MASTER

How much should you listen to your customers?

a customer-centric approach to determine optimal contact frequency for CRM communications

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How much should you listen to your customers? A customer-centric approach to determine optimal contact frequency for CRM communications

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in partial fulfilment of the requirements for the degree of
Master of Science in Innovation Management

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M.Sc. T. Arvonen, Veikkaus Oy
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1. Summary

Customer Relationship Management (CRM) can be defined as creating and maintaining one-to-one relationships with customers, in order to drive more value for the company (Kumar and Reinartz, 2012). The foremost aims of CRM are the retention of existing and acquisition of new customers (Kim et al., 2012). In order to do this, companies can design various kinds of marketing interventions called CRM communications. For each customer, the CRM communications can be differentiated in terms of the frequency of contact, the contact channel and the content of the message. The aim for all CRM communications should be to approach customers in an optimal way and this way influence the customers’ future purchase behaviour in a favourable direction.

Delivering messages the optimal way for all customers is, however, often very challenging for a practitioner. The reason for this is that each customer is different and has different needs, and therefore it is fundamental to also treat them in a differentiated manner (Boulding et al., 2005). The preferences and needs vary especially regarding the communication frequency, and this is illustrated by the recent CRM customer survey results, which show that the wrong frequency of messaging is the single biggest reason for customers to end their relationships with practitioners (Kim et al., 2012; BlueHornet, 2013, pp. 17).

Kale (2004, pp. 44) suggests that the high failure rate of CRM projects results from not focusing enough on customers. Many academics and practitioners have therefore proposed that the CRM communications, and particularly the communication frequency, should be customer-centric (Kim et al., 2012). In other words, practitioners should conform to the customers’ preferences and expectations as much as possible. Although customer-centricity has received plenty of support among CRM academics on a general level (Verhoef and Lemon, 2013; Kumar, 2010), empirical evidence focusing on detailed customer-centric CRM practises are still absent.

According to Verhoef et al. (2010), contact-strategy models aim to estimate the best possible mix of messages that customers should receive and the frequency that each customer should be approached, in order to maximize the overall customer retention from CRM communications. Most of the contact-strategy models have been developed to take advantage of the customer transaction and demographic data (Verhoef et al., 2010; Blattberg et al., 2009), and this far the customers’ preferences have not been considered in the models. Doing this would require a mixed method approach, e.g. using surveys or web sites to collect information about customer preferences, and then mixing this information with the transaction and demographic data.
Considering the importance of optimal frequency of CRM communications, combined with the lack of customer-centric CRM practises and the lack of customers’ perspectives in current contact-strategy models, we argue that there is a need for an approach that uses customers’ preferences in determining the optimal frequency for CRM messaging. To contribute to this gap in literature, different levels of conformance to customers’ preferences were tested in an experiment. For the experiment, a selected group of customers were contacted through a survey and asked about their past experiences and preferred amount of CRM communication. This information was then used in an experiment, where zero, partial and full conformance to the customers’ preferences was differentiated.

The effects of the experiment were measured with changes in customer value metric, which considered the customers’ actual purchases before, during and after the experiment. The experiment was carried out with the text message CRM communications of the national lottery and gambling provider of Finland, Veikkaus. While for the experiment the frequency of messaging was changed, the content of the messages and other possible customer contact points were kept the same as before.

The practical implications of the study are threefold. The results show that practitioners should pay more attention to customer preferences that suggest decreasing the contact frequency, rather than the preferences that suggest increasing the contact frequency. In fact, the results suggest that practitioners should ignore the preferences for higher contact frequencies, and fully conform to the preferences for lower contact frequencies. Furthermore, the results show that if a practitioner needs to prioritize between customers when becoming more customer-centric, it is better to start with the most dissatisfied customers.

First, the customers that prefer to receive more CRM communication do not experience the reciprocal behaviour, as suggested by the social exchange theory. In fact, conforming to the preferences of these customers might be harmful for the practitioner, as it can result to significantly worse customer value than continuing the same as before. Therefore, practitioners are better off when not conforming to the preferences of the customers who prefer to receive more CRM communication, given that the contact frequency and buying cycles are already high.

Second, customers that prefer to receive less CRM communication than before do experience significant reciprocal behaviour, as suggested by the social exchange theory. So if customers prefer to receive less communication, their preferences should be conformed, as this can significantly increase their future customer value compared to continuing the same as before.
Lastly, the level of dissatisfaction is a strong predictor for the positive changes in customer value, when customer conformance is applied. This suggests that the highest benefits for customer value can be gained from the more dissatisfied customers, and if a practitioner needs to prioritize between customers when becoming more customer-centric, the most dissatisfied customers would be the best ones to start with.

On a more general level, the study contributes to the work of CRM practitioners by developing an approach that can be used to determine how often each customer should be approached. The findings can be used when designing contact policies, which dictate the exact amount of CRM communication that each customer receives. When customers signal their preference for the amount of CRM communications, practitioners can adapt that amount based on the findings from this study.

The generalizability of the results is limited to practitioners that have relatively frequent text message CRM communications, so that the customers will notice the changes made in the amounts. Therefore, the retailers of fast-moving goods or services can consider the results relevant. For other contexts and CRM channels, additional experiments are encouraged.

The results of this study provide new insights and empirical results for the research of customer-centricity. Previously the recommendations have stayed on a relatively vague level, suggesting practitioners to become more customer-centric and to conform to customers’ preferences (Verhoef and Lemon, 2013; Kumar, 2010; Kim et al., 2012). In this study we show that being customer centric can be useful when customers prefer to receive less CRM communication. But when customers prefer to receive more messages, practitioners might be better off by not listening to the customers and keeping the contact frequency the same as before.

Similarly, the study contributes to the research about social exchange theory. We show that social exchange theory does have a reciprocal effect to the customers’ purchase behaviour, only when customers prefer to receive less CRM communication than before, or when customers are dissatisfied to the frequency of communication. To our knowledge, this is the first time that the effects of social exchange theory are experimented in CRM context, and therefore the results provide an avenue for future research in this field.
2. Introduction

Customer Relationship Management (CRM) can be defined as creating and maintaining one-to-one relationships with customers, in order to drive more value for the company (Kumar and Reinartz, 2012). The foremost aims of CRM are the retention of existing and acquisition of new customers (Kim et al., 2012). In order to do this, companies can design various kinds of marketing interventions called CRM communications. For each customer, the CRM communications can be differentiated in terms of the frequency of contact, the contact channel and the content of the message. The aim for all CRM communications should be to approach customers in an optimal way and this way influence the customers’ future purchase behaviour in a favourable direction.

Delivering messages the optimal way for all customers is, however, often very challenging for a practitioner. The reason for this is that each customer is different and has different needs, and therefore it is fundamental to also treat them in a differentiated manner (Boulding et al., 2005). This entails that the CRM communications of a company should take into account the customer profile and the different preferences that the customers have (Kim et al., 2012). Customer preferences for the frequency of communication may also vary and affect customer satisfaction. This is supported by the recent CRM customer survey results, which show that the wrong frequency of messaging is the single biggest reason for customers to end their relationship with practitioners (Kim et al., 2012; BlueHornet, 2013, pp. 17).

