Annual Report 2016

Dutch Payments

Association

Amsterdam, May 2017



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Profile

The Dutch Payments Association (Betaalvereniging Nederland) organises the collective tasks in the national payment system for its members. These members are providers of payment services on the Dutch market, such as banks, payment institutions and electronic money institutions. The collective tasks concern infrastructure, standards and common product features, aimed at achieving an optimally effective, secure, reliable and efficient payment system.

The payment system is of great social importance. Hence, transparency, openness and accessibility are important principles. Active cooperation with representatives of end users is essential for an efficient and secure payment system. Consequently, the Dutch Payments Association devotes considerable attention to stakeholder management.

Background

In 2010, the Payment System Committee of the Dutch Banking Association (*Nederlandse Vereniging van Banken*, NVB) and Currence concluded that a reassessment of the structure of the Dutch payment system was inevitable, given the developments taking place within the system. These developments include SEPA, the internationalisation in general, the more open and dynamic market structure created by the arrival of non-bank payment institutions (and similar entities), and the increasing need for stakeholder and supply chain management throughout the sector. In addition, with the advent of payment institutions, it is no longer considered desirable for the NVB, as the organisation representing the interests of the banks, to fulfil collective tasks for the payment system.

The creation of a new payment organisation was investigated in 2010 and 2011, under the direction of a steering committee composed of representatives from banks, the NVB and Currence, and with De Nederlandsche Bank (DNB) participating as an observer. This investigation considered job responsibilities, governance and funding, as well as the structure of the organisation. Since the demand side of the payment system is also important, the results of the study were discussed with the members of the National Forum on the Payment System (*Maatschappelijk Overleg Betalingsverkeer*, MOB).

The Dutch Payments Association was founded on 29 November 2011, in the knowledge that central investment and direction of national collective tasks – combined with clear and unambiguous governance – would contribute to the effectiveness, efficiency, security and reliability of the national payment system.

Our mission

The Dutch Payments Association aims to achieve an optimally effective, secure, reliable and socially efficient payment system. To this end, it provides services (collective tasks) that serve the common interest of its members and supervises these tasks.

The Dutch Payments Association has established the following core values as essential prerequisites for fulfilling its tasks successfully:

- Interconnecting
- Driven
- Relevant

The Dutch Payments Association considers it extremely important to actively involve the representatives of end users – i.e. entrepreneurs and consumers – in its activities. In doing so, it gives substance to the social nature of the payment system.

Our vision on the payment system

The payment system is an indispensable component of the economy; it has many stakeholders and is of great social significance. In that sense, it has a utility function. The large number of parties involved, the high quality requirements, extensive rules and regulations and the large volume of transactions make the payment system an extremely complex market. Consequently, all relevant parties have to be involved and their interests taken into consideration to achieve an effective, secure, reliable and socially efficient payment system.

With the creation of the Single Euro Payments Area (SEPA) in the Eurozone, standards and payment products are in principle established at European level rather than national level. Moreover, European legislation gives new players (payment institutions in particular) more opportunities to enter the payment market. Even though the payment market is becoming international, national collaboration with regard to collective and non-competitive matters remains extremely important. This is particularly important in terms of further improving the high quality level of the payment system and retaining the social advantages achieved thus far, as well as expanding these further where possible.

The Dutch Payments Association's tasks include:

Product management

In its capacity as product manager, the Dutch Payments Association focuses on establishing, managing and adjusting common product characteristics, standards and rules. Its tasks also include (further) developing and implementing new collective services, national and



international products and standards initiated by the members or based on foreign best practices.

Change management

The Dutch Payments Association ensures that national and international requirements and developments with regard to the payment infrastructure, standards and product characteristics are translated to the national payment system and is responsible for their implementation.

Quality assurance

The Dutch Payments Association formulates security requirements for the payment system and certifies, among other things, market parties within the payments chain. It also supervises compliance with rules and regulations in order to guarantee and, where possible, improve the security and reliability of the payment system. In addition, it monitors the quality of the payment chain and coordinates the resolution of any disruptions in the chain.

Security and fraud prevention

The Dutch Payments Association manages the collective aspects of cyber security policy in relation to the payment system, and works closely with other institutions, including the National Cyber Security Centre (NCSC), to implement this policy. It also coordinates fraud prevention within the entire payment chain, compiles and analyses statistics on fraud, and drafts prevention policy. In addition, it coordinates the implementation of measures designed to prevent fraud.

Payment system expertise

The Dutch Payments Association keeps track of external developments that are of interest to its members and other stakeholders. To this end, it consults (potential) players in the payments market, external standardisation bodies and researchers. Where useful and desired, it collaborates with external parties and conducts research that contributes to increasing the effectiveness, security, reliability and social efficiency of the payment system.

Information

The Dutch Payments Association conveys various viewpoints and reports to the public, coordinates collective information campaigns regarding its activities and handles media relations.



Report from the Board of Directors

It is with great pleasure that I present the annual report of the Dutch Payments Association for the 2016 financial year.

Board of Directors

As specified in the statutes, the Dutch Payments Association's Board of Directors comprises nine members: three independent members, including the chairman, and six members who are affiliated with members of the Dutch Payments Association. In this way the Dutch Payments Association demonstrates that, as an association of payment service providers (the supply side), it also values the social role of the payment system, including the interests of the payment service users (the demand side). This ensures that during the discussions in the board, the viewpoints of all the parties involved in the payment system are heard.

The section on Board and Management provides additional information on the composition of the board.

The Board met five times during the reporting period. During its meetings, the Board focused not only on its regular activities (see below), but also on the Dutch Payments Association's project-based activities that are of importance for society, such as Instant Payments and contactless payment on public transport. The Board noted with satisfaction that these programmes have been expeditiously implemented. It also complimented all of the parties concerned on the successful introduction of iDIN. The Board of Directors has a number of committees. The Selection and Appointments Committee evaluates potential board candidates against the profile for board members and during the AGM nominates those with a positive recommendation for appointment.

The Audit Committee meets four times a year. Two of these meetings are specifically focused on the budget and the annual accounts, respectively. During the past year special attention was paid to the new structure of the Administrative Organisation & Internal Control (AOIC) and the change to a new accountant (BDO instead of KPMG).

It was agreed during the course of 2016 that the board would conduct a self-evaluation in the first half of 2017.

Activities

The Dutch Payments Association has three objectives: to promote an efficient and effective payment system, to ensure the system's security and reliability and to promote a clear, common vision regarding the system. In the Profile section, we provide a detailed explanation of our mission and vision for the payment system.



For a more detailed description of the Dutch Payments Association's activities in the past period, please refer to the Activities section.

The Dutch Payments Association's Board and management continue to work to make it a more effective and efficient organisation. We value the fact that we enjoy the confidence of our members and stakeholders, and have thus benefited from the support necessary to play a central facilitating role in the Dutch payment system.

The Board of Directors approves of the annual review of the functioning of the Dutch Payments Association carried out by management along with the members of the Advisory Council. Based on the results of the review conducted in 2016, several action points were formulated on which work commenced within that same year. The board is appreciative of the way in which the management communicates its activities and products in a transparent and professional manner to a wide group of interested parties.

The Dutch Payments Association welcomed two new members in 2016, including one payment institution.

In conclusion

The Board of Directors looks back on this reporting period with satisfaction. It is pleased to note that the reorganisation of the financial administration has indeed resulted in both quality improvements and cost savings.

The board thanks the management for the pleasant and professional collaboration and thanks all the staff for their hard work.

Amsterdam, 10 May 2017

On behalf of the Board of Directors, Henk Brouwer, Chairman



General developments in the payment system

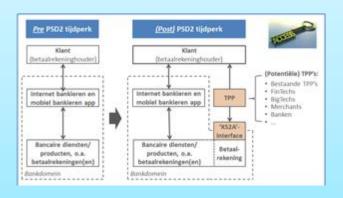
Developments

A number of the Dutch Payments Association's activities in 2016 were determined by significant general developments in the payment system.

Increased competition in the payments market

Increased openness and competition in the payments market sit high on the European agenda and the European Commission has drawn up regulations for this purpose. Brussels aims to generate more market competition by lowering entry barriers and stimulating market innovation.

The Revised European Payment Services Directive (PSD2) entered into effect on 13 January 2016. The PSD2 confers on account holders the right to use payment initiation and account information services ¹ offered by Third Party Providers (TPPs). In order to offer this service, the account holder grants the TPP access to their payment account. The figure below provides a schematic overview of this process.



¹ A payment initiation service is the initiation of payment orders on the request of and with the express authorisation of a private or corporate account holder via the account holder's online payment account. Account information services can, at the account holder's request, be used to compile information from the account holder's various payment accounts, for example for the purposes of online budgeting tools.



