



Staff Memo

# Buy now, pay later – a threat to financial stability?

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# List of contents

1	The emergence of BNPL	5
2	Potential risks to financial stability	11
2.1	Risk assessment framework and methodology	11
2.2	The payment product and checkout solution: Could be changed in the event of problems – at least in the short term	12
2.3	Business model: Significant credit and technology risks limit profitability	16
2.4	Risks to the financial system: Difficult to assess but driven by the providers' indirect interconnectedness	23
3	Concluding remarks	28

## **Staff Memos**

A Staff Memo provides members of the Riksbank's staff with the opportunity to publish advanced analyses of relevant issues. It is a publication for civil servants that is free of policy conclusions and individual standpoints on current policy issues. Publication is approved by the appropriate Head of Department. The opinions expressed in Staff Memos are those of the authors and should not be regarded as the Riksbank's standpoint.

## Summary

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“Buy now, pay later” (BNPL) is a payment product that has emerged and seen strong growth in recent years. However, as the product’s popularity has grown, so has criticism. The lack of consumer protection is often highlighted when the risks of BNPL are assessed. However, the potential threats to financial stability have not received as much attention. It is important that the Riksbank understands the risks, given its responsibility to contribute to the stability and efficiency of the financial system.

This Staff Memo therefore examines the potential impact of BNPL on financial stability. This examination is based partly on the payment product itself and the broader checkout solution of which it is a part, and partly on the underlying business model used by the providers. We also examine whether there are risks to the financial system as a whole, for example if contagion effects were to arise between providers offering BNPL in Sweden.

The analysis shows that the risks associated with BNPL from a financial stability perspective presently stem primarily from the dependence of the BNPL providers on insured deposits to finance their business model. Authorities need to improve their understanding of the risks related to how the BNPL providers choose to finance their activities. Moreover, there is a degree of indirect interconnectedness that means that if confidence in one provider is damaged, it could spread to others.

Furthermore, higher interest rates, increased competition and reduced e-commerce spending will test the viability of the business model going forward, likely leading to some form of consolidation in the coming years.

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## Introduction

This Staff Memo analyses the potential threats to financial stability posed by the “buy now, pay later” (BNPL) payment product. BNPL is a term used globally to describe credit, usually interest-free, offered in the e-commerce sector in particular, although there is some confusion over the concept. In this Staff Memo, BNPL is defined as e-commerce invoice purchases, which is the most common way BNPL is used in Sweden. These purchases generally involve interest-free credit as long as the consumer pays on time and are characterised by their integration into e-commerce platforms. The risks to financial stability associated with Swedish BNPL providers’ broader checkout solution, in which they manage the online trader’s entire checkout system, are also evaluated to some extent. The broader checkout solution includes BNPL as one of many payment options alongside for example cards, bank transfers and Swish.

To assess the potential risks to financial stability, the largest BNPL providers in Sweden and a number of other players involved in e-commerce payments in various ways have been interviewed. The potential risks are assessed using a three-part framework in which we analyse:

- the impact of BNPL on e-commerce payments
- the risks associated with the business model for BNPL
- the potential risks to the financial system as a whole should there be contagion effects from the failure of one of the BNPL providers.

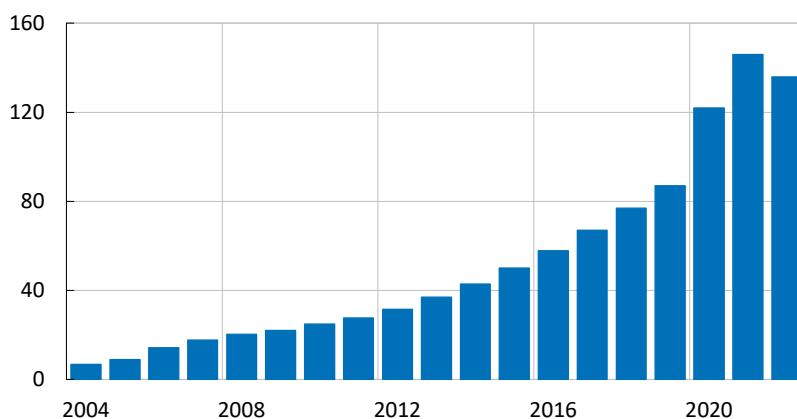
# 1 The emergence of BNPL

## E-commerce has grown explosively in recent years together with various new payment solutions

E-commerce has grown rapidly in recent years. By the end of 2022, it had total sales of around SEK 136 billion – a doubling of sales volumes compared to 2017.<sup>2</sup> This means that e-commerce turnover corresponds to around 17 per cent of total retail trade, or around 2 per cent of Sweden’s GDP.<sup>3</sup>

**Diagram 1. Sweden e-commerce turnover 2004-2022**

Total Swedish e-commerce sales, SEK billion



Source: E-barometern, PostNord

With the rapid growth of e-commerce, different types of payment solutions have also started to be offered to consumers at online traders’ points of sale, which is to say when the consumer pays. Many online retailers in the Swedish market currently have one supplier that provides the entire store’s checkout system. This checkout solution offers consumers a variety of options to pay for their goods. See Diagram 2 for an example of what this might look like for the consumer. In broader terms, payment solutions can be divided into two categories: (i) **pay now** and (ii) **pay later**. If the consumer chooses to pay later, this means that the consumer pays after receiving the goods instead of at the time of purchase. This option represents up to 60 per cent of e-commerce sales volumes in Sweden today.<sup>4</sup>

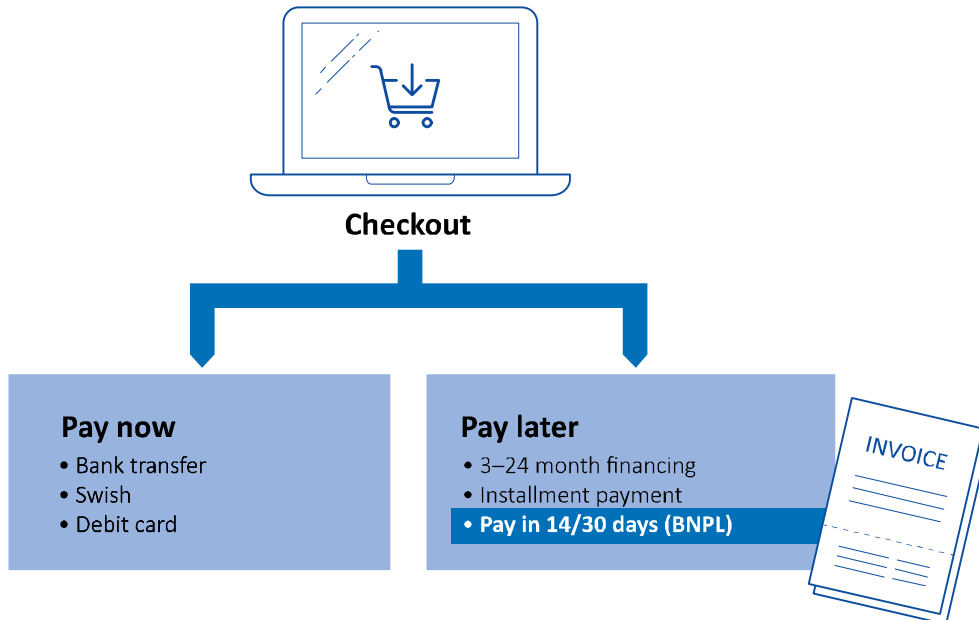
<sup>2</sup> See Handelsfakta.se, [E-handelns totala försäljning och tillväxttakt](#) [E-commerce total sales and growth rate], data collected in July 2023.

<sup>3</sup> According to Svensk Handel’s [2022 profitability report](#), retail trade amounts to around 11 per cent of Sweden’s GDP, while [Statistics Sweden](#) (2021) reports that e-commerce accounted for around 17 per cent of GDP in 2021.

<sup>4</sup> The numbers vary between different suppliers.

**Diagram 2. Payment options in e-commerce**

E-commerce checkouts typically offer different payment options to either pay now or pay later.