Kale (2004, pp. 44) suggests that the high failure rate of CRM projects results from not focusing enough on customers, which are after all, the C of CRM. Therefore, many academics and practitioners have proposed that the CRM communications, and particularly the communication frequency, should be customer-centric (Kim et al., 2012). In other words, practitioners should conform to the customers’ preferences and expectations as much as possible. Although customer-centricity has received plenty of support among CRM academics on a general level (Verhoef and Lemon, 2013; Kumar, 2010), empirical evidence focusing on detailed customer-centric CRM practises are still absent.

A final issue concerns the tendency of academics and practitioners to rely on large and complex datasets, also known as big data, in optimizing CRM communications. A good example of these approaches is the field of contact-strategy models (Verhoef et al., 2010; Blattberg et al., 2009). According to Verhoef et al. (2010), contact-strategy models aim to estimate the best possible mix of messages that customers should receive and the frequency that each customer should be approached, in order to maximize the overall customer retention from CRM communications. Most of the contact-strategy models have been developed to take advantage of the customers’ transaction and demographic
data (Verhoef et al., 2010; Blattberg et al., 2009), and this far the customers’ preferences have not been considered in the models. Including the customer preferences in contact strategy models would require a mixed method approach, e.g. using surveys or web sites to collect information about customer preferences, and then mixing this information with the practitioner’s big data. An illustration of the components of the mixed method approach (and the outcomes of the respective studies) can be seen in Figure 1.

Considering the importance of optimal frequency of CRM communications, combined with the lack of customer-centric CRM practises and the lack of customers’ perspectives in current contact-strategy models, we argue that there is a need for an approach that uses customers’ preferences in determining the optimal frequency for CRM messaging. Furthermore, the effects of being customer centric have not been empirically tested in the previous contact strategy research. This is another gap in the literature, which we aim cover (Figure 1).

To address these needs, the aim of this study is to investigate the effects that conformance to customers’ preferences has, when determining the frequency for CRM communications. More specifically, we experiment the effects that different levels of conformance have on the customer value, and link the results to the theories of social exchange and hypothetical bias. The study will be conducted with actual customers in the national lottery of Finland, and it will be done by using a mixed method approach that combines big data from the practitioner with survey data from the customers (Figure 1).

Figure 1: Components of the Mixed Method Approach (with the outcomes of respective studies in brackets)
3. Theoretical Background and the Research Question

As suggested by Kim et al. (2012), conforming to the customers’ preferences should improve the satisfaction towards CRM communications and consequently also the practitioner-customer relationship. This proposition is supported by the social exchange theory, which dictates that when customers acknowledge that they are being listened to, they tend to reciprocate by changing their behaviour in a favourable direction for the exchange partner (Gefen and Ridings, 2002). In CRM context this means that when the customers acknowledge that the practitioner is listening to them, they would positively change their buying behaviour and ultimately become more valuable customers to the practitioner.

In addition to the basic social exchange theory, Kumar, Venkatesan and Ravishanker (2007) found in their study on the customers’ multichannel purchase choices that the frequency of marketing communications is a very strong indicator for the social exchange behaviour of customers. They found that the customer reciprocity is at its highest when the frequency of CRM communications is optimized, and declines when the frequency is varied from this level. Therefore, lowering the level of customer dissatisfaction on the frequency of communication should lead to improved social exchange behaviour, as well as better results generated by this. (Kumar et al., 2007)

On the other hand, conforming entirely to the customers’ preferences might not be optimal strategy for the practitioners. This is because the customers could be exaggerating their preferences in order to get at least some kind of effect from the practitioner. This exaggeration is supported by the studies on hypothetical bias (Murphy et al., 2003; Sinden, 1988; Harrison and Rutström, 2008), which dictate that in hypothetical settings, customers tend to overstate their economic valuations and preferences by a factor of two or three. The reason for the exaggeration is in the hypothetical nature of the situation, which leads to people trying to give a more positive image about themselves than they actually are. Good examples of hypothetical settings are customer survey questions about tolerance or willingness to buy. (Murphy et al., 2003; Sinden, 1988; Harrison and Rutström, 2008)

When collecting customer preferences for the frequency of CRM communications, hypothetical bias can occur due to the nature of the questions, which customers can understand to measure their tolerance to messaging, as well as their willingness to buy (more frequently). As higher preference provides a better image, hypothetical bias can lead to exaggerated preferences on the amount of communication, when more communication is preferred. This can cause the practitioner to send too many messages, which can lead to ‘overkill’ of messaging (Kumar et al., 2006), resulting to losing the customer for good.
As explained above, the two theories (social exchange and hypothetical bias) dictate that the practitioner should perform opposing actions. First, s/he should conform to the customers’ preferences as stated by the social exchange theory, but on the other hand, s/he should not conform entirely to the request, as explained by the effects of hypothetical bias. The most powerful response should therefore be somewhere between the initial and preferred situation.

Considering this, different levels of customer conformance will be tested in an experiment, where zero, partial and large conformance will be differentiated. The idea is that moving in the direction indicated by the customers and thus partially meeting their preferences would harvest the benefits from social exchange theory, while not causing the problems from customers’ exaggerated preferences (caused by the hypothetical bias). In other words, the aim is to study the effects that different levels of conformance (or compliance) have on the effectiveness of the overall CRM communications. The research question for this study is therefore:

*RQ: What is the optimal level of conformance to customer preferences on the frequency of CRM communications, in order to maximize the effectiveness of the communications?*

In order to answer the question, a selected group of customers were contacted through a survey and asked about their past experiences and preferred amount of CRM communication. This information was then used in an experiment, where different levels of conformance to the customers’ preferences were tested. The aim of the experiment was to test our assumptions about the optimal level of conformance, in order to improve the effectiveness of the CRM communications. The effectiveness of the CRM communications was measured with changes in customer value metric, which considered customers’ actual purchases before, during and after the experiment. In addition, the status of the customers’ marketing permissions before and after the experiment was investigated. Marketing permission refers to the (law-bound) consent from customer, which signals that s/he wishes to receive marketing communication from the respective practitioner.

The experiment was carried out with the text message CRM communications of the national lottery and gambling provider of Finland, Veikkaus. In order to keep the duration of the experiment short, the participants included in the experiment were active customers that had previously received a high amount of messages from Veikkaus. Finally, while for the experiment the frequency of messaging was changed, the content of the messages and other possible customer contact points were kept the same as before.
4. Research Design

The design of the research is a real life experiment, which combines survey data for its input and uses changes in actual purchasing behaviour of the customers in the marketplace as its output. More specifically, the experiment uses the preferred amount of communication obtained from a customer survey as *input*, the partial or complete conformance with customer-voiced preferences as *treatment*, and finally, the actual change in purchase behaviour as *outcome* variable. The experiment was performed with the actual customers of Veikkaus, in autumn 2013. It involved active customers that had received a high amount of CRM communication in past. Focusing on these customers helped to limit the time-period necessary for conducting the experiment, as message frequency and buying cycles were high. It also limited the influence of changes in other personal variables of the customers and their environment. Moreover, for these customers the frequency of messages could be easily increased and decreased in a meaningful way. However, it also implied that the results might not be generalizable to other, less active customers.

