Web Links

- **Current CNB Research Projects**

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- **Research Publications**

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Research Areas

A) Monetary Policy

B) Macroeconomic Modelling and Forecasting

C) Financial Stability

D) Fiscal Policy

E) Real Sector and Convergence

Research Priorities 2007 – 2012 Monetary Policy

Strategic and policy issues related to inflation targeting, and independent monetary policy in more general, should be researched in both the Czech and European context in order to provide a background for the CNB's monetary policy prior to euro adoption and for the CNB's participation in the Europe-wide general discussion on monetary policy throughout 2007-2012. The experience of countries that will be adopting the euro before the Czech Republic and the experience of the enlarged euro area should be among the closely followed issues.

Research Priorities 2007 - 2010

A) MONETARY POLICY

- Independent monetary policy - improving the decision-making process

- Independent monetary policy - strategic interactions

- Euro adoption in the region

- Long-term trends, equilibrium values and monetary policy

- The transmission of monetary policy to inflation and output

- Inflation dynamics

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A. Monetary policy – Priority Topics 2011
(coordinator: Roman Horváth)

- A1. Projects analysing the impact of the financial crisis on monetary policy design, especially alternative specifications of the inflation target (e.g. index composition) or policy rules (e.g. asset prices) to stabilise the economy.

- A2. Projects determining the optimal level of foreign exchange reserves in the aftermath of the financial crisis.

- A3. Empirical projects comparing the impact of the crisis on the financial system in selected euro area members to developments in the Czech Republic.

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A. Monetary policy – Priority Topics 2011 (coordinator: Roman Horváth)

- A4. Projects analysing the impact of potential higher global inflation on the long-term trends of important economic variables and the sustainability of low inflation targets in small open economies.

- A5. Projects examining the functioning of various transmission channels (such as the credit channel, the exchange rate channel and important interest rate spreads) during and after the crisis.

Completed Projects

- CNB WP 8/2008 - Monetary Policy Rules with Financial Instability

- CNB WP 15/2007 - The Effects of Anticipated Future Change in the Monetary Policy Regime (A2/05)

1A) Independent monetary policy – improving the decision-making process

Ongoing Projects

- A1/09 - Money and Prices: Policy Perspectives for Selected New EU Members

- A2/09 -Demand for Cash in a Converging Economy

- A2/10 - Bayesian Fan Charts for the Czech Economy

- A3/10 - Hedging Behaviour of Czech Exporting Firms

2A) Independent monetary policy – strategic interactions

Completed Projects

- CNB WP 14/2007 - Inflation Targeting and Communication:
  Should the Public Read Inflation Reports or Tea Leaves? (A4/03)

2A) Independent monetary policy – strategic interactions

Ongoing Projects

- A3/09 -Monetary Policy Transparency and predictability: International Evidence from Central Banks´ Voting Records

- A4/09 – The CNB´s Forecast as a Coordination Device

3A) Euro adoption in the region

Ongoing Projects

- A6/09 - Adopting the Euro in the Czech Republic: What Can the Czech Republic Learn from the Experience of the Euro Area Countries?

4A) Long-term trends, equilibrium values and monetary policy

Completed Projects

- CNB WP 3/2007 - The Convergence of a Transition Economy:
  The Case of the Czech Republic (E4/2005)

- CNB WP 3/2008 - Central Bank Losses and Economic Convergence

- CNB WP 4/2007 - The Time-Varying Policy Neutral Rate in Real Time: A Predictor for Future Inflation?

5A) The transmission of monetary policy to inflation and output

Completed Projects

- CNB WP 4/2008 - The Effects of Monetary Policy in the Czech Republic: An Empirical Study (A3/07)

- CNB WP 8/2009 - Heterogeneity in Bank Pricing Policies: The Czech Evidence (A7/07)

5A) The transmission of monetary policy to inflation and output

Ongoing Projects

- A1/07 - Determinants of Exchange Rate Comovements

- A5/07 - Monetary Policy and Exchange Rate Dynamics: The Exchange Rate as a Shock Absorber

- A1/10 - The Impact of Monetary policy on Financing of Czech Firms

6A) Inflation dynamics

Completed Projects

- CNB WP 1/2007 - Measuring and Explaining Inflation Persistence:
  Disaggregate Evidence on the Czech Republic (E5/05)

- CNB WP 12/2008 - Survey on Wage and Price Formation of Czech Firms (D3/07)

- CNB WP 6/2008 - The Price Effects of an Emerging Retail Market (E3/07)

Research Priorities 2007 – 2012
Macroeconomic Modelling and Forecasring

In order to improve the quality and robustness of the CNB's modelling suite, the new SDGE models should be finalised and models more driven by data should be developed. The CNB's forecasting models should be gradually improved by applying new advances in economic theory, computational methods and econometrics. The CNB will use these models for generating forecasts and policy simulations under inflation targeting and for producing country inputs into the ESCB's debates after euro adoption.