All EU member states are required to incorporate the PSD2 into their national legislation by 13 January 2018. As of that date, they must also comply with the terms of the PSD2, with the exception of certain security procedures and measures. The European Banking Authority (EBA) in London has developed secondary legislation in this regard. The Regulatory Technical Standards (RTS) concerning strong customer authentication and secure communication are without doubt the most significant for the sector. The RTS apply to remote electronic payments in general and, more specifically, the interaction between banks and TPPs. It is expected that the European Commission, the European Parliament and the European Council will finalise the final RTS in the latter half of 2017 and that it will enter into force eight months later – in the spring of 2019 at the earliest.



In 2016, the Dutch Payments Association and its members submitted a response to the draft RTS which the EBA presented to the market for consultation. We anticipate that the PSD2 will facilitate promising innovations in the payment system. The challenge for market participants is to prevent market fragmentation as far as possible. One potential consequence of such fragmentation is that the (society-wide) benefits of any new opportunities remain relatively invisible and ambiguous to the market. A further risk posed by fragmentation is greater inefficiency due to TPPs or entrepreneurs having to create and maintain a variety of IT links with the banks that service the payment. There are clear challenges to overcome in this area.

In this context, the Dutch Payments Association is actively involved with the NextGenPSD2 Taskforce, a market initiative of the Berlin Group. This comprises a long-term partnership between payment service providers working towards standardisation and interoperability. The Taskforce's objective is to draw up a specification for uniform interfaces for exchanging messages between TPPs and the banks that service accounts in order to reduce the mentioned risk of fragmentation.

Furthermore, more attention needs to be devoted to the safety of these new forms of payment service. Whilst the PSD2 and RTS provide frameworks for these services, considerable uncertainty regarding the practical implementation prevails. One essential component is the issuing of certificates to digitally identify TPPs. It is important for the validity

of these certificates to be continuously linked in real time to the validity of the licence (for payment initiation services) or registration (for account information services) issued to the TPP by the national competent authority.

In order to develop new services and solutions like those mentioned above, it is necessary to secure a commitment to harmonise with other interested parties. Input from the demand side is a crucial condition in order to increase the chances of success. To this end, the Dutch Payments Association contributes to two stakeholder consultations, namely the Euro Retail Payments Board (ERPB) and the National Forum on the Payment System (Maatschappelijk Overleg Betalingsverkeer, MOB).



At the end of 2016, the ERPB established the Working Group on Payment Initiation Services for the purpose of establishing technical, operational and business-related preconditions to enable TPP services to function efficiently. The Dutch Payments Association contributes to this working group via various European umbrella organisations. The MOB has set up a similar working group for Dutch umbrella organisations, which keeps them informed of developments and provides a forum in which to introduce and discuss input of specific relevance to the Netherlands. This MOB working group is chaired by the Dutch Payments Association.

Emergence of new payment service providers

Increasing numbers of non-bank providers – often driven by the development of new technologies – are entering the payments market with new applications. PSD2 is creating new opportunities for these parties. This is serving to increase competition between new and established payment service providers, but it also creates opportunities for cooperation. Indeed, all payment service providers are compelled to innovate in order to attract new and retain existing customers. The parties' best chance of maximising their customer reach is through mutual cooperation.

For new payment services, short 'time to market' is becoming ever more important. We are now increasingly seeing such providers use an 'Agile' approach, which creates new dynamics to which the Dutch Payments Association is responding. Agile is a collective name for an iterative style of project management. Instead of planning out a project in depth at the outset, Agile is a cyclical approach in which a relatively small multidisciplinary team designs, builds, tests and delivers (small) components within short, structured periods known as 'sprints' – often no longer than a month or sometimes even a week at most – in order to more rapidly achieve a qualitative better final result. Each sprint is essentially a miniature project in itself.



The arrival of these new players means that payment chains are becoming longer and more complex, which increases the need for effective coordination within the chain.

'Mobile first' and a seamless shopping and payment experience

Globally, the number of 'mobile payments' completed via apps on smartphones and tablets is on the rise. The online market is transitioning towards the mobile channel and consumers are increasingly using their online banking app to put through transfers and check their balance. Moreover, consumers are also increasingly combining online and in-store shopping to achieve their ideal retail experience, blurring the line between the two to form 'omni-channel retail'. Retailers are striving for maximum 'conversion' i.e. moving customers from browsing and familiarising themselves with products to making an actual purchase. This requires a seamless payment process.

Online identification can play an important role in making online purchases and using online services. iDIN enables consumers to identify themselves to other organizations online using the secure and trusted log-in facilities of their own bank.





Increasing demands on payment infrastructure, including for 'Instant Payments'

The increasing digitisation of the payment system is placing greater demands on the availability, robustness, speed and flexibility of the underlying payment infrastructure. Following the successful implementation of SEPA, Instant Payments with immediate debiting and crediting becomes the new societal norm. This remains high on the European agenda and banking communities are working to create a pan-European system. Some countries are opting for partial solutions, such as 'peer-to-peer' (P2P) payments,¹ while others, including the Netherlands, are adapting their underlying payment infrastructure to make it suitable for Instant Payments, in principle for all payment types.

Under the direction of the Dutch Payments Association, the Dutch banking sector has been developing a new infrastructure for Instant Payments since 2015. Transfers will be instantly credited to the beneficiary's bank account and the funds become available within a few seconds – 24 hours a day, 365 days a year – even if the beneficiary is a customer of another bank. Significant progress was made during 2016. It is anticipated that Instant Payments will be introduced onto the market in the first half of 2019.



¹ This includes customers transferring (limited) amounts to each other using their smartphones, generally using aliases such as their mobile telephone number or email address.



Annual Report 2016

New technologies and the importance of standardisation

New technologies, including biometrics and blockchain technology, may lead to new applications in the payment system. However, innovation in the payments market may initially lead to fragmentation. The use of open standards is a prerequisite for enabling subsequent interoperability with other solutions and likewise for pan-European compatibility. One significant technological development are interfaces, often in the form of Application Programming Interfaces (APIs), to provide data to third parties. The PSD2 requires payment account providers, such as banks, to offer such an interface for the payment initiation and account information service providers mentioned above. The market initiative to draw up a

An inter-bank blockchain research project was initiated in 2015, which continued in greater depth throughout 2016. The Dutch Payments Association is facilitating the collaboration in this area, with the aim of increasing our collective knowledge of blockchain technology and identifying applications within the payment system. DNB has also affiliated itself with the joint research.

The project involves building a proof-of-concept blockchain solution for transferring funds based on the blockchain software Ethereum. The partnership is intended to test theoretical elements, including speed, scalability and data privacy, in a practical setting.



Europe-wide specification is one of the responses to this requirement.

Our field of activity

Our stakeholders

The Dutch Payments Association wishes to unite all the players in the payments sector to achieve optimal results for society. This emphasizes the importance of carefully-considered stakeholder management. In the Netherlands, social and political involvement in the payment system is considerable. This includes our societal partners in the MOB,² as well as those in the political arena. Themes such as account number portability, Instant Payments, namenumber verification and compensation policy for electronic payment fraud have regularly been the subject of public and political attention.

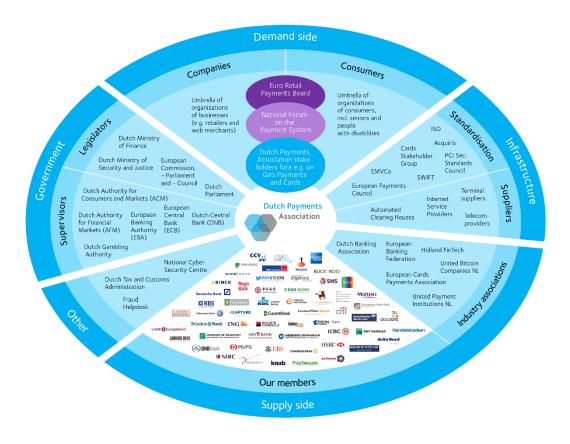
² The MOB, which is chaired by DNB, focuses on promoting the efficiency of the Netherlands' payment system on behalf of the public. It is composed of representatives of the providers and users of the payment system. The Dutch Payments Association is also a member of the MOB.



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We proactively share our views on matters touching the public interest on behalf of our members and provide information to various parties within the Dutch and European arena. Likewise we actively contributed to the social debate in 2016. In addition, we use our expertise during European and national legislative processes and provide input to the various parties on collective, non-competitive issues.

We discuss relevant developments in our own stakeholder fora. Various consumer organisations, entrepreneurs associations, terminal suppliers, cash register suppliers, banks and payment processors convened at the Card Payments Forum on a number of occasions in 2016. Matters under discussion included European developments, communication campaigns and experiences with (mobile) contactless payments. Consumer organisations, entrepreneur associations, banks, large creditors and transaction processors participate in our Giro-Based Payment Stakeholder Forum. In 2016 topics such as the Switching Service, a number of themes relating to direct debits, releasing name and address details, and the phasing out of the Acceptgiro product, were addressed.