4.1. The Customer Survey

The aim of the survey was to find out the *preferred amount of CRM communication* from the customers, who would be included in the experiment. The survey started by asking the customers the amount of the messages they *thought* they had received in the past, in order to put the customers in the right mind-set for the remaining questions. Next, customers were asked information for control variables, such as their overall satisfaction on the content and frequency of the CRM communication. Lastly, the customers were asked about their preference regarding the amount of text messages (per week and per month) they wished to receive, and this was used as the input variable for the experiment. The survey was sent in Finnish, but the English version of it can be seen in Appendix 1.

The survey was sent via email to a group of 6 636 customers. The *customers selected* were all customers of Veikkaus, who:

1) Had given permission for conducting marketing research
2) Had a valid email address in the database
3) Had given text message marketing permission to Veikkaus
4) Had not given email marketing permission to Veikkaus
5) Had received between three (3) and five (5) CRM text messages from Veikkaus within the past month
The first requirement is bound by online marketing laws, and the second requirement was to eliminate customers that could not be reached by email. The third requirement, besides being bound by the marketing laws, concerned the channel the experiment would use. As the investigation focused on finding the optimal level of customer conformance, it was important that customers received and opened the messages that were sent to them. Text messages are opened almost every time, whereas the opening rates of marketing emails generally vary between 20% and 50% (MailChimp, 2013). The use of text messages as the channel of the experiment simplified and accelerated the experiment; text messages can be created faster than email messages (simplification), and they have a more immediate effect as a CRM marketing intervention than emails (faster validation).

The fourth requirement states that the customers selected should not have email marketing permission. This limitation was done in order to have the experimented customers isolated from marketing emails, and therefore subjected only to the text message marketing interventions from Veikkaus, both before and during the experiment. From the customers’ perspective, this also further highlighted the different text message frequencies that were tested with the experiment.

The fifth requirement states that customers selected for the experiment were customers, who had received three (3) to five (5) CRM text messages from Veikkaus within the past month. The selection was done in order to limit the experiment to customers who on average were more frequent customers and thus had received a higher amount of messages. This selection allowed significant increases and decreases in the amount of text messages, and it led to a shorter time required for the validation of the results.

Veikkaus had 6636 customers that fulfilled the abovementioned five requirements, and all those customers were provided with the survey by email (appendix 1). The customers were given one week to answer the survey, and in order to increase the response rate, two attractive prizes (free cruise for 4 persons) were raffled among the survey participants. Two days before the deadline customers who had not yet responded, received a text message reminder. After the deadline, the responses were combined with the customer data by using a personalized link, which customers used when answering the survey. In total 1281 people responded, forming a response rate of 19.3%.

4.2. The Experiment
The aim of the experiment was to study different levels of conformance to the customers’ preferences, in order to maximize the effectiveness of the CRM communications. With the selected customers, different
levels of conformance were tested for a 20-day time-period to investigate which level provides the best effect for the long-term sales of those customers.

After submitting their answers about the preferred amount of messages, the customers were divided into three equal test groups, one for each level of conformance. Group 1 had 100% conformance, so the customers received exactly the amount of communication they signalled in the survey. Group 2 had 50% conformance, so they received the amount of messages which was halfway between the earlier amount and the preferred amount of messages, rounded to the closest integer. Group 3, or the control group, had 0% conformance and received the same amount of messages than before the experiment. Therefore, the amount of messages (M) that each customer received during the experiment was calculated with the following formula:

\[ M = M_0 - x \times (M_0 - P) \]

where

- \( M \) is the amount of text messages received during the experiment (\( M \Rightarrow 0 \)).
- \( M_0 \) is the amount of messages that the customer had received in the 20-day time-period before the experiment.
- \( P \) is the customer’s preferred amount of messages per month, as signalled in the survey and adapted for the 20-day time-period (\( P \Rightarrow 0 \)).
- \( x \) is the conformance percentage that depends on the customer’s test group (0%, 50% or 100%).

The effectiveness was measured based on the changes in customer value metric, which predicts the customers’ purchases for the upcoming year. For the metric, a specific formula was created that takes into account the customers’ sales and products purchased 4, 12 and 52 weeks before the calculation date. The customer value metric will be introduced in more detail in the results section. The experiment was continued for 20 days, after which the effect of the experiment was studied in the customer groups that will be specified in the next section, ‘hypotheses for the research’.

4.3. Context of the Study

The study was done at the national lottery operator of Finland, Veikkaus. Besides the national lottery, the product portfolio of the company includes other jackpot games, daily games (such as Keno, scratch cards and online bingo) and sports betting games. The company operates under a monopoly licence, which is justified by the beneficiary role it has towards the Finnish society. Every year, the profits of the company are donated to the Ministry of Education and Culture, which distributes them further to Finnish arts, sports, science and youth work: in total over 3 000 beneficiaries across the country.
Although the company has monopoly rights for the Finnish gambling markets, in reality this applies only to the offline point-of-sale shops. Online, there exists several competitors (both Finnish and non-Finnish), whose games are accessible from all over the world. The companies themselves are based in locations with lower taxation and less strict legal regulations, such as Malta, Gibraltar or the Isle of Man. Considering this, the monopoly status of Veikkaus is not applicable in online gambling market.

Besides the online gambling operators, also other online retail shops are competing for the customers’ share-of-wallet through online marketing efforts. Especially nowadays, when the amount of email marketing communications is increasing across the field, most of the aforementioned competitors are also actively targeting the email inboxes and competing for the attention of the same customers.

The EU constitutes that each online marketer needs consent from the customer they contact in marketing purposes. These consents, also known as marketing permissions, are mainly acquired during the customer registration process. Veikkaus also organises time to time so-called “contact information campaigns”, which aim to update customers’ contact information, as well as to acquire marketing permissions from the existing customers. Currently, Veikkaus has about 600 000 customers, who have given a permission for either email or text message marketing.
5. Hypotheses for the Research

The study aims to investigate the effects of social exchange theory and hypothetical bias for determining the frequency of CRM communications. The social exchange theory dictates that when customers acknowledge that they are being listened to, they tend to reciprocate by changing their behaviour in a favourable direction for the exchange partner (Gefen and Ridings, 2002). The hypothetical bias, on the other hand, is present in hypothetical settings requiring economic evaluation, and it can lead to exaggerated preferences on the amount of communication (Murphy et al., 2003).

The two theories dictate that the practitioner should perform opposing actions. First, s/he should conform to the customers’ preferences as stated by the social exchange theory, but on the other hand, s/he should not conform entirely to the request, as explained by the effects of hypothetical bias. The most powerful response should therefore be somewhere between the initial and preferred situation.

