

Charles University in Prague

Faculty of Social Sciences

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MASTER THESIS

**Consumer Credits in the Czech Republic through the Optics of
Behavioral Economics: the Impact of the Form of Presented
Information on the Individual's Decision Making**

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Declaration of Authorship

The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.

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Prague, June 30, 2010

Signature

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Abstract

This study is inspired by behavioral economics, which reveals some of the biases in people's behavior and stresses the importance of the form of presented information. The aim of this study is to show the impact of the form of presented information on the individual's decision making in case of choosing consumer credit. We design hypothetical questionnaires each with one specific table introducing three different consumer credits. Each table provides participant with different form of contract conditions, which however always bear the same level of price and sanction information. Such price and sanction manipulations enable us to measure the participants' trade-off between the price of the credit and related potential sanction costs and how the preferences change if we add clarifying form of contract conditions. Empirical analysis reveals that if the conditions of the consumer credits are presented in more transparent way, it seems to be possible to nudge consumers towards safer credit without restricting the range of options. The effort of the study is therefore to show the importance of financial institutions providing borrowers with transparent and unambiguous credit contracts.

JEL Classification C81, C91, D03, D14, D18, G21

Keywords behavioral economics, decision making, information, consumer credits

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Abstrakt

Tato práce se inspičuje behaviorální ekonomikou, která poukazuje na důležitost formy podání informací a komplexitu rozhodování. Cílem práce je ukázat vliv způsobu podání informace na rozhodování jednotlivce v případě výběru spotřebitelského úvěru. V rámci výzkumného šetření jsou navrženy hypotetické dotazníky – každý z nich obsahuje jednu tabulku s nabídkou třech rozdílných spotřebních úvěrů. Každá tabulka prezentuje účastníkovi výzkumu smluvní podmínky v různých formách, tyto formy se ovšem nikdy neliší v množství a úrovni prezentovaných informací. Takovéto cenové a sankční manipulace nám umožňují měřit trade-off dotazovaných mezi cenou úvěru a k němu se vážícími sankčními náklady a jak se mění preference jedince, když přidáme objasňující formu smluvních podmínek. Empirická analýza naznačuje, že pokud jsou podmínky spotřebitelských úvěrů prezentovány přehlednějším a jasnějším způsobem, je možné „pošouchnout“ spotřebitele k výběru bezpečnějšího úvěru bez toho, abychom omezili svobodu a rozsah výběru. Snahou této studie je tedy ukázat, že je velmi důležité, aby finanční instituce poskytovali informace o podmínkách spotřebních úvěrů přehledně a jednoznačně.

Klasifikace JEL	C81, C91, D03, D14, D18, G21
Klíčová slova	behaviorální ekonomie, rozhodování jednotlivce, informace, spotřebitelské úvěry
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Thesis Proposal

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Předběžný název:

Spotřebitelské úvěry v ČR optikou behaviorální ekonomie – vliv formy smluvních podmínek na rozhodování jednotlivce

Hypotéza:

Čím nepřehlednější a delší je smlouva spotřebního úvěru, tím hůř se spotřebitel orientuje ve smluvních podmínkách a má tendenci zvolit pro něj nepříznivější variantu.

Formou podání informací o podmínkách úvěru je možné příznivě ovlivnit rozhodování spotřebitele směrem k výhodnějším smluvním podmínkám.

Popis tématu:

Stále probíhá debata, jestli mají spotřebitelské úvěry pozitivní vliv na blahobyt lidí, které si přes ně půjčují. Narůstá zadlužování a množství exekucí. Spotřebitelské úvěry obyvatelstvu tvořily k 30.6. 2009 20% celkového úvěru domácnostem. Jen v prvním pololetí 2009 poskytly nebankovní instituce spotřebitelské úvěry ve výši 20.5 miliard Kč (ČLFA), spotřebitelské úvěry u bankovních institucí narostly během stejného období o 9.9 miliard Kč (ČNB). Ministerstvo financí připravuje nový zákon o distribuci finančních prostředků, který by měl přinést větší regulaci úvěrů, objevuje se iniciativa regulovat úrokovou sazbu úvěrů. Jak ale upozorňuje organizace Člověk v Tísni, hlavním problémem spotřebitelských úvěrů není vysoká úroková sazba, ale rizikovost úvěrů daná komplexitou smluvních podmínek a neschopnost spotřebitele se v těchto podmínkách orientovat.

Tato práce se inspiruje behaviorální ekonomii, která poukazuje na důležitost formy podání informací a komplexitu rozhodování.

Cílem práce je ukázat vliv způsobu podání informace na rozhodování jednotlivce v případě výběru spotřebního úvěru a navrhnout vhodnou formu smluvních podmínek. Práce by měla empiricky ověřit hypotézu, že je možné zlepšit rozhodování spotřebitele zlepšením způsobu podání informací bez omezení svobody výběru. Snahou je ukázat, že je velmi důležité, aby finanční instituce poskytovali informace o podmínkách spotřebních úvěrů přehledně a jednoznačně. To je zejména u nebankovních institucí v České republice problém.

Metodologie:

Pozorování budou sesbírána v rámci originálního výzkumného šetření, které bude účastníkům zadávat hypotetické úkoly. Vybereme několik současných úvěrových kontraktů a v některých případech upravíme jejich složitost a přehlednost. Každý dotazovaný bude mít následně za úkol vybrat si tu nejvýhodnější variantu ze zadané skupiny smluv

Data pak budou analyzována vhodným ekonometrickým modelem.

Očekávaný vzorek se pohybuje kolem 150 respondentů, na implementaci výzkumu budeme spolupracovat s organizací Člověk v tísni.

Předběžný obsah:

1. Úvod
2. Shrnutí relevantní literatury
3. Design výzkumu
4. Model
5. Výsledky
6. Závěr

Reference:

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Chapter 1 INTRODUCTION

Consumer credit has become relevant issue for researchers, regulators and the banking industry as a result of increasing market integration, regulatory changes and a growing tendency of households to use debt to finance consumption. Furthermore, there is increasing risk of over-indebtedness.

As of 31.12.2009, consumer credits represented 20% of the total households' debt. Only during 2009 non-banking institutions provided consumer credits at the level of 41.06 billion CZK¹. The level of consumer credits by bank institutions expanded during the same period by 13.8 billion CZK.²

Czech Ministry of Finance works on implementation of new EU directive about distribution of financial resources, which should ensure more regulation of credit market and should come into force 1.1.2011. Moreover, there has appeared a political will to cap the level of interest rate. Nevertheless, as claimed by the organization People in Need (Clovek v Tisni), the biggest problem regarding consumer credit is not represented by high interest rate. As shown by Karlan and Zinman (2007) the microfinance loans in developing countries often offer interest rates of 200% or even more, but the borrowers are still made better off by these loans.

The main issue within consumer credits is thus not given by the level of interest rate, but by the riskiness of the loans due to complex and non-transparent contracts. Such contracts represent difficulties for consumers to actually know the signed conditions and to prevent themselves from accepting risky product.

This study is inspired by behavioral economics, which reveals some of the biases in people's behavior and stresses the importance of the form of presented information. By pointing out some of the patterns of human behavior that deviates from perfect rationality, behavioral economics can increase the scale of beneficial paternalistic

¹ Source: ČLFA

² Source: ČNB

policies that in a way nudge individual choice without putting restrictions on the range of options (like e.g. currently discussed interest rate caps).

The current research on irrationality of consumer behavior and on possible systematic consumer misperception due to complexity of the credit market is quite solid. However, only limited work has applied behavioral economic insights to consumer overindebtedness, sanction costs awareness and consumer bankruptcy.

The aim of this study is to show the impact of the form of presented information on the individual's decision making in case of choosing consumer credit. Our focus is on the consumer's trade-off between the price of the credit and related sanction costs and how the preference changes if we manipulate the form of presented information. Our goal is to find suitable format of presenting loan conditions without restricting the range of choice. The effort of the study is to show the importance of financial institutions providing borrowers with transparent and unambiguous credit contracts. Within Czech Republic that is nevertheless not the case, especially within the non-banking institutions.

