



**STATUS REPORT** | CARD PAYMENT CONTINGENCY MEASURE IN DENMARK  
2 July 2024

# Status of the card payment contingency measure in Denmark

Danes primarily pay digitally. The payments infrastructure in Denmark is secure and robust. However, it is still important to have a payment contingency measure in case it is not possible to pay for basic necessities as usual. Therefore, the Danish Payments Council is working with other relevant parties to ensure a society-wide payment contingency measure involving payment cards in Denmark. This report provides a status on the work so far.

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# 01

## A Danish payment contingency measure is important

Danes mainly pay for items digitally. Digital payment solutions accounted for approximately 9 out of 10 payments in physical trade in 2023.<sup>1</sup> Such widespread use means that shoppers and stores are highly dependent on digital payment solutions working. Although Denmark has a secure and robust payments infrastructure, the potential for serious incidents that could affect digital payment capabilities cannot be ruled out.<sup>2</sup>

Consequently, it is important to have a payment contingency measure in place to minimise the social impact if it is not possible to pay for goods in stores as usual. The work on the national payment contingency measure is in line with general crisis management planning, and the cyber threat to Denmark highlights the need for a robust payment system.<sup>3</sup>

The members of the Danish Payments Council (see box 2) have decided to work together to develop a society-wide payment contingency measure concerning payment cards in Denmark. Their work is based on Danmarks Nationalbank's November 2023 analysis of offline card payments as a national payment contingency measure.<sup>4</sup>

## The Danish Payments Council is working towards a long-term card payment contingency measure in Denmark

The basis for an offline card payment contingency measure in Denmark is largely in place, as most adults already have payment cards capable of offline payments, i.e. card payments that do not require connection to payment systems at the initiation of payment. It is also possible for most physical retail stores to accept offline card payments, for example in situations where there is no internet access. This has been the basis for Danmarks Nationalbank's recommendations for citizens' emergency preparedness, see box 1.

<sup>1</sup> See Danmarks Nationalbank, The role of cash in a society with low usage of cash, *Danmarks Nationalbank Analysis*, No. 21, November 2023 ([link](#)).

<sup>2</sup> See Danmarks Nationalbank, Oversight of the financial infrastructure 2023, *Danmarks Nationalbank Report*, No. 4, May 2024 ([link](#)) and Danmarks Nationalbank, Offline card payments as a payment contingency measure, *Danmarks Nationalbank Analysis*, No. 17, November 2023 ([link](#)).

<sup>3</sup> See Centre for Cybersecurity, *The Cyber Threat Against Denmark 2023*, June 2024 ([link](#)).

<sup>4</sup> See Danmarks Nationalbank, Offline card payments as a payment contingency measure, *Danmarks Nationalbank Analysis*, No. 17, November 2023 ([link](#)).

## BOX 1

### Danmarks Nationalbank's recommendations for citizens' preparedness

The Danish Emergency Management Agency, in collaboration with the sector authorities, has prepared a number of specific tips to help citizens prepare to be self-sufficient for up to three days. The advice is intended as a guide and is designed to be customised to individual needs and circumstances.

Danmarks Nationalbank has been involved in the process and recommends having one or more physical payment cards for which the PIN can be remembered that can be used if the Internet is down or phones cannot be used. Carrying a small amount of coins and small denomination notes is also recommended.

Read more about the recommendations on Danmarks Nationalbank's website, in Danish only, ([link](#)).

The Danish Payments Council is working to ensure that adults with a Danish-issued payment card from one of the three leading brands (Dankort, Mastercard or Visa, including Visa/Dankort and Mastercard Dankort) are able to make payments in Denmark to maintain access to basic necessities for at least a week. In practice, this means that payment cards must be able to make payments offline. This requires initiatives to be implemented by several parties, including increasing the number of payment cards that can be used offline with spending limits able to support basic consumption for at least a week. The Danish Payments Council expects this to be the case by the end of 2024 at the latest.