Based on the theories, we predict that for customers who prefer to receive more CRM communication than before, partial conformance to the customers’ preferences should yield better results than (a) full conformance or (b) continuing the same as before. Furthermore, we predict that for customers who prefer to receive less CRM communication than before, full conformance to the customers’ preferences should yield better results than (a) partial conformance or (b) continuing the same as before. The logic behind the predictions is that customers who prefer to receive fewer messages would not experience hypothetical bias, because by signalling a lower preference they are not trying to give a better image about themselves and therefore exaggerating their preferences. On the other hand, for customers that prefer to receive more messages than before, both theories should have an effect. Below we state these assumptions as formal hypotheses:

- **H1a:** For customers that prefer to receive more messages, partial conformance to the customers’ preferences (test group 2) yields better results than full conformance (test group 3)

- **H1b:** For customers that prefer to receive more messages, partial conformance to the customers’ preferences (test group 2) yields better results than continuing the same as before (test group 1)

- **H2a:** For customers that prefer to receive less messages, full conformance to the customers’ preferences (test group 3) yields better results than partial conformance (test group 2)

- **H2b:** For customers that prefer to receive less messages, full conformance to the customers’ preferences (test group 3) yields better results than continuing the same as before (test group 1)

We also predict that the effect of social exchange theory is especially strong for dissatisfied customers, and that higher dissatisfaction to the frequency of CRM communications leads to higher potential
benefits, when customer conformance is applied (test groups 2 and 3). The motivation for this assumption is that dissatisfied customers should be most eager to change their situation. Dissatisfied about the frequency of communications and asked for their opinion, these customers would be most sensitive to the changes in practitioner’s response. When they note a change in the desired direction, they reciprocate quickly and show more social exchange behaviour than customers who are not listened to. This reasoning is supported by the study of Kumar et al. (2007), which suggests that the frequency of CRM communications is a strong indicator for the effects of social exchange theory. Therefore, the third hypothesis of the study states that:

- **H3a:** For customers receiving partial conformance to their preferences (test group 2), the level of dissatisfaction positively correlates with the changes in customer value
- **H3b:** For customers receiving full conformance to their preferences (test group 3), the level of dissatisfaction positively correlates with the changes in customer value

In order to measure the hypothesized results, customer answers to the respective survey question were operationalized as control variable. The satisfaction regarding the frequency of past CRM communications (question 4, appendix 1) had items reaching from 1 (extremely dissatisfied) to 7 (extremely satisfied), and was used as a control variable for the hypotheses H3a and H3b.
6. Results of the Customer Survey

From the selected 6,636 customers, 1,281 customers replied to the survey. The fact that customers had to answer to the survey through a different channel (email) than their primary CRM channel with Veikkaus (text messages) probably had a decreasing effect on the response rate. On the other hand, the raffled prizes and the reminder text messages before the deadline were used to increase the rate. As a result, the response rate of 19.3% was slightly better than the previous customer surveys conducted by Veikkaus on average. There might be a non-response bias involved, as customers who were satisfied on the current frequency of CRM communications might not answer the survey sent to them. However, this should not cause problems for the study, as the focus is on the customers preferring a change in their contact frequency. Moreover, the survey was kept short and the prize was raffled among all respondents, in order to guarantee that all customers would answer the survey, irrespective of their opinion on the frequency of CRM communications.

6.1. Data Modifications for the Survey Data

First, the answers to all the questions were recoded to respect the questions asked from the customers. Then, comparison was done between the answers to the preferred amount of communication per week (frequency_week) and the preferred amount of communication per month (frequency_month). There were 10 cases where the frequency_month value was missing completely and 2 cases where the value specified was lower than the value of frequency_week. The responses from these 12 cases were considered illogical and therefore unusable, and thus removed from the experiment.

The remaining 1,269 respondents were then divided in three experiment groups. The allocation was done randomly, using the value of frequency_month as strata variable. This was done to guarantee the division of preferences equally between all the test groups. The resulting test groups each included 423 customers.

6.2. Analysis of the Survey Results

Based on the answers to the first question (“How many text messages do you remember receiving from Veikkaus during past month?”, answer Last_month), it seems that the customers know fairly well the amount of text messages they have received. Out of the 1,269 respondents, 347 customers (27.3%) knew the amount of text messages correctly, and a total of 823 customers (64.9%) got in the range of +/- 1 message. From the remaining answers, 179 (14.1%) customers thought they had received at least 2 messages less than they actually had, and 267 (21.0%) thought they had received at least 2 messages
more than they actually had. The finding suggests that customers are relatively aware of the amount of text messages they receive, and therefore, the changes in the frequency of text messages should have an impact on the customers’ attitudes and purchase behaviour.

Table 1: The amount of messages received during the month before the experiment

<table>
<thead>
<tr>
<th>Actual amount of received text messages</th>
<th>Customers’ answers (Last_month)</th>
<th>Amount of customers (N)</th>
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<tr>
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<tr>
<td>5</td>
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</tr>
</tbody>
</table>

The questions regarding the satisfaction on the current frequency and content of the messages (Figures 1 and 2) reveal that the customers are generally satisfied with the current CRM communications. Out of the 1 269 respondents, 841 (66.2%) customers rated the frequency of text messages either satisfying or extremely satisfying (values from 5 to 7). On the other hand, only 243 (19.1%) customers rated the
frequency either dissatisfying or extremely dissatisfying (values from 1 to 3). On average, the satisfaction on the frequency was 4.94.

Respectively, 819 (64.5%) customers rated the content of text messages either satisfying or extremely satisfying (values from 5 to 7). On the other hand, only 254 (20.0%) customers rated the content either dissatisfying or extremely dissatisfying (values from 1 to 3). On average, the satisfaction on the content was 4.86.

Figure 2: Satisfaction on the frequency of the messages
The customers were also asked if they wanted to receive more or less messages in the future (Figure 3), in order to analyse their preferences from multiple perspectives. Most of the customers (65.7%) stated that the current amount was fine and they wanted to receive the same amount also in the future. 321 (25.5%) customers wanted to receive less than before, and 111 (8.8%) more than before. This suggests that the frequency with which Veikkaus has sent its text messages has been generally balanced on a satisfactory level.
For the question “How many text messages would you like to receive from Veikkaus per week?”, 738 (58.2%) customers stated that they wanted to receive exactly one message a week (Figure 4). This is consistent with the findings of the previous question, as most of the customers did receive on average one message per week.

Figure 4: Customers’ preference on receiving more or less messages (-2 = much less, 0 = the same as before, 2 = much more)
For the question “How many text messages would you like to receive from Veikkaus per month?”, more than one third (41.1%) of the customers answered ‘4’, which was consistent with the answers to the previous question. Overall, customers gave varied answers and all options from 0 to 15 per month received some answers (Figure 5).

