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EDITORIAL

The CNB has been targeting inflation for ten years now. We have decided to take this opportunity to present recent CNB research related to the inflation targeting strategy. The first two articles contribute to the discussion about how the inflation targeting strategy should be evaluated. They both point out that it is not enough simply to count how many times inflation was on target. One alternative way of measuring the success of the strategy is suggested in the first article. Partial simulations with the forecast model can help us understand the reasons for deviations of inflation from the target. Another alternative is proposed in the second article, which emphasises that success is conditional on transparent and consistent communication of inflation factors. The next two articles focus on one of the most prominent features of the inflation process – persistence – and its implications for the inflation targeting strategy. They both find that inflation persistence may be lower in the Czech case than one might expect. The third article – based on microeconomic data – provides evidence that inflation persistence has declined during the ten years of inflation targeting. The fourth article – based on macroeconomic data – estimates the level of the inflation target perceived by the public and illustrates that the strategy has gained credibility and has managed to stabilise perceived inflation at low levels.

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Why and How to Assess Inflation Target Fulfilment

Jan Filáček[1]

During the last two decades, significant progress has been achieved in central bank transparency. Many central banks have adopted an inflation targeting framework, which allows the public to easily assess monetary policy performance. The existence of an explicit target allows a central bank to analyse monetary policy performance. For example, Svensson (1997a) notes that: "…a specified quantitative target …provides an ex post measurement of monetary policy performance, namely inflation realised relative to the inflation target". In this paper, we focus on this particular aspect of inflation targeting – inflation target fulfilment assessment.

The purpose of target fulfilment assessment is to disaggregate an overall forecast error into separate groups of factors (exogenous, endogenous, factors under the direct influence of monetary policy) or even into particular factors (e.g. oil prices, the output gap, interest rates). Such a detailed decomposition creates a solid basis for regular discussion of the functioning of the transmission mechanism and of potential adjustments to the modelling apparatus. As Nymoen (2005) points out, "…not doing serious empirical work on model specification and evaluation is a certain recipe for forecast failure".

Another benefit of the assessment is a further improvement in knowledge of the modelling apparatus and its properties and behaviour among staff and board members. The ex post view of economic developments contained in the target fulfilment analysis differs from the ex ante view contained in the actual forecast. Whereas the ex ante view gives us a coherent story of future economic developments based on pure model logic, the ex post view is usually quite far from providing a clear-cut story of past developments. Confronting the forecast with real historical data yields – on the surface – many inconsistencies and hard-to-interpret developments. For example, in spite of a more expansionary monetary policy, lower inflationary pressures might arise. Interpreting such situations is much more challenging than describing a new forecast and includes dealing with many linked relevant issues such as data revisions and forecasting technique modifications.

Also, a sound analysis of target misses/fulfilment can, if published, enhance monetary policy transparency and credibility. Missing the target is usually perceived as a failure of the central bank, even though some targeters intentionally miss targets under certain circumstances.[2] If a central bank dissembles the miss, it risks being attacked by the public and undermining faith in future target fulfilment. On the contrary, if a central bank provides the public with the reasoning for the miss, it might successfully explain part or even all of the deviation from the target and preserve its credibility. Even if the whole deviation were ascribed to inappropriate monetary policy, the public announcement of such a finding accompanied by self-reflection might result in better monetary policy conduct in the future and sustained public confidence in the target.

Our survey among 19 OECD countries shows that the majority of central banks with an explicit inflation target provide the public with detailed ex post analyses of inflation target fulfilment, on either a regular or irregular basis. However, some central banks in our sample still do not compare the inflation outcomes with the target on a regular basis (as of summer 2006 – see Table 1).

Consequently, we describe in the paper a possible approach to identifying the reasons underlying inflation target hits/misses based on partial simulations of a reduced-form model. These simulations allow us to split the overall miss into partial effects of different underlying factors (effects of flexible inflation targeting, model change, external developments, monetary policy). Alternative procedures are proposed for models with endogenous and exogenous monetary policy. We also treat the effects of risk assessment by the bank board.

1 This article is based on Filáček (2007).

2 In the case of inflation targeting, such a regime is called flexible inflation targeting (see Svensson, 1997b).

Finally, we apply the procedure with endogenous monetary policy to the Czech National Bank's forecasts between 2002 and 2005. In this period, the inflation forecasts and interest rate forecasts were biased upwards and inflation was below the target most of the time (see Chart 1).

