Marcus W. Mosen Jürgen Moormann Dietmar Schmidt (Hg.)

Digital Payments – Revolution im Zahlungsverkehr





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1. Auflage 2016



Bibliografische Information der Deutschen NationalbibliothekDie Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über http://dnb.d-nb.de abrufbar.

Besuchen Sie uns im Internet: http://www.frankfurt-school-verlag.de

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ISBN (print): 978-3-95647-073-8 ISBN (pdf): 978-3-95647-074-5 ISBN (ePub): 978-3-95647-075-2 ISBN (Mobi): 978-3-95647-076-9

1. Auflage 2016 © Frankfurt School Verlag GmbH, Sonnemannstraße 9-11, 60314 Frankfurt am Main

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Vorwort

Zahlen mit dem Smartphone, Blockchain, Instant Payments, globale Player, neue Geschäftsmodelle, neue Prozesse, Data Analytics ... – nach mehreren Dekaden des relativen Stillstands hat sich der ehemals angestaubte Zahlungsverkehr zu einem der faszinierendsten Themen der Finanzbranche entwickelt. Vorangetrieben durch neue Technologien, insbesondere die Verbreitung von mobilen Endgeräten, hat das digitale Bezahlen weltweit einen enormen Aufschwung genommen. Dieser wird unterstützt durch politische Initiativen in der Euro-Zone, eine Vielzahl von FinTech-Unternehmen im Payment-Bereich sowie ein sich veränderndes Verhalten der Nutzer von Zahlungsmöglichkeiten. Letzteres erfolgt zunehmend losgelöst von nationalen Grenzen.

Hieß es früher in den Banken "Wer den Zahlungsverkehr hat, hat den Kunden", gilt heute "Wer die Daten hat, hat den Kunden". Aber die Generierung von Daten läuft im Wesentlichen über den Zahlungsverkehr. Denn dieser ist die Drehscheibe für alle wirtschaftlichen Aktivitäten sowohl auf der Händler- als auch auf der Konsumentenseite. Für die Akteure im digitalen Payment bedeutet dies, dass sich der Wettbewerb zunehmend an der Leistungsfähigkeit am realen und virtuellen Point of Sale, unterstützt durch die Nutzung digitaler Kundenprofile, entscheidet. Payment wird damit zum integralen Bestandteil der Kommunikations- und Transaktionsschnittstelle zum Kunden. Dies wiederum wird signifikante Investitionen im stationären Handel und im E-Commerce erforderlich machen. Als Konsequenz wird sich das "Payment-Erlebnis" deutlich verändern und zunehmend rein digital stattfinden.

Was sind "Digital Payments"? Schon diese Frage ist nicht leicht zu beantworten, zumal es keine allgemein akzeptierte Definition gibt. Wir verstehen unter Digital Payments die Übertragung von Werten, die mithilfe elektronischer Geräte initiiert und/oder empfangen wird und die elektronische Kanäle zur Übertragung der Zahlungsanweisungen nutzt. Damit sind papiergebundene Zahlungsmittel und Bargeld ausgeschlossen.

Handelt es sich um eine Evolution oder eine Revolution des Zahlungsverkehrs? Um diese Frage beantworten zu können, unterscheiden wir zwischen Zahlungsverfahren, die zwar neu sind, aber auf bestehenden Technologien und Prozessen aufbauen, und Zahlungsverfahren, die auf heute noch im Frühstadium befindlichen Technologien basieren, damit neue Prozesse ermöglichen und gegebenenfalls zu neuen Geschäftsmodellen führen. Diese Entwicklung wird zwangsläufig zu einer Reduzierung des Bargelds führen – ganz ohne regulatorischen oder politischen Einfluss.

Auf beiden Ebenen, der kontinuierlichen sowie der disruptiven Ebene, finden derzeit massive Veränderungen statt. Natürlich sind neue Zahlungsverfahren Teil der normalen technologischen Evolution. Die Breite der aktuellen Investitionen in disruptive Geschäftsmodelle, Infrastrukturen, technische Konzepte und innovative Zahlungssysteme hat

jedoch das Potenzial, eine Revolution des Zahlungsverkehrs zu bewirken. Wir ahnen heute bestenfalls, wie die Zukunft der Digital Payments aussehen wird. Daher folgen wir der Auffassung, von einer Revolution des Zahlungsverkehrs zu sprechen.

Mit diesem Buch möchten wir Sie mit auf eine Reise durch die Sphäre des digitalen Zahlungsverkehrs nehmen. Zu diesem Zweck haben wir eine Reihe von Experten eingeladen, ihre Gedanken, Lösungsansätze und Einschätzungen in Beiträge zu fassen und mit Ihnen, liebe Leser, zu teilen. Der Expertenkreis setzt sich aus Vertretern etablierter, großer Unternehmen und Vertretern junger, aufstrebender Unternehmen der Finanzbranche zusammen. Dazu kommen auf Zahlungsverkehrsthemen spezialisierte Berater und Wissenschaftler sowie Repräsentanten relevanter Institutionen des Euro-Raums.

Das Buch ist in drei Teile gegliedert:

- Aktuelle Entwicklungen des Digital Payments aus institutioneller, regulatorischer, betriebswirtschaftlicher und technologischer Sicht,
- Auswirkungen auf Geschäftsmodelle und Zahlungsverfahren sowie
- Nutzung von Daten im Kontext des digitalen Zahlungsverkehrs.