![Bar chart showing frequency of text message preferences per month.](Image)

**Figure 6: Customers' preference on the amount of messages per month**
7. Treatments for conducting the Experiment

Before starting the experiment, the amount of messages was calculated for each customer, according to Formula 1:

\[ M = M_0 - x \times (M_0 - P), \]

where \( M \) is the amount of text messages received during the experiment (\( M \Rightarrow 0 \)). \( M_0 \) is the amount of messages that the customer has received in the last 20-day time-period. \( P \) is the customer’s preferred amount of messages per month, as signalled in the survey and adapted for the 20-day time-period (\( P \Rightarrow 0 \)). Finally, \( x \) is the conformance percentage that depends on the customer’s test group (0%, 50% or 100%).

For group 1 (conformance 0%), the amount stayed the same than before the survey, and they received either 2 or 3 text messages during the experiment. The customers in group 2 (conformance 50%) received the amount that was halfway between the preferred amount and the amount before the survey. This varied between 1 and 6 messages during the experiment. The customers in group 3 (conformance 100%) received exactly the amount of messages they had signalled in the survey. This varied between 0 and 10 text messages during the experiment. The exact amounts of customers for each group and experimented amount can be seen in the table below.

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Conformance%</th>
<th>Amount of messages during experiment</th>
<th>Amount of customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>2</td>
<td>216</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>3</td>
<td>207</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>1</td>
<td>39</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>2</td>
<td>181</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>3</td>
<td>137</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>4</td>
<td>51</td>
</tr>
<tr>
<td>2</td>
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<td>50</td>
<td>6</td>
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<tr>
<td>3</td>
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<td>28</td>
</tr>
<tr>
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<td>100</td>
<td>1</td>
<td>83</td>
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<td>5</td>
<td>45</td>
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<tr>
<td>3</td>
<td>100</td>
<td>6</td>
<td>2</td>
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<tr>
<td>3</td>
<td>100</td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 2: The amount of customers for each amount of messages and test group during the experiment
<table>
<thead>
<tr>
<th>Test Group</th>
<th>Conformance%</th>
<th>Amount of messages during experiment</th>
<th>Amount of customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>100</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>10</td>
<td>2</td>
</tr>
</tbody>
</table>

The amounts specified in the table above were used when executing the experiment. The customers were contacted according to a schedule (Table 3), which specified the contact days for each experimented frequency level. The schedule was planned in order to minimize the amount of sending days and topics, as the same message was sent to all customers that were supposed to receive a message that day. The messages included information on different products and customer benefits, which are normal topics for the CRM communications of Veikkaus. The days and the times of day when the messages were sent, were also normal sending times of Veikkaus. In total the experiment lasted for 20 days, and the messages were sent during 10 sending days. Lastly, the messages were spread out for the experiment period, so that customers received messages at most during two consecutive days (Table 3).

### Table 3: The schedule for executing the experiment for different total amounts of messages

<table>
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</tbody>
</table>

22
8. Performance Variable Development

After conducting the experiment, the results were analysed according to the test group (1, 2 or 3) the customer belonged. The performance of the experiment was measured with (i) the amount of marketing permissions changed during the experiment and (ii) the customer value measure. As the experimented change is a continuous process for the company, the measures are designed in such a way that they capture the long-term effects of the experiment to the company-customer relationship.

8.1. Amount of Marketing Permissions Changed

For this measure, the status of the customers’ marketing permissions was checked one week after the experiment ended, giving customers enough time to react to the changes. As all the customers had given text message marketing permission before the experiment and none of them had given email marketing permissions, the changes can be seen in the status overview after the experiment, presented in the table below (Table 4). In test groups 1 and 3, only one customer had removed his text message permission. In test group 2, three customers had done that, but on the other hand, two customers had added email marketing permissions. All of these changes are very small compared to the size of the test groups (423 customers), so there has been no systematic change to the customers’ marketing permissions. Therefore, the measure will be discarded in the detailed analysis part.

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Conformance%</th>
<th>Email Permission Day 27</th>
<th>Text Message Permission Day 27</th>
<th>Amount of customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>Yes</td>
<td>No</td>
<td>1</td>
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<tr>
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<td>0</td>
<td>No</td>
<td>No</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>No</td>
<td>Yes</td>
<td>422</td>
</tr>
<tr>
<td>2</td>
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<td>Yes</td>
<td>419</td>
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<td>No</td>
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<tr>
<td>3</td>
<td>100</td>
<td>No</td>
<td>Yes</td>
<td>422</td>
</tr>
</tbody>
</table>

8.2. Customer Value Measure

In order to describe the customer value of the customers studied, we created a formula that predicts the customers’ spending behaviour for the upcoming year. The customer value is calculated by using the sales from the last 4, 12 and 52 weeks as indicators. In addition to the actual amount of sales, the formula takes into account the frequency of purchases from the last year and the ratio of recent
purchases to the overall purchases. Lastly, the number of different games played is included as a factor to improve the prediction accuracy. This measure will be referred as the *customer value* measure in the rest of the study.

The factors included in the customer value measure describe the three perspectives of the popular RFM-model, which consists of Recency (of the last transaction), Frequency (of purchases) and Monetary (total sum of purchases) factors. The contact-strategy research has proven that the RFM-model correlates positively with customer lifetime value (CLV) (Simester, Sun and Tsitsiklis, 2006; Rust and Verhoef, 2005), and it is therefore suitable as a long-term measure for experiments with customers. In addition, the number of products purchased (cross-buying behaviour) has also been proved to correlate with CLV (Kumar et al., 2008).

The prediction formula was built based on the historical data of all customers of Veikkaus, and the weights of the factors were optimized in order to reach maximal accuracy for the prediction of the sales for the upcoming year. The final formula has a prediction accuracy of $R^2=0.75$ and the exact factors and weights can be seen in the formula below:

$$P = 0.71C + 0.91R + 0.003F - 0.04 \log(M_4) + 0.32 \log(M_{12}) + 0.61 \log(M_{52}) + 0.02G_4,$$

- $C$ is the constant factor
- $R$ is the ratio of last 4 weeks of purchases to the last 52 weeks of purchases (Recency)
- $F$ is the amount of weeks played within the last 52 weeks (Frequency)
- $M_4, M_{12}, M_{52}$ are the respective sales for the last 4, 12 and 52 weeks (Monetary)
- $G$ is the amount of different games played within the last 4 weeks

When assessing the effects of the experiment, the average changes in the customer values were investigated. The *changes in customer value* were calculated according to the following formula:

$$Customer \ Value \ change\% = \frac{(Customer \ Value \ after \ experiment)-(Customer \ Value \ before \ experiment)}{Customer \ Value \ before \ experiment}$$
9. Results of the Study

In this part, the experimented customers will be divided in different groups based on their answers to the survey questions. More specifically, the survey questions investigated are the ones regarding the previous satisfaction to the CRM frequency, and the customers’ indication on receiving more or less messages in the future. The results presented are the average customer value changes of the three test groups, and the results were assessed based on comparing the differences in mean values with one-way ANOVA test, at 95% confidence interval.