One option for paying later that has received a lot of attention is “buy now, pay later” (BNPL). BNPL is not a standardised concept and often has slightly different meanings in different countries. Generally speaking, however, it refers to a payment option offered at e-commerce checkout and which is basically a credit, but one where the consumer does not pay any interest or fees as long as they pay on time.<sup>5</sup> In Sweden, this is often referred to as an invoice purchase and is normally an interest-free credit that allows the consumer to pay 14–30 days after the goods have been dispatched.<sup>6</sup>

## BNPL is a popular payment option in Sweden

In Sweden, buying on invoice has long been an option in physical retail. However, since its introduction in e-commerce in the early 2000s, it has been an important tool to reduce the threshold for shopping online where it is more difficult for consumers to assess the delivery performance of shops and the risk of fraud. BNPL thus has a consumer security aspect as long as payment is made after the goods have been delivered. In addition, it is more accessible than credit cards, for example, as it does not require an application in advance or a certain minimum income. From the perspective of online traders, BNPL helps to reduce the number of abandoned shopping baskets and thus to increase sales.

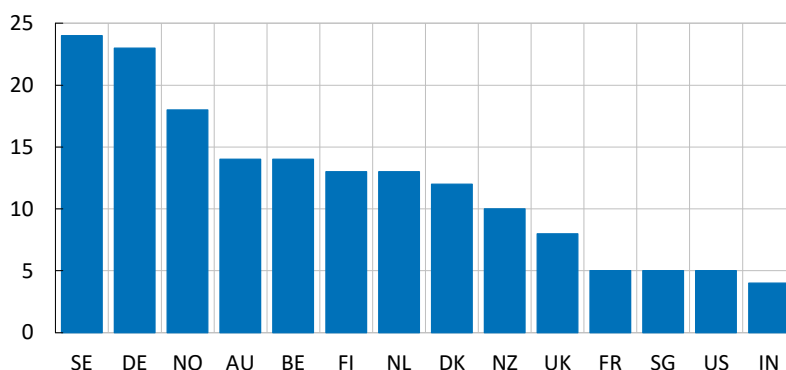
BNPL is used to a greater extent in e-commerce in Sweden than globally. Currently, Sweden stands out with the highest share of BNPL payments in e-commerce in the world at around 24 per cent (see Diagram 3).

<sup>5</sup> See, for example, information on the [MoneyHelper](#) website of the UK Money & Pensions Service.

<sup>6</sup> In the United States, for example, BNPL typically involves paying one quarter of the amount at the time of purchase and the remaining three quarters at two-week intervals over the next six weeks.

**Diagram 3. Share of BNPL payments in e-commerce in different countries**

Share of e-commerce payments made with BNPL, based on transaction value, per cent



Note. Based on market research data for 2022. Respondents were asked whether they had bought anything with BNPL, where BNPL was defined as buying something now and deferring payment or paying in instalments. In addition to the definition, examples of local BNPL providers were also provided to further help respondents understand what was meant by BNPL.

Source: FIS/Worldpay, The Global Payments Report 2023

There are various conceivable explanations for this. On the one hand there is a Swedish tradition of buying goods on invoice from physical retailers. On the other hand one of the largest BNPL players globally, Klarna, was founded in Sweden.<sup>7</sup>

## More focus on consumer protection than financial stability risks

As BNPL has grown in popularity, so has criticism of it. This criticism has focused partly on the product itself from a consumer protection perspective and partly on the profitability of the providers’ business model.<sup>8</sup> More information on how it works can be found in the fact box “BNPL – How the business model works”.

The global providers focusing on the product have typically suffered heavy losses for several years because they have prioritised growth over profitability, when interest rates have been low (see Diagram 4).<sup>9</sup> This strategy has favoured their valuations. The idea was that the providers would build up a large customer base that would enable profitability in a maturity phase, which meant that they spent a lot of money on marketing, for example. A large customer base with detailed customer data would also make it possible to further increase sales by customising advertising for third parties, for example.

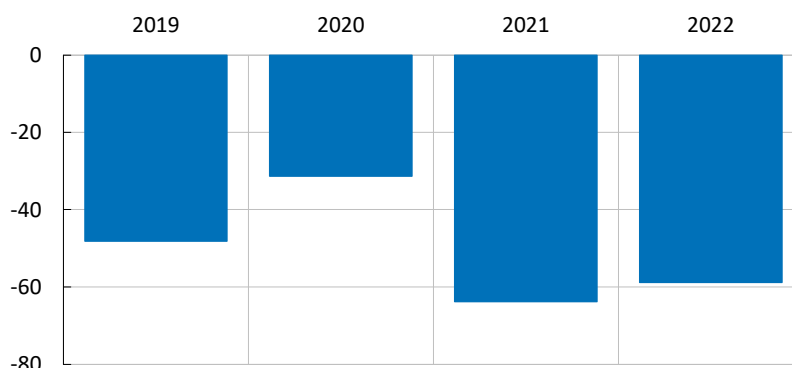
<sup>7</sup> This is especially true for larger purchases such as electronics.

<sup>8</sup> On the profitability of the operators’ business model, see, for example, Finextra, [BNPL – all of this hype for a not-so-profitable business?](#), September 2021.

<sup>9</sup> Large, global, specialised BNPL providers include Affirm Afterpay, Sezzle, Zip and Klarna.

**Diagram 4. Major global BNPL providers' losses in recent years**

Net income/Total revenue, per cent



Note. Simple average for Affirm, Sezzle and Klarna.

Source: S&P Capital IQ

The global BNPL providers face high costs compared to their revenues, low margins due to fierce competition and high loan losses. This situation has been further exacerbated by higher interest rates, which have also increased providers' funding costs. At least one BNPL provider has already gone bankrupt as a result of the deteriorating macroeconomic situation.<sup>10</sup>

Authorities that have scrutinised BNPL have focused on consumer risks related to the payment solution, such as unconscious over-indebtedness. These reviews have mainly been carried out in countries such as Australia, the United Kingdom and the United States.<sup>11</sup> New regulation in Sweden has also focused on consumer protection, such as the 2020 requirement on the order in which different payment options may be presented to prevent invoice purchases from being listed first.<sup>12 13</sup> As yet, however, no comprehensive analysis has been made of the threats that BNPL could pose to financial stability. This is particularly relevant to the Riksbank given the extent of BNPL in e-commerce in Sweden and the fact that the providers offering BNPL in Sweden are banks or credit market companies that are dependent on deposits that are mainly deposit guaranteed for their funding. In other countries, BNPL operators typically do not have banking licences but instead work with partner banks.

This Staff Memo therefore analyses potential risks associated with BNPL from a financial stability perspective. Since up to 90 per cent of all payments in Swedish e-commerce today are made via the checkout solutions offered by six major Swedish BNPL providers, we focus on them in this report. Hereafter, we will refer to them as "the

<sup>10</sup> The Australian provider OpenPay went into receivership in February 2023; see, for example, Finextra, [Oz BNPL firm Openpay fall into receivership](#), February 2023.

<sup>11</sup> See, for example, [FCA](#) or [CFPB](#).

<sup>12</sup> See, for example, Svensk Handel, [Nya regler från och med 1 juli 2020](#) [New rules as of 1 July 2020] (2020).

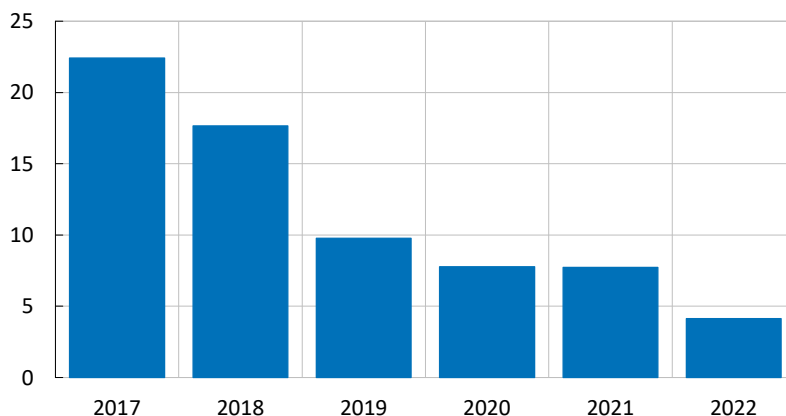
<sup>13</sup> The inquiry into over-indebtedness also recently submitted its report to the Swedish government on various legislative proposals to strengthen consumer protection for credit and reduce the risk of over-indebtedness. See Government Offices, [Utredningen om överskuldssättning överlämnar sitt betänkande](#) [Inquiry into over-indebtedness submits its report], July 2023.



