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Financial derivatives and the theory of money

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Abstract

Financial derivatives are used and counted as money, but it is unclear exactly what sort of money they are. This article explores the monetary role of financial derivatives in securing the global financial system. It finds that derivatives commensurate the values of different forms of financial assets, and, in the process, they facilitate continuity across different forms of money. In this role they are a form of commodity money, but very different from conventional understandings of commodity money. In developing this idea, the paper engages recent debates in *Economy and Society* about the nature of money. In particular, it takes issue with Ingham's state theory of money, which cannot adequately engage exchange rate volatility and extra-national roles of money, and Lapavistas' approach to a Marxist theory of money, which relegates commodity money to a historical abstraction.

Keywords:

Notes

1. For the purposes of this paper, the term 'derivative' will be used in relation to financial derivatives, except when specifically noted. Not all derivatives are financial and, indeed, while derivatives have been traded for thousands of years in relation to commodities (rice, cotton, tulip bulbs, etc.), derivatives specifically related to finance have existed for only three decades. But such has been the speed of their growth that commodity derivatives now make up less than 5 per cent of all derivative transactions.
2. Just how derivatives are counted remains an on-going debate. The fact there is a debate is a signal that derivatives are a very different form of money. For an IMF perspective, see Vrolijk ([1997](#)).
3. This is the International Swaps and Derivatives Association (ISDA) estimate of the notional amount outstanding at the end of 2004 in interest rate, credit and equity derivatives. All but \$12 trillion is interest rate (including currency) derivatives. Two years earlier (December 2002) the aggregate figure was just \$105 trillion.
4. This is the BIS measure of daily turnover on OTC (over the counter, as opposed to exchange traded) derivatives.
5. See Ingham ([2004](#)) for a sustained exposition and critical evaluation of this conception.
6. This was the effect of the Black-Scholes options pricing model, whose (living) authors received the Nobel Prize for Economic Sciences in 1997.
7. Robert Shiller, and others, through his company Macro Securities Research (see <<http://www.macromarkets.com/index.htm>>) has patented a range of derivatives designed to give life stability – for example, securities which are either positively or negatively correlated with house prices in your city so that you can either take on an exposure to house price movements but without owning real estate or, as a house owner, you can hedge against falling house prices. For a brief explanation by Shiller himself, see Geraciotti ([2003](#)).

8. From this position come propositions that derivatives are a way in which the poor are exploited (LiPuma and Lee [2004](#), [2005](#)) and of the necessity for their control, or even elimination, by a Tobin tax (e.g. ul Haq et al. [1996](#)) or a World Monetary Authority (Eatwell and Taylor [2000](#)).

9. See also Derrida ([1992](#): 129 n.9) for a similar depiction of global finance. Tratner ([2003](#)) astutely notes the parallels between Derrida's depiction and Milton Friedman's monetarism: the quintessential depiction of money as a 'veil', separate from the 'real' economy.

10. Lysandrou ([2005](#)) develops a similar argument in relation to securities: that developed securities markets serve to impose competitive norms across asset types and across space.

11. Aglietta ([2002](#)) provided a sweeping review of the history and future of money that centres on the issue of trust.

12. The distinction between money and money of account is important, for failing to distinguish leads to confusions. For example, in summarizing 'structuralist' theories of money, Gilbert (2005: 364) depicts an evolutionary development of the money from single purpose to general purpose monies, which have 'culminated in national currencies as the apotheosis of the modern form'. But national currencies are monies of account, not money per se and, in a global context, they do not function as general purpose monies – indeed, most national currencies are not means of exchange outside their nation-of-origin.

13. Gilbert, in attempting to combine the 'economic', 'social' and spatial dimensions of money (and the way in which these dimensions are mutually defining), refers to the need to reveal money's paradoxes. In the midst of polemical debate, this is an important contribution. Revealing the paradoxes 'provides a more nuanced understanding that money is at once both homogeneous and heterogeneous, a metaphor of modern society and a material object rooted in daily practice, and that it circulates through time and place, across and through various scales that it helps constitute on its passage' (2005: 361).