Offline card payments are an existing solution already available in retail stores, enabling payments even when digital payment systems are down. This requires that payment terminals are able to switch to offline mode and store offline card payments until connection to the payment systems is restored. To accept offline card payments, the store must have an agreement with its payment provider. It must also be able to activate the offline mode on the terminal when necessary. In smaller stores, this will typically involve manual intervention by the staff.

The Danish Payments Council is particularly focused on ensuring that the card payment contingency measure works for at least a week in the nationwide supermarket chains and pharmacies. This will ensure that the public can use their payment cards to pay for basic necessities such as groceries and medicines for an extended period of time, even if the payments infrastructure or digital payment solutions are disrupted.

### Current status of the card payment contingency measure

The current status is that at least 82 per cent of adults over the age of 18 with a payment card can pay offline with a card that can be included in a card payment contingency measure for at least a week.<sup>5 6</sup> All Dankort cards, including those co-badged with<sup>7</sup> Visa and Mastercard, and most Mastercard cards, can currently be included in a card payment contingency measure. Supermarket stores can also store payments on payment terminals from a few days in the busiest stores to over a week.

<sup>5</sup> Data are based on a stock-take by Finance Denmark on Danish-issued payment cards that can perform offline authorisation, see box 4. Danish card issuers have, among other things, reported the number of payment cards issued to the bank's Nemkonto customers over the age of 18. If a cardholder has a payment card with offline functionality at another bank where they do not have their Nemkonto, that card is not included in the statistics. Hence this is a minimum level of coverage, as the cardholder may have a payment card at another Danish bank that can perform offline authorisation. Additionally, data are reported for individuals over the age of 18 and not the household.

<sup>6</sup> Not all payment cards issued in Denmark are authorised for offline card payments, although they do have this functionality. Therefore, not all cards with offline functionality can currently be included in a card payment contingency measure, see more in chapter 4.

<sup>7</sup> A co-badged payment card typically combines two different card brands on the same physical payment card.

In the following, the Danish Payments Council provides an update on the work and further initiatives to ensure that payment cards are a society-wide payment contingency measure in Denmark.

**BOX 2****The Danish Payments Council**

The Danish Payments Council<sup>1</sup> is a forum for voluntary collaboration on retail payments in Denmark. Established by Danmarks Nationalbank in 2012, the Council brings together members from various interest groups, companies and authorities with a stake in the Danish payments market. The Council's objective is to promote the efficiency and safety of retail payments for all parties involved, i.e. citizens, companies, banks etc.

**Members of the Danish Payments Council**

The Danish Payments Council consists of 13 members. Danmarks Nationalbank chairs and provides secretariat services to the Danish Payments Council. The Council also consists of representatives from Copenhagen Fintech, the Danish Chamber of Commerce, the Confederation of Danish Industry, the Ministry of Industry, Business and Financial Affairs, the Danish Financial Supervisory Authority, Finance Denmark, Forbrugerrådet Tænk (Danish Consumer Council), Mastercard, Nets, SMVdanmark, Vipps Mobilepay and Visa.

<sup>1</sup> Read more about the Danish Payments Council on Danmarks Nationalbank's website ([link](#)).

## 02

# The card payment contingency measure must support payments for basic necessities

With a card payment contingency measure, the Danish Payments Council will ensure that it is possible to pay for basic necessities for an extended period of time if digital payments are not working as usual. A payment contingency measure should therefore at least be able to support payments in stores that sell groceries, medicines, etc.

Although the contingency measure focuses on ensuring that payments can be made for at least a week in supermarkets and pharmacies, it will potentially also be possible to pay offline with payment cards in stores other than those specifically involved in the card payment contingency measure. This may require individual stores to take specific actions, see chapter 1. Stores and shops involved in the payment contingency measure have taken steps or are working on ensuring that they can accept offline card payments, even during extended periods when online payments are not possible. In addition, it can be assessed on an ongoing basis whether other retail sectors, such as petrol stations, could be included in the contingency plan.