BNPL providers”.<sup>14 15</sup> Note that all of these providers also offer banking or payment products other than just BNPL, such as savings accounts or unsecured loans.<sup>16</sup> As you can see in Diagram 5, BNPL providers have experienced a downward trend in their level of profitability in recent years.

**Diagram 5. Level of profitability of BNPL providers**

Net income/total revenue, per cent



Note. Simple average for Collector Bank, Klarna Bank, Qliro, Resurs Bank, Svea Bank and TF Bank.

Source: The banks’ annual reports

<sup>14</sup> Collector Bank (Walley), Klarna Bank, Qliro, Resurs Bank, Svea Bank and TF Bank (Avarda).

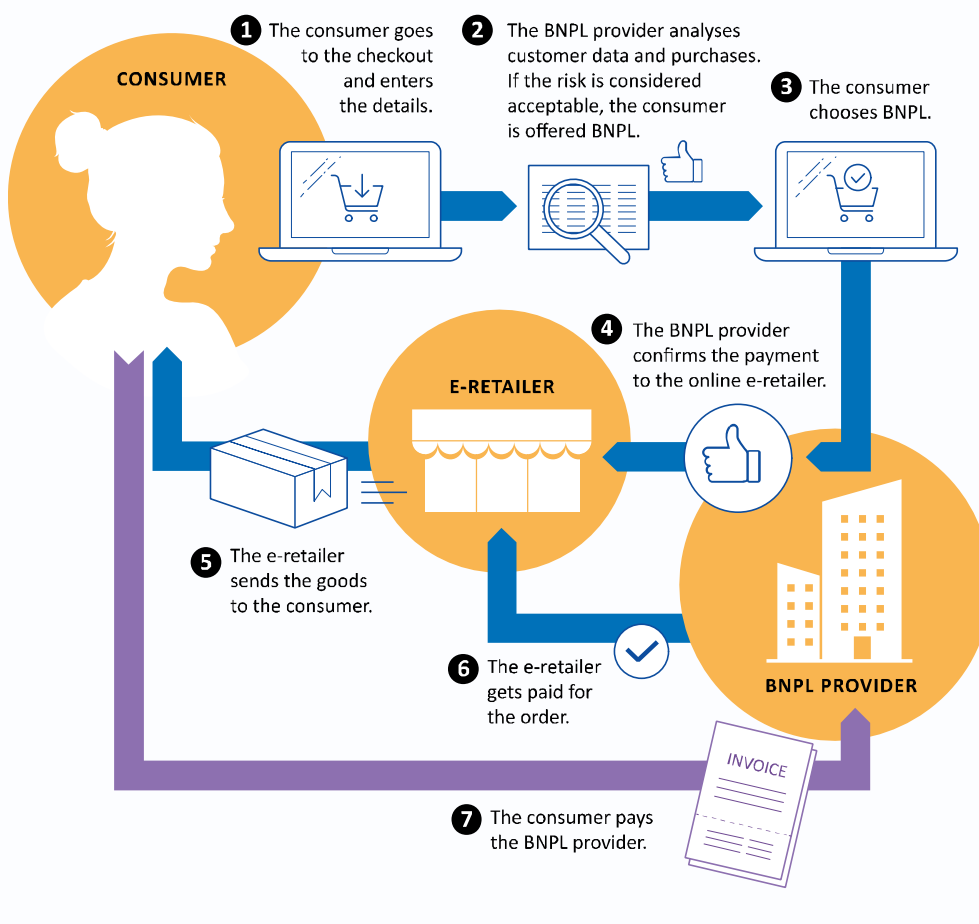
<sup>15</sup> See, for example, the survey by Market ([link](#)) conducted in February 2022, which maps the payment providers used by the 250 largest online retailers in Sweden.

<sup>16</sup> The figures presented for BNPL providers in this Staff Memo refer to their entire business operations, not just BNPL. This is because the providers do not report separate results for BNPL activities. According to annual reports for 2022, between 15 and 85 per cent of the providers’ revenues come from the Payments or E-commerce segments.

## FACT BOX – How the BNPL business model works

The business model for BNPL means that the BNPL provider receives its revenues mainly in the form of fees from the online retailer. In addition, the BNPL provider receives revenue in the form of fees from the consumer if the consumer does not pay on time.<sup>17</sup> BNPL is a relatively expensive payment option for the online retailer, but in return the online retailer expects higher sales to consumers.<sup>18</sup> Moreover, the BNPL provider assumes the credit risk towards the consumer from the online retailer.

In order for a provider to offer BNPL to online retailers, significant initial expenditure is required to develop a platform for BNPL and to create the necessary integrations with e-commerce platforms, delivery services and the like. There are also ongoing costs for the provider to develop the platform as well as for customer support, credit checks and marketing. Added to this are credit losses if the consumer does not pay. Each purchase made by the consumer is usually accompanied by a credit risk assessment, which results in the approval or rejection of the proposed purchase. The illustration below provides a simplified view of the flow of a BNPL transaction.



<sup>17</sup> Some, particularly global BNPL players, also receive marketing revenues when they promote various products or services to consumers on their platform or within their customer base.

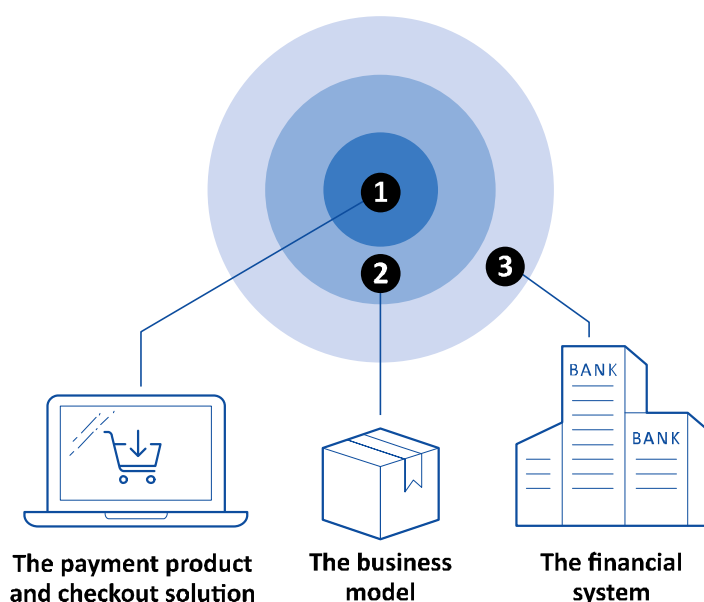
<sup>18</sup> See, for example, N. Engström, F. Linton and R. Olofsson (2023), "[Payments cost – but the costs vary](#)", Economic Commentary, Sveriges Riksbank.

## 2 Potential risks to financial stability

### 2.1 Risk assessment framework and methodology

Financial stability is defined as a financial system that is stable and efficient, which also includes the ability of the public to make payments. To evaluate the potential risks of BNPL, we need to understand what BNPL itself means for e-commerce payments and how the providers and their business model affect the financial system as a whole. To evaluate these aspects in a more systematic way, we divide our analysis into three parts.

**Diagram 6. Framework for analysing risks to financial stability**



1. **Risks associated with the payment product and checkout solution:** Part of financial stability concerns the ability of the public to make payments. Given that e-commerce accounts for around 17 per cent of retail turnover, it is therefore relevant to find out whether BNPL as a product and the checkout solution offered by BNPL providers are systemically important for e-commerce payments in Sweden. We also need to know how quickly we can switch to alternative solutions should problems variously arise.
2. **Business model risks:** A stable and efficient financial system depends on business models that are profitable over time. A single player with a problematic business model can be replaced but, if the business model of a particular product offered by several players is problematic, it can affect the entire financial system. It is therefore relevant for the Riksbank to find out what the

profitability potential of BNPL is and what the main risks of the business model are.

