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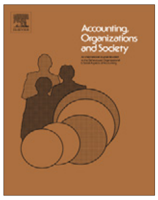

Understanding financial crisis through accounting models

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A B S T R A C T

This paper presents evidence that accounting (or flow-of-funds) macroeconomic models helped anticipate the credit crisis and economic recession. Equilibrium models ubiquitous in mainstream policy and research did not. This study traces the intellectual pedigrees of the accounting approach as an alternative to neo-classical economics, and the post-war rise and decline of flow-of-funds models in policy use. It includes contemporary case studies of both types of models, and considers why the accounting approach has remained outside mainstream economics. It provides constructive recommendations on revising methods of financial stability assessment and advocates an 'accounting of economics'.

Introduction

On 9 December 2008 Glenn Stevens, Governor of the Reserve Bank of Australia commented on the "international financial turmoil through which we have lived over the past almost year and a half, and the intensity of the events since mid September this year". He went on to assert: "I do not know anyone who predicted this course of events. This should give us cause to reflect on how hard a job it is to make genuinely useful forecasts. What we have seen is truly a 'tail' outcome – the kind of outcome that the routine forecasting process never predicts. But it has occurred, it has implications, and so we must reflect on it" (RBA, 2008). This idea that 'no one saw this coming' has been a common view from the very beginning of the credit crisis. And yet it would be premature to ask "Why did nobody notice?", as Queen Elizabeth II did in November 2008 (Pierce, 2008). It is not difficult to find predictions of a credit crisis and recession in the years leading up to it – not only by pundits, but by serious analysts from the world of academia, policy institutes, think tanks and finance. The point of this paper is that there is something to be learned from this observation: "we must reflect on it" in the words of Governor Stevens. The credit crisis and ensuing recession may be viewed as a 'natural experiment' in the validity of economic models. Those models that failed to foresee something this momentous may need changing in one way or another. And the change is likely to come from those models (if they exist) which did lead their users to anticipate instability.

There is an immediate link between accounting and the ability of some economists to predict the crisis. Previewing the results, 'accounting' (or flow-of-funds) models of the economy turn out to be the shared mindset of a large subset of those analysts who worried about a credit-cum-debt crisis followed by recession, before the policy and academic establishment did. They are 'accounting' models in the sense that they represent households', firms' and governments' balance sheets and their interrelations, and that accounting identities play a major role in the model structure and outcomes. If society's wealth and debt levels reflected in balance sheets are among the determinants of its financial stability and of the sustainability of its growth, then such models are likely to timely signal threats of instability. This does not imply that balance sheet data are more accurate or objective than other data, or that accounting professionals are inherently superior in analytical skills or work ethic than macroeconomic model builders. But it does mean that models that exclude balance sheets – such as the general equilibrium models widely used in academic and Central Bank analyses – are prone to 'Type II errors' of false negatives, rejecting the possibility of crisis when in reality it is just months ahead.

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With a few exceptions, this point seems to have been overlooked to date. When Krugman (2009) prominently asked 'How did economists get it so wrong'? he gave a number of reasons, but did not discuss – other than in a passing mention – those economists who did *not* get it wrong (Galbraith, 2009). In the accountants and auditors community, the dominant response in the wake of the credit crisis has been to re-examine accounting regulations such as 'fair-value' accounting (Boyer, 2007; Laux and Leuz, in press), mark-to-market accounting, lax auditing practices, and the like; or to ask how accounting models can reflect what has happened (Roberts and Jones, in press). It is important to stress from the outset that the present paper aims to make an entirely different point. It is a response to the call by Arnold (2009) in this Journal to examine "our failure to understand ... the macroeconomic and political environment in which accounting operates" (also, Hopwood 2009). One key to understanding policy makers' environment is the neglect of balance sheet effects in policy advice. This paper therefore draws attention to the 'accounting approach' within economic analysis underpinning flow-of-funds models, where balance sheets effects are central. It also attempts to explain the neglect of the 'accounting approach' by policy makers.