Several factors may prevent digital payments from functioning as usual. The Danish Emergency Management Agency generally recommends that citizens should be prepared to be self-sufficient for three days.<sup>8</sup> However, in severe situations, restoring payment systems or payments infrastructure may take longer. Therefore, it is important to ensure that a card payment contingency measure can cover the payment needs for basic necessities in society for a prolonged period of time. It is difficult to determine how long a payment contingency measure should be able to function, but the Danish Payments Council is working towards ensuring that it can support payment needs for basic necessities for at least a week.

The payment contingency measure must be able to function in all situations in which the stores involved continue to sell goods. This will probably require electricity to enable the store to maintain essential functions such as refrigeration, cash registers and lighting.<sup>9</sup> Similarly, a disruption in telecoms/data communication is unlikely to be isolated to payment systems, but can also affect retail in other ways, such as ordering and delivering goods to stores.

The Danish Payments Council notes that the largest payment providers, national supermarket chains and pharmacies have detailed contingency plans that can fully or partially handle most situations in which digital payments do not function as normal.<sup>10</sup> A nationwide card payment contingency measure is a backup for

<sup>8</sup> See the Danish Emergency Management Agency, Prepared for Crises, June 2024 ([link](#)).

<sup>9</sup> See Danmarks Nationalbank, Offline card payments as a payment contingency measure, *Danmarks Nationalbank Analysis*, No. 17, November 2023 ([link](#)).

<sup>10</sup> These include so-called stand-in procedures and emergency mobile POS systems, typically a smartphone using mobile networks. This means that in most cases, digital payments can be made online,

individual contingencies and ensures consistent functionality across stores and pharmacies in the event of a breakdown or disruption of digital payments.

even if certain parties in the card payment chain, such as the card company or banks, cannot be contacted, or the store cannot use the regular POS system or loses its wired internet connection.

# 03 Criteria for a payment card payment contingency measure in Denmark

Card payments involve a chain of parties, see box 3. Establishing a payment contingency measure is a complex task that, among other things, requires agreement on the framework, inter-organisational coordination, implementation and knowledge sharing between the parties involved in a card payment. In addition, the card payment contingency measure must be usable without centralised authorisation, and each individual store and shop must be able to activate the solution independently. These two criteria are especially important if communication lines are disrupted.

**BOX 3**

**Card payments involve a chain of parties**



**Parties involved in a card payment**

A card payment, including those made without connection to the payment systems, i.e. an offline card payment, involves several key parties. The individual parties work together in a coordinated process, collectively enabling the cardholder to make payments with a payment card.

**The card company** owns the card system and the associated licence rights for the card brand. It sets rules for the use of the payment card as well as acquiring procedures and card-issuing frameworks that the card issuer and the acquirer must comply with. The leading card companies in Denmark are Dankort, Mastercard and Visa.

**The card issuer** is typically the cardholder's bank. Card issuers enter into agreements with the card company, which grants them a licence to issue the card company's payment cards to their customers.

**The card acquirer** also enters into an agreement with the card company that grants a licence to process payments on behalf of the payee. In Denmark, only Nets processes payments made with Dankort's payment cards, while multiple acquirers process payments made with Mastercard and Visa payment cards.

**The terminal provider** provides technology and services to the payee in the form of payment terminals.

**The payee** is typically a retailer and enters into agreements with card acquirers and terminal providers to be able to accept payments with payment cards.

**The payer** is the cardholder who uses their payment card to pay in a store or shop.

Together with other relevant parties, including Swedbank Pay and Verifone, the members of the Danish Payments Council have identified five overall criteria that must be met for payment cards to constitute an effective and society-wide payment contingency measure in Denmark.

The card payment contingency measure builds on the historical support from Danish banks, card acquirers and terminal providers, enabling their customers to make and accept offline payments in Denmark – first with the introduction of Dankort and later with international payment cards.<sup>11</sup>

### **1. Card companies permit offline card payments**

The major card companies present on the Danish market must permit a type of card payment that can be made offline in case online payments cannot be made. Such permission must at least be valid in stores covered by the payment contingency measure and for an extended period of time. Permission from the card companies is important as they set the overall rules for the use of their payment cards, which are implemented throughout the chain of parties involved in a card payment, see box 3.

