DANISH PAYMENTS COUNCIL

REPORT ON NON-BANKS IN THE PAYMENTS MARKET

September 2016

Report on non-banks in the payments market

The report can be downloaded from Danmarks
Nationalbank's website, www.nationalbanken.dk, under
Banking and payments, Danish Payments Council.

The report is based on information available up to 19
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1 INTRODUCTION AND CONCLUSIONS

1.1 CONCLUSIONS

In the autumn of 2015, the Danish Payments Council requested that a working group should undertake an analysis of non-banks in the payments area. Non-banks mean providers that are not banks, offering payment-related services to consumers and firms. Non-banks comprise a wide range of firms, spanning from small fintech start-ups providing high-tech payment services to large, global firms deciding to include payments in their business area. This report is the result of the working group's efforts.

On the basis of the report, the Payments Council concludes the following:

- *Globally, non-banks in the payments market are gaining importance these years. Such actors typically focus on initiating the payment, while the actual exchange of money still takes place in the infrastructures of traditional providers*. The technological advances of recent years, including the widespread use of smartphones and improved Internet access, have changed the wishes and demands of consumers and firms as regards payment solutions. This has opened up new business opportunities for non-bank payment service providers. They are typically either fintechs – often relatively newly established – with payment services as their principal business area, or large, global firms offering payment services mainly to supplement their primary business. Many of the non-banks focus on initiation of payments, i.e. how the consumer requests the provider to make a transfer. Subsequently, the payment is typically executed using the existing payments infrastructure, i.e. as a transfer between bank accounts or a card transaction.

- *Non-banks providing payment services have not yet gained a strong presence in Denmark. However, recent experience shows that new solutions that meet a user need can gain ground quickly.* Non-bank providers must be licensed to operate as a payment- or e-money institution or must hold a "restricted authorisation" from the Danish Financial Supervisory Authority in order to provide payment services in Denmark. At present, only a few of them can be said to be rooted in the increased digitisation. Foreign firms are currently not playing any large role in the Danish payments market either. One reason may be that the existing solutions in Denmark, especially the Dankort and Danish banks' new mobile payment services, fulfil user needs to a high degree. However, the fast growth of the latter shows that this is a dynamic area, which may evolve quickly from today's status, e.g. when some of the large foreign firms start to roll out their solutions in Denmark, as they are expected to. Moreover, there seems to be considerable activity already among non-banks providing services not subject to authorisation.

- *Non-banks may contribute to a larger supply of products and intensified competition. This also applies indirectly in that they may pose a potential threat to existing providers, prompting the latter to respond, for instance by allocating more resources to innovation*. Non-banks typically excel in exploiting technological advances, launching solutions that meet user needs. In many cases, they have identified a niche outside the sphere of other providers, or shortcomings in existing solutions. Overall, they contribute to a more varied supply of products, and they may also contribute to lower prices for services provided by more traditional providers. In addition, competition from non-banks – or even the prospect of such competition – may induce existing providers to allocate more resources to development of new solutions to the benefit of users. A case in point is MobilePay and Swipp, which may, to some extent, be regarded as the Danish banks' response to the potential threat from foreign actors. Another example is Dankort on mobile phones, which is expected to be rolled out later this year.

- *The legal basis gives rise to some uncertainty when Danes use foreign payment service providers. Larger prevalence of such providers in Denmark may pose an increasing problem*. In many situations where Danes use foreign payment service providers, it is unclear which country's law is governing the contractual relationship. If the provider in question is located in another EU member state, the legal basis will be the Payment Services Directive in any case. However, the provider in question may not need to comply with specifically Danish provisions, such as the provisions on data use and charge-back in e-commerce. Besides creating uncertainty about the consumer's legal position, this may also distort competition, as Danish providers will typically be obliged to comply with these rules. This uncertainty may entail a growing concern in so far as the use of foreign providers may increase in the coming years.

- *Denmark is well set to become a preferred country of establishment for new fintechs in the payments area, possibly supported by enhanced efforts from the authorities to help these firms get started*. Denmark is one of the countries in the world with the highest prevalence of digital solutions, also in the payments area. A number of other preconditions for becoming a preferred country of establishment for new fintechs also exist, including access to a highly skilled labour force. Furthermore, the work of various forums to strengthen cooperation and knowledge sharing among these firms is a positive development. A case in point is the new organisation Copenhagen Fintech. Finally, the Danish Financial Supervisory Authority is spending considerable resources on advising newcomers in the payments area on the applicable statutory requirements and assisting them with the necessary applications. In a few countries, e.g. the UK, the authorities have taken a step further by establishing a formal unit with the purpose of supporting start-ups and implementing schemes that enable the providers to apply for exemption from statutory requirements for their solutions.

1.2 BACKGROUND

Banks and bank-owned firms have traditionally been the dominant providers of payment services both in Denmark and abroad. This is because these services typically involve transactions in deposit accounts, which may only be serviced by banks. Abroad, non-banks have begun to play a larger role in the payments market in recent years.[1] They cover a wide range of firms, from small, newly established providers to some of the largest global technology firms.

Against this background, in the autumn of 2015 the Payments Council decided to initiate an analysis of non-banks in the payments market. According to the mandate, the analysis was to

1. identify factors of significance to the prevalence of non-banks in the payments market;
2. describe the prevalence of non-banks in the payments market in Denmark and abroad;
3. analyse their potential impact on the payments market in Denmark.

[1] See e.g. Bank for International Settlements, *Non-banks in retail payments*, September 2014.

The Payments Council set up a working group to perform the analysis. Danmarks Nationalbank headed the work and provided secretariat services to the working group, which consisted of Joachim Strikert, Confederation of Danish Industry, Henrik Sedenmark, Danish Chamber of Commerce, Tobias Thygesen and Louise Fjord, Danish Bankers Association, Troels Holmberg, Danish Consumer Council, Espen Torpe Jørgensen and Andreas Kaus Jensen, Nets, Karina Hansen, Danish Financial Supervisory Authority, and Jonas Aaen, Ministry of Business and Growth. The participants from Danmarks Nationalbank were Anders Laursen and Anders Mølgaard Pedersen.

1.3 DEFINITION AND SCOPE

In this report, non-banks mean firms without a banking licence, which

1. provide payment-related services or
2. provide services that are useful to users before or after a payment.

Depending on the type of services, these actors may be subject to regulation, but typically less demanding regulation than that applicable to banks.

In general, the group of non-banks comprises a wide variety of firms. They range from large, global technology firms, which have entered the payments market primarily to support other business areas, to small fintech start-ups providing high-tech financial services. Basically, this heterogeneity makes it difficult to classify the non-banks and define common characteristics.

Unlike banks, the new providers in the payments market do not supply financial intermediation in the general sense. Some non-banks receive deposit-like funds in the form of electronic money stored in a payment card chip or on a server. Others provide short-term credit. But both types of services result from the providers' payment services and do not aim to transform savings into investments, which is characteristic of financial intermediation by banks.

Generally, non-banks can be classified as firms acting as subcontractors to other firms in the payments area, e.g. banks and infrastructure firms like Nets, and firms providing services directly to consumers and businesses as payers and payees. This report focuses only on the latter, i.e. non-banks that can be said to serve end-users. These firms are of most interest to the members of the Payments Council.

Another focal point of the report is firms seeking to take advantage of the opportunities which have opened up as a result of recent years' considerable digitisation. This focus of the report are not sharply delineated, but the report does not elaborate on traditional actors without a banking licence, e.g. credit card companies, money transfer companies, cash-in-transit (CIT) companies, card terminal suppliers, etc.

1.4 CONTENTS

This report consists of four chapters. Chapter 2 gives a brief introduction to key concepts in the payments market, the regulation of the area and special characteristics of the payments market. This is followed by a description of these years' most important drivers of the payments market, which are found to have spurred the growing prevalence of non-banks, including both various aspects of the increased digitisation and a number of legislative initiatives.

Chapter 3 describes the prevalence of non-banks in the Danish payments market. A distinction is made between regulated firms and firms providing services that do not require authorisation. The regulated firms are broken down by payment institutions and e-money institutions and providers with a restricted authorisation. The chapter also contains a short section on potential barriers in Denmark for such firms and the authorities' efforts to help these firms.

Chapter 4 provides an overview of key trends among non-banks at the global level. A distinction is made between firms with payment services as their primary source of income and other firms predominantly offering payment services to support another business area. Furthermore, the chapter gives a brief account of the potential consequences of foreign actors playing a larger role in the Danish payments market, including for the banks and consumer protection in general.

2 THE PAYMENTS MARKET UNDERGOING CHANGE

2.1 INTRODUCTION AND SUMMARY

A payment service is a service provided by a provider to a user, contributing to transferring money from a payer to a payee. In Europe, this area is regulated by the recently revised Payment Services Directive. The market for payment services is characterised by a number of special factors, besides extensive regulation. Examples are network effects and economies of scale, which – viewed in isolation – make it difficult for providers to launch new solutions.

The payments market is currently influenced by several factors resulting from the increased digitisation. First and foremost, the growing prevalence of digital equipment such as smartphones and tablets, which are easy to take everywhere, and the improved Internet coverage. Another factor of mounting importance is new payment situations such as e-commerce and exchange of services from person to person on an online platform.

In addition, various European legal acts, adopted in recent years, may have far-reaching consequences for the payments market. Most recently, the revised Payment Services Directive has introduced a third-party right to perform transactions on a user's account with the user's consent. Potentially, this may induce non-banks to provide payment services, which previously required them to service deposit accounts themselves or use the card infrastructure.

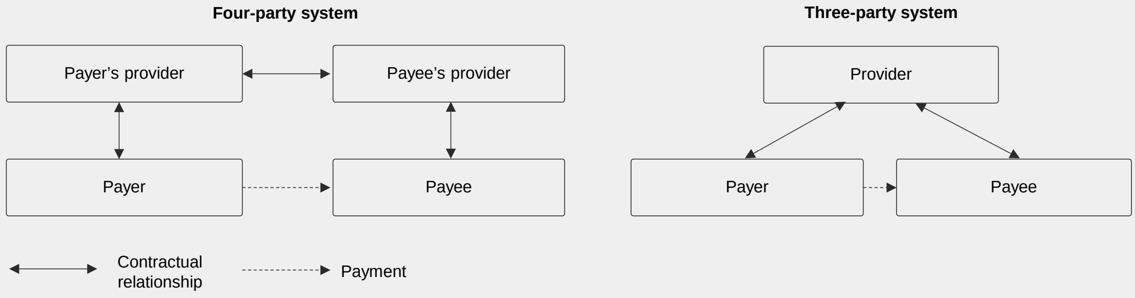
2.2 THE PAYMENTS MARKET IN BRIEF

A payment service can essentially be described as an activity contributing to transferring money from a payer to a payee. It may be initiated by the use of a payment instrument, e.g. a payment card such as the Dankort. Alternatively, the parties may just have concluded an agreement on a payment, e.g. in the form of direct debit, which entails a transfer initiated by the payee. Transfer via Betalingsservice is an example of direct debit.

Suppliers of payment services are called providers, while payers and payees are called users. If a payer and a payee have a choice between several providers, it is called a four-party system, cf. Chart 2.1. Another main type of system is a three-party system or closed system characterised by agreements between one provider and both the payer and the payee.

Four-party and three-party systems

Chart 2.1



Payment concepts typically vary according to the parties involved. Most payments cover consumer purchases of goods or services from businesses, or C2B (consumer to business) payments. Other widespread payment types are B2B (business to business) payments and P2P (person to person) payments.

Regulation

At the European level, this area is regulated, inter alia, by the Payment Services Directive of 2007.[2] The Directive defines payment services, cf. Box 2.1, and establishes who is allowed to provide such activities in the EU. The Directive also includes provisions on e.g. access to payment systems, disclosure requirements, liability for fraudulent use, charges for the use of payment instruments, execution time, accrual of interest, etc.

2 Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market.

Payment services Box 2.1

Payment services are defined in an Annex to the Payment Services Directive as one of the following seven activities:

1. *Cash deposits*. Services enabling cash to be placed on a payment account as well as all the operations required for operating a payment account.
2. *Cash withdrawals*. Services enabling cash withdrawals from a payment account as well as all the operations required for operating a payment account.
3. *Payment transactions without a credit line*. Execution of direct debits, credit transfers and card payments without a credit line.
4. *Payment transactions with a credit line*. Execution of direct debits, credit transfers and card payments with a credit line.
5. *Issuing and/or acquiring of payment instruments*. Conclusion of an agreement with a holder of a payment instrument or with a retailer on the acceptance of payments made with a payment instrument.
6. *Money remittance*. Transfer of funds without establishing a payment account for payer or payee.
7. *Payment transactions by means of telecommunication devices, etc*. Execution of payments made by means of mobile telephones, etc. where the network operator acts only as an intermediary between the buyer and seller of the goods and services.

