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Report

Big Techs in the payment system

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Summary

At the request of the Dutch Ministry of Finance, the Netherlands Authority for Consumers and Markets (ACM) carried out a market study into the role of major technology firms (“Big Techs”) in the Dutch payment system. In this study, ACM looked at the following Big Techs: Apple, Amazon, Ant Group, Facebook, Google, and Tencent.

This report offers a description of the current positions of these Big Techs on the Dutch payment market and, more specifically, on the submarkets for offline payments, online payments, and peer-to-peer payments. Among other topics, the report explores the question of what the Big Techs' considerations are for entering the Dutch payment market, and what their strategies or plans are. In addition, this report examines possible opportunities and risks for competition, should the positions of Big Techs on the payment market become stronger. Finally, the report examines the question to what extent the current legal framework and regulatory toolbox are sufficient for mitigating any anticompetitive concerns, and for keeping the payment market open.

Positions of Big Techs on Dutch payment market are small, but on the rise

ACM's study reveals that, right now, Big Techs still have a small presence on the Dutch payment market, but one that is growing. So far, Big Techs have offered consumers primarily innovative payment solutions, including paying by e-wallet on mobile devices. With regard to offline payments, the introduction of Apple Pay in June 2019 stands out. The percentage of contactless payments using mobile devices is now over 5% of the total number of offline payments. The payments using Apple Pay make up a significant share of that percentage. On a much smaller scale, Ant Group and Tencent also facilitate the acceptance of payments by Dutch stores (online and offline) for Chinese tourists and citizens. All Big Techs in the study currently offer online methods of payment, mostly in collaboration with license holders. None of the Big Techs currently offer methods of payment for peer-to-peer in the Netherlands (see also Table A).

Payment activities of Big Techs to expand

Across the board, the developments in the Netherlands and the rest of Europe lag slightly behind the developments in the rest of the world, where Big Techs are often further ahead in their initiatives on the payment market. Nevertheless, in European countries, including the Netherlands, several Big Techs recently launched collaborations with existing competitors, or strengthened their positions on the European payment market through acquisitions or minority stakes. It is therefore expected that, in the foreseeable future, these developments will continue on the Dutch payment market, and that Big Techs will continue to expand their activities on the Dutch payment market.

Table A. Activities of Big Techs on payment markets and reasons for entry

Big Techs	Offered in the Netherlands (NL) or Outside the Netherlands (BN)			Reason(s) for entry	
	Offline	Online	Peer-to-peer	Supporting the ecosystem	Direct revenues
Apple	NL	NL	BN	X	X
Google	NL*	NL	BN	X	
Amazon	BN	NL		X	X
Facebook		NL	BN	X	
Tencent	NL**	NL**	BN**	X	X
Alibaba	NL**	NL**	NL**	X	X

*Only available for credit card payments in banking app of bunq, among other banks.

**Only available to Chinese tourists / citizens.

PSD2 is not a major reason behind the entry of Big Techs

The Big Techs indicate that the introduction of PSD2 is not the reason (or the most important one) for entering the European and Dutch payment markets. Although some Big Techs – such as Google – have licenses for offering payment services under PSD2 in the EU, they often act as technical service providers (which do not require a license), and they work together with current license holders such as banks or payment card schemes in order to offer their payment services.

Expansion of the ecosystem is the main reason for entering the payment market

The Big Techs that have been studied indicate, in general, that they choose offering payment services in order to strengthen their ecosystems, and to make it easier for consumers to stay in the ecosystem. An additional but secondary reason for Big Techs to offer payment services is the generation of direct revenues from these activities (see also Table A).

Acceptance of innovative methods of payments will increase further

As part of this study, ACM asked PwC to conduct a consumer survey relating to their choice for method of payment. The results of the survey reveal that consumers under 40 see the e-wallet as a replacement of more accepted methods of payment such as iDEAL (a widely-used online payment method in the Netherlands). In that context, the survey results suggest that e-wallets that are based on the Near Field Communication (NFC)-chip technology such as Apple Pay are accepted at a faster rate than e-wallets, which are based on QR-codes. This is because consumers value the ease of payment associated with the NFC-chip more. Considering the results in this age category, acceptance among a wider group of consumers can be expected in the medium run.

Big Techs compete and work together with banks

ACM has also asked a number of banks in the Netherlands how they view the entry of Big Techs into the payment market. Banks compete with Big Techs, but also work together with them. For example, several major banks offer Apple Pay, which, in fact, competes with the contactless use of the debit cards that are issued by those same banks. With regard to online payments, Big Techs are, generally

speaking, competitors to payments using iDEAL. For peer-to-peer payments, banks have a strong position with Tikkie (a popular payment system in the Netherlands for peer-to-peer payments), and payment requests in their online banking environments, while Big Techs do not (or not yet) have a peer-to-peer presence in the Netherlands.

Loss of interaction with customers is seen by banks as greatest risk

Banks see Big Techs taking over the interaction with customers as the greatest risk to their own business models. Customer interaction is important because of the information that the bank is able to collect through such interactions, and because of the opportunities to sell payment services and loans together. Interest income from products such as loans and mortgages still remains the most important business model of Dutch banks. On the other hand, banks also see opportunities: the enormous market reach of Big Techs also offers banks (especially new banks) that offer services over the internet opportunities to make their services available to large groups of users sooner.

Potential risks to access for competitor payment services to Big Tech platforms

On the one hand, anticompetitive risks on the payment market may consist of impediments that make it harder for new, innovative competitors such as Big Techs and fintechs to enter the market. For example, entry into the Dutch payment market may be impeded by the fact that Dutch debit-card numbers are composed differently than what is common in the rest of Europe. On the other hand, there is a risk that, although they are currently not dominant on the Dutch payment market, Big Techs leverage the market power that they do have on adjacent markets, and, by doing so, are able to ‘tip’ the payment market. That is why ACM remains vigilant against possible refusals to grant access to competitor payment services, against the risk that Big Techs give their own payment services preferential treatment on platforms of Big Techs, and against the risk of leveraging market power by bundling products.

Effective risk management calls for strengthening the regulatory toolkit

ACM has assessed to what extent the current legal framework and regulatory toolkit are suitable to address such risks. It has been concluded that competition rules, PSD2, and the IFR, in their current forms, offer various opportunities to step in if these risks materialize. However, there is a concern that the toolkit comes up short in terms of addressing the risks in a sufficiently timely and effective manner in potential ‘tipping’ markets such as the payment market. We see two policy options for strengthening the current toolkit. These options focus on keeping the markets open to competitors in order to prevent these from ‘tipping’, after which interventions would be more difficult.

1. *Adjusting PSD2.* Under PSD2, payment institutions must grant access to payment systems on the basis of objective, non-discriminatory, and proportionate criteria in order to create a level playing field for payment service providers so that they are able to compete with each other under the same conditions. This requirement may offer a solution for the risks that occur if Big Techs act as de facto gatekeepers, and deny other payment service providers access to their platforms or give their own products preferential treatment. In practice, Big Techs currently do not often act as payment service providers, but rather as technical service providers, as a result of which they are not subject to this requirement laid down in

PSD2. A realistic policy option is to adjust PSD2 in such a way that payment service providers gain access, under the above-mentioned criteria, to the 'facilitating technology' of Big Techs, if they act as gatekeeper when offering payment services. This ensures a level playing field for market participants that wish to offer their payment services through this 'facilitating technology', and that consumers are able to choose for themselves what payment service they use if they pay over a Big Tech platform or device.

2. *Ex-ante instrument.* Under the competition rules, ACM is able to intervene if an undertaking abuses its dominant position. Such an intervention is ex-post, so after any harm has already materialized. In dynamic, innovative markets such as the payment market, where network effects play a large role, it is vital to be able to step in quickly. Such interventions may be able to limit the anticompetitive risks of exclusionary or exploitative behavior in the form of unreasonable access at an early stage. For that reason, ACM, together with the Belgian and Luxembourg competition authorities, and the Dutch Ministry of Economic Affairs and Climate Policy, already took the initiative and drew up a proposal for an ex-ante instrument that can be deployed against platforms (including Big Tech platforms). This type of instrument targets various markets within ecosystems, and could also be effective in the payment market. ACM therefore supports the corresponding initiatives that the European Commission is currently undertaking.

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1 Introduction

Technological developments are prompting new technology firms to start operating in financial markets. This delivers benefits for consumers through innovation, but also entails new risks – in terms of privacy and cybersecurity for example – and hence new oversight issues for the joint regulators in the financial sector.¹ In its role as a competition and market regulator, ACM has conducted a market study at the request of the Ministry of Finance into the role of major technology firms – also referred to as Big Techs – in the Dutch payment market². The aim of this study is to survey the services that the Big Techs provide or could introduce in the payment market and the resulting opportunities and risks in terms of competition and innovation in the payment system.

ACM's findings in this report are based on information obtained from the Big Techs and banks themselves and on interviews with market participants and fellow regulators. PwC has also conducted surveys on behalf of ACM³ among consumers and retailers to gauge acceptance of new methods of payment. The full results of these surveys are appended to this report.

This report addresses the following research questions:

- 1) What is the current position in the Dutch payment market with regard to the entry of Big Techs?
 - a. How do consumers and retailers view the acceptance of new methods of payment?
 - b. What activities do Big Techs have in the Dutch payment market and how do these compare to activities outside the Netherlands?
 - c. What role does the introduction of PSD2 play in the entry of Big Techs into the Dutch payment market?
 - d. How are banks (including traditional banks) reacting to the entry of Big Techs into the payment market?
- 2) What opportunities and risks in terms of competition and innovation does ACM see in the entry of Big Techs into the payment market?

The coronavirus pandemic makes these questions even more important, because the hygiene and distancing rules in force have caused a shift to even more online purchasing and contactless payments. This is going hand in hand with the deployment of new technologies by Big Techs among others.

¹ AFM (2020), Trendzicht 2020.

² See the ACM news bulletin dated 22 October 2019, <https://www.acm.nl/nl/publicaties/marktstudie-naar-grote-techbedrijven-op-de-nederlandse-betaalmarkt>

³ ACM is the commissioning authority, while the survey was financed by the Ministry of Finance.

What do we understand by Big Techs?

Big Techs are playing an ever greater role in our society. They manage global ecosystems of related products that are seamlessly integrated with each other. Big Techs benefit from scale and network effects and have access to large volumes of data. In its app store study⁴ ACM uses the following definition for Big Techs' ecosystems and platform-ecosystems:

"We define an ecosystem as a set of businesses functioning as a unit and interacting with a shared, compatible market for software and services, together with the relationships among them. These relationships are frequently underpinned by a common technological platform or market, and operate through the exchange of information, resources and artifacts. A platform-ecosystem is an ecosystem that supports a collection of complementary assets with one platform as central controller of the underlying architecture that functions as a hub within the technology-based business system."

Big Techs can thus add value for consumers by enabling optimum interoperability of different products. However, this also enables Big Techs to lock consumers into their system and keep out competitors.

Big Techs have also started operating in the payment market in recent years so as to further expand their ecosystem. The Financial Stability Board (FSB) believes the entry of Big Techs into the payment market could have a considerable impact on the payment market due to the characteristics of Big Techs, such as large, established customer networks, brand awareness and trust, extensive customer and business information and substantial financial resources.⁵

Which Big Techs do we examine in this market study?

In this study we examine six Big Techs, including four American companies: Alphabet Inc. (referred to henceforth as Google), Amazon, Facebook, Apple, and two Chinese companies: Ant Group and Tencent. We have chosen these operators because they are the only ones that provide an ecosystem (or platform-ecosystem) and are licensed to provide payment services in the European Union and/or already actively provide payment solutions in or outside the European payment market.⁶

In this report we first consider the main developments⁷ in the Dutch payment market and the acceptance of new methods of payment. We then summarise the main initiatives of Big Techs in the Dutch payment market and the way these initiatives fit in with their broader business strategy, as well as the banks' reaction. Thereafter we assess the main opportunities and risks in terms of competition and offer possible scenarios highlighting opportunities and potential risks that could arise. Finally, we

⁴ See ACM (2019), *Market study into mobile app stores*. (<https://www.acm.nl/sites/default/files/documents/market-study-into-mobile-app-stores.pdf>)

⁵ FSB (2019), *BigTech in finance: Market developments and potential financial stability implications*. (<https://www.fsb.org/2019/12/bigtech-in-finance-market-developments-and-potential-financial-stability-implications/>)

⁶ For this reason Microsoft has not been included in this study.

⁷ This report draws on the latest data but disregards developments occurring after July 2020.

also consider the scope afforded by the current regulatory toolkit to mitigate these risks and we recommend improvements to the current legislation.

2 The Dutch payment market

Before we consider the strategy and activities of Big Techs in the payment market, in this chapter we present a picture of the payment system in the Netherlands. We focus specifically on various non-cash payment instruments and the acceptance of new methods of payment such as the e-wallet. This provides a clearer picture of the position that Big Techs occupy or could occupy in the payment process by offering new electronic methods of payment.

2.1 Payments

The rise of electronic payments

The Dutch payment market is growing rapidly. From 2010 the number of offline transactions rose to over 7 billion in 2019, with a transaction value in excess of €151 billion, a rise of more than 10%.⁸ In absolute terms offline payments thus have a higher transaction value than electronic online payments and peer-to-peer payments. In 2019 those values were €25.8 billion⁹ and €22 billion respectively¹⁰. At the same time Dutch consumers are placing increasing trust in electronic payments using debit cards¹¹, which is reflected in the growing use of electronic money at the expense of cash. In 2010 two out of three offline payments were still made with cash. By 2019 two out of three payments were made with a debit card.¹²

In order to be able to store electronic money or use it to make or receive payments, consumers or retailers need a payment account. At present the Big Techs' payment instruments are mainly a 'shell', or 'facilitating technology', around existing non-cash payment instruments, such as the debit card, providing access to balances on payment accounts.¹³ If the payer and payee have a range of payment options at their disposal, they must choose on the basis of available resources (debit card or computer), the ease of approving a transaction (pincode or fingerprint) and the costs of processing the payment.¹⁴

Below we describe a number of recent developments in the payment market that create new opportunities for Big Techs. We have adopted the distinction used by the European Commission in the payment market between offline payments, online payments and peer-to-peer payments.¹⁵

Strong increase in contactless offline payments

⁸ DNB and Betaalvereniging Nederland (2020), *Betalen aan de kassa 2018*, p. 1; Betaalvereniging Nederland (2020) *Factsheet Betalingsverkeer 2019*, p. 3.

⁹ Thuiswinkel.org (2020), *Thuiswinkel Markt Monitor 2019*.

¹⁰ DNB and Betaalvereniging Nederland (2020), *Betalen aan de kassa 2019*, p. 10.

¹¹ Betaalvereniging Nederland (2020), *Infographic Factsheet Betalingsverkeer 2019*.

¹² The value of debit card transactions already exceeded the value of cash payments in 2010. See: Betaalvereniging Nederland (2020) *Factsheet Betalingsverkeer 2019*, p. 3, and DNB and Betaalvereniging (2020) *Betalen aan de kassa 2018*, p. 1.

¹³ A more detailed description of non-cash payments can be found in ACM (2017), *Fintechs in het betalingsverkeer*.

¹⁴ See EC decision (M.8251) Bite/Tele2/Telia/Lietuva (2017); EC decision (M.5384) BNP PARIBAS/FORTIS (2008)

¹⁵ See Commission Decision 2001/782/EC (27); Case COMP/29.373 (2002); Case Comp32017M8251 (2017)

Since 2014 it has been possible to make contactless non-cash payments in the Netherlands using the Near Field Communication (NFC) chip integrated into debit cards. The Netherlands leads the world in terms of acceptance of contactless payments.¹⁶ Consumers are increasingly opting for contactless debit card payments: whereas contactless payments accounted for around 2% of all offline payments in 2015¹⁷, by 2019 this figure had risen to 43%.¹⁸ The proportion of contactless payments rose strongly in the first half of 2020, amounting to 69% of all offline payments in June 2020.¹⁹ At present most contactless transactions are conducted with a debit card, but the Dutch Payments Association expects mobile phone payments to be the way of the future. The consumer survey conducted on behalf of ACM²⁰ shows that 12% of respondents never make contactless payments and 69% do so often or always. Figure 2.1 shows that contactless payments have gained a lot of ground in offline payments in recent years.

¹⁶ Bank for International Settlements, *Shaping the future of payments*

https://www.bis.org/statistics/payment_stats/commentary1911.htm. The average person in the Netherlands conducted over 120 contactless debit card transactions in 2018, whereas in France, for example, the figure was 36.

