Instant payments and cards: Apples and oranges or a possible substitute?

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Abstract

If instant payment instruments are to disrupt the card payments market as expected, this will require propositions that match or surpass those currently developed for cards. This begs the question whether instant payments can realistically substitute for certain card transactions. Certainly, there seems to be sufficient common ground for the former to substitute for the latter. Nevertheless, the two instruments are not the same, and each has its own characteristics, specific use cases and advantages. This paper explores some of the barriers to the full uptake of instant payments and the main challenges when it comes to driving adoption among the wider public.

Keywords: instant payments, cards, euro area, retail payments

INTRODUCTION

Launched by the European Payments Council in November 2017, the Single Euro Payments Area (SEPA) Instant Credit Transfer (SCT Inst) is an instant payments scheme enabling euro credit transfers within the SEPA to be made in under 10 seconds. SCT Inst was designed for everyone — consumers, businesses, large companies and administrations. It works like a regular SEPA credit transfer but much, much faster; it is also open and accessible to users and service providers 24 hours a day, seven days a week.

Instant payments will certainly replace some parts of the present system for credit transfers; indeed, some even expect that instant payments will become the new normal. Opportunities even go beyond regular credit transfers. As Santamaria[1] argues, instant payments are the closest substitute for cash — in both cases, the transfer of funds is immediate and available 24/7/365. Banks also have scope to develop solutions in person-to-person and person-to-business market segments where cash and cheques are currently widely used, where these solutions would reduce the cost of managing cash and cheques. These solutions could further facilitate electronic and mobile commerce payments. As cards are used extensively in these situations as well, the question is whether instant payments and cards are like apples and oranges or whether instant payments could be a substitute for payments that are currently made with cards. The paper will address some aspects relevant for such substitution.

First, the paper will examine the current state of the retail payments market in the euro area. It will then consider the extent to which instant payments could compete with card-payment instruments for market share. Following this, the paper conducts a comparison of cards and instant payment instruments to identify key areas to consider when developing propositions for instant payments. The final section of the paper concludes.

RETAIL PAYMENTS IN THE EURO AREA: THE STATE OF PLAY

Non-cash payments are extremely relevant in the euro area, with the volume of these transactions increasing year on year. Statistics published by the European Central Bank (ECB) show that 101 billion non-cash payments were made in the euro area in 2020,[2] translating to a compound annual growth rate (CAGR) of 6.8 per cent over the preceding five years. Some 47 billion (47 per cent) of these transactions were made with cards, translating to an even higher CAGR of 9.6 per cent over the preceding five years. Credit transfers and direct debits accounted for 23 per cent and 22 per cent respectively. When looking at these figures for the euro area in more detail, significant differences can be observed at the individual country level.

As Figure 1 illustrates, the number of cashless transactions and their growth rates are significant. Despite the challenging environment in 2020, the number of cashless transactions continued to increase, although at a slightly lower pace — from 2019 to 2020 the number of cashless transactions and card-based transactions grew by 5.4 per cent and 6.1 per cent, respectively.

At the end of 2019 and in the summer of 2020, the Eurosystem[3] and the European Commission (EC)[4] presented their respective retail payments strategies. The key themes of these strategies are summarised in Table 1. Both strategies highlight the importance that retail payment solutions for European consumers should be rooted in the EU. As instant payments are home-grown in Europe, the EC sees these clearly as a, if not *the*, building block for the creation of a European champion in payments.

Regulators[5] consider payments to be the oil lubricating the economy and, if not organised properly, the first barrier to the creation of internal markets. Payments are also an important tool to strengthen the international role of the euro, for example, when international trade and international financial contracts are cleared in euros.

Given the significant role that they perform for the economy, payments have long been and will continue to be under the scrutiny of regulators. Regulatory initiatives can help regulators to achieve their geopolitical agenda; can foster innovation and/or competition; can have effects on end-user protection, end-user pricing and transparency; and can also be used in the fight against financial crime. Payment service providers (PSPs) will have to stay abreast of these developments and be sufficiently flexible to cope with future regulatory initiatives as well. If the mix of objectives, as mentioned, is applied in the right doses, it can certainly assist in making European payments fit for the future.

