**

Understanding monetary policy transmission is essential for appropriate timing of policy rate changes. This edition of the Research Bulletin is focused on various monetary policy analyses carried out in the Czech National Bank. The first article gives a fairly general description of how monetary policy was conducted in a group of developed countries during the last three decades and shows how interest rate setting changed in response to various changes in the institutional framework, such as the adoption of inflation targeting. The second article tackles the classical issue of the money and inflation nexus. Although the benefits of money in policy analysis have been questioned by many commentators, the forecasting exercises carried out in this article lend some support to the role of money for policy analysis. The third article investigates the main channels of monetary transmission mechanisms and finds a well-functioning monetary transmission in the Czech Republic. Last but not least, the fourth article deals with the question of how the Czech National Bank is viewed by the media. The authors show that even surprising policy moves do not reduce the favourableness of media assessment, and emphasise the role of timely and clear central bank communication in this respect.

Roman Horváth

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#### **How Does Monetary Policy Change?**

The evolution of monetary policy rules in a group of inflation targeting countries during the last three decades is examined. Our results indicate that the response of interest rates to inflation is particularly strong during periods when central bankers want to break a record of high inflation. Contrary to common perceptions, the response becomes less aggressive after the adoption of inflation targeting, suggesting a positive effect of this regime on the anchoring of inflation expectations.

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#### **Does Money Help Predict Inflation?**

The predictive ability of money for future inflation in the Czech Republic, Hungary, Poland and Slovakia is investigated. Using a battery of various monetary indicators and forecasting models, we obtain results suggesting that some models with money help improve inflation forecasts and we argue that money serves as a useful cross-check for monetary policy analysis.

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#### The Effects of Monetary Policy in the Czech Republic

The effects of monetary policy on the Czech economy are examined using several econometric models. A well-functioning transmission mechanism is documented. We find that a monetary tightening has negative effects on the degree of economic activity and on the price level, both with a peak response after one year or so.

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#### The Czech National Bank's Monetary Policy in the Media

The favourableness and extent of the media coverage of the Czech National Bank's monetary policy decisions is analysed. One important lesson is that even a policy rate change that is surprising for financial markets does not hamper favourableness if the change is appropriate and well communicated. The extent of media coverage is greater when policy rates are changed.

Jiří Böhm, Petr Král and Branislav Saxa (on page 12)

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## **How Does Monetary Policy Change?**

#### Jaromír Baxa, Roman Horváth and Bořek Vašíček<sup>1</sup>







Monetary policy conduct is often described using the Taylor rule (Taylor, 1993). The rule suggests that the central bank sets the interest rate according to the state of economy, which is often well characterised by the deviation of (expected) inflation from the inflation target and the deviation of actual output from its potential.

Following Clarida et al. (1998) researchers frequently estimate the Taylor rule in order to shed light on to what extent the interest rate setting of a central bank is influenced by expected inflation, output or other factors such as exchange rates or foreign interest rates. The coefficients obtained from the Taylor rule estimation are then analysed to derive some observations about central bank behaviour.

Our study estimates the Taylor rules for five inflation-targeting central banks (Australia, Canada, New Zealand, Sweden and the United Kingdom) using an econometric framework that allows central banks' response to macroeconomic variables to evolve over time. Given that inflation targeting has gained popularity, it seems interesting to explore how interest rate setting is carried out under this framework. We focus on countries that have long-term experience with inflation targeting and for which data are available for approximately the last three decades (our sample period ends in mid-2007 and the crisis period is not included). The sufficient time coverage allows us to examine several important policy issues: 1) How and when does monetary policy change? Is the change gradual or abrupt? 2) Does inflation targeting represent a major change in monetary policy? 3) When do central bankers respond more aggressively to inflation, and do they consider other macroeconomic variables? 4) To what degree is policy smoothed? 5) How persistent is the inflation process?

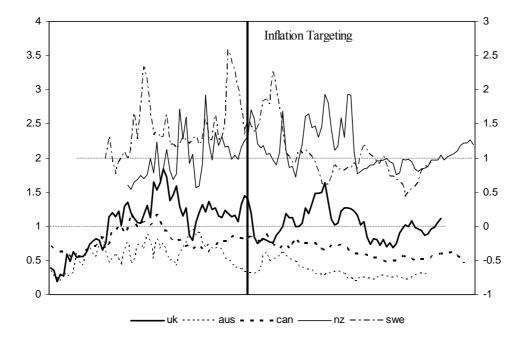
In general, we find that the changes are rather gradual and coincide either with important institutional reforms such as changes in monetary policy regime or with periods of disinflation. The gradual change in monetary policy conduct suggests that central bankers allow market participants to get acquainted with the new regime.

