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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

Dans la presse

Allen, Jason & Hortaçsu, Ali & Kastl, Jakub, “Crisis Management in Canada: Analyzing Default Risk and Liquidity Demand during Financial Stress”, *American Economic Journal: Microeconomics*, Vol 13(2): 243-275, May 2021

À paraître

Feunou, Bruno & Fontaine, Jean-Sebastien & Le, Anh & Lundblad, Christian T., “Tractable Term-Structure Models”, *Management Science*

Davoodalhosseini, Mohammad, “Central Bank Digital Currency and Monetary Policy”, *Journal of Economic Dynamics and Control*

Duprey, Thibaut & Klaus, Benjamin, “Early warning or too late? A (pseudo-)real-time identification of leading indicators of financial stress”, *Journal of Banking & Finance*

Garratt, Rod & Oordt, Maarten van, “Entrepreneurial Incentives and the Role of Initial Coin Offerings”, *Journal of Economic Dynamics and Control*

DOCUMENTS DE TRAVAIL DU PERSONNEL

Schroth, Josef, “Optimal Monetary and Macroprudential Policies”, Document de travail du personnel de la Banque du Canada 2021-21

Amano, Robert & Gosselin, Marc-André & McDonald-Guimond, Julien, “Evolving Temperature Dynamics in Canada: Preliminary Evidence Based on 60 Years of Data”, Document de travail du personnel de la Banque du Canada 2021-22

Kosse, Anneke, “An Empirical Analysis of Bill Payment Choices”, Document de travail du personnel de la Banque du Canada 2021-23

Boire, Francois-Michel & Duprey, Thibaut & Ueberfeldt, Alexander, “Shaping the future: Policy Shocks and the GDP growth distribution”, Document de travail du personnel de la Banque du Canada 2021-24

DOCUMENTS D'ANALYSE DU PERSONNEL

Chen, Heng & Engert, Walter & Huynh, Kim & O'Habib, Daneal, “An
[Exploration of First Nations Reserves and Access to Cash](#)”,
Document d'analyse du personnel de la Banque du Canada
2021-8

RÉSUMÉS

Crisis Management in Canada: Analyzing Default Risk and Liquidity Demand during Financial Stress

Using detailed information from the Canadian interbank payments system and liquidity-providing facilities, we find that despite sustained increases in market-rate spreads, the increase in banks' willingness to pay for liquidity during the 2008–2009 financial crisis was short-lived. Our study suggests that high-frequency distress indicators based on demand for liquidity offered by central banks can be complementary, and perhaps even superior, to market-based indicators, especially during times and in markets where uncertainty in the economic environment may lead to lack of meaningful information in prices due to absence of trading.

Tractable Term-Structure Models

We introduce a new framework that facilitates term structure modeling with both positive interest rates and flexible time-series dynamics but that is also tractable, meaning amenable to quick and robust estimation. Using both simulations and U.S. historical data, we compare our approach with benchmark Gaussian, stochastic volatility, and shadow rate models, where the latter enforces positive interest rates. Our approach, which remains arbitrarily close to arbitrage free, offers a more accurate characterization of bond Sharpe ratios due to a better fit of the volatility dynamics and a more efficient estimation of the return dynamics. Further, standard shadow rate and stochastic volatility models exhibit important restrictions that are largely absent in our approach.

Central Bank Digital Currency and Monetary Policy

Many central banks are contemplating whether to issue a central bank digital currency (CBDC). A CBDC has certain potential benefits, including the possibility that it can bear interest. However, using a CBDC is costly for agents. I study the optimal monetary policy when only cash, only a CBDC, or both cash and a CBDC are available to agents. If the cost of using a CBDC is not too high, more efficient allocations can be implemented by using a CBDC than using cash, and the first best can be achieved. Having both cash and a CBDC available may result in lower welfare than in the cases where only cash or only a CBDC is available. The welfare gains of introducing a CBDC are estimated under various scenarios for the United States and Canada. For example, if the cost of using a CBDC relative to

cash is around 0.25% of the transaction value, introducing a CBDC can lead to an increase of 0.12%-0.21% consumption for the United States and 0.04%-0.07% for Canada.

Early warning or too late? A (pseudo-)real-time identification of leading indicators of financial stress

Cette étude vise à prévoir les phases des cycles financiers grâce à une mesure de l'intensité des tensions financières intégrée dans un modèle de Markov avec changement de régime. Le ratio du service de la dette et les variables liées au marché de l'immobilier annoncent une transition vers un régime caractérisé par de fortes tensions financières. À l'inverse, les indicateurs mesurant la confiance des agents économiques annoncent la fin de la période de stress élevé. L'analyse des résultats sur échantillon montre que ces indicateurs peuvent offrir un signal précoce plusieurs trimestres avant que ne se produise le changement de régime considéré. Les résultats hors échantillon montrent, en revanche, que la performance des indicateurs repose pour l'essentiel sur les données constituées pendant la crise financière mondiale. La comparaison de la qualité des prédictions du modèle avec celles d'un modèle d'alerte précoce binaire standard révèle que le modèle de Markov à changement de régime surclasse la grande majorité des spécifications dans le cas d'un horizon pouvant atteindre trois trimestres avant le début des tensions financières.

