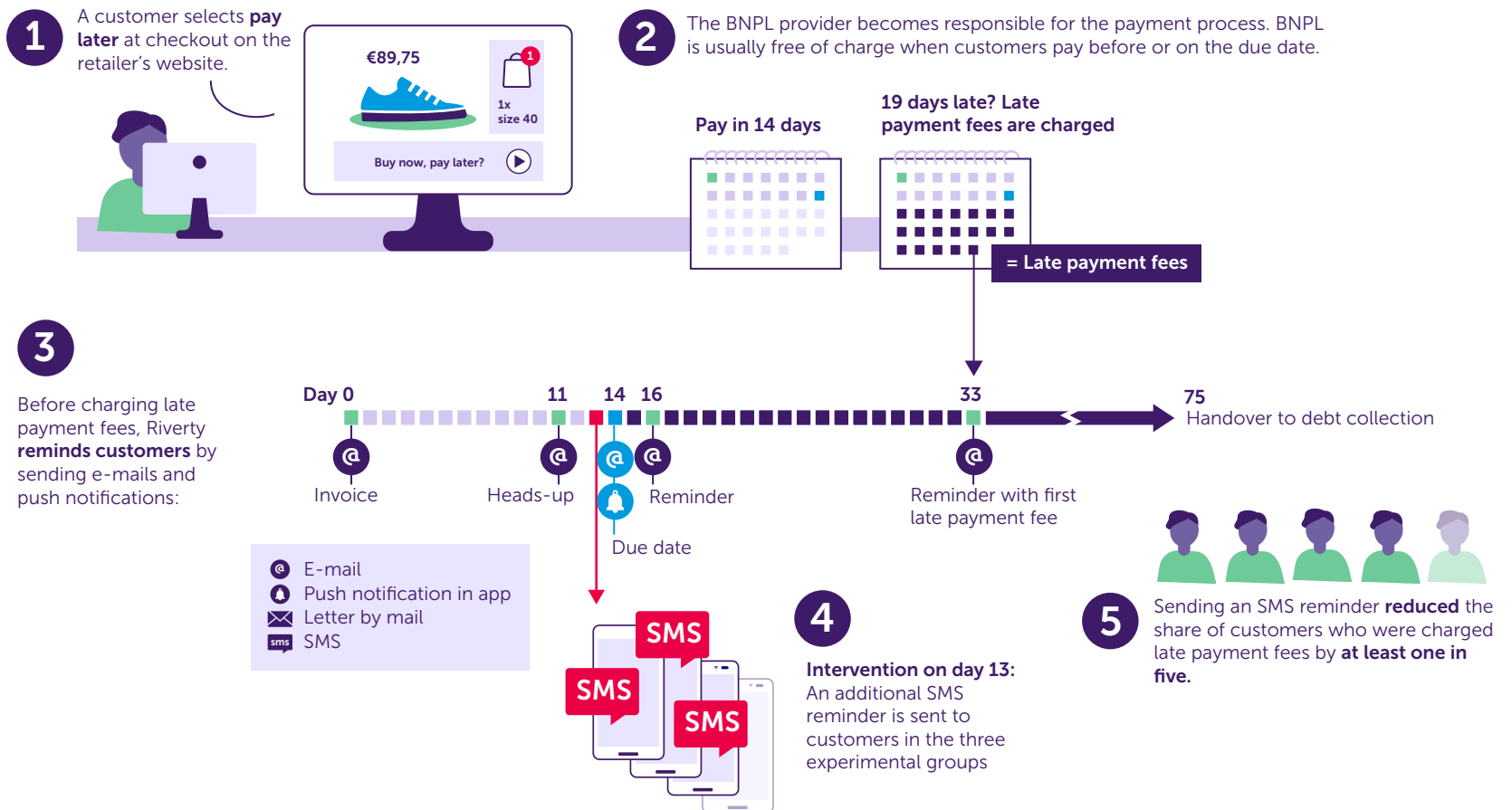# Helping customers pay their BNPL bill on time

In short The AFM and *Buy Now, Pay Later* ('BNPL') provider Riverty conducted an experiment, testing whether SMS reminders helped customers to avoid late payment fees. The relatively simple intervention proved effective: it reduced the share of customers who were charged late payment by one in five. The AFM encourages BNPL providers to increase the number of customers who pay on time and to reduce the number of customers who are charged late payment fees. To this end, it is important to understand what barriers consumers face, to design interventions that can help them to pay on time, to measure the effect of these interventions and to share this knowledge.

1 A customer selects **pay later** at checkout on the retailer's website.

€89,75

1x size 40

Buy now, pay later?

2 The BNPL provider becomes responsible for the payment process. BNPL is usually free of charge when customers pay before or on the due date.