The study is organized as follows:

Chapter 2 sums up important concepts and research studies in behavioral economics. Chapter 3 gives an overview of consumer credit market in the Czech Republic. Chapter 4 introduces the original research with the experimental design and Chapter 5 provides readers with model description and econometric results.

Chapter 2 LITERATURE REVIEW

“There is little doubt that the major new theoretical approach to law and economics in the past two decades does not come from either of these two fields. Instead it comes from the adjacent discipline of cognitive psychology, which has now morphed into behavioral economics.”

Richard Epstein (2008), p.803

Despite the assumption of classical economic models, that humans make rational decisions, behavioral economics suggests certain deviations from this behavior. There is growing empirical evidence that human decision making appears to be influenced by irrelevant factors or details that do not seem to affect the economic setting of a choice.³ As a result, individuals may not act in their best interests.

Thaler and Sunstein (2009) introduce a theoretical creature called “Econ,” who operates perfectly for its own gains. Econs are not expected to make perfect forecasts, but they are required to make unbiased forecasts – forecasts that are not systematically wrong in a predictable direction. Their decision making is perfectly rational. In contrast to such decision making, real „Human“ is considered based on the recent behavioral research findings. Actions of Humans are then compared to the theoretical actions of „Econs“ in many policy related situations. Such contrast aims to show that while many existing policies may be perfectly suited for Econs, they are far less ideal for the regular Humans both meeting specific policy goals and maximizing overall market welfare.

Defining patterns of how we fall short of rationality and designing systems that narrow common behavioral failures is the subject of *Libertarian Paternalism* – relatively new concept of behavioral economics that stems from the knowledge of cognitive psychology and social scientists and focuses on creating policies that take

³ Most of the recent experiments and explained biases in human`s decision making are summed up in Ariely (2008) and Thaler and Sustein (2009).

into account the limits of human rationality. (Thaler and Sunstein (2009), Amir and Lobel, (2009)).

By pointing out some of the patterns of human behavior that deviates from perfect rationality, behavioral economics can increase the scale of beneficial paternalistic policies that in a way nudge individual choice without putting restrictions on the range of options.

However, Camerer et al. (2003) warns that such policies should be implemented cautiously, given differences in opinion about what behaviors are irrational and what is in humans' best interest.

2.1 IMPORTANT CONCEPTS

In this section we will discuss relevant concepts of human behavior that might influence our experiment or might work as partial explanation of certain results.

How humans think and decide

Based on the psychological literature⁴ there are two kinds of thinking – one intuitive and automatic, another reflective and rational. These two systems are usually referred to as System 1 and System 2 respectively, nevertheless, Thaler and Sunstein (2009) introduced terms Automatic and Reflective System.

Table 1: Automatic versus reflective system

Automatic system	Reflective system
Uncontrolled	Controlled
Effortless	Effortful
Associative	Deductive
Fast	Slow
Unconscious	Self-Aware
Skilled	Rule-following

Source: Thaler and Sunstein (2009)

⁴ See i.e. in Baron (1994)

Such dual-process theory is a key explanation to the fact that humans sometimes act rationally and sometimes make mistakes – they use different system in different situations. **Table 1** sums up the most important features of each system.

We use automatic system when we rely on our experience and skills whereas reflective system is more analytical and self-conscious – and therefore slower. That is why we tend to use automatic system also in situations that require actual “thinking”. In our research, we have to prevent our respondents from using their automatic system and intuition while making decisions about the consumer credits. That is why the theory of choice architecture is very important.

Selective optimism and overconfidence

Many experiments also provide evidence of selective optimism of individuals. As turns out, individuals tend to generalize information based on highly selective examples that suit them well. Jolls (1998) reports that nearly 200 studies have shown that individuals believe that good things are more likely than average to happen to them. Bad things on the other hand are more likely than average to happen to the others.

A nice example is presented in a study focusing on Virginia residents who applied for a marriage licence: despite the fact that respondents knew the divorce rate reached nearly 50%, when they had to predict the likelihood that their marriage would end in divorce the model response was zero (Baker and Emery, (1993)).

As stems from experiments summed up by Larsen and Shepperd (2001), people believe that they are less-than-average likely to be victims of car accidents, crime or earthquakes. Moreover, they tend to think that they are less likely than others to be hit by illness, depression or unwanted pregnancies.

This optimism seems to be even stronger when the concerned issues are more a matter of personal control, which suggests that people tend to overestimate their skills when comparing to other people (Klaaren et al (1994), Robinson and Ryff (1999)).

Such unrealistic optimism leads to an underestimation of the probability that unpleasant events will happen to oneself (i.e. see Sunstein 1999).

Choice architecture

Even neoclassical economics, despite relying on people's rational behavior, admits, that under certain conditions of imperfect information, regulation may be an appropriate solution. The insights of behavioral economics significantly enlarge the world of imperfect information. As argued by Epstein (2006), once we accept that many of our decisions are based on imperfect, biased, and inaccurate calculations of expected benefits and costs, then it becomes clear that market failure is pervasive.

The question of whether policy can and should endeavor to overcome the imperfect decisions, however, depends on whether and how behavioral biases can be subject to corrective measures. From observing the many deviations from rational behavior, often referred to as biased behavior, it results that appropriate corrective measures must incorporate such various biases in different ways, since these biases have unique origins. (Ariely 2008)

As claimed in Amir and Lobel (2009), a range of research in psychology, neuroscience, and decisionmaking points out two groups of biases: those that stem from reflexive or intuitive processes as described in *How humans think and decide* in this chapter – these biases are so called Type 1 biases derived from System 1 processes. Second group of biases are such that occur because of processes that are meant to control, monitor, and prevent the individuals from the intuitive responses (Type 2 biases derived from System 2 processes). When targeting the bias correction, specific choice architectures therefore need to take these origins of biases into consideration.

Choice architecture solutions that target bias correction are often suitable in cases in which individual decision makers face too much information with too little expertise. Example of such choices are presented in Ariely (2008). These are i.e. choices about health insurance, pension plan or prescription drug coverage. Extracting information about health insurance into a more transparent and manageable system would clearly be positive, since it would enable the decisionmaker to understand the outcomes of different choices. Therefore, it would enable the individuals to make the choice that best suits their needs.

Such strategy is the core of our research - we are trying to sum up the conditions presented in consumer credit contracts in a more manageable way – table – presenting two possible dimensions for decision making. First it is price of the credit (presented in the form of payment, RPSN, the total amount the borrower has to pay off), second it is the theoretical sanctions related to the loan (in the form of percentage, various additional scenarios and graph).

As argued in Sunstein and Thaler (2009), social science research reveals that as the choices become more numerous and/or vary on more dimensions, people are more likely to adopt simplifying strategies. Therefore, our choice architecture helps us to measure, what is the decision making strategy of the individual – if it is the dimension of the loan price or the dimension of possible sanctions and what form of presenting the sanction costs can change the preference.

Regarding our research, there is an opportunity to correct Type 1 bias relatively easily – instead of requiring participants to state what consumer credit would be the most suitable for them, we asked them to rank all three credit offers from the best to the worst option – just to prevent them from making an intuitive decision.

However, as far as Type 2 biases are concerned, it might not be that easy.

Amir and Lobel (2009) warn that providing better and clearer information in an attempt to override biases may have drawbacks as well. One should also consider whether such choices are subject to accountability to others or to overweighing less relevant attributes simply because they are now presented clearly, since they both might lead to Type 2 biases. That is, helping people think more carefully about the decision may yield unintended consequences, such as overemphasis of decision dimensions that previously did not impact the decision making process but are now clearly visible and likely to attract undue attention.

Nevertheless, our study is trying to find the way to point out both price and other costs that might be related to the individual consumer credit offers. Sanction costs that were either not clearly specified or not considered due to complicated contract brought many people into distress. That is why we do not believe that these parameters should be considered less relevant and the attention to these parameters referred to as undue.