Our contribution in Europe

The ERPB, which was established at the end of 2013, is an important stakeholder consultation at European level. It has considerable influence on the direction in which the European payments market develops and may be regarded as the European equivalent of the Dutch MOB. European umbrella organisations representing a range of stakeholders participate in the ERPB under the chairmanship of the European Central Bank (ECB). The subjects addressed by the ERPB in 2016 included: Instant Payments in euros, contactless and mobile payments, and P2P mobile payments. We communicate our visions and positions to the ERPB and its working groups via the European Payments Council (EPC),³ the Payment Systems Committee of the European Banking Federation (EBF), the European Card Payments Association (ECPA)⁴ and the MOB's Working Group on Efficiency and European Affairs (WEE).

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³ The EPC is the brand owner of the European payment products, European transfers (SEPA Credit Transfer, SCT) and the European system of SEPA direct debits (SDD). The SCT and SDD schemes have replaced similar Dutch payment products. In addition to the Dutch Payments Association, which represents all its members, ABN AMRO, ING and Rabobank are also members of the EPC in their own right. Both the Dutch Payments Association, in its capacity as chair of the Legal Support Group and participant in the Scheme Evolution and Management Group, and the aforementioned members who participate in various EPC bodies, contribute actively to the EPC's work.

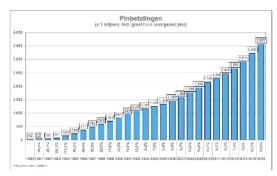
⁴ The European Card Payments Association (ECPA) was established in 2014 and its participants include several European card organisations. The Dutch Payments Association is another of its members. The ECPA seeks to represent the interests of its members and to serve as the European partner for the parties that are working on the design of the European card payments landscape. It provides the Dutch Payments Association with a voice in global organisations such as EMVCo and PCI SSC.

Activities

Activities: Point-of-sale payment system

Promoting the efficiency of the payment system

In 2016, consumers made 3.6 billion debit card payments, <u>an increase of approximately 10%</u> for the third consecutive year. From a European perspective, such growth is unprecedented. 2016 saw a turnover of €97.3 billion in debit card payments (a 5.1% increase from 2015).



According to research conducted by the Dutch Payments Association and DNB, the number of cash payments fell again in 2016 to €2.9 billion. This continued decline in the use of cash contributes to greater efficiency and security in society. We issued a press release on this subject in early 2017.

The cost of debit card payments in the Netherlands is among the lowest in Europe. This is partly due to the partnership between banks and collective merchants accepting debit cards that was established in the 2005 Payment System Covenant and has since been extended twice via Additional Agreements. The Dutch Payments Association supports the covenant.

Innovations in the electronic point-of-sale system are implemented regularly, further enhancing convenience and efficiency. The main new applications in point-of-sale payments at present are contactless payments using debit cards or mobile phones, and debit card refund services.

Developments in relation to debit card payments, inter alia, are discussed in the Card Payments Forum, at which all relevant stakeholders from the Dutch point-of-sale payment system are represented. The Dutch Payments Association is also responsible for coordinating public communications concerning the point-of-sale payment system.



More debit card payments, less cash once again

The Additional Agreement of 2014 included an undertaking to achieve a ratio of 40% cash payments to 60% debit card payments by the end of 2018. The Dutch Payments Association plays an important supporting role in this effort through communications activities and joint promotional campaigns. In 2015, for the first time more point-of-sale payments in the Netherlands were made by debit card than by cash. We issued a press release on this subject which included the figure below. This trend continued in 2016, with 55% of payments being made by debit card and 45% with cash. At this rate, it is likely that the ratio of 40% cash to 60% debit card payments will be achieved by the end of 2018.



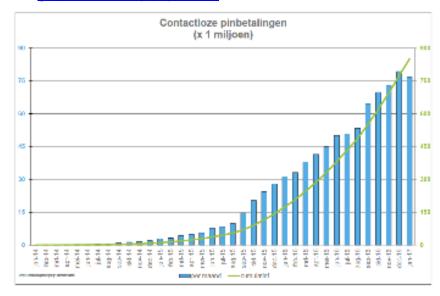
Furthermore, small amounts which consumers traditionally were paying in cash are increasingly being paid by debit card, primarily through contactless payments. While the total number of debit card payments rose by 10.6% in 2016, the number for amounts under €10 increased by as much as 17.2%. The average amount per debit card payment dropped from €28.67 in 2015 to €27.27 in 2016.

Huge rise in contactless payments in 2016

Since the introduction in 2014, the number of contactless payments in the Netherlands has increased enormously. In most cases, card holders are not required to enter their PIN code for small contactless payments. This enables point-of-sale transactions to be completed much faster than with contact debit card payment methods or cash; contactless payments are also more economical for retailers. Contactless payments have caused cash usage to drop by approximately €100 million. Moreover, terminals for small contactless payments do not require a numeric keypad (on a vending machine, for example), which delivers both cost and security benefits.



In comparison to 2015, the number of contactless payments in 2016 increased by almost five times to 630 million payments (135 million in 2015). This spectacular growth is illustrated in the graph of monthly payments.

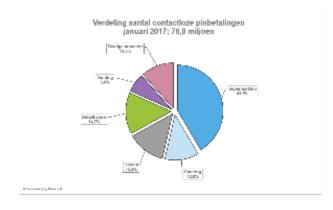


In December 2016, 24% of all debit card payments were contactless. Two thirds of all payment terminals in the Netherlands are now enabled for contactless payment, compared with one third in 2015. All terminals are required to be equipped for contactless payments by 2020. More than 19 million debit cards and smartphones can be used to make contactless payments. In September 2016 the 500 millionth contactless payment was made. This prompted us to release an infographic that was widely publicised in the media. The milestone of 1 billion contactless payments was expected to be somewhere during the end of the first quarter of 2017. On the 23th of March 2017 the number of 1 billion contactless payments was reached.



Initially, contactless payments were primarily used for small amounts of up to €25 without entering a PIN code; consumers now increasingly use contactless payments for amounts above €25. in which case a PIN code is required. This year, the proportion of larger contactless payments rose from 5% to 10%. The average amount of a contactless payment increased from €8.90 in 2015 to €11.18.

The majority of contactless payments in 2016 (42%) took place in supermarkets. The hospitality sector accounted for 15% of all contactless payments, and catering and vending machines for more than 12%. The current distribution of payments across the various sectors is available here.



Communications and information campaigns

Since 2015, the focus of the national 'Pay using your debit card? Yes, please!' campaign has shifted to promoting contactless payments. The campaign is a joint initiative by the Dutch Payments Association (which is directing the campaign), the Foundation to Encourage Efficient Payments (*Stichting Bevorderen Efficiënt Betalen*, SBEB)⁵, banks, umbrella organisations of retailers and consumers, and international card organisations. The campaign is promoted via television, internet, advertisements, promotional teams across the country (during the Four Day Marches in Nijmegen, for example) and free publicity. Promotional material from the campaign is also on display at points of sale.





A new commercial focusing on contactless payments aired in 2016. The message was that contactless payments are fast and convenient, incentivising viewers to try it for themselves. The commercial was widely viewed and well received.

A survey conducted mid 2016 indicated that men like and tend to make contactless payments more than women. The survey identifies that insufficient information and a lack of knowledge concerning contactless payments is the most significant barrier to the uptake among women. Since women are an extremely important target group (according to a DNB study, they make 11% more point-of-sale transactions than men), the focus of the campaign promoting contactless payments was shifted towards women in the last months of 2016. For instance, the promotion team behind the 'Pay using your debit card? Yes, please!' campaign attended the Margriet Winter Festival at the trade fair in Utrecht, and an online campaign aimed at women was launched in December 2016.

⁵ The Foundation to Encourage Efficient Payments was established following the signing of the Payment System Covenant in 2005. It manages a fund that supports projects designed to increase the security and efficiency of the payment system.

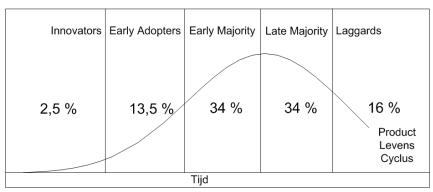


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Partnership to improve and promote mobile contactless payments

Last year, the first mobile CTLS (contactless) payments at point-of-sale were made following a range of tests. At the start of 2016, mobile CTLS payment options were still limited. By the year's end, however, customers of ING, Rabobank and ABN AMRO were able to make mobile CTLS payments using a suitable smartphone. At the beginning of the year, there were 36,000 registered e-wallets; at the end of the year, this figure approximated 150,000.

Users can use their registered e-wallet to make mobile CTLS payments at a contactless payment terminal. In order to install an e-wallet, customers must be aged 16 years and older, use mobile banking and have a suitable Android smartphone. This target group comprises approximately 3 million people and coverage was therefore around 5% by the end of 2016. Mobile CTLS payments are in the Early Adopters phase. The target is to reach approximately 500,000 e-wallets (16.6% coverage) in the Early Majority phase by the end of 2017. In order to achieve this target, various promotional campaigns will be developed in 2017.