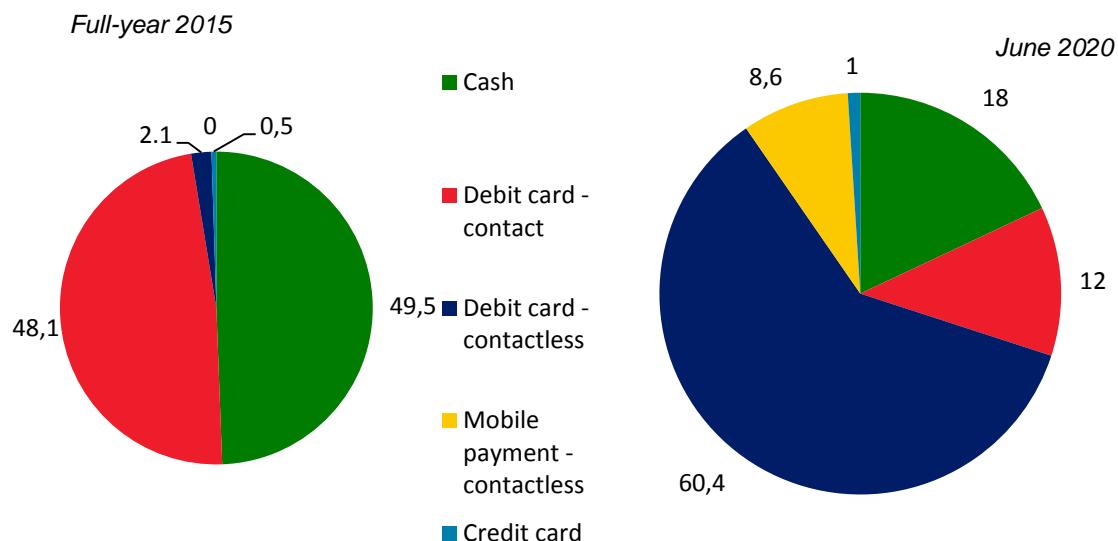
¹⁷ DNB and Betaalvereniging Nederland (2019), *Betalen aan de kassa 2018*, p. 2.

¹⁸ Betaalvereniging Nederland (2020), *Factsheet Betalingsverkeer 2019*, pp. 3, 4 and <https://www.betaalvereniging.nl/wp-content/uploads/Coronabulletin-9-juli-2020.pdf>

¹⁹ How this rise will continue after the coronavirus pandemic remains uncertain according to the Dutch Payments Association.

²⁰ Research by the PwC consulting firm on behalf of ACM.

Figure 2.1. Shift in the use of methods of payment from 2015 to June 2020, in percentage of total number of transactions



Source: Based on data from the Dutch Payments Association and De Nederlandsche Bank.

Rapid growth in mobile payments

Where contactless payments can be made using a debit card²¹, it is also possible to make contactless payments using a mobile phone with an NFC chip (referred to henceforth as contactless mobile payments). A growing number of banks have offered this payment method since 2015 through their own e-wallet application. Contactless payments can also be made using other mobile devices with an NFC chip, such as smartwatches. Big Techs also offer this new payment method by means of e-wallets. Their e-wallets currently operate as a ‘shell’ on the banks’ electronic money network.²² The use of e-wallets has risen significantly in the Netherlands since 2019, the year in which the Apple Pay e-wallet was introduced.²³ In 2019, 12% of people in the Netherlands made contactless payments by mobile phone, representing a rise compared to 2018 (9%) and 2017 (7%).²⁴

²¹ Since 1 January 2020 Visa and Mastercard have required retailers to have a payment terminal that accepts contactless payments (https://pinnen.nl/nl/home/nieuws/general-press-releases/2019/contactloos_verplicht.htm)

²² The payment is still made through the banks’ infrastructure, such as payment accounts and payment cards.

²³ Betaalvereniging Nederland (2020), *Infographic Factsheet betalingsverkeer 2019*.

²⁴ DNB and Betaalvereniging Nederland (2019), *Betalen aan de Kassa 2018*, p. 7.

E-wallet

An e-wallet at the point of sale is an application on the customer's mobile phone that operates as a digital wallet. The customer saves the details of their payment cards, discount cards and account numbers to their e-wallet and can then use it to make payments. Payments can be initiated by means of NFC technology, QR code or other methods.

An e-wallet in the online environment is a digital wallet in which the customer stores their payment card details. Other information, such as addresses, can also be stored in the e-wallet. The customer only needs to save these details to their e-wallet once and can then use them in all affiliated online stores.

An e-wallet can be used to make peer-to-peer payments to contacts who use the same e-wallet (or to request a payment). Other applications, such as SMS, e-mail or WhatsApp are often required in order to send payment requests.

In addition to making payments by means of the NFC chip, mobile phones can also initiate payments by scanning QR codes (referred to henceforth as mobile QR code payments), Bluetooth connections and other methods.²⁵ These methods are available on a small scale in the Netherlands and acceptance is limited. Contactless mobile payments by means of NFC chip are used more widely. At the end of 2019 around 10% of all contactless payments were processed by means of contactless mobile payments, the vast majority using the NFC chip.²⁶ The use of contactless payments (including by mobile phone) in stores has risen since the start of the coronavirus pandemic in March 2020. In July 2020 mobile payments accounted for one in eight contactless payments.²⁷

The PwC survey shows that 73% of respondents made no contactless payments with their mobile phone in the past year. 13% of respondents said they often or always made contactless payments with their mobile phone. The use of other mobile devices (such as smartwatches) is lower, with 3% often or always using another device. QR code payments are fairly rare in the Netherlands. Only 4% of the surveyed consumers often or always make QR code payments. Contactless mobile phone payments are accepted by 85% of surveyed stores and QR code payments by 8% of stores.

Rise in use of mobile phones for online and peer-to-peer payments

The percentage of online payments made by mobile phone rose from 2%²⁸ in 2014 to 15%²⁹ in 2019. Most online transactions are still conducted on a laptop or desktop, collectively accounting for 71% of all online purchases in 2019. This proportion is lower, however, than in previous years. 15% of online transactions were conducted on mobile phones in 2019. 4% of respondents state that they often or always use their e-wallet for online payments. Most online payments are still made using iDEAL, the

²⁵ Samsung Pay, for example, uses sound waves to initiate payments.

²⁶ Betaalvereniging Nederland (2020), *Infographic Factsheet Betalingsverkeer 2019*.

²⁷ The rise is partly due to increased payment limits for mobile payments. Coronabulletin Betaalvereniging Nederland July 2020.

²⁸ Thuiswinkel.org (2015), *Thuiswinkel Markt Monitor 2014 Q4*.

²⁹ Thuiswinkel.org (2020), *Thuiswinkel Markt Monitor 2019*. In addition, 13% of online payments are made on tablets and 1% in stores.

banks' electronic payment solution. 81% of respondents state that they often or always use iDEAL for online purchases.

Unlike offline payments, online stores must actively choose to accept e-wallet payments. The survey of retailers shows that 15% of online stores accept e-wallet payments. By contrast, almost all online stores in the survey accept iDEAL. Credit card, PayPal, post-payment and bank transfers are often also accepted.

Finally, applications on mobile phones are leading to a sharp increase in the number of peer-to-peer payments using the electronic payment system. Most peer-to-peer transactions in 2019 were in cash and 45% took place electronically, for example with the Tikkie app, compared to 38% in 2018. Electronic transactions have a higher average value than cash transactions, however.³⁰ 52% of surveyed consumers state that they often or always make peer-to-peer payments by means of mobile transfers (where the payer takes the initiative). 44% state that they often or always make peer-to-peer payments by accepting a payment request on Tikkie, for example, where the payee takes the initiative.

Changing roles in the payment system

As well as providing payment accounts, banks have traditionally facilitated many steps in the payment system, such as initiation, verification, authentication and clearing & settlement.³¹ A strong trend is under way in the payment system, however, whereby these individual steps are increasingly being carried out by different parties. Financial technology firms (referred to henceforth as fintechs) often focus on a specific part of the payment chain. They may provide services for consumers and retailers at the point of sale and in the online payment environment.³² Big Techs differ from fintechs in terms of their scale, reach and financial muscle, but fintechs may also operate in one or more parts of the payment chain.³³

A barrier to the entry of foreign fintechs and Big Techs into the payment chain (or parts of it) is the different composition of the debit card number used in the Netherlands. Whereas most European countries have 16-digit card numbers ("Funding Primary Account Number"³⁴), the Netherlands uses a 19-character code for debit cards. This means a different token is required to make payments in the Netherlands than in other European countries. This gives rise to additional costs for foreign operators, including fintechs and Big Techs, wishing to enter the Dutch payment market.

In response to the entry of non-banks into the payment chain, banks are trying in turn to attract other parts of the payment chain that they have not previously served. For offline payments consumers use payment cards issued by banks, but the payment actually goes through the Visa and Mastercard

³⁰ DNB and Betaalvereniging Nederland (2020), *Betalen aan de Kassa 2019*, p. 10.

³¹ See ACM (2017), *Fintechs in het betaalverkeer: het risico van uitsluiting*.

³² Online payments require a payment service provider (PSP) such as Mollie to complete the payment for the retailer.

³³ A detailed description of fintechs' activities can be found in: EY (2020), *Nederlandse FinTech census 2019*.

³⁴ A 16-digit card number, similar to a credit card number.

payment card schemes. In the Netherlands it is mainly Maestro (Mastercard) debit cards that are used. In order to be less dependent on these American operators, 16 European banks are introducing a European payment card scheme, the European Payment Initiative (EPI), covering payment cards and e-wallets for offline, online and peer-to-peer payments. EPI launched its implementation phase in July 2020.³⁵

Regulation: PSD2

Big Techs must be licensed by a European national central bank in order to be eligible for payment facilitation. If they are not licensed, they can operate by entering into a partnership with a licensed partner, such as a bank.

The Payment Services Directive (from 2007, also known as PSD1) laid down six different services for which licences are required. These include issuing money, effecting transfers from payment accounts and issuing bank cards. Eligibility for such licences is subject to stringent requirements which in practice only banks will be willing and able to fulfil. In order to foster greater competition in the payment market, PSD2 was introduced in 2019, among other things introducing two new services with lighter licensing requirements. With the consumer's agreement, undertakings holding these licences can request the bank to grant direct access to payment accounts and payment information (services 7 and 8 in the Directive).

DNB has licensed between 10 and 15 fintechs to provide these two services. Of the Big Techs, only Google is currently licensed for these services. Big Techs can also enter the payment market without these licences by relying on the licences of business partners. There may be various reasons why fintechs are more likely to apply for licences than Big Techs. For example, it could be because Big Techs have less need of access to the payment account and payment information than fintechs because they are already in contact with users and can obtain information on them.

In addition to the new licences, PSD2 includes additional rules for financial institutions. For example, the criteria set by financial institutions for access to payment accounts and payment account information must be objective, non-discriminatory and proportionate. The directive thereby seeks to ensure a level playing field for payment service providers.

2.2 Expected acceptance of new methods of payment

In the survey referred to above, PwC assessed the expected preferences of consumers and retailers for new methods of payment. The full results appear in the annex to this market study. A number of interesting findings can be summarised as follows:

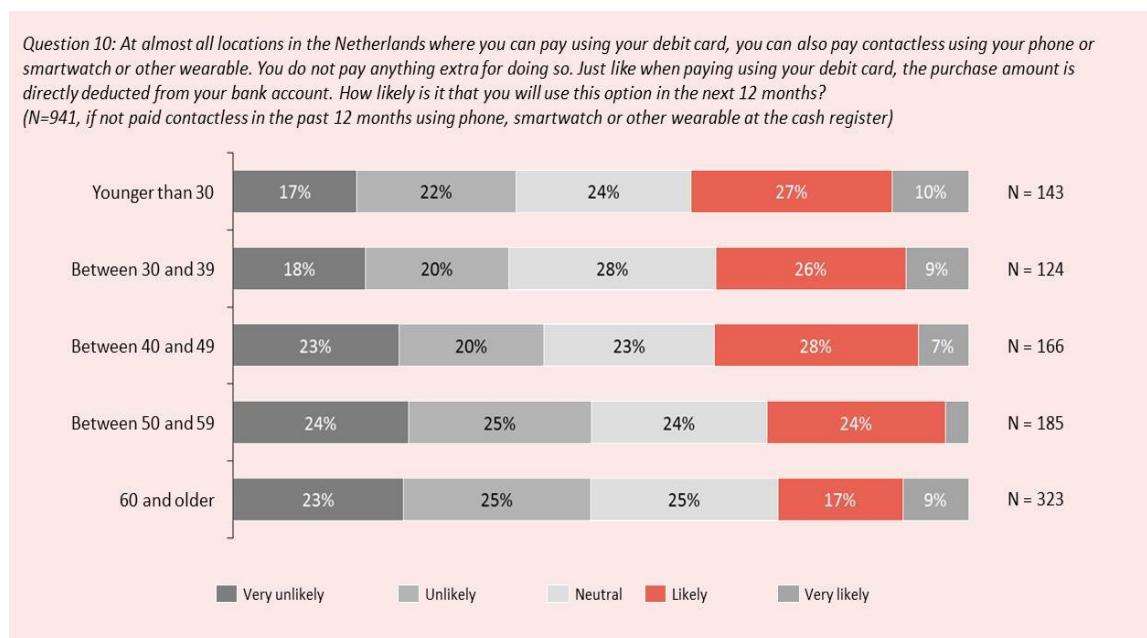
- Around 90% of consumers have used more than one method of payment in the past year

³⁵ See ECB news bulletin, *ECB welcomes initiative to launch new European payment solution*, dated 2 July 2020. (<https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200702-214c52c76b.en.html>)
https://ec.europa.eu/info/news/200702-european-payments-initiative_en

(either online or at the point of sale). The main reason for this is that consumers in principle prefer a single method of payment but also like to have another in reserve.

- Of the respondents who did not pay at the point of sale using the NFC chip in their phone in the past year, 31% say they are likely or very likely to do so within a year. The expected use also decreases partly with age, as can be seen in Figure 2.2. 44% say they are unlikely or very unlikely to do so.
- In the case of offline payments by QR code on a mobile phone, 14%³⁶ of respondents say they are likely or very likely to use QR codes during the next year compared to 60% who say they are unlikely or very unlikely to do so.
- In the case of online payments, 19% expect to use their e-wallet, while for peer-to-peer payments the readiness to do so is somewhat lower at 17%. More than half (55-60%) of respondents who have not used an e-wallet in the past year say they are unlikely or very unlikely to do so for online and peer-to-peer payments in the year ahead.

Figure 2.2. Approximately 30% of non-users expect to use contactless payments by mobile phone



³⁶ The survey draws a distinction between expected acceptance of payments by means of a QR code that has to be scanned from a printed voucher or from the screen at the point of sale. The difference in expected acceptance was less than 1%. The 14% is based on both expected acceptances.

Figure 2.3. Consumers' main reasons for and against adoption.

Reason for acceptance	Reason against acceptance
Offline NFC payments	
<ul style="list-style-type: none"> • Easy to use [81%] • I don't (always) have to take my wallet/purse with me [61%] 	<ul style="list-style-type: none"> • No need for new methods of payment [50%] • Not secure in terms of theft and/or fraud [42%] • No easier to use than other methods of payment [38%]
Offline QR payments	
<ul style="list-style-type: none"> • Easy to use [61%] • I don't (always) have to take my wallet/purse with me [50%] • Secure in terms of theft and/or fraud [31%] 	<ul style="list-style-type: none"> • No need for new methods of payment [53%] • No easier to use than other methods of payment [46%]
E-wallet for online payments	
<ul style="list-style-type: none"> • Easy to use [81%] • Secure in terms of theft and/or fraud [31%] 	<ul style="list-style-type: none"> • No need for new methods of payment [58%] • No easier to use than other methods of payment [32%]
E-wallet for peer-to-peer payments	
<ul style="list-style-type: none"> • Easy to use [83%] • Secure in terms of theft and/or fraud [30%] 	<ul style="list-style-type: none"> • No need for new methods of payment [56%] • No easier to use than other methods of payment [33%]

Figure 2.3 shows the main reasons why consumers decide whether or not to adopt a new method of payment.³⁷ Increased convenience is the main reason for acceptance of all types of e-wallets. The e-wallet is also perceived to be very secure.