Diese Gliederung erscheint uns sinnvoll, um der Vielschichtigkeit des Themas gerecht zu werden und dieses zumindest grob zu strukturieren. Zu jedem Teil finden Sie eine kurze Einführung.

Wir bedanken uns bei allen Autoren ganz herzlich für die Bereitstellung ihrer Erfahrungen und ihr großes Engagement, durch das sie zum Gelingen dieses Buches beigetragen haben. Darüber hinaus geht unser Dank an Frau Dr. Ines Reiferscheid (mexxon consulting GmbH & Co. KG) und Herrn Alexandros Tegos (Concardis GmbH) für die erhebliche organisatorische und inhaltliche Unterstützung. Frau Mechthild Eckes danken wir für die konstruktive Begleitung des Buchprojekts von Seiten des Frankfurt School Verlags.

Wir hoffen, dass dieses Buch zu einem guten Verständnis der aktuellen Entwicklungen auf dem Gebiet des digitalen Bezahlens beiträgt, Anregungen liefert und Richtungen für die zukünftige Entwicklung des digitalen Zahlungsverkehrs aufzeigt. In diesem Sinne wünschen wir allen Lesern eine anregende Lektüre, interessante Erkenntnisse und viel Erfolg bei der praktischen Umsetzung.

Eschborn, Frankfurt a.M. und Bad Homburg v.d.H., im Oktober 2016 MARCUS W. MOSEN, JÜRGEN MOORMANN und DIETMAR SCHMIDT

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Teil I: Aktuelle Entwicklungen im Payment-Markt

Einführung

Der erste Teil dieses Buches befasst sich mit der Vielzahl von Strömungen, die die Entwicklung von Digital Payments derzeit vorantreiben. Die Einflüsse kommen aus verschiedenen Richtungen. Initiativen aus dem institutionellen Bereich treffen mit politischen Interessen zusammen, regulatorische Anforderungen kommen hinzu und eine Vielzahl betriebswirtschaftlicher Projekte testet den Markt. Dies alles wird beeinflusst und ermöglicht durch massive technologische Fortschritte. Die Gesamtheit dieser Einflüsse führt zu noch nie dagewesenen Veränderungen des Zahlungsverkehrs.

Sinnvollerweise starten wir unsere Reise durch die Sphäre des digitalen Zahlungsverkehrs mit einem politisch-institutionellen Beitrag. Marc Bayle de Jessé und Monika Hempel skizzieren die Zukunft des Retail-Zahlungsverkehrs aus Sicht der Europäischen Zentralbank. Dazu thematisieren sie zunächst die Harmonisierung des europäischen Marktes für den Zahlungsverkehr, bevor sie auf die zentralen Treiber des zukünftigen digitalen Bezahlens im europäischen Raum eingehen.

Daran schließt sich der Bericht von Hans-Martin Kraus und Robert Nest zur PSD2 und ihren Auswirkungen auf den Payment-Bereich an. Die neue Zahlungsdiensterichtlinie ist einer der großen, bereits beschlossenen Veränderungsimpulse. Nach Auffassung der Autoren wird PSD2 zur Marktöffnung führen und das Geschäftsfeld Zahlungsverkehr grundlegend verändern.

Mit Instant Payments wurde ein weiteres Großprojekt bereits beschlossen, das ein sehr ambitioniertes Vorhaben für ganz Europa ist. Hier gibt es zwei wesentliche Perspektiven. Aus Sicht von EBA Clearing, der mit der Entwicklung der Infrastruktur beauftragten Organisation, arbeitet das Autorenteam Hays Littlejohn, Erwin Kulk und Britta Kotthaus die Erfolgsfaktoren für eine derartige Infrastrukturplattform heraus.

Aber was bedeutet die Realisierung von Instant Payments für die Anwendungsseite? Darauf gibt **Michael Salmony** in seinem Beitrag eine kritische und facettenreiche Antwort. Er analysiert eine Reihe von Use Cases und kommt zu dem Schluss, dass sich der disruptive Einfluss von Instant Payments vor allem im B2B-Bereich zeigen wird.

Die Durchführung digitaler Zahlungen basiert auf adäquater Technologie. Daher sind die technologischen Entwicklungen von herausragender Bedeutung für die Gestaltung des zukünftigen Zahlungsverkehrs. Innovative Technologien im Zusammenhang mit kartenbasierten Zahlungen thematisiert **Arne Pache**. Dabei geht er auch auf Aspekte der Kundenauthentifizierung und Zahlungssicherheit ein.

In längerfristiger Sicht ist die Blockchain-Technologie das derzeit am stärksten – und durchaus kontrovers – diskutierte Thema im Zahlungsverkehr. Jürgen Bott und Udo Milkau liefern einen Überblick über den Hintergrund und die Charakteristika der Technologie und bewerten ihre Einsatzmöglichkeiten im Zahlungsverkehr.

Den Abschluss des ersten Buchteils bildet der Beitrag von Gerd Cimiotti, der die Veränderungen in der Payment-Branche zusammenfasst und ein Zukunftsbild entwirft. Anhand von vier Szenarien entwickelt er Vorstellungen, wie die Zukunft des Bezahlens im Jahr 2025 aussehen kann. Diese Szenarien erfordern von allen Akteuren neue Geschäftsmodelle und neue Payment-Lösungen, womit der Übergang zu Teil 2 des Buches hergestellt wird.