Mobile contactless payments are considerably more complex than contactless card payments. Whereas cards are standardised to a large extent, for mobile contactless payments there are a number of complicating factors, such as different brands of smartphones, location of the NFC chip, different versions of operating systems, as well as the influence of other apps installed on the phone and how they interact with different payment terminals. The Dutch Payments Association therefore took the initiative to set up a testing laboratory where banks can test their e-wallets to ensure that both consumers and merchants have a positive, familiar payment experience. Various parties work together in the test lab, including banks, terminal suppliers, smartphone suppliers and telecom suppliers. Issues that arose during testing were analysed and addressed under the direction of the Dutch Payments Association. The results were then shared more widely in four stakeholder gatherings, along with other relevant developments in the field of mobile payments. These tests drew attention from other Benelux countries.



At the end of the year, the testing procedures received a positive evaluation from all involved parties. We will continue this testing in 2017. In view of the expected growth in mobile payments and their increasing complexity (for example, multiple e-wallets on one smartphone), it is important that mobile payments continue to function efficiently and that they are easily understood by consumers and merchants. This requires cooperation. All insights will be discussed with stakeholders at the Dutch Payments Association's Card Payments Forum.

Debit card refund services

When consumers return goods to a retail outlet and request a refund, they are generally refunded in cash. Since 2014, however, it has also been possible to refund through their debit card. With debit card refunds, consumers who return a purchase to the store are refunded directly to their bank account the next business day. Three large Dutch banks offer debit card refund facilities to their business customers.



Debit card refunds offer major benefits for both consumers and retailers; for example, retailers no longer have to keep extra cash in the till for refunds and consumers quickly receive the money back in their bank account. Debit card refunds are particularly popular in the non-food retail trade and for returning deposits. In 2014, 85,000 debit card refund transactions took place; in 2015, this figure was 936,000 and by 2016 it had increased to more than 1.8 million transactions. The average amount of debit card refund transactions in 2016 was €50.49, but still varied considerably.

Initial research indicated that both business owners and customers appreciate debit card refund services. Usage can therefore be expected to increase. A campaign promoting debit card refund services was launched at the end of 2016, which will be rolled out more widely in 2017.

Customised solutions to accessibility problems in cash supply

The number of bank ATMs has been declining gradually since 2008. The network of bank ATMs and other cash facilities – such as the number of bank branches with tellers – is also declining. Yet, in spite of this trend, the cash accessibility survey demonstrated that accessibility to cash remained stable in 2016. The number of cash withdrawals from ATMs in 2016 fell by 6.5% compared to 2015. The value of cash withdrawals, which has been declining for a number of years under the influence of these factors, also dropped by 1.7%.



The accessibility of cash-based facilities in rural areas has become a subject of social and political debate. The Dutch Payments Association is committed to working with its members to keep ATMs in more sparsely populated areas accessible and efficiently maintained. The geographical distribution of ATMs is analysed on a regular basis. The Dutch Payments Association serves as the national contact point for issues relating to accessibility to cash. In consultation with its members, customised solutions are being implemented based on an analysis of the local situation.

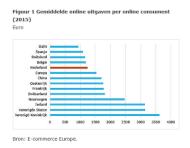
To prevent new issues arising, the Dutch Payments Association uses an information system for individual members that enables them to see which ATMs are geographically essential to maintaining the current high level of accessibility. Finally, members notify the Dutch Payments Association of any proposed changes to their ATM network, in order to assess in advance the combined effect of the different members' plans and whether these plans could lead to any issues. The Dutch Payments Association addressed and resolved a number of situations of this kind in 2016, in consultation with various societal parties.

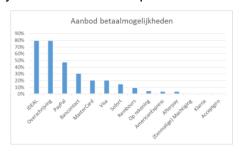
Activities: Online payments

Continued strong growth in online payments

In 2016, Dutch consumers made more than 173 million online purchases amounting to a total amount of €20.16 billion. This is an increase in online spending on goods and services of 23% compared to 2015. Research into online consumer expenditure conducted by Thuiswinkel.org⁶ revealed that 7.2% of all retail purchases were made through the online channel in 2016. A further study carried out by Ecommerce Europe revealed that Dutch consumers' online expenditure falls considerably short of other European nations. In 2015, for example, a consumer in the the United Kingdom on average spent almost three times more online (€3,600) than a Dutch consumer (€1,242). An overview of online purchases per consumer in 2015 is available here.

According to Statistics Netherlands (Centraal Bureau Statistiek, CBS), the rising number of online shoppers primarily comprises those aged 65 and older. Furthermore, the number of online purchases per consumer has risen sharply. In 2016, the number of online shops registered with the Chamber of Commerce rose to 33,710. That is an increase of 8% compared to 2015. The vast majority of these online shops consist of only a single employee.





Research conducted by Currence iDEAL indicates that the average number of payment methods offered by online shops has also risen over the past three years. Dutch online shops offer an average of 3.9 different payment methods. Among Thuiswinkel.org's members, this number is as high as 6.2. iDEAL is the most widely accepted payment method, in addition to credit transfers. Both of these payment methods are accepted by 80% of online shops in the Netherlands.⁷ Acceptance of PayPal (48%), credit cards (21%) and Afterpay (4%) remained unchanged last year.

⁷ Payment options for online retailers 2016, BOOM market research on behalf of Currence iDEAL B.V., January 2017



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⁶ ThuiswinkelMarktMonitor 2016 commissioned by Thuiswinkel.org, in cooperation with PostNL

Passing the milestone of one billion transactions

The number of iDEAL payments rose sharply again in 2016. The number of transactions grew by more than 27% (23.2% in 2015). In total, 283 million payments were successfully processed through iDEAL. Pizza delivery company New York Pizza put through iDEAL's one billionth payment on King's Day 2016.

Since its introduction in October 2005, more than 1.2 billion transactions have been carried out via iDEAL.



The success of iDEAL is partially evidenced by the huge number of transactions outside the scope of eCommerce: more than 127 million in 2016. Such transactions include, for example, bill payments, top-up payments, payment requests, payments for government services, for public transport passes and for donations, all with iDEAL. A portion of this growth can also be attributed to foreign merchants increasingly using iDEAL on their websites (over 56 million in 2016).

In 2016, the value of iDEAL payments amounted to €23.7 billion – an increase of 31% compared to the previous year (€18.1 billion in 2015). The average amount of each transaction in 2016 was €83.79 (€81.39 in 2015).

A comprehensive analysis of iDEAL during 2016 is included in the Annual Report of Currence (the owner of iDEAL).

Mobile payments account for one quarter of online purchases

According to the eCommerce Payment Monitor, the market share of smartphones in eCommerce in the Netherlands has risen from 6% in 2015 to 9% in 2016. The share of tablets remained unchanged at 14%. Therefore, almost a quarter of online purchases were made using a mobile device. In view of the focus on mobile shopping, this share can be expected to increase further in the coming years.



When considering the distribution of different payment methods over various channels, increased usage of iDEAL via smartphones is particularly striking. This market share rose by 8 percentage points in comparison to 2015, to 47%. This growth has mainly come at the expense of credit card payments that dropped to 16% in this channel.

Mobile payments receive a lot of attention and the importance of smartphones in making payments is expected to expand in future. This will be driven by the rise of contactless payments via NFC chips throughout Europe on the one hand, and by the increase in mobile internet usage on smartphones on the other. Mobile telephones have become the connecting factor between online and offline payments. Companies such as Apple, Google, MasterCard and Visa are throwing their weight behind this trend with the development of so-called 'e-wallets' – apps in which consumers can store their payment instrument details, of their bank card or credit card for example, in order to make payments. At this point, it is difficult to predict the speed of these developments and how significant these e-wallets will become, but market parties have high expectations.

Payments between consumers on the rise

Another development that contributes to the increase in payments via mobile phones are 'peer-to-peer (P2P)' payments. A number of solutions that were aunched in 2016 allow consumers to easily transfer money to each other. Examples of new providers in this market are Florin and Sowdan. Existing players have also identified opportunities in this area and launched their own solutions, for example ING, bunq, Rabobank's 'Ipayou' and ABN AMRO's 'Tikkie'.



The majority of these services enable a consumer to receive funds from someone else by means of a payment request that can easily be delivered via social media, such as WhatsApp. The payer is then directed to a payment page where the payment can be settled with iDEAL. This makes it simple for people to pay their share of a lunch or joint gift, for example.

Due to upcoming changes in legislation (PSD2, allowing consumers to give licensed providers immediate access to their payment account) and payment infrastructure (Instant Payments, instantly credited to the payee's account), it is expected that this segment of the market will become increasingly important.

iDEAL QR implemented nationwide

In 2016, iDEAL QR was introduced. This enables consumers to make iDEAL payments by scanning an iDEAL QR code with a smartphone or tablet. This payment method is mainly suited for locations not suitable for traditional digital payment methods. iDEAL QR was launched during the Hartstichting charity appeal mid-April 2016. It was subsequently tested among a number of online merchants over the summer. The positive results from this trial led iDEAL-licensees to confirm that they would integrate iDEAL QR into their mobile banking apps in 2017. This makes it easier for consumers who use a mobile banking app (approximately 8 million people) to pay with an iDEAL QR code.