Our research highlights the benefits of building a credible monetary framework such as inflation targeting that anchors inflation expectations. With credibility and anchored inflation expectations, monetary policy does not have to be so aggressive. On the contrary, we find that the central banks indeed had to be quite aggressive when they wanted to break high built-in expectations of high inflation and reduce them to levels consistent with price stability. The example is the UK in the early 1980s. In this context, our research shows that for our set of countries the aggressiveness of monetary policy never increases after the adoption of inflation targeting (see Figure 1), but – contrary to common perceptions – often decreases. This result is consistent with Kuttner and

<sup>&</sup>lt;sup>1</sup> This article is based on Baxa, Horváth and Vašíček (2010).

Posen (1999), who determine formally the conditions under which policy aggressiveness decreases.

**Figure 1.** Monetary policy aggressiveness before and after the adoption of inflation targeting



Our regression analysis also suggests that the exchange rate and foreign interest rates had, along with expected inflation and the output gap, a statistically significant effect on monetary policy rates quite often. Nevertheless, such statistical significance has to be interpreted carefully. It seems more plausible that the current values of the exchange rate and foreign interest rates contain additional information about future economic activity and inflation and complement the uncertain measures of the output gap and the future realised inflation rate as a proxy for the private inflation expectations of policy makers, rather than that central banks target some specific values of variables capturing the external economic environment (see also Taylor, 2001, for a similar line of argument).

In addition to the Taylor rule, we estimate a model of inflation behaviour which allows us to track the degree of inflation persistence as well as its evolution over time. The model is somewhat similar to previous research conducted at the Czech National Bank by Franta et al. (2007), but these authors focus on inflation persistence in new EU member states. We find that inflation is affected by its past values to a lesser extent after the adoption of inflation targeting. The lower degree of inflation persistence probably reflects, among other things, the signalling role of an explicit inflation target. Figure 2 shows the estimated degree of inflation persistence for our sample countries before and after the adoption of inflation targeting. While before inflation targeting, inflation is often highly inertial (e.g. values in Figure 2 of around one), it tends to decrease after the adoption of inflation targeting.

**Figure 2.** Inflation persistence typically decreases after the adoption of inflation targeting

Note: The y-axis depicts the evolution of the estimated inflation persistence parameter and the x-axis represents time, with the year of adoption of inflation targeting denoted by a black vertical line.

Many previous empirical studies analysing central bank behaviour found a very significant degree of interest rate smoothing (e.g. Clarida et al., 1998, estimated the size of the coefficient at around 0.9). Rudebusch (2006) pointed out that such a degree of policy inertia is at odds with the actual interest rate behaviour of central banks, which are more active and able to surprise the markets. Our results suggest that the high degree of interest rate smoothing seems to be a consequence of measurement error and an inappropriate econometric framework. In particular, most previous studies applied econometric models that do not allow for potential changes in the way policy rates are set. This led to upward bias in the estimation of the smoothing parameter. We find that the degree of interest rate smoothing varies between countries, with values ranging from 0 (no interest rate smoothing) to 0.6 (intermediate smoothing).

In terms of future research we believe it would be worthwhile to extend the data coverage to include recent data on the global financial crisis and apply our econometric framework to better understand whether and how monetary policy reacts to periods of financial instability and which types of financial instability are the most worrying for central banks. This would improve the understanding of both the interest rate setting process and the reaction of monetary policy makers to the current global financial crisis in a more systematic manner. Similarly, it would also shed light on the conditions under which financial stability enters monetary policy considerations.

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## **Does Money Help Predict Inflation?**

#### Roman Horváth, Luboš Komárek and Filip Rozsypal<sup>2</sup>







The recent financial crisis has contributed to growing interest in exploring the interactions between the macroeconomic environment and financial sector developments and re-opened several important issues for monetary policy conduct, in particular how to operationalise

issues related to financial imbalances for monetary policy decision-making and how to build models that are able to give some guidance in situations of financial instability.

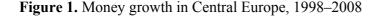
In our view, one prerequisite for building successful general equilibrium macroeconomic models with a financial sector is first to assess empirically whether financial variables convey any useful additional information aside from macroeconomic developments.