TABLE. 1

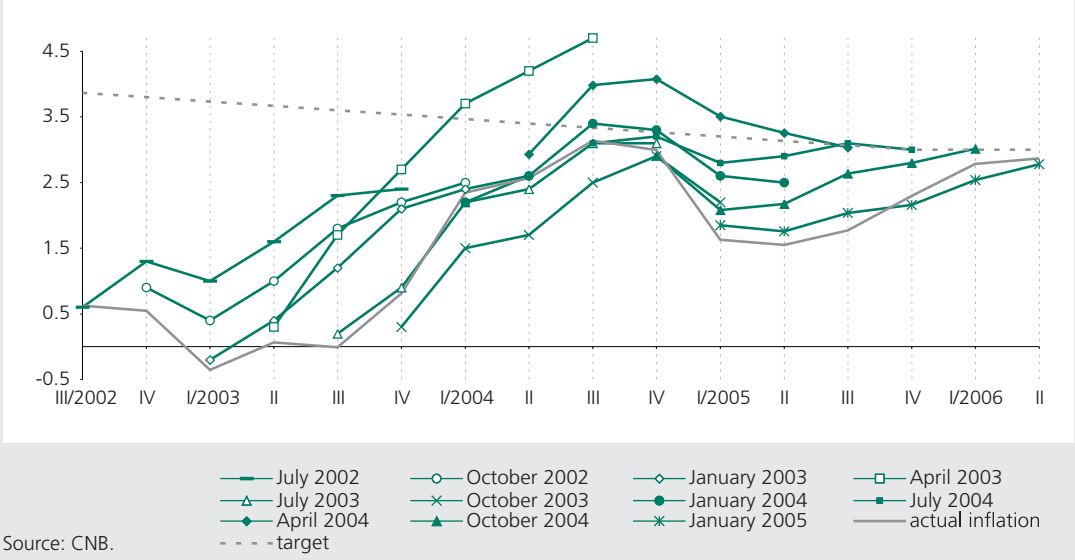
International survey of assessment of target fulfilment

Country	Central bank	Explicit comparison of inflation with target	Analysis of underlying factors in the outcome	Explicit role of monetary policy in the outcome
Australia	Reserve Bank of Australia	no	yes	no
Canada	Bank of Canada	yes	yes	yes
Czech Republic	Czech National Bank	yes	yes	yes
Euro area	European Central Bank	no	yes	no
Hungary	Magyar Nemzeti Bank	yes	yes	yes
Iceland	Central Bank of Iceland	yes	yes	yes
Korea	Bank of Korea	yes	yes	no
Mexico	Banco de México	yes	yes	no
New Zealand	Reserve Bank of New Zealand	yes	yes	no
Norway	Norges Bank	yes	yes	yes
Poland	National Bank of Poland	yes	yes	yes
Slovak Republic	Národná Banka Slovenska	no	no	no
Sweden	Sveriges Riksbank	yes	yes	yes
Switzerland	Swiss National Bank	no	no	no
Turkey	Central Bank of the Republic of Turkey	yes	yes	no
United Kingdom	Bank of England	yes	yes	yes

Source: Central banks' websites.

CHART. 1

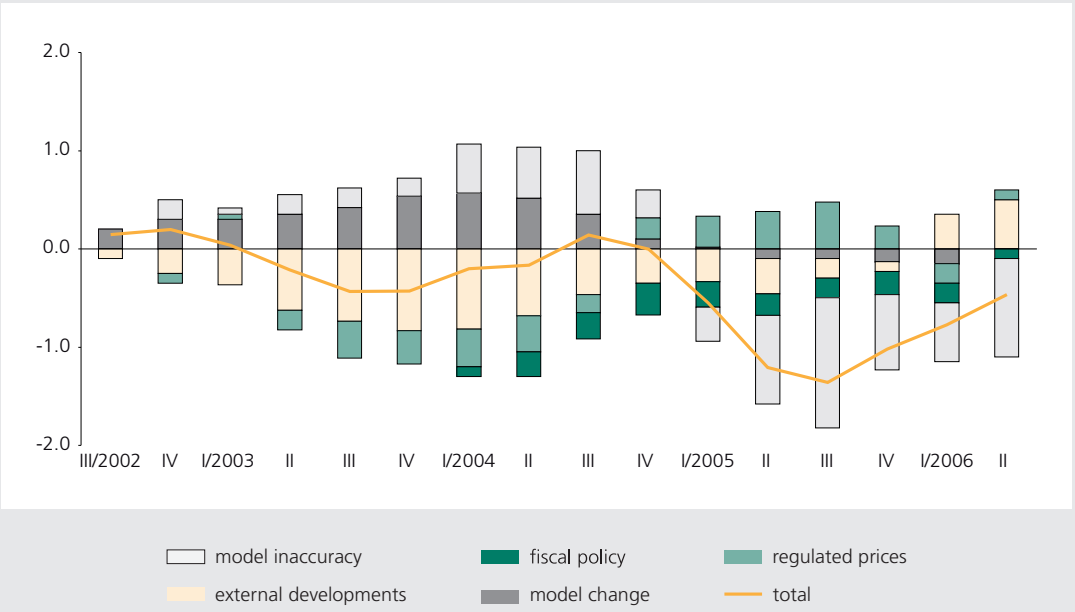
The CNB's forecasts for the CPI, July 2002 – January 2005



Source: CNB.