A revised Payment Services Directive was adopted in 2015 and must be implemented by early 2018. The new Directive omits activity no. 7, since it is found to be covered by activity numbers. 3 and 4. The two following activities were added, performed by a third party, i.e. another provider than the provider servicing the user's payment account:

a. *Payment initiation services*. Payment initiation at the payer's request from a payment account at another payment service provider.
b. *Account information services*. Provision of consolidated information via the Internet on one or more payment accounts held by the user.

One type of firm which is allowed to provide payment services is payment institutions, cf. Chart 2.2. They must meet a number of specific requirements of capital, protection of user funds, business activities, management suitability, etc., cf. the Payment Services Directive. Payment institutions encompass a wide range of actors, e.g. credit card issuers, card payment acquirers and money transfer firms.

Another type of firm which is allowed to provide payment services in the EU is e-money institutions. The requirements applying to e-money institutions are described in the E-Money Directive of 2009.[3] In addition to providing payment services, such institutions may also issue electronic money, or e-money. The latter is a value stored electronically on a card or on a server, issued against prepayment and accepted by others than the issuer.

The two Directives do not regulate issuers or the use of payment instruments or e-money with limited usability. An example is a payment card or e-money which is only accepted by a small number of retailers defined in advance. Another example is a payment card or e-money used solely for buying a few goods or services. It is up to the member states to define their own rules for such types of payment instruments or e-money.

[3] Directive 2009/110/EC of the European Parliament and of the Council of 16 September 2009 on the taking up, pursuit and prudential supervision of the business of electronic money institutions.

Institutions authorised to provide payment services in the EU

Chart 2.2

Institutions \ Activities	Deposits and lending	Issue electronic money	Provide payment services
Credit institutions	+	+	+
E-money institutions	-	+	+
Payment institutions	-	-	+

The Directives also provide for exempting small providers from the requirements on payment and e-money institutions. The condition is that the providers execute payments for less than 3 million euro per month, while e-money issuers may not store funds exceeding 5 million euro. Small providers that have been exempted from the institution-specific requirements must still comply with the other provisions of the Payment Services Directive.

Credit institutions – or banks – are allowed to provide payment services and issue e-money in line with e-money institutions. Moreover, unlike payment and e-money institutions, they may receive deposits and grant credit, whereby they are subject to stricter requirements than payment or e-money institutions, cf. the Credit Institution Directive.[4] A common feature of all three types of institution is that they are allowed to perform cross-border activities in the EU, provided they are authorised to do so by the supervisory authorities in their home member state, cf. Chapter 4.

Special characteristics

The market for payment services has a number of special characteristics. Firstly, user demand for a given payment solution, such as a particular card, is influenced by *network effects*. This means that the more payees that accept the solution, the more attractive it becomes for payers to have it – and vice versa. These effects typically have a self-reinforcing impact on the prevalence of a given payment solution.

Secondly, providing payment services is associated with considerable *economies of scale*. This reflects the substantial overheads for developing and operating a payment solution, while the costs of extra payments are typically relatively low. Combined with the network effects, this cost structure means that for a given payment segment, e.g. card payments at point of sale or online payments, the number of solutions is often small.

The combination of network effects and economies of scale may constitute a barrier for providers of new solutions. The network effects make it difficult to grow, since one side of the market, i.e. payers or payees, will often hesitate to embrace the new solution until the other side has done so – and vice versa. At the same time, economies of scale entail that a certain size is necessary if a given solution is to be viable.

Thirdly, consumers and retailers often *respond differently to fees* for payment services. Experience shows that consumers may react to even small fees by switching to another method of payment, while retailers are more willing to accept fees if they are matched by expectations of increased sales or savings in other areas. This is why fees for payment services are often levied on retailers only.

[4] Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms.

Finally, the market for payment services is characterised by a substantial need for *collaboration among providers*. This applies primarily to the providers in a four-party system who must agree on the format for exchange of payment messages and the terms and conditions for participation. The collaboration of providers is governed by competition rules, and as a general rule, it may only comprise their mutual relations and not, for example, prices charged to the users.

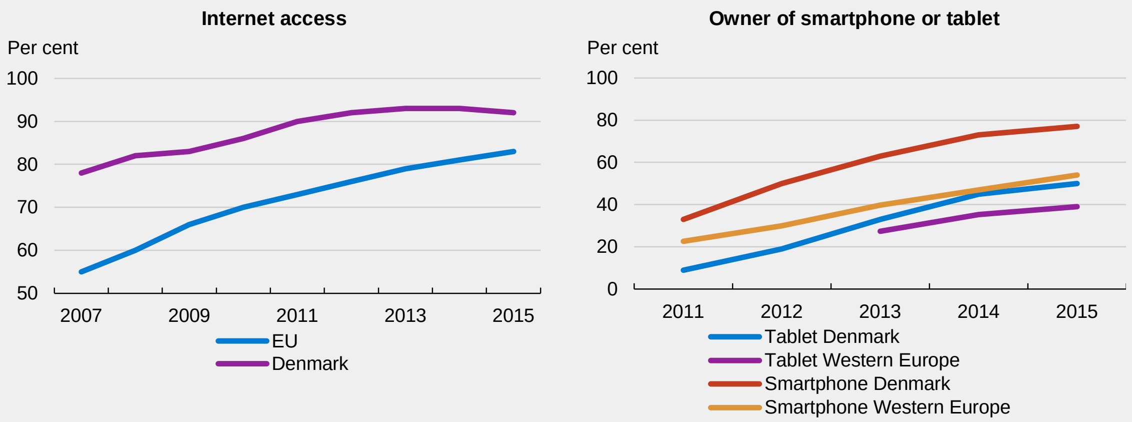
2.3 DRIVERS OF A MARKET UNDERGOING CHANGE

These years, the payment services market is influenced by several factors which will change the framework for the providers and may entail far-reaching consequences. Most of these factors relate to the increased digitisation of society, i.e. the growing use of information and communication equipment in various contexts. Other factors are several legislative initiatives in the payments area, including the adoption of a revised Payment Services Directive.

New payment instruments and increased mobility

The last few years have seen a tendency for a rising share of the population to obtain Internet access and buy portable digital equipment such as smartphones and tablets, cf. Chart 2.3. In the countries furthest ahead in this process, including Denmark, the point of saturation seems to be near. In addition, Internet coverage has improved substantially in most countries in recent years, and the speed of data exchange has been enhanced.

Internet access and share of the population with a smartphone or tablet Chart 2.3



Note: The left-hand chart shows the shares of the population in the EU and Denmark with Internet access. The right-hand chart shows the shares of the population in Western Europe and Denmark owning a smartphone or tablet.
Source: Eurostat, Statistics Denmark and Statista.com.

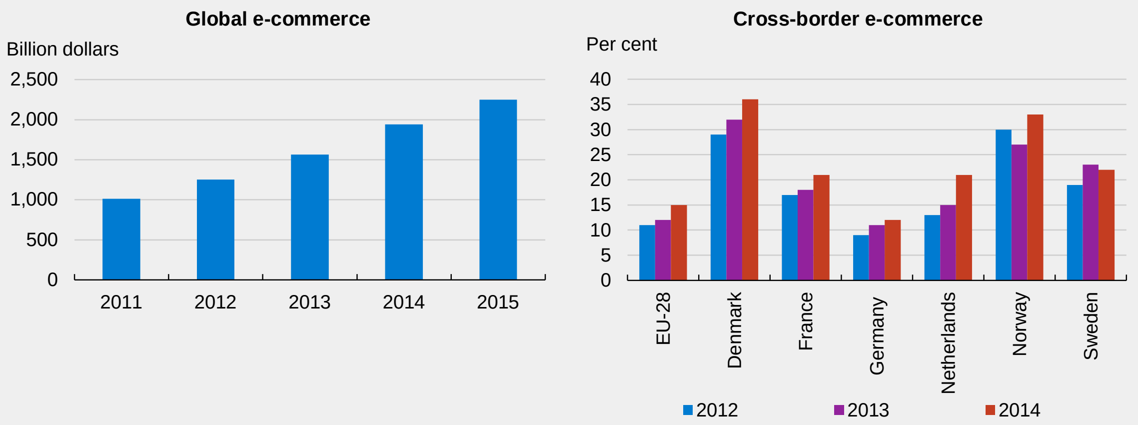
Given the growing share of the population with Internet access, more people are now able to use remote payment services, e.g. via online banking solutions for the computer. Today most banks also offer solutions for smartphones and tablets, for the customers to use for transfer of funds from their accounts and for checking transactions and balances. Combined with the extended Internet coverage, this has enabled customers to access their accounts practically anywhere.

The smartphone is perceived by many as the payment instrument of the future. Today, the vast majority of C2B payments are made using cards or cash, but it is widely expected that a large part of these payments will be replaced by mobile payments in a few years, and new payment solutions targeted to smartphones are frequently launched. In several countries, the latter are already widely used for P2P payments, cf. the extensive use of MobilePay and Swipp in Denmark.

New payment situations

Payment situations other than traditional point of sale transactions have gained ground in step with the increased digitisation. Above all, the volume of e-commerce has grown substantially in recent years, cf. Chart 2.4 (left). This reflects, inter alia, increased shopping in foreign online stores, cf. Chart 2.4 (right). Some of the growth in e-commerce can be attributed to shopping via smartphones, often called mobile commerce.

Development in e-commerce Chart 2.4



Note: The left-hand chart shows the value of global e-commerce. The right-hand chart shows the shares of the population who have shopped in online stores abroad.
Source: Global B2C E-commerce Report 2015 and European B2C E-commerce Report 2015.

Some countries have developed special e-commerce payment solutions with a view to easier or safer payment. However, card payments remain a widespread payment method on the Internet, i.e. use of a payment instrument which was originally designed for point of sale transactions. This applies especially to cross-border e-commerce where the most frequently used payment instrument is international cards, particularly Visa and MasterCard.

Finally, business models have emerged whereby consumers sell or rent goods or services or provide financial services to other consumers. Cases in point are rental of dwellings or cars, transport services and crowdfunding, i.e. funding from a large group of donors via an online platform. This has resulted in increased demand for safe and efficient P2P payment solutions, and several providers of these services have developed their own payment solutions, cf. Chapter 4.

User expectations and wishes

Furthermore, the increased digitisation has changed consumers' perception of what payment services should be capable of, cf. surveys performed by e.g. McKinsey and PwC.[5] For example, text messages, e-mails and other messages that reach the recipient instantly with just a few touches on a

[5] McKinsey, *The Fight for the Customer*, 2015, and PwC, *The new digital tipping point*, 2015.

keyboard have made it difficult for consumers to accept that it may take a day or more to transfer money to a payee, and that it is even cumbersome.

At the same time, consumers are becoming more and more concerned about fraudulent use of data in digital solutions. This appears from, inter alia, surveys performed by the European Commission,[6] and it was also corroborated by a recent report from TrygFonden and the Danish Consumer Council based on a questionnaire survey conducted among a large number of Danes.[7] But the surveys also show that concerns rarely make consumers change their behaviour, e.g. switching from a given payment solution.

Digitisation has also influenced retailers' wishes regarding payment solutions. This applies especially to retailers selling goods online. They focus, inter alia, on keeping the solutions as user-friendly as possible so that consumers are not deterred from making their purchases. Moreover, retailers selling goods both online and in physical stores often state the importance of having integrated solutions and one provider in order to minimise the administrative burden.

Legislative initiatives

The payment services market is also affected by various legislative initiatives these years. As mentioned earlier, at the European level the Payment Services Directive and the E-Money Directive have introduced two new types of institution which are allowed to perform cross-border activities, provided they are authorised to do so by the supervisory authorities in their home member state. Furthermore, the Payment Services Directive has generally contributed to harmonising legislation in this area in the EU, which has strengthened competition among payment service providers.

In 2015, a revised Payment Services Directive was adopted, which must be implemented by January 2018.[8] As an aspect of special relevance to this report's subject, the new Directive introduces a legal right for third parties to make transactions on a user's bank account or receive information on transactions and balances on several accounts and forward it to the user – all subject to the user's explicit consent. This is achieved by extending the definition of payment services to include such activities, cf. Box 2.1.