Future Retail Payments: the Implications of Innovation for the Single Euro Payments Area

Marc Bayle de Jessé/Monika Hempel

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- 5 Conclusion

References

1 Introduction

The Eurosystem's policy on innovation in the euro retail payments market is based on its mandate to promote the smooth operation of payment systems and its objective to ensure the safety and efficiency of payments. As a catalyst for change, the Eurosystem has strongly supported the integration of the euro retail payments market in Europe. The creation of the Single Euro Payments Area (SEPA) has led to a number of improvements in terms of both the efficiency and the safety of cashless retail payments. From a macroeconomic perspective, the realisation of a more efficient retail payments market through SEPA facilitates trade, increases competition, and moves the euro area closer to the completion of the Economic and Monetary Union. Thus, it is an important tool for strengthening EU competitiveness and growth.

The complex migration process to SEPA made evident that industry initiatives that are linked to the political and social ambition of a more integrated, competitive and innovative Europe require the establishment of an appropriate governance structure at European level. In the area of retail payments, this requirement has been addressed by the creation of the Euro Retail Payments Board (ERPB).

While the payments industry and the regulators have been working towards the full realisation of SEPA, technological, societal and economic changes related to digitalisation have created opportunities for the emergence of innovative retail payment solutions that can accommodate different payment situations and changing customer needs and expectations. Recent studies by providers of market and consumer information indicate that the consumer expectations and attitudes of Generation Z (young people aged 18 to 24) with regard to payments differ substantially from those of Generation X (those aged 35 to 49). In particular, there is a larger preference among the former for online and mobile payments and more openness towards new technologies and new (non-bank) service providers.¹

For the Eurosystem, the biggest challenge is to ensure that the introduction of innovative payment products and services does not reintroduce fragmentation into the European market. Proprietary innovative solutions competing for the market and/or solutions that, with increasing market adoption, continue to focus exclusively on a single national market are not considered the right way forward and may warrant public policy intervention. Instead, what is required are pan-European solutions based on common standards that are competing in the market.

¹ See GfK (2016); Sparks & Honey (2014); VISA Europe (2015).

This paper is organised as follows: Section 2 reviews the integration process for euro retail payments from the late 1990s up to the migration of the two core SEPA payment instruments, i.e. the SEPA credit transfer and the SEPA direct debit. Furthermore, it identifies the next steps in the retail payments integration process required for card payments and explains the overarching European governance structure for retail payments. Section 3 discusses to what extent innovation resulting from digitalisation might be a challenge in the development towards a deeper integration of retail payments in Europe. It identifies instant payments, payment initiation services and the application of distributed ledger technologies as the three most important areas where the network effects in the retail payments industry warrant cooperation between competing service providers to achieve the best possible user experience. It also explains how the Eurosystem, in its catalyst function, facilitates the development of pan-European solutions or, as a minimum, interoperable solutions² to avoid (renewed) market fragmentation. Section 4 addresses the challenge to European retail payments governance from global payment service providers and section 5 concludes.

2 Retail payments integration – the Single Euro Payments Area

2.1 The creation of SEPA

The integration of the financial market is deeply embedded in the general economic, social and political context of Europe. For the past 60 years, increasing economic integration has strongly supported political reconciliation and social stability in Europe. In 1957 the Treaty of Rome laid the cornerstone for the creation of a single economic market with the free movement of people, goods, capital and services. The Single Market was realised in 1992. In the same year, the Maastricht Treaty set out to create Economic and Monetary Union (EMU) as the next stage of integration, providing the legal foundation for a single European currency. In 1999 the single currency, the euro, was introduced. In 2002 it became a tangible reality with the introduction of euro banknotes and coins. Today, 336 million Europeans in 19 countries can pay using the same banknotes and coins everywhere in the euro area.

² I.e. solutions that allow the easy exchange of payments data between the providers of different solutions to ensure that any payer in Europe will be able to make a payment in euro, in a secure and simple way, to any payee in Europe.

Until the late 1990s, making payments for goods and services traded across borders remained slower, more cumbersome and more expensive than making national payments. This was due to the fact that retail payments were largely based on national payment instruments, national standards and national payment systems. For cross-border payments, these national instruments, standards and systems could not be used. What was missing was a single market for cashless payments that allowed payments for goods and services traded across Europe to be made at the same costs and in the same way as at the national level.

The origins of the SEPA initiative can be traced back to that time. In 1999 the Eurosystem, in line with its statutory task of promoting the smooth operation of payment systems, drew up a set of objectives for cross-border retail payments, calling on the banking and payment service industry to fulfil these objectives within a given period. Additional pressure was put on the financial services industry by Regulation (EC) No 2560/2001 on cross-border payments in euro. This regulation eliminated price differences for end users between cross-border and domestic retail payments in euro, provided certain conditions were met. The banking sector responded in 2002 with a roadmap entitled "Euroland: Our Single Payments Area!", and established the European Payments Council (EPC), which is the decision-making and coordination body of the European banking industry in relation to payments.

Overall, the aim of SEPA was to enable individuals, businesses and public administrations to make cashless payments in euro, throughout Europe, from a single payment account anywhere in Europe, using a single set of payment instruments as easily, efficiently and safely as at the national level. For that purpose, the EPC created the SEPA credit transfer and the SEPA direct debit rulebooks and the SEPA cards framework.