CHART. 2

Breakdown of the difference between actual and forecasted interest rates, July 2002 – June 2006



Source: CNB, author's calculations.
Note: Bars represent partial effects of individual underlying factors, and are computed using model simulations of six consequent forecasts for given quarter. The effect of fiscal policy is available only from January 2004.

Out of the eleven forecasts made in this period, three (July 2003, January 2004, January 2005) almost matched the ex post outcomes and one (October 2003) stood below actual inflation for much of the forecast. A detailed assessment of the inflation target fulfilment reveals that a large part of the bias in the forecasts can be assigned to bias in the variables describing external developments (especially weak foreign demand) – see Chart 2. Some short-lived deviations of interest rates from the model recommendation (labelled model inaccuracy in Chart 2) can be partially explained by the bank board's asymmetric risk assessment.

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Inflation Targeting and Communication

Aleš Bulíř and Kateřina Šmídková[1]

The case for inflation targeting (IT) rests on inflation targets, forecasts and inflation reports providing a dependable and efficient instrument for the central bank's communication with the public, thus anchoring consumer expectations (Woodford, 2005). It has been argued that if the central bank communicates its commitment to a targeting rule well, the public will take up the published inflation forecast as its own expectation of inflation, in turn making stabilisation costs lower as compared with other, less credible regimes.

Our analysis of central bank communication tools vis-à-vis the public confirms that IT permits a fine appreciation of monetary policy decisions. Anyone reading inflation reports should be able to understand the central bank's decision-making process, especially in situations where such an understanding is difficult to obtain from observing policy actions, inflation targets and forecasts only. The understanding of monetary policy depends on the formal quality of inflation reports as well as the track record of linking monetary policy decisions with inflation developments, both actual and expected. The formal quality of inflation reports has been scrutinised in detail and some central banks predictably write better than others (Fracasso, Genberg and Wyplosz, 2003; Roger and Stone, 2005). Much less attention has been paid to the consistency of inflation reports with other communication tools.

The papers to date have focused mostly on comparing inflation targets with inflation outcomes, with the result of rather poor performance (Roger and Stone, 2005). We replicate this finding – in our sample inflation was one percentage point higher/lower than the target in more than one-half of all the annual observations. The evidence suggests that inflation deviated from the target mostly because the economy was hit by an unexpectedly large supply or demand shock that the authorities either could not or decided not to correct, thus severely limiting the usefulness of this indicator (Filáček, 2007). Nevertheless, the target-to-outturn indicator cannot be dismissed entirely – the public commitment of a central bank to its chosen targets is necessary for the verifiability thereof and can be ensured only over a sufficiently long period.

We extend the analysis of IT communication to include information obtained from published inflation reports, namely inflation forecasts and verbal assessments of various inflation factors. By presenting an inflation forecast – conditional on a preset path of interest rates – below/above target, the central bank effectively signals its commitment to change the policy rate in order to bring inflation closer to the target.[2] The inflation forecasts directly affect public behaviour as long as the central bank is expected to act on them.

A simple version of the forward-looking rule may take the following form:

$$i_t = \gamma i_{t-1} + (1-\gamma)\left(\delta\left(\pi^{F,CB}_{t+j} - \pi^*\right) + i^n\right)$$

where i_t is the policy instrument (the short-term nominal interest rate); $\pi^{F,CB}_{t+j}$ denotes the one- and two-year inflation forecast formulated at time t at quarterly frequency; π^* is the inflation target; and i^n is a policy-neutral interest rate equal to the sum of the equilibrium real interest rate and the inflation target. Thus, if the inflation forecast is above/below the target, the public expects the policy rates to be increased/lowered to offset the gap between expected inflation and the inflation target.

The signal sent through the forecast may need to be augmented by communicating additional inflation factors that are not incorporated into the inflation forecast. If the observed policy action does not correspond to the signal derived from the inflation forecast, the public will try to obtain such missing information from inflation reports. For example, the inflation forecast predicted above-target inflation in the future and the policymaker lowered the policy rate. To this end, it should suffice to make use of information contained in the inflation reports and to use it in the following order: (i) the inflation

1 This article is based on Bulíř, Šmídková, Kotlán and Navrátil (2007).

2 Conditional forecasts were used initially by all six countries in our sample and the Czech National Bank switched to unconditional forecasts only in late 2002. Under unconditional forecasts, used recently in the Czech National Bank, Norges Bank and other banks, both inflation and future interest rates are determined in the model and communicated explicitly rather than derived implicitly from the inflation forecast.

forecasts and targets, (ii) the monetary policy decisions, and (iii) the verbal descriptions of various current and expected inflation factors.