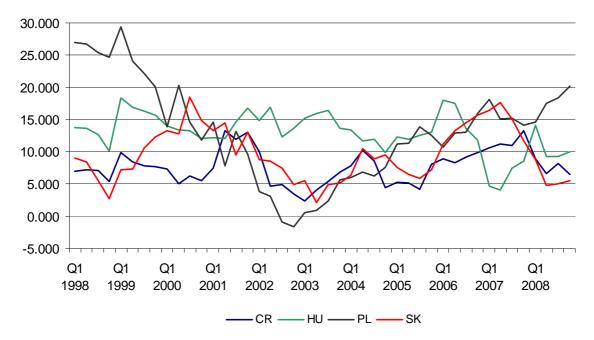
In our working paper summarised here, we explore the interactions between money and inflation. This is a classical topic that has been analysed numerous times before, with the consensus that money is a driver of inflation in the long run. We approach this topic from a somewhat different perspective. First, the central bank is interested not only in the long-term evolution of inflation, but in the medium-term evolution as well, as this coincides more with its monetary policy horizon. In this context, many commentators put forward that money does not carry any additional information and thus, from a monetary policy perspective, there is little need to care about it (Woodford, 2003). On the other hand, others have emphasised that money serves as a useful cross-check for monetary policy analysis and remains an important vehicle of inflation (Nelson, 2008). To address these considerations, we examine to what extent money influences inflation in the medium term, i.e. over a horizon of about 1–2 years in our case, and carry out an extensive forecasting exercise in this respect. Second, we examine the money-inflation nexus in four Central European countries (the Czech Republic, Hungary, Poland and Slovakia), a topic that has been little explored so far, especially for the forecasting properties of money with regard to inflation.

More specifically, we investigate how money growth and three other commonly used monetary indicators (monetary overhang, the nominal money gap and the real money gap) contribute to inflation forecasting vis-à-vis some other standard econometric models for inflation forecasting, such as the autoregressive process (where it is assumed that inflation depends only on its own past values) and a model where the output gap is added as the additional determinant of future inflation. The aforementioned monetary indicators are sometimes used at various central banks to cross-check their monetary policy analysis and are constructed in such a way as to capture the core elements and to reduce the noise in money developments. Simplifying somewhat, it can be said that the indicators are constructed as the deviation of actual money from its equilibrium inferred from money demand estimation. Figure 1 shows the money growth (using monetary aggregate M2) in Central European countries. Even though money has often been growing close

<sup>&</sup>lt;sup>2</sup> The article is based on Horváth, Komárek and Rozsypal (2010).

to, or at, double-digit levels, it has to be emphasised that this is not necessarily inflationary, as these countries are experiencing higher potential growth (due to their catching-up process to Western Europe). This shows up as a higher reference value for money growth.





We proceed with our forecasting exercise as follows. We first estimate the (real) money demand functions in all our sample countries in 1998–2008. Typically, real money demand is assumed to depend on GDP growth and interest rates. While we find that the inclusion of GDP growth and interest rates is sufficient for obtaining "well-behaved" money demand estimates in the Czech Republic, Poland and Slovakia, the exchange rate has to be included as an additional determinant of real money in the case of Hungary. We hypothesise that this is a consequence of the high share of foreign currency lending in Hungary, which implies that the exchange rate plays a greater role in money holding decisions in this country. Importantly, we find that the money demand estimates are stable in all our sample countries, which is an important precondition for the construction of the three aforementioned monetary indicators. Interestingly, the coefficients in the money demand functions differ substantially across our countries and, unlike some previous studies, we show that it is not appropriate to estimate these functions jointly for all countries in a panel data setting.

Next, we carry out a comprehensive forecasting exercise and compare the accuracy of the aforementioned models in our sample countries. We forecast inflation up to a horizon of two years, i.e. a period that largely coincides with the monetary policy horizons in our countries that practise inflation targeting. Having obtained the forecasts of inflation, we construct basic measures of the forecast errors, such as the root mean square error and the mean absolute error. These errors are then compared across the models as well as across the countries. To allow comparison across the countries, the errors are adjusted for inflation variability in each country in order to obtain the Granger-Newbold criterion (Granger and Newbold, 1986). It is important to emphasise that we carry out the forecasts both at the given forecasting date and at the given

forecasting horizon. The underlying motivation is to make the resulting measures less vulnerable to one-off shocks once averaged across different horizons or dates.

Our results suggest that although money growth as well as all the monetary indicators provide useful information for future inflation, they do not improve the accuracy of the inflation predictions. More specifically, some money indicators in some countries improve the accuracy of the inflation predictions, but other indicators in other countries do not. All in all, the performance of the examined forecasting models containing money is found to be quite heterogeneous. Since at least some models contribute positively to the precision of inflation forecasts, we argue that money should not be ignored in monetary policy analysis.

