

Payment services in transition: instant payments, PSD2 and new competitors

Technological innovations, regulatory adjustments and the increasing digitalisation of daily life have permanently altered the payments landscape in Europe, and will continue to shape it in future. Technical capabilities for initiating and processing payments digitally have evolved at a rapid pace in the past few years. With smartphones playing an increasingly central role in trade with goods and services, the aim is to seamlessly integrate the act of payment into the purchase process (one-click payments). Smartphones have been a catalyst for the new business models developed and rolled out by a growing number of providers, who are capitalising on the use of data analytics, new means of accessing payment accounts and the introduction of instant payments. Fintech and bigtech companies, which both compete and cooperate with incumbents in the market for payment services, have attracted particular attention in this regard. These developments are putting traditional structures and existing economic principles in the area of payments to the test.

While these new developments generate efficiency gains and create a richer user experience, they also result in greater technical complexity and a tendency to operate increasingly within individual ecosystems. This could potentially lead to certain online platforms dominating the market, raising questions on matters of competition policy, for instance.

In Europe, payment solutions have traditionally evolved along national borders, while global players have tended to think and act internationally. This has given them an initial edge in Europe, too. The challenge for European payment service providers, then, is to create effective pan-European payment solutions to rival those offered by their increasingly successful global competitors.

The structural change shaping European payment systems also poses new challenges to central banks, supervisory bodies and legislators. If a larger share of payment transactions shifts to international providers, and value and process chains fragment across national borders, there may be repercussions for supervisory mandates as well as implications under competition and data protection law.

How technological developments shape payment habits

The way in which people and businesses pay for goods and services has changed substantially over the last few years. Various different factors are responsible for this (see the chart on p. 53), but technological advances have played a particularly important role.

NFC technology, ...

First, near-field communication (NFC) technology, which makes contactless payments by card and smartphone possible, has become widespread. Around 55 million of the 100 million "girocard" debit cards issued in Germany now support contactless payments based on NFC technology (as at end-2018),¹ not counting the contactless debit cards offered by international card schemes and credit cards. Indeed, all the new credit cards issued in Germany since 2017 have been contactless-capable. Amongst accepting parties, more than 620,000 of the 840,000 terminals set up in-store are equipped to process contactless girocard payments (as at end-2018).² In December 2018, almost 16% of all girocard transactions were already contactless.³

... e-commerce, ...

Second, new online payment solutions are evolving in response to increasing levels of e-commerce. This sector is accounting for an ever larger share of sales, making up 10.2% of all retail sales in 2018.⁴ Added to this is the growth in online sales in the services sector,⁵ though the boundaries between digital goods and services are becoming ever more blurred.⁶ Online purchases are often paid for via specialised e-commerce schemes.⁷

... smartphones, ...

Third, the widespread use of smartphones⁸ and mobile internet is having a transformative effect on purchasing habits. This is boosting the trend towards developing new and innovative payment solutions for use both at the point of sale (POS) and in mobile commerce (m-commerce),⁹ which also includes in-app purchases.¹⁰ M-commerce is a driving force behind the ongoing integration of payment methods

into smartphones, either via payment cards stored digitally in an app, direct debit mandates or payment methods integrated into digital ecosystems (e.g. platform solutions for e-commerce or mobility services),¹¹ which are also accepted as a means of payment by third parties, in some cases. In m-commerce, consumers prefer to use payment channels that are preconfigured, stored on their device and easy to use for reasons of convenience. This can create lock-in effects in the field of payment solutions, with consumers turning a blind eye to potentially better rivals.

Smartphones increasingly look set to also become a key device for payments, not least because they are an ubiquitous feature of day-to-day life. Today's mobile payment solutions still do not play much of a role at the POS – they do not appear to offer sufficient benefits (e.g. the integration of voucher schemes or customer loyalty programmes) compared with the classic means of payment, plus the tried-and-tested traditional payment card has made substantial gains in terms of convenience and speed now that it is equipped with the contactless function – but banking apps are now increasingly being used to conduct traditional

¹ See girocard (2019).

² See girocard (2019).

³ See girocard (2019). No figures are available for the credit card companies.

⁴ See Handelsverband Deutschland e.V. (2019).

⁵ See Bundesverband E-Commerce und Versandhandel Deutschland e.V. (2019).

⁶ See Urbach (2019).

