

Setterfield, Mark

**Article**

## Editorial to the special issue

European Journal of Economics and Economic Policies: Intervention (EJEEP)

**Provided in Cooperation with:**

Edward Elgar Publishing

*Suggested Citation:* Setterfield, Mark (2020) : Editorial to the special issue, European Journal of Economics and Economic Policies: Intervention (EJEEP), ISSN 2052-7772, Edward Elgar Publishing, Cheltenham, Vol. 17, Iss. 3, pp. 307-312,  
<https://doi.org/10.4337/ejeep.2020.03.04>

This Version is available at:

<https://hdl.handle.net/10419/277487>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by/4.0/>

## Editorial to the special issue

### The monetary economics of Basil J. Moore

Mark Setterfield

Professor of Economics, The New School for Social Research, New York, USA

Born in Toronto in 1933, Basil J. Moore (1933–2018) studied at the University of Toronto, Canada and Johns Hopkins University in Baltimore, USA, where his doctoral research – on the impact of monetary policy on bank profit in Canada – was supervised by Fritz Machlup. He joined the faculty at Wesleyan University in Connecticut in the late 1950s, spending more than four decades of his career at Wesleyan before accepting a position as Professor Extraordinary of Economics at the University of Stellenbosch in South Africa in 2003. A monetary macroeconomist who increasingly identified with post-Keynesian economics as his career progressed, Moore is renowned as an advocate of endogenous money theory (EMT) and, in particular, the variant of EMT that he dubbed ‘horizontalism.’ The core tenets of his thinking on endogenous money and its macroeconomic consequences are found in a series of articles and books published during the second half of his career. Many of these are well known in both academic and policy-making circles – none more so than *Horizontalists and Verticalists: The Macroeconomics of Credit Money* (Moore 1988), which is, by popular repute, his *magnum opus* (see, for example, Bindseil/König 2013).

There exists ever-more widespread agreement among macroeconomists that the quantity of money in circulation is endogenous, determined by private decision-making within the economy rather than being imposed upon the economy from without. For some, acceptance of this principle is essentially a matter of empirics. In modern New Keynesian macroeconomics, for example, it is regarded as true as a matter of observation that central banks use the interest rate as the primary tool for conducting monetary policy. As ‘price-makers’ they therefore become ‘quantity-takers,’ so that the quantity of money in circulation is rendered an endogenous residual. To the extent that this account has theoretical foundations, they lie in the notion that if, as a practical matter, the monetary sector is more volatile than the real sector, then using the interest rate to conduct monetary policy interventions is demonstrably the best way of achieving short-term aggregate income stabilization (Poole 1970).<sup>1</sup>

On this (New Keynesian) account, the endogeneity of money is a *choice* on the part of central banks (albeit one conditioned by the relative volatilities of the real and nominal sectors). Central banks could, in principle, revert to conducting monetary policy intervention through the manipulation of monetary aggregates. According to post-Keynesians, however, this last claim is false. In the post-Keynesian EMT championed by Moore, the endogeneity of money arises as a matter of necessity, not as a matter of choice.

Central to EMT is an institution that is missing from the mainstream New Keynesian account of endogenous money: the commercial bank. According to EMT, commercial banks are quintessentially *retailers of credit*, making loans on demand to creditworthy borrowers. The retail price of this credit is set by commercial banks themselves, as a

1. For a more detailed account and critique of this thinking, see Fontana et al. (2020: 341–343) in this issue.

mark-up over the ‘wholesale’ price of credit – that is, the rate of interest at which commercial banks can, themselves, borrow liquid reserves.<sup>2</sup> Given the commercial interest rate quoted by commercial banks and the number of creditworthy borrowers, the demand for credit determines the quantity of bank credit created, which in turn determines the total money supply (the quantity of broad money in circulation). This process, through which loans create deposits, necessitates an endogenous supply of reserves by the central bank in order to maintain the liquidity of the commercial banking sector as a whole. The central bank has no effective control over the quantity of reserves created, despite being the monopoly supplier of reserves to the banking sector. Instead, money creation is characterized by a ‘reverse base multiplier’ or ‘money divisor’ process:

$$B = \frac{1}{m} M,$$

where  $B$  denotes the monetary base,  $M$  is the total (broad) money supply and  $1/m$  – the money divisor – is the reciprocal of the traditional money multiplier (Lavoie 1984: 778; Rogers 1985: 243; Arestis 1987: 5–6). In the money-divisor process in equation (1),  $B$  responds endogenously to variations in  $M$ , which are determined (as previously described) by bank-credit-creating decisions made within the private sector. Ultimately the central bank loses control over the quantity of reserves created, which is determined instead by the liquidity requirements of the banking sector. As the monopoly supplier of these reserves, however, the central bank can autonomously set the ‘wholesale price of credit’ at which it supplies reserves to commercial banks. Monetary policy thus becomes a matter of the central bank determining the value of an interest rate – not by choice, but because the price at which it supplies its own reserves to the private financial sector is the only variable over which the central bank has effective control. On these first principles of endogenous money, and the ‘bank-centric’ view of capitalism in which they are embedded, post-Keynesian monetary theorists are essentially agreed.

The principles of endogenous money found in EMT are far from new, having antecedents in debates that can be traced back over several centuries (Arestis/Howells 2001). Even in modern post-Keynesian economics, accounts of EMT are evident in the mid-twentieth-century contributions of the Cambridge Keynesians (Robinson 1956; Kaldor 1964) and the monetary circuit theorists (Le Bourva 1962). But within this venerable history, Basil Moore’s *Horizontalists and Verticalists* (Moore 1988) stands out as a landmark statement of the principles and macroeconomic consequences of EMT. In particular, in the course of criticizing and rejecting the assumption of an exogenously given money supply central to the quantity-theory-of-money-based doctrine of the monetarists (or ‘verticalists’ in the parlance of the book’s title), Moore (1988) introduces the branch of EMT known as horizontalism. Simply put, this posits a central bank that sets the overnight interest rate, at which it then accommodates commercial banks’ demand for reserves – resulting in a horizontal reserve supply schedule. At the same time, commercial banks set the commercial interest rate on loans as a mark-up over the central bank’s overnight rate, at which they then accommodate (creditworthy) demands for bank loans emanating from the non-bank private sector. Because the mark-up is invariant with respect to the quantity of loans, this gives rise to a horizontal bank-credit supply schedule. This thumbnail sketch does scant justice to the substance of *Horizontalists and Verticalists*. But lest there be any doubt about the book’s lasting significance, and the contents of ‘mainstream’ monetary economics textbooks

2. Depending on the institutional configuration of the banking system, the wholesale price of credit so-described may be a central-bank discount rate, or a market rate of interest that the central bank itself manipulates (such as the federal funds rate in the US banking system).

notwithstanding, it is noteworthy that those familiar (from first-hand experience) with central-bank practices are in little doubt that Basil Moore emerged victorious from the battle between horizontalists and verticalists (Bindseil/König 2013; McLeay et al. 2014).

Of course, *Horizontalists and Verticalists* can also be seen as initiating the (in)famous debate between horizontalists and *structuralists*, adherents of EMT who nevertheless took exception to various of the claims made in Moore (1988) (see, for example, Pollin 1991 and Palley 1994). For structuralists, for example, horizontalism involves the claim that while the quantity of money is endogenous, the interest rate is exogenous – whereas for various reasons (associated with policy reactions, variations in lenders' risk, and/or changes in commercial bank liability structures, for example), the interest rate can be expected to vary systematically as the demand for credit (and hence the quantity of money in circulation) varies. More recently, however, the long and sometimes vexed debate between horizontalists and structuralists has given way to some convergence of thinking, even among some of its chief protagonists.<sup>3</sup> For example, writing on the determination of interest rates, Wray (2006: 272) argues that, per Moore, 'the central bank exogenously administers the overnight interbank lending rate ... [and] has no choice but to accommodate "horizontally" the demand for reserves.' He nevertheless cautions that this exogeneity of the interest rate in the *control* sense (meaning that the value of the interbank rate is set outside the economy by a policy authority) does not necessarily imply exogeneity in the *causal* sense (meaning independence of the interbank rate from any other variable in the system). This is because 'any plausible theory of interest rate setting by the central bank would include a reaction function to make the interest rate at least weakly endogenous [that is, variable, with a lag, in response to changes in other variables in the system] in the theoretical sense' (ibid.: 272). Meanwhile, according to Moore (2010: 9), the economy is best seen as a complex adaptive system in which the distinction between 'endogenous' and 'exogenous' breaks down. Hence,