Discrepancies between rule-based, expected policy rate changes and actual policy rate changes need to be explained by verbal descriptions of various inflation factors. We perused the quarterly inflation reports and extracted all verbal assessments and the presumed direction of their impact on inflation. Each verbal comment was catalogued into a supply, demand or external environment category, further divided into subcategories, and assigned either an inflationary or a deflationary effect. After simple aggregation we obtained an index-like measure of quarterly inflation factors that are a fairly good leading predictor of turning points in inflation in our sample countries (Chart 1). While the broad trends in these inflation factors seem common to all three countries, we found large idiosyncratic shocks driving inflation developments in individual countries (the external environment in the Czech Republic and aggregate demand in Chile).

Depending on the combination of past developments, inflation forecasts and unanticipated shocks, three sets of events could occur. First, the central bank consistently communicated economic developments and its own policy response. As a result, the public correctly anticipated the eventual inflation outturn. Second, the central bank provided a consistent explanation of its policies, however, unanticipated shocks pushed inflation above/below the forecast and the public was surprised by the eventual inflation outcome. Nevertheless, the public accepted the unanticipated nature of the shocks against the background of otherwise consistent communication. Third, the central bank's inflation forecasts, policy rate moves and verbal explanations were mutually inconsistent and the public was confused about monetary policy.

Our results confirm that central bank communication was broadly consistent across our sample countries (Table 1). The summary results were found to be remarkably similar among advanced inflation targeters (Chile and Sweden) as well as among "lite" targeters (Hungary and Poland). First, while we found policy rates moving in a direction opposite to what was implied by the inflation forecast in one-half of all the observations, the majority of these policy actions could be understood from the publicly available information. Central banks signalled interest rate moves through their inflation forecasts. However, these signals were regularly augmented by verbal

TABLE. 1

Clarity of communication, individual countries, 2000–2005
(1-year forecast horizon)

	Chile	Czech Republic	Hungary	Poland	Sweden	Thailand	Average
	In per cent of total observations						
Consistent communication No inflation outcome surprise	50.0	66.7	50.0	66.7	50.0	50.0	55.6
Consistent communication Inflation outcome surprise	33.3	16.7	16.7	33.3	50.0	33.3	30.6
Inconsistent communication	16.7	16.7	33.3	0.0	0.0	16.7	13.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

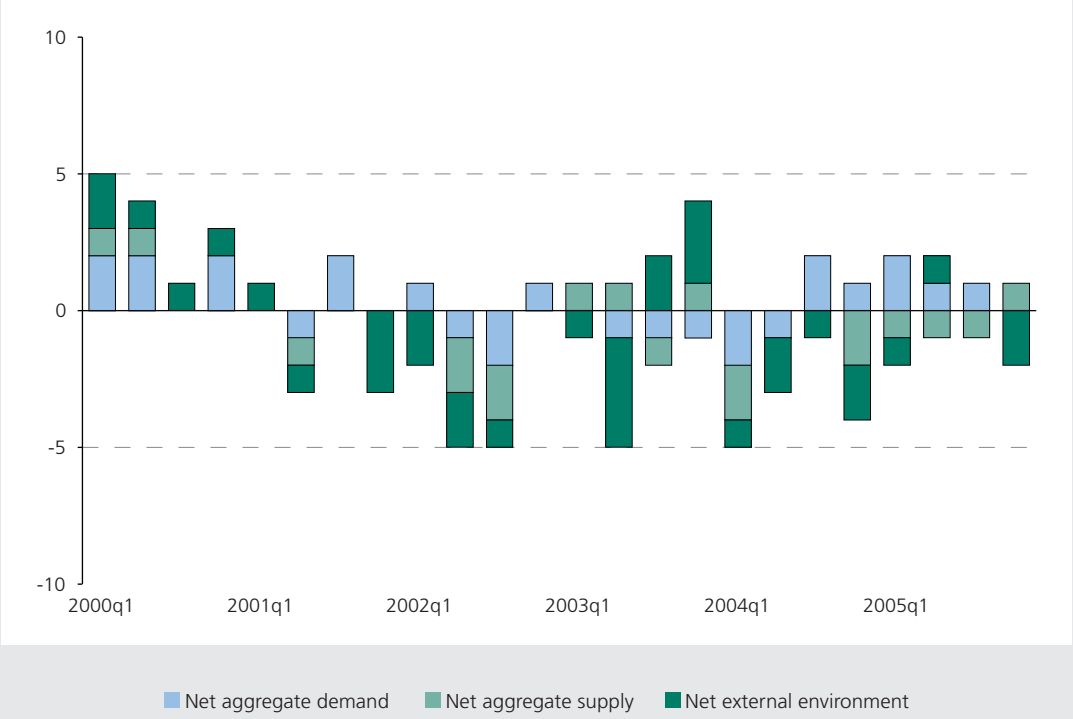
Source: Authors' calculations.
Note: Calculations are based on 4-quarter inflation forecasts and the benchmark calibration of the policy rule.

assessments of inflation factors. In our sample, these factors were slanted toward deceleration in the rate of inflation.

