

Intelligence MEMOS



From: Paul Jenkins
To: The Bank of Canada
Date: July 26, 2019
Re: **ADDING 'ANIMAL SPIRITS' TO CENTRAL BANK MODELLING**

Radical uncertainty about the economic outlook is posing a new challenge for the Bank of Canada and other central banks.

In my new C.D. Howe Institute [report](#), I argue that closer attention should be paid to the distinction between risk and uncertainty. Risk applies to situations where the outcome of a given situation is not known, but where we can measure probabilities with some degree of confidence. Uncertainty, in contrast, applies to situations where we cannot know all the information we need in order to estimate the probabilities in the first place.

I also assess the need for central banks to add to their toolkit with 'bottom up' agent-based models and to reposition their communications strategy through the use of narratives—both to help address what we mean by true uncertainty.

The events leading up to, during and, after the fallout of the 2008 to 2009 global financial crisis have made it clear that our ability to project economic activity – both domestic and global – is considerably less than previously assumed. And Brexit, US-China trade tensions and climate change are reflective of the uncertain global environment facing Canada.

It has been standard practice that central banks take into account perceived risks for the economic outlook in their conduct of policy. They have used so-called optimizing (rational) models in which agents are fully rational, knowing what shocks have occurred, the persistence of such shocks and how the shocks are propagated.

Central banks could expand their toolkit with agent-based models that account for irrational, non-optimizing behavior. Drawn from the literature on behavioural economics where 'animal spirits' has become a common term, agent-based models include simple behaviours (or rules) that add up to real-world complexity.

In the uncertain global environment, the Bank of Canada and other central banks should also strengthen their communications strategies with narratives to help economic agents understand the world confronting them. A growing concern about the true nature and extent of uncertainty facing policymakers is becoming more commonplace, and for good reason.

The US Federal Reserve, for example, is undertaking a review of its approach to communications with such a concern clearly in mind. The Bank of Canada also seems dialed in to this reality. In a recent speech, Governor Poloz said, "These days, there is a litany of things we just do not know."

It is better to acknowledge than ignore these uncertainties as part of a central bank's modelling and communications strategy – that is, there is no pretense that we know with any precision what the future holds. The challenge is in integrating acknowledgement of these uncertainties, while recognizing the need for judgment in taking policy decisions based on risks that are calculable.

And more honesty with the use of narratives can encourage firms and individuals to take more responsibility for their actions.

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