Merchants can easily add iDEAL QR codes to their payment methods. We anticipate that iDEAL QR will also be implemented in physical environments, for example on large café terraces or in busy shops to shorten queues at payment terminals, providing additional electronic payment options.

eMandates: issuing valid electronic direct debit mandates online

In May 2016, the eMandates product became available to the whole market via all participating banks. There are two types of eMandate: standard eMandates, which are targeted at private individuals, and business eMandates for use in the business-to-business (B2B) market.



eMandates are secure, fast and easy to use. Customers can use them to issue a legally valid payment authorisation to payees online to effect periodic or one-off debits from their payment account without the need for a paper based signature. The consumer or business customer issues the eMandate online via the trusted internet or mobile banking facilities of their own bank, in the same manner as iDEAL payments.

eMandates offer significant advantages to corporates, who can be certain that the eMandate was signed by an authorised party, that it will be recognised by the bank in case of dispute and that the account number for the direct debit is correct. These are huge advantages for corporates. Moreover, corporates are less exposed to risk. Instead of customers retaining the right to reverse a direct debit for up to 13 months after it has been debited, eMandates reduce this risk period to eight weeks, as set down in the European Payment Services Directive (PSD).

A further advantage of eMandates is that, – when using the business eMandate – in addition to the ability to issue and process the mandate in a completely digital manner, the mandate is automatically registered at the debtor bank. Neither the payer nor the payee need take any further action to complete the registration process, which saves time and reduces the risk of input errors. This ensures that more business mandates are processed successfully.



In 2016, the focus was on recruiting participants, which has paid off. Currence has issued licences to seven Creditor Institutions which offer eMandates to business customers, and six Debtor Institutions which authorise their private customers to issue eMandates. In total 25 Mandate Service Providers have been accredited. These organisations oversee the technical integration of creditors with the various banks that offer eMandates to business customers.

Over 200,000 eMandates were issued to 128 payees in 2016. Examples include the University of Groningen, which allowed its students to issue eMandates for the payment of their tuition fees and Bonchef, an online reservations system for restaurants.

Historically in the Dutch market, the 'I agree' checkbox is an important means of allowing consumers to authorise direct debits online. This practice however does not generate a mandate that is recognized by the debtor bank, but is nonetheless widespread. This prompted the MOB to assemble a working group comprising various market parties in order to create a uniform assessment framework for secure electronic mandates issued by consumers. We anticipate that this initiative will lead to further growth in the use of eMandates since this is the only product that is in full compliance with the applicable rules in the SEPA Direct Debit Rulebook for electronic direct debit mandates.

The focus in 2017 will be on payers, who will be actively informed about how to issue direct debit authorisations securely, quickly and easily online, using eMandates.

iDIN: new method of online identification now widely available

A significant milestone was passed at the end of 2016: iDIN was introduced to the market and is now widely available. It has received coverage from a range of media.



iDIN is an online identification and log-in service jointly developed by Dutch banks and the Dutch Payments Association. It enables private account holders to confirm their identity online and log in to participating organisations (i.e. merchants) using the trusted log-in facilities of their own bank. The majority of retail banks in the Netherlands are taking part, including ABN AMRO, ING, Rabobank, SNS, ASN Bank, RegioBank and Triodos Bank.

Reliable online identification process

Increasing digitisation is a significant trend in our society. The Netherlands boasts one of the highest percentages of internet penetration in Europe; over 93% of Dutch citizens have internet access at home. The need for reliable online identification processes is therefore growing. Consumers wish to be fully in control – with whom do I share which of my personal details? – and they want the identification to be secure and simple.

The banks are well placed to create an outstanding solution to the need for reliable identification processes online.

With the knowledge of their clients, the online banking tools that they provide to customers and their existing high levels of security (to prevent online fraud). Almost every adult in the Netherlands has their own payment account and, according to Statistics Netherlands, 86% of the population uses online banking. Banks therefore have significant reach among consumers online.

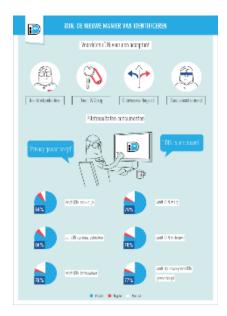
Supporting increasing digitisation

iDIN enables organisations to reliably identify their online customers and to digitise their paper-based processes. The banks are already required to carefully verify the identity of each customer, including their personal details such as name and date of birth, on opening a bank account. In this way, iDIN supports organisations with further digitisation.

Users provide explicit approval

Customers themselves can specify whether or not they wish to use iDIN. In each instance, they must expressly approve the transmission of their personal details to the merchant and are able to view exactly which details the merchant has requested. This allows the customer to remain in control. Obviously, iDIN merchants do not gain access to the customer's financial details at their bank, such as their account balance or transaction history. And conversely, banks are not able to view the details of iDIN merchants' customers or which webpages customers visited when placing their orders, thereby safeguarding customer privacy. An external privacy evaluation confirmed that iDIN satisfies all the applicable requirements of the Dutch Data Protection Authority (Autoriteit Persoonsgegevens, AP).





Positive results from the initial trial

From the start of 2016, this new log-in facility and means of online identification was tested as part of a trial with a range of participants including the Dutch Tax and Customs Administration, various financial institutions, an insurance company, and providers of other online services. The trial indicated that the technology functioned well and the response from users was enthusiastic. Further research revealed that 84% of people found iDIN to be user-friendly and 86% would use it again. We released these results in an infographic.

Widespread availability

The positive results of the iDIN trial prompted the banks to make it widely available in the online market from mid-November 2016. A large number of well-known merchants have since registered to include iDIN on their websites, signing a contract either with their bank or with a so-called Digital Identity Service Provider (DISP). Private customers of the participating banks can use iDIN directly and do not have to take any specific action. A demonstration of how iDIN works is available on the iDIN website.

Activities: Giro-based payments

Giro-based payments are socially important

Both corporate and private users can always rely on the fact that giro-based payments will be put through quickly and accurately to the specified recipient. This generally takes place within an hour and a half, or by the following day at the latest. Giro-based payments are processed considerably more quickly in the Netherlands than in other countries.



But more speed can yet be gained. The Netherlands will be one of the first euro area countries to take a significant step towards achieving Instant Payments [link binnen het document]. This innovation will also enable transactions between banks to be processed in real time, 24 hours a day, 365 days a year (24/7/365), in the Netherlands and all across Europe in the near future.

Other developments are bridging the gap between new and existing payment methods. A number of banks already enable their customers to scan an Acceptgiro on paper using a mobile banking app, which is then converted directly into a digital payment order. The introduction of eMandates, which make it possible to issue a legally valid direct debit mandate through a fully digitised process, is another relatively new development.

Frequent coordination with stakeholders makes a valuable contribution

The Giro Stakeholder Forum (GSF) facilitates information sharing between providers and users concerning developments in giro-based payment transactions. One theme of discussion is the issue of curbing failed direct debits – fortunately an especially rare occurrence in the Netherlands – and limiting costs thus incurred as far as possible in close consultation with all parties concerned. At the end of 2016 the participants indicated that, in their view, the GSF forms a valuable platform not subject to direct commercial interests for collective discussions on the requirements and capabilities of giro-based payments and related issues.

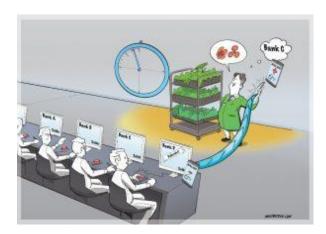
It also allows stakeholders to be involved with new developments, such as the current implementation of Instant Payments, from the outset so that they can contribute their input. In addition to providing valuable feedback in relation to new plans from the supply side, it also enables market parties to make their own preparations to respond to upcoming changes in a timely manner.

Developments in instant payments, 24 hours a day, 365 days a year

The Dutch banking sector is working under the direction of the Dutch Payments Association to develop a new infrastructure for real-time payments (Instant Payments). With Instant Payments, transfers are instantly credited to the beneficiary's bank account, even if the beneficiary is a customer of another bank. This new infrastructure will be available, 24 hours a day, 365 days a year, including weekends and public holidays.

Development in full flow

The development and construction of the infrastructure required to make Instant Payments possible is well underway. A considerable amount of behind-the-scenes work was carried out in 2016. Stakeholders were periodically updated on the progress and given the opportunity to give feedback. End-to-end testing can be conducted from mid-2018. A trial will be run in early 2019 to test Instant Payments in practice. All payment service providers will be able to offer their clients Instant Payment services from May 2019. The major Dutch banks will all offer Instant Payments via mobile and/or internet banking and ensure that their payment accounts are capable of receiving Instant Payments originating from other banks.