Given that SEPA was closely linked to the political and social ambition of a more integrated, competitive and innovative Europe, it soon became clear that the actual migration to the use of SEPA instruments required the closer involvement of actors on the demand side, a broader governance structure and legislative support from the regulators. The harmonisation of the legal environment for payment services has been achieved mainly by

³ Article 127(2) of the Treaty on the Functioning of the European Union and Article 3.1 of the Protocol on the Statute of the European System of Central Banks (ESCB) and of the European Central Bank (ECB).

⁴ See ECB (1999).

⁵ Regulation (EC) No 2560/2001 of the European Parliament and of the Council of 19 December 2001 on cross-border payments in euro (OJ L 344, 28.12.2001, p. 13) – repealed by Regulation (EC) No 924/2009.

⁶ See ECB (2013a).

means of the Payment Services Directive (PSD)⁷, and the harmonisation of rules and standards has been undertaken by the payments industry. The Eurosystem contributed as a facilitator by promoting private sector action, helping to overcome coordination problems, seeking to involve all relevant stakeholders and, in cooperation with the European Commission, setting public policy objectives. This helped pave the way for the banking industry to deliver the SEPA credit transfer and SEPA direct debit schemes in 2008 and 2009 respectively.

To ensure that migration to the SEPA schemes takes place in a timely manner, the Eurosystem drew attention to the need to set an ambitious but realistic end-date for the migration. Subsequently, the SEPA migration end-date regulation was adopted by the European Parliament and the Council and entered into force in March 2012. The migration deadline for the euro area was set at 1 February 2014¹⁰ and for non-euro area Member States at 31 October 2016. As of these dates, the existing national euro credit transfer and direct debit schemes were to be replaced by the SEPA credit transfer and the SEPA direct debit schemes. 11

With the exception of some post-migration issues of a more technical nature, SEPA migration for credit transfers and direct debits in euro has been achieved. It has led to a number of improvements in terms of both the efficiency and the security of euro retail payments. Now, one payment account, one type of credit transfer and one type of direct debit suffice for making euro payments at home and abroad.

⁷ Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market (OJ L 319 of 5.12.2007, p. 1).

⁸ See ECB (2009a); ECB (2010).

⁹ 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 (OJ L 94, 30.3.2012, p. 22). On 26 February 2014 Regulation (EU) No 248/2014 of the European Parliament and of the Council amending Regulation (EU) No 260/2012 was officially adopted, allowing an additional transition period of six months for the euro area.

¹⁰ An amendment of the SEPA end-date regulation introduced a further transition period of six months that could be applied in euro area countries.

¹¹ See ECB (2013b); ECB (2013c).

See Schmiedel, H. (2007); ECB (2009b); Burger, C. et al. (2011); Schmiedel, H. et al. (2012); Martikainen, E. et al. (2013).

As regards the pricing of retail payment services, the regulation on cross-border payments eliminated differences in charges for cross-border and national payments in euro. As a result, average fees for cross-border transfers in euro declined by 90% between 2001 and 2005.¹³

The creation of SEPA, supported by the new legal framework introduced by the PSD, has also brought down execution times for retail payments. Since 1 January 2012, the PSD has obliged payment service providers to make funds accessible to the recipient by the end of the next business day after a payment order is received. Faster payment services with almost immediate availability are already being offered in some countries or are currently under development.

What has yet to filter through more forcefully is the awareness among payers and payees that payment service users have the freedom to use non-domestic payment accounts, irrespective of the location of the payee and as stipulated by European law.¹⁴ In particular, it has to be emphasised that IBAN discrimination, i.e. practices by direct debit creditors which do not allow the use of non-domestic payment accounts of their debtors, are legally banned.

In December 2015 the European Commission published a green paper on retail financial services. ¹⁵ The main purpose of this initiative is to investigate obstacles and gaps in previous legislation that prevent the supply side from providing services across the Single Market and the demand side from enjoying the benefits of the Single Market. The ECB very much welcomes this initiative as it should complement the efforts of the industry and the Eurosystem to further develop open, fair and competitive retail payments in the EU. ¹⁶

2.2 SEPA for cards

Migration to SEPA for credit transfers and direct debits was a major milestone in European retail payments integration. Looking forward, SEPA for cards is the next step in that process. To this day, consumers and merchants, but also banks and other payment service providers, still encounter obstacles or experience geographical differences when making

¹³ See European Commission (2006).

¹⁴ Article 9 of Regulation (EU) No 260/2012.

¹⁵ See European Commission (2015).

¹⁶ See ECB (2016a).

and accepting card payments. The goal has not yet been reached as far as SEPA for cards is concerned, i.e. a harmonised, competitive and innovative European card payments area.¹⁷

Besides cash, cards are the most widely used payment instrument in Europe. Cards are also the fastest growing electronic retail payment instrument in Europe, with the number of card transactions in the EU having almost quadrupled in the last 15 years. However, while cards are the predominant electronic payment instrument, it should be noted that cards – like cash – were initially designed for face-to-face payment situations. Given the strong growth in e-commerce, the necessity of finding appropriate and innovative solutions for purchases made via the internet, the phone or by email has become apparent. The incidence of fraud related to "card-not-present" (CNP) transactions has become a source of concern and needs to be addressed by appropriate security measures.