In anticipation of the Europeanisation of payments, various market initiatives have emerged. Notably, the European Payments Initiative (EPI), set up by a group of European banks and acquirers (see https://www.

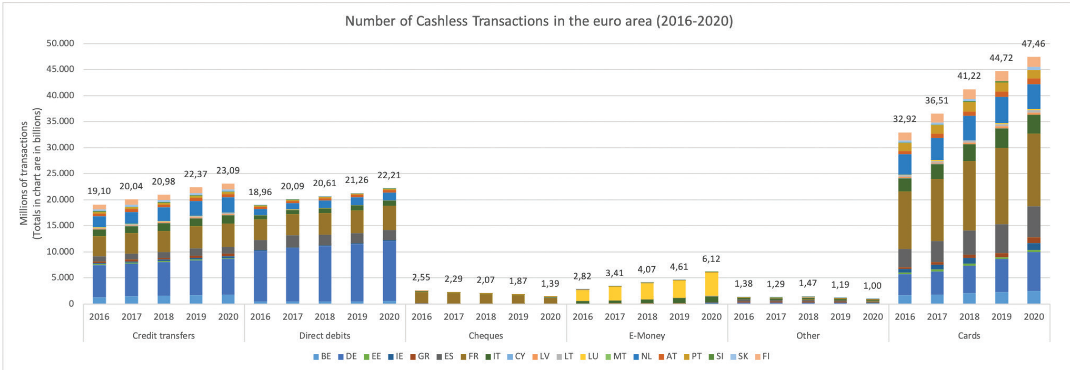

Figure 1: Number of cashless transactions in the euro area, 2016–2020
Source: ECB Statistical Data Warehouse.

Table 1: Key themes within the retail payments strategies of the Eurosystem and the European Commission

Eurosystem	*European Commission*
Pan-European reach and customer experience	European payment solutions that work cross-border
Convenient and cost-efficient	Competitive and innovative payments market
Safety and security	Payment and other support infrastructures: unrestricted access and interoperability
European identity and governance	Improved international payments supporting the international role of the euro
Global acceptance	

epicompany.eu), has the ambition to create a unified, innovative pan-European payment solution leveraging instant payments. The solution aims to become a new standard in payments for European consumers and merchants across all types of retail transactions, including in-store, online, cash withdrawal and 'peer-to-peer', as an alternative to existing international payment solutions and schemes. Both the ECB[6] and the EC[7] have expressed their support for EPI.

All in all, card transactions still dominate in cashless payments, while at the same time cash is (still) used for the bulk of point-of-interaction (POI) and person-to-person (P2P) payments. Card transactions show growth while transactions in cash show a declining trend. The ECB is studying a possible digital euro that could enter this area as well.

INSTANT PAYMENTS: A POSSIBLE SUBSTITUTE FOR CARDS?

The argument[8] has been made that banks have the potential to develop solutions in the person-to-person and person-to-business segments in situations where cash and cheques are currently widely used. The data presented herein show that cards are the most widely used cashless payment instrument in the euro area. Could the key to the mass adoption of instant payments lay in substituting card transactions? On the one hand, propositions based on instant payments could substitute part of the current transactions that are made with cards; on the other hand, such propositions could capture the new transactions that drive the growth in card transactions and that could come from the displacement of cash and cheques.