### **2. Card acquirers and terminal providers accept and enable offline card payments**

Card acquirers and terminal providers must accept and enable payments that are offline at the time of payment for an extended period. Card acquirers and terminal providers have a direct customer relationship with retailers, providing software and hardware that enables card payments. They implement the card company's rules and also set their own rules for acceptance of card payments. It is therefore important that their technical services and rules support the ability to make card payments offline for an extended period of time in stores involved in the contingency measure.

### **3. Card issuers issue payment cards that can make offline card payments**

Card issuers must issue payment cards that enable Danish cardholders over the age of 18 to make offline card payments and maintain a basic consumption of necessities for an extended period.

### **4. Liability is clear and accepted in advance**

The liability for a card payment made offline must be clear and accepted in advance by all the parties involved. Offline card payments cannot be checked against online checks, such as balance checks or fraud checks.<sup>12</sup> This means that situations may arise where an offline payment is authorised and a product or service is delivered even though there are insufficient funds in the cardholder's underlying account, or where the payment is subsequently disputed by either the cardholder or the cardholder's bank, for example due to scams or fraud. In such situations, liability will lie with one or more of the parties involved in the card payment.

It is important that liability is clear and accepted by all parties. If this is not the case, it may result in one or more parties not accepting offline card payments in a critical situation, especially if it is prolonged.

### **5. Stores can accept offline card payments for an extended period of time**

Stores involved in the payment contingency measure must have procedures and technology that enable them to accept offline card payments for an extended period of time.

In order for card payments to be made offline, it must be possible to set the payment terminals to offline mode in stores and shops. Some terminals

<sup>11</sup> See Danmarks Nationalbank, Offline card payments as a payment contingency measure, *Danmarks Nationalbank Analysis*, No. 17, November 2023 ([link](#)).

<sup>12</sup> However, offline card payments are still subject to different checks and security mechanisms that may vary for the type of offline card payment, see boxes 4 and 5.

automatically switch to an offline mode if they are not connected to systems, while others have to be switched manually by store staff.

It is important to regularly test that POS systems and terminals are updated with the latest software so that the terminals can accept payments offline, and – if necessary – that staff know how to set terminals to offline mode.

Stores must also have payment terminals with enough storage capacity to store transactions for an extended period of time.

# 04

## Status of whether the criteria for card payment contingency measures have been met

The Danish Payments Council aims to ensure that the card payment contingency measure can support citizens in paying for basic necessities for at least a week if digital payments are disrupted. This presupposes that the five aforementioned criteria for an effective and society-wide card payment contingency measure are met.

The following provides a status on whether each criterion is met in Denmark. If this is not the case, the progress of work to meet the criterion is stated.

### 1. Card companies permit offline card payments

Almost all adults over the age of 18 in Denmark have either a Dankort, Mastercard, Visa or a combination of these (Visa/Dankort and Mastercard Dankort).

All three card companies support and permit a type of card payment that can be made offline. However, there are differences in the extent and type of offline card payments that card companies' rules permit for the use of their payment cards, and therefore whether their cards can currently be included in a card payment contingency measure.

Overall, there are two ways to make offline card payments: Offline authorisation, see box 4, and deferred authorisation, see box 5.

Dankort and Mastercard permit card payments that are authorised offline. The rules applied by these two companies for card payments with Dankort, Mastercard and Mastercard Dankort enable their cards to be included in a card payment contingency measure. The same applies to the Dankort component of the co-badged Visa/Dankort payment card.

Visa does not generally permit offline-authorized card payments with their payment cards. This means that this type of card payment is not accepted in stores in Denmark with Visa payment cards.<sup>13</sup> Instead, Visa allows deferred authorisation for up to 24 hours. However, Visa's current rules, including the 24-hour time limit, restrict the use of offline card payments to such an extent that it is not currently possible to base a long-term card payment contingency measure on Visa's payment cards.