3. **Risks to the financial system as a whole:** Problems in one part of the financial system can spread to other parts of the system if players are highly interconnected. Contagion can also spread beyond the sector. This makes it relevant to find out how closely interconnected the BNPL providers are. For example, what happens to the other providers if one of them loses the trust of their investors or customers?

To understand the threats BNPL may pose to financial stability, both the BNPL providers themselves and a number of other operators involved in payments in e-commerce in various ways have been interviewed. These include e-commerce platforms, trade organisations and online retailers. The interviews were conducted between February and May 2023.

## 2.2 The payment product and checkout solution: Could be changed in the event of problems – at least in the short term

Based on our analysis, we consider that BNPL itself is not systemically important for e-commerce payments as long as there is a high degree of interchangeability. That is, the public would still be able to make payments if the BNPL payment option was not available. However, many online retailers are dependent on the broader checkout solution offered by BNPL providers. Even so, this dependency seems to be less of a problem in the short term as, there is some degree of interchangeability due to different types of fallback solutions that can be used during a transitional period.

Almost all e-commerce payments in Sweden rely on BankID. This poses a risk as it makes it a key dependency for the functioning of e-commerce payments. If BankID crashes, it will be difficult to use virtually all the payment solutions currently available. This includes BNPL which is subject to a new requirement for strong two-factor authentication for purchases since the beginning of the year, which typically involves identification via BankID.<sup>19</sup> Payment solutions that do not rely on BankID are most often made through foreign providers, such as PayPal, but fewer online retailers have agreements with such providers.

In the text below, we discuss the interchangeability of the BNPL product itself and its interchangeability with the broader checkout solution in which it is normally integrated.

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<sup>19</sup> See Sveriges Riksdag, [Report 2022/23:FiU18](#) (2022).

## The BNPL product is just one of many payment options

The analysis shows that the BNPL product is currently interchangeable and not systemically important for e-commerce payments. There are several reasons for this conclusion.

Firstly, although BNPL is an important payment method in e-commerce, it represents a relatively small share of the overall consumer credit market (see Diagram 7). BNPL is generally used for small purchases and most people who use it pay on time.<sup>20 21</sup> It thus seems reasonable to assume that BNPL is not primarily used because there is an underlying need for credit but perhaps primarily for the security and convenience aspects it provides when shopping online.<sup>22</sup> This would mean that a high proportion of BNPL purchases could be completed with other payment options if BNPL were not available. It is particularly reasonable to think this, as there are now alternative ways to meet both the need for security and simplicity or convenience. When it comes to security, Svensk Handel (the Swedish Trade Federation), for example, offers the Trygg e-handel certification at a cost to the online retailer.<sup>23</sup> When it comes to ease or convenience, there are now alternatives such as Swish.

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<sup>20</sup> More than 90 per cent of consumers pay their invoices on time according to Finansinspektionen, [Swedish Consumer Credit 2022](#) (2022).

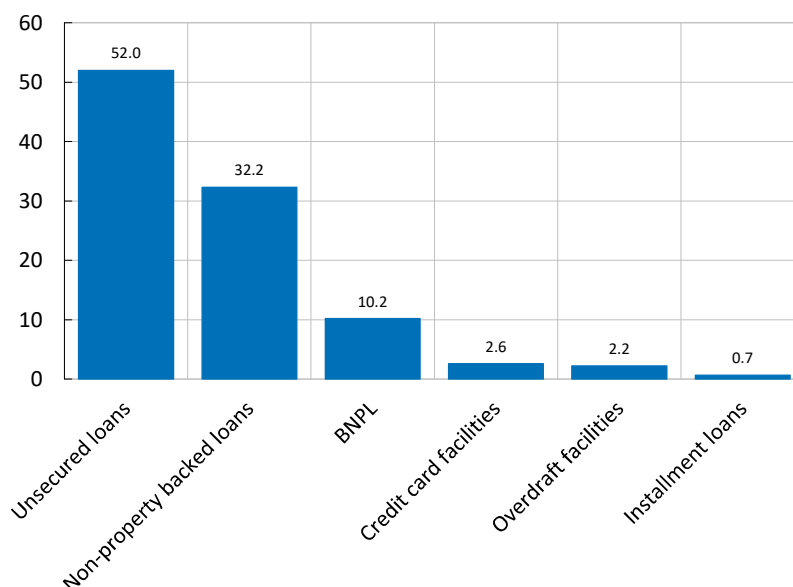
<sup>21</sup> The average invoice purchase is less than SEK 1,000 according to Finansinspektionen, [Swedish Consumer Credit 2022](#) (2022).

<sup>22</sup> This can be seen, for example, in Nets, "[Ecommerce Report Sweden 2022](#)", which shows that Swedish consumers mainly favour invoices because they are perceived as a secure payment option. The report is based on interviews with 10,000 internet users in Norway, Denmark, Finland, Sweden, Switzerland, Germany, Austria and Italy.

<sup>23</sup> Trygg E-handel is a certification for online retailers owned and operated by Svensk Handel AB. To obtain this certification, the online retailer must fulfil a number of requirements, such as withdrawal rights, refunds and data protection. The certification is displayed as a symbol on the online retailer's website.

**Diagram 7. BNPL compared to other Swedish consumer loans**

Consumer loans broken down by loan type, share of volume, per cent



Note. BNPL includes invoices and converted instalments. Based on a sample of loans and credits disbursed between 13 and 22 May 2021. After processing by Finansinspektionen, the sample includes 341,381 borrowers. The invoices included are only those that have resulted in an additional cost to the consumer.

Source: Finansinspektionen, Swedish Consumer Credit 2022

**Other payment options are also growing in popularity**

Secondly, there are several alternatives to BNPL in e-commerce today. In recent years, for example, Swish has emerged as a popular alternative to BNPL. Over half of the Swedish consumers interviewed in 2022 had used Swish to pay for an online purchase in the past year, with the main reason being that it is convenient and easy.<sup>24</sup> The increasing use of Swish is also confirmed by the observations of the providers we interviewed, who state that Swish is growing rapidly as a payment option because consumers see it as a smooth and easy way to pay without having to enter card details, for example. The Riksbank's latest cost study also shows that Swish is the fastest payment option for online payments.<sup>25</sup> BNPL is probably most important in sectors where many goods are returned, such as fashion and clothing.<sup>26</sup>

<sup>24</sup> See Nets, "[Ecommerce Report Sweden 2022](#)" (2023).

<sup>25</sup> It takes 20 seconds to pay with Swish compared with 49 seconds to pay by invoice or 50 seconds to pay by card; see N. Engström, F. Linton and R. Olofsson (2023), "[Payments cost – but the costs vary](#)", Economic Commentary, Sveriges Riksbank.

<sup>26</sup> This is however subject to change as retailers have started to reduce the availability of free returns due to cost and environmental reasons.



*More of the people surveyed had used Swish than invoicing for online purchases in 2022.<sup>27</sup>*

### **The checkout solution is replaceable in the short term thanks to fallback solutions**

The checkout solution as a whole offered by BNPL providers can be replaced relatively quickly in the short term, albeit with a simpler solution, given the alternative solutions that are often available to maintain payments. There are several reasons for this conclusion.

First, the overall checkout solution of each BNPL provider is highly interchangeable with that of the other providers as their technical solutions are very similar and often based on the same underlying technology.<sup>28</sup> There may be greater differences between the forms of service or the prices they offer customers than between the solutions themselves. Moreover, the e-commerce platforms used by online retailers typically have integrations with several different BNPL providers. This makes it relatively easy for smaller online retailers in particular to switch checkout solution in the event of insolvency or technical problems, given that they often have a less customised checkout solution. However, this possibility depends on whether there are contractual restrictions.

