



BANQUE DU CANADA  
BANK OF CANADA

# Recherche mensuelle à la Banque du Canada

---

Février 2013

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 publiés sur le site Web de la Banque du Canada.

## PUBLICATIONS

### Sous presse

Pomeranets, Anna, “Securities Transaction Taxes: Literature and Key Issues”, *Encyclopedia of Finance*, 2nd edition.

### À paraître

Allen, Jason, Robert Clark, et Jean-Francois Houde, “Discounting in Mortgage Markets”, *Journal of Industrial Organization*

Alquist, Ron, et Olivier Gervais, “The Role of Financial Speculation in Driving the Price of Crude Oil”, *Energy Journal*

Baumeister, Christiane, et Gert Peersman, “Time-Varying Effects of Oil Supply Shocks on the U.S. Economy”, *American Economic Journal: Macroeconomics*

Brunetti, Celso, Bahattin Buyuksahin, et Jeffrey H. Harris, “Herding and Speculation in the Crude Oil Market”, *Energy Journal*

Brunetti, Celso, Bahattin Buyuksahin, Michel A. Robe, et Kirsten R. Soneson, “OPEC 'Fair Price' Pronouncements and the Market Price of Crude Oil”, *Energy Journal*

Buyuksahin, Bahattin, Thomas K. Lee, James T. Moser, et Michel A. Robe, “Physical Markets, Paper Markets and the WTI-Brent Spread”, *Energy Journal*

Li, Fuchun, “Identifying Asymmetric Comovements of International Stock Market Returns”, *Journal of Financial Econometrics*

Rossi, Barbara, et Tatevik Sekhposyan, “Conditional Predictive Density Evaluation in the Presence of Instabilities”, *Journal of Econometrics*

## DOCUMENTS DE TRAVAIL

Pinheiro, Tiago, Francisco Rivadeneyra, et Marc Teignier, “Financial Development and the Volatility of Income”, Document de travail de la Banque du Canada 2013-4

## RÉSUMÉS

### *Discounting in Mortgage Markets*

Les auteurs étudient les rabais consentis sur les taux hypothécaires affichés. Au terme d'un examen détaillé des transactions hypothécaires conclues au Canada, ils constatent une hausse du rabais moyen au fil du temps ainsi qu'une forte dispersion des rabais

accordés. Cette dispersion sur les marchés du crédit est généralement attribuée à la différenciation des prix que les prêteurs pratiqueraient en fonction du risque. L'approche adoptée ici est novatrice en ce que les contrats hypothécaires bénéficient d'une assurance garantie par l'État, de sorte que le risque ne peut être le principal déterminant de la dispersion. Les auteurs concluent que les taux hypothécaires dépendent des caractéristiques des ménages et des prêts ainsi que des particularités du marché local. Une bonne partie de l'hétérogénéité des taux s'explique également par des caractéristiques non observées, peut-être liées aux coûts de recherche.

### *The Role of Financial Speculation in Driving the Price of Crude Oil*

As financial firms have increased their positions in the oil futures market during the past ten years, oil prices have increased dramatically as well. The coincidence of these two events has led some observers to argue that financial speculation caused the oil-price increases. Yet several arguments cast doubt on the validity of this claim. For example, although the quantity of oil implied by the number of open futures contracts is much larger than U.S. daily oil consumption, comparing these two statistics is misleading because not all paper oil is immediately deliverable. In addition, changes in financial firms' positions do not predict oil-price changes, but oil-price changes predict changes in positions. Other explanations for the oil-price increases include macroeconomic fundamentals such as increased demand from emerging Asia. Of these explanations, the most consistent with the facts relates the oil-price increases to a series of positive demand shocks emanating from emerging Asia.

### *Time-Varying Effects of Oil Supply Shocks on the U.S. Economy*

We use vector autoregressions with drifting coefficients and stochastic volatility to investigate how the dynamic effects of oil supply shocks on the U.S. economy have changed over time. We find a substantial decline in the short-run price elasticity of oil demand since the mid-eighties. This finding together with time-varying dynamics helps explain why an oil production shortfall of the same magnitude is associated with a stronger response of oil prices and more severe macroeconomic consequences over time, while an oil price increase of the same magnitude is associated with a smaller decline in oil production and smaller losses in U.S. output in more

recent years. We also show that oil supply shocks more recently account for a smaller fraction of the variability of the real price of oil, implying a greater role for oil demand shocks. Notwithstanding this time variation, the overall cumulative effect of oil supply disruptions on the U.S. economy has been modest. Oil supply shocks contributed to some extent to the 1991 recession and slowed the economic boom of 1999-2000, but they do not explain other U.S. recessions nor do they help explain the "Great Inflation" of the 1970s and early 1980s.

