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Digital Money: If You Can't Create It Anonymous, You Need to Offer a Yield

PEOPLE, AND ESPECIALLY THE RISK PRONE, PREFER ANONYMOUS MEANS OF PAYMENT, BUT BANKS AND CENTRAL BANKS COULD SUCCESSFULLY ISSUE DIGITAL MONEY TRADING ANONYMITY FOR A RETURN, EXPERIMENTS SUGGEST

Experiments conducted by four Bocconi Professors suggest that the lack of anonymity could prevent digital money issued by banks and central banks from being welcomed by the public, unless it comes with a yield.

Emanuele Borgonovo, Stefano Caselli, Alessandra Cillo, and Donato Masciandaro (along with **Giovanni Rabitti**, Heriot-Watt University) ran experiments on 98 University students in order to understand whether anonymity is a relevant component in the demand for money.

For their experiments, the researchers designed a number of means of payment (MOP) displaying different combinations of illiquidity risk (related to the standard function of money as a medium of exchange), expected return (related to the function of store of value) and anonymity (assuming privacy-protection as a third, novel function of money).

When asked to assign a value to each MOP, participants gave a 1.44% higher value to anonymous MOPs with the same illiquidity risk and the same expected return of non-anonymous ones. If asked to allocate a budget to the two different MOPs, 75% chose to allocate their whole budget to the anonymous MOP, and the average allocation was 82% of the budget.

"The results mean that anonymity per se matters," says

Professor Masciandaro, “even if, perhaps, less than expected. It is a valuable third attribute, following expected return, consistently ranked as the most important feature, and illiquidity risk.”

Risk-prone individuals seem to appreciate anonymity more than the rest of the population, the experiment found. “There are several possible interpretations for this result,” the authors write. “For example, people may not want others to know that they like risk. That is, as risk aversion is the social norm, riskloving agents may have a greater desire for anonymity. Another possible interpretation is that risk-prone subjects are more prone to illegal deals and, therefore, they might like anonymity more.”

At any given level of anonymity, furthermore, to accept higher illiquidity risks, individuals require a more than proportional increase in the expected return.

The results have implications for both issuers of private digital money (like cryptocurrencies, explicitly premised on the ability to facilitate quasi-anonymous transactions), and banks and central banks interested in issuing public digital money.

On the one hand, the success of private digital currencies will depend on their ability to decrease the illiquidity risk and increase the expected return while credibly guaranteeing anonymity.

On the other hand, the experiments show that the attractiveness of a digital currency “depends on how it is designed in terms of the level of privacy and interest-bearing mechanisms,” the authors conclude. “In principle, the illiquidity risk of a central bank digital currency is low. At the same time, it seems unlikely that individuals will view it as offering the same anonymity as cash. Our results show that offering a yield could help increase its appeal.”

Emanuele Borgonovo, Stefano Caselli, Alessandra Cillo, Donato Masciandaro, Giovanni Rabitti, “*Money, Privacy, Anonymity: What Do Experiments Tell Us?*”, *Journal of Financial Stability*, Volume 56, 2021, 100934, DOI: <https://doi.org/10.1016/j.jfs.2021.100934>.

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