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BANK OF CANADA

Recherche mensuelle à la Banque du Canada

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Ce bulletin mensuel présente les publications les plus récentes des économistes de la Banque. Le rapport inclut des études parues dans des publications externes et les documents de travail du personnel publiés sur le site Web de la Banque du Canada.

PUBLICATIONS

À paraître

Jonathan Chiu, “Book Review of "Blockchain Technologies, Applications and Cryptocurrencies: Current Practice and Future Trends"”, Journal of Economic Literature

Kerem Tuzcuoglu, “Composite Likelihood Estimation of an Autoregressive Panel Ordered Probit Model with Random Effects”, Journal of Business & Economic Statistics

DOCUMENTS DE TRAVAIL DU PERSONNEL

Xing Guo & Pablo Ottonello & Diego Perez, “Monetary Policy and Redistribution in Open Economies”, Document de travail du personnel de la Banque du Canada 2022-6

Christian Friedrich & Peter Selcuk, “The Impact of Globalization and Digitalization on the Phillips Curve”, Document de travail du personnel de la Banque du Canada 2022-7

DOCUMENTS D'ANALYSE DU PERSONNEL

Felipe Alves & Christian Bustamante & Xing Guo & Katya Kartashova & Soyoung Lee & Thomas Michael Pugh & Kurt See & Yaz Terajima & Alexander Ueberfeldt, ”Heterogeneity and Monetary Policy: A Thematic Review”, Document d’analyse du personnel de la Banque du Canada 2022-2

Francisco Rivadeneyra & Nellie Zhang, ”Payment Coordination and Liquidity Efficiency in the New Canadian Wholesale Payments System”, Document d’analyse du personnel de la Banque du Canada 2022-3

Joel Wagner & Tudor Schlanger & Yang Zhang, ”A Horse Race of Alternative Monetary Policy Regimes Under Bounded Rationality”, Document d’analyse du personnel de la Banque du Canada 2022-4

RÉSUMÉS

Book Review of "Blockchain Technologies, Applications and Cryptocurrencies: Current Practice and Future Trends"

Composite Likelihood Estimation of an Autoregressive Panel Ordered Probit Model with Random Effects

Modeling and estimating autocorrelated discrete data can be challenging. In this paper, we use an autoregressive panel ordered probit model where the serial correlation in the discrete variable is driven by the autocorrelation in the latent variable. In such a nonlinear model, the presence of a lagged latent variable results in an intractable likelihood containing high-dimensional integrals. To tackle this problem, we use composite likelihoods that involve a much lower order of integration. However, parameter identification might potentially become problematic since the information employed in lower dimensional distributions may not be rich enough for identification. Therefore, we characterize types of composite likelihoods that are valid for this model and study conditions under which the parameters can be identified. Moreover, we provide consistency and asymptotic normality results for two different composite likelihood estimators and conduct Monte Carlo studies to assess their finite-sample performances. Finally, we apply our method to analyze corporate bond ratings.

Monetary Policy and Redistribution in Open Economies

This paper examines how monetary policy affects the asymmetric effects of globalization. We build an open-economy heterogeneous-agent New Keynesian model (HANK) in which households differ in their income, wealth, and real and financial integration with international markets. We use the model to reassess classic questions in international macroeconomics, but from a distributional perspective: What are the effects of monetary policy and external shocks in open economies? And how do alternative exchange-rate regimes compare? Our analysis yields two main takeaways. First, heterogeneity in households' international integration is a central dimension that drives the inequality in the consumption responses to external shocks more so than do income and wealth. Second, households' heterogeneity reveals the presence of a stabilization-inequality trade-off for the conduct of monetary policy in open economies, with fixed exchange-rate regimes leading to amplified but less unequal consumption responses to external shocks.

The Impact of Globalization and Digitalization on the Phillips Curve

In this paper, we examine the impact of globalization and digitalization on the Phillips curve in a sample of 18 advanced economies over two decades. Using industry-level data from the World and EU KLEMS databases, we first estimate country-industry-specific Phillips curves for each decade by relating the growth rate of output prices to lagged inflation and an employment gap. We then assess the relative impact of globalization and digitalization on the slope coefficients of these Phillips curves, which represent the sensitivity of inflation to economic slack. We measure globalization by increases in trade and financial integration and digitalization by the use of industrial robots as a share of a country's population. We find that globalization significantly reduces the slope of the Phillips curve, while digitalization has the opposite effect. We also find some evidence that globalization decreases the intercept of the Phillips curve and that digitalization increases it. Evidence for the impact of both trends on employment is less conclusive. When investigating the associated transmission channels for both trends in the context of our slope analysis, we find that the negative impact of globalization on the slope coefficient of the Phillips curve is muted in industries that experience a high growth rate of total factor productivity and that the positive impact of digitalization is muted in industries that have seen high investments in IT capital in the past.