This expansion of the Payment Services Directive is an attempt to enable non-banks to provide payment services, which normally requires servicing deposit accounts. These actors can use this opportunity to launch new solutions, but banks too can act as third parties and benefit from the new opportunities. The European Banking Authority, EBA, is preparing technical standards for third-party access to user accounts.[9]

In addition, various other European legal acts have been adopted recently, which are of great significance to the European payments market. A case in point is the SEPA Regulation of 2012, which made it mandatory for European banks to apply a number of harmonised standards for transfers in euro.[10] Another example is the Regulation on interchange fees of 2015, which, inter alia, introduces a cap on the fee payable by the retailer's provider to the consumer's provider for card payments.[11]

6 See e.g. European Commission, Special Eurobarometer 423, *Cybersecurity*, 2015.

7 Trygfonden and Danish Consumer Council, *Digital Tryghed (Digital Security – in Danish only)*, 2016.

8 Directive 2015/2366/EU of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market.

9 See https://www.eba.europa.eu/-/eba-consults-on-strong-customer-authentication-and-secure-communications-under-psd2.

10 Regulation (EU) no. 260/2012 of the European Parliament and of the Council of 14 March 2012 on technical and business requirements for credit transfers and direct debits in euro. The Single European Payments Area, SEPA, covers payments in euro by citizens and firms.

11 Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions. For more information on the card market and the Commission's proposal for a Regulation, see Danish Payments Council, *Rapport vedrørende forslag til EU-forordning om interbankgebyrer* (Report on a proposed EU Regulation on interchange fees – in Danish only), March 2014.

3 NON-BANKS IN DENMARK

3.1 INTRODUCTION AND SUMMARY

Non-banks in the Danish payments market can be divided into regulated and unregulated firms. Regulated firms consist of payment and e-money institutions authorised to perform cross-border activities in other EU member states, as well as providers with a restricted authorisation. Unregulated non-banks are firms which serve users in the payments area, but which are not deemed to provide payment services according to the statutory definition, whereby they do not need authorisation from the Danish Financial Supervisory Authority.

The number of payment and e-money institutions is relatively limited in Denmark. Moreover, this group is generally very heterogeneous, ranging from different firms such as Nets, Nets' subsidiary Teller and Forbrugsforeningen, which can be regarded as traditional providers, to a few non-banks which can be said to be rooted in the increased digitisation. In addition, a large number of payment and e-money institutions from other EU member states have notified activities in Denmark, but only a small part of them target Danish users actively.

Firms with restricted authorisations are divided into payment service providers and issuers of e-money. Most payment service providers with restricted authorisations are either payees who have issued cards that can be used only in that particular firm, e.g. petrol cards or store cards, or money transfer firms. This group also comprises a few telecom companies and firms providing services via an online platform, e.g. crowdfunding or car rental.

Similarly, among e-money issuers with restricted authorisations only a small number of firms have issued e-money with wide usability. These are mainly telecom companies which have, in principle, issued e-money in the form of deposits on calling card accounts, and such e-money can be used by anyone accepting payments by text message. The large group of e-money issuers with restricted authorisations also includes issuers of gift vouchers to a chain of stores or to stores in a shopping centre.

Unregulated non-banks comprise both firms which are involved in the execution of individual payments, without providing payment services as defined in legislation, and firms providing services to users before and after a payment. As opposed to providers authorised by the Danish Financial Supervisory Authority, there is no central register of unregulated firms. However, the main impression is that these firms account for greater activity than payment service providers, i.e. regulated firms.

The relatively modest number of new regulated actors in the payments area in Denmark may be explained by several factors. An important explanation is that most users are satisfied with the existing payment solutions, e.g. the Dankort and most recently also the banks' mobile payment services, MobilePay and Swipp, so they do not seek out new solutions. Moreover, other more general factors have been pointed out, such as the framework conditions for start-ups and the possibilities of knowledge sharing and benefiting from synergies.

In several countries, the authorities have launched measures to help non-banks in the payments market – and the financial area more generally – get started. For example, the UK Financial Conduct Authority has established a special unit to support and guide such firms, and it has introduced a scheme enabling the latter to apply for temporary exemption from legislative requirements. The

Danish Financial Supervisory Authority has also chosen to focus on non-banks and their business models by designating them a strategic focus area in their new 2020-strategy.

3.2 REGULATION

Section 2.2 of this report outlined the contents of the Payment Services Directive and the E-Money Directive. In Denmark, the two Directives have been implemented by the Payment Services and Electronic Money Act, containing the specific requirements applying to non-bank providers of payment services as well as the general provisions on payment services. Moreover, the Act contains a number of special Danish provisions, including on providers' use of data and, in connection with e-commerce, consumers' right to have the payment charged back if the goods are not delivered or are defective, i.e. the charge-back rules.

As mentioned earlier, the Payment Services Directive and the E-Money Directive enable member states to exempt small payment service providers and issuers of e-money from the institution-specific requirements on payment and e-money institutions. Danish legislation has made use of this option, but such firms must have a restricted authorisation and comply with a number of administrative and governance requirements. In addition, they must comply with the other provisions of the Danish Payment Services and Electronic Money Act, in accordance with the Payment Services Directive.

Also as mentioned earlier, issuers of payment instruments or e-money with limited usability, e.g. only at one specific payee, are also completely exempt from the two Directives, including from the general provisions of the Payment Services Directive. However, in Denmark these issuers too must have a restricted authorisation and comply with the other statutory provisions. As opposed to payment and e-money institutions, providers with restricted authorisations are authorised to operate only in Denmark.

A legislative amendment in 2014 exempted certain issuers of e-money from the requirement for a restricted authorisation and the other provisions of the Payment Services and Electronic Money Act. This applies to small issuers of e-money in amounts of less than kr. 3,000 with limited usability and without automatic top-up. These issuers must, however, still be registered with the Danish Financial Supervisory Authority and comply with a statutory requirement for acquiring the remaining value of the claims. This means that the issuer must pay out the value of remaining e-money at the request of a holder.

Danish legislation also comprises payment surrogates, which were introduced in 2009 in order to continue the regulation of a number of payment instruments, e.g. electronic 10-clip cards, which are not covered by the Payment Services Directive. Issuers of payment surrogates must be registered with the Consumer Ombudsman, who also supervises that the payment instruments in question are safe and efficient. In connection with the legislative amendment in 2014, it was also decided to exempt issuers of payment surrogates in amounts of less than kr. 3,000 from the requirement for a restricted authorisation and the other provisions of the Payment Services and Electronic Money Act.

The Danish decision to regulate firms that are not covered by EU legislation primarily reflects the general consideration of consumer protection. This entails certain administrative costs for both authorities and firms, and the statutory requirements may even constitute an actual barrier for some providers. Moreover, the exact definition of payment surrogates seems to be subject to some uncertainty.[12] In connection with the implementation of the revised Payment Services Directive, it must be decided whether to continue this regulation.

3.3 PAYMENT AND E-MONEY INSTITUTIONS

Payment and e-money institutions are firms authorised by their respective supervisory authorities – in Denmark the Danish Financial Supervisory Authority – in accordance with the Payment Services Directive or the E-Money Directive. In mid-2016, a total of 12 payment institutions and three e-money institutions were registered in Denmark, cf. Box 3.1. This compares with more than 700 authorised payment and e-money institutions at the European level, many of which have notified cross-border activity in Denmark, cf. below.

Payment and e-money institutions in Denmark Boks 3.1

On 1 August 2016, the following *12 payment institutions* were registered in Denmark:

- *4T af 1. oktober 2012 ApS*. This firm acquires payments via text message and other solutions settled over the consumer's telephone bill. The firm is owned by TDC, Telenor, Telia and 3.
- *Clearhaus A/S*. This firm acquires online payments made with e.g. international cards and offers collection of subscription payments.
- *Coop Betalinger A/S*. This firm offers cash deposits at Coop Bank A/S via the Coop stores. It is owned by Coop Bank A/S.
- *Fintech Solution A/S*. This firm states that it will launch a solution later this year for cross-border business-to-business payments.
- *Flex Funding A/S*. This firm offers an online platform for lenders and borrowers, i.e. crowdfunding, which entails a need for payment execution.
- *Forbrugsforeningen af 1886*. Forbrugsforeningen issues credit cards which can be used at retailers in Denmark. The consumer earns a bonus when using the card.
- *Inpay A/S*. This firm offers online stores payments via the consumer's online bank.
- *Kameo ApS*. Like, Flex Funding, this firm provides crowdfunding, which entails a need for payment execution.
- *Nets A/S*. This firm acquires Dankort payments, among other activities, and concludes agreements with firms on direct debit collection via Betalingsservice and Leverandørservice.
- *Nordea Finans Danmark A/S*. This firm issues credit cards, among other activities, and executes payments made with these cards. It is owned by Nordea Bank Danmark A/S.
- *Saxo Payments A/S*. This firm offers a platform for cross-border business-to-business payments. It is owned by Saxo Bank A/S.
- *Teller A/S*. This firm acquires payments made with international cards, among other activities. It is owned by Nets Holding A/S.

Similarly, the following *3 e-money institutions* were registered:

- PASPX A/S. Offers various payment services based on e-money accounts.
- *Rezidor Loyality Management A/S*. This firm issues and acquires gift vouchers for use at selected hotel chains in Denmark and abroad.
- *Swipp ApS*. This firm offers credit transfers via mobile telephone to private individuals and firms. It is owned by a large number of Danish banks.

Registered payment institutions in Denmark comprise a great variety of actors. The group includes credit card issuers, card payment acquirers and bank-owned firms with activities that could also have been performed by the bank. It also comprises providers of crowdfunding, i.e. funding from a large

[12] See Danish Payments Council, *Report on new payment solutions*, March 2014.

group of donors via an online platform, which is found to require authorisation as a payment service provider.[13]

Out of the 12 payment institutions, only a few come under the definition of non-banks and can be said to be rooted in the increased digitisation. A case in point is *Clearhaus*, acting as acquirer of online payments made with international cards such as Visa and MasterCard. Clearhaus also offers collection of regular payments, i.e. subscription payments, by withdrawing funds from these cards. Clearhaus went into business in March 2015, and today it is one of the few Danish acquirers of card payments.

Another payment institution providing e-commerce services is *Inpay*. This firm concludes agreements with retailers and provides intermediation of payments from the consumer's online bank via its own bank accounts in a number of countries. In connection with payment, the consumer is first notified of which Inpay account is to receive the transfer, and then Inpay handles the rest of the transaction. Inpay does not act as a third party as defined in the revised Payment Services Directive, cf. section 2.3, since the consumer itself makes the transfer via their online bank.

A third example of a payment institution which has emerged in the wake of the increased digitisation is *Fintech Solutions A/S*, which owns the company November First A/S. The company was licensed as a payment institution in the spring of 2016 and plans to launch a solution later this year for cross-border online payments. This solution will mainly target small and medium-sized enterprises. Like InPay, Fintech Solutions will hold accounts in the countries to which it offers transfer of funds.

A fourth payment institution matching the delineation of actors in focus in this report is *4T*. This firm offers to acquire payments via text messages and other solutions settled over the consumer's telephone bill or prepaid calling card account. Established in 2012, 4T is owned by the telecom companies TDC, Telenor, Telia and 3. Payment via apps and associated payment cards has become more popular than payment via text messages in recent years, given the widespread use of smartphones and tablets.

Nets, among others, is included in the group of other payment institutions that cannot be said to be rooted in recent years' increased digitisation. This firm is subject to authorisation as a payment institution in order to acquire Dankort payments and execute payments in e.g. Betalingsservice. In addition, Nets also offers its users other services, such as provision of card terminals and e-commerce payment modules. Moreover, Nets owns Teller, an acquirer of payments made with international cards, which has also been authorised as a payment institution.

Like payment institutions, registered e-money institutions also constitute a very heterogeneous group. *PASPX* was authorised as an e-money institution in 2015 and offers various payment services based on e-money accounts. *Rezidor Loyalty Management* issues and acquires gift vouchers, including electronic ones, for use at selected hotels in Denmark and abroad. Finally, the firm *Swipp* is subject to authorisation as an e-money institution on technical grounds related to settlement of transfers via its mobile payment service.

Moreover, a large number of foreign payment and e-money institutions have notified activities in Denmark, cf. Box 3.2. Almost all of them perform these activities from their headquarters in other EU

[13] See Danish Financial Supervisory Authority, *Orientering om samspillet mellem alternativ finansiering og den finansielle regulering* (Outline of the interaction between alternative funding and financial regulation – in Danish only), memorandum, 18 November 2013.

member states, and more than two thirds of them are headquartered in the UK. In practice, only a small part of the notified payment and e-money institutions seem to be active in Denmark, as many institutions have merely chosen to register as providers in Denmark for future use, if needed.