Pay in 14 days

19 days late? Late payment fees are charged

= Late payment fees

3 Before charging late payment fees, Riverty **reminds customers** by sending e-mails and push notifications:

Day 0   11   14 16   33   75
                                                                       Handover to debt collection

Invoice   Heads-up   Reminder   Reminder with first
                                                  late payment fee
                    Due date

@ E-mail
🔔 Push notification in app
✉ Letter by mail
sms SMS

SMS
SMS
SMS

4 **Intervention on day 13:** An additional SMS reminder is sent to customers in the three experimental groups

5 Sending an SMS reminder **reduced** the share of customers who were charged late payment fees by **at least one in five.**

AFM

Contents

PUBLICATION

ANALYSIS

AFM

1. Summary

The number of transactions with *Buy Now Pay Later* ('BNPL') has increased over the past few years. BNPL is usually free of charge when customers pay their outstanding invoice within the specified timeframe. However, when consumers do not pay on time, most providers charge late payment fees.

The AFM and BNPL provider Riverty conducted an experiment, testing whether SMS reminders helped customers to avoid late payment fees. In this experiment, we found that this intervention reduced the share of customers who were charged late payment fees by at least one in five. The SMS reminder helped customers overcome the practical barriers that may prevent them from paying on time, such as being unaware of or forgetting about the due date, not receiving e-mails or push notifications via the mobile application, or not reading or understanding the information concerning late payment fees.

In this experiment, at least one in eight customers were charged late payment fees, even when receiving an SMS reminder. The AFM encourages BNPL providers to increase the number of customers who pay on time and to reduce the number of customers who are charged late payment fees. This all starts with providing BNPL responsibly. In addition, it is important to understand what barriers consumers face, to design interventions that can help them to pay on time, to measure the effect of these interventions and to share this knowledge.

2. An introduction to BNPL

For several years now, Dutch consumers have been able to complete online purchases by using "Buy Now, Pay Later" (BNPL). This service allows consumers to either postpone the payment of a purchase until 14 or 30 days after the order has been shipped, or to pay in three instalments. The use of BNPL has increased rapidly over the past few years.[1] In 2022, BNPL providers in the Netherlands processed about 45 million transactions totalling about €4.8 billion. The number of transactions increased by 8% relative to 2021. The total value of transactions increased by 13%.[2]

Consumers provide various reasons for why they use BNPL.[3] For instance because they want to receive and evaluate a product first before they either complete the payment or return the product. Consumers may also have financial motives for using BNPL: some prefer to spread out payments over time and some prefer the flexibility to pay for a purchase later, for instance after their next month's salary is paid out.

The use of deferred payment services such as BNPL can be explained from a psychological perspective. Research has shown that the method and time of payment can affect how people consider and evaluate purchases.[4] In addition, people tend to have a biased focus on the present relative to the future.[5] When consumers use BNPL, they may register the pleasure of the purchase but pay less attention to the negative feelings surrounding the payment, which only occur later.

BNPL simplifies the order placement process for customers, because it is a relatively frictionless payment method. BNPL requires few actions from the consumer to complete a purchase – like payments with a stored online credit card. Because BNPL allows both deferred payment and relatively frictionless purchasing, consumers may purchase more products and take on more payment obligations than they would without BNPL.

BNPL is usually free of charge when customers pay their outstanding invoice within the specified timeframe. However, when consumers do not pay on time, most providers charge late payment fees. These fees are on average around €15 in the case of late payment and a minimum of €40 for customers who are transferred to debt collection.[6] As the number of transactions with BNPL is increasing, it becomes more relevant to help customers pay on time and avoid late payment fees.

2.1 Paying late(r) with Riverty

The AFM conducted an experiment in collaboration with BNPL provider Riverty, testing the effectiveness of SMS reminders as a tool for helping customers avoid late payment fees. Riverty is one of the largest providers of BNPL in the Netherlands. It provides the option to defer the payment of a purchase until 14 days after the order has been shipped. At checkout on the retailer's website, consumers can select Riverty as their payment method. Before completing the purchase, consumers can click a link to read the terms and conditions. On the terms and conditions website, it is explained that late payment will lead to fees, with a link to a table specifying the fee structure.[7]

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1 AFM, 2022
2 AFM, 2024
3 AFM, 2024
4 Prelec & Loewenstein, 1998; Thaler, 1999
5 Frederick, et al, 2002; O'Donoghue & Rabin, 2015; Ericson & Laibson, 2019; Laibson et al., 2007; Skiba & Tobacman, 2008; Meier & Sprenger, 2010; Ottaviani & Vandone, 2011
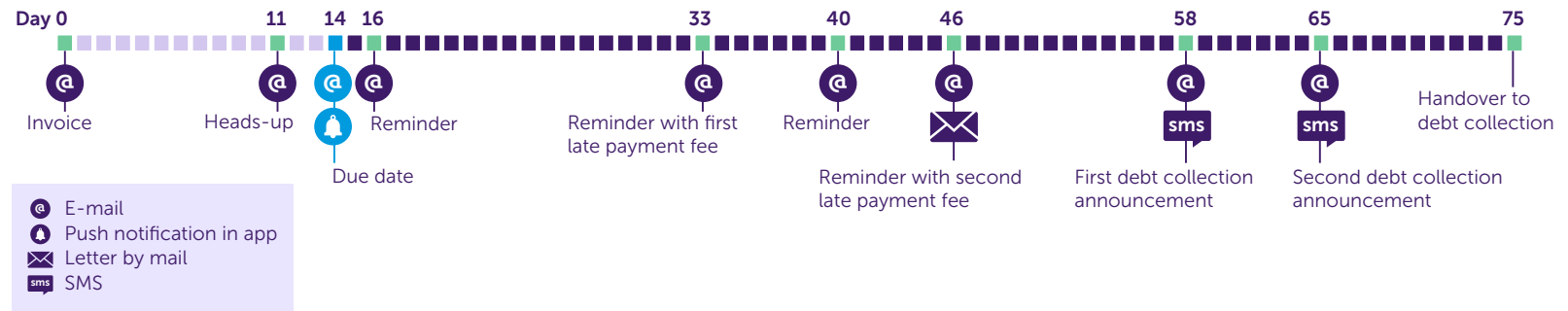6 Some providers use a flat fee structure, while others use a dynamic fee structure with the fee depending on the order amount.
7 Riverty Terms and Conditions (in Dutch).

