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PUBLICATIONS

Sous presse

Guérin, Pierre, et Martin Bijsterbosch, “Characterizing very high uncertainty episodes”, *Economics Letters* 121 (2013) 239–243 (November 2013)

Halaburda, Hanna, et Yaron Yehezkel, “Platform Competition under Asymmetric Information”, *American Economic Journal: Microeconomics*, 5(3): 22-68.

Slive, Joshua, Jonathan Witmer et Elizabeth Woodman, “Liquidity and central clearing: evidence from the credit default swap market”, *Journal of Financial Market Infrastructures* 2(1) 3-35

À paraître

Christensen, Ian, Paul Corrigan, Caterina Mendicino et Shin-Ichi Nishiyama, “Consumption, Housing Collateral, and the Canadian Business Cycle”, *Canadian Journal of Economics*

Dubrovinsky, Mati, et Ralph A. Winter, “Organizational Form and the Quality of Output”, *Canadian Journal of Economics*

Guérin, Pierre, Laurent Maurin et Matthias Mohr, “Trend-cycle decomposition of output and euro area inflation forecasts: a real-time approach based on model combination”, *Macroeconomic Dynamics*

Huyn, Kim, Anton Ho et David Jacho-Chavez, “crs: A Package for Nonparametric Splines Estimation in R”, *Journal of Applied Econometrics*

Leiva-Leon, Danilo, “Real vs. Nominal Cycles: A Multistate Markov-Switching Bi-Factor Approach”, *Studies in Nonlinear Dynamics and Econometrics*

DOCUMENTS DE TRAVAIL

Anand, Kartik et Prasanna Gai, “The Safety of Government Debt”, Document de travail de la Banque du Canada 2013-34

Chang, Bo Young, et Bruno Feunou, “Measuring Uncertainty in Monetary Policy Using Implied Volatility and Realized Volatility”, Document de travail de la Banque du Canada 2013-37

Guérin, Pierre, E. Ghysels et M. Marcellino, “Regime Switches in the Risk-Return Trade-off”, CEPR Discussion Paper No. 9698 (October 2013)

Huyn, Kim, Teodora Paligorova et Robert Petrunia, “Public/Private Transitions and Firm Financing”, Document de travail de la Banque du Canada 2013-36

Morel, Louis, Mikael Khan et Patrick Sabourin, “The Common Component of CPI: An Alternative Measure of Underlying Inflation for Canada”, Document de travail de la Banque du Canada 2013-35

RÉSUMÉS

Characterizing very high uncertainty episodes

This paper uses a two-step approach to characterize the evolution of US macroeconomic and financial variables during episodes of very high uncertainty. First, we identify episodes of very high uncertainty using a regime-switching model. Second, we assess the behavior of macroeconomic and financial variables during these episodes of very high uncertainty. This methodology is analogous to the approach followed by Baele et al. (2012), who study episodes of flights to safety in financial markets. We find that very high uncertainty episodes are associated with a weaker growth performance and sharp declines in stock prices.

Platform Competition under Asymmetric Information

We consider platform competition in a two-sided market, where the two sides (buyers and sellers) have ex-ante uncertainty and ex-post asymmetric information concerning the value of a new technology. We find that platform competition may lead to a market failure: competition may result in a lower level of trade and lower welfare than a monopoly, if the difference in the degree of asymmetric information between the two sides is below a certain threshold. Multi-homing solves the market failure resulting from asymmetric information. However, if platforms can impose exclusive dealing, then they will do so, which results in market inefficiency.

Liquidity and central clearing: evidence from the credit default swap market

An international initiative to increase the use of central clearing for over-the-counter (OTC) derivatives emerged as one of the reactions to the 2008 financial crisis. The move to central clearing is a fundamental change in the structure of the market. Central clearing will help control counterparty credit risk, but it also has potential implications for market liquidity. We analyze the relationship between

liquidity and central clearing using information on credit default swap clearing at ICE Trust and ICE Clear Europe. We find that the central counterparty chooses the most liquid contracts for central clearing, consistent with liquidity characteristics being important in determining the safety and efficiency of clearing. We further find that the introduction of central clearing is associated with a slight increase in the liquidity of a contract. This is consistent with two countervailing effects. On the one hand, central clearing will likely increase collateral requirements relative to the prereform bilaterally cleared market, thereby increasing clearing costs and possibly reducing the liquidity of the market. On the other hand, improved management of counterparty credit risk, increased transparency and operational efficiencies at central counterparties could bring more competition into OTC derivative markets and serve to increase liquidity.