2.2 RELEVANT EMPIRICS

So far, empirical studies prove that the more complicated description of the credits, the less oriented are the borrowers and the more costly it is for them to choose among the available offers. Moreover, it turns out that there are certain marketing manipulations (psychological interventions – i.e. specific pictures, colors, framing) which make consumers less sensitive to credit price. Such conclusions clash with assumptions of neoclassical economists, who expect rationality and continuity in human's decisions. Let us point out some specific studies.

Shu (2007) proved that even for MBA students at a top school it was difficult to choose the best loan despite certain simplifications in comparison to the real world.

Woodward (2007) conducted thorough analysis of available loans questioning what kind of borrowers got the best deals and under what circumstances. The result proved the general concern that the more complicated the markets get, the bigger disadvantage it represents for the uneducated. Furthermore, the sources of complexity of the contract conditions, which make the comparison of other available products more complicated, are expensive for the borrowers.

Bertrand et.al (2005) in their experimental loan offer to borrowers in South Africa concludes that the larger simplicity in the loan description the larger take-up of the loans. Therefore, loans described by text had lower take-up rate than loans described in form of a table; moreover, loans described by more complicated table (more parameters carrying the same information) had lower take-up rate. However, the information in the tables were only about the price of the loan – interest rate, payment, number of payments – without information about the sanction costs. That is why we want to expand the table in our research by such information.

The research by Bertrand et al. (2005) also focused on psychological manipulations and found out that psychological manipulations appeared to weaken the price sensitivity of demand. As it turns out, psychological interventions (such as i.e. picture of a woman on the contract) thus seem to matter more when the interest rate is high, which is against neoclassical rationality assumptions. Nevertheless, this research did not confirm theoretical expectation by behavioral economics that

negative framing or positive framing have significant effect on human decision making.

On the other hand, there are few studies claiming that empirics is not that straightforward with behavioral theories. Wright (2007) can be such example. His paper focuses on the common interest in predictive power and empiricism shared by neoclassicists and behavioral economists. He addresses the question of whether behavioral economic models have increased our knowledge of economic behavior in the context of “consumer contracts.”

Wright (2007) conducts empirical investigation to firm exploitation of consumer biases which includes the credit card market, standard form contracts, and shelf space contracts. He finds that *„the empirical studies of firm and consumer behavior in these examples do not support the claims that behavioral law and economics generates greater predictive power than standard price theoretic analysis.“* (p.39)

Nevertheless, in his conclusions he admits that the results do not suggest that irrational behavior does not cause significant inefficiencies in some markets or that intervention will never be a solution to those inefficiencies. His effort is simply directed towards the question what explanatory power have behavioral insights actually added to the researched fields and finds out that even counting with the behavioral biases does not improve the predictive power of the consumer behavior.

Current research on irrationality of consumer behavior and on possible systematic consumer misperception due to complexity of the credit market is quite solid.⁵ However, only limited work has applied behavioral economic insights to consumer overindebtedness, sanction costs awareness and consumer bankruptcy. Our research focus therefore makes our study rather unique.

⁵ Summary of the most relevant recent studies can be found in Ariely (2008) and Thaler and Sustein (2009).

Chapter 3 CZECH CONSUMER CREDIT MARKET

Consumer credit market in the Czech republic is in comparison to western countries very young and it has been flourishing in the past years especially within the non-banking sector. The range of products and number of institutions making these products available to nearly everyone (who is above 18 years old, has czech citizenship or has permanent residence in the Czech Republic) has grown rapidly. This chapter brings overview of the current situation including legal regulation of the market, description of the market size and description of available products on the market.

3.1 LEGAL REGULATION

On 1st June 2002 Code 321/2001 Col. came into force, adjusting conditions regarding closing consumer credit and updating Code 64/1986 Col. Code 321/2001 represents unification of czech legislation and legislation of EU countries.

One of the major contribution of this code is - besides the exact definition of consumer credit - introducing annual percentage rate (referred to as APR, roční průměrná sazba nákladů RPSN in Czech), which includes not only annual interest rate of the credit but also other costs related to the credit. Therefore it better reflects total price of the credit and enables comparison among different credit offers. The code nevertheless provides only relatively vague definition of what should be included in the calculation of APR and therefore there is certain space for financial institutions to exclude some fees related to the credit.

Code 321/2001 also defines what should be included in the consumer credit contract and to certain extent regulates consumer credit advertising. However, it does not apply to all consumer credits - those excluded are for example:

- consumer credits determined for property purchase, construction, reconstruction or maintainance
- consumer credits providing less than CZK 5 000 or more than CZK 800 000

- consumer credits with due date in less than 3 months or are payable in maximum 4 payments within no more than 12 months.⁶

Supervision regarding this code is ensured by Czech Trade Inspection. Bank institutions within banking sector are supervised by Czech National Bank, that also ensures consumer protection supervision in this sector. Institutions from non-banking sector are nevertheless out of its competences.

However, there has been prepared new legislation regarding consumer credits on the czech market. On 1st January 2011 new code 145/2010 Col. based on the EP and EC Directive 2008/48/ES is supposed to come into force, reflecting some of the up to now unresolved issues and strengthening consumer protection. Among the most important changes that the code brings, belong i.e. stricter information responsibility of credit provider or statutory duty of credit provider to consider bonity of client together with provider's right to require such type of information directly from client as well as from credit databases such as SOLUS or Banking and Non-Banking Credit Bureau.

Moreover, code defines new right of borrower to withdraw from the consumer credit contract 14 days past its closing without declaring a reason, limits fees in case of early debt repayment by debtor, etc. Nevertheless, some of the issues regarding consumer credits are still not considered. One of the controversial topics out of the code's focus is i.e. settling law-suits through arbitration proceedings.⁷

⁶ Source: Czech Trade Inspection, www.coi.cz

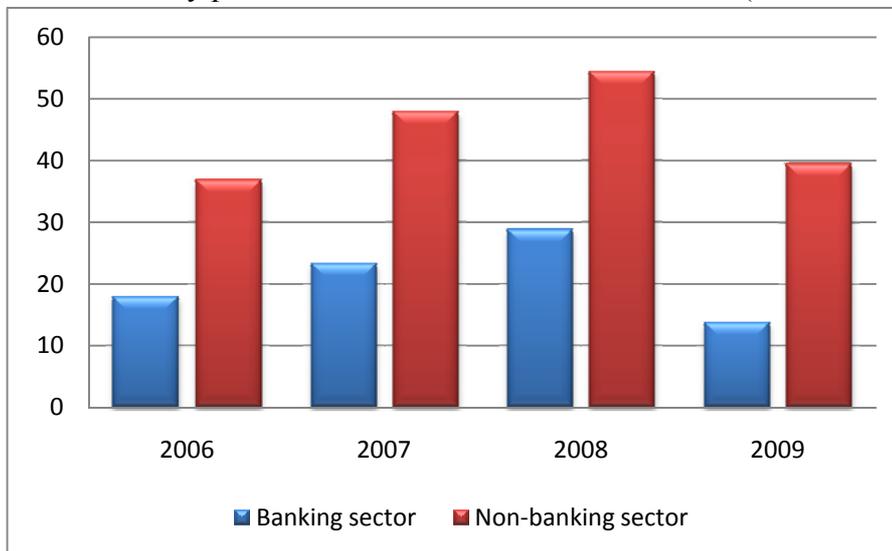
⁷ for detailed discussed of changes in consumer credit legislation due to Code 145/2010 see i.e. <http://www.epravo.cz/top/clanky/zakon-o-spotrebitelskem-uveru-63132.html>

3.2 MARKET OVERVIEW

In the Czech Republic, total consumer credits provided by banking sector rose from CZK 43.732 billion in 2003 to CZK 157.542 billion in 2009.⁸ In addition, non-banking credit of a consumer nature rose from CZK 40.9 billion to CZK 241 billion.⁹

Recent development of newly provided consumer credits both in banking and non-banking sector is shown in **Chart 1**. As can be seen, year 2009 meant significant drop both in banking and non-banking sector due to economic recession – households were forced to cut their expenditures and financial institutions to make the conditions for credit take-up more restrictive.