In terms of future research, we believe it would be worthwhile to evaluate the predictive ability of money in Central Europe within a more structural framework. Similarly, it would also be interesting to investigate whether and how money matters for the future degree of economic activity.

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# The Effects of Monetary Policy in the Czech Republic

## Magdalena Morgese Borys and Roman Horváth<sup>3</sup>





Understanding the transmission of monetary policy to inflation and other real economic variables is of primary importance if central bankers are to conduct monetary policy effectively and naturally. Research programmes at central banks typically have monetary transmission as one of their key topics. In addition, research on the monetary transmission mechanism is vital in order to assess in retrospect how well

transmission worked. Not surprisingly, there is extensive theoretical as well as empirical literature examining the effects of monetary policy shocks on real economy aggregates and prices. For a small open economy such as the Czech Republic, it is essential to analyse monetary policy transmission for several reasons.

Previous studies have produced somewhat mixed evidence regarding the functioning of monetary policy transmission. In this context, our research shows that the mixed evidence is a consequence of measurement error arising from the estimation of models mixing data from two distinct policy regimes, i.e. from the fixed exchange rate regime under which the Czech National Bank conducted its policy until May 1997, and from the inflation targeting regime that was adopted in January 1998. In consequence, not accounting appropriately for this major policy break has led some previous studies to exhibit various puzzling results. Therefore, we felt it was worthwhile to update previous results reflecting the monetary policy regime changes, to utilize a wider range of econometric techniques and, on top of that, to incorporate some features such as real-time (e.g. data available at the time, not revised data) and forward-looking variables into the VAR analysis. To our knowledge, real-time data has not been applied to study monetary transmission in the Czech Republic. This is in a sense paradoxical, as an important feature of monetary policy conduct is that it is based on the information set available at the time of policy-making. This implies that using ex-post revised data (note that these are typically more precise, but are not available at the time of monetary policy action) may contaminate the estimated effects of monetary policy (Croushore and Evans, 2006). The revisions are typical for output data.

In addition, our research provides empirical evidence on how monetary policy affects sectoral prices, evidence that was lacking for the Czech Republic. The lack of evidence was striking, because tradable prices in a small open economy may be driven to a large extent by international factors that domestic monetary policy is unlikely to affect or affects at very high cost (in terms of output fluctuations). Our prior assumption is that as non-tradable prices are typically less exposed to international competition and more labour-intensive, the reaction of non-tradable prices is likely to be more persistent (see for example Barro, 1972).

An important feature of our research is to examine the effects of monetary policy within various econometric models in order to shed light on the robustness of the results. Using data from the inflation targeting period, we focus on assessing the persistence and magnitude of monetary

<sup>&</sup>lt;sup>3</sup> This article is based on Borys and Horváth (2008).

policy shocks to output (including the real-time output gap), prices (at both the aggregate and sectoral levels) and the exchange rate, controlling for a standard set of factors.

In general, monetary transmission in the Czech Republic seems to be similar, in terms of persistence of the responses of economic variables to monetary shocks, to that in more developed countries, including the euro area.

All in all, subject to various sensitivity tests, we find that prices and output decline after a monetary tightening, with the bottom response occurring after about one year. This finding corresponds with the actual targeting horizon of the Czech National Bank. In addition, we document that the reaction of tradable prices is faster than that of non-tradable prices. While the maximum effect of a monetary shock on tradables can be seen after a year or so, it is at least a year and a half for non-tradable prices. This result broadly confirms the microeconomic evidence on the effect of competition on price rigidity.

Our results support the notion that the price puzzle (i.e. an increase in prices after a monetary tightening) is associated with econometric model misspecification rather than with the actual behaviour of the economy. This is supported by other empirical VAR studies on monetary transmission in the Czech Republic, as all studies estimating the effects of monetary policy across different monetary policy regimes (i.e. the fixed exchange rate regime and inflation targeting regime mixed together) exhibit the price puzzle, which is presented in Table 1. Table 1 provides a comparison of our results with previous studies on monetary transmission estimation in the Czech Republic. A more thorough examination of factors contributing to the price puzzle, including all studies on monetary transmission (and not only for the Czech Republic), is available in Havránek et al. (2011).