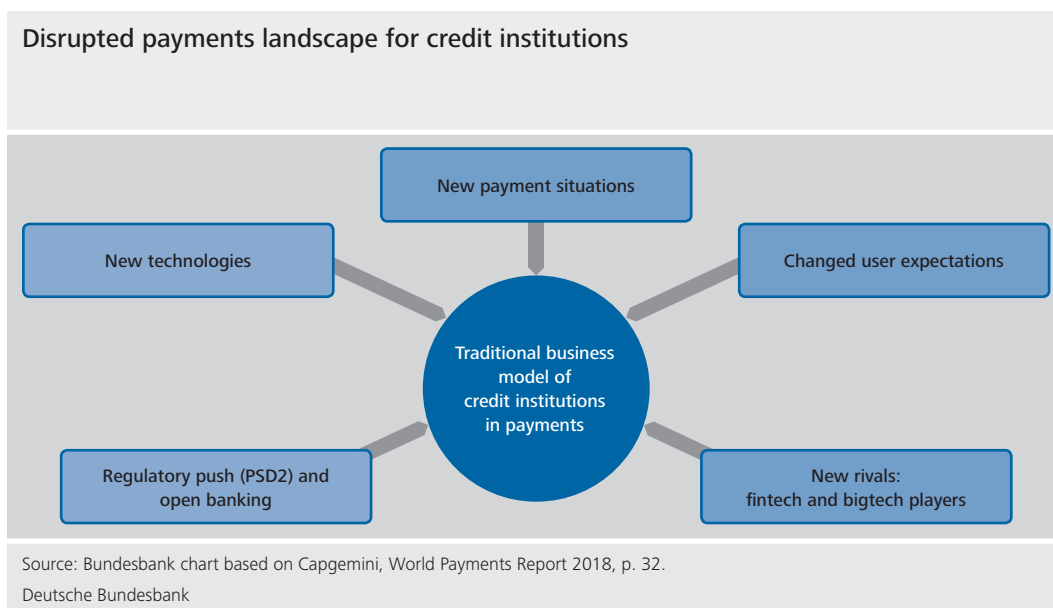
⁷ Specialised e-commerce schemes include PayPal, Sofortüberweisung, paydirekt and giropay. Of the online shoppers who participated in the Deutsche Bundesbank's 2017 study on payment behaviour in Germany, 58% reported that they use e-commerce schemes to pay for their purchases.

⁸ In Germany alone, 57 million nationals use smartphones. See Statista (2019).

⁹ See Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (2019a).

¹⁰ In some apps, additional content or services can be purchased, e.g. the user can pay to unlock further features within a free app. Such transactions are known as in-app purchases.

¹¹ It is often the case that credit card data or direct debit mandates are stored in the integrated solutions to process payments.



banking business, too.¹² These apps can also be used to initiate peer-to-peer (P2P) payments to friends or family members, simply by selecting a payee based on that person’s telephone number (which is linked to their IBAN in a database) from the smartphone’s list of contacts.

On top of this, technological leaps have been made in biometrics, in the Internet of Things (IoT) and with virtual assistants, and will be a further catalyst for change in terms of payment habits. Virtual assistants can now be found in ever more households and cars and all smartphones. In theory, it is possible to use a virtual assistant to initiate payments by voice command, then authorise them by providing a further biometric characteristic¹³ such as a fingerprint, though iris or facial recognition would also be possible.¹⁴ Biometrics are a simple-to-use authorisation method which could render passwords and also single-use transaction codes obsolete. Biometric identification is also gaining ground amidst increasing security requirements for payment transactions, necessitated, inter alia, by the standards established by the revised Payment Services Directive (PSD2). If payment solutions were to be directly incorporated into IoT processes and virtual assistants, this would probably exacerbate lock-in effects still further, as it is primarily the precon-

figured payment solutions already stored in such applications that are likely to be used.

These developments have already helped accelerate the decline of cash payments;¹⁵ indeed, in 2018, the share of sales paid for in cash sank below that of card payments for the first time.¹⁶ Two factors are driving this trend. First, digitalisation is creating ever more payment scenarios in which only cashless payment instruments are permitted. Second, there have been improvements in the accessibility of payment solutions and the devices used for settling payments. Germany’s widely used girocard, for instance, has become far more attractive still since a contactless function was added.

Thus far, technological developments have chiefly influenced the way in which payments

Share of cash payments sinks

... biometrics, the Internet of Things and virtual assistants fostering change in payment habits

¹² See Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (2019b).

¹³ According to a survey conducted by the Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V., one in three Germans would be prepared to initiate a credit transfer by voice command. See Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (2019c).

¹⁴ According to a survey conducted by the Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V., the majority of German citizens can picture themselves using biometric characteristics to authorise payments. See Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (2019d).

¹⁵ See Deutsche Bundesbank (2018a).

¹⁶ See EHI Retail Institute e.V. (2019).

are initiated. But there has not been any fundamental change over the past few years in the manner in which the underlying payment instruments (credit transfer, direct debit and card payment) are processed, nor in the actors, intermediaries and infrastructures involved in settlement. Yet the field of payment innovations is now occupied not just by the established financial sector incumbents but also, to an increasing extent, by new players with a stronger technological focus, with the result that the market environment for payments is undergoing significant change.

New competitors in the field of payments

Fintech an additional option, not a rival force

The advent of innovative technologies is transforming the competitive environment in the field of payments, with inventive up-and-coming providers of technology-enabled financial innovations, known as fintech companies, busy devising new digital payment services. While the last few years have witnessed steady growth in the number of German fintech companies operating in Germany,¹⁷ merger and acquisition (M&A) activity now suggests that there is a trend towards market consolidation.¹⁸ The firms engaged in M&A activity are often looking to expand their own range of services and broaden their target customer groups. Clearly, tapping into economies of scale and scope is no less important for fintech firms hoping to prevail in the market for financial and payment services. This trend is also evident on the financing side – in recent years, investors in fintech companies have been focusing increasingly on the small number of promising enterprises, turning a blind eye, for the most part, to the vast majority of start-ups.¹⁹

Bigtech players are new rivals ...