9.1. Customers that preferred to receive more messages

For this part, the hypotheses H1a and H1b were investigated in the light of three different perspectives. First, the filtering included the 253 customers that answered the question “How many text messages in total would you like to receive from Veikkaus per month?” with a value of ‘6’ or more. This is above the previous amount that customers had received (3-5), while still including enough customers in each group to make a reasonable comparison. Although the test group 1 showed slightly better change values than the others (Table 6), there was no statistically significant difference between the groups (F=0.439, p=0.645). The results still provided non-significant support for hypothesis H1a, but they did not support the hypothesis H1b.

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Conformance%</th>
<th>Customer Value change% (mean)</th>
<th>Amount of customers (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>2.82 %</td>
<td>84</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>0.71 %</td>
<td>84</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>0.45 %</td>
<td>85</td>
</tr>
</tbody>
</table>

For the second comparison, the 111 customers who answered +1 or +2 to the question “How often would you like to receive text messages from Veikkaus?” were selected. The options for the question included values from -2 to +2 (0 included), so answering +1 or +2 showed a clear preference in receiving more CRM communication than before. The test group 1 provided clearly better changes in the customer value metric than the other two groups (Table 7), and there was also a statistically significant difference between the groups (F=4.145, p=0.018). The Tukey post-hoc test revealed that the changes of test group 1 were significantly better than the changes of test group 2 (p=0.030) or test group 3 (p=0.031). The changes between test group 2 and test group 3 were not significant (p=0.997). These results suggest to reject hypothesis H1b, as test group 2 (conformance 50%) performed significantly
worse than test group 1 (conformance 0%). The results also show a non-significant support for hypothesis H1a.

Table 6: Customer Value changes for customers that prefer to receive more messages in the future

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Conformance%</th>
<th>Customer Value change% (mean)</th>
<th>Amount of customers (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>11.85 %</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>0.42 %</td>
<td>43</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>0.12 %</td>
<td>38</td>
</tr>
</tbody>
</table>

The third filtering included the 477 customers, who answered the survey in such a way that they preferred to receive more messages in the future than they had received in the past. More specifically, the customers answered the question “How many text messages in total would you like to receive from Veikkaus per month?” with a value at least one higher than the question “How many text messages do you remember receiving from Veikkaus during the past month?” There seems to be a difference between the changes in customer value from test groups 1 and 2 to test group 3 (Table 8), but the differences between groups were not found statistically significant (F=0.701, p=0.497). The results still showed non-significant support for hypotheses H1a and H1b.

Table 7: Customer Value changes for customers that prefer to receive more messages than before

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Conformance%</th>
<th>Customer Value change% (mean)</th>
<th>Amount of customers (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>2.63 %</td>
<td>160</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>3.84 %</td>
<td>163</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>0.88 %</td>
<td>154</td>
</tr>
</tbody>
</table>

Although the value changes in all three comparisons were more positive for the 50% conformance (test group 2) than for the 100% conformance (test group 3), the null hypothesis could not be rejected in any case. Therefore, non-significant support was found for the hypothesis H1a. This suggests that either the customers did not notice significant change in the amount of messages they received during the experiment, or then the effect from social exchange theory was not strong enough to provide meaningful results during the experiment. However, as similar effect was found in all three comparisons, it is possible that significant effects can be found with longer and more thorough experiments.

The results from the second comparison (Table 7) suggest that the hypothesis H1b should be rejected. This is because 0% conformance (test group 1) resulted to significantly better results than 50% or 100%
conformance (test groups 2 and 3). In the other two comparisons, no significant changes were found between the groups. Rejecting the hypothesis suggests that although the customers initially preferred to receive more messages than before, they did not reciprocate by purchasing more when their preferences were conformed with. This suggests that the social exchange theory does not have an effect in this kind of setting. This is also a surprising outcome for the practitioners, as it suggests that customers, who prefer to receive more messages, should not be listened to. Instead, practitioners should continue with a contact frequency they have previously determined for these customers.

9.2. Customers that preferred to receive less messages

For this part, the hypotheses H2a and H2b were investigated also in the light of three different perspectives. First, the filtering included the 173 customers that answered the question “How many text messages in total would you like to receive from Veikkaus per month?” with a value of ‘0’ or ‘1’. This is below the previous amount that customers had received (3-5), while still including enough customers in each group to make a reasonable comparison. The results in Table 9 suggest that the full conformance yielded best results, being the only test group where the average customer value change was positive. This was also confirmed by the one-way ANOVA test, proving statistically significant difference between the test groups (F=3.246, p=0.041). Analysing the specific differences between groups revealed that the changes of test group 3 were significantly better than the changes of test group 1 (p=0.043), and better (but not significantly) than the changes of test group 2 (p=0.067). The changes between test group 1 and test group 2 were not significant (p=0.711). The results suggest that hypothesis H2b is confirmed, and hypothesis H2a receives non-significant support.

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Conformance%</th>
<th>Customer Value change% (mean)</th>
<th>Amount of customers (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>-2.98 %</td>
<td>58</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>-1.58 %</td>
<td>58</td>
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<tr>
<td>3</td>
<td>100</td>
<td>10.11 %</td>
<td>57</td>
</tr>
</tbody>
</table>

For the second comparison, the 321 customers who answered -1 or -2 to the question “How often would you like to receive text messages from Veikkaus?” were selected. The options for the question included values from -2 to +2 (0 included) so answering -1 or -2 shows a clear preference in receiving less CRM communication than before. Although the results in Table 10 suggest that the test group 3 performed best, the differences between groups were not found statistically significant (F=2.086,
p=0.126). The results therefore suggest that both hypotheses H2a and H2b receive non-significant support.

Table 9: Customer Value changes for customers that prefer to receive fewer messages in the future

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Conformance%</th>
<th>Customer Value change% (mean)</th>
<th>Amount of customers (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>-1.97%</td>
<td>103</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>3.38%</td>
<td>116</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>5.89%</td>
<td>102</td>
</tr>
</tbody>
</table>

The third filtering included the 408 customers who answered the survey in such a way that they preferred to receive fewer messages in the future than they had received in the past. More specifically, the customers answered the question “How many text messages in total would you like to receive from Veikkaus per month?” with a value at least one lower than the question “How many text messages do you remember receiving from Veikkaus during the past month?” The results for each test group can be seen in Table 11. Although the results suggest better results from full conformance, the differences were not statistically significant (F=1.694, p=0.185). The results therefore suggest a non-significant support for hypotheses H2a and H2b.

Table 10: Customer Value changes for customers that prefer to receive fewer messages than before

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Conformance%</th>
<th>Customer Value change% (mean)</th>
<th>Amount of customers (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0.12%</td>
<td>138</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>1.12%</td>
<td>129</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>5.96%</td>
<td>141</td>
</tr>
</tbody>
</table>

The customer value increased most in the test group 3, where the customers’ preferences were fully conformed with. In addition, the customers subjected to partial conformance of preferences (test group 2) improved their customer value more than the customers in the control group (test group 1), where the frequency of CRM communication was kept the same as before. In the first comparison we found statistical proof that for customers who prefer to receive less communication, it is better to conform to their preferences rather than continue the same as before, thus supporting the hypothesis H2b. In the other two comparisons the results were similar, but the null hypothesis could not be rejected, thus giving non-significant support for the hypothesis. The results confirm the assumption that for customers who prefer to receive less communication, social exchange theory has a strong effect on their purchase
behaviour, and therefore their preferences should be conformed with rather than continue the same as before.