Foreign payment and e-money institutions with notified activities in Denmark Box 3.2

Payment and e-money institutions in other EU member states may perform cross-border activities in Denmark based on an authorisation issued by the supervisory authority of their home member state. They may do so by establishing a presence in Denmark, such as a branch, or conclude an agreement with an agent. Alternatively, they may provide the services from their headquarters abroad.

In mid-2016, 319 payment institutions and 84 e-money institutions had notified cross-border activities in Denmark via their national authorities. These are primarily performed via their respective headquarters, most of which are located in the UK. More than two thirds of the payment institutions have stated that they make money transfers.

The large number of registered foreign payment and e-money institutions does not reflect the number of such institutions active in Denmark. In practice, many institutions have opted for notification of activities in several EU member states, including Denmark, without necessarily activating their authorisations in all countries.

3.4 RESTRICTED AUTHORISATION

As mentioned earlier, a distinction is made between two types of firms with restricted authorisations, i.e. payment service providers and issuers of e-money.

Payment service providers

In mid-2016, 67 providers were registered with restricted authorisations to perform payment services in Denmark. For most of them, the reason is their modest size, i.e. a monthly business volume of less than 3 million euro, cf. section 2.2, while for the remainder the reason is that their issued payment instrument is not sufficiently widely used. In practice, many providers meet both criteria for needing only a restricted authorisation.

Like payment institutions, providers with restricted authorisations constitute a very heterogeneous group. Basically, they can be divided into

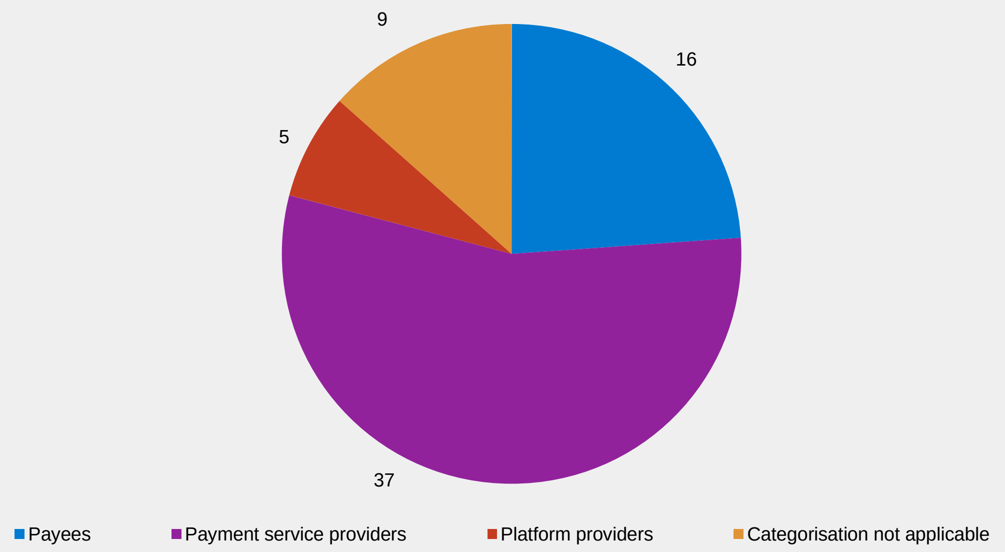
1. firms acting as payees
2. firms that mainly perform payment services, i.e. assist in transferring funds from payers to payees
3. firms providing a service via an online platform. Examples of the latter are crowdfunding or private car rental.

Most providers with restricted authorisations are either payees or firms providing payment services, cf. Chart 3.1. The first group includes mainly issuers of cards, typically a kind of credit card, that can only be used at the firm in question or at a small group of retailers. These are, inter alia, issuers of petrol cards, i.e. oil companies, issuers of store cards for shopping centres, and taxi companies offering their customers taxi cards.

The group of firms that perform payment services mainly consists of firms offering money transfer, typically to payees abroad. Many of them also offer other financial services, such as currency exchange, and often operate an entirely different type of business in addition. This group also comprises a few telecom companies that e.g. provide payment services in the event of customer payments via text messages.

Payment institutions with restricted authorisation

Chart 3.1



Note: The chart shows the number of payment institutions with restricted authorisation, distributed by firm type.
Source: Danish Financial Supervisory Authority.

Issuers of e-money

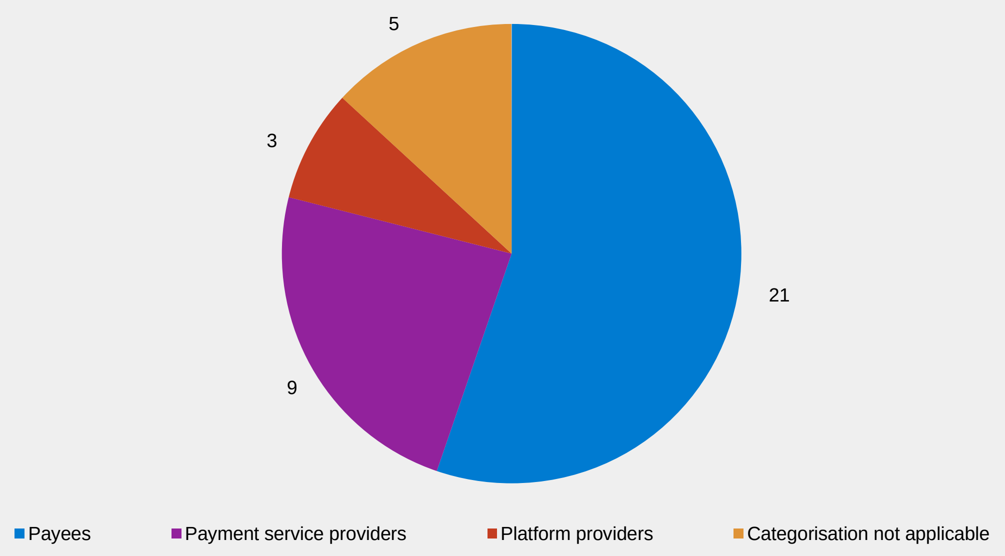
In mid-2016, 38 firms in Denmark had a restricted authorisation to issue e-money. For around half of them, the reason was their size, and for the other half the reason was the limited usability of the e-money they issue. In this group as well, a large share of the firms meet both criteria for needing only a restricted authorisation.

As mentioned earlier, e-money issuers with restricted authorisations can be divided into payees, payment service providers and firms offering a platform, most often an online platform, for a given market. Examples of the latter could be a website for private individuals' purchase and sale of clothes or a mobile commerce app, which retailers may join. The firms that own these platforms service accounts for their customers, the balance of which constitutes e-money in a legal sense.

The large group of e-money issuers with restricted authorisations are payees or firms acting on behalf of payees, cf. Chart 3.2. They are predominantly issuers of gift vouchers that can be used in a chain of stores, often with individual ownership, i.e. franchise-based, or in the stores of a shopping centre. This group also includes the company *Rejsekort*, one of the largest e-money issuers in Denmark measured in terms of value of the claims.

The group of payment service providers consists of firms issuing e-money with wide usability. The group includes telecom companies with balances on prepaid calling card accounts whereby they are found to have issued e-money which can, in principle, be used at all retailers accepting payment by text message. This group also encompasses a few issuers of gift vouchers with wide usability and firms offering prepaid electronic accounts for a card or mobile payment system.

E-money issuers with restricted authorisation Chart 3.2



Note: The chart shows the number of e-money issuers with restricted authorisation, distributed by firm type.
Source: Danish Financial Supervisory Authority.

3.5 UNREGULATED FIRMS

Firms which serve users in the payments area, but which are not deemed to provide payment services do not need authorisation from the Danish Financial Supervisory Authority. In principle, many firms match this definition, e.g. suppliers of check-out systems, cash-in-transit firms and firms that print and send inpayment forms. Below, as elsewhere in the report, the focus is on relatively newly established firms rooted in the increased digitisation.

As opposed to payment service providers and e-money issuers, there is no central register of unregulated firms in the payments area. There have been several recent attempts to map fintechs in Denmark, i.e. firms offering high-tech financial services, and classifying them into different categories, including payment services.[14] The examples below are primarily based on this work.

Examples

An example of a type of firm that serves users in the payments area, but which is not deemed to perform payment services, is providers of payment modules – or gateways – for e-commerce. A gateway is the technical platform handling payments and forwarding them to the acquirer. Basically, this can be compared with a card terminal in physical commerce. The largest provider of gateways

[14] See e.g. www.cfir.dk.

in Denmark is *DIBS*, owned by Nets. Other examples are *Paymenter*, *Gate2Payments* and *Pensopay*.

Another example of payment service providers that do not need authorisation is intermediaries of payments by virtual means of payment. They could be e.g. firms assisting consumers or businesses in making or receiving bitcoin payments. This activity is not covered by the concept of payment services, which is limited to cash transactions, bank deposits and e-money. An example of a Danish firm providing such services is *Coinify*.

Besides the above actors that are involved in the actual payment, there are many examples of firms providing useful services to users before or after a payment, for instance services giving the user a better overview of payments made or received, or services making it easier to collect and reconcile payments. Such *value added services* are not associated with the actual payment, but often contribute to simplifying other processes for the payer or payee.

An example of a value added service is provision of information on a user's payments and deposits in accounts held with one or more other payment service providers. Such activities, called account information services, do not require an authorisation today. However, when the revised Payment Services Directive is implemented, it will be regarded in future as a payment service requiring authorisation from the Danish Financial Supervisory Authority, cf. Chapter 2. An example of a Danish provider of this kind of service is *Spiir*.

Another example of a value added service is digital solutions replacing paper receipts and slips. This type of solution allows consumers to gather their documentation of previous purchases in one place, and a potential advantage for retailers is that they can identify the purchaser and issue targeted bargains at the moment of payment to customers who accept this. A Danish provider of digital receipts is *Storebox*, which was acquired by Nets in 2015.

A third type of value added service is solutions for digital check-out systems that are applicable to the payee's smartphone or tablet. They are typically delivered with software that provides an overview of turnover and inventory and integration to a terminal for card payments. Danish providers of such solutions are *Wallmob* and *Shopbox*. As opposed to Wallmob, Shopbox has opted for a restricted authorisation to issue e-money.

A fourth example of a value added service is electronic invoicing, whereby the payee sends the invoice electronically in a format that can be read directly into the payer's ERP system. This enables firms and the public sector to automate invoicing processes and integrating them with other processes in a transaction, e.g. ordering and payment.[15] Examples of Danish suppliers of electronic invoicing solutions are *Tradeshift*, *Dinero* and *Sproom*.

A final example is a service integrating data on the use of company cards with the company's ERP system, for automatic reconciliation and book entry. This may contribute to reducing the company's administration costs for such cards. An example of a Danish provider of such services is the newly established company *Pleo*, which states that it plans to launch its solution later this year.

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[15] Electronic invoicing is described in more detail in Danish Payments Council, *Report on business-to-business payments*, September 2015.

3.6 DISCUSSION

Not many regulated payment service providers in Denmark are rooted in recent years' increased digitisation, whereas there seems to be more activity among unregulated actors, particularly suppliers of value added services. This assessment is primarily based on the above-mentioned attempts to map Danish fintechs, but it is also corroborated by actors in close contact with these firms.

A Nordic comparison shows more pronounced activity among non-banks in Sweden than in Denmark. Today, Stockholm is found to be one of the most important fintech hubs in Europe, housing several non-banks which have grown to a considerable size, such as Klarna and iZettle, cf. Chapter 4. There are no signs of higher activity levels among fintechs in Norway and Finland than in Denmark.

Barriers and drivers

The relatively modest number of new regulated actors in the payments area in Denmark may be explained by several factors. An important explanation is probably that the vast majority of users, i.e. consumers and retailers, in Denmark find that their needs are already being met by the existing payment solutions, first and foremost the Dankort.[16] Moreover, in recent years the banks have succeeded in launching new, popular solutions where the Dankort is not applicable, e.g. for P2P payments.

The emergence of non-banks in the payments area also depends on the framework conditions for start-ups. This implies, inter alia, access to highly skilled labour, the wage level and general costs of living as well as access to funding. Cultural factors play a role too, such as entrepreneurship and risk appetite and a tradition of cooperation between the non-banks and the traditional providers, including banks.

These issues were analysed in a 2015 report from Rainmaking Innovation and Oxford Research on Copenhagen's potential as an important Nordic fintech hub.[17] The report was commissioned by several stakeholders, i.e. City of Copenhagen as well as the Financial Services Union (Finansforbundet) and the Danish Bankers Association and others. The report also contained recommendations for measures to enhance Copenhagen's opportunities of becoming a fintech hub.