nothing is really exogenous, even interest rates, because central banks will always react to economic conditions ... . What the central banks or the governments do is a response to the state the economy is in. There is no purely exogenous or autonomous policy coming from outside. Central banks have some discretion but there is always some sort of endogenous component. (Moore 1988: 9–10)

The similarities between these positions are obvious.<sup>4</sup>

The essays in this special issue explore the monetary economics of Basil J. Moore – its origins, substance, and application – in light of its status as an ongoing and still-developing research project. The prominence of *Horizontalists and Verticalists* in Moore's canon notwithstanding, Louis-Philippe Rochon begins by discussing the 'slow progress toward horizontalism' that characterized Moore's earlier work. Rochon draws attention to the long process by which Moore himself first escaped the trappings of conventional monetary

3. Indeed, the differences of opinion may have been exaggerated in the first place. See, for example, Wray (2006: 271).

4. This is not to say that nothing remains of the debate between horizontalists and structuralists. For example, Deleidi (2020) has recently argued that contrary to the claims of some structuralists, there is no reason for the private sector to adjust interest rates as loan volume expands, because arguments about increasing risk and/or illiquidity as loan volume expands at the microeconomic level do not translate into the same phenomena at the macroeconomic level. In other words, structuralist arguments suffer a fallacy of composition. Hence for Deleidi (2020), absent the central bank *choosing* to endogenize its setting of the overnight rate to economic conditions, the credit-supply schedule is horizontal and horizontalism is the more general version of EMT.

and financial theory before finally arriving at the principles of EMT. This process is revealed by breaking down Moore's career into three distinct phases, the third and final of which constitutes the 'imperial' phase for which he is remembered today, as a fully fledged post-Keynesian and pioneer of EMT. Rochon's focus, however, is on the first two phases, which he associates with a mainstream Keynesian early period (1958–1970) followed by an at-times-confusing period of transition into post-Keynesianism (1970–1977). The sharp break between these phases was marked by Moore spending a year as a Senior Visitor at Cambridge University in 1970, an experience that (among other things) began a lifelong friendship with Paul Davidson and which, as Rochon notes, Moore himself has described as a crucial formative event. Rochon shows, however, that while the impact of the Cambridge episode on Moore's thinking was instant and (with hindsight) decisive, it nevertheless took Moore almost a decade to make full sense of this experience and finally emerge (post-1978) as the scholar who would go on to write *Horizontalists and Verticalists*.

The remaining contributions to the issue focus on various frontiers of monetary analysis inspired by modern EMT and the particular contributions to it of Basil Moore. It is widely accepted that monetary theory and monetary institutions (and their history) are inseparable, and in this vein Jane Knodell explores the slow and steady but by no means instantaneous emergence of accommodative central banking – one of the lynchpins of EMT – in the US economy. Knodell views the evolutionary emergence of a stable and fully functioning system of modern endogenous money creation through the lens of three key phases of nineteenth- and twentieth-century US monetary history. She identifies the core element of modern accommodative central banking as being the endogenous provision of an outside asset, the long and slow genesis of such provision being the key to understanding how and why earlier monetary systems failed (as well as how and why the current Federal Reserve system works). Knodell demonstrates that earlier monetary systems achieved (at best) 'partial endogeneity' of money, showing also what could/should have been done to achieve full accommodation during each phase in the development of the US monetary system to which she turns her attention.

