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OPINION

E-money revisited

Jul 22nd 2000

From The Economist print edition



If e-money catches on, central banks may lose the power to set interest rates—or so it has been argued. Several new studies say this is wrong

OUR Economics Focus of [January 22nd](#) discussed a recent paper by Harvard's Benjamin Friedman, which argued that technology in the form of e-money might render central banks obsolete. At a conference this month in Washington, DC, organised by the World Bank, the IMF and *International Finance*, several economists examined Mr Friedman's much-discussed idea and declared it wrong.

Mr Friedman's argument went roughly as follows. Central banks can control short-term interest rates because they are monopoly suppliers of "base money"—currency, plus deposits by banks at the central bank. Suppose that technology eliminates both kinds of base money. In such a world the central bank would no longer have the fulcrum it currently uses to change interest rates.

Why might the demand for base money evaporate? Electronic cash, stored on memory-cards, PCs and other devices, could replace physical cash. And banks' deposits at the central bank would disappear if banks themselves vanished. This is imaginable. Instead of holding deposits at banks, people might store their assets with a custodian (such as a computer company), which itself neither issued liabilities nor extended credit (ie, was not a bank). When people bought or sold something, settlement would take the form of an immediate transfer of ownership of those assets. There would be no bank "money".

Several papers presented at the meeting questioned this vision, for different reasons. The one by Charles Goodhart of the London School of Economics (and formerly of the Bank of England's monetary policy committee) was the clearest.

First, Mr Goodhart argued, e-money is unlikely to retire ordinary currency in the foreseeable future. The great advantages of currency are simplicity and anonymity. Even if the first is eroded by technology, the second will remain. Anonymity in transactions is something that buyers and sellers often want—and not always so that they can break the law. Forms of e-money might be technologically capable of providing anonymity, but they would still rely on trust between the

parties (trust, that is, in the other party's promise not to reveal the information the transaction has conveyed). Cash leaves no tracks, and makes no demands on anybody else's integrity.

What about the demand for banks' deposits at the central bank, the other component of the monetary base? Mr Goodhart argues that banks are no more likely to disappear than currency. Specialised financial intermediaries will always be needed to help people and firms choose their asset portfolios and to distinguish between good and bad credit risks. But the clients of these necessary intermediaries then need to distinguish (using limited information) good intermediaries from bad. How? "The obvious answer is to make the information purveyors hold the loans/assets that they recommend on their own books, using enough of their own capital to keep them honest, and then finance the rest of their financial requirements by offering various kinds of deposit, or mutual-fund-unit, liability." In other words, the obvious answer is banks.

If people still want currency, and still want banks, there will be a monetary base and central banks will stay in business. But Mr Goodhart concludes by asking what happens if, despite all of the above, currency and banks alike do in fact disappear. Even in this extremely unlikely event, he contends, a central bank would still be able to set short-term interest rates.

Even in a world without currency or banks, the market will set a long-term interest rate that matches borrowers' demand for e-money to lenders' supply. Fundamental "real" factors (productivity growth and pure "time preference") will determine this figure. In the short term, though, the central bank can raise the interest rate simply by offering to borrow e-money at more than the prevailing market rate; or it can lower it by offering to lend e-money for less than the prevailing market rate. True, in undertaking these transactions, the central bank may suffer losses: in this respect, and under these assumptions, it is just like any other borrower or lender. Except, of course, for one big difference: unlike other borrowers and lenders its operations (and possible losses) are backed in the end by the government's power to raise taxes.

This puts central banks' future in a new light. If governments want them to retain control over short-term interest rates, they can always arrange it. They can do it directly, through regulation. Governments could oblige tax payments to be settled with central-bank liabilities, for instance, thus preserving a monetary base on which to act. Or, indirectly, even without a monetary base, governments can simply stand behind central banks when they act in loss-making ways to move interest rates. But in either case, governments would be explicitly acting to keep their central banks working—and would have to explain why.

If Mr Goodhart is right, central banks will never disappear over governments' objections, even though they may in the end become technologically dispensable. The real challenge to central bankers in an e-money world will be to justify their existence, something at which they have had very little practice up to now.

The paper by Benjamin Friedman that started this debate was "The Future of Monetary Policy"; it appeared in the November 1999 issue of *International Finance*. Mr Goodhart's paper, and the others, will appear in a forthcoming issue of that journal.