Aside from fintech players, global tech companies, predominantly from the United States and China, are starting to show interest in the provision of payment services in Europe (see the table on p. 55). These companies are primarily tech firms, often referred to as bigtechs,

that have grown to become market heavyweights on the back of digital business models in e-commerce, search engine business or social media platforms, to name but three. They act as platform providers, uniting various services on a single platform in order to create platform-based ecosystems. In entering the European market, bigtech players which offer payment services requiring authorisation can benefit, once approved, from factors including European passporting²⁰ and the specific mechanisms and economics of payments markets.

They can benefit above all from the two-sided nature of the market, which is generally a given when it comes to payment services. Bigtech firms already come equipped with critical mass on the demand side in terms of both customers and retailers,²¹ which makes their platform or service attractive to more customers and retailers still.

Aside from this, large platforms can capitalise on their broad user bases, capital strength and profitability to quickly carve out a share of new adjacent lines of business, enabling them to leverage economies of scale and scope. One major e-commerce marketplace has a wealth of information on the behaviour of traders and consumers that use its platform, meaning that it is well placed to provide them with credit facilities, for instance.

A bigtech firm operating an ecosystem occupies a predominant position there, allowing it to unilaterally determine the rules of the game, such as technical standards, prices, terms and

... with a tendency towards forming monopolies, ...

... which leverage economies of scope ...

... and foster closed ecosystems

¹⁷ See, for example, EY (2018).

¹⁸ See, for instance, press releases from the firms Raisin (which has the brand name weltsparen.de in Germany) and figo, both of which rank among the largest and best-known fintech companies in Germany. See Raisin (2019) and FinLeap (2019).

¹⁹ See Barkow Consulting (2019).

²⁰ Passporting means that a payment service provider, say, authorised in one EU/EEA state can carry out activities in any other EU/EEA state.

²¹ For more on the concept of two-sided markets, see Rochet und Tirole (2006).

Bigtech players as payment service providers: an overview for Germany

Use	Google	Apple	Amazon	Facebook	Alipay	WeChat
Payment service available in Germany since ... for/with ...	June 2018	December 2018	2011	Not yet available in Germany	July 2016 (Chinese bank account required)	November 2017 (Chinese personal ID required)
P2P	X (not yet available in Germany)	X (not yet available in Germany)	–	X	X	X
POS	X	X	–	–	X	X
E-commerce	X	X	X	–	X	X
Crypto-tokens	–	–	–	(planned)	–	–

Deutsche Bundesbank

conditions, access rights and rights of use²² and for third parties, besides establishing its own data processing standards.

In addition, these ecosystems are operating directly at the customer interface. The actual providers of payment accounts and cards are being relegated to second place, making them more interchangeable, and payment business models which worked in the past are ceasing to function. Credit institutions, which up to now have been responsible for payments, are increasingly ceding direct customer contact to their rivals, meaning that they are ever less able to ascertain customers' wishes.

For the most part, platform-based ecosystems are highly user-friendly and incorporate a broad spectrum of goods or services. There is no doubt that they can also make network effects and economies of scale and scope work to the advantage of their customers. On the other hand, there is an inherent tendency in the digital economy towards forming monopolies that needs to be taken into account when shaping the regulatory environment. There is a risk that the market will develop along the lines of the "winner takes it all" principle. For this reason, regulators, supervisory bodies, anti-trust authorities and consumer protection authorities at both the national and European

levels need to develop a detailed and coordinated position on this topic in order to ensure that Europe's payments market remains competitive and efficient going forward.

PSD2 paving the way for open banking in the field of payments

The mounting competition in the European payment services market is being intensified by regulatory action plans that are likely to cause a further shift in the relationship between established providers and new players.

As part of PSD2, registered providers of account information services (AISPs) and licensed payment initiation service providers (PISPs) will, from September 2019 onwards, be able to use an interface to access precisely defined account information at the account servicing payment service provider (ASPSP) in order to initiate payments or provide account information.²³ This is

²² For example, Apple has not opened up the NFC interface on its devices to third-party payment providers, meaning that Apple Pay is the only contactless payment method available to owners of Apple products. The European Commission is currently examining whether this contravenes competition law.

²³ For a detailed description of PSD2, see Deutsche Bundesbank (2018b).

Credit institutions risk being relegated to second place

Align regulatory framework with new market conditions

Regulatory action plans driving changes in the market

PSD2 interfaces: ...

Digital identity challenges

Secure electronic identification (eID) and authentication is a central building block of the Digital Single Market and essential for the establishment of legal certainty, trust and security in electronic transactions. One major area in which there are particular requirements when it comes to establishing the identity of new customers, authenticating customers and authorising transactions is the provision of digital financial services.

eID solutions are still not very common in Germany, however. Whilst eID functionality has been a standard feature of all German identity cards issued since November 2010, this means of proving one's identity online has not yet gone mainstream, not least because it is generally quite complicated to use.