Chart 1 Newly provided consumer credits in 2006-2009 (billion CZK)



Source: database ARAD – CNB, CLFA

Currently, consumer credits offered by banking sector range usually from 10 000 CZK to 600 000 CZK, whereas in non-banking sector the amount can even reach 1 000 000 CZK (i.e. in case of financial institution Cetelem). Interest rates of offered products are in the range of 5.5% – 17%, RPSN being around 20% in banking sector, whereas in non-banking sector it can even exceed 200%. Interest rate regarding sanctions is in banking sector usually around 0.024% per day of delay (derived from the rate defined in the Civil Code), whereas in non-banking sector it can reach up to 0.1% per day of delay.

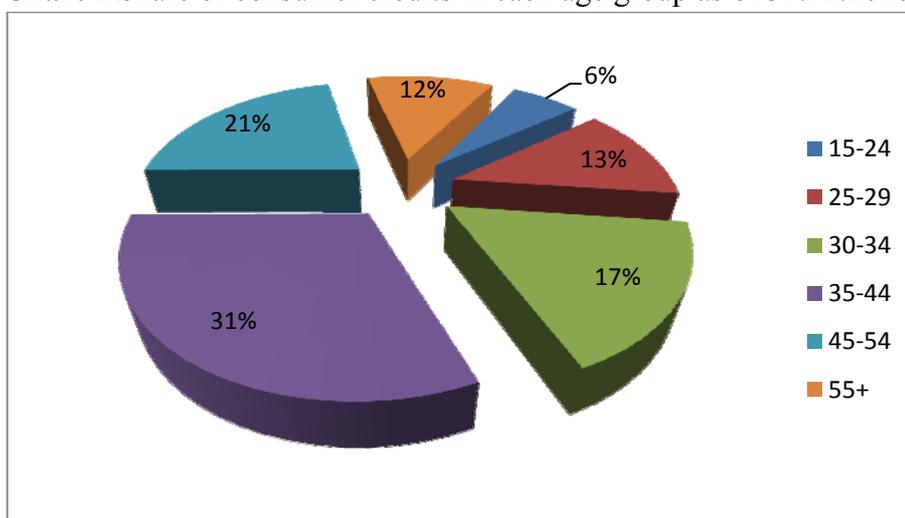
⁸ based on database ARAD, CNB

⁹ based on data from CLFA

Moreover, one-time sanction fees in non-banking sector after certain delay in payment can range from 8% of monthly payment up to 50% of the total loan. The reason is that financial institutions from non-banking sector very often do not require information about credit history of the borrower and bonity requirement is also very low (usually net income of 6 000 CZK per month), therefore both interest rates (as well as APR) and especially sanction costs are certain form of compensation. Generally, and especially in non-banking sector, it applies that products with lower price have higher sanction costs and other way round.¹⁰

Now let us have a look at what groups of consumers based on age and income level are the most frequent credit takers.

Chart 2 Share of consumer credits in each age group as of 31.12.2010



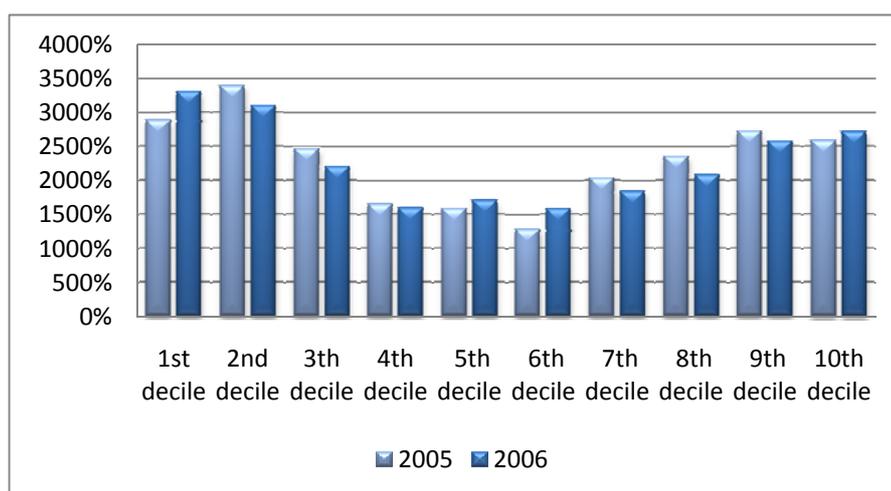
Source: Czech Credit Bureau

As of 31.12.2010, the highest share of consumer credits – 31% - was taken by individuals in age group 35 – 44 years old. 21% of consumer credit takers were between 45 – 54 years old, 17% were in their early thirties. Old people (above 55) represented 12% of consumer credit takers, whereas young people up to 24 years old represented only 6% of consumer credit takers.

¹⁰Detailed overview and comparison of current consumer credit offers can be found i.e. <http://www.finance.cz/uvery-a-pujcky/spotrebitelske/srovnani-uveru/>, or in recent study of organisation People in Need available on http://www.demografie.info/?cz_detail_clanku&artclID=640

Regarding statistics about distribution of consumer credits among income groups, the latest data available are unfortunately related to year 2006. Nevertheless, we present them at least to get an idea of the most frequent income groups financing their consumption through consumer credits, since we do not expect the patterns to change dramatically over following 3 years.

Chart 3 Shares of households with consumer credit in individual income groups



Source: Czech Statistical Office, CNB

Intuition being confirmed by data, the most frequent credit takers are those with the lowest income (1st and 2nd decile), who are the most vulnerable to fluctuations in expenditure and exposed to the risk of delayed payments due to very low saving rate. In 2006, the deposit-to-net income ratio for 1st decile reached -1,3%, whereas for 10th decile it equaled 11.5%.¹¹ That brings us to discussion of what groups are the most frequent in defaults.

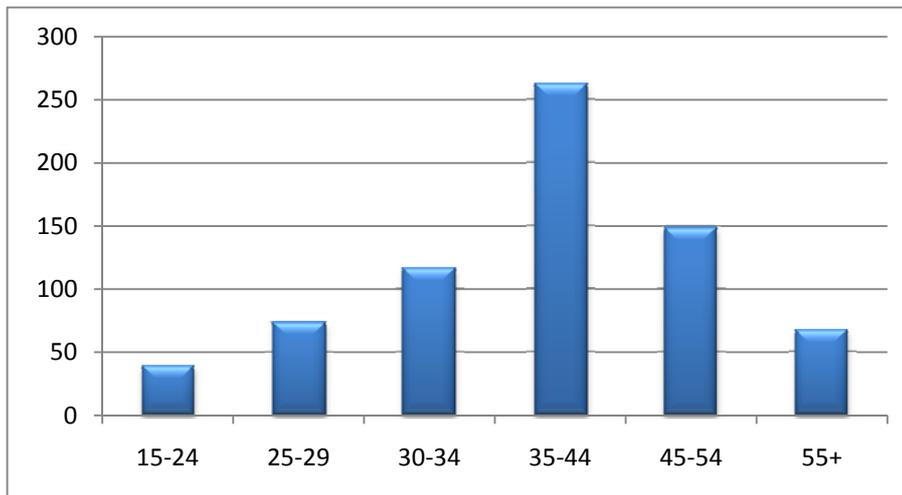
3.3 DEFAULTS, NUMBER OF EXECUTION PROCEEDINGS

Based on Czech Credit Bureau statistics, in 2009 there was increase in volume of unrepaid credits past due date despite the decrease in newly provided credits. Credit takers thus experienced larger difficulties in repaying their liabilities. Based on the same source, when we exclude corporations and focus only on individuals, consumer credits became one of the riskiest credits, where share of default relative to total volume reached 4.4%.