### *Herding and Speculation in the Crude Oil Market*

We examine whether herding among speculators in U.S. crude oil futures markets affects market prices and volatility. Using detailed data on the positions of hedge funds and swap dealers from 2005–2009, we find little evidence that herding destabilizes the crude oil futures market. To the contrary, herding among speculative traders is negatively correlated with contemporaneous volatility and does not lead next-day volatility. Our impulse-response analysis shows that market regulators should monitor herding since a shock to herding among all groups may lead to price changes, and, in the case of hedge funds, may lead to increased volatility. Interestingly, however, increased swap dealer herding actually dampens crude oil price volatility.

### *OPEC 'Fair Price' Pronouncements and the Market Price of Crude Oil*

OPEC producers, individually or collectively, often make statements regarding the "fair price" of crude oil. In some cases, the officials commenting are merely affirming the market price prevailing at the time. In many cases, however, we document that they explicitly disagree with contemporaneous oil futures prices. A natural question is whether these "fair price" pronouncements contain information not already reflected in the market price of crude oil. To find the answer, we collect "fair price" statements made from 2000 through 2010 by officials from OPEC or OPEC member countries. Visually, the "fair price" series looks like a sampling discretely drawn (with a lag) from the daily futures market price series. Formally, we use two primary methodologies to establish that "fair price" pronouncements have little influence on the market price of crude oil and supply little or no new news to oil futures market participants.

### *Physical Markets, Paper Markets and the WTI-Brent Spread*

We document that, starting in the Fall of 2008, the benchmark West Texas Intermediate (WTI) crude oil has periodically traded at unheard-of discounts to the corresponding Brent benchmark. We further document that this discount is not reflected in spreads between Brent and other benchmarks that are directly comparable to WTI. Drawing on extant models linking oil inventory conditions to the futures term structure, we test empirically several conjectures about how calendar and commodity spreads (nearby vs. first-deferred WTI; nearby Brent vs. WTI) should move over time and be related to storage conditions at Cushing. We then investigate whether, after controlling for macroeconomic and physical market fundamentals, spread behavior is partly predicted by the aggregate oil futures positions of commodity index traders.

### *Identifying Asymmetric Comovements of International Stock Market Returns*

Proposant une nouvelle approche en matière de mesure des covariations entre les rendements boursiers, l'auteur applique un test non paramétrique en vue d'établir si les covariations entre les marchés boursiers internationaux sont asymétriques, en l'occurrence, plus prononcées en phase de baisse qu'en phase de hausse des marchés. Il fait les constats empiriques suivants. D'abord, il existe des covariations asymétriques entre le marché boursier des États-Unis et ceux du Canada, de la France, de l'Allemagne et du Royaume-Uni, mais les données ne permettent pas de rejeter l'hypothèse nulle de symétrie des covariations entre le marché boursier des États-Unis et celui du Japon. Ensuite, plus la diminution ou la montée des cours boursiers est importante, plus les covariations entre les rendements boursiers sont fortes. Ce résultat est contraire à celui qu'implique une distribution symétrique bivariable, à savoir que les covariations tendent vers zéro lorsque les rendements boursiers deviennent très positifs ou très négatifs.

### *Securities Transaction Taxes: Literature and Key Issues*

The main scope of this chapter is to review the literature and key issues associated with securities transaction taxes (STTs). Despite the use of STTs around the globe, the theoretical and empirical literature on the impact an STT has on liquidity and volatility is mixed. If an STT is not appropriately designed, it could interfere with the

smooth functioning of financial markets, lead to informational inefficiency, arbitrage, tax evasion and double taxation. Effective implementation of STTs therefore requires cross-jurisdictional coordination, controls on cross-border transactions and carefully constructed enforcement.

### *Conditional Predictive Density Evaluation in the Presence of Instabilities*

We propose new methods for evaluating predictive densities. The methods include Kolmogorov-Smirnov and Cramér-von Mises-type tests for the correct specification of predictive densities robust to dynamic mis-specification. The novelty is that the tests can detect mis-specification in the predictive densities even if it appears only over a fraction of the sample, due to the presence of instabilities. Our results indicate that our tests are well sized and have good power in detecting mis-specification in predictive densities, even when it is time-varying. An application to density forecasts of the Survey of Professional Forecasters demonstrates the usefulness of the proposed methodologies.

### *Financial Development and the Volatility of Income*

Au moyen d'un modèle d'équilibre général qui intègre des contraintes d'emprunt endogènes liées à la valeur des garanties, les auteurs étudient, à partir d'un échantillon représentatif de pays aux secteurs financiers de taille différente, la relation entre le degré de développement financier d'un pays et les variations de son cycle économique. Le secteur financier peut accentuer ou modérer la volatilité des revenus en amplifiant ou en réduisant les effets des chocs technologiques sur les cycles économiques. Les auteurs font ressortir une relation non monotone entre la volatilité des revenus et le degré de développement du système financier mesuré par le volume des prêts. Sans contredit, le niveau des revenus s'accroît dans les pays au système financier plus développé; la volatilité peut, par contre, augmenter ou diminuer selon le degré de développement financier.