The report concluded that Copenhagen is basically well set to become a fintech hub in Europe. One of the most important challenges pointed out was the absence of a central location for fintechs to exchange knowledge and create synergies. Subsequently, a number of actors, under the auspices of the new organisation Copenhagen Fintech, have initiated shared office facilities for fintechs, which are now being established.[18]

The role of the regulator

The report from Oxford Research and Rainmaking Innovation included a few regulator proposals. The regulator was e.g. encouraged to ease the rules for work permits in Denmark and make it more attractive to invest in fintechs. In addition, the regulator was recommended to provide more help to start-ups to enhance their understanding of rules and requirements and possibly to consider adjusting the rules and requirements when they were a barrier to innovation.

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16 See Danish Payments Council, *Report on new payment solutions*, March 2014.
17 See Rainmaking Innovation and Oxford Research, *CPH Fintech Hub*, December 2015.
18 See www.cphfintechhub.dk

In several countries, the authorities have launched measures to help fintechs get started. In the UK, the Financial Conduct Authority launched a project in 2014 to promote innovative firms. This included the establishment of a special unit, the Innovation Hub, to guide non-banks regarding legal issues and applications for authorisation. The Innovation Hub also hosts events bringing together firms and the UK Financial Conduct Authority in dialogue.

Another initiative from the UK Financial Conduct Authority is the introduction of a "regulatory sandbox" for testing new solutions outside the legislative framework. This enables providers to test their ideas without having to have full authorisation and meeting all statutory rules. Such exemption is granted on the basis of an application from the provider and applies only until the solution grows to a certain volume. The first providers are expected to use this scheme from the autumn of 2016.

The Danish Financial Supervisory Authority generally spends considerable resources on advising start-ups on rules and requirements and assisting them in applying for authorisation, etc. Moreover, new business models and fintech will constitute a strategic focus area for the Danish Financial Supervisory Authority towards 2020.[19] A specific example of the Danish Financial Supervisory Authority's enhanced focus on this area is the establishment of a task force to strengthen the measures for non-banks and help them get started.[20]

19 See Danish Financial Supervisory Authority, *Justified confidence - Well-functioning financial markets,* Strategy 2020, June 2016.

20 See www.finanswatch.dk/Finansnyt/article8711154.ece (in Danish only).

4 NON-BANKS AT THE GLOBAL LEVEL

4.1 INTRODUCTION AND SUMMARY

In recent years, other countries have seen a pronounced increase in the level of activity among non-banks in the payments market. This applies both in Europe and elsewhere, including in North America, where most investments in firms of this type take place. The main driver of this development has been increased digitisation, including the more widespread use of smartphones and improved access to the Internet.

The non-banks can, basically, be divided into two groups. One group is firms with payment services as their primary source of income. This group comprises a wide range of firms, varying from small, national providers offering a single solution, often in a niche area, to large, global actors providing payment services in a number of areas. These actors are often referred to collectively as fintechs.

The other group is firms for which payment services is a secondary business area. They have typically chosen to become active in the market for payment services for reasons other than making a profit from user fees. For example, the aim could be to sell more of the goods and services constituting their core business. Often these firms already have a large customer base, which they can draw on when rolling out their payment solution.

Both types of actors make extensive use of the existing payments infrastructure developed by more traditional providers, including the banks. Typically, the non-banks' contribution consists in supplying the interfaces for consumers and businesses, including the hardware and software used to initiate payments. In many cases, the underlying transaction is, nevertheless, a basic card payment or a transfer between bank accounts.

So far, the new foreign actors have not gained significant market shares in Denmark. The reason may be that existing payment solutions, including the Dankort and the banks' new mobile payment services, are very popular among Danish consumers and businesses. However, it is to be expected that some of the foreign actors will eventually gain some foothold in Denmark. This applies especially to those that already provide a service of some kind to Danish consumers.

If foreign actors gain higher market shares in the Danish payments market, this may result in increased competition and a more varied product range – to the benefit of consumers and businesses. But it may also lead to increased fragmentation and higher overall costs for payment services in Denmark. For the banks, the main risk is that the non-banks will also take over a number of other, more profitable services.

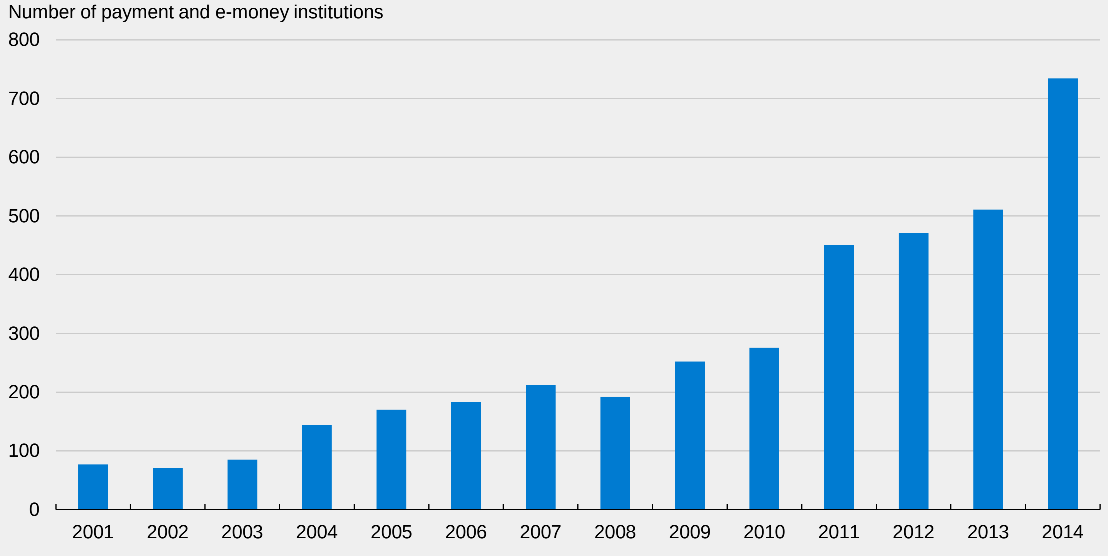
When Danish consumers and businesses use foreign providers not physically present in Denmark, there may be uncertainty as to the governing law. If the contractual relationship is not governed by Danish law, certain special provisions of Danish law will not apply. In addition, it may be cumbersome for Danish consumers to complain and perhaps prosecute a foreign provider, especially one based outside the EU.

4.2 BACKGROUND AND CATEGORISATION

In Europe, non-bank providers of payment services are subject to the rules described in section 2.2. If they issue payment instruments that are broadly used, they must, as a minimum, be authorised as payment institutions. If they also issue broadly used electronic money, they must be licensed as e-money institutions. Providers with relatively modest business volumes may be exempted from applying for approval, but that will depend on the national rules implementing the Payment Services and E-Money Directives.

In recent years, there has been a pronounced influx of non-bank providers in the European payments market. Alone the number of registered payment and e-money institutions in the EU has more than doubled since 2010, cf. Chart 4.1. In addition, there seems to be considerable activity among non-banks that need not be authorised as payment or e-money institutions, either because they are relatively small or because they are, from a legal perspective, not assessed to offer payment services.

European payment and e-money institutions Chart 4.1

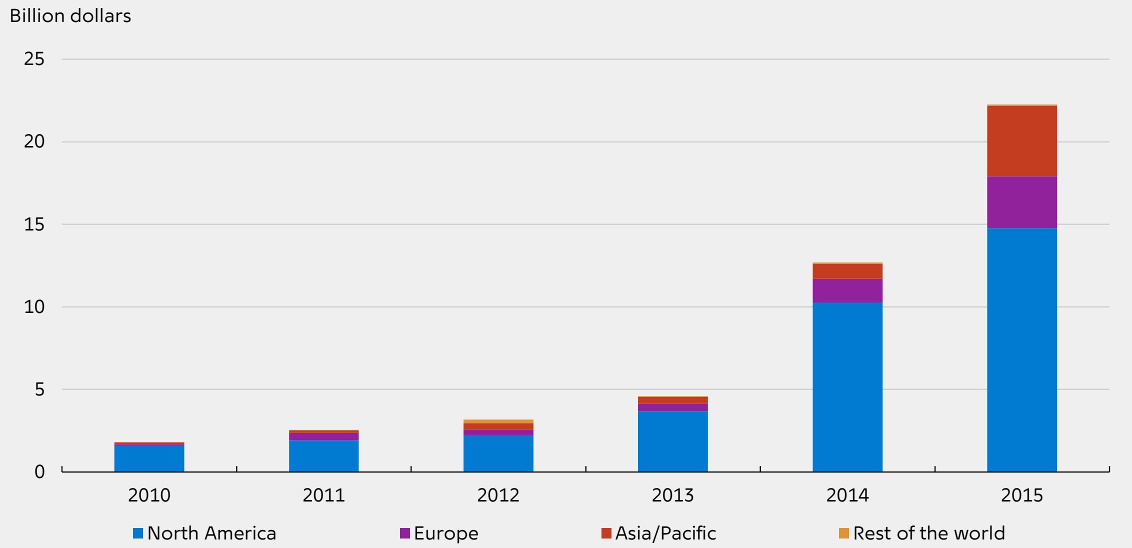


Note: The chart shows the number of registered EU payment service providers that are not credit institutions. The payment institutions included before 2009 are those registered as payment service providers under national legislation.

Source: European Central Bank's Statistical Data Warehouse and own calculations.

A similar trend is seen in other continents. In North America, for example, investments in new actors within financial services (fintechs), including payment services, quadrupled from 2013 to 2015, cf. Chart 4.2. In Asia/Pacific and Europe, growth was even higher as the value of investments in firms of this kind increased by factors of 10 and 7, respectively. But overall investments in such firms remained considerably lower in both Asia/Pacific and Europe than in North America.

Global investment in financial technology firms (fintechs) Chart 4.2



Source: Accenture, *Fintech and the evolving landscape*, 2016.

This development can to a large extent be attributed to some of the factors that are changing the payments market these years, cf. Chapter 2, first and foremost increased digitisation and especially the widespread use of mobile digital equipment such as smartphones and tablets and improved access to the Internet. This has provided new opportunities for initiating and receiving payments and paved the way for a series of payment situations other than physical trading, which in turn has spurred further innovation and new actors.

Although increased digitisation is the common driver of this development, the non-banks are a very heterogeneous group of firms. Basically, they can be divided into two groups. One group comprises firms with payment services as their core business, in the following referred to as providers of payment services. The other group comprises firms that provide payment services primarily in order to support another business area, such as selling goods or services or providing a service via an online platform.

4.3 PROVIDERS OF PAYMENT SERVICES

Non-banks that mainly offer payment services range from small providers with a presence on the domestic market only to large, global firms. In many cases, they started by offering a solution addressing a specific need in the domestic market. Subsequently, they may have launched other solutions and increased the number of countries where these solutions are offered. In this way, they have tried to achieve economies of scale in relation to the payment services, but done so gradually, as cross-border activities require knowledge of the market conditions in each country.

A common feature of these firms is that their business models are based on achieving a profit by providing payment services. Typically, they do so by charging fees to their users, especially to businesses. To the extent permitted by legislation, they may also seek to exploit payments data commercially. In this respect they differ from banks, which rather see payment services as basic services to be provided in order to attract and retain customers with a view to profiting from other business.

Another characteristic of the new providers of payment services is their extensive use of the existing payments infrastructure. This applies both to exchange of payment messages and in connection with the actual transfer of funds from the payer to the payee. In many cases, the only contribution made by these firms is that they provide the interface used to initiate the payment, while the rest of the process is executed using the banks' payment systems and the payment cards infrastructure.

Many of these providers can be categorised as fintechs. This is a concept used about high-tech financial firms. Normally the term fintech is also taken to mean providers of other types of financial services, e.g. lending and services related to credit rating and budget management. Often it is also used about relatively newly established firms that are trying to gain a foothold on the market.

Examples

It is difficult to map or group these service providers in that it is a very dynamic market with very different types of actors. The following therefore provides only a few examples of firms belonging to this category. The focus is on firms that are active in several countries and are or could become relevant for Danish users. It should be emphasised that the firms in question may also offer services other than those mentioned here.

A large number of the non-banks have emerged in response to the different payment solution requirements applying to e.g. e-commerce and mobile commerce compared with physical trading. One example is *PayPal*, which operates a three-party system for payments based on accounts created online, cf. Box 4.1.[21] PayPal began as a payment solution on eBay, a US online platform. Subsequently, PayPal has launched a number of other solutions and acquired several companies.

[21] The boxes in this section and the following section are based primarily on the information provided on the websites of the respective firms.