**Table 1.** Comparison to other studies on monetary transmission in the Czech Republic

	Sample period	Single monetary policy regime	Reaction of output to MP shock	Reaction of prices to MP shock	Bottom reaction of output and prices
EFN (2004)	1994–2003	No	(-), sig.	(+), sig.	6Q/
Ganev et al. (2004)	1995–2000	No	(+), n.a.	(+), n.a.	
Creel and Levasseur (2005)	1993-2004	No	(+), sig.	(+), sig.	
Darvas (2005)	1993-2004	No	(-), n.a.	n.a.	4Q/n.a.
Héricourt (2005)	1995–2004	No	(-), sig.	(+), sig.	1Q/
Hurník and Arnoštová (2005)	1994-2004	No	insig.	insig.	8Q/6Q
Elbourne and Haan (2006)	1998–2004	Yes	(-), sig.	(-), sig.	4Q/4Q
Jarocinski (2006)	1997-2004	Yes	(-), sig.	(-), sig.	4Q/4Q
Gavin and Kemme (2007)	1995–2006	No	(-), sig.	(+), sig.	
Anzuini and Levy (2007)	1993-2002	No	(-), sig.	insig.	4Q/8Q
Our research	1998–2006	Yes	(-), sig.	(-), sig.	3Q/4Q

Note: (-) and (+) denote, respectively, a decline and increase of the variable after a monetary policy shock. The column "Single monetary policy regime" indicates whether the sample period of the study comes from a single monetary regime or spans different regimes (the fixed exchange rate regime until May 1997 and the inflation targeting regime adopted in January 1998). Abbreviations: sig. – the reaction of the variable to a monetary policy shock is statistically significant at the 5% level, and Q – quarters. If the reaction of the variable to a monetary shock does not have the correct sign, the bottom reaction of the variable is not reported (denoted as "--

--" in the table; n.a. indicates that the corresponding estimates were not available in the original study). The references are available in Borys and Horváth (2008).

Next, we find that there is a rationale for using the real-time output gap estimate instead of current GDP growth, as using the former results in much more precise estimates of monetary policy effects. The impulse responses of GDP to an unexpected change of interest rates are less precisely estimated, and thus our findings point to the importance of real-time data in monetary policy analysis. Finally, our results also indicate a persistent appreciation of the domestic currency after a monetary tightening ("delayed overshooting"), although the confidence intervals are in this case rather wide, with a gradual depreciation afterwards.

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# The Czech National Bank's Monetary Policy in the Media

Jiří Böhm, Petr Král and Branislav Saxa<sup>4</sup>







Transparency and communication are particularly important for those central banks that conduct their monetary policies within the inflation targeting framework. Since 1998, the CNB has become one of the most progressive institutions concerning the openness of monetary policy

among inflation-targeting central banks (Dincer and Eichengreen, 2007). All steps taken to increase the CNB's transparency have been oriented primarily towards the financial markets and analysts, who are naturally the main target group of the CNB's communication on monetary policy decisions. A credible, accountable and transparent central bank should, however, also take account of the general public's perception of its monetary policy decisions, and the CNB does so.

Unlike the sophisticated audience (markets, analysts), which is directly influenced by announcements made by the central bank, the general public is typically reached indirectly by the bank primarily through the media. In our paper, we find it appropriate and useful to take a look back at the media's perception of the CNB's monetary policy decisions in the period of 2002–2007. In doing so, we closely follow the methodological approach suggested by Berger, Ehrmann and Fratzscher (2006).

The above-mentioned time period seems very convenient for the purposes of our research, its results and their interpretation for two reasons. First, this time span preceded big changes recently made in the CNB's communication, and these changes – despite being oriented towards a rather sophisticated audience – could have somehow modified the pattern of the CNB's reflection in the media. Second, that period of time was characterised by quite smooth economic developments in which the perception of the CNB's decisions might have primarily been affected by ordinary domestic monetary and economic phenomena and the CNB's own track record in terms of its decisions and their justifications.

The analysis is based on a dataset that measures the favourableness and quantity of the press coverage of central bank monetary policy decisions received after press conferences, held typically on Thursdays. The decisions of the board are usually announced shortly after the decision has been taken and explained during press conferences later in the afternoon. The analysis in this paper is based on articles published in four selected dailies, namely Mladá fronta Dnes, Právo, Hospodářské noviny and Lidové noviny, within the following two days (the following Fridays and Saturdays).