<sup>13</sup> Visa payment cards can technically support offline authorisation in the same way as payment cards from other card companies in Denmark. However, Visa's scheme rules state that a payment made with offline authorisation should generally not exceed kr. 0, with certain exceptions, such as payments made in unmanned transit environments like bridge crossings.

BOX 4

**Offline card payments with offline authorisation**

A card payment with offline authorisation is a payment where the transaction is authorised without connection to the payment systems. This means that the payment terminal does not need to be online to verify and complete the payment. Instead, the card and terminal perform local verification using the payment card's chip and PIN. In this instance, the terminal checks the security mechanisms built into the payment card's chip and authorises the transaction without direct authorisation from the cardholder's bank.



The payment card's chip contains information about whether the card may be used for offline authorisation and specifies spending limits, both per transaction and in total across multiple transactions. These offline parameters are what the terminal uses to authorise the payment locally.

Every time the payment card is used with offline authorisation, the chip tracks the amounts spent and the number of payments. When the spending limit is exceeded, the payment is declined. The spending limit is reset when the payment card is used on a terminal connected to the systems. When the payment is authorised, data on the payment are stored locally on the terminal. Once connection to the systems is re-established, information is sent to the payment systems and the payment is processed.

Offline authorisation requires the use of the physical plastic card and typically, entry of a PIN code. This means it is not possible to make offline-authorized mobile payments based on payment cards such as Apple Pay and Google Pay.

BOX 5

**Offline card payments with deferred authorisation**

A card payment with deferred authorisation is a payment where the transaction is registered locally on the payment terminal but not authorised at the initiation of the payment. The payment terminal does not need to be online to register and store the payment locally. This type of card payment is known from payments on board passenger aircraft.



Once the payment terminal has re-established connection to the payment systems, the transaction is sent to the payment systems to be authorised. If approved, the payment is then processed.

Deferred authorisation does not use offline parameters from the payment card's chip. This means that deferred authorisation does not require the use of the physical payment card. Therefore, it is possible to pay with mobile payment solutions based on payment cards such as Apple Pay and Google Pay.

All payment cards, including those already issued, can be used to pay with deferred authorisation, as this method does not require that the payment card has been given offline functionality. This also means that there are no pre-set spending limits on the card for offline payments with deferred authorisation.

**Ongoing work to meet the criterion**

Visa is in dialogue with acquirers and key retailers to extend the use of deferred authorisation card payments with Visa's payment cards for an extended time period in socially critical situations. An extension will potentially mean that all Visa's cards, including the Visa component of Visa/Dankort<sup>14</sup>, can be included in a card payment contingency measure. Visa has indicated that an extension requires a sector-wide agreement on when the contingency measure can be activated, as well as a liability model, see the status on criteria 3 and 4.

Dankort and Mastercard payment cards can be included in a card payment contingency measure in Denmark, as both card companies allow offline authorisation, see the status on criterion 1 above. In addition, Dankort and Mastercard have expressed their willingness to support the use of deferred authorisation for their payment cards in socially critical situations. This would enable their cards, including Mastercard Dankort and the Dankort component of Visa/Dankort, to make offline payments using both offline authorisation and deferred authorisation.

**2. Acquirers and terminal providers accept and enable offline card payments**

There are several card acquirers and payment terminal providers in Denmark. The largest acquirers in physical trade are Nets and Swedbank Pay, while the largest terminal providers are Nets and Verifone. These three companies cover all the nationwide supermarket chains and pharmacies.

<sup>14</sup> The Dankort part will continue to work with offline authorisation.

Nets, Swedbank Pay and Verifone enable and accept offline-authorized card payments in the stores for cards that support offline authorisation, i.e. Dankort and Mastercard. However, acquirers and terminal providers do not currently support offline card payments with deferred authorisation. This means that Visa and Mastercard payment cards that do not have offline authorisation functionality cannot yet be used in a payment contingency measure, see the status on criterion 3 below.