PayPal Box 4.1

PayPal is a US company operating a three-party system for payments based on accounts created online. The company was established in 1998 under the name of Confinity. In 2002 it was acquired by eBay, which operates an e-commerce platform where PayPal is the most frequently used payment solution. In 2015, eBay decided to spin-off and list PayPal for trading on NASDAQ.

A consumer wishing to use PayPal must first open an account with the company. After that, the consumer can select to transfer money to the account via a credit transfer or to link a payment card to the account for making payments. From a legal point of view, funds held in PayPal accounts are regarded as electronic money in Europe.

PayPal has been used mainly as an e-commerce payment solution. Today, payments can be made via PayPal in practically all countries in the world and in a total of 25 currencies, including the Danish krone. In Denmark, PayPal has a relatively modest market share, but in some countries it is the most frequently used e-commerce payment solution.

Under PayPal's business model it is primarily the retailers who are charged fees. Consumers can open an account and use PayPal for payments free of charge, except for an exchange fee for payments in foreign currency. Retailers are charged a fee per transaction, however, consisting of a fixed amount plus a percentage of the payment value.

In the past few years, PayPal has launched a series of new solutions, including a wallet solution, an mPOS terminal for smartphones and tablets and a credit facility. Furthermore, PayPal has acquired several companies, including the money transfer business Xoom and Venmo, which offers a mobile payment service primarily used for P2P payments.

PayPal's European activities are managed out of Luxembourg, where the company has been granted an EU-wide banking licence. This means that all European customers hold their accounts with PayPal Europe S.à.r.l. According to the company's user agreement, the relationship between PayPal and its customers is regulated by English law, however.

Another example is firms offering "overlay services" in connection with e-commerce. In this case, the service provider logs into the consumer's online bank and executes the payment. *Trustly* is a Swedish company offering overlay services in Denmark and other countries, cf. Box 4.2. Another provider is the German firm *Sofort*, which is active in several European countries, but not in Denmark. According to the revised Payment Services Directive, overlay services will be defined as payment services in future, cf. section 2.3.

Trustly Box 4.2

Trustly is a Swedish provider of overlay services, a payment service used in connection with e-commerce. The company was established in 2008 and has been authorised as a payment institution in Sweden. According to its own information, Trustly is currently active in 29 countries, including Denmark, and the company's solution is used for more than 1 million transactions per month.

To pay via Trustly, the consumer must initially click an icon on the retailer's website. A series of dialog boxes are then displayed, in which the consumer must state his/her bank, account number and online bank login. On the basis of this information, Trustly logs into the consumer's online bank and executes the payment.

Trustly's earnings are made up of fees from retailers. The size of these fees is not disclosed. Trustly does not charge fees to consumers. However, under the Payment Services Directive, Trustly cannot prevent retailers from charging fees to consumers opting for this solution.

Besides online stores, Trustly can be used for e.g. websites offering games and bets. It can also be used for transfer of funds to PayPal accounts and in connection with money transfers via Western Union. Only few Danish retailers offer payment via Trustly.

A third example of non-banks that can attribute their success to e-commerce payment solutions is providers of invoicing services. This may be an attractive solution for consumers that do not wish to pay before they have received their goods or services. In Europe, there are a few providers of such solutions. One of them is the Swedish firm *Klarna*, which is active in many countries, including Denmark, cf. Box 4.3.

Klarna Box 4.3

Klarna is a Swedish provider of e-commerce payment solutions. The company was established in 2005 and is currently active in 18 European countries, including Denmark. According to Klarna's own information, 10 per cent of all online payments in these countries are executed via one of the company's solutions. Klarna has been authorised as a credit institution by the Swedish Financial Supervisory Authority.

Klarna originally offered an invoice-based solution for paying for online purchases. With this solution, consumers need not pay until they have received their goods. Subsequently, the company has launched a number of other solutions, including a service allowing consumers to split payments into monthly instalments and a wallet solution called Klarna Checkout.

Like most other providers of payment services, Klarna has various fees from retailers as its primary source of income. Among other things, these fees must cover Klarna's assumption of the risk that the consumer will not pay for the goods received. In addition, Klarna charges interest to consumers who opt to pay in instalments.

In 2014, Klarna acquired the German company Sofort, which offers an overlay service resembling that of Trustly, cf. Box 4.2. Sofort is normally regarded as the largest provider of this type of service in Europe. So far, Klarna has chosen to let Sofort continue as a separate company offering its own solution.

In addition, there are several examples of new providers of "wallet solutions". This is a kind of electronic wallet in which one or more of the consumer's payment cards can be registered. Other information may also be registered, e.g. an address for delivery of goods to the consumer, which is useful in connection with e-commerce. An example of a global provider of wallet solutions used mainly for e-commerce is *Amazon Payments*, cf. Box 4.4.

Amazon Payments Box 4.4

The company Amazon Payments is owned by Amazon, one of the world's largest online stores. Amazon Payments offers a wallet solution for other online stores based on Amazon accounts that include, inter alia, information about customers' payment cards and delivery addresses. This solution can be used in connection with e-commerce and mobile commerce, but has not been rolled out to physical stores.

To use the Amazon Payments wallet solution, consumers must click the Amazon icon, log onto the account and approve payment. The consumer need not fill in card details or delivery address, as this information has already been registered. Moreover, the retailer receives no information about the consumer's card, which is registered with Amazon only.

Amazon Payments charges a fee to retailers for each transaction. Part of this fee can be assumed to cover the fee payable by Amazon Payments to its acquirer of card payments. Depending on national data legislation, it is also possible for Amazon to exploit the data collected about consumer purchases for other commercial purposes.

In Europe, Amazon Payments has been authorised as an e-money institution in Luxembourg. The company has also notified cross-border activities in Denmark, but is estimated to have concluded agreements with only few Danish online stores. Amazon Payments has also launched a few other payment solutions, but they have all been discontinued after a relatively short period.

In addition, several firms offer businesses a one-stop solution for receiving payments for both physical trading and e-commerce and mobile commerce. For firms selling goods and services via several channels and with a presence in many countries, handling payments can be a large administrative task. Examples of large European providers that offer businesses assistance in this area are *Adyen*, *Ingenico* and *Lyra Network*.

Other non-banks have seen a market for card payment terminals that are linked to mobile devices such as smartphones and tablets (mPOS terminals). This makes the terminals easy to move and bring along. At the same time, they typically come with software for inventory management, analysis of sales data, etc. that can be used on the mobile device. One supplier of such terminals in a number of European countries is the Swedish company *iZettle*, cf. Box 4.5. Similar companies in Europe are *Payleven* and *Sumup*.

iZettle Box 4.5

iZettle is a Swedish provider of mPOS terminals for devices such as smartphones and tablets. The company is registered as an e-money institution in Sweden and according to its own information it is active in 13 countries, including Denmark. iZettle was established in 2010 and the owners include the international card companies MasterCard and American Express.

When it was launched, the iZettle solution comprised a user interface for download as an app and a card reader that had to be physically connected to the retailer's smartphone or tablet. In 2016, the company introduced its new iZettle Reader, which can communicate remotely with the mobile device using Bluetooth technology.

The iZettle solution is aimed primarily at small retailers. The company points out that the connection process is simple and that no separate agreement with a card acquirer is required. In addition, the solution may be useful for retailers that frequently change their points of sale.

In 2015, iZettle expanded its range of services to include the iZettle Advance loan facility. This facility allows retailers to raise loans from iZettle that are repaid in the form of a surcharge on future transaction fees paid to the company. At present this service is offered only to retailers in selected countries, including Denmark.

Non-banks also operate in the market for cross-border credit transfers. This market has been dominated by banks and firms such as Western Union and MoneyGram, which rely on a large network of local agents responsible for receiving and disbursing funds. The new service providers typically offer their users online initiation of the transfer instead. One example of such a service provider is the UK company *Transferwise*, cf. Box 4.6. Other examples are *WorldRemit* and *TransferGo*.

Transferwise Box 4.6

Transferwise is a UK company offering a service for cross-border payments via the Internet. The company was founded in 2011 and has been authorised as an e-money institution by the UK Financial Conduct Authority. Today it is possible to make transfers via Transferwise in nearly 60 countries and in almost 40 currencies, including the Danish krone.

From a user point of view, payment via Transferwise resembles an ordinary bank transfer. The payer first selects an amount and a currency for remitting and receiving the payment and then states whether the money is to be drawn on a bank account or a payment card. Finally, the payee, who must also be connected to Transferwise, is selected.

The difference lies in the execution of the underlying payment. When Transferwise is used, no exchange takes place between the two currencies. Instead, the system searches for two identical, but opposite payments, which are then settled en bloc as two domestic transfers. According to Transferwise, a transfer typically takes 1-4 banking days.

Transferwise charges fees from payers that are, according to the company, lower than the costs of a bank transfer. Transferwise states that it has more than 1 million registered users executing payments in excess of 500 million pounds sterling per month.

Yet another category of non-banks comprises firms offering consumers and businesses the option to pay in virtual currencies, e.g. bitcoin. For example, a number of service providers, such as the Danish firm Coinify, cf. section 3.5, offer to exchange payments received in virtual currencies into the national currency and deposit it in the business operator's bank account. Examples of non-banks providing services based on virtual currencies are *BitPay*, *Coinsimple* and *Coin.co*.

4.4 OTHER FIRMS

The second group of non-banks consists of firms that basically have another main purpose than providing payment services. This group also includes a range of very different firms. A special category is large, global firms that already have considerable customer bases. This means that they do not initially have to attract a sufficient number of users, which can be difficult in a payments market characterised by strong network effects, cf. Chapter 2.

As a main rule, these firms offer payment services for reasons other than making a profit from user fees. This could e.g. be to sell more goods or services, to save the costs for payment service providers or to exploit payment data commercially. Consequently, they can be more competitive than other providers as regards the prices of their services. In this respect they could be said to have certain similarities to banks, which also accept that payment services are not necessarily profitable, cf. below.

Like the above providers of payment services, these actors to a large extent make use of the existing payments infrastructure. This applies especially to the payment cards infrastructure, as the underlying method of payment is typically a card payment. However, a few firms also offer solutions based on prepaid funds, which may add up to considerable amounts. But here too, the infrastructures of traditional service providers are used for topping up the funds, either in the form of a bank transfer or via an attached payment card.

Examples

Among the firms in this group are payees who have launched their own payment solutions. This could in principle be an app allowing consumers to store their card information in order to facilitate payment when trading with the payee in question via a smartphone or tablet. In practice, a large number of businesses offer such solutions as an integral element of their app-based sales.

A more advanced payment solution could be a closed system based on prepaid funds that customers access via a card or a smartphone app. For the business, this solution may boost customer loyalty as well as sales, especially if combined with a discount scheme or similar. Moreover, the business may earn a profit from the prepaid funds in the form of interest income as well as unused funds.

An example of a firm that offers its customers the option to deposit funds in this way is the coffee chain *Starbucks*, cf. Box 4.7. For many years, Starbucks has been issuing prepaid cards, and in 2011 the chain introduced a mobile payment solution in selected countries. The current volume of prepaid funds means that Starbucks would be among the 20 largest banks in the USA if the company had had a banking licence. Starbucks does not offer its payment solutions in Denmark.

Starbucks Box 4.7

The US coffee chain Starbucks is often used as an example of a payee that has launched its own payment solution. It comprises a prepaid card, the Starbucks Card, as well as a mobile payment solution that can be used when purchasing the chain's products.

The Starbucks Card was introduced in 2001. It is accepted at Starbucks points of sale in the USA and a number of other countries, but not in Denmark. Customers can top up their cards by linking it to a payment card and entering a regular top-up value. The card is a loyalty card, as points can be earned and exchanged for goods.

In 2011, Starbucks began to roll out a mobile payment solution, which can now be used in the USA, the UK and Canada. This solution comprises an app that can be downloaded onto a smartphone and can hold the customer's Starbucks Card. Besides payment, it can be used for pre-ordering coffee and for locating the nearest point of sale.

The Starbucks payment solutions mean that the company is now among the largest recipients of funds in the USA. Measured by the value of deposits on the Starbucks Card, the company would be among the 20 largest US banks if it had had a banking licence. In Europe, Starbucks has been authorised as an issuer of e-money in the UK.

Another category of firms that offer payment solutions without having this as its core business area are providers of online platforms. This could be a social network or a platform for retail sales to consumers or for exchange of services between private individuals. Like the Danish examples provided in Chapter 3, this type of platform may require a payment solution enabling transfer of funds between users.

Facebook is an example of a social network provider that has launched its own payment solution, cf. Box 4.8. Transfers via Facebook take place using the "Messenger app", which is normally used for sending messages between participants. If participants wish to send money via the Messenger app, they must attach a payment card first. So far, Facebook's P2P payment solution is available in the USA only.