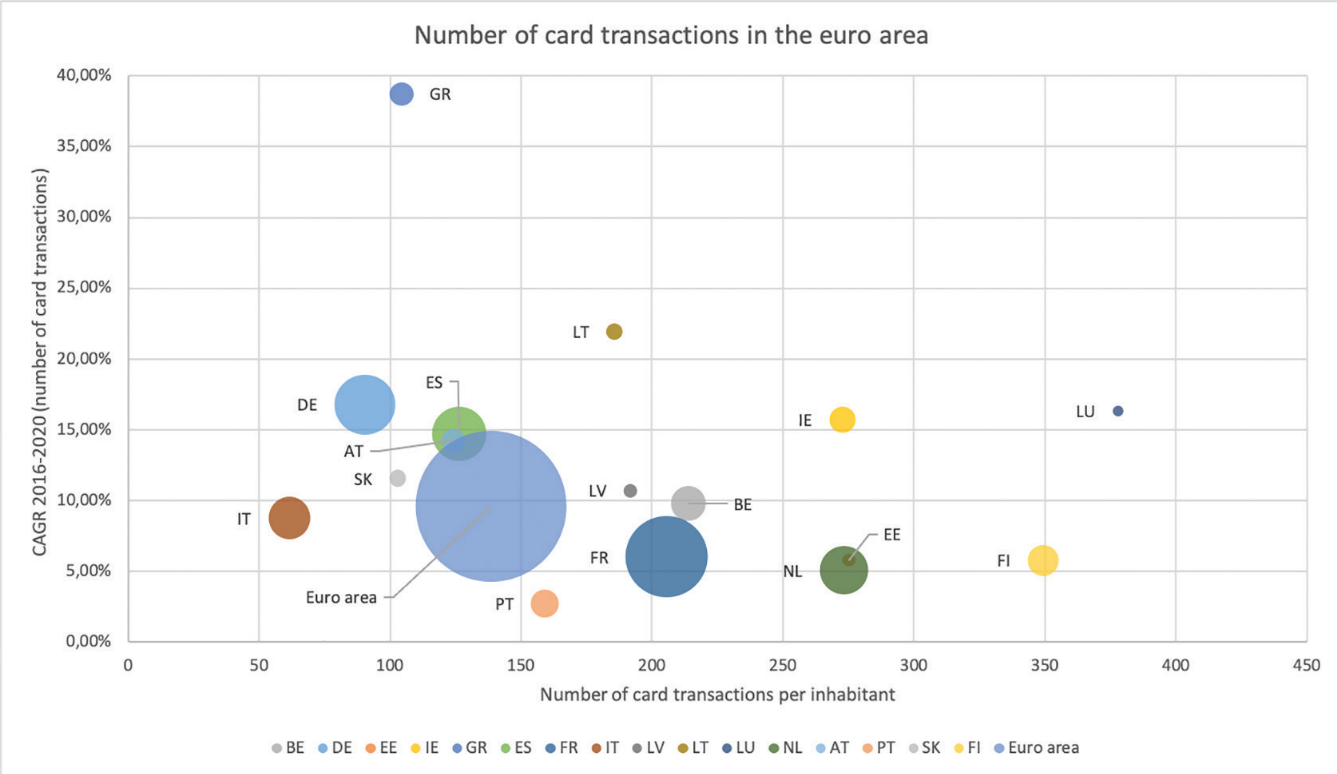

Figure 2: Number of card transactions in the euro area, 2016–2020
Source: ECB Statistical Data Warehouse.

The data presented so far pertain to the euro area. The euro area itself consists of 19 different member states, all at various maturity levels with respect to card transactions. Using data from the ECB's Statistical Data Warehouse, Figure 3 illustrates this maturity level by plotting each country against a horizontal axis that represents the annual number of card transactions per inhabitant during 2020 and a vertical axis that represents the CAGR over 2016–2020 of the total number of card transactions in that country. The size of the bubble represents the total number of card transactions in that country during 2020. For reference, the bubble for Germany represents 7.5 billion card transactions. (Note that Cyprus, Malta and Slovenia have been omitted due to the lack of card-related data available for those countries at the time of writing.)

As can be derived from Figure 2, some relatively large countries like Italy, Germany, Austria and Spain currently lag below the average number of transactions per inhabitant in the euro area (currently standing at 139); nevertheless, these have still the potential to reach that average or even exceed it as their respective CAGRs are higher than that of the euro area (9.75 per cent). The figure also shows that even in markets where the number of card transactions exceeds the average number in the euro area as a whole, healthy growth rates can still be observed.

To put this into context, forecasts have been derived for all cashless payment methods. These forecasts are presented in Figure 3 and have been derived by, where possible, applying the individual CAGR to each individual entry in Figure 1.

