

Contents lists available at [SciVerse ScienceDirect](http://SciVerse.ScienceDirect.com)

## Journal of Macroeconomics

journal homepage: [www.elsevier.com/locate/jmacro](http://www.elsevier.com/locate/jmacro)

## Macro has progressed

Sharon Kozicki <sup>\*,1</sup>

Canadian Economic Analysis Department at the Bank of Canada, 234 Wellington St., Ottawa, ON, Canada K1A 0G9

## ARTICLE INFO

## Article history:

Available online 2 October 2011

## JEL classification:

E  
C53  
B4

## Keywords:

New Keynesian  
DSGE  
Learning  
Crises  
Real-financial linkages  
Macroeconometric forecasting models

## ABSTRACT

Recent articles claiming convergence in macroeconomics take a narrow view of macro focused on the use of New Keynesian dynamic stochastic general equilibrium models. With this narrow view of the state of the art in macro, Fair (2011) questions whether macro has progressed. However, when taking a broader view, many important contributions in macro are evident. Encouraging and appreciating diversity in research, including the development and use of a variety of models and methodologies should enhance the pace of progression.

Crown Copyright © 2011 Published by Elsevier Inc. All rights reserved.

## 1. Introduction

The recent global financial and economic crisis has been the trigger for a spate of recent evaluations of the state of macroeconomics. While it is not uncommon for “taking stock” articles to appear on occasion, the recent flow of such assessments had picked up considerably. This surge can be linked to an uprising of critiques to the apparent convergence in the profession to a modeling approach that generally yielded models with extremely limited financial depth and which were consequently seriously challenged to explain developments in the face of financial stress (Caballero (2010), Kocherlakota (2010)).

The article by Fair in this issue provides a somewhat broader criticism, one that goes beyond obvious shortcomings in terms of coverage of real-financial linkages in these models. Nevertheless, Fair evaluates advancements in macro from a very specific point of view. He questions whether advancements in what is currently the most common framework for examining macroeconomic questions really represent an increase in our understanding of how the macro economy works. In this context, he takes a few New Keynesian Dynamic Stochastic General Equilibrium (NK DSGE) specifications as representative of the state-of-the-art macro models and evaluates their ability to illuminate the workings of the macroeconomy, relative to what some might regard as dated technology—a so-called “Cowles Commission approach,” as embedded in the Fair model.<sup>2</sup> The metric for evaluation can be loosely described as the ability to “fit the data”, where “fitting” incorporates a large number of empirical observations and may include in-sample and out-of-sample exercises.

\* Corresponding author. Tel.: +1 613 782 8437.

E-mail address: [skozicki@bankofcanada.ca](mailto:skozicki@bankofcanada.ca)

<sup>1</sup> The views expressed in this paper are those of the author. No responsibility for them should be attributed to the Bank of Canada.

<sup>2</sup> One representative estimated NK DSGE model is Smets and Wouters (2007), which is a model specification largely based on Christiano et al. (2005).

Fair emphasizes the weaknesses of typical quasi-academic NK DSGE models in comparison to his own model, but it is not clear that a typical NK DSGE model specification provides the appropriate metric for evaluating progress in macroeconomics.<sup>3</sup> In particular, although the allocation of research resources has disproportionately focused on the *core* NK-DSGE paradigm, claims of convergence in macro generally don't acknowledge the enormous contributions that have been made outside the core.<sup>4</sup> That said, progression has not been in the directions that hindsight would have deemed optimal. Not unlike what may happen in the macroeconomy itself, there has been overinvestment in some areas and underinvestment in others. Indeed, to a large extent, the article by Fair can be seen as partially documenting an area of overinvestment (see also Chari et al., 2009). Not discussed in the article are areas where there has been considerable progress, but also perhaps underinvestment.

While being far from exhaustive, this note touches on a few areas of macro where our knowledge has progressed, but which generally remain outside the core. Examples include work on crises, expectations and learning, macroeconomic forecasting models, and real-financial linkages. A few comments are then offered on NK DSGE models and their use outside of academia. Acknowledging advances outside the core, a discussion follows on whether one model is the best way to go: Would the whole really be better than the sum of all the parts? Within a central bank, in addition to the practical advantages of having a suite of models, diversity in practice encourages diversity of ideas and research on multiple fronts using different techniques. These are key factors that will support ongoing progress in macroeconomics.