Various legislative changes in the recent past (the eIDAS Regulation,¹ amendments to the Money Laundering Act (*Geldwäschegesetz*) and the Act on Identity Cards and Electronic Identification (*Personalausweisgesetz*), the Online Access Act (*Onlinezugangsgesetz*) and PSD2) have created a more amenable landscape for eID and authentication tools in the digital financial services space, stimulating the development and launch of solutions in this field.

Financial service providers are not only major potential users of eID solutions for purposes such as verifying a counterparty's identity under money laundering law – they can also be providers of identity services themselves, as evidence from other countries has shown. One possibility would be to use the authentication procedures built into online banking applications to confirm, at the customer's request, their identity, age or address for third parties such as online

merchants. This way, credit institutions would be able to leverage the high quality of customer data they have on record and use them as a platform for offering new services that can generate fresh sources of income from retailers, for example.

¹ Regulation (EU) No 910/2014 of 23 July 2014 (eIDAS stands for "electronic identification, authentication and trust services").

subject to the payment service user explicitly agreeing to such an exchange of data or authorising the transaction upfront. To this end, the interface through which the data exchange is channelled needs to be configured in such a manner that it functions just as efficiently as the standard internet portal for online banking.²⁴ Established financial service providers, but also tech enterprises and new providers, are at liberty to offer products based on payment initiation and account information services, provided they have the required licence and are suitably registered. Payment initiation services enable any given payment service user to easily and conveniently create a pre-completed credit transfer order instructing their bank to, for instance, effect payment for an e-commerce transaction.

... banking industry busy making preparations

While the arrival of these new services looks set to heighten competition for providers from the banking sector, PSD2 also offers these institutions an opportunity to carve out a place for themselves in the market as providers of innovative services. According to a Bundesbank survey analysing the banking sector, many institutions in Germany will be technically equipped to offer payment initiation services, e.g. for trading clients, by the end of 2019. The vast majority of credit institutions are intending to offer account information services as early as before the end of this year, and some are already providing this facility. This service means not only accessing payment accounts, including any held at other credit institutions, but also, for example, loan accounts and safe custody accounts as well, thus enabling the customer to obtain the broadest possible overview of their finances. This kind of access to such accounts is, however, not regulated by PSD2. According to the survey, most credit institutions plan to use the customer's account data, subject to that customer's express consent, for their own credit assessment purposes and for sharing information with third parties (e.g. online retailers) upon request in connection with consumer credit.

Credit institutions in Germany are leaning towards offering the interface required under PSD2 in the form of an API (application programming interface), a mechanism that allows bank data to be used innovatively and that has the potential to make banking more convenient, diversified and straightforward. On the one hand, APIs let banks incorporate finance apps operated by third-party providers into their own range of services, e.g. payment solutions for international credit transfers. On the other hand, at the customer's request, an API can integrate their bank data into an app operated by a third-party provider. From a strategic point of view, the banking industry has interests that go beyond PSD2. The aim is to set up a functioning API ecosystem that will add attractive features to banks' portfolios and prevent the payments market from slowly being taken over by new competitors. Against this background, a working group operating under the auspices of the Euro Retail Payments Board (ERPB) and peopled by representatives from both providers and users of European payment services has got started on a new API scheme designed to explore the ways in which, say, identification methods, personalised financial management tools or specific payment options can be incorporated into an API scheme using open interfaces. The hitherto commonly favoured strategy of banks – to themselves provide financial services boasting a high degree of added value – is likely to gradually lose its effectiveness in today's digital age.

PSD2 interface the launching pad for an API ecosystem

"New" banks are already out there today. These institutions have directly configured their IT infrastructures and operating systems in such a way as to enable them to benefit from the opportunities offered by the platform economy and by digitalisation, for instance by purchasing a variety of banking modules from third parties instead of developing and running these on an in-house basis, or by acting as a provider

Open banking

²⁴ The relevant regulatory technical standards (RTS) and guidelines drawn up by the European Banking Authority (EBA) detail the exceptions to the rules. See EBA (2019).

of “banking as a service” themselves. This approach has the added advantage of facilitating greater flexibility and agility in responding to market trends.

For one thing, this market shift towards open banking is likely to intensify the pressure on established providers because lucrative segments of the processing chain may come under even greater attack from new players in future than has been the case thus far. For another, however, open banking also presents a chance to establish innovative business models and, working together with other providers, tap into new market potential. Trust is one particular area in which credit institutions in Germany can still get the better of tech companies, which is a further reason why cooperation between credit institutions and fintech firms is becoming increasingly common. Such an arrangement allows the former to provide their customers with convenient, innovative services at the drop of a hat, while the latter gain access to a large customer base as well as established trust and regulatory expertise, amongst other benefits. That said, there are signs that this situation may change in the next few years as the personal preferences of subsequent generations evolve and shift.

Instant payments the new standard

The changes currently underway in the payments landscape are not solely confined to opening accounts up to third parties and the growing dominance of API schemes in banking. Instant payments, in other words, the settlement of everyday payments in a matter of seconds – almost in real time – are bound to contribute to a further dismantling of existing market structures in the payments market.