Giuseppe Fontana, Riccardo Realfonzo, and Marco Veronese Passarella address more recent monetary history, noting with some satisfaction that since the global financial crisis and the Great Recession, both central banks and (to some extent) monetary and macroeconomic theory have moved away from postulates associated with orthodox monetary theory and towards acceptance of endogenous money. Nevertheless, the authors caution that the endogeneity of money is still widely regarded as an empirical fact, rather than an endemic feature of capitalist economies that can be derived from a well-founded EMT. With this in mind, they set out to highlight a series of developments that, over the last ten years, have continued to advance the theory of endogenous money beyond the foundations laid by authors such as Basil Moore. Ultimately, the paper demonstrates that even as mainstream monetary economists and policy-makers have failed to catch up with the basic core of EMT, the theory itself has continued to develop, thus widening the gap that mainstream thinking needs to bridge if it is to fully assimilate the concept of endogenous money.

As if to demonstrate Fontana, Realfonzo, and Passarella's claim that EMT continues to evolve, the next two papers both address what might at first appear to be emerging challenges to the endogeneity of money, arising from either public policy or private financial sector developments prior to or since the global financial crisis and the Great Recession. Malcolm Sawyer discusses the phenomenon of 'financialization' and its implications for commercial banking, the endogeneity of money, and the form of money itself. Sawyer argues that, at least to date, financialization has had no effect on the form of money and little substantial effect on the endogeneity of money – despite having (notoriously) wrought substantial organizational change in the financial sector that has diminished the role of

commercial banks in the credit-creation process as a result of the rise of ‘shadow banking.’ He argues that financialization has, however, had substantial implications for monetary macroeconomics in general. In particular, Sawyer draws attention to the growing financial instability of macroeconomic processes that results from the increasing prominence of non-bank entities, households, and unconventional monetary policies in the processes of borrowing and lending.

The central concern of Sheila Dow’s paper is the range of proposals for monetary reform that, in the wake of the global financial crisis and the Great Recession, seek to make money exogenous as a (purported) means of imposing greater stability on the economy. Evaluating them from the perspective of EMT and, in particular, the emphasis on financial innovation therein, she takes a dim view of these proposals. Her particular focus is on what constitutes money and the role of the private sector in making this determination, this being an important aspect of the endogeneity of money. Dow notes that this endogeneity of the money form is a potentially fast-moving dynamic, suggesting that what is accepted as being ‘as-good-as-money’ can vary (with confidence and animal spirits) over the course of the cycle – all the more so given the rise of shadow banking, as discussed in the previous paper. Ultimately, she concludes that the endogeneity of the very form that money takes makes a state monopoly of money (an exogenous money supply) unfeasible, undermining proposals for monetary reform that are predicated on imposing exogeneity.

As previously noted, the determination of interest rates is an important concomitant of endogenous money. John Smithin argues that in an endogenous money system characterized by the absence of a ‘natural’ rate of interest, two fundamental questions for central banks are: what rate of interest should they target; and how (if at all) should the policy rate be varied? In response to these questions, Smithin recommends a ‘park it’ approach to monetary policy (involving little or no variation in the policy rate over the cycle), arguing that within this framework the optimal real policy rate is zero. He shows that a real policy rate of zero is conducive to the best possible macro performance (including high employment, robust output growth, and stable inflation), coupled with *distributional equity* – specifically, a situation in which rentiers are given the capacity to maintain the purchasing power of their wealth, but do not gain from an expansion of output to which they have not contributed. He contrasts the effects of his preferred zero real rate policy with those of an alternative zero nominal rate policy (associated with modern money theory), noting in particular the potentially adverse effects of a zero nominal rate peg with respect to inflationary (or deflationary) instability and distributional inequity.

Another important concomitant of endogenous money is the need for prudential bank regulation, which topic is the focus of the final paper in this special issue by Peter Docherty. Docherty argues that post-Keynesians have paid surprisingly little attention to prudential bank regulation given the centrality of EMT to post-Keynesianism and its reputation as a ‘bank-centric’ vision of capitalism. In the context of this deficiency, he recommends the assimilation into EMT of regulatory proposals associated with more mainstream thinking, on the basis that support for the six key features of conventional regulation theory (the possibility of individual bank failure; the contagious nature of bank failure; the broader economic impact of disruption to banking services; the need for public action to prevent bank failure; the problem of moral hazard this creates; and the consequent need to minimize the effects of moral hazard) can be found in the post-Keynesian literature. But according to Docherty, two important modifications are required in order to make this assimilation successful. The first involves a greater emphasis on liquidity. Banks must maintain sufficiently liquid balance sheets, he argues, to accommodate fluctuations in the desire to draw down deposits at short notice in response to variations in liquidity preference. These variations in liquidity preference are overlooked by conventional theories of the demand