#### ***Ongoing work to meet the criterion***

Nets, Swedbank Pay and Verifone are in dialogue with Dankort, Visa and Mastercard about implementing and supporting card payments with deferred authorisation. If an agreement is reached, all Visa and Mastercard payment cards that cannot currently be used offline, i.e. cannot make payments with offline authorisation, can be included in a card payment contingency measure.

### **3. Card issuers issue payment cards that enable cardholders over the age of 18 to make offline card payments and to maintain consumption of basic necessities for at least a week**

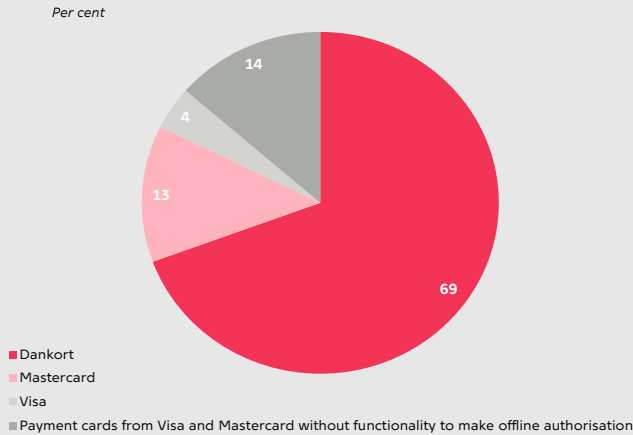
Card issuers in Denmark are typically banks that issue payment cards to their customers. Based on data from the banks, it is estimated that at least 82 per cent of the population over the age of 18 in Denmark have a payment card that can be used in physical stores to make offline-authorized payments, i.e. have a Dankort, including co-badged Dankort (Visa/Dankort or Mastercard Dankort) or a Mastercard, see chart 1. This is a minimum estimate, as the calculation only includes payment cards issued to the banks' Nemkonto customers<sup>15</sup>. If a cardholder has a payment card with offline authorisation functionality at a bank other than their Nemkonto bank, that card is not included in the statistics. In addition, citizens who do not have payment cards with offline authorisation functionality may still be covered by others. For example, another person in the household with one or more payment cards with offline authorisation functionality can assist with payments.

Card payments are designed with great emphasis on security. In the case of offline card payments, card companies and card-issuing banks cannot continuously monitor their customers' payments for inappropriate behaviour, such as overdrafts or scams and fraud. However, card companies and card-issuing banks can implement security measures such as offline authorisation with spending limits. Consequently, there are differences in the number and size of payments that can be made with payment cards that can perform offline authorisation and differences between the banks that issue these payment cards to their customers, see chart 2. If a citizen has multiple cards that allow offline authorisation, they have the corresponding ability to make multiple payments in an outage situation.

<sup>15</sup> Danish citizens are required to designate a bank account as a Nemkonto. This designated account is used for receiving salary payments and various government payments, including benefits and tax refunds.

CHART 1

**82 per cent of citizens over 18 have at least one payment card that allows offline-authorized payments**

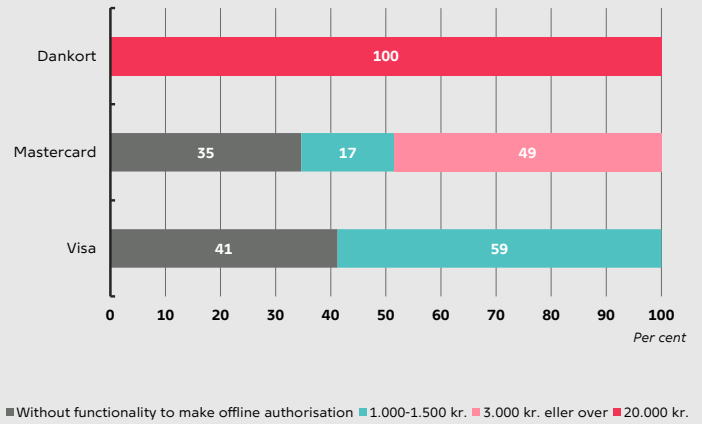


Note: The chart shows the distribution of Danish bank customers categorised by the type of payment card they have and whether the card can be used for offline-authorized payments. A person is only counted once, even if they have multiple payment cards or bank accounts. The categorisation is hierarchical and based on the offline spending limits of the card brands. This means that if a cardholder has a Visa/Dankort and a Mastercard, they are only included in the statistic for Dankort, as Dankort has the highest spending limit for offline-authorized payments.