¹¹ Source: Czech Statistical Office

Regarding age categories and related volume of debt in case of defaulted credits, the lowest amount is owed by young credit takers up to 24 years old. Highest absolute debt related to defaulted consumer credits on the other hand belong to middle aged. Detailed overview of individual age groups is presented in **Chart 4**.

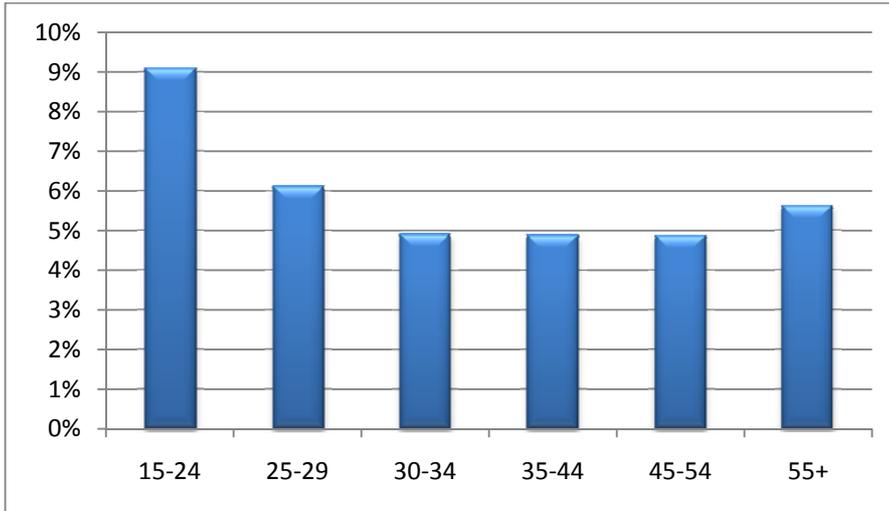
Chart 4 Debt of consumer credit takers in default as of 31.12.2009 (in million CZK)



Source: Czech Credit Bureau, 2010

Unfortunately, the only data we were able to obtain regarding defaults within each age group relative to level of consumer credits provided in that age group, are related to all types of credits, not only consumer credits. Nevertheless, such information can also give certain picture of those groups, who are generally considered the riskiest regarding regular payments. As shown in **Chart 5**, the risk of default is highest for the age group 15-24 (9.1%) and decreases with increasing age. The default risk increases again for the elderly - the share of defaulted consumer credits relative to total consumer credits taken in the group 55+ reached 5.6%.

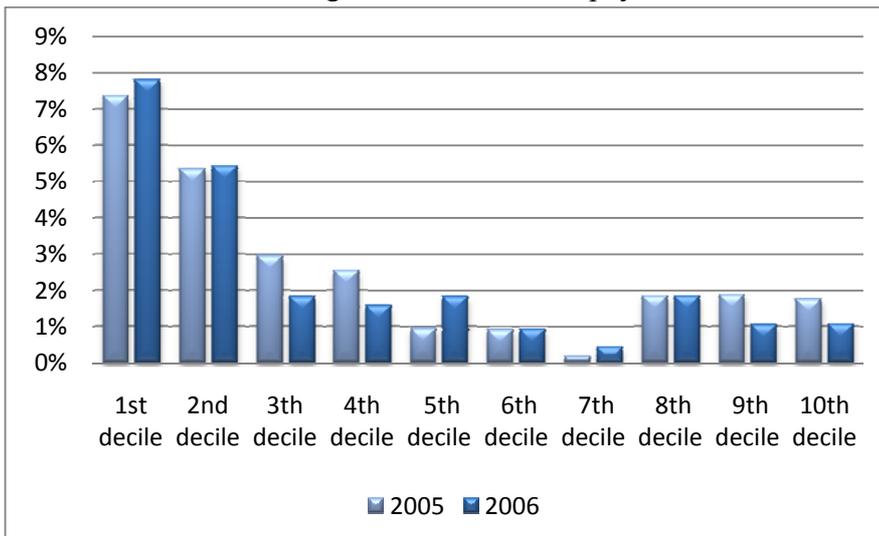
Chart 5 Share of credits with payments over 3 months after due date – age groups



Source: Czech Credit Bureau, april 2010

When we look at income groups, **Chart 6** shows that the riskiest income groups regarding default are low income groups (1st and 2nd decile). The share of defaulted consumer credits relative to total consumer credits taken in these two income groups reached in 2006 7.8% and 5.4% respectively. Same as in case of shares of households with consumer credit in individual income groups, we obtained only not very up-to-date data, but we believe that it is sufficient for getting an idea of threatened groups regarding overindebtedness.

Chart 6 Problems making consumer credit repayments in individual income group

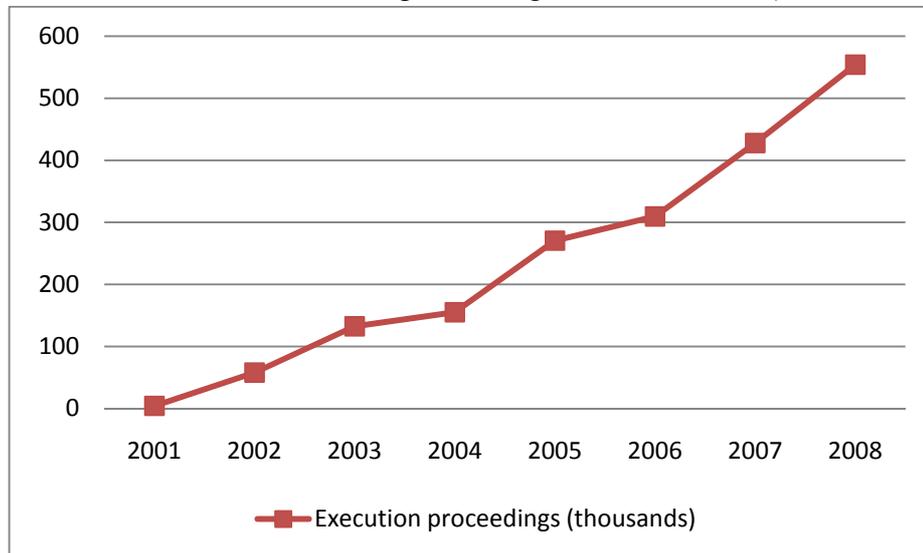


Source: Czech Statistical Office, CNB

To show that overindebtedness is becoming a significant issue in the Czech Republic, we also include data about execution proceedings (see **Chart 7**). Based on statistics

from the Chamber of Executors of the Czech Republic, the number of execution proceedings grew from 4 302 cases in 2001 to 554 128 cases in 2008. In total it thus makes 1 933 650 execution proceedings over 8 years.

Chart 7 Number of execution proceedings in 2001 – 2008 (in thousands)



Source: Chamber of Executors of the Czech Republic

Chapter 4 THE EXPERIMENT

We are going to conduct a research that is partly inspired by field experiment in consumer credit market in South Africa by Bertrand et al.(2005). The inspiration stems from the marketing manipulations in the consumer credits offer and their effects on the take-up decision – particularly the effect of presenting the offer in the simplified versus more complex table. Nevertheless, our study rather tries to discuss what information and in what form can be revealed to consumers in order to make them aware of all key conditions of the contract and thus make credit contracts more transparent - as stressed in Thaler and Sunstein (2009).

Our study focuses on two major questions - what influence have different revealed price information on the take-up decision and what forms of the sanction costs make the consumers include these costs in their decision making process. In other words, we are interested in the trade-off between the price of the credit versus related sanction costs. The main focus of this research is therefore on how consumers change preferences towards this trade-off depending on the form of revealed information.

However, the experiment is based on hypothetical offers of consumer credits and therefore can not follow the real decision making of consumer between consumer credit offers, which represents limitation relative to referenced studies - nevertheless, in the context of our study it would be extremely difficult to arrange field experiment. Therefore we at least tried to upgrade the experiment from in behavioral economics widely used lab experiments with students by arranging diversified portfolio of participants.