## 2. Progress in macro

While the core may not be well-designed for examining or considering financial crises, it is not the case that progress has not been made on understanding crises. Caballero (2010) notes that “an enormous amount of work at the intersection of macroeconomics and corporate finance has been chasing many of the issues that played a central role during the current crisis, including liquidity evaporation, collateral shortages, bubbles, crises, panics, fire sales, risk-shifting, contagion, . . . much of this literature belongs to the *periphery*.”<sup>5</sup> Nevertheless, emphasis within macroeconomics on the core has led many to be less informed about progress that falls outside the core.

In this regard, Caballero also provides a critique of the focus on the core in the context of lessons from the recent crisis for macroeconomics researchers. In particular, he notes that “confused precision creates the illusion that a minor adjustment in the standard policy framework will prevent future crises.”

Introducing additional financial richness into the core in such a way that the model allows for the potential of financial crises requires breaking with standard modeling choices such as: a general preference to avoid ad hoc sources of frictions; limited or no time-variation in risk, term, and liquidity premiums; and, the usual treatment of expectations formation. In the case of the latter, Kocherlakota (2010) points to the importance of self-fulfilling beliefs about what others will do for understanding phenomena such as credit market crunches or asset market bubbles and to private information for capturing massive amounts of daily trading of multiple assets in varying degrees of segmented markets.

As is the case with financial crises, while models in the core generally assume rational expectations, the treatment of expectations in the literature is also much broader than just rational expectations or the implicit expectations generating mechanism embedded in the Fair model. Indeed, considerable progress has been made in environments which incorporate alternative assumptions on expectations formation. Evans and Honkapohja (2001) provide a formal and systematic exposition on adaptive learning and its implications in macroeconomics while Evans and Honkapohja (2008) review recent and ongoing developments in the area of expectations, learning, and monetary policy. A key message of the latter is that monetary policy must be designed to ensure determinacy and stability under learning. For instance, monetary policy may need to be more aggressive in response to a deviation of inflation from target in order to stabilize inflation expectations if learning implies persistent deviations from fully rational expectations.

The Federal Reserve Board's model of the US economy (FRB/US) was developed to be used with either rational expectations or using VAR-based proxies for expectations (Federal Reserve Board, 1996). In addition, recognizing that long-run expectations can play an important role in forward-looking models, FRB/US implementations may incorporate shifting end-points to bring long-run expectations generated from the model more in line with external information. In this vein, survey data can be used explicitly to improve models of expectations (Kozicki and Tinsley, accepted for publication). Moreover, recently Faust and Wright (2011) have shown that explicit use of such information also can result in considerable improvements in forecast performance. However, even when survey data are not explicitly used, empirical models that admit shifts in long-run expectations (concepts often treated as structural constants in NK DSGE models) have been shown to be effective at closing the gap between theory and empirical fit in macroeconomic models (Kozicki and Tinsley, 2001, 2005).

In addition to the work on crises and contributions related to the treatment of expectations, there have been important advances in the development of macroeconomic models for forecasting and policy evaluation that fall between the Cowles Commission approach to macroeconomics and the NK DSGE literature. Developments in time series econometrics, especially cointegration theory (Granger, 1981) and error correction modeling techniques (Engle and Granger, 1987), have enriched the toolkits of forecasters to improve the joint modeling of long-run relationships derived from economic theory and short-run

<sup>3</sup> Likewise, the typical VAR used as a metric for evaluating NK DSGE forecasts may not provide a meaningful benchmark as not all VARs generate good forecasts.

<sup>4</sup> Nevertheless, much of the recent discussion/critique of macroeconomics focuses on the same core. See, for instance, Blanchard (2009).

<sup>5</sup> A detailed review of literature in these peripheral topics can be found in Caballero (2010) and Part VI of Tirole (2006).

Download English Version:

<https://daneshyari.com/en/article/965540>

Download Persian Version:

<https://daneshyari.com/article/965540>

[Daneshyari.com](https://daneshyari.com)