'No one saw this coming'

The trigger to the credit crisis turned out to be the US real estate market and its derivative products, but the broader trend leading up to it was financial globalization, and the speculation and opacity that this allowed which, in turn, was possible largely due to financial deregulation. Indeed, as Reinhart and Rogoff (2009) show in a survey of financial crises in 66 countries over eight centuries, deregulation is among the best predictors of financial crisis. But with a few exceptions, neither these trends nor the trigger appear to have been clearly identified beforehand as risky by the leading academic, policy and business institutions. A few examples illustrate. Josef Ackermann, CEO of *Deutsche Bank*, in 2008 recounted a July 2007 lunch to discuss the looming risks to the financial system. Attended by chief executives of leading banks, political leaders, and senior Federal Reserve officials, the deepening woes in the subprime mortgage market did not figure high on the agenda. "We clearly underestimated the impact", said Ackermann (Landler, 2008). Similarly, the Canadian academic Philip Das in a 2006 survey article of financial globalization pointed out its benefits as "[f]inancial risks, particularly credit risks, are no longer borne by banks. They are increasingly moved off balance sheets. Assets are converted into tradable securities, which in turn *eliminates credit risks*. Derivative transactions like interest rate swaps also serve the same purpose" (Das, 2006; emphasis added). Again, a 2006 IMF report on the global real estate boom asserted that there was "little evidence (...) to suggest that the expected or likely market corrections in the period ahead would lead to crises of systemic proportions". The consensus view is that "[n]o one foresaw the volume of the current avalanche" (Wellink, 2009). These and other examples and quotes all create the impression that in the policy, academic and business communities, the credit crisis came as a bolt out of the blue. Greenspan (2008) in his October 2008 testimony before the Committee of Government Oversight and Reform indeed professed to "shocked disbelief" while watching his "whole intellectual edifice collapse in the summer of [2007]".

Despite appearances, this mainstream view was not the only serious *ex ante* assessment. An alternative, less sanguine interpretation of financial developments was publicized, and it was not confined to the inevitable fringe of bearish financial commentators. Take, for instance, Wynne Godley, affiliated with the Levy Economics Institute of Bard College (NY) from the mid-1990s until his death on 13 May 2010 at the age of 83. From 2000 he had consistently argued that a US housing market slowdown was unavoidable in the medium term, and that its implication would be recession in the US. Godley warned that 'Goldilocks is doomed', as he put it in a 2000 article with Randall Wray. 'Goldilocks' was the simile after the children's tale, employed in the years after the dotcom crash for the US economy, which was said to be neither too 'cold' (low unemployment) nor too 'hot' (low inflation). Godley and Wray (2000) argued that this stability was unsustainable, as it was driven by households' debt growth, in turn fuelled by capital gains in the real estate sector and its derivative products. Based on an accounting framework of the US economy, they predicted that as soon as debt growth slowed down – as it inevitably would within years – growth would falter. When house prices had started to fall, Godley and Zezza (2006) published *Debt and Lending: A Cri de Coeur*. They demonstrated again the US economy's dependence on debt growth and argued that only the small slowdown in the rate at which US household debt levels were rising, resulting from the house price decline, would immediately lead to a "sustained growth recession ... somewhere before 2010" (Godley & Zezza, 2006: p. 3). In January 2007, the US Congressional Budget Office (CBO) produced its annual report, which, as Godley and others noted in an April 2007 analysis, had predictions on GDP and inflation "indicating a Goldilocks world in the medium term" which they deemed "wildly implausible" (p. 1) as it required continued growth in household indebtedness while real estate collateral values were in a steep fall. In contrast to CBO projections of GDP growth averaging 2.85 percent between 2007 and 2010, Godley and others in April 2007 predicted output growth "slowing down almost to zero sometime between now and 2008" and warned that "unemployment [will] start to rise significantly and does not come down again". Again, in November 2007 Godley and others forecast "a significant drop in borrowing and private expenditure in the coming quarters, with severe consequences for growth and unemployment" (Godley, Papadimitriou, Hannsgen, & Zezza 2007: p. 3). These forecasts describe the actual developments from spring 2007. If anything, they were sanguine: US growth not only 'slowed to zero' but actually turned negative in 2008.

Godley's assessment is part of a set of public predictions which are not only *ex post* correct but also reasonably specific about the mechanism and timing of the credit crisis, as well as its recessionary implications. Together they believe