European developments

Work has commenced to introduce Instant Payments throughout Europe. The European Payments Council (EPC) published the 'SEPA Instant Credit Transfer Scheme Rulebook' in November 2016. The Rulebook forms the standard for all Instant Payments made in euros. Banks in the Netherlands will adhere to the Rulebook in order to enable Instant Payments to other European countries. Payment service providers in other countries are free to choose whether or not to adhere to the new Rulebook.

Faster, higher, more

The Dutch sector aims to process transactions within five seconds and will not impose a mutual maximum on individual payments. The European target is less ambitious, with a processing speed of ten seconds and a maximum amount of €15,000. It is expected that further areas of application for Instant Payments will continue to be identified and that use of the new infrastructure will grow rapidly, to the extent that Instant Payments will expand to become the new norm for the payment system.

Public focus on 'incorrect credit transfers'

Billions of payments are processed quickly and smoothly by Dutch banks each year. Under European law, banks process payments based on the 'self-checking' IBAN⁸.



Incorrect credit transfers are payments made to an IBAN in error where the payer only realises this after completing the transfer. This sometimes leads to an undue payment which the payer can re-claim. The payer can request their bank to apply the Undue Payments Procedure. The recipient then refunds the undue payment to the payer or the payer is provided with the recipient's details in order to recover the funds themselves, taking legal action if necessary.

There was considerable interest in incorrect credit transfers from consumer organisations, politicians and the media in 2016. The Dutch banks therefore conducted research into the matter. This indicated that 1,300 incorrect credit transfers are reported each month, three quarters of which are the consequence of using old account numbers and errors made when using internet and mobile banking address books. One measure to reduce this problem is to clean up address books. It was also revealed that more than 200 customers each month report an incorrect credit transfer to their bank that is the result of fraud.

In response to this study, the banks announced various measures that they had already implemented or will implement during the course of 2017, such as ceasing to reissue IBANs from closed accounts. More information relating to other follow-up measures in this regard is available on the Dutch Payments Association's website, including the innovative IBAN Name Check initiated by Rabobank, which was launched at the start of 2017.

⁸ IBANs include an algorithmically-derived control number (the so-called Modulo 97 algorithm), which makes it possible to verify that it is a real, valid account number.



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Switching Service versus account number portability

In 2004, it was decided in consultation with the Dutch Government to establish a Switching Service^{9.} The European Payment Account Directive (PAD) stipulates that member states must set up a national switching service by 2016. The Dutch Switching Service has served as a model for other countries.



The Dutch Switching Service automatically puts credit transfers to and payments from the old payment account through to a new account with another bank for a period of 13 months. Companies that attempt to collect direct debits are also automatically informed that the payment account has changed. On average, 80,000 consumers and businesses use the Switching Service every year.

The Dutch Payments Association presented the results of the user evaluation survey to the MOB in May 2016. Just like the previous survey in 2011, the results of the evaluation were positive. Customer satisfaction with the Switching Service was rated at 7.8, which is a high score. Customer satisfaction with comparable services in the energy and telecommunications sectors was around 7.0. Switchers rated the service as quick, convenient and friendly and found it helpful.

There were, however, areas in which the service could improve, for example by digitising certain components where applicable. The Dutch Payments Association drew up specifications for this in 2016. Two banks are now offering the option of a completely digital switching service; paper-based documentation is no longer necessary. This makes switching even easier. The expectation is that more banks will follow suit.



⁹ The associated agreements are set out in the inter-bank Switching Service Covenant, which is curated by the Dutch Payments Association.



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Although the Switching Service works effectively, the ability for customers to take their payment account number with them to another bank – so-called 'number portability' – is a request that regularly recurs on the social and political agenda. However, number portability is complex and costly to implement because IBANs include country and bank-specific components. Furthermore, customers who take their payment account number with them to a new bank would still need to request and activate a new debit card, credit card, internet and mobile banking and possibly other new products for their new payment account. Number portability does not resolve switching-related problems of this kind. The Switching Service, which assists customers to switch smoothly to a new bank, is therefore also a good option that removes the burden from the customer as much as possible.

Nevertheless, number portability can enhance customer mobility and market competition, which definitely offers certain benefits. In view of the various implications of realising number portability, this can only be arranged at the European level.

The European Commission will report on compliance with the PAD among member states in September 2019. This report will include a cost-benefit analysis of EU-wide number portability.

Research into alias conversion for IBANs

Linking an alias, such as a mobile phone number or e-mail address, to an IBAN would increase convenience for consumers. A number of our neighbouring countries have successfully used aliases for IBANs for 'consumer-to-consumer' payment applications. Such aliases would make it easier for account holders to 'remember' their account number. When people change their payment account, the selected alias could remain unchanged and only the associated IBAN would change. However, as the situation currently stands, the use of aliases does not provide any alternative for IBANs for business payments by consumers (direct debits, for example) and payees (salary payments, for example).

The ERPB is investigating alias conversion at European level and the Dutch Payments Association is participating in the steering committee. The banks will examine the advantages and disadvantages of using aliases in greater detail in concert with the Dutch Payments Association in 2017.

Phase-out of national direct debits now complete due to end of Lottery Direct Debit

The actualization of realization of SEPA signalled the end of the Dutch direct debit payment product Incasso. As specified in the SEPA Regulation, as of 1 August 2014, direct debits will only be processed via European direct debit (SDD). However, DNB offered an exemption for the Dutch Lottery Direct Debit¹⁰ until 1 February 2016. This extension of the termination date allowed Dutch lottery payees more time to adjust to the new situation, whereby payers can reverse payments within a period of eight weeks (56 days). As of 1 February 2016, this group has also been using standard European direct debits and national direct debits were definitively terminated.

Less paper than ever

Giro-based payments are becoming increasingly digitised. Very few consumers still use transfer forms sent in dedicated bank envelopes via the post-box. The convenience of internet banking and making transfers via banking apps has led to further digitalisation.



Use of paper Acceptgiro forms has been declining for years. In 2016, the number of paper Acceptgiro forms processed dropped by 21% compared to 2015 to 19 million¹¹. This was primarily due to the fact that payees and consumers are switching to more efficient payment methods, such as European direct debits and iDEAL. Additionally, fewer and fewer online retailers are offering Acceptgiro as a payment option.

Figures from the seven largest Dutch banks illustrated that, in 2016, 89% of people who received paper Acceptgiro forms actually effected the payment via mobile or internet banking (71% in 2010) [link naar grafiek nog op internet te zetten]. One contributing factor in this regard is the growing popularity of mobile banking apps, which enable customers of certain banks to scan paper Acceptgiro forms and make the relevant payment without having to enter any further details.

¹¹ The number of Acceptgiro payments is calculated on the basis of the number of paper Acceptgiro forms that were processed.



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¹⁰ Formal name: Recurring direct debit for lottery participation

In 2012, the National Forum on the SEPA migration and the MOB agreed to discontinue paper Acceptgiro forms as of 1 January 2019. However, an important point of concern in this regard is ensuring that effective payment methods remain available to vulnerable groups, for example those who have limited or no access to the internet and are unable to use mobile banking on a smartphone.

Currence, the brand owner, will oversee the discontinuation process to ensure that the phase-out is managed efficiently. In concert with the banks, a round of consultations with relevant interest groups was held in 2016¹² to gauge these parties' response to the transition to other payment products. This stakeholder consultation revealed that, in particular, commercial partners that have already transitioned completely have experienced few real problems, if any. However, a number of interest groups and charities petitioned to extend the phase-out date and to create additional alternatives. The key considerations in this regard are the attention value and convenience of paper payment orders for groups that do not wish to or are unable to use digital payment methods. In early 2017, it was decided to abandon the agreed phase-out deadline of January 2019 and to phase the Acceptgiro out by means of market-led developments. Acceptgiro licensees may decide independently when to discontinue the product and to make this known well in advance.



FiNBOX to be discontinued

FiNBOX enables organisations to send invoices and other financial documents digitally to users of internet banking services. It was developed by banks and service providers that specialise in sending documents. The aim was to increase convenience for customers and give them a better overview of their finances. However, the number of consumers that use FiNBOX has lagged well below initial expectations on its introduction. This is due to the fact that many organisations now offer their own alternative means of sending financial notifications, via 'my circles' for example. Additionally, it is increasingly easy to pay bills using iDEAL or by direct debit. The banks have therefore independently decided to discontinue FiNBOX. As of January 2016, ING no longer offers FiNBOX and ABN AMRO and Rabobank will also cease to offer it on 1 January 2017 and 1 April 2017 respectively.

¹² The stakeholders include ANBO, the Dutch Consumers Organisation, Goede Doelen Nederland and a number of large-scale Acceptgiro users, such as the Dutch Tax and Customs Administration, the Red Cross, energy companies, municipalities, internet service providers, housing associations and health insurance companies.