4.1 MOTIVATION

This research is trying to mirror the current issues on the Czech consumer credit market, especially in the non-banking sector. Such issues include too complicated and long contracts using not fully and clearly defined terms¹², no 100% clear description what costs should be included in average percentage rate (“RPSN”) which therefore offers only limited comparison¹³ and especially the effort of the institutions to hide sanction costs which increases the risk of gradual over-indebtedness.

None of the major non-banking institution shows terms of sanction costs on their webpage and sanctions are never part of any promoted credit offer. They are only part of consumer credit contract presented as % of i.e. debt, but without any specification of mentioned terms (outstanding debt? total debt? the monthly payment I failed to pay on time?) or mechanisms of sanction calculation. Moreover, none of the major non-banking institutions we contacted through their call centers (where clients are encouraged to close the contracts) was able to specify anything regarding sanction costs setting or calculation.

Czech Trade Inspection organized controls of consumer credit contracts of non-banking institutions to check whether they fulfill all legislation requirements. As it turned out, 50% of contracts missed some of the appurtenances defined by law.¹⁴

Organization Clovek v Tisni (People in Need, CVT) tries to point out the main risks of the consumer credits and by its recent project Index of Predatory Lending it tries to put medial pressure on the non-banking institutions to make their consumer credit contracts more transparent.

¹² for an example of current consumer credit contract see Appendix A

¹³ In the Czech Republic, APR (RPSN) is still not 100% reliable indicator of the true cost of the credit. Recent study by the organization Man in Need shows certain efforts especially of bank institutions to manipulate APR and thus compete other products on the market. For interesting article justifying the need for a more effective APR from the US point of view see Renuart (2009)

¹⁴ Source: Press release of Czech Trade Inspection from 24th February 2009

The Index considers five categories:

1. Comprehensibility – expressed by the length of the loan contract and the frequency of various shortcuts
2. Presence of interest on delayed payments higher than defined by law
3. Sanction costs in case of delayed payments by 30 days
4. Price of the loan in case of no delays
5. Alternative dispute resolution as part of the contract

All categories represent the same weight within the index and the higher the index, the worse rating the company and its products has. The index is thus one way to make the comparison despite the complexity of the conditions possible.

The Index of Predatory lending is of course not ideal, but fulfills the requirement of transparent indicator of unfavourable or risky product and quickly attracted attention of all major media in the Czech Republic. The campaign and medial pressure turned out to be successful and some of the companies started changing their contracts conditions in order to get better rating within the index.

Due to the initiatives of People in Need, Czech Trade Inspection and of course high media attention to increasing overindebness and number of execution proceedings, consumer credit contracts and consumer protection are recently big issue. Our research thus might bring contributinal conclusions to heated debate about how to present credit contract conditions and how to protect consumers. Our research should answer the question whether it is possible by clarifying especially the sanction costs to make potential credit taker realize the risks and shift towards safer options.

4.2 RESEARCH QUESTIONS

There are three main research questions:

1. Are consumers more sensitive to the final amount they have to pay than to the individual payments? Will revealing the price in form of final (total) amount to be paid shift the preferences of participants towards the cheaper credit?

According to Thomas and Mortvitz (2009), who discuss “naive theories in judgments of price differences” and conduct set of experiments, people in their judgements of the magnitude of price differences can be affected by the ease of mental computation. The results of their experiments show that for participants it was easier to judge the size of a larger difference in price than that of smaller difference. In our case, we thus expect that participants will be more affected by the total price of the credit, since the differences in price will be more visible and easier to compute, than in case of monthly payments.

2. Will adding clarifying form of sanction costs that bears the same information make participants better realize the risks and shift their preferences towards safer options? Will participants react more significantly if the development of sanction costs is presented in a form of graph relative to sanction scenarios in the table?

Based on numerous experiments presented in i.e. Thaler and Sunstein (2009), presenting conditions of products requiring certain level of expertise (such as health insurance, pension plans, etc.) in simplified, more transparent and manageable way turned out to be beneficial, especially for less educated. Therefore, we expect that clarifying form of sanction costs will enable participants to better assess the risks and consequently increase the probability of safer (higher in price but lower in sanctions) credits take-up.

Moreover, Pinker (1990) in his chapter Theory of Graph Comprehension points out that despite the fact there is no theory in cognitive science explaining why it should be so, several experimental evidence suggests that information presented in graphic format relative to i.e. tables of numbers is easier for people to perceive and to reason about. Therefore we expect development of potential sanction costs in the form of

graph to have greater effect on individual's decision making than additional sanction scenarios presented in a table.

3. Is the effect of clarifying information more significant for less educated than for those with higher education?

As already discussed in part 2., Thaler and Sunstein (2009) mention several studies, where presenting clarifying information turned out to be beneficial especially for less educated. Therefore we expect, that the effect of additional forms of information will be more significant for less educated than for participants with higher education.

4.3 EXPERIMENTAL DESIGN

The research was conducted through questionnaires. Besides the general questions about the participants each questionnaire included one table with 3 credit offers. The tables consisted of two parts – first part presented the price of the loan, the second part included the sanction costs.

Due to the treatments setting, which will be described below, there were in total 12 different tables revealing the same information, but in different forms. Based on neoclassical economists, no form should thus change participants' decision making in comparison to the control group if it does not carry any additional information.

The credit amounts and the time period determined for paying off the loan were equal for each credit – 30 000 CZK and 1 year.¹⁵

Every participant was randomly assigned one questionnaire with one table and asked what credit offer they would prefer the most, less and the least. Since in this case it would be very difficult to make such research as a field experiment and thus simulate real life decision making of a credit applicant, the requirement to rank the offers should force those who would be appealed to pick one offer only randomly to actually think about it. This should minimize the Type 1 bias. Additionally, participants were asked to state their age, sex, level of completed education, recent status (student, employed, entrepreneur, pensioner, unemployed), if they have ever

¹⁵ for closer explanation of numerical setting see 3.3.1. Design of the tables

taken consumer credit and whether they were planning to apply for credit in the near future.

The forms with one table and requirement for additional personal information described above were given away as paper questionnaires.

Due to the randomization of forms of information in tables we were able to measure the effects separately.

4.3.1 Design of the tables

First of all, when designing the tables, the theory of choice architecture was considered. The table format in comparison to plain text seemed to better fulfill the aim of providing better and clearer information¹⁶ and improve the decision making of individuals.

Nevertheless, as pointed out by Amir and Lobel (2009), it should be considered whether such choices can cause overweighing of less relevant attributes simply because they are now presented clearly. Such situation might lead to Type 2 bias. (see part Choice Architecture)

However, we are trying to find the way to point out both price and other costs that might be related to the individual loan offers. Sanction costs that were either not clearly specified or not considered due to complicated contract brought many people into distraintment. That is why we do not believe these parameters should be considered less relevant.

Regarding the content of the tables and what parameters of the contract should be revealed to the consumer, three main guidelines were used.

First of all, the current legal regulation was considered. Based on the Consumer Credit Act 321/2001 Col., there are certain parameters that have to be in the contract such as:

- loan in CZK,

¹⁶ This assumption is confirmed i.e. in experiment by Bertrand et.al (2005) – loans, that were described in tables were more transparent to borrowers than those described in a text – and there was thus higher take-up probability

- defined individual payments including their maturity,
- APR (RPSN)¹⁷, defined conditions under which APR (RPSN) can be changed (which cannot be subject only to the Lender's will),
- information about sanctions in case the conditions of the contract are violated
- enactment about the right to pay off the loan before its maturity
- the way of paying off the loan

The responsible supervisory institution in this case is Czech Trade Inspection.

The second guideline taken into account was The Ethical Code for consumer credits by People In Need (CVT).

The organization tries to force the Lenders to provide following information on the first page of the contract:

- loan in CZK
- APR (RPSN)
- the level of individual payments
- number of payments
- other costs related to the loan:
 - sanction fees
 - interest on delayed payments

Finally, our inspiration stems from Thaler and Sunstein (2009). They suggest a concept so called RECAP = Record, Evaluate, Compare Alternative Prices, which would force lenders to disclose interest rate and all fees related to the loan in order to make comparison between lenders possible. Most importantly for us, they point out the importance of including some kind of “worst case scenario”. Including such information would help borrowers to see how much their payments may increase in the future. We added more forms of scenarios in our research to see what form (and if any) of this information have actual influence on the borrowers' decision making.