Second, although the sample central banks missed their inflation targets in more than one-half of all the observations, this metric says very little about the quality of communication or indeed about the inflation targeting regime. Also, surprises – inflation significantly different from the forecast – were relatively infrequent, with the central banks failing to anticipate only about one-third of all inflation outcomes, mostly overestimating the rate of inflation. These results make us believe that some countries may have missed their targets intentionally to take advantage of favourable macroeconomic conditions in order to disinflate (e.g. the Czech Republic and Hungary), while others may have been subject to sizeable unanticipated shocks (e.g. Sweden and the Czech Republic). Third, confusion in central bank communication was rare. Only about one in six policy decisions was confusing in the sense that the inflation forecast, policy action and verbal assessments were not aligned.

CHART. 1

Czech Republic: inflation factors, 2000–2005



Source: Authors' evaluations of inflation reports.
Note: A positive/negative inflation factor index indicates pressures leading to higher/lower rates of inflation in the future.

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Measuring and Explaining Inflation Persistence: Disaggregate Evidence on the Czech Republic

Ian Babetskii, Fabrizio Coricelli and Roman Horváth[1]

The sensitivity of aggregate inflation to various macroeconomic disturbances has been traditionally at the focus of monetary authorities' attention. Indeed, the transmission of monetary policy actions to prices depends on a number of factors, including *inter alia* the degree of nominal rigidities. Consequently, in the last 20 years or so, there has been substantial research investigating the macroeconomic consequences of nominal rigidities for the working of an economy in response to various shocks and for the design of monetary policy rules. In this paper, we focus on assessing inflation persistence, i.e. to what extent past inflation influences current inflation, based on disaggregate data underlying the consumer price index in the Czech Republic.

There are various reasons why it is vital to study inflation persistence at a disaggregated level. Disaggregated analysis generally uncovers smaller inflation persistence across the individual/sectoral price indexes compared to aggregate inflation. This suggests that inflation persistence observed at the aggregate level may arise due to aggregation bias (see Granger, 1980) and due to the fact that idiosyncratic shocks will tend to disappear when a substantial number of series are aggregated (Altissimo, Mojon and Zaffaroni, 2007). Disaggregate analysis is also fruitful for understanding which components of various price indexes exhibit greater inflation persistence. In addition, the role of structural breaks in estimating inflation persistence can be tackled in a fuller manner.

Additionally, several studies have raised the issue of which factors lie behind the fact that the inflation process is relatively persistent. Some macroeconomic studies argue that the lower responsiveness of aggregate inflation to output developments in the euro area in comparison to the U.S. is caused by more rigid structural policy settings and relate it to trade barriers in the European services sector. Analogously, it has been pointed out that low competition in services enhances the sector's inflation inertia as measured at the aggregated level. On the other hand, studies employing microeconomic data seem to be to a certain extent at variance with the studies based on macroeconomic data. Lunnemann and Matha (2005) for several EU countries and Clark (2006) for the U.S. find little evidence that services display greater inflation persistence than goods. Similarly, Coricelli and Horvath (2006) report results for Slovakia indicating that inflation inertia in the services sector is even lower than for goods and put forward an explanation of why (labour intensive) services, where the degree of competition is typically lower (as compared to goods) as services are often not exposed to international competition, may in fact exhibit smaller persistence. The argument is based on the general equilibrium model of Calvo (2000), who shows that greater competition in the market may actually slow down the adjustment to shocks, as the degree of strategic complementarity increases with higher competition. All these aforementioned issues give further impetus for individual or sectoral level analysis of inflation persistence.

One of the interesting policy applications of inflation persistence analysis at the disaggregate level is provided by Cutler (2001). Cutler constructs an alternative measure of core inflation – persistence-weighted core inflation. The measure is constructed in a way giving larger weights to items exhibiting higher inflation persistence. This can potentially be a fruitful approach, as for example in some other core inflation measures the exclusion of particular products from the basket is to a certain extent arbitrary. Cutler (2001) finds that several non-seasonal food prices (food prices are typically excluded from core inflation) exhibit relatively

1 This article is based on Babetskii, Coricelli and Horváth (2007).

persistent inflation and thus their behaviour may provide additional information for capturing trends in inflation series.

DATA AND MEASUREMENT

Our dataset includes 412 individual price indexes of narrowly defined products and 9 broader sectors from 1994:M1 to 2005:M12. The selected 412 products (series that remained in the basket for the whole sample period) represent 64% of the CPI basket as of 2005. Chart 1 shows the official CPI inflation and our sample inflation constructed based on our 412 products over 1995–2005 at monthly frequency. The high similarity between the two series suggests that our sample of 412 products is fairly representative in terms of inflation dynamics.