After Riverty has been selected as the payment method, Riverty conducts several checks before the order is accepted. For example, it conducts age and identity checks and gathers publicly available information about the personal and financial situation of consumers. For returning customers, Riverty also checks past payment behaviour. If the consumer is authorised to use Riverty, the order is placed and the customer receives an order confirmation from the retailer. From this point on, Riverty becomes responsible for the payment process and bears the fraud and credit risk.

Riverty's communication with its customers starts after the retailer has shipped the order. Riverty creates an invoice and sends it to the customer by e-mail. We label this 'day 0'.[8] The due date is 14 days later. In the regular communication process (which applied to all customers in this experiment), Riverty reminds customers of the due date by sending e-mails and push notifications via its mobile application. Customers who do not pay their balance in full before day 33 (19 days after the due date) are charged a late payment fee of €7-€19 – the exact fee depending on the order amount.[9] Riverty reminds customers again with an e-mail on day 40. Customers who do not pay their balance in full before day 46 (32 days after the due date) are charged a second late payment fee of €9.50-€21 (by e-mail and letter). After the second late payment fee, Riverty sends customers an e-mail and SMS reminder on days 58 and 65. If the balance is not paid in full by day 75, the invoice is handed over to debt collection.

Figure 1. Visualisation of the communication process of Riverty

| Day 0 | 11 | 14 | 16 | 33 | 40 | 46 | 58 | 65 | 75 |

- Invoice
- Heads-up
- Reminder
- Due date
- Reminder with first late payment fee
- Reminder
- Reminder with second late payment fee
- First debt collection announcement
- Second debt collection announcement
- Handover to debt collection

@ E-mail
🔔 Push notification in app
✉ Letter by mail
sms SMS

2.2 Helping customers to pay their BNPL bill on time

To select an intervention that helps to reduce the number of BNPL customers who are charged late payment fees, it is important to better understand why customers miss payment deadlines and what potential barriers they face in this process.

Customers who do not pay on time can roughly be divided into two groups. First, some customers may not have the financial means to pay on time. BNPL providers perform creditworthiness assessments, but these are not as strict as in the case of consumer loans that are currently regulated. Hence, BNPL providers have no watertight view of their customers' financial position. This group of customers also includes those who are faced with unforeseen events and expenses after making a purchase.

The second group of customers consists of those who – although they have the financial means to pay (on time) – experience practical barriers to doing so. In this experiment, we target this second group. Customers may fail to pay on time because they are unaware of or forget about the due date. In the process that existed before the start of the experiment, Riverty reminded customers of the deadline by sending e-mails and push notifications via its mobile application. Some customers may never receive these reminders, for instance because they provided an incorrect or a one-time e-mail address during checkout or did not install Riverty's mobile application. In addition, some customers who do receive reminders may not read or understand the information concerning the due date and late payment fees.

Based on these insights, we designed and tested a simple intervention – sending an SMS reminder – to help customers overcome the possible barriers in this specific context and reduce late payments.

3. SMS reminders

In previous field experiments, SMS reminders were found to promote financial and non-financial behaviours, such as meeting saving goals,[10] paying fines,[11] vaccination,[12] voting,[13] complying with HIV care[14] and appearing in court.[15] We therefore expected SMS reminders to also be effective in helping customers pay their BNPL bill on time.

The advantage of SMS messages is that they can be sent to almost all customers, including those who provided an incorrect or one-time e-mail address and those who did not install Riverty's mobile application. Moreover, we assumed that customers would be more likely to notice SMS messages than e-mails, because most people receive far fewer SMS messages than e-mails and because most people receive a notification on their phone for each new SMS message.

Because the goal is to help customers overcome the problem of delaying and forgetting their payment, we expected timing to be another crucial factor for the effectiveness of the intervention. SMS reminders in this experiment were sent out on the day before the due date. We expected this to be the time at which customers would be most likely to take immediate action and pay their balance. Finally, previous research suggests that personalised SMS messages have a stronger impact on behaviour than non-personalised SMS messages.[16] Therefore, we addressed customers using their first name.