The main reason for not adopting an e-wallet is lack of need. Differences can also be seen between age groups. In the case of QR code payments, it is notable that for the group aged under 40 a lack of convenience weighs more heavily than not needing it. Respondents below 40 see the e-wallet more as a replacement for existing methods of payment and also have higher acceptance or willingness to accept it. For the group over 40, security aspects appear to be more significant than for the younger group of respondents. Payment frequency also appears to affect willingness to accept it: the more often a consumer makes payments, the more open he or she generally is to new methods of payment.

Trust and network effects

A striking feature of the survey results is that the options 'My friends or family also use it' and 'No / little trust in the companies providing it' do not appear to be important motives for consumers' decisions on whether to use an e-wallet in any submarket. The first may imply that consumers are not influenced – at least consciously – by indirect network effects. The latter finding is interesting given the perception that Big Techs are generally unable to access payment data. Respondents state

³⁷ All answers selected by more than 30% of respondents are shown.

that they trust their own bank with their payment data. PayPal and other banks also enjoy a reasonably good level of trust. Of the Big Techs, Apple enjoys the most trust, with 17% of respondents³⁸ trusting the company or trusting it a lot. For the remainder of the Big Techs the figure is less than 10%.

Figure 2.4. Limited consumer use of mobile QR code payments, due partly to limited offering by retailers.

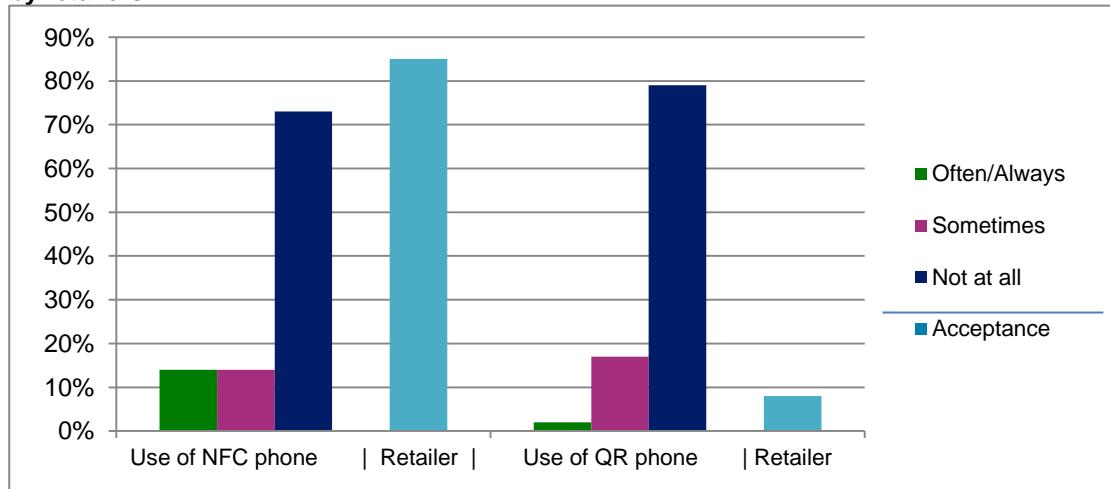


Figure 2.4 shows the current acceptance and retailers' offering of contactless mobile payments on the one hand and mobile payments by QR code on the other hand. It shows that consumers embrace contactless mobile payments more than QR code payments. Non-users of contactless mobile payments also expect to start using them within a year on a larger scale than non-users of QR payments. It is also notable that as yet hardly any retailers are offering QR payments, whereas contactless payments can be made with a mobile phone almost everywhere.

Acceptance in stores

The survey shows that 72% of physical retailers perceive demand among their customers for mobile offline payments. 83% of retailers believe this demand will increase in the future³⁹. Retailers say there is less demand among their customers for payment by QR code. 8% of retailers say there is currently demand, while 31% believe demand will increase in the future. Fewer than 30% of retailers that do not currently accept QR codes say they are likely or very likely to do so in the next 12 months. Retailers that do not expect to accept QR code payments could be persuaded to do so, for example if more customers wanted to use them, if the costs (per transaction) were lower or if they were easier for them and the customer to use. Retailers that currently accept QR codes are found to be fairly price-sensitive. Of these retailers, 56% would stop offering them if they cost 5-10% more than debit card payments. A degree of caution must be exercised in interpreting the precise results of the survey of physical stores, since the sample was of limited size and not very representative. The

³⁸ This trust is greater among iPhone users.

³⁹ In view of the context, 'future' in this case can be interpreted as within five years.

picture resulting from the survey is borne out, however, in discussions with large retailers.

The survey shows that there is not currently much demand among online retailers for payments with e-wallets (28% perceive demand among customers), but 67% of respondents expect demand to rise sharply in the future in the case of online payments. In line with this observation, 54% of retailers that do not currently accept e-wallets say they are likely or very likely to do so in the next 12 months if transaction costs are not high and, for example, they are equivalent to the current transaction costs of an iDEAL payment. In the case of retailers that do not expect to accept e-wallets in their online store, ‘Lower costs per transaction’ and ‘If it is easier for me and/or the customer to use’ are reasons for offering them. It is notable that retailers appear to be insensitive to whether other businesses accept e-wallet payments (this is not seen as a reason for accepting e-wallet payments at this stage).

2.3 Conclusion

Banks, fintechs and Big Techs are entering the market with new methods of payment on both the consumer and retailer sides. In the payment market the (older) electronic non-cash methods of payment, such as the debit card, currently have a dominant position compared to (new) shells on electronic non-cash methods of payment such as e-wallets and payment apps. Banks continue to play an important role in non-cash payments.

There are three distinct submarkets: offline payments, online payments and peer-to-peer payments. E-wallets can be used in all submarkets. At the point of sale, e-wallet payments can be initiated by means of different technologies, such as NFC chip or QR code.

Methods of payment in the offline payment market using QR code technology compete for the same group of consumers as methods of payment based on the NFC chip. Online retailers expect to see a sharp increase in acceptance of e-wallets based on the NFC chip in the years ahead. Physical retailers appear to expect that acceptance of methods of payment based on QR codes will remain limited in the next 12 months.

Mobile e-wallet payments cannot currently be seen as a dominant method of payment in any of the aforementioned submarkets, because acceptance in the Netherlands is still very low. The e-wallet does nevertheless have the potential to further displace other methods of payment in all these submarkets for a specific group of consumers in the years ahead. It can be seen that respondents under 40 see the e-wallet as a replacement for methods of payment that are currently dominant, such as iDEAL. In view of the age group involved, acceptance can be expected among all consumers in the medium term.

3 The payment market activities of Big Techs

In this chapter we address the following questions: What activities do Big Techs have in the payment market in and outside the Netherlands, and why do they have payment services?

3.1 Overview

All Big Techs offer methods of payment in the Netherlands. Acceptance in the Dutch payment market is still limited at present. Only the Apple e-wallet – Apple Pay – is seeing rapid growth of market share in offline payments. At the end of 2019 the share was approximately 5%. The payment services of the Chinese Big Techs are currently only available to Chinese tourists or Chinese citizens in the Netherlands. The Big Techs appear to have a very limited presence in online payments.⁴⁰ They do not yet operate in the market for peer-to-peer payments in the Netherlands.

Taking advantage of network effects and their strong position in technology and data, the Big Techs often introduce a facilitating technology as a method of payment built around the banks' payment system. Table 3.1 shows that all Big Techs operate in the online payment market in the Netherlands, in order to strengthen their various ecosystems and core activities. Furthermore, Big Techs such as Apple and Google that control mobile phone operating systems also appear to be heavily engaged in offline e-wallet payments. As an extension to this, outside the Netherlands they are engaged in peer-to-peer payments to strengthen the payment platform within the ecosystem. The Chinese Big Techs are also focusing on all three submarkets outside the Netherlands. They are doing so using QR technology, which makes them somewhat less dependent on the Mastercard/Visa payment card schemes. The four American Big Techs use these payment card schemes based on NFC technology.

Having regard to the Big Techs' activities in payment markets outside the Netherlands, it is expected that in addition to online payments they will have a more marked presence in the Dutch market for offline and peer-to-peer payments in the near future.

⁴⁰ Thuiswinkel.org (2020), *Thuiswinkel Monitor Q1 2020*

Table 3.1 Big Techs by activity in the payment market in and outside the Netherlands and reasons for entry

<i>Big Techs</i>	<i>Offered in the Netherlands (NL) or only outside the Netherlands (BN)</i>			<i>Reason(s) for entry</i>	
	<i>Offline</i>	<i>Online</i>	<i>Peer-to-peer</i>	<i>Supporting the ecosystem</i>	<i>Direct revenues</i>
Apple	NL	NL	BN	X	X
Google	NL*	NL	BN	X	
Amazon	BN	NL		X	X
Facebook		NL	BN	X	
Tencent	NL**	NL**	BN**	X	X
AliBaba	NL**	NL**	NL**	X	X

*Only available for credit card payments within the banking app of bunq, among others.

**Only available to Chinese tourists/residents.

As can also be seen from Table 3.1, the Big Techs themselves say the main motive for introducing methods of payment is to strengthen their ecosystem. PSD2 has not played a major role in their decision to enter the Dutch payment market. The use of data differs among the Big Techs, with in particular Google, Facebook and Amazon and the Chinese Big Techs using a lot of personal data, at both individual and aggregate level, for ease of payment but also to limit payment fraud. Big Techs were already operating in various EU countries before PSD2. The PSD2 legislation does not apply to Apple and Amazon, however, because their payment market activities are deemed to be a technical service in the payment system. Only Google currently has a PSD2 licence for payment initiation and account information services. Details are provided below of the activities of each of the Big Techs in the payment market as part of their broader strategy.

3.2 Apple

Apple earns the bulk of its revenues from sales of hardware such as the iPhone, iPad and Apple Watch. Service provision has become increasingly significant over time, however. Whereas service revenues in the first quarter of 2014 amounted to \$4.4 billion, in the second quarter of 2020 the figure was \$13.4 billion. Services such as Apple Music and the App Store increasingly generate a large share of revenues.⁴¹ ACM has the impression that Apple is gradually shifting the focal point of its activities from hardware to services. In our view offering Apple Pay can be seen as part of this diversification.

⁴¹ <https://www.statista.com/chart/14629/apple-services-revenue/>

Apple Pay in the Netherlands

Apple Pay has been available officially in the Netherlands since it was introduced at ING on 11 June 2019. In the 2019 fiscal year Apple earned between \$[0 and 5] million with Apple Pay in the Netherlands, a fraction of its total global profit. Banks can enter into a contract with Apple to use their credit and debit cards in electronic form by means of an e-wallet on a device for offline (point-of-sale, POS) payments by means of NFC-enabled POS. The Netherlands is one of the last EU countries to see the introduction of this method of payment. This may have to do with the specific composition of debit card numbers, which needs to be converted in order to work in the Big Techs' systems. This represents a barrier to the entry of Big Techs in the Netherlands. The relatively low costs of existing methods of payment may also be a factor for banks.

Apple is one of the larger operators in smartphone payments in the Netherlands. The share is still relatively limited, however. Apple Pay has been linked to [1 to 5] million payment cards in the Netherlands.⁴² There are around 27.8 million debit cards and 6.6 million credit cards in the Netherlands.⁴³ These figures suggest that roughly [0-10]% of these cards are linked to a smartphone with Apple Pay for offline payments. Apple itself sees Apple Pay as a digital wallet, which is a substitute for a physical wallet and provides an alternative to cash, credit and debit card payments, for example.⁴⁴

In addition to offline payments, Apple Pay can be used to pay online on websites and in apps.⁴⁵ To enable this the website provider can build in the 'pay with Apple Pay' function.⁴⁶⁴⁷ This button can also be built into apps for in-app purchases or purchases of apps, although app providers in the Apple App Store are not required to use it.⁴⁸⁴⁹ Apple Pay cannot be used for peer-to-peer payments in the Netherlands.⁵⁰

Apple Pay mainly operates on the existing structures and should therefore be seen not so much as a new payment service, but rather as a facilitating technology. This means consumers can make payments with existing payment cards using Apple hardware⁵¹ (also referred to as a bank-led

⁴² These figures are based on the number of cards that were used during the quarter to December 2019 to make at least

one payment. The figures may therefore underestimate the actual number.

⁴³ See <https://factsheet.betrouwbaar.nl/#betalen-aan-de-toonbank>

⁴⁴ Based on responses to ACM's information request to Apple.

⁴⁵ <https://developer.apple.com/apple-pay/>

⁴⁶ <https://support.apple.com/en-gb/guide/safari/ibrw8e207504/mac>

⁴⁷ https://developer.apple.com/documentation/apple_pay_on_the_web

⁴⁸ App providers that sell digital content in the app must, however, use Apple's IAP function. This is not the same as Apple Pay. The IAP function must also be used for sales of apps. This function is not the same as Apple Pay.

⁴⁹ <https://support.apple.com/en-gb/HT201239#inapp>

⁵⁰ Apple offers peer-to-peer payments in the United States under the name Apple Cash.

⁵¹ With credit cards, debit cards or prepaid cards. Apple does not issue cards in Europe. The cards loaded into Apple Pay are therefore those that a consumer already has, for example at a bank.

solution⁵²⁾

Apple's international payment activities

Apple Pay was launched in America in 2014. According to our own assessment, however, Apple Pay is relatively little used in America, by only 22% of iPhone users. Internationally, by contrast, ACM estimates that Apple Pay has been activated on around 50% of iPhones worldwide. Apple Pay had an estimated 440 million users worldwide in 2019.⁵³ Apple has voice recognition software called Siri which can be found on the iPhone and other Apple devices. Users in the United States can use Apple Pay on an iPhone to initiate a peer-to-peer payment with Apple Cash by means of a voice instruction.

Apple has introduced a payment product in the United States: Apple Card. This credit card is issued by Goldman Sachs Bank USA under a co-branding agreement and uses the payment infrastructure of Mastercard. According to Apple the Apple Card is intended to help US consumers to lead a healthier financial life by paying less in fees and avoiding interest fees.

Why does Apple want to offer Apple Pay?

Our impression is that Apple introduced Apple Pay to give users a simple, secure and privacy-friendly way of making payments with Apple devices. Apple Pay also generates revenues from the fees charged to banks.⁵⁴ The revenue generated with Apple Pay in the Netherlands is still relatively limited, amounting to \$[0 to 5] million in 2019.

Data collection does not appear to be the main reason for Apple to enter the payment market. If the consumer has enabled 'Location Services', the Apple device provides *location data* for offline payments, i.e. the time and date of payments in order to display the seller's company name to the user in Apple Pay. This data does not leave the device in a way that can be traced back to an individual. Apple does not receive any data on the amount spent or the content of the transaction in offline payments.⁵⁵ In the case of online payments, Apple receives anonymised data relating to the

⁵² This means the bank carries out the verification of the payment and arranges the settlement of the funds.

⁵³ Further information on the methodology can be obtained from Statista.

<https://www.statista.com/statistics/722213/user-base-of-leading-digital-wallets-nfc/>,

<https://www.statista.com/statistics/911914/number-apple-pay-users/>,

⁵⁴ When Apple Pay was introduced, ING put out advertisements actively promoting the use of the ING debit card in Apple Pay.

⁵⁵ This is confirmed in market discussions with other market participants; <https://support.apple.com/en-gb/HT204274>: 'When customers pay with Apple Pay, you don't receive or handle their actual credit card, debit card or bank account numbers in your systems.'

That means retailers that decide to accept offline payments with Apple Pay do not receive any payment details of their customers, whereas retailers do receive these for

purchase amount, the app developer, the date and time. Apple also checks whether the payment was successful.⁵⁶ Apple has no access to and does not collect any payment information that can be traced back to a consumer or can identify an individual.⁵⁷ Apple Pay only stores part of the actual card number, together with a description of the card, in order to help the consumer to manage the card.

Apple does not have a PSD2 licence, but has entered the market by cooperating with banks. In any event PSD2 has not been a precondition for or an impediment to Apple's provision of Apple Pay. Apple states that the percentage of payment devices with NFC technology, the high concentration of card issuers (banks) and retailers' willingness to accept Apple Pay played a role in the entry into the Dutch market.⁵⁸

3.3 Google

Google focuses mainly on four activities. The provision of: (i) a search engine, (ii) operating systems and platforms⁵⁹, (iii) an advertising platform and (iv) hardware products. From a financial point of view the sale of advertising space is by far Google's most important activity. In the first fiscal quarter of 2020 more than 80% of revenues were generated from sales of advertising.⁶⁰ Under the terms of the Google Payments Privacy Notice the collected data can be used for the effective targeted sale of advertising space. Google has explained that collecting user data is not a reason for it to offer payment services.