Second, many larger online retailers often already have a fallback solution, that is to say a solution that they can use if their main supplier's solution crashes or stops working. Common fallback solutions include a simple checkout with only card payments, Swish or both and, to some extent, services from foreign providers such as PayPal. These alternative solutions can usually be up and running very quickly for larger players who already have contracts and alternative solutions in place. But even for smaller operators, it can be relatively quick to set up an alternative solution as e-commerce platforms often have ready-made integrations.

Several players we interviewed say that changing payment system is seen as a relatively small task, for example in comparison to changing ERP system. Information on foreign payment providers' websites also indicates that an integration can take a day or less from first contact to a functioning basic solution.<sup>29</sup>

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<sup>27</sup> See Nets, "[Ecommerce Report Sweden 2022](#)" (2023).

<sup>28</sup> Although they are based on similar underlying technologies, it is unlikely that all actors' solutions would stop working at the same time. This is partly due to the fact that they often work with different versions of the checkout solutions and have constructed their integrations in different ways.

<sup>29</sup> Adyen or PayPal for example.



*One operator we interviewed commented that one of their customers had found an alternative solution via Swish within 24 hours of being locked out of their platform.*

The risk that payments in e-commerce would be unavailable for a longer period of time thus seems to be limited in the short term because it is usually possible for the online retailer to arrange an alternative, usually simpler, checkout solution relatively quickly. However, this depends on factors such as the e-commerce platform the online retailer uses, as the e-commerce platform determines whether there are ready-made integrations, the bank the online retailer uses, as this determines how long the integration with Swish will take, and whether the online retailer already has agreements for fallback solutions.

### **Lower substitutability when all factors are considered**

There is a difference between interchangeability to keep a payment function and interchangeability concerning the entire checkout solution and underlying systems. A fallback solution that maintains the payment function can often be up and running quickly. But it takes much longer for an online retailer to replace one checkout solution with another if they want to do a complete integration that includes the front end, meaning what the consumer sees, the order management system and the accounting system. This can create problems for individual online retailers as it may require quite substantial investments, which could make it difficult for them to offer the checkout solution to consumers in the long run.

Online retailers usually integrate with the BNPL provider via the e-commerce platform, which generally has a ready-made integration with the BNPL provider that they can use, at least for some parts of the integration. However, many online retailers, especially the largest, have a unique front end with which it may take the provider some time to integrate. For large retailers, this means that the entire integration from first contact to finished product can take up to 12 months.<sup>30</sup>

## **2.3 Business model: Significant credit and technology risks limit profitability**

The BNPL business model has so far shown at least the potential to be profitable – depending on the market in which it is offered and the strategy chosen by the provider. This is particularly true if BNPL is part of a broader product range. However, it is unclear how sustainable the BNPL business model is, as well as how it will hold up in the changed macroeconomic environment we are now in, with higher interest rates and increased competition. The analysis shows that the main risks of the BNPL providers'

<sup>30</sup> The effective working time is shorter but processes are often delayed due to the prioritisation of other projects or the availability of key personnel.



business models come from two sources: credit risks taken by providers and the large technology investments required. Together, they limit profitability.

### Profitable business model in Sweden

The BNPL providers we interviewed state that the business models for BNPL and the checkout solution are closely linked and fundamentally profitable in the Swedish market.<sup>31</sup> They report that several factors combine to make this the case in both the Swedish market and a number of other Nordic markets. First, the infrastructure around BNPL is different in Sweden compared to other countries. BNPL itself is highly standardised and consumers are also somewhat accustomed to paying with BNPL at physical retailers. It is also relatively easy for online retailers to access public information about consumers and to identify them via their personal identity numbers. In addition, there is an infrastructure of debt collection agencies that can help them recover any debts incurred.



*Several providers we have interviewed say that it is more difficult to achieve profitability with the business model as soon as you expand beyond Sweden, Norway and Finland because the conditions are different in other countries.*

These factors have made it possible to automate processes and simplify credit assessments, reducing both costs and credit risks. Moreover, the widespread use of BankID in e-commerce means that the rate of fraud is lower in the Swedish market than in other markets without similar identification solutions.<sup>32</sup>

Second, both BNPL services themselves and the providers' overall activities are generally broader in Sweden than outside Sweden – at least when compared to global BNPL providers. In Sweden, BNPL services usually include both BNPL and the checkout solution as a whole, while outside Sweden it is more common for operators to specialise in only one of these products. This makes it possible for the Swedish providers to handle a larger share of an online retailer's payments and to sell more different products to the online retailer. In addition, most Swedish BNPL providers also have other activities, such as corporate lending, property loans and credit cards, which means that they are less dependent on BNPL as a single product.

Being able to sell multiple products to online retailers has become particularly important as Swish has grown rapidly as a popular payment option in e-commerce. Some online retailers we interviewed said that more than half of their e-commerce payments are now made via Swish, making it important for BNPL providers to offer Swish as well in order to stay relevant. In addition to adding new payment options,

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<sup>31</sup> The profitability of the business model is difficult to verify through publicly available data for the Swedish providers as they also have other operations in addition to BNPL and do not report the results for BNPL separately.

<sup>32</sup> See, for instance, Sveriges Riksbank, [Payments Report 2022: Are payments in Sweden safe?](#) (2022).

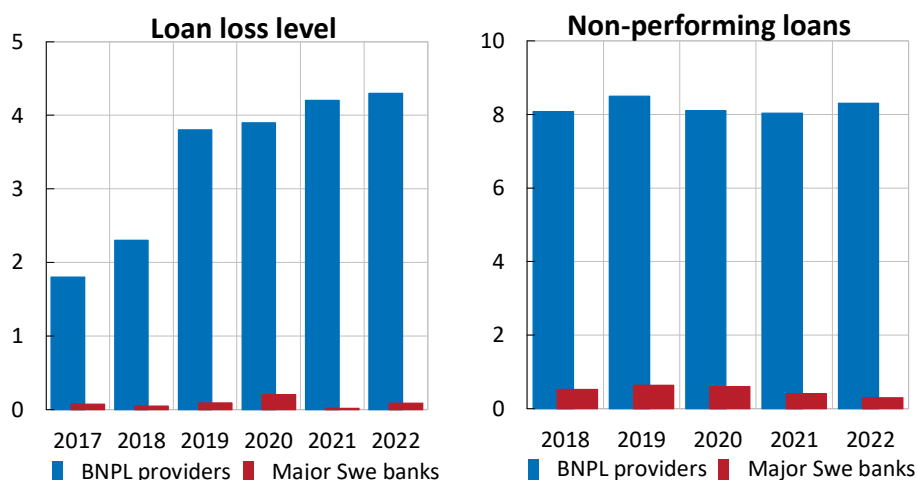
the checkout solution is also being developed on an ongoing basis, which involves additional costs, such as integrating and updating the delivery selector so that the consumer can instantly see the price, days to delivery and pick-up points and similar information about the delivery to make the checkout experience even smoother.

### Credit risks are significant and have increased in recent years

A key aspect of the BNPL business model is credit risk. BNPL providers' overall loan loss level was around 4 per cent of their total lending in 2022.<sup>33 34</sup> This can be compared with the credit loss level for the major Swedish banks amounting to a tenth of a per cent in the same year.<sup>35</sup> BNPL providers therefore take more credit risk than the major Swedish banks and their level of risk has also increased over the last five years (see Diagram 80). Moreover, they have a significantly higher share of non-performing exposures compared to the major Swedish banks.

**Diagram 8. The level of loan losses is high and has increased in recent years, while the share of non-performing exposures has remained more constant**

Left: Loan losses, net/Total loans, per cent. Right: Stage 3 loans/Total loans to the public, per cent



Anm. Weighted average. BNPL providers are Collector Bank, Klarna Bank, Qliro, Resurs Bank, Svea Bank and TF Bank. The major Swedish banks are Handelsbanken, SEB and Swedbank.

Källa: The banks' annual reports

<sup>33</sup> These figures refer to the entire business of BNPL providers, which, in most cases, also includes business activities other than BNPL and checkout solutions. According to annual reports for 2022, between 15 and 85 per cent of the providers' revenues come from the Payments or Commerce segments.