We designed three different SMS messages for this experiment: a basic SMS reminder, an SMS reminder including a message about how customers could avoid fees by paying on time, and an SMS reminder including a paylink.

3.1 Making the due date more salient

The first version of the SMS message – the *reminder* – simply reminded customers that their payment was due. By keeping the SMS message short, it is more likely that customers who read the SMS message will notice the most important information.

3.2 Making the due date and consequences more salient

The second version of the SMS message – the *reminder incl. consequence* – not only reminded customers of the upcoming due date but also included a message intended to make the consequences of late payment more salient. It is possible that customers fail to take timely action, and miss a due date, because they are unaware of the negative consequences. Making the consequences of late payment more salient may therefore help customers pay on time. For instance, a previous experiment involving payment notifications for speeding tickets found that emphasising the late payment penalty in a reminder letter increased the timely payment rate.[17]

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10 Karlan et al., 2016

11 Haynes et al., 2013

12 Dai et al., 2019; Milkman et al., 2021; 2022; Patel et al., 2023

13 Dale & Strauss, 2009; Malhotra et al. 2011

14 Mayer & Fontelo, 2017

15 Fishbane et al., 2020

16 Haynes et al., 2013; Uhl et al., 2019

17 Dušek et al., 2022

Before completing a purchase using Riverty, customers were able read about late payment fees in the terms and conditions. However, as with the due date, people may not have read or understood the information, or they may have forgotten about the fees as the due date approaches.[18] Making the consequences of late payment more salient may therefore help these customers to pay on time.

3.3 Making the due date more salient and payment easier

The third version of the SMS message – the *reminder incl. paylink* – not only reminded customers of the upcoming due date but also aimed to make payment easier. Frictions that seem minor may in practice prevent people from acting on their intentions. Removing these frictions can have a substantial effect on behaviour. For instance, in an experiment in the UK, the simple intervention of directing letter recipients straight to a specific form as opposed to a more general webpage increased tax collection rates from 19% to 23%.[19]

Adding a paylink to the SMS reminder may help customers to pay on time by removing the friction of having to look up how to pay and then complete the payment.

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18 After this experiment was conducted, four BNPL providers in the Netherlands have agreed on a Code of Conduct. Part of this Code of Conduct are agreements to better inform customers about the potential costs for late payment.

19 BIT EAST Framework Guide, 2014

4. Experiment

4.1 Procedure

The goal of the experiment was to test whether sending out an SMS reminder on day 13 – one day before the due date – would lead to more customers paying their balance in full before being charged the first late payment fee on day 33. In Figure 2, we provide a timeline of the communication from day 0 until day 75, including the time of the intervention.

On day 0, customers were randomly assigned to one of four experimental groups. In the *control group*, customers received all communications according to the regular procedure but no SMS reminder. In the three reminder groups, customers received all communications according to the regular procedure as well as an SMS reminder on day 13. Figure 3 shows the four experimental groups.