All three comparisons suggest that the test group 3 performed better than test group 2, but no statistical difference was found between these two groups. Therefore, the null hypothesis cannot be rejected, and hypothesis H2a receives non-significant support. The lack of statistical evidence might be explained by the short duration of the experiment, which limited the customers’ time to react to the changes with their purchase behaviour. In addition, the customers might not have expected an immediate response from the practitioner, and thus a partial conformance might have been mistaken as full conformance by some of the customers. Nevertheless, for customers who prefer to receive less communication, it could not be confirmed that full conformance would provide better results than partial conformance. This means that also the effects from hypothetical bias in the survey answers could not be confirmed, although the results provide non-significant support for this.

9.3. Customers that were dissatisfied to the previous CRM communications

In this part, the hypotheses H3a and H3b were investigated, and the aim was to study the predictive power of the customers’ dissatisfaction to the changes in the customer value metric. First, the customers’ answers to the question “How satisfied are you with the current frequency of the text messages from Veikkaus, from 1 (very dissatisfied) to 7 (very satisfied)?” were recoded to reflect the level of dissatisfaction, from 0 (low dissatisfaction) to 6 (high dissatisfaction). Then, a linear regression analysis was conducted to investigate the possible correlation, one test group at a time. The level of dissatisfaction was used as a predictor variable and the change percentage was used as an outcome variable. The results are reported in table 12, and they suggest a significant (p=0.011 < 0.05) positive correlation in test group 3, thus confirming the hypothesis H3b. Furthermore, a positive, non-significant (p=0.341) correlation was found for the test group 2, which provides non-significant support for the hypothesis H3a.

<table>
<thead>
<tr>
<th>Test Group</th>
<th>Conformance%</th>
<th>F-value</th>
<th>Adjusted $R^2$</th>
<th>Regression equation</th>
<th>Significance of dissatisfaction term</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0.732</td>
<td>-0.001</td>
<td>9.663 – 2.120(dissatisfaction)</td>
<td>0.393</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>0.909</td>
<td>0.000</td>
<td>0.757 + 0.673(dissatisfaction)</td>
<td>0.341</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>6.498</td>
<td>0.013</td>
<td>-1.125 + 1.836(dissatisfaction)</td>
<td>0.011</td>
</tr>
</tbody>
</table>

Table 11: The correlation of the level of dissatisfaction with the change in customer value metric
The results confirm that when conforming to customers’ preferences, dissatisfaction positively correlates with the changes in customer value. This suggests that the highest benefits for customer value can be gained from customers, who are most dissatisfied with the current frequency of communication. So in case a practitioner needs to prioritize between customers when becoming more customer-centric, the most dissatisfied customers would be the best group to start with.
10. Conclusion and Discussion

In this part, we explain and assess the results from the six hypotheses. Combining the results from the first four hypotheses indicate that practitioners should pay more attention to customer preferences that suggest decreasing the contact frequency, rather than the preferences that suggest increasing the contact frequency. In fact, the results suggest that practitioners should ignore the preferences for higher contact frequencies, and fully conform to the preferences for lower contact frequencies. Furthermore, the last two hypotheses suggest that if a practitioner needs to prioritize between customers when becoming more customer-centric, it is better to start with the most dissatisfied customers.

Hypothesis H1a received non-significant support. Customers who preferred to receive more CRM communication were divided in three groups, where their preferences were either ignored, partially conformed with, or fully conformed with. The partial (50%) conformance provided better results than full conformance across all three perspectives, but none of these differences was statistically significant. This means that although the customers might have given exaggerated answers in the customer survey due to hypothetical bias, the effects could not be confirmed with the results. It might also be that in the experiment the customers were not given enough time to realize and react to the changes made by the practitioner. Therefore, to confirm the effects of hypothetical bias, longer and more thorough experiments would be required.

Hypothesis H1b was rejected. Although the partial and full conformance did provide positive results in some cases, ignoring the customers' preferences usually provided the best results. When considering customers who gave a strong signal for receiving more messages (answering +1 or +2 in a scale from -2 to +2), continuing with the same frequency as before proved to be significantly better than conforming to the customers' preferences. This signals lack of reciprocity in purchase behaviour, when customers' preferences were conformed with. The results therefore suggest that in this kind of setting, the customers, who prefer to receive more communication, do not experience the effects from social exchange theory. This is a surprising outcome for practitioners, as it suggests that conforming to customers' preferences about the frequency of CRM communications is worse for the overall customer value than continuing the same as before. It should be noted here that the previous contact frequency was not optimized in any way, so the findings are limited to already high contact frequencies and customer buying cycles, similar to the context of the study.

Hypothesis H2a was confirmed, and non-significant support was found for hypothesis H2b. The customers who preferred to receive less CRM communication than before were also assessed based on
the same three test groups (0% conformance, 50% conformance and 100% conformance). Customers, whose preferences were fully conformed with, provided significantly better results than the customers whose preferences were ignored. Although the partial conformance also performed better than continuing the same as before, no statistical proof for this was found. This can be explained by the short duration of the experiment, which limited the customers’ time to realize and react to the changes with their purchase behaviour. In addition, the customers might not have expected an immediate response from the practitioner, and thus a partial conformance might have been mistaken as full conformance by some of the customers. Nevertheless, confirming the hypothesis H2a suggests that the customers who prefer to receive less CRM communication should be rather listened to than ignored, and that the communication frequency should be adjusted according to the customers’ preferences, rather than kept the same as before. It should also be noted here that the findings are limited to similarly high contact frequency and purchase cycles than in the study context.

Non-significant support was found for hypotheses H3a, and hypothesis H3b was confirmed. It was found that when fully conforming to the customers’ preferences on the frequency of CRM communication, the level of dissatisfaction is a significant predictor of positive changes in customer value. This indicates that the potential benefits from social exchange are higher, the more dissatisfied the customers are. The results also suggest that the highest benefits for customer value can be gained from customers, who are most dissatisfied with the current frequency of communication. So in case a practitioner needs to prioritize between customers when becoming more customer-centric, the most dissatisfied customers would be the best group to start with. Although the correlation was also hypothesized for the partial conformance of preferences, this hypothesis received only non-significant support.

The results of this study provide new insights and empirical results for the research of customer-centricity. Previously the recommendations have stayed on a relatively vague level, suggesting practitioners to become more customer-centric and to conform to customers’ preferences (Verhoef and Lemon, 2013; Kumar, 2010; Kim et al., 2012). In this study we show that being customer-centric can be useful in certain situations, but it might also be harmful if not used carefully. The results of this study suggest that customer-centricity is profitable for customer value when customers prefer to receive less CRM communication. But when customers prefer to receive more messages, practitioner might be better off by not listening to the customers and keeping the contact frequency the same as before.