Since November 2017, it has been possible to effect cross-border instant payments in euro under the SEPA SCT^{Inst} Scheme, which was called into life by the European Payments

Council (EPC) as an extension to its existing basic SEPA Credit Transfer Scheme.²⁵ Instant payments allow money to be transferred from one account to another within just a few seconds. Provided the credit institution in question offers this service, it can be used by households or enterprises as an alternative to the traditional credit transfer.²⁶ On top of this, it is also conceivable that new payment solutions and products will cluster around the SEPA SCT^{Inst} Scheme. These may include mobile phone-based solutions for peer-to-peer (P2P) payments and other such payment solutions for online and in-store shopping.

P2P payments have been the main area of application for instant payments in the European arena as well. Inasmuch as settlement is effected in real time, such tools represent the electronic equivalent of cash payments between individuals. In P2P solutions, it is normally possible to specify the payee by means of their telephone number, which is linked to that individual's IBAN via a database on which these solutions depend. In Germany, there are already a number of P2P solutions on the market that, to some extent, effect settlement by means of instant payment. However, nationwide coverage of the German market is still not available, as not all credit institutions are offering this kind of service and the relevant actors in the German banking industry have been unable to agree on a common solution. The advantage of payment solutions that function on the basis of the SEPA SCT^{Inst} Scheme is their theoretical pan-European reach. As things currently stand, it is already also possible to combine the various databases in use in order to merge telephone numbers and IBANs, thus providing the foundations for a Europe-wide

... for P2P payments, ...

Instant payments the basis for new payment solutions, ...

²⁵ For a detailed explanation of instant payments and of the TARGET Instant Payments Settlement (TIPS) clearing and settlement infrastructure put in place by the Eurosystem, see Deutsche Bundesbank (2017a).

²⁶ For transactions between businesses (B2B payments) to be settled using instant payment modules, these companies' internal processes first need to be compatible in real-time terms, normally entailing major operational migration activity.

model suited to multiple solutions that can initiate P2P payments via a banking app installed on the user's smartphone.

... and for payments at the POS or online

The immediate finality of instant payments, in particular, is likely to appeal to online retailers and bricks and mortar retailers alike as they are on offer around the clock. This means that cashless payments can be settled with no risk of default, and without necessarily requiring a guarantee model, effectively making instant payments an attractive additional option alongside cash at the POS or an alternative to card payments or electronic direct debits. Applied in e-commerce, instant payments could be used to overcome temporal frictions as, for example, purchased goods can be dispatched immediately upon receipt of the relevant order when payment is made in advance. What is more, from a retailer's viewpoint, this model would deliver an attractive additional alternative to payment by card, direct debit and e-commerce schemes, the only prerequisite being the availability of suitable payment solutions offering user-friendly, uncomplicated and secure access to instant payments. In particular, the establishment of a link between a request to pay and an instant payment could generate practice-driven solutions. An EPRB working group is currently analysing the various initiatives and options now out there on the European market.²⁷

Range of services offering instant payment solutions in Germany still limited

As at 10 May 2019, 1,299 of 1,500 institutions in Germany offering credit transfers can now be reached for the purpose of taking receipt of incoming instant payment orders.²⁸ Since the end of that month, the vast majority of these credit institutions have actively offered instant payments or products based on them. By providing comprehensive, single-source payment solutions that encompass multiple different payment scenarios, credit institutions offering instant payments can enhance their competitiveness vis-à-vis new providers from the non-banking sector or international credit card providers. In addition, instant payments represent a convenient and secure alternative to crypto-tokens like, say, Bitcoin or Ether which, in some

instances, make it possible to effect transactions in close to real time, or at least hold some promise of doing so.

Outlook for payments in Europe

The triple whammy of digitalisation, regulation and competition has been putting established payment service providers under noticeable pressure to adapt and change. Payment service providers from the banking sector have already done a great deal to adapt to the new environment, for example by making greater use of innovative solutions such as a digital girocard that allows customers to pay by smartphone. Some banks have also responded by adding more third-party products to their portfolio.