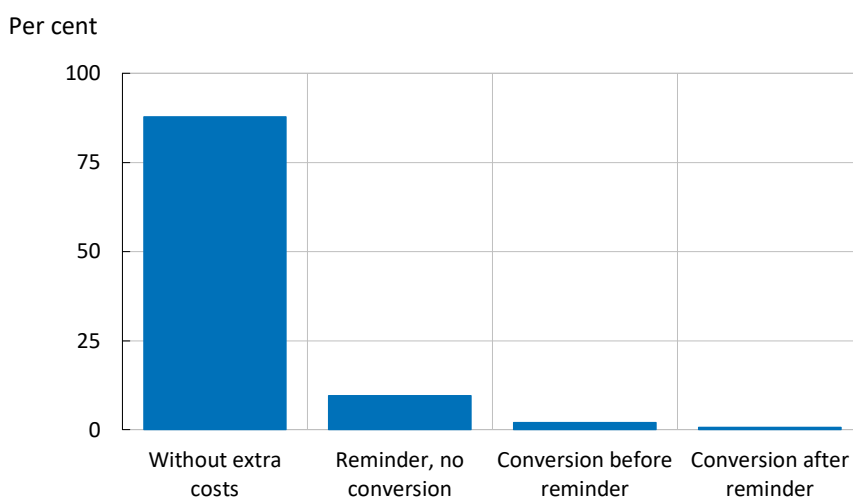
<sup>34</sup> Loan loss rate is defined as net loan losses divided by total loans.

<sup>35</sup> The major Swedish banks are Handelsbanken, SEB and Swedbank.

### Credit risks come mainly from consumers

Credit risks for BNPL providers come from two main channels. The first and largest is consumer credit risk. Consumer loan losses can occur if a consumer buys a product using BNPL and the online retailer delivers it according to contract, but the consumer then fails to pay. Based on an analysis by Finansinspektionen, around one in ten invoices are not paid on time (see Diagram 9).<sup>36</sup> This means that BNPL providers can make money from arrangement fees, reminder fees and the like, but that they have a higher risk of loan losses.

**Diagram 9. Percentage of invoices that are converted or for which a payment reminder is issued**



Note. The figure shows the percentage of invoices that were converted, before or after a payment reminder, or that received a payment reminder in 2021.

Source: Finansinspektionen, Swedish Consumer Credit 2022

Consumer credit risk is a competitive balancing act for providers. The more information providers ask for at checkout, the easier it is to evaluate consumers' credit-worthiness. This is especially true for new consumers. At the same time, the more information providers ask for at checkout, the more likely consumers are to abandon their shopping baskets, as it takes longer to complete the purchase. Moreover, the tighter credit granting gets, the fewer sales there will be for the online retailer. A certain trade-off thus has to be made, considering that providers sell BNPL to online retailers on the basis that it will increase their sales. Here, it is also possible that established providers with proven risk models, licences and the like have a certain advantage over newer providers who have to build all this from scratch.

<sup>36</sup> See Finansinspektionen, [Swedish Consumer Credit 2022](#) (2022).



*Based on an analysis by Finansinspektionen, BNPL users under the age of 25 and those with a lower income (less than SEK 8,000 per month before tax) are the most likely to fail to pay on time, and they are also more likely to convert their invoices into loans.<sup>37</sup>*

Given the short maturities, usually less than one month, providers state that, if necessary, they could adjust their lending behaviour and very quickly make an impact on the credit risk in their loan portfolios. But even if this was technically possible in practice, it is unclear what effect it would have on profitability. More restrictive lending by BNPL providers to consumers would imply a less favourable service offering to online retailers, which could hamper their sales. It is therefore not inconceivable that online retailers would look for other providers who have not tightened their lending in the same way and therefore have a more attractive service offering. This could lead to a negative spiral for the BNPL provider, in which it tightens up to reduce credit risks but, at the same time, reduces its opportunities for long-term growth and profitability if it starts losing online retailers as customers.

### **BNPL providers are more protected against risks from online retailers**

In addition to credit risks from consumers, BNPL providers also have some exposure to credit risks from the online retailers themselves, as they take over the credit risk of the online retailer towards its customer. This means that the BNPL provider may incur loan losses if the online retailer does not deliver the goods to the consumer even though the BNPL operator has already paid the online retailer for the goods purchased. This risk is more significant in sectors where many goods are returned, such as the clothing sector. However, BNPL providers themselves consider this to be a minor risk factor which is also relatively easy to protect themselves against.

BNPL providers usually protect themselves against credit risk from online retailers by screening new online retailers from a credit risk perspective before signing contracts with them. This process can take several weeks depending on the size of the online retailer, its history and the sector in which it operates. They then monitor credit risk on an ongoing basis. To some extent, BNPL providers can also protect themselves against credit risk from the online retailer by applying delayed payments, so that the online retailer is paid for the consumer's goods after a delay of a few days or when the goods have been dispatched instead of directly at the time of purchase.

Because BNPL providers are able to see online retailers' payment flows when they take charge of the entire checkout solution, they consider it to be relatively easy for them to recognise if an online retailer is getting into financial trouble. It is therefore unusual for an online retailer to go bankrupt without the BNPL providers having had

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<sup>37</sup> See Finansinspektionen, [Swedish Consumer Credit 2022](#) (2022).

time to take some form of action. However, it seems particularly important for BNPL providers to monitor this now that the number of retail bankruptcies is increasing.



*The number of bankruptcies in the retail sector increased by 34 per cent in the first half of 2023, compared to the previous year.<sup>38</sup>*

### **Significant economies of scale motivate operators to focus on growth**

Offering a BNPL and checkout solution requires significant fixed investments both initially and on an ongoing basis, as it is a relatively technically complex product. This means at least two things. First, there are significant barriers to entry for new players wishing to enter the market, both in terms of time and money, given that the development of solutions normally takes several years.

Second, it is advantageous for BNPL providers to have as large a customer base as possible to offset their high fixed costs. They therefore have strong incentives to pursue growth strategies which may sacrifice profitability at least in the short term, for example, through lower fees from online retailers in order to bring more online retailers into their portfolio. In the medium term, there is a risk from a financial stability perspective that BNPL providers may prioritise growth over profitability, reducing their financial resilience. These growth strategies also contribute to increased competitive pressures and, in some cases, to an ongoing need for various forms of additional capitalisation.

In terms of competition, BNPL providers appear largely to use pricing to attract new online retailers. However, they themselves consider that other aspects of their service offerings are just as important. For example, this may include the level of customer service they offer to the consumer, the visibility of the BNPL provider to the consumer, the percentage of invoices that go to debt collection or the ancillary services they offer. It is also not entirely uncommon for different BNPL providers to need to cooperate to a degree, for example if a customer wants one operator's checkout solution but another's invoice purchase solution in the same checkout system.



*Our interviewees find it difficult to assess competition from outside Sweden, such as Apple Pay Later, Mastercard Installments and PayPal.*

While competition has increased in recent years, there are also various lock-in effects that, to some extent, hamper competition by reducing online retailers' incentives to switch providers once they have entered into a contract. First, it is very costly for

<sup>38</sup> UC, [Konkursstatistik](#) [Bankruptcy statistics], June 2023.

online retailers to change checkout providers when it comes to full integration, as opposed to the simpler fallback solutions that can be used in the short term that we discussed earlier. Depending on how the online retailer chooses to integrate with the BNPL provider, the process can take anywhere from a few days to several months. In the typical case, however, it takes at least two to three months and thus entails significant costs for the e-commerce retailer – especially since it is common to have relatively low margins in e-commerce.<sup>39</sup> Online retailers are therefore normally reluctant to change supplier unless they have strong incentives. Second, contracts between providers and online retailers are often locked for at least one year, but often two to three years

### **A tougher macroeconomic situation will test the business model**

It is likely that BNPL as a business model will be tested in the near future due to the deteriorating macroeconomic environment that we now find ourselves in, and that looks likely to hit both commerce in general and e-commerce hard. For e-commerce, this comes after a period of strong growth as mentioned earlier. Retail trade is expected to decline by 4.7 per cent measured at constant prices in 2023, according to the June forecast by the National Institute of Economic Research, and e-commerce turnover was already down in 2022 compared with the previous year, which was boosted by the transition during the pandemic into e-commerce.<sup>40 41</sup> In Diagram 10 you can see that some segments are hit harder than others, and therefore BNPL providers with higher exposure to these segments should reasonably experience a greater deterioration in payment volumes if they do not take measures.