Source: Data are based on a stock-take from Finance Denmark, while conclusions are based on insights from multiple parties.

CHART 2

**There are different offline spending limits across payment card brands**



Note: The chart shows Danish-issued payment cards categorised by card brands and corresponding offline spending limits for offline-authorized payments.

Source: Data are based on a stock-take from Finance Denmark, while conclusions are based on insights from multiple parties.

For Dankort and co-badged Dankort (Visa/Dankort and Mastercard Dankort), the possibility of offline-authorized payments, including offline spending limits, is defined in the scheme rules for Dankort.<sup>16</sup> This means that all Dankort and co-badged Dankort cards can be used offline. All Dankort cards can also make payments up to kr. 20,000 before the card has to be used at a payment terminal connected to the payment systems, see chart 2.

With Mastercard’s payment cards, the card-issuing banks must decide whether the card can be used offline. Therefore, not all Mastercard’s payment cards can make offline-authorized card payments, see chart 2. Banks must also set their own spending limits for offline-authorized payments within the rules set by Mastercard (max. 200 euros per transaction, equivalent to approximately kr. 1,500). As a result, Mastercard’s payment cards have different limits on the size of each offline-authorized payment and the amount and number of payments that can be made before the card must be used on a terminal connected to the systems.

Data from the banks show that just over 65 per cent of the issued payment cards from Mastercard can be used with offline authorisation. Of those cards, just under a quarter have an accumulated spending limit of kr. 1,000 or kr. 1,500 kr., while the rest have a limit of kr. 3,000 or more, see chart 2.<sup>17</sup>

<sup>16</sup> Co-badged payment cards, such as Visa/Dankort and Mastercard/Dankort, are effectively two separate payment cards combined into a single physical card. Each component of the card must therefore comply with the rules of the respective card brands, including rules for offline card payments.

<sup>17</sup> The vast majority of Mastercards issued with offline authorisation functionality have spending limits of either kr. 1,500 or kr. 3,000.

Danish banks have issued almost 60 per cent of Visa's payment cards with the functionality to make offline-authorised payments, see chart 2. These cards have a spending limit of kr. 1,500. However, Visa's scheme rules state that Visa's payment cards can only make offline-authorised payments of kr. 0. Therefore, Visa's payment cards are generally not allowed to be used for offline-authorised payments.

#### ***Ongoing work to meet the criterion***

The card-issuing banks are in dialogue with Visa about expanding the use of deferred authorisation for Visa payment cards, see the status on criterion 1. If the use of deferred authorisation is extended and allowed at least in crisis situations, virtually all payment cards in Denmark could be included in a card payment contingency measure.

#### **4. Liability for offline card payments must be clear and accepted in advance by all parties involved**

Data from Nets indicates that only a very limited proportion of offline card payments result in a loss that must be covered by the party liable for the payment in the given situation. Clear and pre-agreed liability supports the payment contingency measure, ensuring all parties continue to allow and accept card payments even in a prolonged outage situation.

Under Mastercard's scheme rules, the card-issuing bank is liable for losses on offline-authorised payments if the payment is made within the spending limits set by both Mastercard and the card-issuing bank. However, for deferred authorisation payments with Mastercard's payment cards, the store is liable for any resulting losses.

Under Dankort's scheme rules, the store is liable for offline-authorised payments unless the payment terminal cannot obtain online authorisation from Nets due to errors in Nets' central systems.<sup>18</sup> In such a case, Dankort offers a guarantee that covers up to kr. 8,000 of the payment.

Visa's rules regarding liability for card payments with deferred authorisation mean that the store is generally liable for the payment, as the card payment cannot be authorised online at the initiation of the payment.