Consumption, Housing Collateral, and the Canadian Business Cycle

Using Bayesian methods, we estimate a small open economy model in which consumers face limits to credit determined by the value of their housing stock. The purpose of this paper is to quantify the role of collateralized household debt in the Canadian business cycle. Our findings show that the presence of borrowing constraints improves the performance of the model in terms of overall goodness of fit. In particular, the presence of housing collateral generates a positive correlation between consumption and house prices. Finally we find that housing collateral induced spillovers account for a large share of consumption growth during the housing market boom-bust cycle of the late 1980s.

Organizational Form and the Quality of Output

This paper re-examines the relationship between the organizational form that a firm chooses, not-for-profit versus for-profit, and the quality of output that it provides. The Arrow-Hansmann theory of hidden action on the part of providers predicts higher quality for not-for-profit suppliers. This prediction has a puzzling lack of support in the empirical literature. We propose a theory that resolves the empirical puzzle and generates additional testable implications. The theory starts with the traditional assumptions of hidden action and supplier altruism. It then incorporates two additional features of real-world markets: hidden information on supplier ability to provide high quality and a variation across buyers in the degree of informational asymmetry. The central prediction of the theory is that quality has a

higher variance across for-profits than across not-for-profits. Preliminary evidence from the U.S. market for hospital care is consistent with the prediction.

Trend-cycle decomposition of output and euro area inflation forecasts: a real-time approach based on model combination

This paper estimates univariate and multivariate trend-cycle decomposition models of GDP and considers the novel possibility of regime switches in the growth of potential output. We compute both ex post and real-time estimates of the output gap to check the stability of our estimates to GDP data revisions. We find some evidence of regime changes in the growth of potential output during the recessions experienced by the euro area. We also run a forecasting experiment to evaluate the predictive power of the output gap for inflation. The benchmark autoregressive model tends to obtain the best forecasts for one-quarter-ahead forecasts, but the output gap measures help to forecast inflation for longer horizons.

crs: A Package for Nonparametric Splines Estimation in R

crs is a library for R written by Jeffrey S. Racine (Maintainer) and Zhenghua Nie. This add-on package provides a collection of functions for spline-based nonparametric estimation of regression functions with both continuous and categorical regressors. Currently, the crs package integrates data-driven methods for selecting the spline degree, the number of knots, and the necessary bandwidths for nonparametric conditional mean, IV, and quantile regression. A function for multivariate density spline estimation with mixed data is also currently in the works. As a bonus, the authors have also provided the rst simple R interface to the NOMAD ('nonsmooth mesh adaptive direct search') optimization solver[see Abramson et al. (2011) and Le Digabel (2011)]which can be applied to solve other mixed integer optimization problems that future users might find useful in other settings. Although the crs package shares some of the same functionalities as its kernel-based counterpart, the np package (see Harrison, 2008) by the same author, it currently lacks some of the features the np package provides, such as hypothesis testing and semiparametric estimation. However, what it lacks in breadth, crs makes up in speed. A Monte Carlo experiment in this review uncovers sizeable speed gains compared to its np counterpart, with a marginal loss in terms of goodness of fit. Therefore, the package will be extremely useful for applied econometricians interested in

employing nonparametric techniques using large amounts of data with a small number of discrete covariates.

Real vs. Nominal Cycles: A Multistate Markov-Switching Bi-Factor Approach

This paper develops a probabilistic model based on comovements and nonlinearities useful to assess the type of shock affecting each phase of the business cycle. By providing simultaneous inferences on the phases of real activity and inflation cycles, contractionary episodes are dated and categorized into demand, supply and mix recessions based on the time-varying shock's contributions. Also, the impact of shocks originated in the housing market over the business cycle is assessed, finding that recessions are usually accompanied by housing deflationary pressures, while expansions are mainly influenced by housing demand shocks, with only a notorious exception occurred during the period surrounding the "great recession" which is affected by expansionary housing supply shocks.