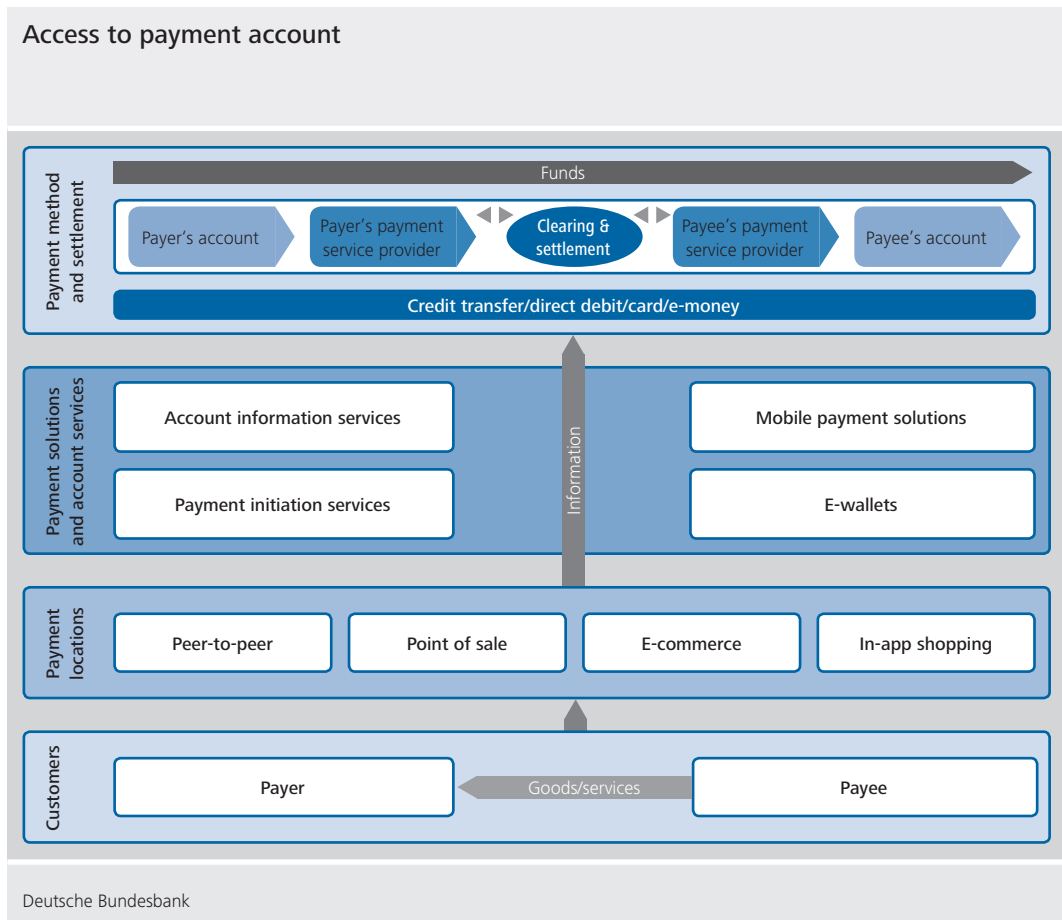
Mounting pressure on credit institutions to adapt, ...

But in a network industry like the payments sector, future success will hinge more than ever on international cooperation and an ability to also establish a common, coordinated market at the customer interface (see the chart on p. 60). This being the case, payment solutions from a single source that can be used in an array of different payment scenarios are likely to play an increasingly important role. As smartphones evolve into universal "do anything" devices, it is possible that payment scenarios will converge. In order to hold their own in the European market and compete as equals with their global rivals in the long run, the existing payment solutions will need to expand their reach beyond their national perimeters and be available across country borders. This also reflects the idea underpinning SEPA, which is to forge a single market for payments. Parallel to this, the international dimension of trade – of e-commerce, say – is gaining more and more importance, and the growing degree of mobility within Europe is producing a situation

... forcing them to think and act globally

²⁷ At present, two initiatives in Germany are advocating the use of instant payments for retail transactions, namely the Westhafen dialogue among experts and the GS1 retail trade POS instant payment concept (HIPPOS).

²⁸ See European Payments Council (2019).



where customers are increasingly making use of payment solutions not just in their home country but also elsewhere in Europe.

National card schemes losing significance

Furthermore, there are exclusively national card schemes in a few European countries, such as the girocard scheme in Germany. These schemes ensure that domestic debit card transactions are processed in an efficient, secure and cost-effective fashion and, for the most part, make do without any burdensome system or licensing fees. But international card payments can only be settled with the aid of international card schemes, whose share of the market, in terms of the number of all card payments in the euro area, rose from around 50% to more than 70% in 2016 within a timespan of just seven years.²⁹ During that same period, almost one-third of national card schemes ceased to operate. When payment instruments were being standardised by European legislators, payment cards were not included in this process. Regulatory intervention was confined

to business models (chiefly in the form of a cap on interchange fees for four party payment card schemes),³⁰ leaving settlement standards intact. Notwithstanding SEPA, private market initiatives aimed at standardisation and harmonisation have thus far not been able to bring about full integration of the card payments market, either. Past private sector initiatives designed to link up national card schemes all failed for a variety of reasons,³¹ for instance on account of the relatively high investment costs. Furthermore, the cap on interchange fees rendered the business model less attractive, despite it still being profitable.

Instant payments might now be the anchor product for pan-European payment services

²⁹ See European Central Bank (2019).

³⁰ Regulation (EU) No 2015/751 of 29 April 2015.

³¹ This refers to the Euro Alliance of Payment Schemes (EAPS), PayFair, EUFISERV and Monnet initiatives, each of which were launched with a different focus. For more information, see European Central Bank (2014).

Instant payments: a new basis for pan-European payment solutions?

that are linked up to the retail or business customer's current account, but only if every single European institution switches to real-time payment processing in the near future. It would thus be beneficial if instant payments – unlike SEPA credit transfers and SEPA direct debits³² – could quickly gain a foothold in the market and potentially become established as the new standard.

