Johannes Beermann: Heads and tails - cash in the age of digitalisation

Dinner speech by Dr Johannes Beermann, Member of the Executive Board of the Deutsche Bundesbank, at the International Cash Conference, Munich, 10 September 2019.

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Introduction

Ladies and gentlemen,

Welcome to the *Seehaus* right at the heart of the English Garden.

This park is a true landmark of the city of Munich, with a design inspired by British landscape architecture.

It probably comes as no surprise that football – another at least originally English pastime – is popular around here as well.

Of course, “kicking a ball” with friends in a park such as the English Garden is a more informal affair than the matches you might see in the professional football leagues, where the stakes are arguably much higher.

But the basic principles of football apply everywhere. The direction of play is the first decision to be made before any match can begin.

Depending on the position of the sun or the direction of the wind, the choice of which goal to defend first could make a difference to the game’s outcome.

A neutral mechanism needs to be put in place to decide who obtains this “first mover advantage”.

A coin toss is one such mechanism. The coin is considered “fair” if both events – the coin landing on *heads* or the coin landing on *tails* – have an equal probability of occurring.

In the history of minting, *heads* on the obverse and *tails* on the reverse have emerged as the two sides shown on coins which serve as legal tender. Although the details on each side differ at first sight, they are closely related.

To “coin” a well-known expression, *heads* and *tails* are literally two sides of the same coin. Together, they complete the coin, which also means both sides have to be taken into consideration.

In the world of payments, that is precisely what central banks do. On the one hand, we provide payment systems that function purely electronically while, on the other hand, we take part in the production and distribution of physical cash. In the prevailing set-up, one aspect of payments cannot work without the other.

Digital payments are in a state of flux. New competitors enter the market, at times trying to disrupt existing structures.

The direction of play remains unclear at this stage. It may be that the rise of one form of digital payment will lead to the fall of another. It is also possible that physical cash is used to a lesser and lesser extent until it effectively fades from existence, at least as far as transactions are concerned.

None of us have a crystal ball to tell us how the match will end. But we can look at existing evidence.

In my brief remarks this evening, let us turn to the hypothetical question: how would the coin toss change, if one of the sides were to vanish?

Supply and demand factors behind cash usage

Ladies and gentlemen,

In Germany, cash remains as popular among private households as ever. If asked directly, 88% of German households would be in favour of keeping the option of using cash for everyday transactions.[1]

This generally "cash-loving" attitude is reflected in the data on actual cash usage. We know from our own analysis that 74% of all point-of-sale transactions are made using banknotes and coins.[2]

But this number is declining – albeit gradually and from a high level by international standards. In some countries, cash usage is already significantly lower than in Germany.

In principle, the declining use of cash could be driven by weakening demand. This could occur if alternative means of payment were to appeal more in relative terms to private households. We as central bankers take a neutral stance towards such a consumer-driven process.

However, the declining usage of cash could also be driven by a weakening supply as the existing cash infrastructure erodes. Such adjustments could stem from both private and public entities and could hamper the adequate provision of cash.

The reasons for this may be complex, yet the implications would be straightforward: households would have to adjust, too.

Once obtaining cash simply becomes "too cumbersome", switching to electronic alternatives is the rational decision, but it means less choice and it may pose several social challenges:

- Think of ensuring financial inclusion in an ageing population.
- Think of providing a non-electronic alternative in times of political crisis or in the event of large-scale cyber attacks.

Any rational decision is preceded by a cost-benefit analysis. While we may see the benefits of different payment methods, we also need to understand their underlying cost structures.

We looked in a recent study at the overall transaction costs of cash compared to debit and credit card payments in the German retail sector.[3]

Cash did turn out to be the most cost-efficient payment instrument for retailers when accounting for cost drivers such as cash handling, fees for card payments and payment infrastructure provision.

But, looking ahead, several factors need to be understood better. To name just a few:

- How is the increasing use of contactless payments impacting on transaction costs across the various payment instruments?
- How are other actors in the cash cycle, most notably financial institutions, dealing with their cost structures?
- What is the market price of personal information? Or, to put it more directly: do digital forms of payment that contain traces of individual data generate social costs that need to be accounted for in future cost comparisons?

It is obviously hard to disentangle supply and demand-side drivers in economics. Moreover, both drivers are likely to be mutually reinforcing.

But to the extent that declining cash usage is driven by supply-side adjustments, central banks can no longer remain neutral. With one side dominating, the coin becomes biased.

Being neutral with regard to consumer choices does not imply being passive with regard to providing an adequate cash infrastructure.

This is especially relevant given that the only viable alternative to physical cash is introducing some form of central bank digital currency. But, in the euro area at least, I cannot see this happening any time soon.

Conclusion

Ladies and gentlemen,

The coin is still spinning through the air, and two outcomes seem conceivable at this juncture.

- In the first scenario, private and public actors within the cash cycle take measures to ensure the adequate provision of cash in line with prevailing demand. As a result, the coin retains its current characteristics, encompassing both electronic and physical forms of payment.
- In the second scenario, the physical side of the coin increasingly starts to resemble the digital side. In effect, the coin becomes one-sided.

One-sided coins are not without historical precedent.

Some 800 years ago, a variety of pfennig coinage dominated monetary circulation in German-speaking areas. Known as bracteates, these coins were embossed on one side and often hollow on the other.

The relatively simple technique employed to make them was also reflected in their limited function as a store of value. In fact, these one-sided coins were infamous for their frequent and sharp devaluations.

As a result, stable coinages were introduced in the 14th century. Those were, of course, two-sided and have become a true symbol of monetary stability that has endured to this day.

Central bank money is the most recognisable means of payment. It is the local unit of account and the only legal tender. Ensuring its adequate supply is a key task for central banks, which we need to fulfil at all times.

As technologies advance and digital forms of money increasingly enter the field, policymakers will not be able to remain “on the sidelines”.

There are two sides to every coin, after all.

On that note, I would like to wish you all a very pleasant and interesting evening. You still have to decide between an excellent red and an equally excellent white wine. The choice is yours. Perhaps a coin toss will help.

Thank you.

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1 Deutsche Bundesbank (2018), Payment behaviour in Germany in 2017 – fourth study of the utilisation of cash and cashless payment instruments.

2 Ibid.

[3] Deutsche Bundesbank (2019), The cost of payment methods in the retail sector, Monthly Report, June 2019, pp. 65–79.