B) MACROECONOMIC MODELLING AND FORECASTING

- Improvement of current forecasting models

- Development of alternative forecasting models more driven by data

- Robustness checks

- Inputs to the ESCB's modelling and forecasting work

- Financial sector in macro-modelling – bottom-up approach

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B. Macroeconomic modelling and forecasting – Priority Topics 2011
(coordinator: Juraj Antal)

- B1. Projects providing a detailed description of the current g3 model and its use, including case studies.

- B2. Projects supporting the further development of the CNB's core forecasting model in the following areas: regulated and oil prices, credit rationing and investment accumulation, the labour market and the financial sector.

- B3. Empirical projects improving inflation forecasts by detecting determining factors of short-term wage developments and balance of payments developments.

- B4. Projects contributing to developing a macroprudential modelling framework encompassing stress testing and policy simulations that should put emphasis on interactions between the real economy and the financial sector, endogenous leverage ratios and default rates and reflect the specific needs of macroprudential policy (e.g. longer horizons, the problem of accumulating imbalances, the problem of internalisation of systemic risk into individual financial institution behaviour, built-in liquidity risk).

- B5. Projects investigating the macroeconomic relationships and mechanics behind financial stress based on a bottom-up approach using finance models with the micro-structure of the financial market with heterogeneous banks, funds and traders.

1B) Improvement of current forecasting models

Completed Projects

- CNB WP 2/2009 - Implementing the New Structural Model of the Czech National Bank

2B) Development of alternative forecasting models more driven by data

Ongoing Projects

- B6/09 - Forecasting Czech GDP with Dynamic Factor Models

- B3/10 - Macro-Financial Model for Short-Term Forecasting

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3B) Robustness checks

Ongoing Projects

- B4/09 - Forecasting Based on a Variety of Econometric Methods

- A2/10 - Bayesian Fan Charts for the Czech Economy

4B) Inputs to the ESCB´s modelling and forecasting work

Ongoing Projects

- B1/10 - Two Country DSGE Model

- B5/07 – The Analysis of the Long Run Effects of the Euro Adoption for CR

5B) Financial sector in macro-modelling – bottom-up approach

Ongoing Projects

- B5/09 - Macro-finance Modeling for the Czech Economy

- B2/10 - Developing a Small Open DSGE Model with Financial Sector

Research Priorities 2007 – 2012
Financial Stability

Research on financial stability is gradually gaining prominence. The weight of the financial sector in the economy is increasing, and with it so are international financial linkages. The CNB will become the new financial system supervisor in 2006. The research should reflect that fact. The aim is to gradually converge to the research frontier in this area and invite research topics related to the non-banking sectors of the financial system.

C) <u>FINANCIAL STABILITY</u>

- Modelling the behaviour of international banks

- Analysing convergence trends and their implications for financial stability

- Analysing the segments of the financial sector

- Measurement of financial system risks

- Operationalisation of the macroprudential policy

C. Financial stability – Priority Topics 2011
(coordinator: Michal Hlaváček)

- C1. Projects assessing the impacts of the financial crisis on real sectors, with an emphasis on improving stress testing of the household and corporate sectors, analysis of changes in sources of corporate financing (the credit crunch, changes in intra-group financing) based on micro data (e.g. credit register) and analysis of credit concentration risks.

- C2. Projects analysing the non-banking sectors of the Czech financial system, with an emphasis on topical issues such as efficiency and competitiveness, stress testing and the impact of population ageing.

- C3. Projects analysing contagion risks (both cross-border and across different financial sector segments) in a situation of financial turbulence, based both on financial markets data and on information from sectoral balance sheets.

C. Financial stability – Priority Topics 2011
(coordinator: Michal Hlaváček)

- C4. Projects assessing the impacts of alternative regulatory responses to crises in the EU context (Basel III, including changes in capital and liquidity regulations, through-the-cycle provisioning, leverage ratios) on individual institutions as well as the impact on the whole industry (via the induced change in macroeconomic dynamics, including the feedback loop between lending and economic activity) and the impact on the relative positions of both the banking and shadow banking sectors.