14. The extended debate between Ingham ([2006](#)) and Lapavitsas ([2005](#)) in *Economy and Society* on the nature of money has come to centre on how the history of money's origin is to be written: whether a generalized unit of account comes first to facilitate

generalized trade or generalized trade calls forth a generalized unit of account. It is a sign of both the polemic and the determinism that have come to dominate this debate.

15. In response to Dodd's ([2005](#)) concerns that electronic money does not readily fit into Ingham's framework, Ingham's response (2006: 260) is to identify electronic transfers as about not monetary exchange but monetary transmission. Only cash can be a means of exchange. Issues of different forms of money are thereby swept away by invoking taxonomy.

16. For the Keynesians who focus on state money, it is necessary to distinguish which particular tokens constitute 'money' and which do not. In a closed economy, this reduces to the specification of where to draw a line between money and other tokens, such as train tickets, which are also denominated in national money of account. But the question also needs to be posed in an open economy, where the tokens that contend to be considered as money are not just train tickets, but liquid financial assets (bonds, futures contracts, etc.) and often denominated in another national money of account.

17. Ingham several times refers to the state or some other 'authority', so that the state is 'not essential to the analytical, or logical, argument about the primacy of money of account'. Yet he also contends that non-state monies of account 'are chronically unstable' and are not sustainable (Ingham [2006](#): 271, 273).

18. In Ingham's 200+-page book *The Nature of Money* (2004), the discussion of contemporary floating exchange rates amounts to just a few paragraphs.

19. To this point we could add that organizations that participate in financial markets seem to have a remarkable record of not seeming to accrue many taxation obligations that might challenge their asset portfolios.

20. Derivatives need state money as their money of account; states use derivatives as part of the prudential requirements of their own operations (especially the central bank) and of financial institutions within the national territory. See Bryan and Rafferty (2006: 207–10).

21. Broadly, there are three paths – one is the TINA argument: that if derivatives are not state money, there is no alternative but that they be seen as commodity money. Another involves the functionalist argument that derivatives are performing commodity functions. In the context of securities, Lysandrou makes this argument sharply: 'The fact that the shares and bonds of bank corporations represent marketable claims on the

profits made from their deposit-taking and lending activities effectively implies that the underlying lending-borrowing relation has itself become commodified' (2005: 776). A third path, building on the second, seeks to identify the productiveness of derivatives as commodities. This is the path taken here, but the issue is clearly larger than can be explored in this context. See also Bryan and Rafferty (2006: ch. 6).

22. For Ingham's state theory of money, this is fundamental: the state and the trust its money of account elicits is all about guarantees of stability, and stability is a precondition for objectivity in measure.

23. Of course, derivatives do not engage 'monies' without convertibility that associate with non-capitalist processes, such as local exchange trading schemes. LET schemes have received some attention as 'alternative' money (e.g. Ingham [2004](#): ch. 9; see also Dodd [2005](#)).

24. Lapavitsas's ([2000](#)) excellent summary of Marx's theory of money shows clearly the centrality of commodity money to Marx's analysis of money. But twenty-first-century money is another matter, and Lapavitsas's analysis of contemporary money (e.g. [2003](#)) has left commodity money aside.

25. We are drawn to Fleetwood's ([2000](#)) explanation of the necessity of commodity money to the integrity of Marx's theory of value, but not to his (tentative) conclusions that the abandonment of commodity money means the end of a universal equivalent form of value. Nor is there the question of why nation-states have abandoned the universal equivalent and the value form. This appears a rather instrumentalist approach to value theory, and, more critically, fails to open up the terms on which Marxian value theory can be used to understand new forms of money.

26. Notice how Zelizer's (esp. 1994) approach, with its emphasis on the individualized, social and cultural uses of money, complements Shiller's conception of derivative contracts to meet individual life circumstances.

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