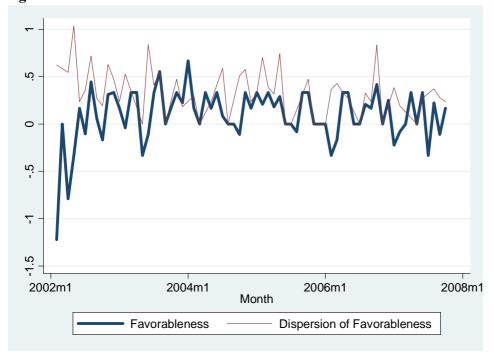
Unlike Berger, Ehrmann and Fratzscher (2006), we do not use the assessments of specialised inhouse media experts in the CNB, in order to avoid any potential staff-related bias. Instead, we

<sup>&</sup>lt;sup>4</sup> This article is based on Böhm, Král and Saxa (2009).

use independent external assessors - three graduate university students from different departments, who did not know each other.

The favourableness with which the CNB's monetary policy decisions are discussed is measured, as in the case of Berger, Ehrmann and Fratzscher (2006), on a scale ranging from very negative (-2), via negative (-1), neutral (0) and favourable (1), to very favourable (2). The key principle is that the favourableness assessment is linked solely to press reactions to a given particular monetary policy decision and to the explanation of that decision at the press conference, whereas any opinions on CNB monetary policy in general and/or on the CNB as an institution itself are ignored. Although the articles sometimes contain somewhat contradictory arguments of the journalist and/or quoted analysts, the favourableness (perception or impression) of the whole article is assessed. Surprising monetary policy decisions are a clear example of assessment ambiguity. On the one hand, such surprises are often considered to be negative. On the other hand, some analysts admit that such surprises belong in the central bank's monetary policy arsenal, thereby turning the tone of their assessment somewhat in the opposite direction.

We extend the methodology of Berger, Ehrmann and Fratzscher (2006) and, unlike them, we also examine the determinants of the heterogeneity of favourableness of coverage. In order to judge how heterogeneous the favourableness of coverage of the four newspapers is after every meeting, a measure of dispersion - defined as the sample standard deviation of the favourableness of all articles published after each meeting - is constructed. Figure 1 shows the evolution of favourableness and its sample standard deviation over time.



**Figure 1.** Evolution of favourableness and its standard deviation over time

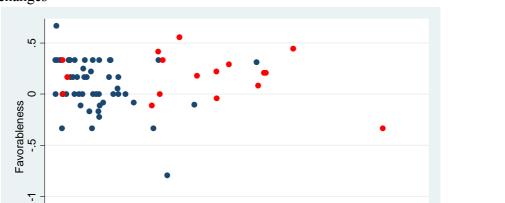
The quantitative assessment shows how much attention the media paid to the monetary policy decision in question. The basic measure used is the length of the article, as expressed by the number of words. Finally, we construct a simple measure of the number of title page articles covering the monetary policy meeting as an alternative measure of extent.

Two groups of possible determinants of favourableness, its dispersion and the extent of coverage are considered. The first group involves determinants that can be influenced to large extent by the central bank directly prior to the meeting or during the meeting day. These include the decision about interest rates, surprise proxied by the market reaction, and the intensity of inter-meeting communication (and possibly also the publication of press conference slides, the ratio of the votes cast at the monetary policy meeting, the concord between the decision and the interest rate sentence, etc.).

The determinants in the second group describe the state of the economic environment at the time of the monetary policy meeting. Here, the variables are linked, for example, to CPI inflation, GDP growth and the exchange rate of the Czech currency vis-à-vis euro.

To estimate the models with favourableness, length and dispersion as the dependent variables, we use ordinary least squares estimation with robust standard errors. For an alternative model of extent, which we use to estimate the number of title page articles, we consider the Poisson regression as our preferred one.

Our major results are the following. First, the media is in general qualitatively indifferent to the fact that the CNB surprises the market from time to time with its interest rate decisions. Simultaneously, such surprising decisions, i.e. those which are not priced in market interest rates yet before the meeting, attract the attention of the media, which manifests itself in more/longer articles. Second, the media welcomes it when the CNB moves interest rates and pays special attention to such decisions, as Figure 2 illustrates. Third, the media does not like rising inflation but welcomes accelerating GDP growth, and vice versa. Fourth, the new quarterly macroeconomic forecast attracts the attention of the media. Finally, movements of the exchange rate are a good reason to write about the CNB's monetary policy meetings, with appreciation of the koruna exchange rate being typically negatively perceived in the media.