The Safety of Government Debt

Les auteurs examinent la sécurité des obligations d'État en situation d'incertitude knightienne sur les marchés financiers. Dans leur modèle, l'insensibilité des obligations d'État à l'information dépend des complémentarités stratégiques entre les contreparties et de la structure des rapports de négociation. Les auteurs établissent la frontière qui sépare les actifs sûrs des actifs risqués et montrent comment l'interaction entre, d'une part, le taux de croissance de l'économie et la capacité budgétaire de l'État et, d'autre part, le degré d'ambiguïté du comportement des investisseurs détermine l'équilibre entre l'offre et la demande d'actifs sûrs. Anand et Gai se servent de leur cadre conceptuel pour illustrer une variante du dilemme de Triffin dans laquelle le rôle d'un pays en tant que seul fournisseur de liquidité internationale est remis en cause du fait que son poids dans l'économie mondiale – et donc sa capacité budgétaire – diminue.

Measuring Uncertainty in Monetary Policy Using Implied Volatility and Realized Volatility

Dans cette étude, les auteurs mesurent l'incertitude entourant l'évolution future du taux directeur en s'appuyant à la fois sur la volatilité implicite, calculée à partir des prix des options sur taux d'intérêt, et sur la volatilité réalisée, établie en fonction des prix intrajournaliers des contrats à terme sur taux d'intérêt. Ces deux

indicateurs de la volatilité mettent en évidence des diminutions de l'incertitude, consécutives aux mesures de politique monétaire les plus importantes que la Banque du Canada a prises pour contrer la crise financière de 2007-2008, notamment l'annonce de son engagement conditionnel pour la période 2009-2010, la réduction du taux cible décidée « hors calendrier » et mise en oeuvre en concertation avec d'autres grandes banques centrales, et l'introduction d'un mécanisme de prise en pension à plus d'un jour. Les auteurs notent aussi qu'en règle générale, les annonces de la Banque concernant le taux directeur sont suivies d'une baisse de l'incertitude. En outre, ils constatent que, parce qu'elle est révélatrice de la prime de risque future sur le marché des swaps indexés sur le taux à un jour, leur mesure de l'incertitude entourant le taux directeur améliore l'estimation des attentes à l'égard du taux fondée sur les taux des swaps indexés.

Regime Switches in the Risk-Return Trade-off

This paper deals with the estimation of the risk-return trade-off. We use a MIDAS model for the conditional variance and allow for possible switches in the risk-return relation through a Markov-switching specification. We find strong evidence for regime changes in the risk-return relation. This finding is robust to a large range of specifications. In the first regime characterized by low ex-post returns and high volatility, the risk-return relation is reversed, whereas the intuitive positive risk-return trade-off holds in the second regime. The first regime is interpreted as a "flight-to-quality" regime.

Public/Private Transitions and Firm Financing

De nombreux travaux empiriques ont été consacrés aux différences entre les structures de financement des entreprises, mais, faute de données suffisantes, le financement des sociétés privées (c'est-à-dire non cotées en bourse) a été peu étudié. Les auteurs s'appuient sur des données administratives confidentielles pour comparer les relations entre les déterminants du financement dans les sociétés privées et les sociétés cotées. Le ratio de levier financier est plus faible dans les sociétés cotées, et cette caractéristique s'explique presque uniquement par le fait que les sociétés privées recourent davantage à l'emprunt à court terme que les sociétés cotées. Les auteurs constatent par ailleurs que les chocs sectoriels ont des effets contrastés sur les moyens de financement utilisés par chaque catégorie de sociétés. Chez les sociétés privées, l'emprunt à long terme est plus fréquent en période de croissance sectorielle que chez

les sociétés cotées; par contre, l'emprunt à court terme redevient plus fréquent quand la conjoncture se dégrade.

The Common Component of CPI: An Alternative Measure of Underlying Inflation for Canada

Les auteurs proposent une mesure de l'inflation sous-jacente au Canada qu'ils obtiennent en estimant, à partir de données mensuelles, un modèle factoriel des variations des composantes individuelles de l'indice des prix à la consommation (IPC). La mesure, dénommée composante commune de l'IPC, présente un attrait intuitif et un certain nombre de caractéristiques intéressantes. En effet, elle n'est pas influencée par les mouvements sectoriels de prix qui peuvent brouiller le signal envoyé par un bon nombre d'autres mesures de l'inflation sous-jacente, et elle semble capter les mouvements de prix associés aux fluctuations de la demande globale dans l'économie canadienne. Cet indicateur pourrait être un complément utile des mesures de l'inflation sous-jacente qui font l'objet d'un suivi régulier de la part de la Banque du Canada.