¹⁷ in such cases where there is impossible to define APR, the Lender must state the maximum amount of the loan, the payments and other costs related to the loan and the conditions under it is subject to change

Table 2 Example of table with credit offers serving as “Control” in our estimates

Amount of 30 000 CZK with 1 year maturity			
	credit 1	credit 2	credit 3
APR (Annual percentage rate)	22,02%	48,39%	88,7%
Monthly payment	2780 CZK	3076 CZK	3468 CZK
Total number of payments	12	12	12
Sanction costs including:			
- sanction fee	<u>7 days past due date</u> 8% of the monthly payment	<u>7 day past due date</u> 8% of the monthly payment	none
	<u>more than 35 days past due date</u> 50% of the total amount	<u>more than 35 days past due date</u> 20% of the total amount	none
- sanction interest rate	<u>above 1 day past due date</u> 0,08% from the debt/ day	<u>above 1 day past due date</u> 0,06% from the debt/ day	<u>above 1 day past due date</u> 0,02% from the debt/ den

Here is the example of one of the tables in the format that was given away. Presented table serves as “Control” in our estimates.

The aim of the numeric setting was to mirror current real loan offers (mainly from the non-banking sector since it is available for majority of consumers) but also provide with clear and simple payment schedule – that is why the credit period was designed for only one year in order to make the whole amount to be paid easily imaginable. The credit amount 30 000 CZK fulfills the requirements of reasonable payments for one year and relatively matches the average amount per credit contract – based on the statistics from Czech Leasing and Financial Association, in 2009 non-banking institutions made 1 100 339 new consumer credit contracts for in total 41.06 billion CZK. That results in average loan 37 315 CZK per credit contract. Moreover, as it results from the statistics of non-banking institution Homecredit – average credit in 2009 was 42 700 CZK.

The rest of the credit conditions were based on real loan offers, however, there was need to adjust the sanction costs in order to make the comparison less complicated and more visible.

Nevertheless, the level of sanction costs correspond to the range available on the market.

4.3.2 Treatments

Treatments can be divided into two groups:

- price treatments
- sanction treatments

Price treatments manipulated the type of revealed information about the credit price.

There were three groups of revealed price carrying the same information:

1. **Control** group received combination of information typical for credit contracts – APR (RPSN), monthly payment and number of payments.
2. Treatment **Final amount info** included only APR (RPSN) and final amount paid by the borrower.
3. Treatment **Payment plus final amount info** revealed the same information as in the case of Control group plus additionally the information about final (total) amount paid by the borrower.

Table 3: Revealed information within price treatments

	Control group	Treatment Final amount Info	Treatment Payment plus final amount Info
APR (RPSN)	X	X	X
Monthly payment	X		X
Number of payments	X	X	X
Final amount paid by the borrower		X	X

Regarding the forms of sanction costs, there were four versions of presented information:

1. **Control** group received sanction information in the standard form as presented in consumer credit contracts – interest from delayed payments expressed as percentage of payment and sanction fee as percentage of consumer’s liability.
2. Treatment **Up to 2 months delay scenarios** included sanctions description as in contract plus 2 additional scenarios clarifying possible sanctions in the case of 1 month delay in payment and 2 month delay in payment.

3. Treatment **Up to worst case scenarios** expressed sanction costs in the same way as in treatment Up to 2 months delay scenarios but revealed computed sanctions for 2 additional scenarios – delayed payments throughout the second half year and delayed payments throughout the whole year. The last scenario represented sort of worst case scenario and was meant to transparently show the risk of the individual credit.

Table 4 Sanction treatments description

	Control group	Treatment up to 2 months delay scenarios	Treatment up to worst case scenarios	Treatment graph
Sanctions as in contract	X	X	X	X
Sanctions in the case of 1 month delay		X	X	
Sanctions in the case of 2 month delay		X	X	
Sanctions in the case of delayed payments in the second half year			X	
Sanctions in the case of delayed payments throughout the whole year			X	
Sanctions in case of delayed payments throughout the whole year in the form of graph				X

4.3.3 Randomizations

Three independent sets of randomizations were conducted – the first one regarded the form of the credit price and the second set of randomizations involved the form of sanction costs presentation. Moreover, to avoid the order effect we randomized the order of the offers in the tables. Nevertheless, we considered only 3 order setting – first setting presented the loans from the cheapest to the most expensive one, second setting presented the cheapest loan as the last one and the most expensive one in the middle, whereas the third order type ranged the loans from the most expensive to the cheapest one. These sets of randomization provided us with the final table to be assigned to certain participant. Such randomization process ensured that treatments were assigned randomly (and thus in average evenly) across all groups of participants.

4.3.4 Hypotheses

Our 3 major hypotheses are divided into three groups based on the focus of manipulation:

Price manipulations

- a. Participants will be more sensitive to the final amount to be paid off than to the individual payments.
- b. Recipients with lower education will react more significantly to clarifying forms of information.

Sanction costs manipulations

- c. The additional scenarios about sanction costs will lower the take up of the cheapest (yet involving the highest sanctions) credit in favor of more expensive ones which involve lower level of possible sanctions
- d. The development of sanction costs in the form of graph will have larger effect than additional scenarios.
- e. Recipients with lower education will react more significantly to clarifying forms of information.

4.3.5 Sample and data collection

Our sample consists of 782 participants. Since it was not feasible to obtain representative sample, the effort was at least to gain as diverse sample as possible. Main partners for the questionnaires distribution were the organization People in Need and the office of Czech Bureau of Statistics in Pilsen. Moreover, there were arranged few sessions with students from University of Economics in Prague, Philosophical Faculty of Charles University and Medical College. We also cooperated with numerous companies and institutions from various industries (IT, health and social care, finance, education, etc.) whose employees were willing to participate. Finally, to include seniors and unemployed in the sample, we arranged questionnaires distribution at several Senior clubs and Labor Office. The data were collected from the second half of February until the beginning of April 2010.

4.3.6 Limitations of the research

The largest limitation of the research is that it is not a field experiment. Since it cannot simulate and follow real decision making process, it depends on the attitude of the participants and relies on their effort to deliver their honest opinion. Participants might not want to express effort to count the impacts of the contract setting in hypothetical situation but they would be able in real situation. Other possible effect of such experimental design may intensify the participants' selective optimism and overconfidence. Nevertheless, since it is hypothetical, the offer does not necessarily have to match real consumer credit products in all their conditions and enables us to be more flexible in the setting. That results in the option to set the table in a way to make it easier both for participants to reveal their preferences and for us to follow them.

Of course, another limitation of the study is that the characteristics of the participants cannot fully match the characteristics of the borrowers neither can it serve as representative sample. However, our sample is relatively diversified across various age categories, occupations, fields of employment etc., being of reasonable size, which enables us to give certain at least suggestive conclusions.

Finally, the numeric setting of the tables might not be suitable for the effects we want to measure. More specifically, the credit amount might be too low or the maturity too short for some of the recipients and thus the possibility of delays in payments may not be considered at all. Nevertheless, since our major focus is to test the trade off between the price and the sanction costs, the real number setting does not seem to be that crucial – it is more about the preferences regarding price of the credit relatively to its sanctions. The hypothetical frame is thus beneficial in a way that participants do not have to focus on the amount as such (which would be the case in the reality) but rather on the relations and ratios within the table. Revealed preferences based on these measures are then exactly what we want to follow.