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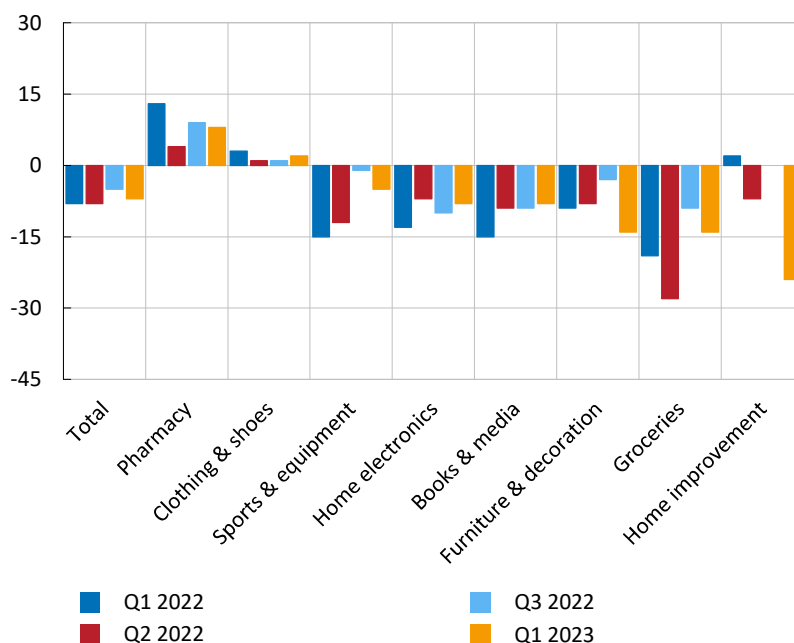
<sup>39</sup> The effective working time can be around 2–3 weeks, but the projects often take longer when other priorities are higher or because it is difficult to find time with key employees.

<sup>40</sup> Based on households' consumption expenditure in retail trade according to forecast published in June 2023.

<sup>41</sup> Se Dagens Handel, [Dyster prognos för 2023 – tillväxt drivs av prisökningar](#) [Gloomy outlook for 2023 - growth driven by price increases], March 2023.

**Diagram 10. Growth of the e-commerce segments**

Growth rate in different e-commerce segments on an annual basis, per cent



Note. The figures refer to growth between the current quarter and the same quarter of the previous year.

Source: PostNord’s E-Barometer

BNPL providers generally expect reduced e-commerce transaction volumes, which will challenge their profitability. To some extent, it will therefore be necessary for BNPL providers to increase market share in order to maintain or improve profitability. The resulting increase in competition may put downward pressure on fees charged to online retailers and increase marketing costs. In addition, BNPL providers’ financing costs are rising, meaning that they need to increase their prices to consumers in their offers in order to improve profitability.

At the same time, the tougher situation for online retailers means that BNPL providers expect more online retailers to try to renegotiate contracts to reduce their costs for the checkout solution. In addition, there are other payment alternatives today that may be more attractive to online retailers because they are cheaper than BNPL at the same time as they are popular among consumers. It is therefore not unthinkable that margins will fall in the future, depending on what the BNPL providers and online retailers agree on.

## 2.4 Risks to the financial system: Difficult to assess but driven by the providers’ indirect interconnectedness

Given that the BNPL providers have exposures towards the same segment, similar business models and fund themselves in a similar way, they are to some extent indirectly interconnected and could therefore be perceived as a collective. This interconnection between the providers is largely based the similar manner in which they fund

themselves. In particular, they use deposits guaranteed by deposit insurance schemes both in Sweden and outside Sweden, especially deposits that can be assumed to be more volatile as they are to a significant extent liquid and, at the same time, more price-sensitive than, for example, the deposits of the major Swedish banks.

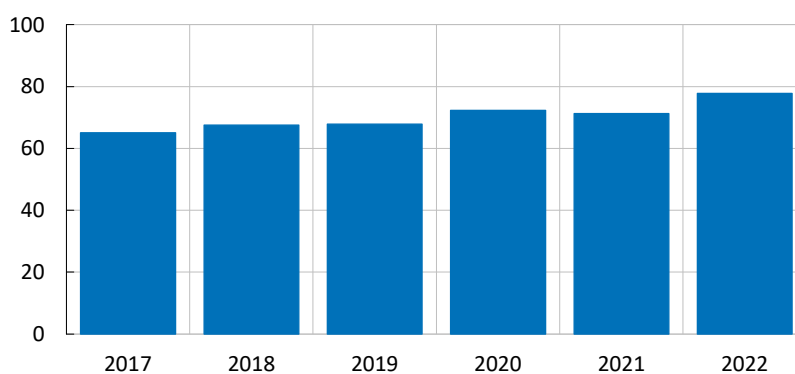
Should depositor or investor confidence in one of the BNPL providers be damaged, there is a risk that confidence in one or more of the others would also be affected. This contributes to a higher risk of a bank run in which depositors quickly withdraw their money from the BNPL providers. Problems among the BNPL providers could also affect confidence in other Swedish banks in certain situations, although this is more context-dependent. This indirect link between BNPL providers thus poses a risk to the financial system as a whole, although it is difficult to assess the severity of this risk.

### BNPL providers are dependent on deposits for funding

During the spring 2023 banking sector turbulence, the risks of a high dependence on deposits as a source of funding were highlighted – especially in cases where deposits are not guaranteed or where they are concentrated in a particular sector. All of the Swedish BNPL providers are dependent on deposits as a source of funding (see Diagram 11). These deposits come mainly from households and are thus largely deposit-guaranteed. Deposits account for at least 65 per cent of the BNPL providers’ assets, compared to 44 per cent for the major Swedish banks. For most BNPL providers, the share of deposits amounts to more than 75 per cent of their total assets, and this share increased between 2021 and 2022, probably due to rising costs for market funding compared to costs for deposits.<sup>42</sup>

**Diagram 11. BNPL providers are dependent on deposits as a source of funding**

Deposits/Total assets, per cent



Note. Simple average for Collector Bank, Klarna Bank, Qliro, Resurs Bank, Svea Bank and TF Bank.

Source: The banks’ annual reports

The fact that BNPL providers have such a large dependence on one single source of funding is a potential weakness if confidence in them were to be affected in some way. Either for an individual provider, or the group as a whole, if confidence problems

<sup>42</sup> The average share of deposits in the funding mix increased from 71 per cent in 2021 to 78 per cent in 2022 for the six banks.



regarding one of them spread to others. Such contagion effects are more likely to happen between the BNPL providers, given that they have similar risk profiles and are to some extent active on the same markets. On the other hand, there is a risk that confidence in other Swedish banks could also be affected.

That the dependence on deposits can be a weakness becomes particularly evident when one takes into account that, to a large extent, the BNPL providers have customers with only one or a few products in their banking activities; this increases the risk of the customer moving their savings compared to a universal bank whose customers are typically more sluggish because they have several products at the bank, such as a current account, pension savings and mortgage.

In addition, the BNPL providers attract deposits with a higher savings rate compared to the major Swedish banks, that is, their deposits are more price sensitive. Because of this, the BNPL providers' cost for deposits also tends to be higher than, for example, that of the major banks. This tendency is even more pronounced in the current environment where deposits are declining and competition for them is increasing.<sup>43</sup> The more price-sensitive nature of deposits in BNPL providers means that more active customers typically choose to save their money in accounts with these banks, which contributes to higher risks as they tend to be more volatile customers.