Figure 2. Visualisation of the communication process of Riverty, including the experimental intervention on day 13.
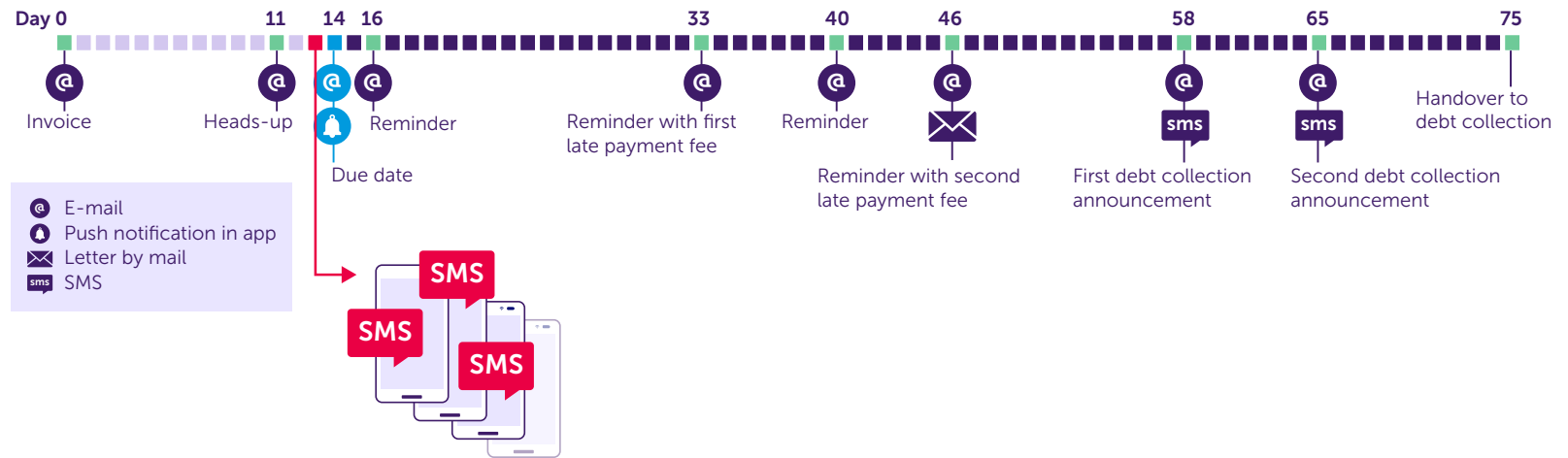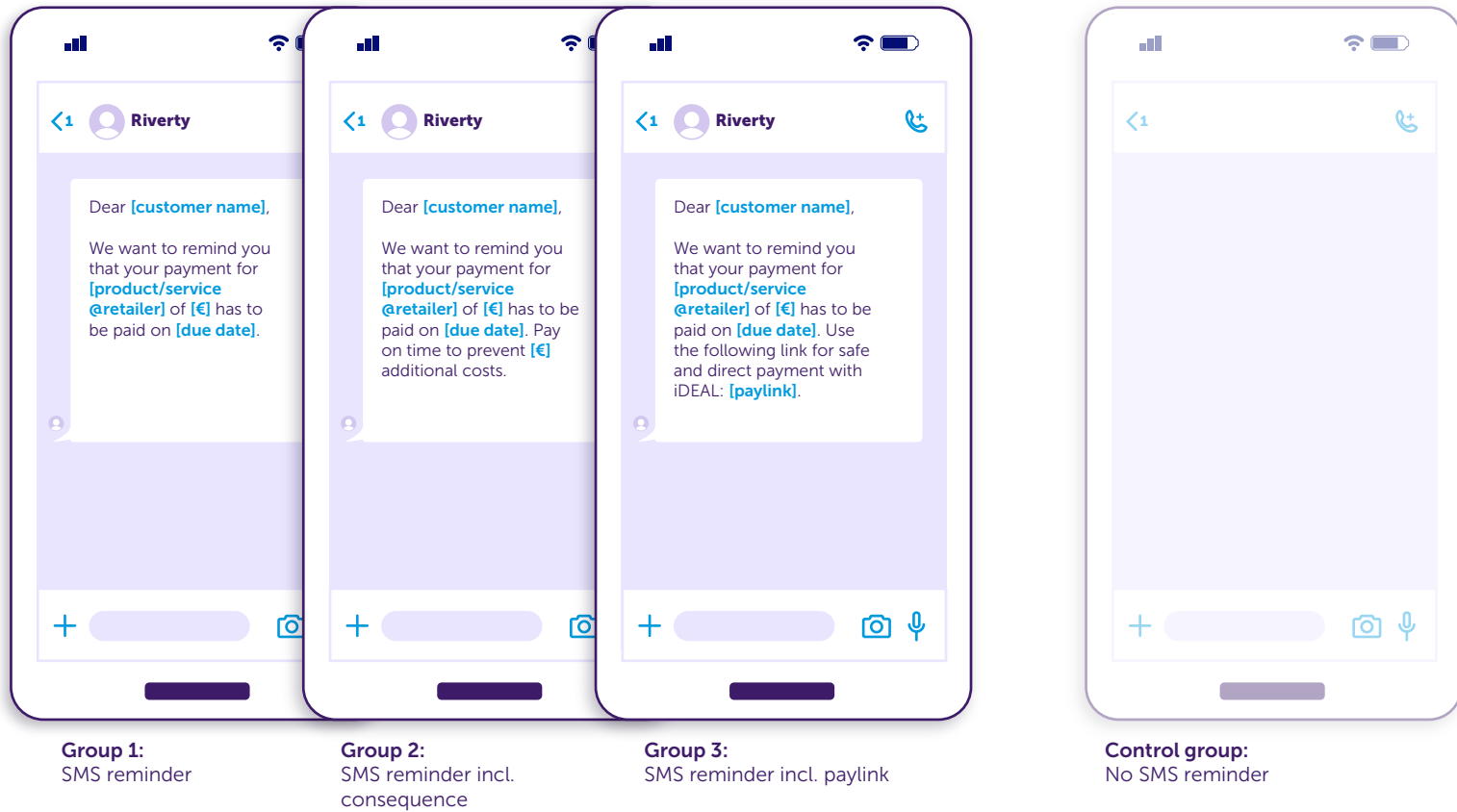
Figure 3. Visualisation of the four experimental groups. On the left are the three groups with SMS reminders; on the right is the *control group* in which customers received no SMS reminder

Group 1:
SMS reminder

Group 2:
SMS reminder incl. consequence

Group 3:
SMS reminder incl. paylink

Control group:
No SMS reminder

4.2 Sample

The sample consisted of customers of a large online fashion retailer. We selected this retailer for the experiment because it allowed us to gather a sufficiently large sample within a reasonable time. It is important to note that customers who use Riverty at the selected retailer differ in various ways from customers who use Riverty at other retailers. In the twelve months leading up to the test period (June 2022 - May 2023), customers of the selected retailer were on average younger, had higher average order amounts, were less likely to pay in full before the due date, and were less likely to pay in full before the first late payment fee. Given these differences, we should be careful when generalising findings from this experiment to other retailers.