Google Pay in the Netherlands

Google's main payment-related activity in the Netherlands is Google Pay for online payments. Google Pay operates on a very minimal scale in the Netherlands⁶¹, since at present it can only be used to a limited extent for offline payments, and then only for credit cards. As stated earlier, this is due to the difference in the composition of the debit card number used in the Netherlands. In its full operational form, Google Pay can be used to make offline, online and peer-to-peer payments.

regular debit card payments. That may be disadvantageous for them in that they are less able to carry out marketing targeted at customers or groups of customers. On the other hand it may be advantageous from the privacy perspective. It also means that a cardholder's details will not be discovered if the retailer is hacked or suffers a data breach.

⁵⁶ Banks send the transaction history in the Apple Wallet directly to the user's device without the involvement of the Apple servers. When Apple Pay is set up the bank must verify the consumer (for example by sending a one-time passcode by SMS or by asking the consumer to log in on his mobile banking app). Apple Pay provides the user environment and the APIs that enable this functionality but does not receive this personal information (such as the telephone number or e-mail stored by the bank).

⁵⁷ TouchID and FaceID data are stored on the user's device.

⁵⁸ Apple Pay was introduced earlier in other European countries due to the different composition of Dutch debit card numbers.

⁵⁹ Such as: Google Chrome, Chrome OS, Gmail, Google Play, Google Drive, G Suite, Google Cloud Platform, Google Pay, YouTube, Google Hangouts and Google Assistant

⁶⁰ See: https://abc.xyz/investor/static/pdf/2020Q1_alphabet_earnings_release.pdf

⁶¹ Based on responses to ACM's information request to Google.

Google Pay currently is used, however, to support other revenue-generating activities in the Netherlands (such as the Play Store). Since mid-November 2020 Google has provided Tap & Pay functionality in Google Pay within the banking apps of bunq, N26 and Revolut for offline payments with a credit card.⁶² By contrast, the current services that Google provides appear to be a facilitating technology at this stage. Google supplies these in cooperation with banks. Google also works with other parties, including banks, in other fields. See, for example, the recent partnership with Deutsche Bank in cloud services and risk analysis.⁶³

Google Pay international payment market activities

Google Pay was reportedly the most downloaded fintech app in February 2020, with 15.6 million downloads (worldwide excluding China). The number of downloads has more than doubled compared to February 2019. Google Pay has been a major success particularly in India. A large majority of the downloads (83.6%) are therefore by users in India.⁶⁴ The usage level in European countries, and particularly in the Netherlands, is significantly lower. In the United States it is also possible to transfer money from a Google Pay account.⁶⁵

Although Google Pay is only available to a limited extent in the Netherlands, businesses can use the Google Pay API⁶⁶ to offer streamlined order processing to consumers who have saved a credit card or payment card to their Google Account. Google also provides an acquiring service for traders, in which it processes transactions on behalf of traders operating in its 'marketplaces'.

Google states that this acquiring service is the only method of payment (within the meaning of PSD2) that Google provides in the Netherlands. This service is limited to Google marketplaces, such as the Play Store.⁶⁷

Why does Google want to operate in the payment market?

A key reason cited by Google for introducing Google Pay is an improved user experience for Android phones, particularly given the competition with the iPhone.⁶⁸ Google Pay has no standalone revenue-generating activities, since Google, unlike Apple, does not charge fees to banks. According to Google, Google Pay is also not intended to be a direct revenue-generating activity. It also states that in Europe (and in the Netherlands) Google Pay is not currently used to earn money in any other way, such as for advertising purposes or the development of artificial intelligence (AI).

⁶² <https://nederland.googleblog.com/2020/11/google-pay-beschikbaar-als-dienst-in.html>

⁶³ See: https://www.db.com/newsroom_news/2020/deutsche-bank-and-google-to-form-strategic-global-multi-year-partnership-to-drive-a-fundamental-transformation-o-en-11628.htm

⁶⁴ <https://sensortower.com/blog/top-fintech-apps-worldwide-february-2020> This estimate by SensorTower does not take account of apps developed by Apple or pre-installed Google apps; it does take account of apps downloaded through the Apple App Store for financial services (wider than just payments).

⁶⁵ <https://support.google.com/pay/answer/7643913?co=GENIE.Platform%3DAndroid&hl=en#:~:text=You%20can%20use%20Google%20Pay,a%20list%20of%20likely%20reasons>

⁶⁶ An Application Programming Interface (API) is a piece of software that enables two programs to 'talk to each other'.

⁶⁷ Based on responses to ACM's information request to Google.

⁶⁸ Based on responses to ACM's information request to Google.

In its responses Google states that payment data and machine learning are used to improve Google Pay. Google uses this data to improve the Google Pay user experience and detect fraud. Google states that the payment information collected in the Netherlands is limited at present because Google Pay is not yet fully operational in the Netherlands.⁶⁹

According to the privacy conditions and Google's responses, for payment transactions Google has access to the user's name, address, transaction history, card details and tax number and the transaction information. In the terms and conditions Google states that this data is stored both on the user's device and on Google's servers.⁷⁰

In order to further increase convenience for the user, Google uses voice recognition software associated with the Google Home assistant. In other countries the user can use Google Home to give voice instructions to initiate an online payment or, for example, to make a peer-to-peer payment to friends (this is not possible in the Netherlands).⁷¹

In Google's case developments in the field of PSD2 and 'Open Banking' APIs play a role in the future products that Google plans to launch in the payment market.⁷² Google is the only Big Tech that has a payment licence or electronic money institution licence in the EU for all services in the payment system. Many of these licences are dormant, however, according to Google. Three Google units have licences: Google Payment Ireland Limited, Google Payment Limited (in London) and Google Payment Lithuania UAB (Vilnius, Lithuania). This licence enables Google to issue electronic money and provide payment services in Europe.⁷³

3.4 Amazon

Amazon generates the bulk of its revenues from its own online and physical stores and from services for third parties who sell on the Amazon platform. Geographically, Amazon generates the bulk of its revenues in North America. Amazon opened a full online store in the Netherlands (Amazon.nl) at the beginning of 2020. In addition to online retail, Amazon also conducts a large number of other activities, such as Amazon Web Services (cloud services) for the business market and subscription services (including Amazon Prime). Amazon provides various financial services, such as payment

⁶⁹ Based on responses to ACM's information request to Google.

⁷⁰ Based on responses to ACM's information request to Google; Google collects four types of information flows with Google Pay: (i) registration information, such as the bank number, card number and expiry date; (ii) third-party information, such as geographic information relating to payments and information on the user's balance (for accounts linked to Google Pay); and (iii) transaction information, such as the time, date, amount and payment method of a transaction, but also the name and e-mail address of the buyer and seller (source: translated on the basis of responses to ACM's information request to Google, but these refer to the 'Privacy notice', so are presumably not confidential).

⁷¹ OECD (2019), *An Introduction to Online Platforms and Their Role in the Digital Transformation*, OECD Publishing, Paris, p. 154 (<https://www.oecd-ilibrary.org/docserver/53e5f593-en.pdf?expires=1601024593&id=id&accname=ocid49027884&checksum=A76E377095D23950E7A2FECFDAEF83FE>)

⁷² Based on responses to ACM's information request to Google.

⁷³ See: <https://www.dnb.nl/toezichtprofessioneel/openbaar-register/index.jsp?naam=google>, <https://www.dnb.nl/en/news/news-and-archive/DNBulletin2019/dnb384278.jsp#>, DNB register of payment institutions and electronic money institutions.

services and loans.⁷⁴ In June 2020 Amazon and ING announced a partnership offering SME loans in Germany through the Amazon seller portal.⁷⁵

Amazon Pay in the Netherlands

Amazon Pay provides a payment solution for online payments in the Netherlands. Amazon Pay is Amazon's main payment service and can be used by consumers on the websites and apps of sellers who accept Amazon Pay. Consumers who select Amazon Pay as the payment method on a seller's website have to log into their Amazon account and complete the payment in the Amazon environment. Amazon Pay is free to consumers. To provide Amazon Pay, sellers pay a processing fee of around 2-3% per transaction (depending on volumes) and an authorisation fee.⁷⁶

The figures supplied by Amazon show that in 2019 Amazon Pay was still only available to a limited number of Dutch sellers and was used for a limited number of transactions.⁷⁷ Amazon Pay has recently entered into a partnership with Adyen, under which Amazon Pay has been added to the Adyen payment platform in the Netherlands.⁷⁸

Why does Amazon want to operate in the payment market?

Amazon sees its payment services primarily as supporting its retail activities.⁷⁹ Amazon's payment services add value to Amazon's services, because they offer consumers and sellers an easy and secure payment method linked to their Amazon account. The payment services also strengthen consumers' relationships with Amazon. For example, consumers who use Amazon Pay to make purchases on websites and apps of third-party sellers are led to the Amazon environment to make their payment. Moreover, by offering discounts on products and services Amazon can encourage consumers to use Amazon Pay to pay on third-party websites.⁸⁰

Amazon states that direct revenues are not the main reason for providing payment services. Nor is the collection of data (e.g. transaction data) a driver for offering Amazon Pay according to Amazon.⁸¹ Amazon Pay only collects information on the currency and the transaction value in order to process the payment. Amazon Pay does not receive information from the third-party seller on the purchased product.

⁷⁴ FSB (2019), *FinTech and market structure in financial services: Market developments and potential financial stability implications*, p. 14, (<https://www.fsb.org/2019/02/fintech-and-market-structure-in-financial-services-market-developments-and-potential-financial-stability-implications/>)

⁷⁵ See the ING press release: <https://www.ing.com/Newsroom/News/ING-in-Germany-and-Amazon-join-forces-in-SME-lending.htm>

⁷⁶ See: <https://pay.amazon.ie/help/SKX7JCY3G3SP73U>.

⁷⁷ Based on responses to ACM's information request to Amazon.

⁷⁸ See: https://www.adyen.com/nl_NL/press-and-media/2020/adyen-announces-the-addition-of-payment-method-amazon-pay-to-its-single-platform

⁷⁹ Based on responses to ACM's information request to Amazon.

⁸⁰ During Prime Day 2019 Amazon offered discounts on products and services if consumers used Amazon Pay to pay on third-party websites. Amazon indicates that this was a specific, one-off promotion.

⁸¹ Based on responses to ACM's information request to Amazon.

Amazon does nevertheless collect user data through the Amazon website. The European Commission is currently investigating whether Amazon is making anti-competitive use of the data of independent sellers who sell on the Amazon platform, such as data concerning their products and transactions on the platform.⁸² The European Commission press release does not indicate that the investigation is directed towards Amazon Pay data.

Amazon has various licences to provide payment services itself.⁸³ Amazon uses its licences in the Netherlands for payments on the Amazon website and for Amazon Pay (payments on third-party websites).

Amazon's international payment market activities

Amazon Pay can be used for offline payments in a limited number of physical stores in the EU, but not in the Netherlands. Amazon states that Amazon Pay in the US and Japan essentially has the same characteristics as in the EU. In India, Amazon Pay has more functionalities, such as opening an account and making peer-to-peer payments between individuals. In the US, Amazon has around 25 physical Amazon Go convenience stores. The Amazon Go app gives users access to the store and they can shop there without having to pay physically for the products. They pay afterwards with their Amazon account. The Amazon Go stores use cameras, sensors and software.

⁸² See: https://ec.europa.eu/commission/presscorner/detail/nl/IP_19_4291

⁸³ Amazon has an electronic money institution licence to handle the issuance, distribution and repayment of electronic money. It also has a payment institution licence for services 3, 4 and 6, enabling it to conduct payment transactions on the payment account of, for example, a person at a bank, or conduct payments covered by a credit line, for example under an overdraft facility. Finally, it can conduct money transfers, including internationally. Amazon is not licensed to provide payment initiation or account information services.

Paying with voice recognition

Amazon has voice recognition software called Alexa that is associated with the Amazon Echo smart speaker. The user can give Alexa voice instructions. There are various examples in which Alexa can be used in conjunction with Amazon Pay to make purchases. In January 2020 Amazon and Exxon Mobil announced a partnership enabling drivers in the US to use Alexa in conjunction with Amazon Pay to pay for fuel at filling stations in future, while in London users can book theatre tickets with Alexa and Amazon Pay.⁸⁴ The partnership with Adyen already enables retailers to send voice messages to customers concerning deliveries of orders paid for with Amazon Pay.

3.5 Facebook

Facebook Inc. (“Facebook”) is a global company that provides various social media platforms, including: Facebook, Instagram, WhatsApp and Messenger. Facebook and its subsidiaries obtain the bulk of their revenues from advertisements sold on its platforms. By collecting data on users, Facebook enables advertisers to reach Facebook users on a targeted basis (age, gender, location, interests and behaviour).

Facebook payment services in the Netherlands

In the Netherlands Facebook currently offers two payment services through Facebook Payments International Limited (“FBPIL”) and one in cooperation with Stripe. Facebook is considering offering these three services collectively under the name Facebook Pay in the course of 2020:

(1) *an electronic means of donating money and fundraising for good causes;* For this purpose Facebook users can use a payment instrument issued by a third party (for example a Mastercard credit card). When Facebook receives such a payment, it stores the received sum in the e-money account of the receiving good cause. Facebook does not charge for this payment service and pays the processing fee of the third party that issued the payment instrument. This activity is therefore loss-making for Facebook. Facebook offers this service throughout the EU. A total of \$[1,000 - 1,500] million was raised worldwide with this service in 2019, including around 15% in the EU and around 2% in the Netherlands.

(2) *in-game purchases of digital goods on Facebook;* Facebook users can play games developed by third parties on the Facebook platform. With this payment service Facebook enables users to create an account that they can use to buy digital goods in the game from the game developers (for example gold coins to go to a higher level). Facebook generated global revenues of \$[100 – 400] million with this activity in 2019. Around 50% of these revenues were generated in the

⁸⁴ See: <https://pay.amazon.co.uk/blog/london-theatre-direct-enables-a-personal-box-office-assistant>

EU and around 1% in the Netherlands.⁸⁵

(3) a service provided in cooperation with Stripe to raise money for personal goals; To supplement the above payment services which Facebook provides independently, it also offers a service in cooperation with Stripe Payments UK Limited ("Stripe") to raise money for personal good causes. Stripe is licensed as an electronic money institution and provides payment services for Facebook users (including accepting and processing payments, and distributing money to recipients). The user pays the processing fee to Stripe and Facebook charges no fees. Stripe provides this service in cooperation with Facebook throughout the EU.

Libra

Facebook is one of the initiators of Libra.⁸⁶ Libra is a 'stable coin' whose value is determined by a "basket" of international currencies. The publication of a White Paper by the Libra Association on this new currency in 2019 triggered a wide-ranging debate among governments, central banks and other authorities on the desirability of such an initiative and whether such a currency could be authorised in the EU within the existing European legal frameworks. The Libra Association has applied for a payment licence in Switzerland, the country in which it has its registered office. The precise position with regard to the introduction of Libra in the European Union is not yet clear. Facebook itself does not expect Libra to be launched internationally before the end of 2020. In parallel with the development of Libra, Facebook has also developed a digital wallet for Libra under the name *Calibra*. Facebook has recently renamed it *Novi*. The launch of this digital wallet depends in turn on the launch of the Libra initiative.

⁸⁵ The geographic distribution is based on the location of the game developer.

⁸⁶ Facebook indicates that any decision to launch Libra rests with the Libra Association, and that the Libra Association is independent of Facebook and has its own management, general meeting of members comprising representatives of participants, a management board and various committees.

Payment services outside the EU

Facebook Pay (in the United States): Facebook Pay has been available on Facebook and Messenger since November 2019 and, in addition to the services provided in the Netherlands, includes features such as ticket purchases, peer-to-peer payments through Messenger and purchases through businesses and users offering goods on Facebook Marketplace. In time, Facebook is also considering providing these services in other regions, and also extending them to Instagram and WhatsApp. Facebook works to some extent with third parties to provide Facebook Pay.

WhatsApp Pay (in India and Brazil): this payment service enables users to make payments to friends and family through WhatsApp. In 2019 it became clear that Facebook was also exploring the possibility of a service enabling SMEs in the Netherlands to send their invoices by WhatsApp.⁸⁷

Why does Facebook want to operate in the payment market?

The main motive for Facebook to offer the current services (in-app purchases and fundraising) is to make its platform more attractive to its users and hence strengthen its ecosystem. It can also obtain data providing information on its users' preferences. Facebook earns no direct revenues for the fundraising option. Facebook does earn money from in-game purchases, however. According to the general terms and conditions, it earns 30% on the apps or in-app purchases sold through Facebook.