Given the non-stationarity of inflation series (most individual inflation rates follow an I(1) process, even if we control for structural breaks), we opt for an examination of the degree of inflation persistence using the complementary unit root and stationarity tests. Specifically, we use the augmented Dickey-Fuller (DF), Phillips-Perron (PP) and Kwiatkowski et al. (KPSS) tests. Next, since our data come from a former transition country, we test the robustness of the results by carrying out a unit root test with a structural break (Lanne et al., 2002, labelled as the LLS test hereinafter). Given a relatively short time series, we test for only one structural break on an unknown date. As we find that most of the time series exhibit a structural break around 1998–1999 (shortly after the adoption of inflation targeting), we decided to employ a unit root test where we impose the break (captured by the shift dummy) in 1998:1.

RESULTS

The results suggest that inflation persistence decreased after the adoption of inflation targeting in 1998. The adoption of an inflation target thus seems to provide a coordinating effect on the inflation expectations of economic agents and therefore puts downward pressure on inflation persistence. The results also unambiguously point to the presence of aggregation bias, that is, aggregate inflation is more persistent than the mean of its underlying disaggregated components. This result is robust to the choice of disaggregation level and weighting scheme, to the choice of estimation technique, and to the choice of period.

We identify that the sectoral structure explains the estimated cross-sectional variation in inflation persistence to a certain extent. In particular, products belonging to the raw goods category exhibit smaller than sample average persistence, while durables have higher than average persistence. Services are characterised by smaller persistence than goods for our 1995–2005 sample. However, the results are sensitive to the choice of estimation technique and period, i.e. using a shorter sample over 1998–2005 we do not find robust differences in terms of the persistence of goods and services. Nevertheless, our regression results show that the services dummy is negatively associated with inflation persistence.

Next, we find that competition is not conducive to reducing inflation persistence. Price dispersion, which we use as a proxy for the degree of competition, is negatively related to inflation persistence. This finding confirms the results of Calvo (2000), who shows that as the level of competition increases, the firm's pricing strategy is influenced more by the average pricing strategy in the market. The costs of charging a different price for identical products increase with higher competition. As a result, this leads to a more inertial response to shocks in a more competitive environment.

Lastly, we construct two measures of core inflation (one based on persistence of individual

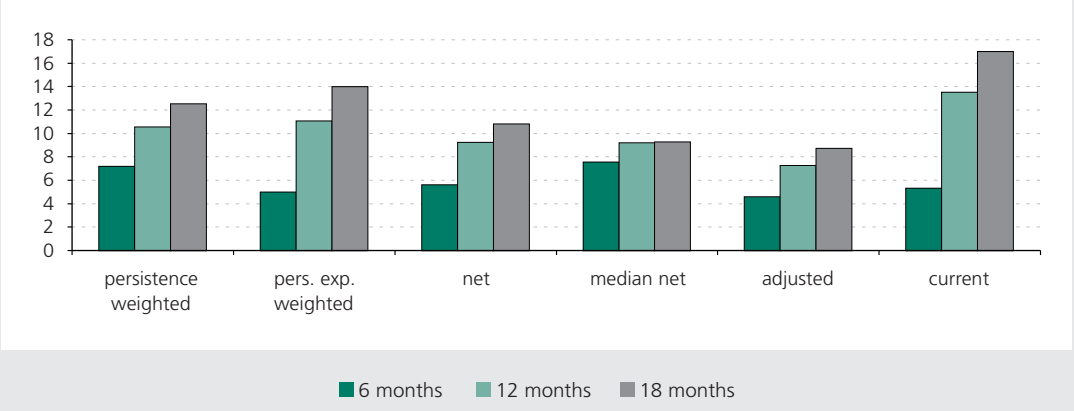
inflation rates and the other one based both on persistence as well as consumption expenditure weight) and evaluate their predictive ability by comparison with other available measures of core inflation over the period 1995–2005 (Chart 2). Generally, we find that adjusted inflation (headline inflation excluding regulated prices, fuel and food prices and changes in

CHART. 1

Official CPI inflation and sample inflation, 1995–2005

CHART. 2

Predictive ability of core inflation measures, 1995–2005



Notes: 6, 12 and 18 months forecasts ahead.
The mean square error is plotted on the vertical axis. Smaller numbers thus correspond to lower forecast errors.
Core inflation measures: Persistence weighted: based on Cutler (2001), greater weights are given to products with higher persistence; Persistence expenditure weighted: combination of the persistence of the series and the CPI basket expenditure weight; Net: headline inflation excluding regulated prices; Adjusted: headline inflation excluding regulated prices, fuel and food prices and changes in indirect taxes; Current: actual CPI inflation.

indirect taxes) is the best predictor of future inflation trends in our set of core inflation measures over the horizons of 6, 12 and 18 months. Our proposed measure – persistence expenditure-weighted core inflation – may be viewed as an equally good predictor as adjusted inflation for the 6-month horizon, but its predictive ability worsens over longer time periods.