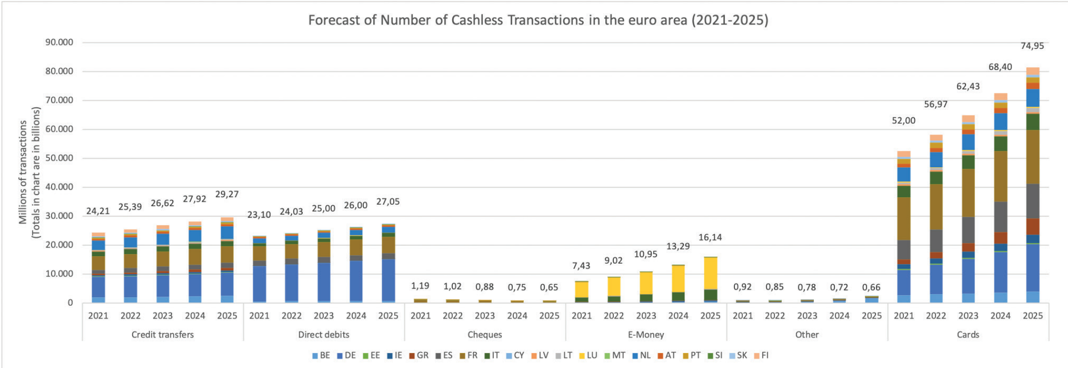

Figure 3: Forecast of number of card transactions in the euro area, 2021–2025
Source: Author's calculations based on data from the ECB Statistical Data Warehouse.

Figure 3 reveals that, if trends do not change, the euro area will see 149 billion cashless transactions in 2025, of which 52 per cent will be made with cards, 19 per cent by credit transfers, 17 per cent by direct debits and 10 per cent with e-money. This shows that credit transfers are not yet enjoying accelerated growth rates driven by instant payments. This is worth revisiting in a few years' time when instant payments have become more common.

If instant payments are expected to counter these trends and to capture market share from card-payment instruments, propositions for instant payment solutions must be developed that match or surpass those currently developed for cards. The next section will address various considerations that will need to be taken into account.

COMPARING INSTANT PAYMENTS AND CARD PAYMENTS

This section will analyse card propositions and potential propositions for instant payment instruments. Only when necessary will any distinction be made between debit, credit, charge and/or prepaid cards.

Card payments and instant payments can be compared according to various criteria. Table 2 provides a preliminary overview of such comparisons. These and other aspects will be elaborated upon in due course.

Execution time

If execution time is considered as the time to initiate or to complete a transaction, card payments and instant payments may be comparable. In reality, however, after the initiation of a card payment, it is only the authorisation that is received in a matter of seconds; what this actually means is that the card is in good standing and that the card issuer has placed a hold on the amount of the transaction approved by the cardholder. The actual transfer of funds (settlement) usually takes place over a period that could extend from the next business day to a month later. With instant payments, both clearing and settlement (ie full execution), happen within 10 seconds, 24/7.

Card authorisation is effectively a guarantee of payment, which to most retailers is as relevant as the actual receipt of funds. Of course, one could also argue that for retailers, confirmation of payment (other than the actual credit on their account) is more relevant than the receipt of funds; this feature is still missing for instant payments, but the industry is working to resolve this.

Table 2: Comparing card payments with instant payments

Aspect	*Card payments*	*Instant payments (SCT)*
Execution time (final settlement between PSPs)	Usually next business day	10 seconds, 24/7/365
Execution time (debit from/settlement with payer)	Depending on contract varies from next business day to once per month	10 seconds, 24/7/365
Execution time (credit to/settlement with payee)	Depending on contract varies from next business day (typically for large payees) to once per month (typically for small payees)	10 seconds, 24/7/365
Sanctions screening	Partially exempted	Mandatory for cross-border payments
Type of transaction	Pull	Push
Revocability	Yes	No
Refund rights	Yes (implicit in scheme rules)	Limited to loss, theft, or misappropriation (additional protection needs agreement between consumer and merchant)
Chargeback	Yes	No
SCA	Exemptions exist, however mandatory for contactless, above €50 + cumulative threshold	Yes, unless an exemption applies
Fees	Borne by merchants (balancing mechanism exist via interchange fees)	To be borne by each actor (depending on the payments account)
Branding/marketing	Strong actors spending considerable amounts in brand awareness	No strong brand owner(s). As such, limited awareness at the public at large
Payment guarantee function (eg for hotel reservations)	Implicit in the model and scheme rules	Currently only possible by means of a deposit/pre-payment
Variable amounts (eg fuel top-up)	Implicit in the model and scheme rules	Currently only possible by means of a deposit/pre-payment followed by a partial refund payment (for the unused amount)

This latter feature has been key to the success of local solutions like iDEAL in the Netherlands.