In the case of Facebook too, PSD2 does not appear the reason for entering the payment market. Through the Irish subsidiary Facebook Payments International Limited ("FBPIL"), Facebook has various licences to provide payment services. The licences do not cover the provision of the following PSD2 services: account information services (service 7) or payment initiation services (service 8). It therefore provides a facilitating technology. Facebook uses an exemption based on Article 3(k) of PSD2 to offer in-game purchases of digital goods.

3.6 Tencent

Tencent is a technology company that grew by providing social media and games. It currently provides a large number of internet-driven mobile applications, services and products in the fields of social media, games, digital content and financial and business services. Tencent generates the bulk of its revenues from online games. Other revenue sources are advertising services, payment services and cloud services.

Tencent operates predominantly in China, but also has activities on other continents. The best-known Tencent service is WeChat, with over a billion active users worldwide. Compared to other Big

⁸⁷ See <https://tweakers.net/nieuws/151336/whatsapp-business-krijgt-in-nederlandmogelijk-geintegreerde-betaalfunctie.html>

Techs, Tencent provides a large number of financial services, such as payment services, loans, payment accounts and insurance.⁸⁸ In most cases Tencent provides these financial services in cooperation with financial institutions.

WeChat Pay in the Netherlands

WeChat Pay is the mobile payment service from Tencent and uses QR codes to conduct online or offline payments. WeChat Pay is integrated into the WeChat app. It is one of the leading payment services in China and currently focuses solely on Chinese users. Tencent also provides WeChat Pay in the EU and hence also in the Netherlands indirectly through payment institutions with the required PSD2 licences, such as Adyen.

Physical and online stores in the Netherlands have been able to offer WeChat Pay as a method of payment to Chinese tourists and residents for a number of years. A payment account at a Chinese bank is required in order to use WeChat Pay. Only Chinese users can therefore use WeChat Pay to pay for products and services of Dutch sellers.⁸⁹ The total transaction value of payments with WeChat Pay in the Netherlands is very limited and amounted to only a few million euros in 2019.⁹⁰ Tencent also states that it wishes to invest further in payment services in the Netherlands, because of the continued growth in Chinese tourism in the Netherlands.

Tencent itself is not currently licensed to provide payment services in the EU. Tencent charges the collaborating payment institutions a fee per transaction for providing WeChat Pay to sellers.

Why does Tencent want to operate in the payment market?

Tencent offers WeChat Pay in order to enrich and expand its ecosystem.⁹¹ The provision of WeChat Pay in the Netherlands enables Chinese tourists to use a method of payment that they know and trust, according to Tencent. The direct revenues from WeChat Pay are a secondary motive for Tencent to provide the payment service.

Data is also an important input for the Tencent ecosystem.⁹² WeChat Pay collects data from Chinese users, such as personal, financial, transaction and location data.⁹³ WeChat Pay can share this data with other units or partners of the Tencent group established in China.⁹⁴⁹⁵ WeChat Pay uses data to

⁸⁸ FSB (2019), *FinTech and market structure in financial services: Market developments and potential financial stability implications*, p. 14, (<https://www.fsb.org/2019/02/fintech-and-market-structure-in-financial-services-market-developments-and-potential-financial-stability-implications/>)

⁸⁹ Based on responses to ACM's information request to Tencent.

⁹⁰ Based on responses to ACM's information request to Tencent.

⁹¹ Based on responses to ACM's information request to Tencent.

⁹² OECD (2019), *An Introduction to Online Platforms and Their Role in the Digital Transformation*, OECD Publishing, Paris, p. 187 (<https://doi.org/10.1787/53e5f593-en>)

⁹³ Based on responses to ACM's information request to Tencent.

⁹⁴ OECD (2019), *An Introduction to Online Platforms and Their Role in the Digital Transformation*, OECD Publishing, Paris, p. 187 (<https://doi.org/10.1787/53e5f593-en>); Financial Times, dated 7 May 2020, *Tencent monitors foreign accounts to aid domestic censorship*.

⁹⁵ Tencent states that it acts in accordance with its own privacy policy and the applicable personal data legislation.

provide and personalise and/or improve its services. If the user gives consent, Tencent shares the data with advertisers and advertising networks in China to serve relevant advertisements.⁹⁶

3.7 Ant Group

Alibaba started providing digital marketplaces, among other things, for consumers and SMEs in China, but now also provides a number of its services outside China. This applies for example to Alibaba Cloud (cloud services in Asia) and the globally operating AliExpress (which is also known in the Netherlands). It has derived most of its revenues from its marketplaces (in China). The Ant Technology Group (“Ant Group”) was established in 2004 under the name Alipay as part of Alibaba Group Holding (“Alibaba”). Alipay accounts for only a limited share of total revenues.

Alipay initially supported the Alibaba ecosystem, and particularly the TaoBao marketplace, by enabling mobile payments, with the consumer only having to pay once they had received the ordered product and was satisfied with it. Alipay is said to have been created in response to the arrival of eBay in China. Alipay also enabled consumers to hold virtual accounts on TaoBao. In 2013 Alipay introduced Yu’ebao, which enabled consumers to invest through their accounts in a series of financial products.

In 2011 the then CEO of Alibaba, Jack Ma, decided to spin off Alipay, bringing an end to Alibaba’s control of Alipay. Alibaba ultimately acquired a 33 1/3% stake in Alipay, however, and the companies are still working closely together. This can be seen among other things from the fact that on its website under “Our businesses” Alibaba still refers to Ant Group as an “unconsolidated related party of the Alibaba Group”. Ant Group also still supports Alibaba’s marketplaces in the domestic market. In 2014 Alipay changed its name to Ant Financial, and that name was then changed to Ant Group in 2020. Ant Group is considered to be the fintech with the highest market capitalisation in the world.

In addition to Alipay and the aforementioned Yu’ebao, Ant Group provides a range of financial services through subsidiaries (including Sesame Credit, a credit rating company, and MyBank, a neobank) as well as partnerships particularly in Asia. In 2019 Ant Group acquired WorldFirst UK Limited and thus also became active in Europe. WorldFirst also has an operation in the Netherlands. In March 2020 Ant Group also acquired a minority stake in the Swedish company Klarna.

Alibaba/Ant Group in the Netherlands

Ant Group has been available in the Netherlands since 2016, but its activities are still limited. These currently comprise a facility whereby Chinese residents visiting the Netherlands (or other EU countries) can use Alipay at the point of sale in the Netherlands and online retailers in the Netherlands can accept Alipay as a payment method on their websites, either directly or through third

⁹⁶ See the Privacy Policy of WeChat Pay Europe B.V. (“Last updated: 27 August 2018”). Consulted on 6 October 2020.

parties. Alipay also offers peer-to-peer payments in the Netherlands.⁹⁷ WorldFirst also focuses on SMEs, enabling them to conduct international payments and/or transactions. In 2019 Alipay activities generated revenues exceeding € [50 - 100] million in the EEA as a whole, including € [0 - 5] million in the Netherlands. Revenues from WorldFirst UK's activities totalled € [0 - 5] million, including € [0 - 5] million in the Netherlands.

Ant Group receives the main categories of the data. Ant Group has used this data particularly in Asia to develop other financial services (credit rating, bank services, SME loans, etc.). It is unclear whether Ant Group and Alibaba share data under the existing partnership.

Why does Alibaba/Ant Group want to operate in the payment market?

The provision of services in the EU and the Netherlands fits in with the company's global growth strategy. Ant Group is leveraging the Chinese tourists already using Alipay in their own country as a basis for gradually expanding its services in Europe, making minor acquisitions and acquiring stakes in companies already operating in Europe.⁹⁸ This provides a basis on which the other financial products it already provides elsewhere in the world can ultimately also be introduced in Europe.

For Ant Group too, the introduction of PSD2 does not appear to be a reason for entering the Dutch payment market. Payments are seen as a core activity of Ant Group and for that reason they are licensed. Ant Group conducts its Alipay activities under licences held through Alipay (Europe) Limited S.A. of Luxembourg – an electronic money institution – and Alipay (UK) Limited – a payment institution. WorldFirst is also licensed to provide the services as an electronic money institution.

⁹⁷ See: <https://www.businessinsider.com/dominant-alipay-adds-p2p-payments-and-further-broadens-its-mobile-commerce-platform-2015-7?international=true&r=US&IR=T>

⁹⁸ Alipay is also one of the main sponsors of the European Football Championship to be held in 2021.

3.8 Conclusion

Although Big Techs do not yet have a leading position in the payment market, their strong position in their core activities and technological lead could enable them to play a more important role in the payment market, including in the Netherlands. A number of Big Techs such as Apple, Google and Amazon, but also the Chinese Big Techs, recently started operating in the Dutch market for offline payments. The partnerships entered into by Amazon and Tencent with Adyen, for example, show that Big Techs consider growth in the Dutch payment market to be important. Given the large number of payment instruments that Big Techs provide elsewhere in Europe, it is likely that they will be introduced in the Netherlands.

4 Banks' reaction to the entry of Big Techs

As can be seen above, Big Techs do not currently have a dominant position in the Dutch payment market. Some of the Big Techs have already entered the payment market (or parts of it), however, with Apple Pay being the main example as a payment instrument for offline payments. The other Big Techs are also expected to enter the market in the near future, for offline, online and peer-to-peer payments.

The question is how the banks will respond to the entry of the Big Techs into the payment market. Financial services were previously controlled entirely by a small number of banks in the Netherlands. The entry of new players, not only Big Techs but also fintechs and neobanks, is increasing the pressure to innovate.⁹⁹

In this chapter we consider how banks view the entry of the Big Techs into the payment market in the short and long term and how they have reacted to this development so far. There are different types of banks: major banks, neobanks and relationship banks.¹⁰⁰ Before we discuss the risks and opportunities, we will briefly consider banks' current business models and how they themselves are responding to digitisation.

4.1 Banks' business models

For the major banks ING, Rabobank and ABN AMRO, the main business model is based on interest income from mortgages and consumer loans to private customers or loans to business customers in the small and medium-sized segment. The number of customers having both a payment account and a mortgage at the same bank is high, ranging between 31-68% at the four largest banks.¹⁰¹ Banks finance their mortgages and loans in part from customers' savings and payment accounts. Interest income from mortgages and consumer loans to private customers is also important for the relationship bank de Volksbank.¹⁰² In the case of Triodos, SME loans to sustainable, social or cultural businesses are a large source of income.¹⁰³ For neobanks, such as bunq and Knab, the main income is generated from subscriptions to payment and savings accounts which they provide for private and business customers.

Payments are important for all the above banks, because they play a part in meeting their financing requirements. Payment accounts provide an important source of stable finance. Payments also

⁹⁹ Based on responses to ACM's information requests to a number of banks.

¹⁰⁰ ACM classifies ABN AMRO, ING and Rabobank as major banks. The relationship banks include Triodos and de Volksbank. These banks focus on a target group that values factors such as human scale, sustainability and the local region. ACM also considers Bunq and Knab, which operate entirely online, to be neobanks.

¹⁰¹ DNB (2020), *Veranderen voor vertrouwen: Lenen, sparen en betalen in het datatijdperk*.

¹⁰² In 2019 de Volksbank launched an initiative based on loans to SMEs.

¹⁰³ Triodosbank (2019), Annual Report 2019, p. 31.

provide banks with customer data, so they can more easily offer other products, such as mortgages, and monitor their customers' creditworthiness.¹⁰⁴ Another significant point is that payments generate a lot of interaction between the customer and the bank, increasing the customer's familiarity with and hence trust in the bank. Finally, payments generate fee income, particularly on the retailer side. As well as being important to the banks, payments are also a major cost item on their balance sheet.

In addition to the Netherlands, ING and Rabobank often also have a substantial interest in payment markets in other European countries, with Rabobank being more internationally focused on loans to the commercial agriculture market and ING having both business and private customers in other countries. The arrival of new players in the payment market is therefore a very relevant development for the banks.

4.2 Banks' vision of the entry of Big Techs

Major banks

In the short term the major banks see both opportunities and risks in the entry of Big Techs into the payment market. The major banks see opportunities to improve their offering to consumers and limit the costs of developing digital methods of payment, such as their own e-wallets. Consumers can also benefit from an improved offering.

However, when Big Techs provide payment services, the risks from the major banks' perspective are that they have less autonomy with regard to products they provide and that they have to share data (or more data) with Big Techs. Banks try to limit these risks as far as possible, but they argue that this is made difficult because PSD2 compels them to share more data with specific Big Techs than was previously the case. They also state that they are dependent on the Big Techs. Apple, for example, does not open its NFC chip in Apple devices, so banks cannot conduct payments through their own e-wallet on Apple hardware. Apple also has a strong negotiating position and, in the view of the major banks, is able to demand an excessively high price for access to Apple Pay.

In the long term banks see a risk that customer contact with the consumer may be diluted as Big Techs gain more trust among customers and their e-wallets become more important in the payment system. Payment methods are also expected to change. Whereas apps and the internet are still widely used at present, ING believes, for example, that the Big Techs' entry into the payment market may be accompanied over time by rapid growth in voice-operated payment instructions.¹⁰⁵ This may also mean that more data flows that originally passed through banks will pass through Big Techs. This will limit the potential to sell other additional banking products such as mortgages in the future.

¹⁰⁴ See: https://www.ing.nl/nieuws/nieuws_en_persberichten/2014/03/ing_en_het_gebruik_van_klant_brief.html

¹⁰⁵ See:

https://www.ing.nl/nieuws/nieuws_en_persberichten/2018/juli/ing_ontwikkelt_eerste_toepassing_voor_nederlandse_goo gle_assistent.html

The banks also see consequences on the retailer side and at the technical ‘back end’ of the payment market. The entry of Big Techs may lead to a strengthening of the Mastercard/Visa card scheme infrastructure, because the e-wallets currently run on NFC technology in Mastercard’s Maestro card scheme. The major banks are also under pressure from new operators on the acquiring side, including payment service providers (PSPs) such as Adyen, but also Big Techs such as Amazon Pay that take over the acquiring payment services for retailers.

Other banks

The neobanks see the entry of Big Techs on the one hand as an opportunity, because Big Techs' products allow extensive customer reach. It also means neobanks themselves do not have to invest in their own e-wallet with a relatively small customer base. In addition, the Big Techs can provide services that the neobanks themselves are unable to provide and the neobanks do not have to develop these themselves. Big Techs also provide standardisation, so the neobanks' payment solutions can easily connect to them.¹⁰⁶ On the other hand neobanks see the same risks as the major banks, such as dilution of customer contact (“disintermediation”), dependency within a Big Tech's strategy and compulsory use of the Big Tech's product on the Big Tech platform.

Relationship banks serve the local and/or regional market with a specific target group of private customers and therefore do not perceive Big Techs as a threat. Both relationship banks state that they do not compete with Big Techs, because they are mainly focused on sustainable banking and do not seek primarily to provide the simplest and most digital method of payment. Relationship banks see the entry of Big Techs mainly as a possible opportunity to offer their customers better experiences. They also see issues in potential cooperation with Big Techs, due to possible high costs and risks of reduced privacy in the Big Techs' payment services.

4.3 The banks' strategy

The banks see that the Big Techs can improve ease of payment for consumers with their new methods of payment. The banks can then respond broadly in three ways to the entry of Big Techs: innovate/compete, cooperate or wait and see. We see banks responding in different ways to the entry of Big Techs, with all three tactics being adopted. In addition to the responses set out above, banks may also try to protect their position by engaging in anti-competitive behaviour. On this point see the ACM report (2017).¹⁰⁷ The banks' reactions in each submarket are considered in more detail below.

4.3.1 Offline payments

Banks currently compete with Big Techs by offering alternative methods of payment, but they also cooperate with them in the market for offline payments. Banks themselves have offered the option of

¹⁰⁶ Reference is also made here to the standardisation offered by Mastercard's EMDES.

¹⁰⁷ See ACM (2017), *Fintechs in het betalingsverkeer: het risico van uitsluiting*.

mobile offline payments for a number of years through their own e-wallets on Android phones, but until recently few people used them.¹⁰⁸ ABN AMRO has discontinued its Wallet partly for this reason.¹⁰⁹ The banks' own e-wallets use NFC technology. ING has also introduced a more extensive e-wallet under the name of Payconiq, which uses QR codes. A growing number of banks in the Netherlands¹¹⁰ support this app, which has been available in the Netherlands since 2018¹¹¹. ING itself has offered offline payments by means of QR codes since 2016¹¹².