Length

2000

No interest rate change

**Figure 2.** Favourableness and length of coverage for meetings with and without interest rate changes

4000

Interest rate change

6000

As for our analyses of how the media tends to report on (economic) events in general, we find that very positive and very negative articles tend to be longer than neutral ones. Simultaneously, more dispersed favourableness across articles is associated with more extensive coverage. Also, as journalists and commentators get used to a certain level of a macroeconomic indicator quite swiftly, a change in the indicator compared to its previous month's or quarter's value is likely to have a stronger impact on the perception of the indicator than the level of the indicator itself or a deviation from its target or trend. A level (despite being very high or very low) is often not as attractive for journalists as a change. Only a change can be perceived as an event, and obviously the media generally tends to report on events rather than on states.

Comparing our results with those presented in the pioneering work of Berger, Ehrmann and Fratzscher (2006) focused on the coverage of the ECB's actions, one can find a couple of differences. Most notably, unlike in the case of the ECB, surprising decisions of the CNB do not lead to significantly less favourable coverage. While a surprising decision of the ECB leads to less coverage, a surprising decision of the CNB increases the extent of coverage in terms of both the length and the number of title page articles. On the other hand, the results of the two studies are similar in several aspects: an interest rate change is perceived more favourably than keeping interest rates unchanged and leads to longer coverage, while higher inflation (or inflation above the target) leads to more negative coverage.

To sum up, the factors that turned out to be significant for the coverage of the CNB's decisions suggest that the media seems to understand in principle (although not in all aspects) what the CNB usually does in the field of monetary policy and why it does it, and pays proper attention to its decisions where appropriate.

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CNB Wo	orking Paper Series 2	2008–2010
15/2010	Ke Pang Pierre L. Siklos	Financial Frictions and Credit Spreads
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12/2008	Jan Babecký	Survey on Wage and Price Formation of Czech Firms

	Kamil Dybczak Kamil Galuščák	
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9/2008	Christian Schmieder	Germany?
8/2008	Sofia Bauducco Aleš Bulíř Martin Čihák	Monetary Policy Rules with Financial Instability
7/2008	Jan Brůha Jiří Podpiera	The Origins of Global Imbalances
6/2008	Jiří Podpiera Marie Raková	The Price Effects of an Emerging Retail Market
5/2008	Kamil Dybczak David Voňka Nico van der Windt	The Effect of Oil Price Shocks on the Czech Economy
4/2008	Magdalena M. Borys Roman Horváth	The Effects of Monetary Policy in the Czech Republic: An Empirical Study
	Martin Cincibuch	
3/2008	Tomáš Holub Jaromír Hurník	Central Bank Losses and Economic Convergence
2/2008	Jiří Podpiera	Policy Rate Decisions and Unbiased Parameter Estimation in Conventionally Estimated Monetary Policy Rules
1/2008	Balázs Égert Doubravko Mihaljek	Determinants of House Prices in Central and Eastern Europe

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1/2008	Nicos Christodoulakis	Ten Years of EMU: Convergence, Divergence and New Policy Priorities

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April 2011	Monetary Policy Analysis in a Central Bank		
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May 2010	Ten Years of Economic Research in the CNB		
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May 2009	Evaluation of the Fulfilment of the CNB's Inflation Targets 1998–2007		
December 2008	Inflation Targeting and DSGE Models		
April 2008	Ten Years of Inflation Targeting		

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Michael Woodford Columbia University	27 Sep 2010	The Central-Bank Balance Sheet as an Instrument of Monetary Policy
Glenn Rudebusch Federal Reserve Bank of San Francisco	20 May 2010	Macro-Finance Models of Interest Rates and the Economy
Pierre Siklos Wilfrid Laurier University	13 Apr 2010	Financial Frictions and Credit Spreads
Adam Posen Peterson Institute for International Economics	20 Jan 2010	Monetary Discipline, Global Currencies, and the Crisis in Eastern Europe
Charles Calomiris Columbia Business School	2 Dec 2009	Banking Crises and the Rules of the Game
Lucrezia Reichlin London Business School	30 Jun 2009	Business Cycles in the Euro Area
David De Jong University of Pittsburgh	15 Apr 2009	Macroeconomics in Crisis: Implications for Policymakers
Nicos Christodoulakis London School of Economics	1 Dec 2008	Ten Years of EMU: Convergence, Divergence, and New priorities
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Giuseppe Bertola Università di Torino	11 Sep 2008	Public and Private Insurance
Gabriel Fagan European Central Bank	6 May 2008	Macroeconomic Adjustment to Monetary Union
Thomas J. Sargent New York University	9 Apr 2008	Robustness Issues in Model Building
Fabio Canova Universitat Pompeu Fabra	25 Mar 2008	Do Expectations Matter? The Great Moderation Revisited

### Selected Journal Publications by CNB Staff 2008–2011

Antal, J., Hlaváček, M. and Holub, T. (2008): Inflation Target Fulfillment in the Czech Republic in 1998–2007: Some Stylized Facts. *Czech Journal of Economics and Finance*, 58(9–10), 406–424.