Three areas are critical to the realisation of SEPA for cards: standardisation, interoperability and security. What is effectively hampering SEPA for cards is the fact that there are too many country- or card-scheme-specific requirements and implementation specifications which are not interoperable. Standardisation of the functional and security requirements, and the development of implementation specifications on that basis, is a pre-condition for the production of "SEPA-compliant" cards and terminals. A harmonised functional testing/security evaluation process, as well as a harmonised certification process, will complete these efforts. Furthermore, the Eurosystem expects security requirements and the security evaluation and certification processes for new types of cards and terminals to not only be harmonised, but also to be set at the appropriate level to reduce or prevent card fraud.

In 2009 the Cards Stakeholders Group was created in order to address the need for standardisation in the field of card payments. The Cards Stakeholders Group, which brings together five sectors (payment service providers, card schemes, card processors, vendors and retailers), has issued recommendations that are endorsed by the five sectors and published by the EPC in the SEPA Cards Standardisation Volume.¹⁹

In 2015 the ERPB invited the Cards Stakeholder Group to carry out a stock-taking exercise of the market initiatives related to the development of technical standards for card payments in the EU. Based on the resulting report by the Cards Stakeholders Group, the ERPB issued some recommendations on the implementation of the requirements development.

¹⁷ See Börestam, A./Schmiedel, H. (2011); ECB (2012a); ECB (2014).

¹⁸ I.e. card payments for purchases that are made via the internet, the telephone network or by email.

¹⁹ See EPC (2015).

oped in the SEPA Cards Standardisation Volume in respect of different domains (terminal to acquirer, card to terminal, terminal security). Progress with these recommendations will be further monitored.

Interoperability concerns both the technical compatibility of cards and card terminals and card processing. Given the presence of multiple card schemes, multiple banks and multiple processors in Europe, the Eurosystem has repeatedly called for the development of a framework for the processing of card payments as well as an interoperability framework for SEPA-compliant card transaction processing. The technical interoperability of card processors and card schemes – based on European standards – is a key issue when it comes to achieving SEPA for cards. Technical interoperability is required by the EU's Regulation on interchange fees for card-based payment transactions.²⁰ Schemes and processors that want to offer their services in the SEPA environment will have to become "pan-European" by moving towards interoperability based on European standards.

Finally, security and the fight against fraud related to card payments have been high on the Eurosystem's agenda. Since 2012 the ECB has been publishing the Eurosystem's findings on card fraud in an annual report.²¹

About two-thirds of all fraud losses on cards issued within SEPA countries are related to CNP transactions. Hence, the adoption of appropriate mitigation measures, such as the implementation of strong customer authentication, is indispensable to avoid a further rise in CNP fraud. The guidelines on the security of internet payments published by the European Banking Authority (EBA) in December 2014 impose a minimum set of security requirements to be met by payment service providers. These guidelines are themselves based on the recommendations issued by the European Forum on the Security of Retail Payments (SecuRe Pay). The drawing up of level 2 regulatory technical standards and guidelines by the EBA, in close cooperation with the ECB, will provide the market with further guidance on security issues related to internet payments.

The emergence of innovative payment solutions will have an impact on payment behaviour and the use of cards and other traditional payment instruments in the years to come. Innovative card-based solutions for contactless proximity payments, e-commerce wallets and mobile person-to-person payments have the potential to further boost card use by replacing cash payments, particularly for person-to-person payments and small purchas-

²⁰ Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions.

²¹ See ECB (2015a).

²² See European Banking Authority (2014).

es. At the same time, the card industry will be challenged by strong competition from innovative payment solutions based on payment instruments other than cards.

2.3 Retail payments governance – the Euro Retail Payments Board

The creation of SEPA is a good example of successful collaboration between regulators and the market, supported by strong governance. What initially began as a market-driven project by the banking industry to address the requirements regarding the principle of the equality of charges for euro payments imposed by Regulation (EC) No 2560/2001 substantially broadened in terms of stakeholder involvement in the following years. To improve the governance of SEPA, in particular the involvement of corporates, consumers and merchants, the Eurosystem promoted the creation of a European forum for retail payments. This led to the establishment of the SEPA Council in 2010, which was succeeded in 2013 by the Euro Retail Payments Board.

The ERPB is a strategic body that provides guidance and sets a common starting point for the development of an integrated, innovative and competitive market for retail payments in euro in the EU. It also provides recommendations on work priorities, including standardisation needs. The ERPB is composed of high-level representatives that have the authority to take decisions on behalf of the sectors they represent. On the supply side, there are representatives of the banking community, payment institutions and e-money institutions. On the demand side, there are representatives of consumers, retailers with physical premises, internet retailers, businesses/corporates, small and medium-sized enterprises and national public administrations. The ERPB is chaired by the ECB.

In addition to the members, five national central banks (NCBs) from the Eurosystem and one NCB from the non-euro area the NCB community takes part in the ERPB meetings on a rotational basis as active participants. This means that they can contribute to the discussions, but not take a position when a final conclusion/consensus is adopted. Furthermore, the European Commission is invited to join the ERPB as an observer.

The ERPB has no formal powers to impose binding measures. The associations represented by the ERPB members follow up on the ERPB's common positions, guidance or statements on a voluntary basis.

The ERPB relies on the link between its members (European associations) and their respective national constituents (associations and stakeholders at the national level) for receiving national market feedback and for the transmission of relevant information. EU NCBs also act as a link between the ERPB and national SEPA/retail payments committees.