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Inflation Persistence in New EU Member States: Implications for Inflation Targeting Strategy

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The notion of inflation persistence relates to the speed at which inflation converges to its equilibrium value after a shock. Slow adjustment of inflation signals a highly persistent inflation process. A monetary authority has to take the time dimension of inflation deviations into account when setting the monetary policy instrument in order to keep inflation at a desired level. Therefore, the accurate estimation of inflation persistence is an important element in conducting monetary policy. In addition, some approaches to estimating persistence offer the possibility of analysing the levels of the inflation target perceived by public. If the perceived targets change over time or differ from the announced targets, an interesting piece of information is obtained.

Several measures of inflation persistence, based mainly on univariate time series models, have been developed. However, they are primarily designed to measure persistence in developed economies. Using these standard approaches for the Czech Republic (and other NMS) could yield misleading conclusions.

There are several issues that make the problem of measuring inflation persistence in the NMS intricate. The inflation process in countries undergoing economic transformation from central planning to a market economy is influenced by many factors, e.g. monetary policy regime shifts, administrative price changes and price convergence. The resulting breaks in inflation are not distinguishable by standard measures from independent shocks to inflation and are considered as shocks with a long-lasting effect.[2] Standard measures, therefore, deliver substantially higher inflation persistence estimates for the NMS than for the developed countries.

The solution is to explore inflation persistence measures based on models that allow for breaks in the inflation mean. We examined measures based on autoregressive models with a time-varying mean, on autoregressive fractionally integrated moving average models and, finally, on the New Keynesian Phillips Curve estimation.

The time-varying mean models reveal more than a mere estimate of the inflation persistence. They enable us to separate the impact of persistence in nominal contracts and persistence in the real economy factors influencing inflation (intrinsic and extrinsic persistence) from the impact of inflation expectations and monetary policy regime changes. Intrinsic and extrinsic inflation persistence seems to be of comparable importance in the NMS and the euro area countries. Estimates of the time-varying mean models clearly show that changes in expectations and monetary policy regime switches are crucial in analysing inflation persistence in the NMS.

In addition, the time-varying mean models provide an estimate of the inflation target as it is perceived by public. For the Czech Republic, our estimate of the perceived inflation target (Chart 1) shows that the public's perception of the inflation target has changed considerably over time. For example, in 1999 the public-perceived inflation target was 6–8%, whereas in 2006 it was seven times lower. For other NMS (Poland, Slovakia) the shifts in the perceived inflation target (or its confidence interval) are also large, supporting an intuitive view that the perception of inflation and monetary policy regimes has changed profoundly during the economic transformation (Chart 2).

Statistical tests suggest that a stationary process with breaks describes the inflation process more accurately than autoregressive fractionally integrated moving-average models for almost all the current euro area countries and the NMS. Therefore, measures based on time-varying mean models are preferable to measures estimated using autoregressive fractionally integrated moving-average models.

1 This article is based on Franta, Saxa and Šmídková (2007).

2 In econometric terms this means that the standard measures of inflation persistence assume a constant mean of inflation. Since the economic transition that the NMS went through affects the inflation mean, the assumption of a constant mean is unrealistic and the persistence estimates are biased upwards.

CHART. 1

Perceived and announced inflation targets in the Czech Republic.

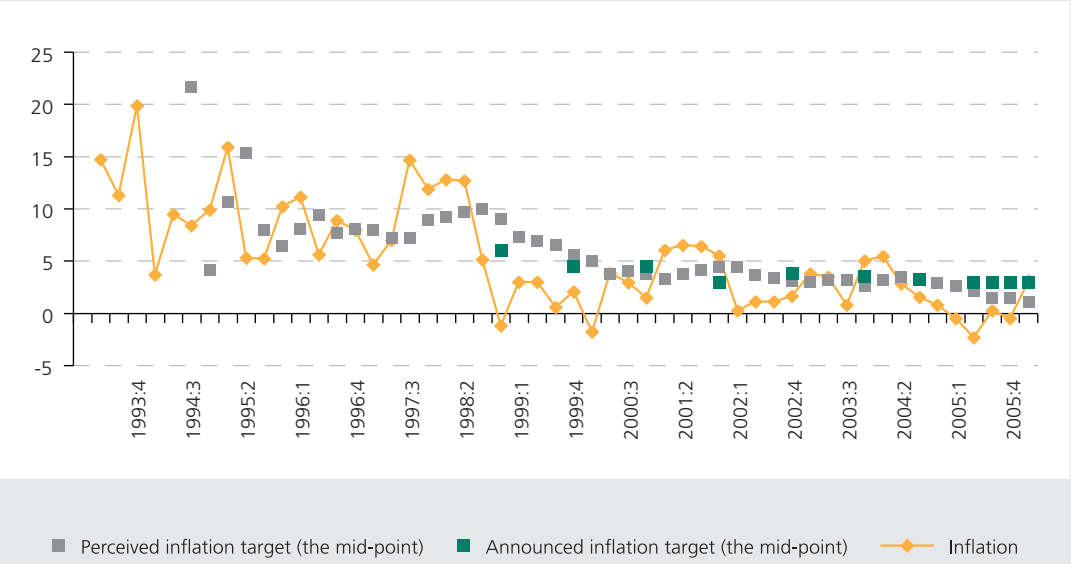

CHART. 2

Chart 2: Shifts in perceived inflation targets, 1999–2006 (90% confidence intervals)