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Activities: Stability in the payment chain

Stability in the payment chain

Due to the sharp rise in the number of electronic payments, the stability of the payment chain has been an important theme for the Dutch Payments Association and its members for a number of years. To ensure that the payment system functions effectively, all the systems that make up the payment chain need to be available at all times. However, the payment chain has become more complex because the number of participants has increased over the years. The Dutch Payments Association monitors the stability of the payment chain and takes action where necessary whenever certain parties may be causing any disruption in the chain.



Disruptions to retail payments continue to be reduced

Demand-side representatives, which come together in the MOB, have expressed their confidence in the availability and stability of the debit card payment chain on several occasions. At over 99.8%, the actual availability of the debit card payment chain was once again high in 2016, in the view of the relevant market participants. This means that, for every thousand payment attempts, 998 were successful immediately. There were no major disruptions in the debit card payment chain in 2016. This was due to a continuous focus on preventing outages by all parties involved.



Although disruption in 2016 was minimal, occasional disruption can never be fully ruled out. Several years ago, the Dutch Payments Association developed the CONNECT notification and information system in order to minimise the effects of any disruptions. Parties in the payment chain can use CONNECT to notify each other of any disruptions, as well as any planned maintenance work. The notifications sent via CONNECT enable issues to be located and resolved rapidly. Furthermore, CONNECT makes it easy to inform the market of the nature and duration of any disruptions. Finally, it improves market parties' ability to schedule and coordinate maintenance activities.

Most of the notifications sent through <u>CONNECT</u> related to scheduled maintenance. The number of disruptions (POINT disruptions - debit card transactions over the internet - and other disruptions) fell markedly from thirteen instances in 2011 to just two in 2016. Approximately 10% of all debit card transactions are completed using POINT, especially in small businesses. A POINT solution is cheaper than a certified connection, but is also more sensitive to disruptions. Of the two disruptions in 2016, one was a relatively minor POINT disruption and the other was a nationwide KPN outage. This primarily affected SMEs that do not use certified telecommunication lines. In 2016, nearly 90% of all telecommunication lines were certified. The risk of an outage on these lines is considerably lower.

In addition to these two reported disruptions, there were in fact three further disruptions in the debit card payment chain, but these did not come to consumers' notice since there are two controlling computer centres that operate in parallel to each other. During the disruption, the traffic from the affected centre was absorbed by the other.

The Dutch Payments Association, in cooperation with all the parties involved, conducted an impact analysis to determine whether the expected further growth in the number of debit card transactions is likely to be affected by any limitations in the processing capacity of one or more transaction-processing systems. It was concluded that there are no insurmountable barriers, and that the infrastructure is able to cope with the expected growth. This impact analysis will be updated every year.

High availability of internet and mobile banking

Thanks to the efforts of banks, including scaling up their capacity, public availability of internet and mobile banking was 99.7% throughout the year, which is higher than in 2015 (99,6%).

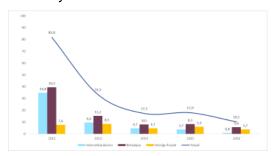
The Dutch Payments Association publishes figures on the availability of internet and mobile banking on its website every quarter. Bank-specific availability figures have also been included since the first quarter of 2015. The seven participating banks provide the Dutch Payments Association with regular information on the availability of their internet and mobile banking systems for this purpose.

Information on the availability of internet and mobile banking has also been available <u>in real</u> <u>time</u> since June 2016. This enables users who are experiencing internet or mobile banking issues to quickly check whether the problem is occurring nationwide or whether the source of the error is local.

Activities: Security in the payment system

Fraud in the payment system at a historically low level

The total amount of fraud in the payment system in 2016 fell sharply in comparison to 2015. The spectacular drop observed in preceding years appeared to be arrested in 2015 (€17.3 million in 2014 and €17.9 million in 2015). Nevertheless, the amount of damage in 2016 dropped a further 43% compared to 2015, to a historic low of €10.2 million (https://www.betaalvereniging.nl/nieuws/fraude-betalingsverkeer-wederom-fors-lager/). This is mainly the result of the decrease in internet banking fraud and debit card fraud.



From a European perspective, the security of retail payments in the Netherlands is comparatively high. In view of the consistent decline of fraudulent giro-based payment transactions, the measures implemented by the banks (such as preventive technology, providing public information and cooperation) have proven effective. Furthermore, users of the payment system are becoming steadily more aware of security risks and able to address these themselves. We nevertheless remain vigilant, since criminals are constantly devising new types of fraud.

Until 2015, internet banking fraud was consistently the largest cause of losses, along with debit card fraud, but in 2016 this type of fraud accounted for only a relatively minor loss (\in 0.8 million). The largest losses were due to debit card fraud (\in 5.6 million). Within this category, fraud using lost or stolen cards (\in 3.2 million) was the most prevalent. Nonetheless, this was 32% lower than in 2015. This is partly due to the decline in debit card dispatch fraud – a type of fraud that emerged in 2015.

In addition, a relatively large loss was due to 'card not present' (CNP)¹³ fraud using credit cards (€1.8 million). This category of fraud – in any form – increased by 15% compared to 2015. This increase can possibly be attributed to the significant rise in consumers shopping online, which consequently increases the number of credit card payments through online shops that do not support 3D-Secure¹⁴. The total losses due to 'other' fraud stood at €2.0 million. Debit card skimming must also be included in this category. In view of the fact that Dutch ATMs are extremely well protected and that Dutch banks can block debit cards from making fraudulent payments and cash withdrawals outside of Europe by means of 'geo-blocking', losses due to skimming fraud have plummeted.



Downturn in phishing and malware

Losses resulting from internet banking fraud fell by 78% in relation to 2015 to a total of €0.8 million (from €4.7 million in 2014 and €3.7 million in 2015). Hardly anyone falls victim to criminals using malware and standard phishing techniques any longer. In the rare instances in which they succeed, the victim is almost always (at a rate of 98.6%) compensated by their bank. This percentage has remained virtually unchanged in relation to 2015 (98.9%). Banks continuously monitor their customers' payment behaviour via internet banking and are becoming better at detecting attempted fraud.



¹³ CNP fraud is where criminals make purchases on the internet, by telephone or by post using a credit card number they have obtained by other means – i.e. the goods or services are not ordered or purchased by the legitimate cardholder.

¹⁴ Additional online security layer for credit card payments (for example, Mastercard SecureCode and Verified by Visa).



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In addition, customers are being deceived more and more rarely. The educational campaigns run by the Dutch Payments Association and the banks about these types of fraud, as well as coverage in the media, have proven effective. In January 2016, the Dutch Payments Association and the banks launched a national campaign to warn the public about debit card dispatch fraud: 'Never send your debit card anywhere!' With the so-called debit card dispatch fraud victims are persuaded via e-mail, SMS, social media or telephone to mail their debit card to a false address and to enter the associated PIN code into a fake website.

Cooperation and knowledge sharing are the key to success

Cooperation and sharing of knowledge and information with other financial institutions, cyber security companies and government departments play an important role in curbing fraud in the payment system. The partnership between the National Cyber Security Centre (NCSC) and the Financial Institutes – Information Sharing and Analysis Centre (FI-ISAC) focuses primarily on preventing and detecting cybercrime.

Banks continuously invest in the security and availability of the electronic payment system. This ensures that their customers retain their trust in the quality of these online services and helps to prevent fraud. It is a matter of keeping one step ahead of criminals. Now that mobile devices such as smartphones and tablets are an inextricable part of our lives, cybercriminals are also seeking to obtain financial gain by these means. No fraud has yet occurred through banks' mobile banking apps in the Netherlands to date, although it has occurred in a number of other European countries. Mobile malware therefore poses a genuine risk. For this reason, the Dutch Payments Association is lending support to the international Mobile Malware Awareness Campaign launched by Europol's European Cybercrime Centre (EC3) in October 2016. The Dutch Payments Association is also monitoring and analysing threats and incidents that occur in neighbouring countries, discusses them with its members and initiates any potential preventive measures.

Dutch partnership on cyber security and fraud prevention

Cyber security refers to preventing losses caused by disruptions, outages or abuse using information and communications technology (ICT) and, when they have already occurred, limiting losses as far as possible and working to restore the service as quickly as possible. One of the Dutch Payments Association's objectives is to make the electronic payment system more secure for both payment service providers and their customers. The large number of parties involved, increasing internationalisation, strict quality requirements and the large volume of transactions render the payment system extremely complex. Any payment chain is only as strong as its weakest link; therefore cooperation is vital in order to ensure that the security and reliability of the payment chain as a whole remain high.



Cybersecurity demands a collective approach and the Dutch Payments Association, its members and relevant government agencies are working closely together. The Dutch Payments Association and its members share information and viewpoints at the strategic level through Chief Information Security Officers (CISOs) meetings, and at the tactical level through the Working Group on Security. Participants share and exchange knowledge and experience in the field of cybersecurity. Threat analyses and other investigations are conducted jointly where appropriate, which results in recommendations to implement specific fraud prevention measures. This national partnership is unique in Europe.