With the introduction of instant payments¹¹³, which are cleared and settled in real time, banks are trying to strengthen the position of the electronic payment system against the Visa/Mastercard card schemes platform used by the Big Techs among others. This may make offline payments initiated with QR technology more attractive to retailers, as they will then receive the payment on their account just as quickly as if it had gone through the payment card schemes.¹¹⁴

In addition, the major banks and bunq are working with Big Techs to maintain contact with (usually) young customers and limit the costs of developing or refining their own e-wallet. For example, they offer Apple Pay jointly with Apple for offline and online payments. In this regard the banks are following the consumer, who wants to be able to make payments using a mobile phone. The other banks do not rule out cooperation, particularly to avoid lagging too far behind other banks in terms of ease of payment, but they first want to see evidence of the added value.

4.3.2 Online payments

In the online payment market banks compete directly with Big Techs. The banks have jointly provided the highly successful iDEAL system in the Netherlands since 2005. This developed slowly at first, but in the last few years banks have made it easier to use by initiating payments not through external devices but through the mobile banking environment and reducing the number of verification steps. In 2016, for example, ABN AMRO reduced the mandatory use of the 'edentifier'¹¹⁵ and since 2018 Rabobank has phased out the 'Rabo Scanner'. The mobile banking apps are very important in this regard.¹¹⁶

¹⁰⁸ Rabobank reported an increase in the use of its Android wallet after the introduction of Apple Pay.

¹⁰⁹ See <https://www.abnamro.nl/nl/prive/internet-en-mobiel/apps/wallet/index.html>

¹¹⁰ Payconiq is a mobile payment app operating on the basis of QR technology through the bank's electronic money network. It was established by ING, but is now independent and is supported by Rabobank, bunq and a number of Belgian banks among others.

¹¹¹ <https://www.payconiq.nl/2018/01/23/payconiq-alvast-te-proberen-door-ing-en-rabobank-klanten/>

¹¹² See ING press release dated 7 April 2016

(https://www.ing.nl/nieuws/nieuws_en_persberichten/2016/04/ing_heeft_primeur_in_nederland_betalen_via_qr-code.html). This is also available for peer-to-peer payments.

¹¹³ The instant payments project is an initiative of the banks. An instant payment is a transfer in euros conducted over the internet and mobile banking system, in which the amount reaches the payee's account within seconds. Previously this took up to a full working day.

¹¹⁴ EPI, an initiative aimed at creating a European payment card scheme, is also intended as a counterweight to the American payment card schemes.

¹¹⁵ See: <https://www.abnamro.com/nl/newsroom/persberichten/2016/geen-edentifier-meer-nodig-voor-iDeal-betalingen-via-abn-amro-mobiel-bankieren-app.html>

¹¹⁶ Payconiq can also be used to make online payments. This also involves the use of QR codes.

4.3.3 Peer-to-peer payments

The American Big Techs are not yet present in this submarket in the Netherlands. Almost all banks nevertheless offer the possibility of easily transferring money between consumers by means of payment requests. Whereas the major banks and bunq have already been offering these payment requests for some time, the other banks only recently began to offer this feature. Triodos is alone in not offering it. ABN AMRO's Tikkie app is also a popular way of making peer-to-peer payments, including for consumers who are not customers of ABN AMRO. Payconiq can also be used for peer-to-peer payments without using QR codes.

4.3.4 Other reactions

All three major banks are investing in apps and fintechs that make banking easier for the consumer.¹¹⁷ Many of these services are covered by PSD2 and compete with possible new initiatives of fintechs and Big Techs. ING has opted for a digital strategy in which it aims to be a first mover by adopting the latest digital technology. Another aspect of that digital strategy is that ING is open to offering its products on platforms other than the ING platform in future and allowing other parties to offer their products on the ING platform, in line with the open banking vision. Other non-neobanks appear to be adopting a more conservative strategy with regard to digitisation.

4.4 Conclusion

Payment market activities are very important for banks, because they also contribute to the banks' financing, both directly and indirectly through sales of loans and/or savings accounts, for example. A presence in the payment market also gives banks customer interactions, brand awareness and customer data, enabling them to bring new products to customers' attention and sell them to them.

With the digitisation of payments and increased competition in this area from Big Techs and fintechs, all banks are innovating in the field of digitisation, albeit to differing degrees. Whereas the smaller banks do not have the reach and clout to compete with the Big Techs, larger banks have invested in fintechs and services. Some of these services have proved successful and others less so. Of the major banks, ING is most clearly positioned as an open digital bank, whereas Rabobank and ABN AMRO innovate less and are more focused on cooperation, although they have introduced new services. The neobanks try to free-ride on the Big Techs' platform in order to rapidly achieve a greater market reach and offer innovative services to their customers. The relationship banks have adopted a more wait-and-see stance.

With the entry of the Big Techs, banks see an increased risk of losing customer interaction and of

¹¹⁷ An example of the implementation of this strategy is ING's investment in fintechs such as Yolt. This is an app providing an overview of different bank accounts and financial products that are not necessarily provided by ING itself (see <https://www.banken.nl/nieuws/20429/toekomst-van-open-banking-volgens-ing>). ABN AMRO has a number of fintech initiatives, such as Gripp¹¹⁷. Gripp is only available to ABN AMRO customers. Rabobank also offers account information services directly to its customers and to customers of other banks to enable them to track their spending.

only being able to purchase the Big Techs' products in bundles. Banks also see Big Techs' use of customer payment data combined with their existing data as a potential competitive advantage. The Big Techs can make optimum use of this payment data with the aid of their superior AI and large existing datasets and potentially offer better services based on this data. They state that the entry into force of PSD2 will oblige banks to share more data with Big Techs than was previously the case.

5 Opportunities and risks in terms of competition

The previous chapters show that the entry of the Big Techs into the payment market stimulates innovation in the payment market and demand for new electronic methods of payment such as the e-wallet. Big Techs have entered parts of the Dutch payment market or are intending to do so. Their entry is in the initial stage but growing, with the development of Apple Pay and mobile offline payments being the most notable features.

Traditional providers of payment services see both opportunities and threats resulting from the entry of Big Techs. Banks have less technological know-how than Big Techs and cannot readily adapt their existing IT systems. The Big Techs thus have certain competitive advantages in the payment market. By introducing their payment apps and e-wallets, the Big Techs can add payment data to their already extensive user databases if the consumer gives consent, enabling them to further strengthen their position, for example in the advertising market.

In view of this strong starting position, it is possible that Big Techs will play an increasingly important role in the payment system in the years ahead. The arrival of the Big Techs can offer advantages for consumers in the form of improved convenience and innovative payment solutions. On the other hand, the arrival of the Big Techs may also pose risks to competition under certain circumstances. The opportunities and risks are described in sections 5.1 and 5.2 respectively of this chapter. Section 5.3 describes the current toolkit which regulators have at their disposal to achieve a level playing field in the payment market.

5.1 Opportunities for innovation and convenience

The Big Techs' entry (or potential entry) into the payment market puts competitive pressure on existing providers of payment services. Until recently the major banks actually had an oligopoly position in the payment market. The arrival of the Big Techs gives the major banks an incentive to offer their payment services more efficiently and to innovate in order to align their offering with the actual or latent needs of their customers.

A particular aspect of the payment market is that consumers in many cases do not pay directly for a payment transaction, or at any rate do not perceive that they are doing so. At most, the costs are charged indirectly (for example by means of a regular fee charged to an account holder for the payment package or by means of a general mark-up on the costs of a retailer's products and services). In the competition among payment services, the convenience of payment services (also referred to as customer experience or customer journey) plays an important role in addition to price. As can also be seen from the surveys described above, this is a key strength of the Big Techs and one that meets the needs of users. Increasing competitive pressure, particularly in the short term, therefore means consumers can take advantage of new, innovative methods of payment from both

existing providers and these new entrants. The entry of the Big Techs can also enable better and more efficient assessment of credit risk through the use of more data for a larger group in society which may have difficulty buying payment services or have no access to the underlying financial products such as loans, investments and savings products. A larger group will thus have more scope to use these services, making them more engaged in society. The collection of more information, in greater detail, may after all reduce the risk premium on loans. Finally, the entry of the Big Techs may increase competition with banks, prompting them to make their services more customer-friendly and their processes more efficient.

5.2 Risks to competition now and in the future

On the other hand, the arrival of the Big Techs may also entail potential risks to competition in the payment market.¹¹⁸ Risks are related primarily to the fact that Big Techs operate an ecosystem or platform-ecosystem, to which large groups of users are tied to a certain extent. If companies are largely independent of their competitors, suppliers, customers or end-users, they are in a dominant economic position. This is not prohibited per se by competition rules. It does, however, give those companies a ‘special responsibility’ not to behave in a way that distorts competition. This responsibility is not without obligation. Abuse of a dominant economic position is prohibited. This responsibility relates not only to the main market in which companies operate. The prohibition extends also to abuse of a dominant economic position in one market by using improper means to strengthen the position in another market in which they operate.

If they have no dominant position as a platform, Big Techs will by definition not contravene the prohibition of abuse of a dominant position.¹¹⁹ We therefore base a more detailed assessment of the risks on a possible future scenario of a vertically integrated platform with a dominant economic position on the platform. Although the Big Techs’ methods of payment are already becoming very popular, that does not necessarily mean a dominant position is being or has been abused, particularly given that Big Techs can experience competitive pressure among themselves.

We do nevertheless see various issues surrounding Big Techs that have a dominant economic position and wish to enter the payment market. These relate only to exclusionary behaviour towards providers on a platform such as retailers or providers of payment apps or e-wallets: refusal to grant access or unreasonable access conditions, bundling, preferential treatment, for example, of their own services and abuse involving (possibly large-scale) data use.¹²⁰

¹¹⁸ Since banks are collaborating with Big Techs, the risk of collusion between established banks appears to be an immaterial risk.

¹¹⁹ Cf. Van Gorp, N. & De Bijl, P. (2019), *Digital Gatekeepers, assessing exclusionary conduct*, e-Economics / Radicand Economics, Discussion Paper commissioned by the Ministry of Economic Affairs and Climate Policy.

¹²⁰ “[...] if a dominant platform is vertically integrated but does not apply discriminatory practices, there is no harm to consumers or competition.”, Van Gorp, N. & De Bijl, P. (2019), *Digital Gatekeepers, assessing exclusionary conduct*, p. 18.

There may be various and sometimes legitimate reasons for discrimination between providers on a platform. For example, discrimination among providers can prevent costs in cases where there are no corresponding benefits. Discrimination can also be used as a means of attacking the dominant position of another platform in a parallel market (entrepreneurial reasons). If these kinds of reasons do not apply, discriminatory practices can be seen as abuse of market power if they restrict competition.¹²¹

Possible forms of abuse of market power in the payment market are set out below.

5.2.1 No or unreasonable access

If companies operate a platform with a dominant economic position, they must grant other companies access to it if such access is strictly necessary in order to offer competing services. They must do so under objective, reasonable and non-discriminatory criteria. Otherwise there is a risk of exclusion. A classic example of such a case is the European Commission's *Microsoft I* case, in which the Commission found among other things that Microsoft was giving competing providers insufficient information to enable their software products to work well with the dominant Microsoft Windows operating system.¹²²

For example, a Big Tech that provides its own payment services on the platform on which it has a dominant economic position could refuse to allow other providers to offer payment services on this platform. This risk was cited a number of times in the market discussions conducted by ACM. Various stakeholders state that they are not given access to the Big Techs' platforms¹²³. These Big Techs actually take over the customer contact with consumers and retailers from banks and act as 'gatekeepers' for the provision of payment services.¹²⁴

The European Commission recently announced the opening of an investigation into Apple Pay. The Commission voiced concern that Apple's terms and conditions for the integration of Apple Pay in apps and websites on which goods and services are sold on Apple devices might distort competition. The investigation will also cover the limiting of access to the NFC chip on Apple devices and alleged refusal to grant competitors access to Apple Pay for specific products. The Commission will investigate the possible impact of Apple's practices on competition in the market for offline and online payment instruments.¹²⁵ The refusal to grant access to the NFC chip does not appear to be based on efficiency arguments, since this technology is necessary for certain types of contactless payments that are offered independently of Apple's own services. Apple itself justifies not opening the NFC chip to third parties in part by arguing that it can thereby protect the security and privacy of iPhone users.

¹²¹ Van Gorp, N. & De Bijl, P. (2019), *Digital Gatekeepers, assessing exclusionary conduct*, p. 19.

¹²² ECLI:EU:T:2007:289

¹²³ See also ACM (2019), *Market study into mobile app stores*.

(<https://www.acm.nl/sites/default/files/documents/market-study-into-mobile-app-stores.pdf>)

¹²⁴ In this connection see also the Communication from the Commission on a Retail Payment Strategy for the EU, COM/2020/592 final, in particular section 3.

¹²⁵ See https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1075

Similar practices could also give rise to concerns about other Big Techs. It would be concerning, for example, if Google, through its control of the Android operating system, were to block or impede access for competing payment services on Android phones in the future. Or if Amazon, which is a dominant platform for online stores in some countries, offered retailers that use Amazon Pay a more prominent position on the platform, for example. Facebook might be able to secure a very strong position with its WhatsApp platform, particularly in the consumer peer-to-peer payments segment, by offering an integrated payment service that can be used without having to leave the Facebook/WhatsApp environment. This could increase the risk of exclusion of competing payment instruments (such as Tikkie) that are based on WhatsApp.

However, it is also possible that vertically integrated payment solutions will gain a strong position because they offer greater convenience or otherwise provide a better user experience and that such a position therefore actually results from 'competition on the merits'. On the other hand, Big Techs also offer different types of platforms with other key functionalities, giving rise to certain interdependencies. Apple and Amazon, for example, will both want iPhone or MacBook owners to also be able to order products through Amazon. That means they are less likely to exclude each other's payment services.

Partly due to the aforementioned technological lead of Big Techs and the fact that they may not open their platforms to third parties in some cases, or may do so only on unfavourable terms, a number of banks and other financial providers have chosen not to compete directly but to cooperate with Big Techs as described in Chapters 3 and 4, as in the case of Deutsche Bank with Google. As also stated in Chapter 4, the provision of payment services in partnership with Big Techs can be a way for banks to recruit or retain customers (including those of a younger age). Banks and other financial operators that ACM has spoken to state that they perceive a dependency on Big Techs in these partnerships. Our discussion partners report that unequal relationships enable Big Techs to impose far-reaching conditions on the partnership.

5.2.2 Bundling and tying

Companies with a dominant economic position that provide tied or bundled products or services may also abuse their dominant position. Tying means a product can only be purchased if another product is also purchased (or the product is not purchased from a competitor). In the case of bundling the products are sold together. It is easy to see that in these cases a company with a dominant economic position in one market can distort the competition in the related market. The market discussions also highlighted the risk of a company's own method of payment being bundled with other products or services that are part of the Big Techs' core activities.¹²⁶ This would amount to the forced purchase of Big Techs' products as described in Chapter 4.

A similar problem could arise with payment services, for example with pre-installed Apple Pay or Google Pay apps on iPhones or Android phones. This problem can also arise when conditions are

¹²⁶ A list of market participants can be found in Annex 1.

imposed on in-app purchases of apps offered through the App Store and Google Play, to the detriment of competing providers of payment apps.¹²⁷ If this has the effect of protecting or strengthening the market power of the (possibly upstream) platform, there may be abuse of a dominant economic position.

The box below gives two examples of European Commission competition cases involving technology firms using tying and/or bundling.

Bundling – Microsoft / Windows

The European Commission imposed fines on Microsoft in 2004 and 2013 for tying its “Internet Explorer” and “Windows Media Player” products to its Windows operating system. Microsoft pre-installed those products and consumers were not able to buy Windows without them.

Bundling – Google Search / Android

The European Commission fined Google in 2018 for abusing its dominant position in the mobile operating system market with Android. Google offered phone manufacturers its popular applications such as Playstore or Google Search only if they also pre-installed other Google Apps. Google appealed against the fine, arguing that it was actually giving consumers a choice.

In addition to tying and bundling products, a company may require customers to use the dominant company's products and/or services right across the board. Another example is the European Commission's Google/Android case in the box below.

Most Favoured Nation Clause – Google / Android

The European Commission fined Google in 2018 for abusing its dominant position in the mobile operating system market with Android. Google banned phone manufacturers from installing modified versions of its operating system on devices. Phone manufacturers had to install Android on all their devices to retain access to Android deliveries. Google appealed against this fine.