Entrepreneurial Incentives and the Role of Initial Coin Offerings

Les premières émissions de cryptomonnaies (PEC) sont une nouvelle méthode de financement pour les entreprises en démarrage dont la popularité a explosé en 2017. Cet engouement s'est toutefois essoufflé au deuxième semestre de 2018 alors que leur réputation a commencé à souffrir de la pression exercée par les organismes de réglementation, de cas de fraude et de leurs rendements décevants. Dans cette étude, nous tentons de déterminer si les PEC sont une mode passagère ou une méthode de financement viable offrant des avantages économiques. Pour ce faire, nous examinons comment l'utilisation d'une PEC pour financer une entreprise en démarrage influe différemment sur les motivations d'un entrepreneur, comparativement au financement par emprunt et par capital de risque. Selon les caractéristiques du marché, une PEC sera plus ou moins efficace que les méthodes de financement habituelles pour harmoniser les intérêts de l'entrepreneur et des investisseurs. Une PEC peut notamment être la seule forme de financement qui incite à

un effort optimal, et donc qui maximise la valeur actualisée nette de l'entreprise en démarrage. En outre, certains projets ne devraient simplement pas être réalisés à moins d'être financés au moyen d'une PEC.

Optimal Monetary and Macprudential Policies

This paper studies monetary policy in an economy where banks make risky loans to firms and provide liquidity services in the form of deposits to households. For given bank equity, market discipline implies that banks can take more deposits when assets are safer or more profitable. Banks respond to loan losses by making their balance sheets safer—i.e., they reduce risky lending sharply and accumulate more safe bonds. In contrast, a social planner would respond by making banks temporarily more profitable such that a riskier balance sheet can be maintained. A planner would temporarily reduce the expansiveness of monetary policy to avoid bonds becoming too liquid in support of the liquidity premium banks earn via deposits. Specifically, when bank equity is low, then optimal monetary policy stabilizes output by supporting bank lending rather than employment.

Evolving Temperature Dynamics in Canada: Preliminary Evidence Based on 60 Years of Data

Recent discussions on climate change have led to an interest in its potential impact on economic phenomena and public policy. In this paper, we focus on one aspect of the climate change question by documenting the time-series properties of temperatures across Canada. In particular, we examine the evolving dynamics of daily average temperature and diurnal temperature range (the difference between the daily maximum and minimum temperatures at a given location) for select Canadian cities using data from the past 60 years. While rising mean temperature levels in Canada and elsewhere has been well documented, research exploring the other elements of temperature dynamics using modern econometric methods and rich model specifications are sparse. To fill in this gap, we extend the work of Diebold and Rudebusch (2019) and examine the evolution of daily temperature averages, volatility, seasonality and duration. This new evidence provides economists exploring issues related to climate change with a better understanding of the nature of Canadian temperature dynamics and their magnitudes.

An Empirical Analysis of Bill Payment Choices

The aim of this paper is to examine which payment instruments Canadians use for paying bills and to assess the factors driving their bill payment behaviour. I use 2019 survey data collected among over 4,000 Canadians and estimate a set of binomial and multinomial regressions to assess the factors influencing consumers' use and perception of different bill payment options. I find that there is no single dominant payment method for all consumer groups: demographics, financial situation, new technology adoption and POS payment habits play a significant role in the usage of bill payment methods as well as in consumers' stated reasons and barriers of use. Moreover, I demonstrate that consumers' bill payment behaviour strongly varies by bill type. The conclusions are useful for policy discussions on how to encourage a migration away from paper-based payment methods and how to (re)design a retail payments system to accommodate end-user needs.

Shaping the future: Policy Shocks and the GDP growth distribution

We incorporate quantile regressions into a structural vector autoregression model to empirically assess how monetary and fiscal policy influence risks around future GDP growth. Using a panel of six developed countries, we find that both policy instruments affect the location of the distribution of future GDP growth, whereas fiscal shocks also impact the shape of the distribution. Fiscal stimulus generates upside risk, paving the path to a faster recovery, especially when the policy rate is constrained by the zero lower bound (ZLB). Unconventional monetary policy during ZLB episodes has a comparable effect on future GDP growth as conventional monetary policy.

An Exploration of First Nations Reserves and Access to Cash

Providing bank notes is one of the Bank of Canada's core functions. The Bank is therefore interested in whether cash is adequately distributed across society, and this also influences the Bank's thinking on issuing a central bank digital currency. We provide a perspective on these issues by exploring access of First Nations reserves to cash. To do so, we measure the distance between the 637 reserve band offices in Canada and their closest cash sources. In this study, these cash sources are branches of financial institutions (FIs), automated bank machines (ABMs) owned by FIs, and white label ABMs. We measure the distance between band offices and cash sources by

geographical distance (“as the crow flies”) and by travel distance (e.g., road routes). We also provide some information on access to financial services more generally and set out questions for future research.

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.**

Jennifer La'O (Columbia)

Organizer: Série Conférencier EFR CEA/INT

Date: 4 juin 2021

Stephen Hansen (Imperial College London and CEPR)

Organizer: Série Conférencier FBD

Date: 7 juin 2021

Saki Bigio (UCLA)

Organizer: Série Conférencier FMD / FSD EFR

Date: 10 juin 2021

Yan Chen (Michigan)

Organizer: Série Conférencier CUR-EFR

Date: 14 juin 2021

Adi Sunderam (Harvard Business School)

Organizer: Série Conférencier FMD / FSD EFR

Date: 17 juin 2021

Sebastien Betermier (McGill)

Organizer: Série Conférencier FMD / FSD EFR

Date: 17 juin 2021

Nicolas Crouzet (Northwestern, Kellogg SoM)

Organizer: Série Conférencier EFR CEA/INT

Date: 18 juin 2021

Raphael Auer (BIS)

Organizer: Série Conférencier FBD

Date: 21 juin 2021