*In July 2023, BNPL providers offered an average savings rate of 3.3 per cent for short-term savings, while the interest rate offered by the major Swedish banks was 1.8 per cent.<sup>44</sup>*

On the other hand, there are various aspects that contribute to reducing the risks associated with the dependence of the BNPL providers on deposits. As mentioned, most of their deposits are deposit-guaranteed deposits from households. BNPL providers' deposits could thus be assumed to be less volatile than, for example, unguaranteed household deposits. In turn, the fact that deposits are largely deposit-guaranteed means that most of the deposits are below SEK 1.05 million per customer (the deposit-guaranteed amount) and thus they do not have large counterparty concentrations. In addition, most of the deposits come from households, which means that they do not have large concentrations against individual sectors. A significant share of the BNPL providers deposits are also fixed term and therefore harder to move than if they would have been overnight deposits.

<sup>43</sup> See, for example, the Riksbank, [Financial Stability Report 2023:1](#) or Nordic Credit Rating, "[Nordic consumer banks' loss provisions remain elevated](#)", 28 June 2023

<sup>44</sup> Based on information on banks' websites on 4 July 2023.

## FACT BOX – The design of deposit insurance scheme provides cheaper financing for BNPL providers

As mentioned, the fact that most of the deposits of the BNPL are deposit-guaranteed is important in making it a more stable source of funding. On the other hand, the contributions to the deposit insurance fund do not fully reflect the risks that the BNPL providers take in their business activities.

At present, an institution's risk class and the size of its covered deposits determine the contribution it has to pay to the deposit insurance fund each year. All in all, the total fees paid by all institutions each year must amount to 0.1 per cent of the total guaranteed deposits. At present, the difference between the highest and lowest risk classes is 4 times. That is, for the same deposit-guaranteed amount, an institution in the highest risk class pays a fee that is 4 times higher than an institution in the lowest risk class. However, even if the fee is partly risk-adjusted, it still does not fully reflect market pricing.<sup>45</sup> This means that institutions who take higher risk can have access to financing that is cheaper than they would otherwise have had access to.

If an institution were to go bankrupt, the depositors of the institution would be refunded through the deposit insurance scheme. The refund would be paid out from the deposit insurance fund, but should the existing funds be insufficient, the difference would be covered by additional fees from the institutions.

### **Several of the BNPL providers are also dependent on deposits from outside Sweden**

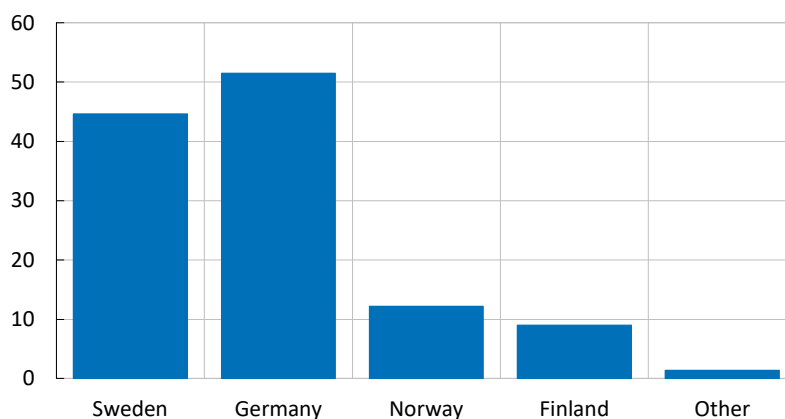
In addition to being dependent on deposits as the primary source of financing, several of the BNPL providers have a high proportion of their euro deposits from the German market (see Diagram 12). One reason given by the providers for choosing to accept deposits in Germany is that they see it as a well-developed market for euro deposits, for example compared with Finland, where some of the participants have lending activities. Since deposit rates are lower in Germany than in Sweden, there is probably also a cost aspect to their choice to borrow from Germany.<sup>46</sup>

<sup>45</sup> See Swedish National Debt Office, [Beslutspromemoria – ändrade föreskrifter om insättningsgaranti](#) [Decision memorandum - amended regulations on deposit insurance], 2020.

<sup>46</sup> Based on ECB data for June 2023, deposit rates to Swedish households at 1-year and 1-2 year maturities were 0.7-0.8 percentage points higher than to German households, while French households received similar savings rates to Swedish households.

**Diagram 12. The geographical distribution of deposits held by the BNPL providers**

Per cent



Note. Based on data for the whole year 2022. Simple average of Collector Bank, Klarna Bank, Qliro, Resurs Bank, Svea Bank and TF Bank's share of deposits from different countries.

Source: The banks' annual reports.

However, most of the BNPL providers do not collect the deposits on their own in Germany. Instead, they do so via one and the same deposit marketplace, which could contribute to risks. Since savers using deposit marketplaces typically look for the highest savings rate and can easily switch accounts, it seems likely that they have a higher volatility among their savers than banks that receive deposits directly from their customers in Sweden.

However, this higher volatility is counteracted, to a certain degree, by most of the savings accounts offered by Swedish banks via deposit marketplaces outside Sweden being fixed-rate accounts where the money is often locked for at least six months and cannot be withdrawn in advance.<sup>47</sup> This should reduce volatility in the short term. This is also supported by a report from S&P Global Ratings, which argues that banks' deposits can have a high resilience in times of stress even if the bank is on a deposit marketplace, provided that deposits have longer maturities and that the possibilities for early withdrawals are limited.<sup>48</sup>

However, the risk of contagion effects in the event of confidence problems remains. This is to say that a situation could arise in which a decrease in confidence in one BNPL provider spreads to the others due to a general fear of similar Swedish banks on the deposit platform. Such a process could be exacerbated by the tendency to favour the domestic market in times of financial stress.

<sup>47</sup> In Germany, it is customary that money on fixed-rate accounts cannot be withdrawn during the remaining maturity, for example, see more on the BaFin website ([link](#)).

<sup>48</sup> See S&P Global Ratings (2021) ([link](#)).

### 3 Concluding remarks

There are two key aspects whereby BNPL can pose risks to financial stability: The indirect interconnectedness of the BNPL providers and their dependence on insured deposits. This is especially true given that a significant part of their deposits often comes from a deposit marketplace over which they themselves do not have control. As we have seen particularly clearly in the spring of 2023, deposits may not be a stable source of funding if there is a sudden loss of trust. In addition, the loss of trust can spread quickly to other similar players or banks in general.

The product in itself does not appear to be systemically important for e-commerce payments. Instead, it seems that it could be replaced— at least in the short term. On the other hand, the considerable dependence on BankID is a vulnerability for e-commerce payments as a whole. The Payments Inquiry report presented in spring 2023 also emphasises that it is important that the state produces a state form of electronic identification as an alternative to BankID.<sup>49</sup>

It is likely that the business model's profitability will be challenged going forward, with stiffer competition, reduced commerce and rising funding costs. We will therefore probably see this business model put under pressure, as well as some degree of consolidation in the sector, beyond that which has already occurred, which will result in fewer providers in the long term, particularly if global providers choose to enter the Swedish market to a larger degree.<sup>50</sup>

Given that BNPL may pose some risks to financial stability, it is good that the providers offering the product are regulated. It is, however, still important for Swedish supervisory authorities to monitor the growth of BNPL going forward. Such monitoring makes it possible to detect whether the concentration on BNPL is becoming large enough to pose a threat to financial stability. There are also a number of issues related to BNPL that need to be analysed in more detail in the future.

First, there are aspects of how the BNPL providers choose to finance themselves that may need to be further analysed. It is therefore important for Swedish authorities to follow the outcome of the global review of banking regulations following the problems we saw in a number of banks worldwide in the spring of 2023. In addition, work is currently under way on further regulation of BNPL in many countries, and it is essential that Swedish authorities also follow this work and closely study what effects new regulation may have so they can learn from best practice around the world.

Second, it would be desirable to review the design of deposit insurance scheme to better take account of the risks in the business models of different banks, although the possibilities for such a review are to some extent limited at the national level given that it is based on an EU Directive. The fact that lending among BNPL providers is to a large extent covered by the deposit insurance scheme creates security for their

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<sup>49</sup> Government Offices, [SOU 2023:16: Staten och betalningarna](#), 31 March 2023.

<sup>50</sup> For example, Handelsbanken has chosen to phase out its subsidiary Ecster.

## Concluding remarks

customers. On the other hand, it also creates moral hazard in that providers can finance a relatively high level of risk-taking with deposits guaranteed by the deposit insurance scheme.



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