- C5. Projects providing support for operationalisation of macroprudential policies, with an emphasis on proposing a specific definition of their goals and intermediate targets, an overview of macroprudential instruments, and analysis of their qualitative as well as quantitative impacts.

- C6. Projects analysing early warning systems and systemic risk indicators for macroprudential policy, including considerations of which indicators should be EU-wide and which could be country specific.

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1C) Modelling the behaviour of international banks

Completed Projects

- CNB WP 9/2009 – Funding Costs and Loan Pricing by Multinational Bank Affiliates (C5/07)

- CNB WP 7/2008 – The Origins of Global Imbalances (B2/07)

2C) Analysing convergence trends and their implications for financial stability

Completed Projects

- CNB WP 7/2007 - Financial Integration of Stock Markets among
  New EU Member States and the Euro Area (C1/07)

2C) Analysing convergence trends and their implications for financial stability

Ongoing Projects

- C1/09 - Credit Growth in Central and Eastern Europe: Determinants, Equilibrium and Policy Tools for Central Banks

- C2/09 - Financial Integration and International Transmission of Shocks: The Case of the New EU Member States

- C2/10 - Survey of Research on Modelling the Financial Sector

- C8/07 - Residential Property Prices and Their Implications for Financial Stability

3C) Analysing the segments of the financial sector

Ongoing Projects

- C5/09 - Models and Stress Testing of Pension Funds

- C7/07 - Relationship Banking in the Czech Republic: Evidence from the Credit Register

4C) Measurement of financial system risks

Completed Projects

- CNB WP 9/2008 - Stress Testing Credit Risk: Is the Czech Republic Different from Germany? (C2/07)

- CNB WP 5/2007 - Bad Luck or Bad Management? Emerging Banking Market Experience

- CNB WP 6/2007 - Market Power and Efficiency in the Czech Banking Sector (C6/05)

- CNB WP 13/2009 - Merton's Approach for Estimating Loss Given Default: Application for the Case of the Czech Republic CNB WP 3/2009 - Measuring Excessive Risk -Taking in Banking (C4/07)

4C) Measurement of financial system risks

Ongoing Projects

- C3/07 – Credit Risk Stress Testing

- C3/09 – Who Borrows and Who May Not Repay: Changes in the Distribution of Credit and Creditworthiness across Households in the Czech Republic since 2000

- C4/09 – Monetary Policy and Banks' Behaviour in the Czech Republic

- C6/09 – Models for Stress-testing Czech Banks' Liquidity Risk

- C1/10 – Dynamic Stress Testing of the Czech Banking System

- C3/10 - Financial Crisis and Interest Rate Spreads

- C4/10 - Macroeconomic Environment and Credit Loss Modelling

Research Priorities 2007 – 2012
Fiscal Policy

Fiscal issues such as long-term sustainability and the flexibility of the fiscal system should be researched in order to form the CNB's views on the impact of the fiscal system on economic developments. Fiscal policy is a high-impact macroeconomic instrument and will be the only one remaining at the national level after euro adoption. The available European experience to date indicates that fiscal policy can be one of the most limiting factors in the convergence process and that a further debate on modifications to the SGP, such as changes in fiscal federalism, can be expected.

D) <u>FISCAL POLICY</u>

- The impact of fiscal policy on the economy

- Micro-foundations of the fiscal system

- Two key components of fiscal policy

- The EU fiscal framework

D. Real sector and fiscal policy – Priority Topics 2011
(coordinator: Kamil Galuščák)

- D1. Projects computing fiscal impulses and multipliers in the EU members before, during and after the crisis period, with an emphasis on lessons for the Czech economy.

- D2. Projects focusing on various aspects of the interaction between fiscal policy and financial markets in the EU, such as factors of cross-country government bond spreads and contagion risk, the effect of interest rate changes on public debt management, the links between increased debt levels and the costs of new financing and the possible role of the financial markets as a substitute for the EU fiscal framework.

- D3. Projects assessing the determinants of saving and consumption decisions in the household sector and the impact of the economic downturn on the household and corporate sectors, their insolvency and demand for goods in different EU members with different exchange-rate regimes.

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D. Real sector and fiscal policy – Priority Topics 2011
(coordinator: Kamil Galuščák)

- D4. Projects analysing the increased risks of divergence inside the EU, considering new evidence on cross-country productivity differentials and their impact on inflation and real exchange rate appreciation.