Similarly, the study contributes to the research about social exchange theory. We show that social exchange theory does have a reciprocal effect when customers prefer to receive less CRM
communication than before, or when customers are dissatisfied to the frequency of the messages. To our knowledge, this is the first time that the effects of social exchange theory are experimented in CRM context, and therefore the results provide an avenue for future research in this field.
11. Managerial Implications

The practical implications of the study are threefold. First, the customers that prefer to receive more CRM communication do not experience the reciprocal behaviour, as suggested by the social exchange theory. In fact, conforming to the preferences of these customers might be harmful for the practitioner, as it can result in significantly worse customer value than continuing the same as before. Therefore, practitioners are better off when not conforming to the preferences of the customers who prefer to receive more CRM communication, given that the contact frequency and buying cycles are already high.

Second, customers that prefer to receive less CRM communication than before do experience significant reciprocal behaviour, as suggested by the social exchange theory. If these customers prefer to receive less communication, their preferences should be conformed, as this can significantly increase their future customer value compared to continuing the same as before.

Lastly, the level of dissatisfaction is a strong indicator for customer value, when customer preferences on the frequency of CRM communications are conformed. This suggests that the highest benefits for customer value can be gained from the more dissatisfied customers, and if a practitioner needs to prioritize between customers when becoming more customer-centric, the most dissatisfied customers would be the best group to start with.

On a more general level, the study contributes to the work of CRM practitioners by developing an approach that can be used to determine how often each customer should be approached. Therefore, the findings assist practitioners in optimizing the customer retention effect of their CRM communication activities.

The results of this study give concrete recommendations for CRM practitioners when becoming more customer-centric, while improving their overall customer value. Practitioners should acknowledge that being customer-centric is not a straightforward process where one does exactly as the customer wants, but consideration can, and should be used in the process. The results of this study give practitioners a guideline on how exactly they should listen to their customers.

The findings of the study can be used when designing the contact policy, which dictates the exact amount of CRM communication that each customer receives. When customers signal their preference for the amount of CRM communications, practitioners can use the findings to adapt that amount to what is optimal for them. More specifically, for the customers that prefer to receive more CRM communications it might not be optimal to send the whole amount they signal, whereas for the customers who prefer to receive less communication, practitioner should conform. In addition, if the
practitioner is about to gradually conform to the customer preferences and has information about the satisfaction levels, starting with the most dissatisfied customers might be most optimal.

The findings of the study are especially applicable to practitioners that have relatively frequent CRM communications, so that the customers will notice the changes made in the amounts. Therefore, the retailers of fast-moving goods or services can consider the results relevant. This is because they have relatively fast buying cycles and generally a higher need for more frequent CRM communication.
12. Limitations of the Study and Suggestions for Future Research

In this part we assess the generalizability of the study findings in different aspects, and in the light of this information we give suggestions for future researchers in each part.

*The effects of hypothetical bias could not be confirmed.* Although the effect received non-significant support where it was studied (partial conformance vs. full conformance), it could not be confirmed in any of the hypothesis. So although the customers might have given exaggerated answers in the customer survey due to hypothetical bias, this could not be confirmed with the results. To confirm the effect of hypothetical bias, longer and more thorough experiments would be required in the future. Preferably, more than one level of partial customer conformance should also be studied.

*The study only considers text message CRM.* The customers may be more sensitive to text message CRM than to CRM through other media, such as email or direct mail. Therefore, the findings of this study may only be applicable to the CRM through text messages, and we suggest that the future research explores the findings also in other types of media.

*The initial frequency of text messages was not optimized in any way.* This limits the results of this study, because comparisons and findings were made based on the previous contact frequency. Therefore, the results can only be generalized in the context where contact frequency and customers’ buying cycles are high, similarly to this study. This also indicates that comparison between the amounts dictated by contact strategy models and customer preferences cannot be made. This might change the positive effects caused by the customer conformance in this study, and we encourage the future research to compare contact strategy models side-by-side with different customer conformance levels.

*The context of asking the preference differs from practice.* It might be that asking customers for the preference in a survey differs from the actual implementation of practitioners, where the preference is usually asked as a part of the practitioner’s web site. Customers might expect a better conformance when the preference is asked in a more permanent environment (i.e. the web site), and therefore the satisfaction, and consequently the customer value might decrease if the preferences are not conformed 100%.

*The results are only applicable to active customers in fast-moving retail industry.* The study was done in a specific context, where the communication frequencies were high, average buying cycles short and customers relatively active. As the effects studied were caused by the changes in the CRM communications frequency, they might require a relatively high amount of communication to work.
Therefore, the topic should be further studied in a context with fewer messages, longer buying cycles and customers that are not sampled based on their activity.
References


Appendix 1: The Customer Survey

Welcome to the customer survey of Veikkaus. Our aim is to investigate satisfaction and preferences about our customer communications, regarding especially the frequency of our messages. The results of the survey will be used when creating a strategy for our overall customer contacting.

Among all participants of the survey, we raffle two (2) gift cards for Tallink Silja ferries. The gift cards entitle to a trip to Stockholm from Helsinki or Turku for four persons at least in A-class cabin.

You have one week to reply. The survey will close on Tuesday the 22nd of October at 12.00 (noon).

Introduction

1. How many text messages do you remember receiving from Veikkaus:
   a. During the past week (options from 0 to 4+)?
   b. During the past month (options from 0 to 9+)?

The customer messages from Veikkaus can be divided in three groups depending on the topic. The different topics provide information about:

1) Your favourite product group
   a. Product groups of Veikkaus:
      i. Sports betting games
      ii. Daily games, including Keno, eBingo and scratch cards
      iii. Jackpot games, including Lotto, Viking Lotto and Eurojackpot

2) Other products of Veikkaus (not in your favourite product group)

3) Customer benefits, such as weekly customer raffles and discounts to culture and sports events

2. What is your favourite product group (options sports betting games, daily games and jackpot games)?

3. How many messages of different types have you received during the past month about (number between 0 and 10):
   a. Your favourite product group?
   b. Other products of Veikkaus?
   c. Customer benefits?
Current satisfaction
4. How satisfied are you with the current frequency of the text messages from Veikkaus, from 1 (very dissatisfied) to 7 (very satisfied)?
5. How satisfied are you with the content of the text messages from Veikkaus, from 1 (very dissatisfied) to 7 (very satisfied)?

Preferences for the future
6. How often would you like to receive text messages from Veikkaus? (options -2 (much less than before), -1, 0 (same as before), +1 and +2 (much more than before))
7. How many text messages in total would you like to receive from Veikkaus:
   a. Per week (options from 0 to 5)?
   b. Per month (options from 0 to 15)?

Conclusion
8. Do you have any other comments, wishes or preferences regarding the text messages of Veikkaus (open box)?

Note: The concept “customer raffle” refers to raffles that every registered customer can participate free of charge.