For the execution of its mandate, the ERPB may establish working groups for a limited period of time for dealing with specific work priorities. Several groups may operate in parallel, depending on the work priorities.

The ERPB reports annually on its activities, common positions, guidance or statements adopted in the previous year and on its objectives and deliverables for the following year. Full documentation is published on its website (www.erpb.eu).

Work undertaken by the ERPB from its establishment up until now includes SEPA credit transfer and SEPA direct debit post-migration issues, electronic mandates for SEPA direct debits, person-to-person (P2P) mobile payments, mobile and card-based contactless proximity payments, technical standards for payment cards, instant payments and e-invoicing.

3 Retail payments innovation – risk of (re)fragmentation

The integration of the retail payments market for euro payments has been a complex and time-consuming process. For the Eurosystem, the biggest challenge of digitalisation in the payments industry is to ensure that the introduction of innovative payment products and services does not reintroduce fragmentation into the European market.

Initially, most innovative retail payment solutions tend to focus on local or national markets. This is not necessarily a problem if the solutions are sufficiently open to extend their reach at pan-European level after reaching a certain level of maturity or to become interoperable with other solutions.

With increasing market adoption, innovative solutions that are either based on proprietary standards or that remain purely focused on a single national market can create a market structure that is not in line with the goals of a Single Market and may warrant public policy intervention. Hence, innovative payment solutions – where applicable – should be built on the SEPA schemes or at least on European and global standards and adopt a pan-European approach. The attention of relevant standardisation bodies to retail payment services has intensified in recent years and a high number of standardisation initiatives are ongoing which will ensure that a wide range of open standards are available for every segment of the payments process.

The three most important areas where the network effects in the retail payments industry warrant cooperation between competing service providers to achieve the best possible user experience are instant payments, payment initiation services and the application of

distributed ledger technologies. In the following, it will be explained how the Eurosystem, in conjunction with the European legislator and the ERPB, fosters pan-European developments in these areas.

3.1 Instant payments

Instant payments are electronic retail payment solutions available 24 hours a day, 365 days a year. They result in the interbank clearing of transactions and crediting of the payee's account with confirmation to the payer within seconds of the payment being initiated. This is irrespective of the underlying payment instrument used (credit transfer, direct debit or payment card) and of the underlying arrangements for clearing (bilateral interbank clearing or clearing via infrastructures) and settlement (e.g. with guarantees/ pre-funding or in real time). Instant payments are the ideal launch pad for innovative payment solutions such as app-based person-to-person and person-to-merchant mobile payments.

Instant payments have been implemented in a number of national communities in Europe, e.g. in the United Kingdom, Denmark and Sweden. Other communities have put forward their plans for developing national schemes, e.g. the Netherlands.²³ Yet even while these schemes are often based on the same standards, the implementation of these standards is generally not harmonised and thus, they are not easily interoperable.

In 2014 the ERPB identified the need for at least one pan-European instant payment solution for euro open to any payment service provider in the EU. In April 2016 the EPC launched a public consultation on its draft SEPA credit transfer instant (SCT Inst) rule-book. This draft rulebook outlines the proposed business and technical rules of the future SCT Inst scheme and is scheduled to be published in November 2016. The scheme is due to be implemented by November 2017. By that time, end-user solutions for instant payments in euro should be made available at the pan-European level by payment service providers.

This means that by November 2017 the European financial market infrastructure has to be ready to clear and settle instant payments on a pan-European scale. The Eurosystem has defined a specific set of expectations for infrastructures offering clearing services for pan-European instant payments in euro.²⁴ In line with the objective of an innovative, integrated and competitive retail payments market, the clearing industry is expected to

²³ See De Nederlandsche Bank (2015).

²⁴ See ECB (2016b).

adopt a pan-European approach to instant payments, i.e. scheme participants should be able to reach and be reached by any other participant in the EU. Where there is more than one clearing infrastructure, it should be sufficient for a payment service provider to participate in one to be reachable at the pan-European level. This consequently requires infrastructures to adopt fair and open access policies vis-à-vis both payment service providers and other infrastructures. They also need to ensure full technical and business interoperability.

As an operator of market infrastructure, the Eurosystem is assessing the requirements for the settlement of pan-European instant payments using its TARGET2 services. The processing of instant payments is one of the three pillars of the Eurosystem's vision for the future financial market infrastructure.²⁵ The Eurosystem works in close collaboration with market participants to ensure that specific market needs for the clearing and settlement of instant payments are identified and addressed accordingly.²⁶

3.2 Payment initiation services

The field of retail payments innovation not only encompasses the renewal of different elements of the payments chain, but also the addition of new services that are built on top of existing payment instruments.²⁷ Two such services that are expected to be particularly relevant for the euro retail payments market in the EU are payment initiation²⁸ and account information services.

The review of the Payment Services Directive (PSD2)²⁹ has opened up the market for third-party payment initiation services, where the initiation and the real-time guarantee to the payee can be provided by a third-party service provider with access to the payment account on behalf of the payer. The new regulatory framework creates a competitive landscape for such payment solutions and has the potential to change the structure of the

²⁵ See ECB (2016c).

²⁶ For more details see Littlejohn, H. et al. (article in this book). For use cases see Salmony, M. (article in this book).