The Dutch Payments Association is also a participant in the Financial Institutes – Information Sharing and Analysis Centre (FI-ISAC). The members of the FI-ISAC include financial institutions and government agencies, such as the National Cyber Security Centre (NCSC), the National Police and the General Intelligence and Security Service (*Algemene Inlichtingen- en Veiligheidsdienst*, AIVD). The Dutch Payments Association contributes to the FI-ISAC with expertise to support its analytical capabilities.

The ISAC – and therefore also the FI-ISAC – strengthens the sector's cyber-resilience by actively sharing information on threats vulnerabilities. The FI-ISAC conducts an Information Threat Monitor on an annual basis, which identifies the most significant threats for the coming one to three years. Intensive sharing of information relating to incidents, vulnerabilities, threats, trends and best practice helps government agencies and financial institutions take adequate measures to further increase their digital resilience.

Some of the members also participate in the National Detection Network (NDN). This is a public-private partnership that seeks to identify digital risks and dangers across the sector more rapidly and effectively. This exclusively involves sharing information on incidents that potentially have a significant impact.

Two external suppliers provide information on cyber threats to the Dutch Payments Association and several of its members. In addition to monitoring for malware, these suppliers also monitor for criminal apps and, where possible, issue warnings about so-called Advanced Persistent Threats (APTs)¹⁵. The members that subscribe to this service receive information that they use to keep their own payment traffic secure.

Combatting fraud through international cooperation

At the European level, the Dutch Payments Association participates in the European FI-ISAC. This ISAC brings together banks and the Computer Emergency Response Teams (CERTs) of the governments of many European countries. The European Network and Information Security Agency (ENISA), the European Cyber Security Center (EC3; part of Europol) and the FS-ISAC (Financial Services – ISAC) are also members. The FS-ISAC is the American counterpart to the Dutch and European FI-ISACs.



The partnership between the Dutch Payments Association and its members with the American FS-ISAC was formalised in 2016. This partnership enables the Dutch Payments Association and its members to establish links with hundreds of international financial institutions from 2016 onwards. This will strengthen and extend our information sources on fraud in other parts of the world, which will improve our members' resilience to cybercrime.

Increasing awareness of secure banking practices

Increasing bank customers' awareness of secure banking practices remains an important issue. In 2016, the Dutch Payments Association updated the 'Hang up! Click it away! Call your bank!' public information campaign with a new television commercial entitled 'Patrouille' [Patrol] with the tag line 'Never send your debit card anywhere!'. Banks are supporting this campaign by furnishing their customers with more detailed information via their own communication channels. The www.veiligbankieren.nl website ties in to the campaign and sets out supplementary information. The website received 100,000 visitors in 2016.

¹⁵ APTs are targeted cyber-attacks generally on knowledge-rich organisations by state actors and/or criminal organisations. The attacker persistently attempts to both penetrate the organisation and to retain a secret presence within its ICT infrastructure.



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The Ministry of Security and Justice invited the banks to give explanatory presentations at various meetings for senior citizens in a number of municipalities. The banks accepted this invitation by giving presentations about phishing and shouldering, and providing new resources for public information.

In collaboration with the Confederation of Netherlands Industry and Employers VNO-NCW and the Royal Association MKB-Nederland, the Electronic Commerce Platform, the NCSC, the National Police and the Public Prosecutor's Office, the Dutch Payments Association published two information sheets entitled 'RATtenplaag in het MKB' [RAT (Remote Access Trojan) Infestation in SMEs] and 'Bestuurlijk advies Factuurfraude' [administrative advice on invoice fraud]. The Dutch Payments Association also supported the awareness campaign of Alert Online.



Europol's European Cybercrime Centre ran a campaign to increase awareness of the risks of mobile malware among consumers and companies. The private and public sectors in 22 European member states combined forces in this campaign. In the Netherlands, the campaign was supported by the National Police, Alert Online and the Dutch Payments Association.

These initiatives and extensive cooperation contributed to the sharp drop in fraud over the past years.

Board and management

As specified in its statutes, the Dutch Payments Association's Board of Directors comprises nine members: three independent members, including the chairman, and six members who are affiliated with members of the Dutch Payments Association. Banks with a market share of more than 10% may each nominate a Board member. Members with a market share of less than 10% are together entitled to nominate a maximum of three members. Upon the establishment of the Dutch Payments Association, it was agreed that the three remaining seats would be allocated to medium-sized banks, smaller banks and payment institutions and electronic money institutions (EMIs).

On May 20th 2017, the board was composed of the following members:

The three independent board members:

- Henk Brouwer (1946), former Director of De Nederlandsche Bank, Chairman
- Henk van den Broek (1952), former Board Member of the Dutch Retail Council, Vice-Chairman
- Mijntje Lückerath (1968), Professor of Corporate Governance at Tilburg University/TIAS

Board members representing the banks:

- Vincent van den Boogert (1969), Chief Customer Officer of ING Netherlands, (appointed in the GMA (Algemene Ledenvergadering ALV) June 7th 2017)
- Jeroen Verriidt (1969). Director of Paving at Rabobank
- Karin Kersten (1970), Director Transaction Banking at ABN AMRO (until May)
- Alexander Baas (1966), COO of Volksbank, representing the medium-sized banks
- Edwin Hartog (1966), Head of Cash Management Corporates & MT member at Deutsche Bank Netherlands, representing the smaller banks
- Michel van Westen (1967), Business Executive at Buckaroo, representing payment institutions and EGIs

New board members in 2016: Karin Kersten (former member: Gert Jan Meppelink), Michel van Westen (former member: Pascal Stoop), Jeroen Verrijdt (former member: Rob Kemna). Bart Schlattmann was Board member until 1th January).

Representatives of DNB and the NVB attend meetings of the board as observers.

The management team consists of:

- Piet Mallekoote (1954), General Director
- Gijs Boudewijn (1958), Assistant Director
- Marco Demmink (1961), Secretary



Governance

The Dutch Payments Association is a small and efficient organisation, which works to ease the burden on its members. It was set up as an association. The Dutch Payments Association comprises several organs:

General Members Assembly (GMA)

Parties on the supply side of the Dutch market that focus on corporate or private end users can become members of the Dutch Payments Association. They fund the Dutch Payments Association and can take part in the GMA. The GMA's primary activities concern determining strategy and approving the annual accounts.

Board of Directors

The Board of Directors takes substantive decisions on important issues, establishes policy frameworks and advises the Executive Board. Its other important duties include appointing and dismissing members of the Executive Board, approving the annual plan and budget, and monitoring how well the Dutch Payments Association carries out its tasks.

Executive Board

The Board of Directors appoints the Executive Board, which is responsible for operational organisation and day-to-day business. The duties of the Executive Board include drafting policy proposals, taking decisions regarding the admission of new members, developing the certification policy and monitoring compliance with regulations.

Advisory Council

The Advisory Council advises the Executive Board – on request or otherwise – on the Payment Association's policies and activities.

Working groups

The working groups are responsible for preparing tactical and operational policy, in collaboration with specialists from the supply side. The working groups can advise the Executive Board, both upon request and of their own initiative. The main working groups are Giro-based Payments, Cards, Cash Payments and Security. Other working groups are active in legal affairs and in communications information campaigns.

Appeals Board

An independent Appeals Board makes it possible to appeal against decisions regarding acceptance and certification when parties are unable to reach agreement with the Executive Board, the Board of Directors or the Appeals Committee of the Board (in that order).



List of members

May 10th 2017, the Dutch Payments Association had 50 members that provided payment services.

ABN AMRO Bank	CCV Holland	KBC Bank Nederland
Acapture	China Construction Bank	LeasePlan Corporation
Achmea Bank	Citco Bank Nederland	Lombard Odier Darier
		Hentsch & Cie (Nederland)
Aegon Bank	Citibank	MUFG Bank
American Express	Commerzbank	Nationale-Nederlanden
		Bank
Amsterdam Trade Bank	Credit Europe Bank	Nederlandse
		Waterschapsbank
ASR Bank	De Volksbank (used to be SNS, ASN and Regiobank)	NIBC Bank
Bank Insinger de Beaufort	Delta Lloyd Bank	PaySquare
Bank of America Merill	Demir Halk Bank	Rabobank
Lynch		
Bank of China	Deutsche Bank	Société Générale Bank
		Nederland
Bank of Dutch Municipalities	Docdata Payments	Staalbankiers
Bank of Scotland plc	GarantiBank International	Svenska Handelsbanken
		AB
Bank of Chaabi du Maroc	GWK Travelex	Triodos Bank
BinckBank	HSBC Bank plc	UBS Bank
BNP Paribas	ING Bank	Van Lanschot Bankers
Buckaroo	INGENICO Financial	Volkswagen Bank
	Solutions	
Bunq	KAS BANK	