Sanction screening

The difference in the execution time also has direct consequences on the aspect of mandatory compliance checks. Accordingly, the Funds Transfer Regulation[9] partially exempts cross-border card transactions from mandatory sanction screening (per Article 2(3) Fund Transfer Regulation, card transactions are exempted as long as: (1) the card is used exclusively to pay for goods or services; (2) the number of the card accompanies all transfers flowing from the transaction; and (3) the transfer of funds is not used to perform a person-to-person transfer of funds).[10] At the ECB's Advisory Group on Market Infrastructures for Payments (AMI-Pay), there is as yet no solution in sight. As such, the current exemption is giving card payments an advantage over instant payments, especially in the cross-border context.

Type of transaction and consumer protection regimes

Leaving aside the execution time, instant payments are inherently different from card payments. Most notably, instant payments are push payments: they are initiated by the consumer pushing a payment out of their account, for instance by typing the bank details of the recipient or by scanning a QR code. By contrast, card payments are pull payments, meaning that merchants, using the card details provided by the consumer, pull the payment out of the cardholder account. This technicality has several consequences, most notably with respect to the consumer protection regime that is applicable to pull payments.

To protect consumers from fraudulent authorisations (eg following a theft, fraud or cloning attempt), card schemes developed the original chargeback mechanism. Such mechanisms offer different levels of protection, depending on the type of card used (debit versus credit), the type of transaction (customer/card present or card not present), or the authentication method applied. The chargeback mechanism was subsequently augmented with additional refund rights under the Payments Services Directive (PSD),[11] with those rights further strengthened by the Revised Payments Services Directive (PSD2).[12] Specifically, pursuant to Article 73 PSD2, the payer is entitled to a refund in the case of non-authorised payment transactions, 'except where the payer's payment service provider has reasonable grounds for suspecting fraud and communicates those grounds to the relevant national authority in writing'. If the non-authorised transaction results either from the use of a lost or stolen payment instrument, or from the misappropriation of a payment instrument, liability regimes differ depending on whether such transactions take place before or after the notification of the loss, theft or misappropriation (Article 74 PSD2), with consumers potentially obliged to bear losses up to €50 in the former case.

By contrast, instant payments presently benefit only from the protection against loss, theft or misappropriation of the means of payment as laid down in PSD2. Indeed, being irrevocable payments, they cannot enjoy the chargeback mechanism, which not only protects consumers from fraud, but also against bankruptcy and non-delivery/non-provision of service. For instant payments to become comparable with cards, a separate service would have to be developed as push payments, or specifically the SCT Inst scheme, does not cater for this. Such value-added services could be developed by market participants, but this begs the question as to who would be willing to bear the additional costs associated with this.

Strong customer authentication (SCA)

Pursuant to Article 97(1) PSD2, PSPs must apply SCA where the payer: (a) accesses his or her payment account online; (b) initiates an electronic payment transaction; or (c) carries out any action through a remote channel which may imply a risk of payment fraud or other abuses. The European Banking Authority (EBA) Regulatory Technical Standards (RTS) on SCA[13] provide for a number of exemptions, some of which are only applicable to card payments. Indeed, pursuant to Article 11 of the EBA RTS, PSPs are allowed not to apply SCA to contactless payments at the point of sale as long as: (a) the individual amount of the contactless electronic payment transaction does not exceed €50; and (b) the cumulative amount of previous contactless electronic payment transactions initiated by means of a payment instrument with a contactless functionality from the date of the last application of strong customer authentication does not exceed €150; or (c) the number of consecutive contactless electronic payment transactions initiated via the payment instrument offering a contactless functionality since the last application of SCA does not exceed five. For their part, instant payments can rely on other exemptions to SCA as listed in Chapter 3 of the EBA RTS: trusted beneficiaries (Article 13), low-value transactions (Article 16) and transaction risk analysis (Article 18).