Heterogeneity and Monetary Policy: A Thematic Review

The heterogeneity of businesses and households impacts aggregate economic fluctuations and, in turn, is shaped by aggregate fluctuations. This view has emerged over the last decade with strong implications for the transmission and conduct of monetary policy. Our thematic review focuses on key aspects of this new theory as well as its underlying assumptions. We place the insights in a Canadian context using relevant microeconomic and macroeconomic data.

Payment Coordination and Liquidity Efficiency in the New Canadian Wholesale Payments System

A new wholesale payments system will launch in Canada in 2021. This real-time gross settlement system called Lynx will have two types of settlement mechanisms, one allowing offsetting and the other not. This paper studies the decision problem of the Bank of Canada: which of the two settlement mechanisms should it use to send its payments. Using extensive simulation, we show that, mainly due to the benefits of liquidity pooling, Lynx would achieve its highest liquidity efficiency—even better than that of the current Large Value Transfer System (LVTS)—if all payments (urgent and non-urgent) from all participants were sent to the mechanism allowing offsetting. The minimum amount of liquidity required to settle all payments by critical deadlines is approximately $10 billion, around half the amount of collateral that LVTS participants allocate (pre–COVID-19). Since time-critical payments sent to the offsetting mechanism could experience a delay, the high level of liquidity efficiency is accompanied by an increase in the number of participants' operational interventions (to pledge more collateral or to alter payment priorities) to ensure that those time-critical payments are never delayed. When coordination does not occur, liquidity efficiency can be far lower than in the LVTS. The results highlight that the Bank of Canada helping with coordination is more important than the specific choice of mechanism.

A Horse Race of Alternative Monetary Policy Regimes Under Bounded Rationality

Nous introduisons la rationalité limitée, à la façon de Gabaix (2020), dans un modèle néokeynésien canonique calibré pour reproduire les données macroéconomiques du Canada depuis l’adoption de son régime de ciblage de l’inflation. À partir de ce modèle, nous dégageons une évaluation quantitative de l’incidence macroéconomique du ciblage flexible de l’inflation et de quelques autres régimes de politique monétaire, à savoir : le ciblage de l’inflation moyenne, le ciblage du niveau des prix et le ciblage du produit intérieur brut nominal. Nous étudions la performance de ces régimes avec et sans la contrainte d’une valeur plancher. Nos résultats donnent à penser que la performance des cadres qui dépendent du passé est sensible aux écarts avec les anticipations rationnelles. En effet, les avantages de ces cadres par rapport au ciblage flexible de l’inflation diminuent progressivement quand le degré de rationalité limitée augmente. Ce constat va dans le sens des

résultats d’expériences en laboratoire montrant que le ciblage flexible de l’inflation demeure un cadre robuste pour stabiliser les fluctuations macroéconomiques.

ÉVÉNEMENTS À VENIR

***Toutes conférences et activités qui devaient être tenues sur place sont suspendues jusqu'à nouvel ordre. Tous les événements ci-dessous auront lieu en ligne.**

Kyle Herkenhoff (University of Minnesota)
Organisateur: FMD / FSD EFR Conférencier
Date: 10 March 2022

Isabelle Mejean (Sciences Po)
Organisateur: EFR CEA/INT Conférencier
Date: 11 March 2022

Yuriy Gorodnichenko (UC Berkeley)
Organisateur: EFR CEA/INT Conférencier
Date: 18 March 2022

Giovanno Compiani (Booth School of Business)
Organisateur: BAP Conférencier
Date: 21 March 2022

David Evans (University of Oregon)
Organisateur: FMD / FSD EFR Conférencier
Date: 24 March 2022

Daphne Skandalis (University of Copenhagen)
Organisateur: EFR CEA/INT Conférencier
Date: 1 April 2022

Maxi Guennewig (University of Bonn)
Organisateur: BAP Conférencier
Date: 4 April 2022

John Cochrane (Hoover Institution, Stanford University)
Organizer: EFR CEA/INT Conférencier
Date: 8 April 2022

Nora Traum (HEC Montréal)
Organizer: EFR CEA/INT Conférencier
Date: 22 April 2022