Facebook Box 4.8

Facebook is the world's largest social network with more than 1 billion members. In the area of payments, the company offers e.g. a solution for P2P payments via the "Messenger app", which can be used to send messages between all Facebook account holders. It is estimated that the app has been downloaded by more than half a billion members.

Facebook's solution for P2P payment uses the card infrastructure, and users must have linked a payment card to the solution. Transfers are free for users, but presumably Facebook has to pay a fee to the card acquirer. Facebook has described it as a non-commercial solution launched in order to boost use of the Messenger app.

At present the Messenger app payment solution is available in the USA only. It is offered by Facebook Payments Inc., which is licensed as a money transfer service in the USA. In Europe, Facebook has been authorised as an e-money institution in Ireland.

Facebook also offers a few other payment solutions. These include a special purchase function – a "buy" icon that can be used for paying for goods and services purchased from advertisers. Again, the member must link a payment card to the solution.

Another example that can be said to belong to this category is the Chinese payment service provider *Alipay*. This service was originally owned by – and provided payment solutions for – Alibaba, which operates an e-commerce platform, but like PayPal it has evolved into a company that offers a wide range of solutions for different payment situations. Other well-known providers of online platforms that also administer their own payment solutions are *Uber* and *AirBnB*.

A third group of actors that provide payment services without having this as their core business area could be large, global technology firms. Examples include Apple, Samsung and Google, which are behind a number of high-profile wallet solutions, cf. Box 4.9. A characteristic of these firms is that they are active in the field of payments mainly in order to increase sales of their primary products and services, not to make a profit from fees.

Apple, Samsung and Google Box 4.9

Over the last few years, the large technology companies Apple, Samsung and Google have all introduced wallet solutions called Apple Pay, Samsung Pay and Android Pay, respectively. This is a kind of digital wallet that can contain an electronic registration of the consumer's card and can be used for payments in physical and online transactions. The three solutions are very similar, so in the following Apple Pay is taken as the point of departure.

Apple Pay can be used with the latest version of the company's smartphone, iPhone 6. A consumer wishing to use Apple Pay must first link a payment card to the digital wallet. Apple has concluded agreements with several international card companies, including Visa and MasterCard, that allow registration of their cards in Apple Pay. In addition, Apple has concluded agreements with card issuers in the countries where the solution can be used.

In physical transactions, payment using Apple Pay takes place by means of contactless technology. More specifically, the payer holds a smartphone close to the contactless terminal and verifies payment by placing a finger on a special touch ID on the iPhone. If payment is approved, the smartphone reacts, e.g. by vibrating. When Apple Pay is used online, the payer clicks an icon and also uses the touch ID verification.

Apple is not in possession of the users' funds at any time, and the company does not perform payment services as defined in European legislation. Apple has income from Apple Pay in the form of a transaction fee charged to card issuers. This is equivalent to the card issuers passing on part of their interbank fees to Apple. However, the latter's primary motivation for launching Apple Pay is believed to be a wish to boost iPhone sales.

Apple Pay was introduced in the USA in October 2014, cf. the table below. Since then, the solution has been launched in other countries, including the UK, France and Switzerland. According to Visa and MasterCard, Apple Pay can be used in more than 250,000 stores in the UK and in the London Underground. There are plans to continue to roll out the solution in other countries, but so far Apple has not announced whether – and if so, when – the solution will be available in Denmark.

Nor have any specific plans been announced for the launch of Samsung Pay and Android Pay in Denmark. Both these solutions were introduced in the US market in September 2015 and have since been made available in some of the same countries as Apple Pay. Unlike Apple, Samsung and Google do not charge card issuers any transaction fees.

Apple, Android and Samsung Pay

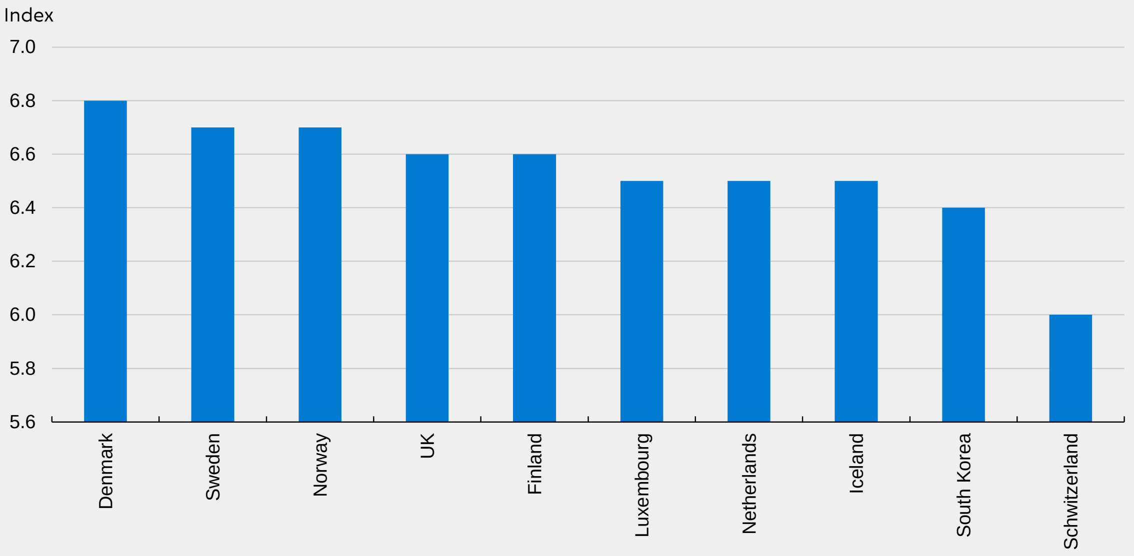
	Apple Pay	Android Pay	Samsung Pay
Launch	USA (Oct. 2014)	USA (Sept. 2015)	South Korea (Aug. 2015) and USA (Sept. 2015)
Current active markets	USA, UK, Canada, Australia, China, Singapore, France, Switzerland and Hong Kong	USA, UK, Australia and Singapore	South Korea, USA, Singapore, China, Spain, Australia and Brazil

4.5 PERSPECTIVES IN DENMARK

The implications of the new, foreign actors for consumers and firms in Denmark will depend on their penetration on the Danish payments market. If they succeed in gaining market shares, this may bring both advantages and disadvantages. On the one hand, they can be expected to contribute to more competition and innovation, which may lower the prices of payment services and increase the product range. On the other hand, this may also lead to growing fragmentation and reduced economies of scale.

At present none of the foreign actors mentioned above play any major role in Denmark. Several of them are not even active in the Danish payments market. But they can be expected to enter the market before long, as they gradually roll out their solutions across Europe. There is also reason to believe that some of them may gain some foothold in Denmark, given the Danes' willingness to embrace new technology, including the prevalence of smartphones and the widespread Internet access, cf. Chart 4.3.

Consumers' individual preparedness to go digital, 2015 Chart 4.3



Note: The index includes indicators such as number of mobile phone subscriptions, number of people using the Internet, number of households with personal computers, number of households with Internet access, number of landline and mobile broadband subscriptions and use of social networks. The chart shows the 10 countries with the highest indices among a total of 147 countries. The maximum index score is 7.

Source: World Economic Forum.

However, a number of specific factors may impede the progress of foreign actors in Denmark. Above all – as pointed out in section 3.5 – a number of existing payment solutions are very popular and many Danes see these as sufficient to meet their needs. The Dankort and the mobile solutions MobilePay and Swipp can already be used in multiple payment situations and are still being developed. Moreover, experience shows that payment habits change slowly when people are satisfied with the existing solutions.

There may also be other reasons why it can be difficult to make a profit in the Danish payments market. Over the years, consumers and businesses in Denmark have got used to payment services being free or relatively inexpensive. Hence, the banks must accept relatively low coverage of costs for payment services, cf. below. In addition, the opportunities to profit from commercial exploitation of payments data are restricted by legislation, cf. Box 4.10.

The foreign actors that would seem to have the greatest potential to become significant players in the Danish payments market are those which already have relationships with Danish consumers. This could be e.g. providers of social networks or of IT and telecom equipment such as smartphones. These actors have already penetrated one side of the market, typically payers, and thanks to network effects this will make it easier for them to penetrate the other side, i.e. to get payees on board.

Legislation on use of payments data Box 4.10

The legal basis for using payment instruments in Denmark is primarily the Payment Services and Electronic Money Act, which also regulates service providers' use of payments data. According to section 85 of the Act, processing of data on where payers have used their payment instruments, e.g. cards, and what they have purchased may take place only when this is necessary in order to execute or correct a payment or there are other objective reasons.

The purpose of this provision is to ensure that payments data is not used to retrieve consumption profiles or otherwise map consumers' purchasing patterns. Such use of payments data could be exploited by businesses in connection with their own marketing or sold to other firms. This provision cannot be derogated from, not even with the consumer's consent.

The Consumer Ombudsman, who is responsible for supervising compliance with section 85, has assessed the provision on several occasions, including its scope. Based on developments in this area, the Consumer Ombudsman in January 2016 announced that practice would be adjusted so that section 85 applies to retailers too. This means that retailers may not collect and store information about consumers' purchases via their payment cards.

The restriction on retailers' use of payments data applies to purchases made using the payment function on consumers' cards. Hence, loyalty programmes for which consumers can register in order to obtain discounts and receive special offers based on previous purchases are not comprised by this ban.

Consequences for the banks

The banks have a solid position in the payments market in Denmark. This applies both in relation to the initiation of a payment, e.g. by means of a card or a credit transfer, and in relation to the underlying execution of the payment in the payments infrastructure. Furthermore, surveys show that consumers have strong trust in the banks when it comes to executing payments and handling sensitive personal information.[22]

However, it has been pointed out by several observers that the current changes in the payments market, cf. Chapter 2, may also affect the role of the banks.[23] In an analysis based on the eight largest Nordic banks, it is assessed that around one third of the banks' revenue from payment services could potentially flow from the banks to fintechs and global actors by 2020.[24]

But it should also be noted that several of the new solutions launched these years are aimed at replacing cash by electronic payments. Viewed in isolation, this trend is positive for the banks, which incur large costs for cash handling.[25] At the same time, cash is traditionally a business area where the banks have found it difficult to make a profit, i.e. cost coverage has been low.

Moreover, as stated above, most non-banks rely on the payments infrastructure already available, including the existing payment instruments. So a payment using a new actor's solution will typically still generate a card payment or a credit transfer. This means that the banks will still be able to make a certain profit from such transactions, e.g. in the form of the interbank fee received by issuers of payment cards in connection with card payments.

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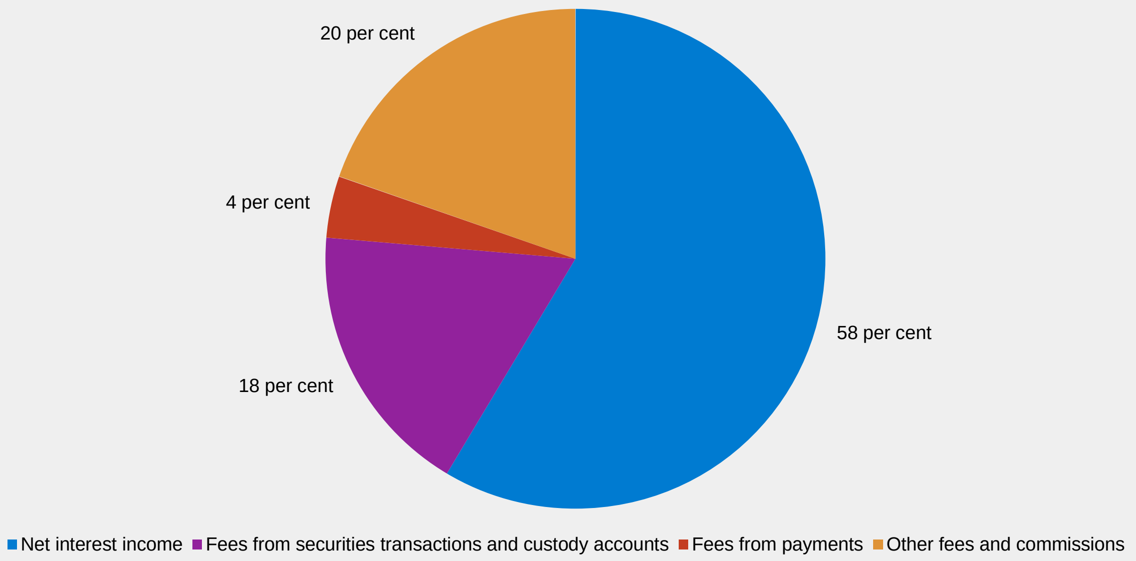
[22] See e.g. speech by Hugo Frey Jensen at the Director's Conference of the Danish Bankers Association, 8 September 2014 (in Danish only).
[23] See e.g. Yves Mersch, *Three challenges for the banking sector*, 12 November 2015.
[24] Accenture, *Digital disruption in Nordic retail banking*, 2015, p. 16.
[25] Cf. Danmarks Nationalbank, *Costs of payments in Denmark*, 2012, p. 10.