Fees

The matter of fees (and, related, the business model) is important too. As consumers are typically unwilling to pay for the privilege of paying, merchants usually pay a (small) fee for receiving payments. Under such a scenario, only the acquirer would be able to charge a fee, leaving the issuer empty-handed. In the cards business model this has been addressed via the introduction of a balancing mechanism in the form of an interchange fee, which is paid by the acquirer to the issuer. For instant payments, however, there is as yet no such mechanism.

Within the EU, interchange fees have been regulated via the Interchange Fee Regulation (IFR)[14] since 2015. The IFR has had the intended consequence of reducing interchange fees in the interbank space, with the resulting pass-through of these reductions to merchants.[15] An occasional paper published by the Italian Central Bank[16] supports the view that low interchange fees contribute to the wider usage of electronic payments. Although discussion about the optimal level of interchange fee is beyond the scope of that paper, by using a non-parametric local estimation, the study finds that reducing fees to below the level set by the IFR may lead to an unintended decrease in per capita transactions. This effect is likely to derive from a reduction in card usage due to higher fees charged to cardholders by those issuers penalised by the 'near-zero interchange fee'. For these reasons, in the context of payment services, setting interchange fees to zero (or negative values) does not seem to be an optimal choice to encourage card payments. Moreover, the pricing and sustainability of the provision of payment services are strictly connected to competition and innovation issues: with near-zero remuneration, only providers able to compensate for their loss of income with other revenues would stay on the market, cutting out the more specialised ones and raising barriers to the entrance of new, and usually more innovative, players. In addition, technological changes may significantly affect the modalities and the costs of interactions at the POI: understanding the link between current fee schemes, innovation and future competition in card payments becomes crucial and is part of a future research agenda. In other words, from that paper it can be concluded that a positive interchange fee is required for card payments to flourish. Further research will be required to identify whether a similar conclusion can be drawn for instant payments. Nevertheless, it is clear that market participants require long-term certainty regarding the business model for instant payments so they can take this into account when developing their business cases and when decisions are required on whether or not to invest in instant payments as an alternative for cards.

Besides the aspect of fees, it is also crucial that market participants can develop a business model in a stable and clear regulatory environment. In this context, investments could be made to build new services on top of the basic instant payment service. Value-added services that could be proposed (and charged) include refunds, payment guarantee, charge-back and insurance, to name but a few.

Another interesting feature, as mentioned above, would be instant notification via the instant payment service provider to the payee of the execution of the transaction.

This would enable the immediate release of goods and services. This mechanism would also be extremely useful for peer-to-peer transactions — especially in those cases where trust concerns may prevent parties from performing an advance payment and cash cannot be used to settle the transaction, such as when buying a used car or renting a flat. In all these cases, instant payments can help to overcome trust issues and ensure the full payment is performed not in advance, but at the same time as the contract is signed. The instant notification of the execution of the payment would also be useful in the context of e-commerce and digital services, although corporates may not be able to adapt their internal processes to cope with immediate availability of funds and complete the underlying transaction instantly. Additionally, an instant payment could create, on the customer's side, the unrealistic expectation that the corporate will take immediate action (such as cutting off utilities because of unpaid bills).

ENSURING THE FULL UPTAKE OF INSTANT PAYMENTS

In this context, what must be done to ensure the full uptake of instant payments? A working group of the Euro Retail Payments Board (ERPB) identified some of the barriers that hamper the full development of instant payments at the POI:[17] (1) lack of interoperability rules and appropriate governance between instant payments at POI solutions; (2) lack of a common pan-European label; (3) lack of technical interconnectivity between instant payments at POI service providers; (4) issues related to take-up, availability and reachability of instant payment services; (5) lack of merchant integration; and (6) security and privacy issues.

While some of these represent technical challenges that could be overcome via the development of a new interoperability framework or by standardising solutions that currently rely on proprietary formats for exchanging transaction data, others require more structural changes. *Inter alia*, new legislation would be needed, for instance, to ensure accessibility to proprietary infrastructure such as near-field-communications (NFC) antennas, and the regulator is looking into this. Additionally, to ensure a smoother customer journey, PSPs could take advantage of SCA exemption to mirror the customer experience of cards, as mentioned above. This is most pertinent with respect to trusted beneficiaries, low-value transactions and transaction risk analysis. The first exemption would benefit peer-to-peer transactions, while the latter two would be more beneficial to merchants at the POI.