The last employed approach to the measurement of inflation persistence is based on the estimation of the New Hybrid Phillips Curve (NHPC). The NHPC describes the overall unemployment dynamics and provides estimates of structural parameters related to the inflation process. Structural parameter estimates are not affected by monetary policy regime shifts. On the other hand, estimates of the NHPC are not directly comparable to the results obtained by other methods.[3] However, this approach can still provide useful information regarding the persistence of inflation shocks. Estimates of the NHPC suggest that regarding the formation of the current inflation rate the NMS in our sample are more backward-looking than the current members of the euro area.

The empirical results, which identify a more backward-looking nature of inflation and larger shifts in perceived inflation targets in the NMS than in the euro area countries, indicate that anchoring inflation expectations is a very important part of monetary policy strategy for the NMS. Despite the fact that the perceived inflation targets in the NMS are now similar to those of the current euro area members, the NMS should pay attention to expectations-based inflation persistence. Since several examples among the current euro area countries show that upward shifts in perceived targets are also possible, the NMS should not take it for granted that their perceived targets will remain at the current low levels.

3 For example, expectations-based inflation persistence, which is related to the persistence of deviations of public inflation expectations from the inflation target pursued by the central bank, is not built into the model, since the estimation procedure assumes rational expectations.

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Lucrezia Reichlin, ECB	6 May 2008	A Two-Step Estimator for Large Approximate Dynamic Factor Models Based on Kalman Filtering
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Carl Walsh, University of California-Santa Cruz	18 Sep 2007	Inflation Targeting and the Role of Real Objectives
Lars Svensson, Sveriges Riksbank	28 Jun 2007	Recent and Prospective Developments in Monetary Policy
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Economic Modelling, forthcoming

Podpiera, J. and L. Weill (2008): "Bad Luck or Bad Management? Emerging Banking Market
Experience", *Journal of Financial Stability*, forthcoming

Pruteanu-Podpiera, A., Schobert, F. and L. Weill (2008): "Banking Competition and Cost Efficiency:
A Micro-Data Analysis on the Czech Banking Industry", *Comparative Economic Studies*, forthcoming

CNB Research Open Day

The fourth CNB Research Open Day will be held in the Czech National Bank's *Plodinová burza* (Commodity Exchange) building on **Tuesday, 6 May 2008**. 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 2009–2010 and to meet CNB researchers informally

This year's ROD is devoted to 10 years of inflation targeting at the CNB. The conference will be followed by a lecture given by Lucrezia Reichlin (ECB, Director General Research).

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_2008_form.html

Programme

Tuesday, 6 May 2008
The Czech National Bank's Plodinová burza (Commodity Exchange) building,
Senovážné nám. 30, Praha 1

8.30 Registration & Morning Coffee
Chair: Robert Holman
9.00 Welcome by Robert Holman (Chief Executive Director, CNB) & ERD Award 2007
CNB Economic Research: What's New, Kateřina Šmídková (Executive Director, Economic Research and Financial Stability Department, CNB)
9.20 Why and How to Assess Inflation Target Fulfilment, Jan Filáček, CNB
9.40 Discussion: Lucrezia Reichlin, ECB
10.00 Q&A
10.05 Coffee
Chair: Kateřina Šmídková
10.35 Transmission of Exchange Rate Shocks into Domestic Inflation: The Case of the Czech Republic, Oxana Babetskaia-Kukharchuk, CNB
10.55 Discussion: István Kónya, MNB
11.15 Q&A
11.20 Foreign Exchange Interventions Under Inflation Targeting: The Czech Experience, Tomáš Holub, CNB (joint work with Adam Geršl, CNB)
11.40 Discussion: Diego Moccero, OECD
12.00 Q&A
12.05 The Effects of an Anticipated Future Change in Monetary Policy Regime, Juraj Antal, CNB (joint work with František Brázdik, CNB)
12.25 Discussion: Yulia Rychalovska, CERGE-EI
12.45 Q&A
12.50 Lunch
Chair: Michal Skořepa, CNB
14.30 Lucrezia Reichlin – A Two-Step Estimator for Large Approximate Dynamic Factor Models Based on Kalman Filtering – lecture with Q&A
16.00 Concluding Remarks