All 47,709 unique customers who selected Riverty at the checkout of the selected retailer in the period between 1 June 2023 and 30 June 2023 were eligible for inclusion in the sample.[20] All customers who returned their order in full were excluded from the data. This led to a final sample of 34,365 customers. Within this sample, the average age was 29 years, the average order amount was €155 and the average number of past orders with Riverty was 11.

4.3 Analyses

To draw solid conclusions on whether the SMS reminders were effective in reducing late payment fees, it is important to conduct statistical tests. Before the start of the experiment, the AFM and Riverty jointly preregistered the hypotheses, a plan for the confirmatory analyses and criteria for inclusion in the sample. We describe the inclusion criteria and statistical analyses in more detail in a statistical appendix. In the next chapter of this report, we present the main results of the experiment and some additional exploratory analyses.[21]

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20 If customers made more than one purchase with the retailer during this period, they were only eligible for inclusion in the sample once, with their first purchase.

21 https://www.afm.nl/~/profmedia/files/rapporten/2024/bpnl-statistical-appendix.pdf

5. Results

5.1 SMS reminders significantly increased payment before late payment fees

The share of customers paying their balance in full before the first late payment fee was significantly higher in each of the three reminder groups compared to the *control group* that received no SMS reminder. All three SMS reminders led to at least a one-in-five reduction in the share of customers who were charged the first late payment fee.[22] Of the three SMS reminders, the message including a paylink was the most effective.[23] However, the difference between the three SMS reminders was not statistically significant.[24] Figure 4 shows the main results of the experiment.

Figure 4. The share of customers who paid before the first late payment fee in each of the four groups.

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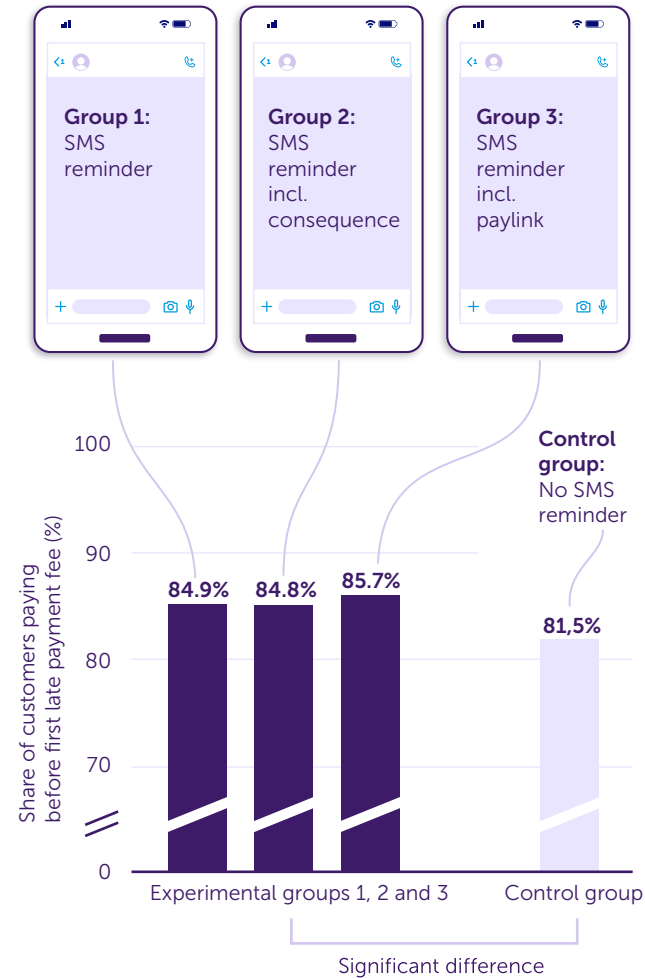
22 Not all customers who failed to pay before the first late payment fee were actually charged the first late payment fee. This may be because the payments of some customers were put on hold, for instance because they notified Riverty of a partial return or because they requested a payment delay. For this reason, we report both the percentage of customers who paid before the first late payment fee (in Figure 4) and the percentage of customers who were charged the first late payment fee (in Table 1). The relative reduction in the text refers to the relative reduction in the percentage of customers who were charged the first late payment fee.

23 There are no indications that customers feared phishing as a result of receiving the SMS with the payment link; no increase in contact with Riverty's customer service was observed.

24 At the 5% level.

5.2 SMS reminders increased payment before or on due date

To gain a better sense of how the SMS reminders affected payment behaviour, Figure 5 shows the share of customers completing their payment on a specific day, ranging from day 0 to day 46.[25] In all four groups, there is a clear spike in the number of people paying on day 11 – the day on which all customers were sent a heads-up e-mail. In the three groups in which customers were sent an SMS reminder, we see an additional spike in the share of customers paying on day 13 – the day on which SMS reminder was sent. In the *control group*, 4% of customers completed their payment on day 13. In the other three groups, the share of customers paying on day 13 is between two and three times higher: 11.2% in the *Reminder group*; 11.3% in the *reminder incl. consequence group*; 11.4% in the *reminder incl. paylink group*.