- D5. Projects researching the main economic rigidities and persistencies in the EU, particularly on the labour market and in the public sector.

- D6. Projects analysing data uncertainty, such as possible biases in the measurement of important economic variables, and the impact of data revisions and the methodology of seasonal adjustment on the forecasting process.

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1D) The impact of fiscal policy on the economy

Ongoing Projects

- D2/10 - A Tool for Assessing the Impact of Fiscal Measures on the Economy

- A6/09 - Adopting the Euro in the Czech Republic: What Can the Czech Republic Learn from the Experience of the Euro Area Countries?

2D) Micro-foundations of the fiscal system

Completed Projects

- CNB WP 7/2009 - The Impact of Early Retirement Incentives on Labor Market Participation: Evidence from a Parametric Change in the Czech Republic

3D) Two key components of fiscal policy

Completed Projects

- CNB WP 1/2009 - The Impact of Population Ageing of the Czech Economy (D2/07)

4D) The EU fiscal framework

Ongoing Projects

- C2/09 - Cyclical Effects of Fiscal Policies in the New EU Member States

Research Priorities 2007 – 2012
Real Sector and Convergence

Research on real sector and convergence issues should increase the robustness of monetary policy decisions both under inflation targeting and after euro adoption, doing so by delivering supply-side oriented, disaggregated analyses that improve our understanding of the economy's long-term behaviour and determining factors. Specifically, more detailed knowledge of real economic developments, typically based on micro-data, should help in improving the CNB's macroeconomic predictions, especially at the 'short end", and in setting the initial conditions of the model-based forecasts.

E) REAL SECTOR AND CONVERGENCE

- Addressing new challenges linked to EU accession, ERM II entry and euro adoption

- Real convergence and international comparative research

- Economic growth and supply-side performance

1E) Addressing new challenges linked to EU accession, ERM II entry and euro adoption

Completed Projects

- CNB WP 12/2008 – Survey on Wage and Price Formation of Czech Firms (D3/07)

- CNB WP 10/2008 - Time Aggregation Bias in Discrete Time Models of Aggregate Duration Data (E4/07)

- CNB WP 11/2009 - Changes in the Czech Wage Structure: Does Immigration Matter?

Ongoing Projects

- A6/09 - Adopting the Euro in the Czech Republic: What Can the Czech Republic Learn from the Experience of the Euro Area Countries?

2E) Real convergence and international comparative research

Completed Projects

- CNB WP 2/2007 – Does Reform Work?
An Econometric Examination of the Reform-Growth Puzzle

- CNB WP 6/2009 - Reform Redux: Measurement, Determinants and Reversals

- CNB WP 4/2009 - Downward Nominal and Real Wage Rigidity: Survey Evidence from European Firms

- CNB WP 5/2009 - The Determination of Wages of Newly Hired Employees: Survey Evidence on Internal versus External Factors

Completed Projects

- CNB WP 5/2008 - The Effect of Oil Price Shocks on the Czech Economy (E2/07)

- CNB WP 12/2007 - Transmission of Exchange Rate Shocks into Domestic Inflation: The Case of the Czech Republic (E6/05)

- CNB WP 10/2007 - Inflation Persistence in New EU Member States: Is It Different Than in the Euro Area Members? (B4/03)

- CNB WP 1/2007 - Measuring and Explaining Inflation Persistence: Disaggregate Evidence on the Czech Republic (E5/05)

- CNB WP 7/2008 - The Origins of Global Imbalances (B2/07)

2E) Real convergence and international comparative research

Ongoing Projects

- A8/07 - The Balassa-Samuelson Effect Revisited: Disaggregated Evidence from the Czech Republic

- D5/09 - Sources of Real Wage Rigidities in the Enlarged EU: A Disaggregated Approach

- D1/10 Firm-level Labour Demand and Labour Costs: Adjustment in Good Times and During the Crisis

3E) Economic growth and supply-side performance

Completed Projects

- CNB WP 6 /2008 - The Price Effects of an Emerging Retail Market (E3/07)

- CNB WP 11/2008 - The Measurement of Capital Services in the Czech Republic (E1/07)

3E) Economic growth and supply-side performance

Ongoing Projects

- D3/09 - Drivers of Growth: The Role of Total Factor Productivity in Sectors

- D1/09 - Consumer Demand Responses to Income, Tax and Price Changes: Evidence from the Czech Household