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# **Forthcoming Journal Publications**

Babecká Kucharčuková, O., Babecký, J. and Raiser, M. (2011): Gravity Approach for Modelling International Trade in South-Eastern Europe and the Commonwealth of Independent States: The Role of Geography, Policy and Institutions. *Open Economies Review*, forthcoming.

Babecky, J. and Campos, N. F. (2011): Does Reform Work? An Econometric Survey of the Reform-Growth Puzzle. *Journal of Comparative Economics*, forthcoming.

Brůha, J. and Podpiera, J. (2011): The Dynamics of Economic Convergence: The Role of Alternative Investment Decisions. *Journal of Economic Dynamics and Control*, forthcoming.

Geršl, A. and Jakubík, P. (2011): Relationship Lending in Emerging Markets: Evidence from the Czech Republic. *Comparative Economic Studies*, forthcoming.

Havránek, T., Horváth, R. and Matějů, J. (2011): Monetary Transmission and the Financial Sector in the Czech Republic. *Economic Change and Restructuring*, forthcoming.

Havránek, T. and Iršová, Z. (2011): A Meta-Analysis of Bank Efficiency Measurement in Transitional Countries. *Transformations in Business and Economics*, forthcoming.

Jakubík, P. and Teplý, P. (2011): The JT Index as an Indicator of Financial Stability of Corporate Sector. *Prague Economic Papers*, forthcoming.

Vašíček, B. (2011): Inflation Dynamics and the New Keynesian Phillips curve in Four Central European countries. *Emerging Markets Finance and Trade*, 46(5), forthcoming.

# **Call for Research Projects 2012**

The CNB Economic Research Department announced the regular Call for Research Projects 2012, direct link: http://www.cnb.cz/en/research/research projects/call for projects 2012.html

Information Meeting for Prospective Authors of CNB Research Projects will be held in the Czech National Bank's Commodity Exchange (Plodinová Burza) building on **Tuesday**, **24 May 2011 at 14.00**.

# **CNB Research Open Day**

The seventh CNB Research Open Day will be held in the Czech National Bank's Commodity Exchange (Plodinová Burza) building on **Tuesday, 24 May 2011**. This half-day conference will provide an opportunity to see some of the best of the CNB's current economic research work, to learn about the CNB Call for Research Projects 2012 and to meet CNB researchers informally.

Please note that places will be subject to availability owing to the limited capacity of the conference facility. To secure your place please register at www.cnb.cz, direct link:

http://www.cnb.cz/en/research/seminars workshops/research open day 2011 form.html

## **Programme**

Tuesday, 24 May 2011 The Czech National Bank's Commodity Exchange (Plodinová Burza) building, Senovážné nám. 30, Praha 1

8.30	Registration & Morning Coffee
9.00	Introduction and ERD Award 2011: Lubomír Lízal, Bank Board Member, CNB
9.10	CNB Research in 2011, Kateřina Šmídková, Executive Director, ERD, CNB
9.20	"Short-Term Forecasting of Czech Quarterly GDP Using Monthly Indicators," by
	Kateřina Arnoštová, David Havrlant, Luboš Růžička and Peter Tóth, CNB
9.40	Discussion: Christian Schumacher, Deutsche Bundesbank
9.55	Q&A
10.05	"Who Borrows and Who May Not Repay," by Alena Bičáková, Renata Pašaličová and
	Zuzana Prelcová, CNB
10.25	Discussion: Jiří Slačálek, ECB
10.40	Q&A
10.50	Coffee
	Chair: Bořek Vašíček, CNB
11.15	"Financial Integration at Times of Financial Instability," by Jan Babecký, Luboš
	Komárek and Zlatuše Komárková, CNB
11.35	Discussion: Martin Feldkircher, OeNB
11.50	Q&A
12.00	"Which Foreigners are Worth Wooing? A Meta-Analysis of Vertical Spillovers from
	FDI," by Tomáš Havránek and Zuzana Iršová, CNB
12.20	Discussion: Sébastien Miroudot, OECD
12.35	Q&A
12.45	Lunch
14.00	Information Meeting for Prospective Authors of CNB Research Projects

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