Link up European card schemes or develop a new European payment procedure altogether?

To advance the integration of the European market, one option would be to use the new instant payment channels harmonised across the EU to settle, at least, cross-border debit card payments. This would establish a basis for the acceptance of national cards throughout the SEPA and improve their competitive position vis-à-vis international card schemes.

Another alternative currently under discussion is to develop a completely new European payment procedure based on instant payments. This could, for instance, build upon the studies by the ERPB working group on an API scheme and cover various payment scenarios. One conceivable way forward would be to establish a kind of European brand for payment solutions which shows a payment service user that a national e-payment solution, for example, will generally work in other European countries as well. A European payment procedure of this type could integrate existing and established national procedures – if available – and enhance them. A further advantage would be that this payment procedure could be used and accepted throughout the SEPA, and the European market would benefit from the fact that no new national payment procedures would be required, especially in smaller markets.

Given the outlined developments, there is the overriding question as to which role card payment transactions will play in a pan-European harmonised payments landscape. Even though cards, which account for more than 50% of transactions, are still the most important electronic payment instrument in the European Union today,³³ they can no longer be seen in

isolation from other access channels to or from one's bank account, but must take on competition from mobile and e-commerce payment solutions. There are currently a number of national payment procedures – some of which are relatively successful, such as a Dutch procedure for e-commerce and one from Sweden for P2P payments. Both procedures are triggered from a current account but work on the basis of credit transfers. The counterparts developed by German institutions are also seeing a steady rise in the number of users and retailers registering for connection, but are yet to secure any notable degree of market penetration, especially for e-commerce.

In the digital age, it is currently those products that are highly user-friendly and may be used across borders that will make their mark in the market. User-friendliness also means being able to use the same product in as similar a way as possible across a number of different payment scenarios. For instance, a solution for P2P payments that may be used across borders could be extended for use in other payment scenarios, such as for e-commerce and in-store shopping. Such a universal approach combined with simple, secure – and possibly biometric – authorisation and authentication procedures as well as easy-to-use apps would enable mobile payments to take off across Europe and give the European market's competitive position a major boost.

But debate should not centre solely on the various ways in which to design the future European payments landscape. On the one hand, it seems rather impracticable – and not very economical – to simply replace schemes and products that are successfully established in many markets with new European schemes. On the other hand, in the recent past, market participants have invested in a new real-time infrastructure and will have to continue their efforts

³² Regulation (EU) No 260/2012 of 14 March 2012.

³³ See European Central Bank (2019).

if they intend to build up an open banking ecosystem for the payments market.

Offer real European alternatives

A new European payment procedure could mean real European alternatives for payers and payees. Such a procedure would integrate existing national payment solutions and be based, perhaps initially, on an existing infrastructure before migrating to a thoroughly modernised real-time infrastructure. The procedure would also cater for all possible payment scenarios: online, offline, P2P and mobile payments. Furthermore, it would be efficient – thanks to network effects and economies of scale and scope – and boast secure authentication, possibly using biometric features, as well as high levels of fraud prevention and cyber security by also making use of artificial intelligence. One other major building block would be the strict application of European data protection principles – principles such as minimisation, restricted use and transparency when collecting and using data – as well as enabling users of digital payment services to check adherence to these principles. This would invigorate competition overall and also bolster European payment solutions and their providers.

Challenges for supervisors and regulators

Needless to say, legal backing is required to promote such European ideas. In addition to giving due consideration to the regulation of new standards, such as instant payments, which is relatively simple in legal terms, the legal framework must leave sufficient leeway for business models. In this regard, work should begin on revising the interchange fee regulation.³⁴ Policymakers will not be able to embark on their reorientation of Europe without high investment on the part of the banking industry. It is essential to ensure that prices can be set in a fair, transparent and cost-oriented manner, as payment transactions involve costs and have to ensure a sustainable basis for business models. An interplay of participants with internal settlement options between the various attractive roles as issuer and acquirer of a means of pay-

ment should still be fundamentally possible, even in the digital age.

The transformation of the European payments landscape with a whole host of new participants also raises issues relating to effective supervision and an appropriate legal framework for competition and data protection requirements. To ensure that an efficient, secure and competitive European payments market can continue to develop, it is essential to clarify when firms that have so far thought of themselves as technical service providers need to be subject to greater oversight and brought into the scope of supervision. Moreover, measures must be in place to enable international providers in the European payments market to be monitored effectively. The debate should also look at the extent to which it matters where transaction data are processed and stored, and which proprietary solution approaches, if any, could inadvertently thwart competition in the payments market. Given the growing levels of international competition, the definition of the relevant market should be discussed, for instance if national providers want to join forces to more effectively unite against international competitors in the domestic market.

The payment transactions market will remain dynamic thanks to the developments resulting from digitalisation. Given the current state of blockchain and distributed ledger technologies, neither are likely to play a major role in the medium term for the further development of European retail payments.³⁵ Established providers are facing a critical decision. They need to continue innovating and investing if they are to keep hold of their currently rather good position in payment transactions. Yet, it is not just providers of payment services that are affected by the greater fragmentation of value chains driven by digitalisation – providers of other fi-

³⁴ See European Commission (2019).