5.2.3 Preferential treatment

Preferential treatment occurs when a platform has a considerable degree of market power and that is by definition problematic for providers of methods of payment if they are not at all present on that platform, or are only present with poor visibility. At the same time, such preferential treatment could be efficient because it increases the consumer's ease of payment (and hence welfare) as a result of the integrated methods of payment a platform can provide.

A dominant company can thus use its platform's technology to give preference to its own services above those of competitors, for example by displaying them more prominently in search results or using a default setting that gives preference to its own standard. This is also an issue with regard to Big Techs. For example, Google Pay could rapidly gain a strong position if the ranking of search

¹²⁷ See ACM (2019), Market study into mobile app stores.

results depended partly on online stores' provision of the Google payment service. This could restrict the competition from other methods of payment. At the same time the consumer might appreciate having a list of search results prominently showing where payment can be made entirely within the Google environment. The development referred to earlier in Chapter 3 concerning voice recognition using Alexa or Siri, for example, may also help the Big Techs to gain a stronger position for their methods of payment. The box below shows an example of a recent competition case concerning this type of conduct.

Technology that gives preference to a company's own standard – Apple Pay / Twint

In 2018 the Swiss competition authority found that consumers who wanted to pay on terminals using the QR-based national payment method Twint, but who had also set up Apple Pay on their iPhone, automatically used Apple Pay to make payments. At the end of 2018 Apple gave a commitment to the Swiss competition authority that it would rectify this preferential treatment of Apple Pay and ensure that consumers had a choice as to which payment method to use.

The question is what will change if there are different more or less competing platforms and what will change if various providers of payment methods are themselves integrated in such a platform. The Big Techs considered here only compete to a limited extent with each other in the primary activities of their platforms, which consumers use alongside each other. Amazon and Apple, for example, do not necessarily have strong incentives to favour their own payment services over those of other Big Techs, because their platforms complement each other.

A degree of interdependence also arises between Big Techs and banks. After all, Big Techs (at present) only provide services that initiate payments and users need a bank account in order to use them. In short, the competition risks of preferential treatment of a company's own methods of payment are currently considered to be low.

5.2.4 Abuse in the collection and use of data

In addition to the types of exclusion referred to above, dominant companies may abuse their dominant position in the way they collect and use consumer and other data.¹²⁸ Chapter 3 showed that a number of Big Techs gain access to payment data by providing payment services, even if they are acting solely as technical service providers. As a result, these Big Techs can combine this data with other data to which they have access and can then, for example, sell advertising space in a more targeted way to third parties. They can also use the payment data in the ongoing development of artificial intelligence (AI) technology. The improvement of this technology can lead to faster and more targeted provision of services by the Big Techs, including financial services in which they compete with the banks. This could include, for example, gauging the creditworthiness of consumers when assessing a loan application.

¹²⁸ See Global Competition Review, *EU targets Facebook and Google data practices*, dated 2 December 2019 (<https://globalcompetitionreview.com/article/1211573/eu-targets-facebook-and-google-data-practices>); Reuters, *Exclusive: EU antitrust regulators say they are investigating Google's data collection*, dated 30 November 2019 (<https://www.reuters.com/article/us-eu-alphabet-antitrust-exclusive-idUSKBN1Y40NX>)

The possibility of combining payment data with other data to which they already have access can therefore give Big Techs a lead in providing certain financial services compared to banks that only have access to payment data. However, abuse can only occur if Big Techs request excessive data from their users, or if they use the data of users (companies) with which they compete to strengthen their own position.

At the beginning of December 2019 it was announced that the EC was investigating how Google and Facebook use and monetise data, including for advertising purposes. In addition, the EC launched an investigation into Amazon in July 2019 in connection with possible abuse of an information advantage that it has as a platform operator over competing retailers using the Amazon platform, by using data on transactions of competing retailers on the platform to make its own offering more attractive to consumers.

5.3 Oversight of competition in the payment market

The risks outlined in the previous section raise the question of how suitable the existing regulatory toolkit is for preventing these risks materialising or for intervening if they do unexpectedly materialise. ACM has ex post instruments that can be used retrospectively under the Dutch Competition Act as well as instruments that can be used to intervene in the market in advance. The access requirements for the revised Payment Services Directive ('PSD2') or the regulation of fees under the Interchange Fee Regulation (IFR) are examples of ex ante instruments. Violations of these can naturally lead to retrospective intervention.

ACM oversees compliance with Sections 6 and 24 of the Competition Act in all sectors, including regulated sectors such as the financial sector. Section 6 is the cartel prohibition and Section 24 is the prohibition of abuse of a dominant position. The Competition Act applies to the wide range of practices referred to above, such as the aforementioned risks associated with unreasonable access requirements, preferential treatment, bundling and abuse of power in data requests. The possibility of enforcement of the Competition Act can lead ex ante to a change in market participants' behaviour. ACM's enforcement under the Competition Act is ex post, which means action can be taken after a violation of the Competition Act has been identified. By definition, the 'harm has already been done' and the consequences of the violation may even be irreversible, for example because network effects have also arisen.

PSD2 requires payment institutions among other things to grant access to payment systems and business payment accounts under objective, non-discriminatory criteria. In many cases, however, Big Techs do not act as payment institutions, but as technical service providers. For example, they provide a kind of interface, a 'facilitating technology' that enables consumers or retailers to use certain payment services, but they do not provide these themselves. Under PSD2 they therefore have no obligation to provide access to payment systems under the aforementioned criteria. Hence PSD2 does not currently provide a basis for enforcing access to payment systems in the case of Big Techs operating as technical service providers, even though the aforementioned Big Techs actually

operate as gatekeepers for access to payment services, and they have taken over the customer contact with consumers and retailers from the banks.

Big Techs are also covered by the IFR when they operate as owners of payment card schemes, issuers, acceptors, processors and/or other providers of technical services. This regulates the fees that banks pay each other per transaction and thus limits the risk of abuse of power in advance. This fee may be a means by which owners of the payment card scheme (Visa/Mastercard) can increase the value of the platform (and hence the payment instruments that use it).¹²⁹ Various European Commission competition cases (Mastercard I and II, and Visa I and II) have shown that without ex ante oversight the interchange fees are set at much too high a level.¹³⁰ In the case of payment cards this regulation also ensures that the activities of technical service providers do not restrict choice for consumers.¹³¹ The IFR thus also offers a legal basis for intervening in cases where technical service providers act as gatekeepers and allow others no access to their platform or ecosystem.

5.4 Conclusion

In addition to opportunities for innovation in the payment market, ACM sees potential risks in the entry of Big Techs into the payment market. Most of these risks could materialise if a Big Tech with a dominant position in a certain market used its market power to establish itself or strengthen its position in the payment market (or part of it). These include the risk of unreasonable access or denial of access to its own platform for competing payment services. Where Big Techs fulfil a gatekeeper function, those with a dominant position may request excessive data from their users, or use this data to strengthen their own position relative to competing companies that use the platform.

As stated earlier in Chapter 3, none of the Big Techs currently has a dominant position in the payment market, but their position is growing. In many cases Big Techs also have a dominant position in other markets which they could exploit in the payment market.

Some risks may materialise particularly over the somewhat longer term. For example, preferential treatment could take the form of a Big Tech giving prominence to its own vertically integrated service on its own platform. Viewed from a static perspective, this could produce benefits for the consumer in terms of improved convenience. But in a context of dynamic competition it may mean that the Big Tech's own service gains a better position in terms of data and more finely tuned technology than the competitors, ultimately leading to a decrease in competitive pressure and innovation. In new bilateral markets small divergences in the level playing field can lead to major differences in competition.

As noted above, the current toolkit available under the Dutch Competition Act is focused on retrospective action to curb abuse of power resulting from dominant market positions, i.e. when a

¹²⁹ Under the Interchange Fee Regulation (IFR), three-party systems working with licensees, agents or co-branding are also subject to oversight with regard to the level of interbank fees.

¹³⁰ See: http://ec.europa.eu/competition/sectors/financial_services/enforcement_en.html.

¹³¹ Article 8 of Regulation 2015/751.

company has already committed a violation. In addition, ACM (and DNB) have powers under PSD2 to increase access to payment accounts and payment information and hence to limit the risk of exclusion. PSD2 cannot, however, prevent all the aforementioned forms of discriminatory behaviour. The question is whether this toolkit is sufficient to maintain a level playing field in markets such as the payment market, with strong dynamics and innovation, where Big Techs have not so far occupied a dominant position, but market conditions can change rapidly.

6 Scenarios

In view of all the developments described above, the precise development of the payment market in the years ahead is difficult to predict. It will depend partly on the role that the Big Techs are willing and able to play in this market (see Chapter 3) and the way in which banks can maintain their position by reacting to this development (see Chapter 4). There is no doubt that in many other sectors the Big Techs have grown exponentially in recent years and have brought about major transformations in the economy and society, and the competition conditions in these sectors have also changed considerably. It is not inconceivable that the same will happen in this sector with the entry of the Big Techs into the payment market.

In order to better anticipate future developments, we describe a number of scenarios in this chapter. These scenarios are not intended as a prediction or an ideal, but as an analysis framework to assess the various opportunities and risks that may arise in a range of scenarios in the payment market. The reality will probably be a combination of the scenarios outlined below.

6.1 Four scenarios: assumptions

Figure 6.1 shows four scenarios that differ in terms of the extent to which consumers trust Big Techs that provide payment services (*horizontal axis*) and the reason why the Big Techs offer payment services (*vertical axis*).

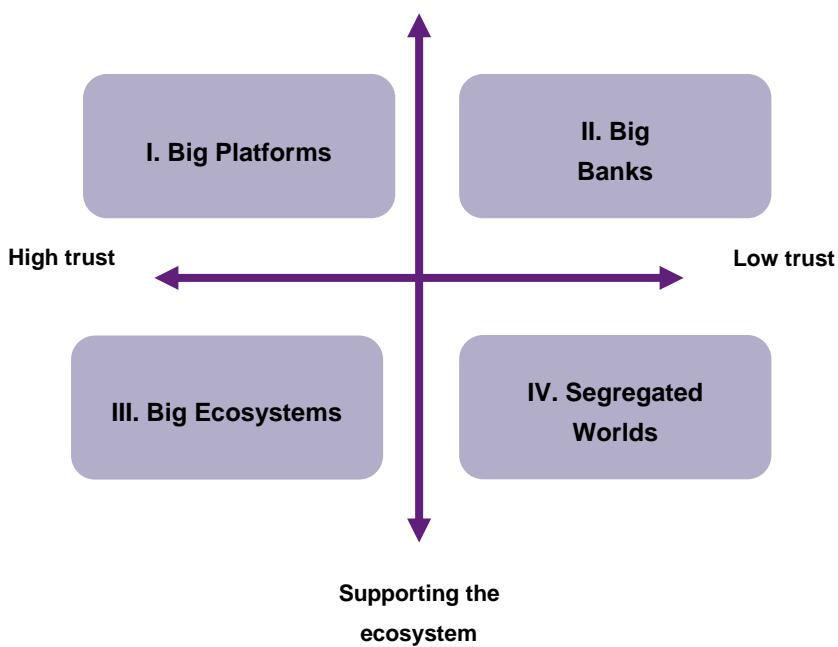
The *horizontal axis* shows the trust, justified or otherwise, that consumers place in Big Techs' payment services relative to those provided by banks, ranging from 'high trust' to 'low trust'. This trust plays an important role, alongside convenience, in consumers' acceptance of Big Techs' payment services.

The *vertical axis* shows the dominant reason why a Big Tech operates in the payment market. On the one hand, the reason may be primarily to generate direct revenues and to provide an independently profitable product. On the other hand, a Big Tech may have the primary aim of supporting the ecosystem and thereby strengthening its own business model. This can be done by offering the consumer a better user experience or by collecting more data so as to advertise more effectively. In practice a combination of factors can sometimes play a role for various Big Techs. The vertical axis is based on a sliding scale from Big Techs that mainly provide payment services for direct revenue generation through to Big Techs that do so primarily to strengthen their ecosystem.

Both trust in the Big Techs' payment services (*horizontal axis*) and the reason why Big Techs operate in the payment market are seen in the scenarios as exogenous factors which are determined in the first place by the consumer or the company.

In the following sections the individual scenarios are considered in more detail, focusing specifically on the risks and opportunities in terms of competition. This report does not deal with the consequences for financial stability¹³², consumer protection¹³³ and privacy¹³⁴.

Figure 6.1. Scenarios for the role of Big Techs and banks in payments



6.2 Scenario I. Big Platforms

In this scenario Big Techs enjoy the trust of the consumer and use that to offer a payment service from which they can generate independent revenues. The Big Techs take over the customer contact from banks. Banks have to cooperate with Big Techs in order to serve consumers for certain financial services that Big Techs are not willing to provide. For Big Techs it is more profitable to leave the banks to bear the risks of some financial services.

Big Techs

In this scenario the initial contact with the customer goes through the Big Techs' payment platforms, such as e-wallets, payment apps, voice-controlled software or another 'facilitating technology'. Big Techs can thus operate as gatekeepers, determining who is permitted to provide its services on the

¹³² Falls within the purview of the regulators De Nederlandsche Bank (DNB) and/or the Dutch Authority for the Financial Markets (AFM).

¹³³ Falls within the purview of the regulators ACM and/or AFM.

¹³⁴ Falls within the purview of the regulator the Dutch Data Protection Authority (Dutch DPA).

platform. Big Techs earn money from payments by offering their own methods of payment, but also by charging banks for access to the platform for the sale of other financial services. Consumers prefer these payment platforms to those of other parties (such as banks) because they offer greater ease of payment and the consumer is confident that the Big Techs will handle the payment data and other data carefully. The Big Techs' platform gives consumers an overview of various payment solutions and other financial services, including the Big Techs' own services. In addition to payment solutions Big Techs can offer other financial services so as to provide a financial one-stop shop. These financial services are provided on a white label basis under the name of the Big Techs, for example by banks. The risks associated with these financial services are therefore borne not by the Big Techs but by these banks.

As a result of the large volume of payment and other data to which they have access, the Big Techs are better able than banks to assess the creditworthiness of potential customers. Loan applications are therefore approved or declined in real time. Big Techs charge consumers subscription fees to provide services. As gatekeepers they can also control the contact with the customer.

Banks

In this scenario banks provide the payment infrastructure. They process all payments at the back end of the payment chain in the form of clearing and settlement. For efficiency reasons the Big Techs choose to leave these services with the banks. The Big Techs have taken over the front end. Banks will have to offer their services on the Big Techs' payment platforms in order to contact customers and must therefore cooperate with Big Techs. Almost all customer interactions go through the Big Techs, as they can offer this more efficiently due to their reach and experience.

Competition

Competition in this scenario will take place on multiple levels. The first level is between the Big Techs' platforms. Big Techs must ensure that they have a competitive offering for the consumer by having sufficient providers within the platform and providing superior service. The Big Techs need the banks to provide a complete offering. The banks need the Big Techs to maintain contact with customers. The platform with the best personal offers will gain the strongest position.

As well as cooperating, Big Techs and banks will also compete on the Big Tech's platform in providing methods of payment and financial services. Competition between the providers is fierce due to the transparency and ease of comparing offers. Economies of scale are necessary in order to make attractive offers to all types of customers and consolidation will ultimately mean that only a few large international banks survive.

Consequences for the payment market

Opportunities in this scenario are:

- Banks are very likely to innovate because they have to make greater effort to establish and maintain contact with the customer.
- Payments can be made very conveniently and the group of consumers that can use the

payments is also larger because the use of data and AI technology allows better risk assessment through the Big Techs' payment platforms.

Risks in this scenario are:

- Exclusion by Big Techs either by denying the parties wishing to operate on the platform access or by charging unreasonably high rates or setting other unreasonable conditions for access to the platform.
- Competition on the platform can be limited if preference is given to the Big Tech's own products. This can be done, for example, by offering less technical support to third parties or by recommending or ranking the company's own products more highly than competing products. Another possibility is offering products on a bundled basis.

6.3 Scenario II. Big Banks

In this scenario Big Techs see the payment market primarily as an opportunity to generate direct revenues, but they do not enjoy the trust of the consumer. The banks control the customer contact, because the consumer places their trust in the bank. That forces the Big Techs to cooperate with banks in order to offer their methods of payment and to be able to earn money from them due to the great ease of payment.

Big Techs

In this scenario Big Techs only create a 'shell' around banks' services, but they do not take over the customer contact and do not operate as gatekeepers. Services of fintech companies also have access to the Big Techs' platforms. The added value and convenience that the Big Techs' platforms offer customers means that banks want to be on the Big Tech's platform. However, there are also disadvantages in providing services on these platforms. Consumers worry, for example, that the data on these platforms is not secure. The Big Tech needs the bank in order to radiate trust to consumers. In this scenario Big Techs can also charge access fees for the platform, but as the banks are less dependent on the Big Techs than vice versa, these fees will be limited.