for money. The second modification follows from the financial instability hypothesis of Hyman Minsky (Minsky 1982; 1986), and involves greater emphasis on the endogenous generation of systemic risk – a particular blind-spot for mainstream monetary theory, as was made clear by the experience of the global financial crisis and the Great Recession.

## REFERENCES

- Arestis, P. (1987): Post Keynesian theory of money, credit and finance, Thames Papers in Political Economy, Spring, No 87/1.
- Arestis, P., Howells, P. (2001): The 1520–1640 ‘great inflation’: an early case of controversy on the nature of money, in: *Journal of Post Keynesian Economics*, 24(2), 181–203.
- Bindseil, U., König, P.J. (2013): Basil J. Moore’s Horizontalists and Verticalists: an appraisal 25 years later, in: *Review of Keynesian Economics*, 1(4), 383–390.
- Deleidi, M. (2020): Post-Keynesian endogenous money theory: horizontalists, structuralists and the paradox of illiquidity, in: *Metroeconomica*, 71(1), 156–175.
- Fontana, G., Realfonzo, R., Passarella, M.V. (2020): Monetary economics after the global financial crisis: what has happened to the endogenous money theory?, in: *European Journal of Economics and Economic Policies: Intervention*, 17(3), 339–355.
- Kaldor, N. (1964): Monetary policy, economic stability and growth, in: *Essays on Economic Policy, Volume I*, London: Duckworth, 128–153.
- Lavoie, M. (1984): The endogenous flow of credit and the Post Keynesian theory of money, in: *Journal of Economic Issues*, 18(3), 771–797.
- Le Bourva, J. (1962): Création de la monnaie et multiplicateur du crédit, in: *Revue Économique*, 13(1), 29–56.
- McLeay, M., Radia, M., Thomas, R. (2014): Money creation in the modern economy, in: *Bank of England Quarterly Bulletin*, Q1, 14–27.
- Minsky, H.P. (1982): The financial fragility hypothesis: a restatement, in: Minsky, H.P., *Can ‘It’ Happen Again? Essays on Instability and Finance*, Armonk, NY: M.E. Sharpe, 90–116.
- Minsky, H.P. (1986 [2008]): *Stabilizing an Unstable Economy*, New Haven, CT: Yale University Press (reprinted by McGraw-Hill, New York).
- Moore, B.J. (1988): *Horizontalists and Verticalists: The Macroeconomics of Credit Money*, Cambridge, UK: Cambridge University Press.
- Moore, B. (2010): ‘We are all Horizontalists now!’: interview with Basil Moore, in: *European Journal of Economics and Economic Policies: Intervention*, 7(1), 7–11.
- Palley, T.I. (1994): Competing views of the money supply process: theory and evidence, in: *Metroeconomica*, 45(1), 67–88.
- Pollin, R. (1991): Two theories of money supply endogeneity: some empirical evidence, in: *Journal of Post Keynesian Economics*, 13, 366–396.
- Poole, W. (1970): Optimal choice of monetary policy instruments in a simple stochastic macro model, in: *Quarterly Journal of Economics*, 84(2), 197–216.
- Robinson, J. (1956): *The Accumulation of Capital*, London: Macmillan.
- Rogers, C. (1985): The monetary control system of the South African Reserve Bank: Monetarist or Post Keynesian, in: *South African Journal of Economics*, 53(3), 157–161.
- Wray, L.R. (2006): When are interest rates exogenous?, in: Setterfield, M. (ed.), *Complexity, Endogenous Money and Macroeconomic Theory: Essays in Honour of Basil J. Moore*, Cheltenham, UK and Northampton, MA: Edward Elgar Publishing, 271–289.