#### ***Ongoing work to meet the criterion***

The card issuers and the Danish Chamber of Commerce, which represents the nationwide supermarket chains, are in dialogue to ensure that liability is understood and accepted in advance for all payment cards.

Regarding payments with deferred authorisation, an ongoing dialogue between card issuers and the Danish Chamber of Commerce aim to establish a liability model between card issuers and stores in socially critical situations in Denmark. That dialogue aims to ensure that all parties involved can accept liability, even in the event of prolonged disruptions. The parties involved expect that there will be clarification within a few months as to whether a model can be established for allocating liability that meets the criterion and which can subsequently be implemented in the card companies' rules for card payments with deferred authorisation.

#### **5. Affected stores can accept offline payments for at least a week**

The national supermarket chains and pharmacies have informed the Danish Payments Council that offline-authorised card payments are part of their

<sup>18</sup> Nets is the sole redeemer of Dankort.

payment contingency plans, and that they have procedures in place to transition to offline mode. For some stores, the transition will happen automatically if the payment terminal loses connection to the payment system. In other stores, staff will have to manually set the terminal to offline mode.

All the largest national supermarket chains, i.e. Salling Group, Coop, Dagrofa, Rema 1000 and Lidl, as well as The Association of Danish Pharmacies, Apotekerforeningen, have indicated that they support card payments as a society-wide payment contingency measure.

The Danish Chamber of Commerce, on behalf of the supermarket chains, is in dialogue with Finance Denmark, which represents the card issuers, about whether stores will receive payments with deferred authorisation if card payments cannot function as normal. Such an agreement requires a model for the allocation of liability for any losses that is accepted by all parties. In that case, all adults in Denmark over the age of 18 who have a Dankort, Mastercard or Visa card will be able to pay for goods with offline card payments in the nationwide supermarket chains.

The payment terminals in pharmacies and supermarkets can each store around 1,000 offline payments. Given the number of terminals in stores and how many transactions are made in the busier stores, some supermarkets will not have enough capacity in their terminals to store offline payments for at least a week. Some supermarkets will only have capacity for less than three days.

***Ongoing work to meet the criterion***

The Danish Chamber of Commerce and the national supermarket chains expect to switch to terminals with larger storage capacity as part of the ongoing replacement of terminals. In addition, the Danish Chamber of Commerce and the supermarket chains, together with their terminal suppliers, will identify the technical possibilities for increasing storage capacity in relevant supermarkets until terminals are replaced.

# 05

## Future work to ensure a card payment contingency measure

The Danish Payments Council and other relevant parties are working to ensure a society-wide card payment contingency measure in Denmark. As this report shows, the basis for such a measure is largely in place.

However, the ambition is that adults with a Dankort, Mastercard or Visa payment card will be able to make offline payments in the nationwide supermarkets and pharmacies for at least a week. This requires further work, particularly in determining whether deferred authorisation can meet this ambition. If deferred authorisation is deemed viable, card companies, acquirers and terminal providers will need to make adjustments to ensure that payments with deferred authorisation are accepted by the payment terminals in the stores involved. The parties are working to ensure that cardholders of payment cards from the three widely used brands will be able to make offline card payments by the end of 2024.

Increasing the storage capacity of payment terminals in the busiest supermarkets is also required, so they can accept offline card payments for at least a week. This is expected to occur through ongoing replacement of the terminals, which will take several years. The possibility of increasing the memory in existing terminals is therefore also being investigated, and the supermarket chains and terminal suppliers are in dialogue about temporary solutions to increase the capacity.

The Danish Payments Council will follow up on the work to ensure a society-wide card payment contingency measure and plans to regularly publish updates. The next status report is expected to be published in the first quarter of 2025.

## Testing the card payment contingency measure

After the technical implementation of the card payment contingency measure, conducting tests at regular intervals will be necessary. Testing ensures that the solution works effectively in the event of a socially critical disruption, provides an opportunity to identify and rectify any errors and deficiencies, and ensures the staff of the parties involved are continuously trained and prepared to handle the situation should it occur.