Banks

In this scenario banks control the initial customer contact as a result of the payment accounts that customers have at the bank. Banks enjoy greater trust, but offer less ease of payment. In order to increase ease of payment, they are prepared to cooperate with Big Techs and to pay a price for doing so. Most payments still pass through the banks' digital environments.

Competition

There will be competition particularly between banks, which will have to participate in the Big Tech platform so as not to lose any customers due to the greater ease of payment. Big Techs do not compete directly with the banks in the payment market but do compete among themselves for convenience/price/privacy.

Consequences for the payment market

Opportunities in this scenario are:

- Big Techs have to overcome the lack of trust. They can secure the loyalty of users by improving privacy and security and innovating to offer superior convenience. This also encourages Big Techs to innovate.

Risks in this scenario are:

- In this scenario banks have a strong position, so they can erect high barriers to entry into the payment market. After all, the Big Techs enjoy little trust and banks consequently control the customer contact.
- Due to their strong position, banks can give preferential treatment to their own payment platforms rather than the shell of the Big Techs.
- Since Big Techs are more dependent on banks, which control the customer contact, there is less competitive pressure on banks to innovate and provide methods of payment offering greater convenience.

6.4 Scenario III: Big Ecosystems

In this scenario the Big Techs offer methods of payment to support their ecosystem and they see these as a way of generating payment data. Banks offer financial products through the Big Techs' platforms. They also provide the infrastructure for payments. Big Techs do not charge banks and other commercial operators for access to their means of payment/platform, but they may charge for preferential treatment on their platform.

Big Techs

Due to the convenience and high level of trust, consumers in this scenario are willing to remain within a Big Tech's ecosystem. The consumer does not even have to go outside the ecosystem to use methods of payment. Other financial products such as loans and insurance are also offered on the platform. In principle the business model is based on offering convenience and a total experience as well as generating data to support the Big Tech's ecosystem. The central aim is to have the customer remain in the ecosystem for as long as possible, so that the Big Tech, for example, can sell more targeted advertisements.

Competition is not based on specific markets or specific products, but much more on the time that users spend on an ecosystem. Big Techs therefore compete in terms of the best artificial intelligence (AI) that enables them to sell as many advertisements as possible and generate as much consumer engagement in the ecosystem as possible. This artificial intelligence technology is fed with consumer and provider data to which Big Techs have access.

A Big Tech does not charge the consumer directly for access. Providers on the platform may be charged to appear prominently on the platform, or to have the possibility of gearing their services closely to the needs of the customer. Big Techs obtain their revenues from creaming off the added value that their ecosystem offers, for example through sales of hardware, the service of matching

users with third-party goods and services or the sale of advertisements.

Banks

One of the providers on the platforms may be a bank. Banks compete purely on the quality of their financial product, i.e. its convenience and the extent to which it meets the customer's requirements. The bank products are intended particularly to increase the value of the ecosystem. Banks also provide the payment infrastructure. However, they mainly operate in the background and support the Big Techs with clearing and settlement.

Competition

Only Big Techs have the real-time data to make their AI superior and to compete in terms of a personalised experience. Data is not interoperable between the ecosystems and the switching costs may be high because data may be lost or different hardware may be required.

If the ecosystems offer equivalent services, the competition will lie in providing the best user experience combined with the best available data. Where Big Techs offer complementary services, they will cooperate. The ecosystem that achieves this most effectively can offer the consumer convenience and the best personal offering with the highest value. The Big Techs try to keep the consumer in a bubble of the ecosystem and secure their loyalty with discounts or excellent customer service. Pressure on the Big Techs to be and remain the most attractive platform comes from informed consumers.

Consequences for the payment market

Opportunities in this scenario are:

- The services can be closely aligned with the consumers' preferences, generating strong consumer value.
- Because the initial customer contact will be with the Big Tech, banks will be challenged to innovate in terms of ease of use.
- The group of consumers that can gain easier access to financial services and products is larger, because Big Techs can more easily serve all consumer groups at efficient rates due to better risk assessment.

Risks in this scenario are:

- Big Techs can adopt a tying/bundling strategy due to the strong position of the platforms/ecosystems in available data and available AI technology.
- Big Techs can exclude competitors offering similar services from their ecosystem by means of low interoperability, data interoperability and data portability.
- The Big Tech can give preference to its products over other products.
- The Big Techs can also abuse their position by requesting an excessive amount of data from consumers/providers on the platform for the use of the ecosystem or of the tied products that they provide.

6.5 Scenario IV. Segregated Worlds

In this extreme scenario Big Techs enjoy little trust among consumers and focus their payment market activity purely on growing their ecosystem. Both Big Techs and banks offer payment instruments. The part of the population that can pay for security opts for the bank; the other part is persuaded by convenience and lower prices to remain within the Big Tech ecosystem. Once in the ecosystem they find it difficult to leave it due to low data interoperability.

Big Techs

In this scenario Big Techs want to keep their customers within the ecosystem as far as possible by providing methods of payment. For example, they could introduce their own digital currency. The payment platform for this is free of charge and freely accessible to consumers and providers, but there is limited interoperability between the bank platform and Big Techs' ecosystems. The consumer needs to be fenced in because he has limited trust in the Big Techs. There will be groups of informed consumers who place their financial affairs outside the Big Techs' ecosystem, because they have little trust in Big Techs. This group could purchase other services from the Big Techs, but they will be cautious about sharing data.

Banks

In this scenario banks focus on the group of customers for which they primarily offer privacy, security and certainty. The bank's business model is based on charging for these payment services. However there is also a group in society that is unwilling or unable to pay for privacy, security and certainty. Privacy, security and anonymity are central given the limited interoperability with Big Techs. Banks also have their own methods of payment. They do not offer the Big Techs' payment solutions since they do not have the same data and AI as the Big Techs in order to make attractive offers.

Competition

Among the Big Techs there is a contest to develop the best AI, combined with the best dataset. There will be consumers who want to complete their day-to-day activities, such as shopping, financial affairs and social media, within the ecosystem. They will not readily switch to a different ecosystem.

The payment instruments are an integral part of the experience in the ecosystem. Since digital currencies are difficult to convert into other currencies, holding them can be a barrier to switching to a different ecosystem. It is conceivable that Big Techs will compete with each other on the economies of scope and scale within their ecosystem.

Consequences for the payment market

Opportunities in this scenario are:

- Amid the opposing forces of trust in the bank on the one hand and convenience and affordability with the Big Tech on the other, both parties will have to innovate in those areas to attract new consumers and not lose any customers.

Risks in this scenario are:

- The risk is that a dual payment system will arise with little competition among participants. That means the banking system is not very innovative, but it is secure and privacy-protected.
- Like the ‘Big Ecosystems’ scenario, this scenario entails a risk of excessive data being requested from customers.
- Since the Big Techs’ various digital currencies are not interoperable and only convertible to a limited extent outside the ecosystem, this may lead to a fragmentation of markets and hence an uneven playing field.
- The low consumer trust means the risks of exclusion, transfer of market power and preferential treatment are lower than in the ‘Big Ecosystems’ scenario.

6.6 Conclusion

The scenarios described above are intended to provide an analysis framework for the opportunities for prosperity and innovation and risks to competition that may arise in the medium term. Table 6.1 provides a summary of the findings.

Table 6.1 Risks and opportunities in terms of competition in various scenarios.

	Big Platforms	Big Banks	Big Ecosystems	Segregated Worlds
Opportunities				
Convenience	X		X	
Access for a larger group of consumers	X		X	
Innovation among Big Techs in security		X		X
Innovation among banks in convenience	X		X	X
Risks				
Exclusion	X	X	X	
Bundling	X		X	
Preferential treatment	X	X	X	
Excessive data requests			X	X

The table shows that the biggest challenge for Big Techs is to compete in terms of security and privacy in the scenarios where the consumer has no trust in the Big Techs. In scenarios in which consumers trust Big Techs and the initial customer contact is with the Big Techs, the opportunity for convenience and access to financial services for a larger group of consumers in society is greater than in scenarios where such trust is absent.

Competition risks arise particularly in the *Big Platforms* and *Big Ecosystems* scenarios in the form of exclusion, bundling and preferential treatment by Big Techs. In the *Big Ecosystems* scenario there is the additional risk of excessive data requests, which is also a factor in the *Segregated Worlds* scenario. In the *Big Banks* scenario the risks of exclusion and preferential treatment of a company's own platforms compared to the Big Techs' shell also play a role, but in this case in relation to the banks.

The next chapter examines the extent to which ACM's existing toolkit is sufficient to resolve the identified competition risks. On this basis policy recommendations are also made which can contribute to a level playing field between Big Techs and other market participants in the payment system.

7 Conclusion and policy options

ACM notes that the Big Techs' position in the payment market is growing, and that this is leading to greater ease of payment for consumers and putting innovative pressure on the banks to also develop payment services offering greater convenience. The introduction of PSD2 does not appear to be the reason why the Big Techs are entering the Dutch payment market.

At the same time ACM sees that the entry of Big Techs entails both risks and opportunities in terms of competition. Specifically, ACM is focusing increased attention on the risk of exclusion of third-party payment services on the Big Techs' platform.¹³⁵ The question is now to what extent ACM's existing toolkit provides a sufficient basis to limit the risks referred to in Chapter 6 in the various scenarios.

In the *Big Banks* scenario in which the banking system has a strong position in the payment market, there is a risk that banks will exclude not only Big Techs but also fintechs or give preference to their own products. In that case ACM has various tools at its disposal under the Dutch Competition Act, PSD2 and the IFR to counter these risks and promote competition. This scenario is closest to the current situation.

PSD2 is intended to stimulate competition and innovation in the provision of payment services and ensure an efficient payment system. One of the ways in which PSD2 tries to achieve this is by offering (possibly licensed) providers of new payment services access to the bank environment, so that the providers of these new services ('fintechs') can compete on an equal footing for the favour of the consumer and retailer. This provides an incentive for both fintechs and banks to offer innovative and efficient payment methods.

The description of Big Techs in this study shows that in a number of cases they do not choose to act as fully fledged payment institutions, but as technical service providers to support the provision of payment services. In these cases the Big Techs offer, for example, a wallet, an app, voice-controlled software or another 'facilitating technology'¹³⁶ which consumers of payment services can use and with which retailers can offer payment services. All consumers and/or retailers can use these, with the Big Techs taking over the customer contact with consumers and retailers from the banks. In such cases the consumer indicates through the Big Tech which payment service he or she wishes to use.

Hence the Big Techs may find themselves acting as the de facto gatekeeper. They can determine which payment methods and brands are offered through their ecosystem or platform, and use this position to charge fees to payment institutions that wish to use them.

As also stated in the Big Platforms scenario, the Big Techs' gatekeeper function described above

¹³⁵ See: Agenda ACM (2020).

¹³⁶ Because not all technological developments in the years ahead can be foreseen, the term 'facilitating technology' is used here in a general sense.

may undermine the objectives of PSD2. PSD2, which was adopted in 2015, currently includes no obligation on Big Techs acting as technical service providers to grant access on the basis of objective, non-discriminatory and proportionate criteria to the ‘facilitating technology’ on their ecosystem or platform in a way that matches the banks’ obligation to grant fintechs access to the banking environment. The other tools at ACM’s disposal (see section 5.3) also only offer the possibility to a certain extent of compelling technical service providers to grant such access.

In order to take account of these developments, one of the obvious policy options is to amend PSD2 in such a way that payment institutions gain access under objective, non-discriminatory and proportionate criteria to the ‘facilitating technology’ of Big Techs which have a gatekeeper function as technical service providers in the granting of access to payment services. This guarantees that a level playing field is created for parties wishing to provide their payment services through this ‘facilitating technology’ and that Big Techs cannot abuse their role as gatekeeper. This policy option can be included in the national and European evaluation of PSD2 due to take place in 2021 and 2022.¹³⁷

In the *Big Ecosystems* scenario payment services are only provided to strengthen the ecosystem, compel single homing among users and generate data. A Big Tech can engage in exclusionary or exploitative behaviour in the form of unreasonable access, self-preferment or excessive data requests. The payment market is one in which market participants can rapidly create different network effects through users. These network effects are magnified by the Big Techs’ ecosystem-strengthening strategy combined with AI technology, as a result of which there may potentially be ‘tipping markets’. Retrospective intervention after a violation of PSD2 or the Dutch Competition Act due to the above practices is therefore less effective because of irreversible transformations of the market. The use of the current toolkit is too slow in highly dynamic and innovative markets such as the markets for ecosystems. In payment markets there are large direct and indirect network effects, users are inclined to stay loyal for longer and there are high access barriers as a result of data collection that impede a level playing field.

For that reason *ex ante* measures should be added to the current toolkit. In order to prevent abuse by dominant online platforms, ACM has taken the initiative, jointly with its fellow competition regulators in Belgium and Luxembourg and the Ministry of Economic Affairs and Climate Policy, of issuing a proposal for an *ex ante* instrument¹³⁸ for these platforms, which can include Big Techs. In order to prevent competition problems, consideration could be given to measures providing *ex ante* guarantees of, for example, platform access, data portability, data sharing and non-discriminatory ranking. ACM therefore supports the initiatives being taken in this area by the European Commission.¹³⁹ These steps will ideally prevent an uneven playing field, as the Big Techs’ methods

¹³⁷ EC (2020), *Communication on Retail Payments Strategy*, p. 23.

¹³⁸ ACM (2019), *Extension of enforcement toolkit to increase effectiveness in dealing with competition problems in the digital economy*. (<https://www.acm.nl/sites/default/files/documents/2019-08/ex-ante-tool.pdf>)

¹³⁹ [https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12418-Digital-Services-Act-package-ex-ante-regulatory-instrument-of-very-large-](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12418-Digital-Services-Act-package-ex-ante-regulatory-instrument-of-very-large-online-platforms-acting-as-gatekeepers) <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12418-Digital-Services-Act-package-ex-ante-regulatory-instrument-of-very-large->

of payment will be more embedded than other players' methods of payment in the overall ecosystem.

Finally, in the Big Ecosystems scenario, structural payment market problems may subsequently arise that transcend individual markets. Dominant positions may arise, for example due to a temporary advantage in terms of information or AI technology in these markets, that are irreversible because consumers are inclined to single homing and do not change ecosystem (even with easy data portability).

In order to break such irreversible dominant positions, the European Commission should be able proactively, in cooperation with the national regulators, to impose proportionate structural remedies on companies in the respective market. What remedies these should be will depend on the situation. ACM therefore supports the European Commission's initiatives, in the framework of the Digital Markets Act, of creating a market investigation tool¹⁴⁰ at European level in cooperation with the national competition authorities. This new tool is expected to offer the possibility of investigating a market in which structural competition problems exist or may exist relating to large direct and indirect network effects, economies of scope and/or learning effects.¹⁴¹ These effects play an important role in ecosystems, so developments can be very rapid. It must be possible to investigate exclusion, for example in the form of unreasonable access, and preferential treatment of a company's own products by parties that are not (or not yet) dominant.

[online-platforms-acting-as-gatekeepers](https://www.rijksoverheid.nl/actueel/nieuws/2020/10/15/toegangs-en-gedragsmaatregelen-om-macht-grote-digitale-platforms-aan-te-pakken)), <https://www.rijksoverheid.nl/actueel/nieuws/2020/10/15/toegangs-en-gedragsmaatregelen-om-macht-grote-digitale-platforms-aan-te-pakken>

¹⁴⁰ See: <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12416-New-competition-tool>. See: <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12416-New-competition-tool.MLex>, 29 October, Google, Facebook, Amazon face new duties to police platforms for illegal content, faulty goods.

¹⁴¹ The Competition & Markets Authority (CMA) and the German Federal Cartel Office currently have such a tool in the form of a market investigation.

Annex I

During the investigation period ACM spoke to several companies and experts about their vision of the payment market and the possible entry of the Big Techs into the Dutch payment market.

The discussion partners were:

Arnout Boot
Simon Lelieveldt
Adyen
Albert Heijn
Bank XS
Betaalvereniging Nederland (Dutch Payments Association)
Bol.com
Bunq
De Nederlandsche Bank
De Volksbank
Detailhandel Nederland (Dutch Retail Association)
ING Bank
Innopay
Mastercard
Rabobank
Securedd
Techleap
Thuiswinkel.org
Vaulut
VGI