Finally, income from payment services constitutes only a small share of the Danish banks' total earnings, cf. Chart 4.4. In other countries, income from payment services may be higher, and a study shows that for European banks it may account for nearly 15 per cent of total earnings.[26] Besides direct fee income, the banks also have indirect income from payment services. This income is more difficult to quantify.

The banks' net interest and fee income, 2015 Chart 4.4



Note: Data comprises banks in the Danish Financial Supervisory Authority's groups 1 and 2.
Source: Danish Financial Supervisory Authority and own calculations.

Although income from payment services constitutes only a small share of the Danish banks' total earnings, there are several reasons why the banks have strong focus on retaining payments as an important part of their core business.

Firstly, payment services account for a large share of day-to-day contacts with customers, thereby providing a platform for communicating other, more profitable products such as various loan types. If the non-banks "get a foot in the door" in relation to payment services, the banks face the risk that they also take over other, more profitable services. Examples include iZettle and PayPal, which offer retailers a kind of loan financing, cf. above.

Secondly, non-banks that offer payments based on prepaid funds could in principle reduce the deposit volumes of the Danish banks. A frequently cited example is Starbucks, which has received considerable funds that could also have been deposited in banks, cf. above. Nor can it be ruled out that large providers of Internet platforms may set up closed systems in which payments are made without being registered in bank accounts.

[26] Cf. Deloitte, *Payments disrupted: the emerging challenge for European retail banks*, 2015.

Thirdly, if permitted by legislation, the banks may exploit customer transaction data commercially, e.g. by providing customers with a better overview of the bank's financial services or by offering targeted products. Obviously, this is not possible if other service providers handle their payments.

In order to remain competitive, in the payments area and in other areas, the banks have invested massively in digitisation and new products in recent years. The banks have launched two mobile payment solutions – MobilePay and Swipp – that have rapidly become popular among the Danes. Moreover, the payments infrastructure has been modernised to allow e.g. real-time payments.[27] And finally, the banks have entered into various cooperation projects with non-banks in the field of payment services, e.g. via the organisation Copenhagen FinTech, and taken organisational initiatives that should contribute to increasing focus on development and innovation.

4.6 REGULATION

In Denmark, payment services have traditionally been supplied by providers based in Denmark. The increased use of the Internet for provision of financial services means that it has become easier to conduct cross-border business via the Internet. Various aspects of the regulation of foreign providers of payment services are discussed below.

Scope of legislation

For foreign actors within payment services, Danish legislation – the Payment Services and Electronic Money Act – is relevant only if they are assessed to offer payment services in Denmark. If that is not the case, any contractual relationship between a foreign service provider and a Danish user can be assumed to be regulated by the legislation of the providers home country. If the foreign provider is located in another EU member state, this legislation will, like the Danish legislation, be an implementation of the Payment Services Directive.

There are no clear guidelines saying when a foreign actor offers payment services in Denmark if the firm does not have a physical presence in the form of e.g. a branch. The Payment Services Directive allows firms to offer payment services in other EU member states without being represented there, cf. Box 4.11. However, the Directive provides no assistance for interpreting when a foreign service provider not represented by a branch can be said to provide payment services in the member state in question.

One possible interpretation is that if people at their own initiative use payment services from a provider in another EU member state, it is not necessary for this provider to notify cross-border activities. This could be taken to mean that a service provider must to some extent have targeted its activities at users in another member state before it can be said to be active there.

In the assessment of the latter, several factors may be taken into account. If a service provider is represented in another member state via agents, this is a clear indication that the firm provides services in that member state. The same applies if a provider offering its services via the Internet has a page in the language of the member state in question. In a Danish context, it might also indicate that a firm provides services in Denmark if it offers a solution to which a Visa/Dankort can be linked.

[27] See Danmarks Nationalbank (2012), Report on domestic payment transfers in Denmark (in Danish with a summary in English), for a more detailed description of the elements of the modernisation of the payments infrastructure.

Rules for providing cross-border payment services in the EU Box 4.11

Under the Payment Services Directive, a provider of payment services may offer its services in other member states (host countries) on the basis of authorisation from the supervisory authority in its own member state (the home country). In such cases, the provider in question must notify the supervisory authority in the home country of these plans and the home country authority will then inform the authority in the host country. Cross-border activities may either be carried out via a physical presence in the host country in the form of a branch or via an agent, i.e. a person acting on behalf of the provider of payment services.

As a main principle, payment service providers with cross-border activities are subject to supervision in the home country. If the institution offers its services via established agents or branches in the host country, the supervisory authority in the member state in question may, however, take action in the event of violation or presumed violation of the rules in the EU Directive.

The new Payment Services Directive gives the host country far better opportunities to ensure that foreign institutions observe national rules, e.g. in the area of consumer protection. One way to ensure this is for the host country authority to ask institutions operating via agents and branches in its area regularly to report on their activities.

Institutions located outside the EU may not offer payment services in Denmark as the Payment Services Directive stipulates that a firm must be based in the EU/EEA in order to offer payment services in the EU.

But even though a foreign actor is assessed to offer payment services in Denmark on the basis of a licence from another EU member state, it is not clear whether it must observe the provisions of the Danish Payment Services and Electronic Money Act or the rules applying in the home country. There has not been much focus on this issue, given that the Payment Services Directive harmonises legislation in the EU member states. However, it is relevant since the Directive allows discretionary national rules in certain areas and since there may be national rules in areas not regulated by the Directive.

A possible guideline when assessing the above is the E-Commerce Directive, which stipulates that the legislation in the home country applies. The E-Commerce Directive applies to "information society services", i.e. services where the consumer takes contact with the provider and requests the service, which is then provided online. One example is airline tickets, which the consumer orders, pays for and receives via the Internet.[28] If payment services can be categorised as information society services, this would therefore indicate that the service provider's national legislation applies.

The Danish Consumer Ombudsman is currently assessing whether payment services can be regarded as information society services. This work was spurred by, inter alia, an inquiry from a consumer regarding a foreign provider's compliance with the provisions of the Payment Services and Electronic Money Act on charge-back when trading online.

Consequences

If Danish legislation does not apply to foreign actors, a distinction could be made between service providers based inside and outside the EU.

If the provider is from a non-EU member state, legislation – and hence consumer rights – may vary considerably. However, most countries have a relatively high degree of consumer protection.

[28] In 2005, a case was brought against Ryan Air for charging high fees for payment using payment cards to consumers purchasing airline tickets online. Although Ryan Air targeted Danish consumers, the firm did not have to observe the Danish fee rules as it provided an information society service.

If the foreign provider is located in another EU member state, this legislation will, like the Danish legislation, be an implementation of the Payment Services Directive. Nevertheless, there may still be national differences, partly due to national discretion, partly due to special Danish rules. These include e.g. the charge-back rules and the rules on protection of data.

In addition, it may be cumbersome for consumers to complain or bring an action against a foreign provider of payment services. This applies particularly to service providers from non-EU member states. If it is more difficult to take legal action than it would be with a national service provider, consumers will typically put up with more before complaining, and some providers may exploit this situation.

Furthermore, it is important to ensure appropriate handling of consumer complaints if a larger share of the payment disputes arising are to be heard outside the Danish Complaint Board of Banking Services, which is the body that considers consumer complaints about banks. For instance, it is important to ensure uniform enforcement of the law.

Besides the consumer protection aspect, there may be competition aspects to take into account. If the foreign actors are subject to less stringent requirements and/or have more freedom of action, this could give them a competitive edge over e.g. Danish banks. However, a European provider of payment services must, as a minimum, observe the requirements of the Payment Services Directive, cf. above.

Finally, it should be noted that if a service provider displays consumer-unfriendly behaviour, this information can rapidly and easily spread via social media. This may have a marked negative impact on the service provider's image, leading to loss of earnings. So presumably there is a high degree of self-regulation in this area.

5 GLOSSARY

App

An application, i.e. a piece of software stored on a smartphone or tablet. Some apps can be used for paying for goods and services bought from one or more payees. The consumer pays by opening the app and executing a number of steps.

Card acquirer

A provider of *payment services* that concludes agreements with retailers on receipt of card payments. An example is Nets, which acquires *Dankort* payments.

Card issuer

A provider of *payment services*, e.g. a bank or a retailer, which issues payment cards.

Charge-back

Reversal of an amount debited to a payer's account. In connection with e-commerce, special Danish provisions laid down in the Payment Services and Electronic Money Act stipulate that consumers have the right to have the payment charged back if the goods are not delivered or are defective.

Contactless technology

Technology that enables registration of a payment without any contact between the *payment instrument* and the reader. An example of this technology is Near Field Communication, which requires the instrument to be swiped close to the reader.

Credit card

A payment card that can be used for buying goods and services and possibly for cash withdrawals on the basis of an approved credit line. For payments by credit card, the money is not debited to the cardholder's account until sometime after the payment, typically once a month.

Danish Payments Council

In 2012, Danmarks Nationalbank established the Danish Payments Council as a forum for collaboration on Danish retail payments. The object of the Council is to promote the efficiency and security of these payments for all parties involved, i.e. consumers, firms, banks, etc.

Dankort

The national *debit card* in Denmark, issued by banks and owned and acquired by Nets.

Debit card

A payment card that can be used for withdrawing cash and buying goods and services. The amount is debited directly from the cardholder's bank account. The *Dankort* is an example of a debit card.

Digital wallet
A digital wallet contains electronic registration of the consumer's cards or other payment solutions, e.g. online accounts. It can be server-based or downloaded as an *app* on a smartphone and used in various payment situations.

Electronic money
A monetary value that is stored electronically or magnetically, e.g. on the chip of a payment card or on a server. It is issued against prepayment and can be used as payment for goods and services from payees others than the issuer. Electronic money is often called e-money.

E-money institution
Provider of payment services subject to the Payment Services and Electronic Money Act. E-money institutions may issue *electronic money* and provide *payment services*, but they may not receive deposits.

Four-party system
The set of agreements between the parties to a card system or similar in which the payer and payee do not necessarily have agreements with the same provider of payment services.

Interbank fee
A fee payable by the *card acquirer* to the *card issuer* per payment. The interbank fee may be a fixed amount per payment, a percentage of the payment value, or a combination of the two.

MPOS terminal
A device that enables the receipt of card payments by use of a smartphone or tablet. It may consist of e.g. an accessory, or dongle, which is connected to the smartphone or tablet.

Network effects in the payments market
This means that the more payees that accept the solution, the more attractive it becomes for payers to have it – and vice versa. These effects typically have a self-reinforcing impact on the prevalence of a given payment solution.

Overlay service
An e-commerce payment solution based on the consumer providing his or her account number and online bank login to a third party, which will then log into the consumer's online bank and execute the payment.

Payment institution
A provider of payment services subject to the Payment Services and Electronic Money Act. Payment institutions may provide *payment services* as defined in the Act, but they are not allowed to receive deposits or issue *electronic money*.

Payment instrument

An instrument used for initiating a payment, e.g. a card or mobile phone. A payment instrument is typically linked to an account with a provider of *payment services*.

Payment service

A service whereby a provider transfers money from a payer to a payee. The activities that are considered to be payment services in legal terms are defined in an annex to the Payment Services and Electronic Money Act.

Prepaid card

A payment card containing a prepaid monetary value, which can be used for payments. The prepaid funds may be stored e.g. in the card chip or registered to a server-based account.

Physical trade

A payment situation defined in the Payment Services and Electronic Money Act as transactions for which both the payer and the payee are physically present. Physical trade is also called point of sale transactions.

SEPA

The Single European Payments Area, SEPA, covers payments in euro by citizens and firms. From 1 February 2014, all credit transfers in the euro area and direct debits in euro must be executed according to the SEPA standards.

The Payment Services Directive

EU legislation defining what *payment services* are and stipulating who may offer such activities in the EU. The Directive also includes provisions on e.g. access to payment systems, disclosure requirements, liability for fraudulent use, fees, etc.

Three-party system

The set of agreements between the parties to a card system or similar in which the payer and payee have agreements with the same provider of *payment services*.