²⁷ See Committee on Payments and Market Infrastructure (2012).

Payment initiation services enable the payment initiation service provider to provide assurance to a payee (e.g. an e-commerce merchant) that the payment has been initiated in order to provide an incentive to the payee to release the goods or to perform the service without undue delay.

Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC (text with relevance for the European Economic Area).

market. It should remove obstacles that have been hindering non-banks from entering the payments service market. In particular, banks will not be allowed to reject access of third-party service providers to their customers' accounts.

More indirectly, the provisions in PSD2 may also act as an incentive to banks to innovate in order not to lose business to non-bank payment service providers. Last but not least, the directive may also stimulate new business models and forms of cooperation between banks and non-banks.

It is encouraging to see that the market is being proactive in meeting the requirements of PSD2. For instance, some retail payment processors have embarked on facilitating payment initiation services, thereby assisting banks and third-party service providers in supplying these services to end users and making them a more valuable service proposal. Some banks have set up special purpose subsidiaries that provide their parent bank's services bundled with the services offered by competing banks, making the increased competition truly work for the benefit of payment service users.³⁰

At the same time, it has to be stated that payment initiation and payment account information services are probably the most salient area of potential (re)fragmentation in European retail payments services. There are close to 7,000 account servicing payment service providers (ASPSPs) in the EU. Most of those ASPSPs will be required to allow providers that offer payment initiation or account information services to access the accounts of their customers based on secure communication and without any discrimination. The creation of a high number of individual technical solutions for account access would create a new barrier to payment initiation service providers. This would be counterproductive to the objective of ensuring a competitive, efficient and innovative market-place based on a level playing field.

The EBA has been tasked with issuing regulatory technical standards which will define the requirements for such access.³¹ As the EBA requirements are expected to put forward high-level principles for account access, it is important that they are formulated in a way which promotes the use of common technical standards by market participants and solutions that ensure a wide reachability of payment accounts by the payment initiation service providers. The Eurosystem, in its role as a catalyst, will support the EBA in its work

³⁰ For more details on PSD2 see Kraus, H.-M./Nest, R. (article in this book).

³¹ The PSD2 contains several mandates for the EBA to draft regulatory technical standards for strong customer authorisation, handling of personalised security credentials and for common, secure and open communication standards.

on defining regulatory requirements which promote the use of common standards. At the same time, it will facilitate the dialogue between market participants to achieve standardised messages and technical interfaces (APIs³²), setting up common access criteria and, if needed, establishing interoperability frameworks.

3.3 Application of distributed ledger technologies in payment services

According to many market participants, distributed ledger technologies (DLT) have a big potential to bring substantial cost savings to and increase speed in the existing financial ecosystem and infrastructure. In the retail payments domain, the possibilities DLT could offer, for example in the delivery of instant payments, certainly deserve further analysis. It could also be argued that efficiency gains from the use of DLT may benefit cross-border/cross-currency person-to-person or customer-to-business payments (e.g. payments on internet platforms). A further use could be in trade finance, given that it is currently predominantly paper-based, involves record-keeping at multiple places and requires reconciliation.³³

Although the economic viability of the wide-scale use of DLT is still not certain,³⁴ it could have a strong disruptive effect on the current financial intermediation architecture.³⁵ One of the hurdles to deploying this technology on a wide scale is the need for cooperation between service providers and for appropriate standards and governance attached to concrete implementation. Indeed, it would seem almost paradoxical to look at a "consensus technology" from a proprietary perspective and to create silos. So the fact that there are collaborative initiatives between FinTech companies and banks as well as between banks, market infrastructures and technology companies is a good sign. The Eurosystem is closely monitoring the different initiatives and encourages the industry to create and implement appropriate standards and governance arrangements for this cooperation.³⁶

³² API = Application Programming Interface.

³³ See ECB (2012b); ECB (2015b); Committee on Payments and Market Infrastructure (2015).

DLT has the disadvantage that – depending on the implementation and the level of trust between participants – it may require relatively high computing power to operate, which can make it expensive. In fact, in a system built with this technology there seems to be an inverse relationship between the level of trust needed (between the operators and users) and the computational power required for the operation.

³⁵ See Pinna, A./Ruttenberg W. (2016).

³⁶ For more details on DLT see Bott, J./Milkau, U. (article in this book).

4 The impact of global payment service providers

Retail payments innovation not only leads to a larger number of European entities (banks and non-banks) competing in the market,³⁷ it also leads to increased competition from entities outside Europe. In fact, many retail payment innovators are based outside Europe. The big internet platforms (Facebook, Google, Apple, Microsoft) and e-commerce companies (Amazon, eBay) are almost all headquartered in the United States. Likewise, the vast majority of FinTech start-ups are launched in the United States. The fastest growing e-commerce and e-payments market today is China, led by Alibaba and Alipay.

The common characteristic of these innovators within the retail payments field is that they primarily focus on the end customer and target customer ties, often with the aim of better integrating payment initiation and/or payment receipt within the commercial value chain. Fintechs tend to build platforms of their own, to sell their technologies and/ or to partner with banks. Established internet/e-commerce companies which have already established a large customer base consider integrating payments into their ecosystems as the natural next step. Some operate peer-to-peer platforms where efficient small value payments between individuals are a prerequisite for an efficient business model. Others simply enter the retail payments market because they have a large customer base (i.e. a natural network) and the necessary technology to transmit and process information in real time between a large number of customers. To reap the benefits of their large global customer base they tend to adopt a global approach when marketing their services. A common feature of established platform providers is that they are able to operate their payment services at very low levels of revenue as they do not necessarily need them to be profitable. They rather look at their overall business and use payment services to enhance the overall customer experience in their ecosystems and thereby increase customer loyalty, acquire better data on customer behaviour and launch personalised advertising.