Finally, when it comes to customer trust, it should be noted that the COVID-19 pandemic has accelerated the adoption of new forms of payment. The majority of customers are now familiar with contactless payments and QR codes.

One of the main features that could increase consumer trust would be the implementation of payee confirmation, that is, confirmation that the payee IBAN matches the payee name. In addition, given the increasing awareness of security-related issues among consumers, privacy is also likely to be a key factor in the wider adoption of instant payments — especially for cross-border transactions that currently rely on US-based entities. In this respect, it is worth noting that unlike with card payments, there are no intermediaries involved in instant payment transactions: only the payer's and the payee's banks (or technically speaking, account servicing PSPs) are aware of the payment.

Ultimately, instant payments will succeed as a substitute for card transactions only if both payers and payees are happy with the service. On the payer side, consumer associations have made it clear[18] that further measures are required before instant payments become the norm. For example, consumers are demanding, *inter alia*, targeted measures to modify or cancel transactions, as well as measures to prevent fraud. This will require the development of additional services. Consumers have also drawn attention to the large variations in charges that banks levy for (regular) instant transfers and how these additional charges are significantly higher than those associated with traditional transfers. It can be assumed that similar concerns exist for instant payments as an alternative for card payments, notably concerns that consumers do not expect to pay for the privilege of being able to pay with instant payments at the POI. As stated before, these concerns could be addressed by a proper functioning business model that balances such costs between actors for instant payments as a replacement for cards. Finally, consumers argue that if instant payments are to be offered in stores, then the individual's freedom to choose between the various payment instruments must be guaranteed.

On the payee side, EuroCommerce[19] has stated that if merchants and consumers are to benefit from new technologies then Europe needs an innovative payment system. Specifically, with payment technologies in a period of rapid change, European retail and wholesale merchants need new business models that can respond to the fluidity of the situation. The SEPA needs transparent, competitive and innovative payment solutions and end users must participate fully in their design. As merchants must accept a variety of payment means, they should pay only for the services they choose. In their view, the multilateral interchange fee model distorts competition in the payment market in a way that inhibits innovation and prevents new players from entering the market. Such barriers must be removed to allow merchants and consumers to benefit fully from new technologies. EuroCommerce has three key messages when it comes to payments. First, on cost-based business models, it argues that a cheaper and fairer payments market in Europe would benefit consumers and retailers. Secondly, on competition, it states that to create a truly single market, Europe needs innovative and competitive payments for face-to-face, mobile and distance selling. Thirdly, on governance, in the view of EuroCommerce, the long-term evolution of the payments market must involve payment users as well as providers.

Both payers and payees welcome innovation and want the freedom of choice to be ensured. The need for robust business models is also clear. As discussed previously, the ability for payers to be able to modify or cancel transactions is a key difference between instant payments and cards that remains to be addressed. Finally, it is vital to secure stakeholder input in the design stage.

CONCLUSION

Aside from becoming the new normal for regular credit transfers, there are opportunities for instant payments in other areas too. While the replacement of cash and cheques has been mentioned by some, there are also significant opportunities to capture market share from card payment instruments, given that these are the most widely used non-cash payment instrument in the euro area, with a relative market share that currently is only expected to grow. This growth could be countered, however, if instant payments were to start to substitute for card transactions. For this to happen, however, instant payments propositions must match or surpass existing card-based propositions. In addition, certain features of instant payments (instant settlement) need to be promoted properly. This will require strong branding and awareness campaigns to educate consumers and merchants, as the average consumer tends not to perceive the different consequences of one means of payment over another. The COVID-19 pandemic has shown that consumers are willing to try new forms of payment, provided that they are convenient, safe, fast and reliable. New payment methods should be offered alongside existing ones so that the option of choice is open to both payers and payees. Ultimately, however, one of the key enablers for instant payments to flourish could well be the privacy concerns of customers who prefer to keep their transactions confidential.

AUTHORS' NOTE

The views expressed in this paper are those of the authors and do not necessarily represent the views, the official policy or the position of the associations or its members they work for.

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