Figure 5. Share of customers in each group paying their balance in full on each day, ranging from day 0 to day 46. The three red lines indicate the days on which the due date, first late payment fee, and the second late payment fee occur in the regular communication process. For some customers, the payment was put on hold, for instance because they notified Riverty of a partial return or because they requested a payment delay. For those customers, events occur on a later day in the process. The percentages in this figure can therefore not be compared directly to the percentages in Figure 4 and Table 1.
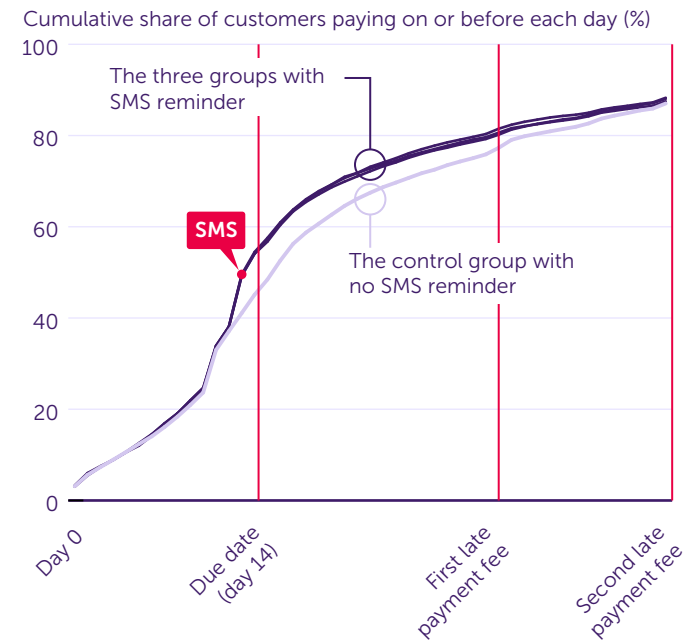

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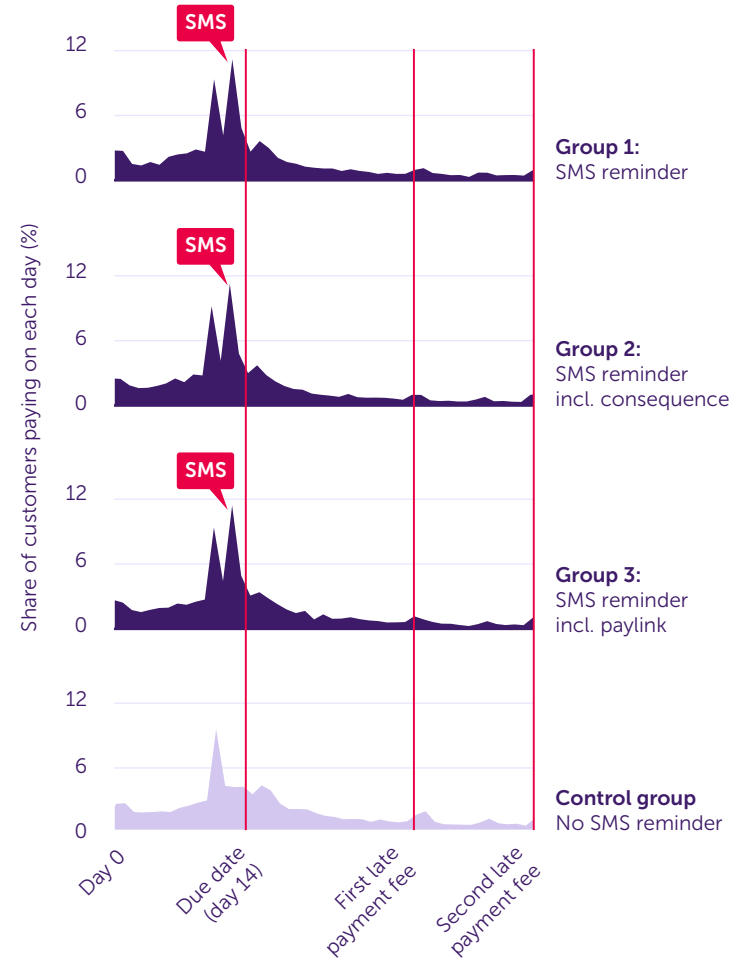
25 We have complete payment data for all customers in the sample up *until* day 46, but not after this day. For this reason, Figures 5 and 6 show payment behaviour until day 46.

Figure 6 shows the cumulative share of customers completing their payment before or on each day ranging from day 0 to day 46. The pattern in Figure 6 corresponds to the pattern in Figure 5, with the lines of the three reminder groups diverging from the line of the *control group* on day 13. Over time, the differences between the four groups become less pronounced.