³⁵ For a detailed description of distributed ledger technologies in the payments market, see Deutsche Bundesbank (2017b).

nancial services and banking products are also facing fierce competitive pressure. In this light, in order to be successful in the European payments market, there is no choice but to take a European perspective.

■ List of references

Barkow Consulting (2019), FinTech Money Map, <https://www.barkowconsulting.com/12195-2/>, accessed on 24 April 2019.

Bundesverband E-Commerce und Versandhandel Deutschland e.V. (2019), https://www.bevh.org/fileadmin/content/05_presse/Auszuege_Studien_Interaktiver_Handel/Inhaltsverzeichnis_fu__r_bevh_Gesamtbericht_Interaktiver_Handel_in_Deutschland_2018.pdf, accessed on 8 April 2019.

Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (2019a), Trends im E-Commerce – So shoppen die Deutschen, <https://www.bitkom.org/sites/default/files/pdf/Presse/Anhaenge-an-Pls/2017/12-Dezember/Bitkom-Pressekonferenz-171206-E-Commerce-Weihnachten.pdf>, accessed on 10 April 2019.

Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (2019b), <https://www.bitkom.org/Presse/Presseinformation/Auf-dem-Smartphone-wird-vor-allem-der-Kontostand-gecheckt.html>, accessed on 10 April 2019.

Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (2019c), <https://www.bitkom.org/Presse/Presseinformation/Jeder-Dritte-wuerde-Sprachbefehl-Geld-ueberweisen>, accessed on 10 April 2019.

Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (2019d), <https://www.bitkom.org/Presse/Presseinformation/Jeder-Zweite-wuerde-Iris-Scan-Zahlungen-bestaetigen>, accessed on 10 April 2019.

Deutsche Bundesbank (2018a), Payment behaviour in Germany in 2017.

Deutsche Bundesbank (2018b), Current regulatory developments in the field of payments and in the settlement of securities and derivatives, Monthly Report, April 2018, pp. 51-55.

Deutsche Bundesbank (2017a), The Eurosystem's financial market infrastructure – origin and future set-up, Monthly Report, December 2017, pp. 80-84.

Deutsche Bundesbank (2017b), Distributed ledger technologies in payments and securities settlement: potential and risks, Monthly Report, September 2017, pp. 35-59.

EBA (2019), <https://eba.europa.eu/regulation-and-policy/payment-services-and-electronic-money/guidelines-on-the-conditions-to-be-met-to-benefit-from-an-exemption-from-contingency-measures-under-article-33-6-of-regulation-eu-2018/389-rti-on-sca-csc->, accessed on 8 May 2019.

EHI Retail Institute e.V. (2019), Kartengestützte Zahlungssysteme im Einzelhandel 2019, <https://www.ehi.org/de/pressemitteilungen/liebe-zum-bargeld-laesst-nach/>, accessed on 7 May 2019.

European Central Bank (2019), Card payments in Europe, April 2019.

European Central Bank (2014), Card payments in Europe – A renewed focus on SEPA for cards, April 2014.

European Commission (2019), http://ec.europa.eu/competition/sectors/financial_services/sepa_en.html, accessed on 7 May 2019.

European Payments Council (2019), Overview SEPA Scheme Participants Status, last updated 10 May 2019, <https://www.europeanpaymentscouncil.eu/document-library/other/overview-sepa-scheme-participants-status>, accessed on 21 May 2019.

EY (2018), Germany FinTech Landscape, pp. 5-6.

FinLeap (2019), <https://www.finleap.com/press/press-releases/171644-figo-und-finreach-solutions-bundeln-ihre-kraefte/#>, accessed on 24 April 2019.

girocard (2019), <https://www.girocard.eu/presse/pressemitteilungen/27022019/>, accessed on 8 April 2019.

Handelsverband Deutschland e.V. (2019), https://einzelhandel.de/?option=com_content&view=article&id=11865, accessed on 7 May 2019.

Raisin (2019), <https://www.weltsparen.de/presse/fintech-kauft-bank-weltsparen-kauft-mhb-bank/>, accessed on 24 April 2019.

Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions.

Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC.

Regulation (EU) No 260/2012 of the European Parliament and of the Council of 14 March 2012 establishing technical and business requirements for credit transfers and direct debits in euro and amending Regulation (EC) No 924/2009.

Rochet, J. and J. Tirole (2006), Two-sided markets: a progress report, *RAND Journal of Economics*, 37(3), pp. 645-667.

Statista (2019), <https://de.statista.com/statistik/daten/studie/198959/umfrage/anzahl-der-smartphonenuutzer-in-deutschland-seit-2010/>, accessed on 10 April 2019.

Urbach, N. (2019), Betriebswirtschaftliche Besonderheiten digitaler Güter, *Geschäftsmodelle in der digitalen Welt*, 2017, pp. 39-62, <http://www.fim-rc.de/Paperbibliothek/Veroeffentlicht/588/wi-588.pdf>, accessed on 8 April 2019.