The competition from outside Europe is not a problem per se as long as European user needs are properly taken into account and governance arrangements ensure that European stakeholders (market participants and public authorities) can sufficiently influence decisions in line with European user needs. That said, European stakeholders' lack of influence could prove to be an issue. For example, the lack of migration to the EMV standard and chip & PIN authentication in the United States affected international card scheme rules that apply to European payment service providers, resulting in (ceteris paribus) higher card fraud also in Europe.

³⁷ See Committee on Payments and Market Infrastructure (2014).

Concerns over the lack of influence of European stakeholders underline the importance of the Eurosystem's efforts in promoting the emergence of innovative pan-European payment solutions that are based on common standards and that can compete in the market. The (re)emergence of fragmentation along national borders or the establishment of silos based on proprietary solutions competing for the market are deemed undesirable and may warrant public policy intervention. Therefore, the pan-European instant payment scheme has major significance for Europe as it will be instrumental in keeping one of the central elements of innovation under European governance.

5 Conclusion

In the pursuit of its mandate to promote the smooth operation of payment systems and the objective of ensuring the safety and efficiency of payments, the Eurosystem strongly supported the creation of SEPA. Enabling payments for goods and services traded across Europe to be made as safely and efficiently as at the national level – and, at the same time, increasing the overall efficiency and safety of retail payments – facilitates trade, increases competition and moves Europe closer to completion of the Single Market.

Against this background, the Eurosystem – in conjunction with the European legislator and the ERPB – aims to ensure that the introduction of innovative retail products and services does not reintroduce fragmentation into the market. This goal is pursued by fostering – in collaboration with the industry – the design and implementation of pan-European retail payment solutions based on common standards, or, as a minimum, of solutions that are interoperable with each other.

Instant payments, payment initiation services and the application of distributed ledger technologies are the three most important areas where the network effects in the retail payments industry warrant cooperation between competing service providers to achieve the best possible user experience. The cooperative approach is supported by a sound regulatory basis, an appropriate governance structure and the industry's commitment to moving forward.

The creation of SEPA, though a long and complex process, has proven that the combination of regulatory action aimed at removing barriers and establishing a level playing field, the setup of an appropriate governance structure involving all relevant stakeholders and the industry's commitment has been a strong driver for retail payments market integration. If this combination of factors remains in place, it should be possible to manage the challenges emerging from the digitalisation of retail payments and to seize the opportunities it presents.

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Auswirkungen der Payment Services Directive (PSD2)

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1 Einleitung

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Literatur

1 Einleitung

Die als Folge der Finanzmarktkrise zunehmenden Regulierungsvorschriften verändern die Finanzbranche, auch und gerade im Zahlungsverkehr. Die regulatorische Intention war, eine von Banken unabhängige oder zumindest nicht mehr systemisch abhängige Struktur des Payment-Marktes zu schaffen.

Mit der ersten Payment Services Directive (PSD1) haben die europäischen Regulatoren eine erste strategische Zäsur gesetzt: Durch eine massive Beseitigung von Markteintrittsbarrieren sollte ein den Payment-Markt verändernder Wettbewerb geschaffen werden. Und in der Tat konnte sich eine Vielzahl neuer digitaler Akteure wie PayPal, Klarna etc. mit signifikanten Marktanteilen in Europa etablieren. Die bisher erfolgte Digitalisierung im Zahlungsverkehr wäre ohne diese Zäsur nicht oder zumindest nicht in diesem Ausmaß erfolgt.

Mit der Payment Services Directive II (PSD2) erfolgt nun eine weitere strategische Zäsur: das regulatorische Einführen eines mandatorischen und standardisierten "Open Access"-Prinzips für Privatkunden an der Schnittstelle zwischen Payment-Anbietern und den kontoführenden Banken. Teil dieser Zäsur ist auch das Anheben der Preistransparenz-, Haftungs- und Betrugsstandards für alle – also auch die neuen Anbieter. Außerdem öffnen sich Märkte für sektorübergreifende Erfolgskonzepte. Nicht nur zwischenzeitlich etablierte Zahlungsabwickler nutzen das Vakuum, um Marktanteile im Payment zu gewinnen. Auch der Einzelhandel etabliert innovative Konzepte und trägt zur Differenzierung des Marktes bei.

Im Folgenden wird die bevorstehende Regulation (PSD2) beschrieben. Dann werden Hypothesen zu strategischen Stoßrichtungen der Marktteilnehmer entwickelt. Es folgen Überlegungen zur zukünftigen Struktur der Payment-Branche sowie Schlussfolgerungen für Banken und FinTechs.

2 Kerninhalte, Zeithorizont und Konflikte

Der folgende Abschnitt adressiert die Kerninhalte der PSD2, den Zeithorizont der politisch-regulatorischen Finalisierung und den wichtigsten regulatorischen Synchronisationskonflikt (SCT Inst).¹

¹ SCT Inst = Single Euro Payments Area (SEPA) Instant Credit Transfer.