Figures 5 and 6 indicate that we were successful in helping customers who would have otherwise paid (too) late. SMS reminders can help customers avoid late payment fees. At the same time, the patterns suggest an already anticipated limitation of this type of intervention: SMS reminders probably have little effect on customers who would otherwise pay very late in the process or those who would be transferred to debt collection (e.g., because they do not have the financial means to pay).[26]

Whereas our predictions were focused on the payment before the first late payment fee, we also examined whether the effects of the SMS reminders on payment behaviour were statistically significant at two other points in the process. In addition to the share of customers who were charged the first late payment fee, Table 1 also shows the share of customers who did *not* pay their balance in full before or on the due date and the share of customers who were charged the second late payment fee. At all three points in time, the differences between the Reminder groups and the Control group are statistically significant.[27] However, it is apparent from Table 1 that the effects are more pronounced – in absolute numbers – shortly after the intervention (on the due date) as compared to later in the process when customers are charged the second late payment fee.

Figure 6. Cumulative share of customers in each group paying their balance in full on or before each day, ranging from day 0 to day 46. The three red lines indicate the days on which the due date, first late payment fee, and the second late payment fee occur in the regular communication process. For some customers, the payment was put on hold, for instance because they notified Riverty of a partial return or because they requested a payment delay. For those customers, events occur on a later day in the process. The percentages in this figure can therefore not be compared directly to the percentages in Figure 4 and Table 1.

Cumulative share of customers paying on or before each day (%)

The three groups with SMS reminder

The control group with no SMS reminder

SMS

Day 0 — Due date (day 14) — First late payment fee — Second late payment fee

_____

26 Note that we do not have the data to test whether the SMS reminders had a statistically significant impact on the share of customers being transferred to debt collection. We also have no data that allows us to distinguish customers who pay late due to practical reasons from customers who pay late due to financial reasons.

27 Unlike in our main analyses, we had no preregistered hypotheses about differences in the effect of the reminders on the due date or on the day of the second payment fee.

PUBLICATION

ANALYSIS

Table 1. The second column shows the share of customers who did not pay before or on the due date in each of the four groups. The third column shows the share of customers who were charged the first late payment fee. The fourth column shows the share of customers who were charged the second late payment fee.

Group	Did not pay before or on due date	Charged first late payment fee	Charged second late payment fee
Control group	54.4%	16.8%	7.5%
Reminder	45.1%	13.3%	6.3%
Reminder incl. consequence	45.2%	13.4%	6.5%
Reminder incl. paylink	44.8%	12.8%	6.6%

5.3 Leads for follow-up research based on customer characteristics

To generate possible leads for follow-up research, we included various customer characteristics in our analysis. We found that the likelihood of paying before the first late payment fee was *higher* for returning (versus new) customers and for older customers. The likelihood of paying before the first late payment fee was *lower* for customers with higher order amounts and for customers who had more previous arrears.[28] We found no clear evidence suggesting that the effectiveness of the intervention differed between customer subgroups.

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28 Unlike in our main analyses, we had no preregistered hypotheses about the associations between customer characteristics and payment behaviour.

6. Conclusion

As the number of transactions with BNPL is increasing, it becomes more relevant to help customers pay on time and avoid late payment fees. These fees are on average around €15 in the case of late payment and a minimum of €40 for customers who are transferred to debt collection. Considering the average BNPL order value of approximately €100, these late payment fees are relatively high and can be impactful for financially vulnerable consumers. The AFM encourages BNPL providers to increase the number of customers who pay on time and to reduce the number of customers who are charged late payment fees. To this end, it is important to understand what barriers consumers face, to design interventions that can help them to pay on time, to measure the effect of these interventions and to share this knowledge.

SMS reminders reduce the share of customers who are charged late payment fees

In this experiment, we found that a relatively simple intervention – sending an SMS reminder – reduced the share of customers who are charged with late payment fees by at least one in five. All three versions of the SMS reminder succeeded in reducing late payment. The SMS reminders helped customers overcome the practical barriers that may prevent them from paying on time, such as being unaware of or forgetting about the due date, not receiving e-mails or push notifications via the mobile application, or not reading or understanding the information concerning late payment fees. Based on the outcomes of this experiment, Riverty has rolled out SMS reminders for all retailers and has set up a "test-and-learn approach" to continuously work on improvements based on insights into consumer behaviour.

Leads for helping customers pay their BNPL bill on time

Timing and communication channel might be important factors in explaining the effectiveness of our intervention, but this was not tested in this experiment. BNPL providers could test the effectiveness of SMS reminders versus others communication channels (e-mail, letters, push messages) or the effect of timing (sending a reminder on day 1, day 13 or day 32, for example). Moreover, our exploratory analyses provide leads for BNPL-providers to help customers pay their BNPL bill on time. This could include studying the effect of reminders specifically tailored to various subgroups such as younger and older customers, first-time and returning customers and various order amounts.

Using a varied toolbox to protect consumers

Changes to the choice environment and the information provided to consumers are no silver bullet. In this experiment, at least one in eight customers were charged late payment fees, even when receiving an SMS reminder. More restrictive interventions (such as stricter creditworthiness checks) are required to prevent consumers from ending up in situations where they are financially vulnerable. However, in some situations behaviourally informed interventions can be an effective (additional) tool to help consumers make sensible financial decisions.