Chapter 5 MODEL ESTIMATION AND RESULTS

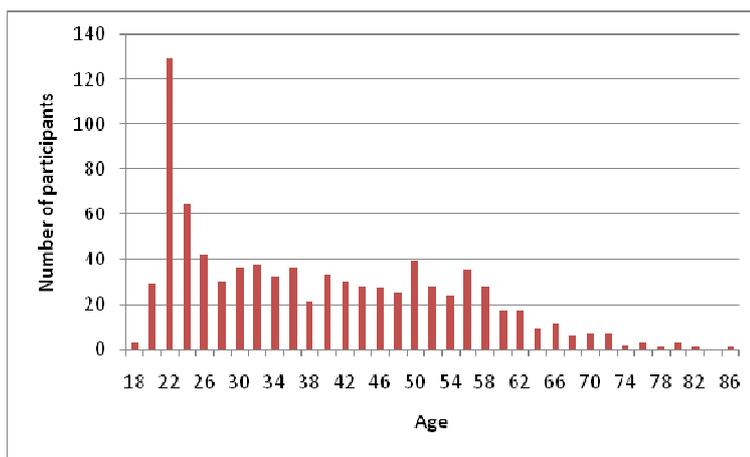
5.1 SAMPLE DESCRIPTION

For the distribution process of the questionnaires we used random number generator that ensured random assignment of the treatments among the participants. More about the randomization is to be found in the next chapter.

Now let us present closer analysis of the sample structure. The sample includes 782 participants out of which 52,4% are women and 47,6% are men.

Following chart shows the age distribution of the participants.

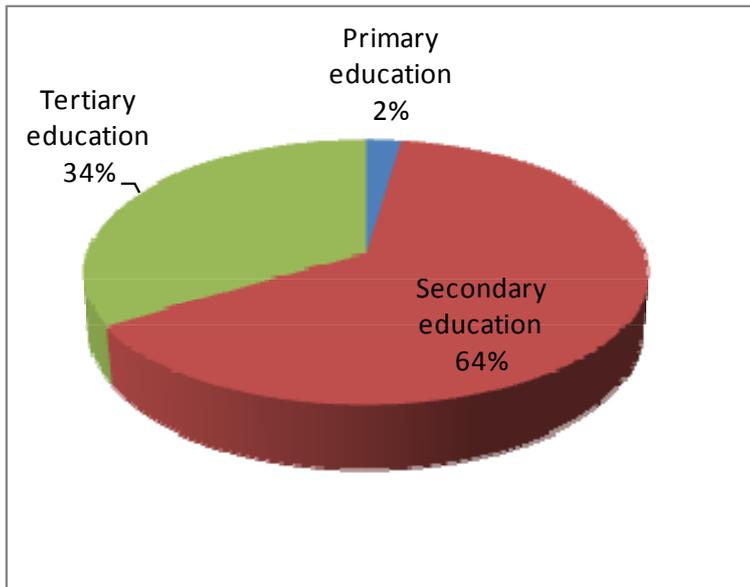
Chart 8 Age distribution



The age distribution is a bit imbalanced due to relatively high proportion of university students within the sample, nevertheless, except for this bias in the age group 22-25 the distribution is relatively flat. The sample includes all age categories from the age of 18 until the age of 85 which fulfils our diversity goal.

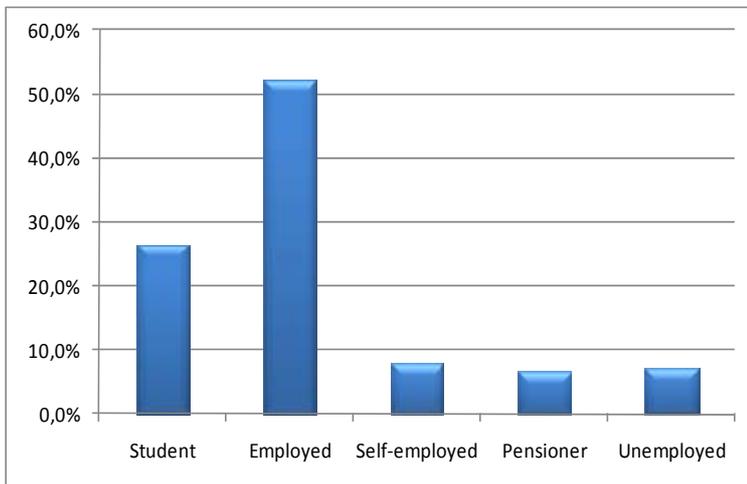
Regarding the criteria of completed education, the largest share within the sample was represented by secondary educated group – 64% of the participants completed such level. Primary educated participants represented only 2% of the sample and tertiary educated 34% of the sample.

Chart 9 The structure of the sample based on the completed education



In comparison to the reality in Czech population, such distribution is strongly biased towards the tertiary educated group. Based on the data from Czech Bureau of Statistics, 18,7% of population completed primary education, 69,5% completed secondary education and only 11,7% gained tertiary education.

Chart 10 Status of the recipients

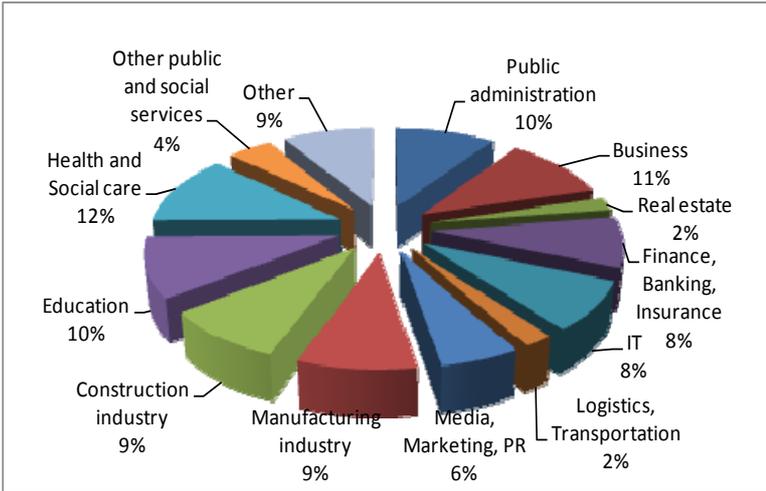


As shown in **Chart 10**, the structure of the sample based on the current status is as follows: 26,5% of the sample are students, 52,1% account for the employed, self-

employed (entrepreneurs) represent 7,8% ¹⁸, pensioners make up 6,5% and the unemployed count for 7 % of the sample.

Regarding the field of employment, we managed to gain diversified sample. As shown in **Chart 11**, shares of individual industries are relatively balanced. The largest share belongs to Health and social care – 12% of participants work in this industry. The second most frequent field of employment is Business which represents 11% of the sample, followed by Education sector and Public administration both counting for 10%. Other industries are for example IT, Construction Industry, Finance, Banking and Insurance, Manufacturing industry, Logistics and transportation or Media, Marketing and PR. These count for 2% up to 8% sample share. The group Other includes industries like culture, law advisory or energetics.

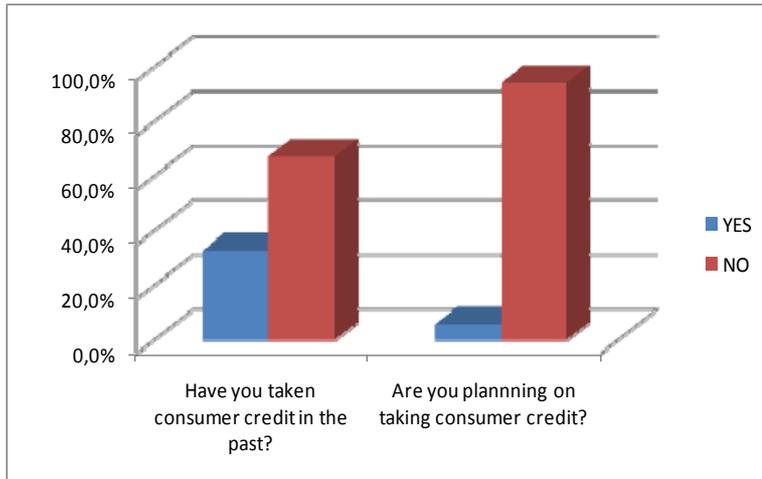
Chart 11 Field of employment



Within the questionnaire, part with personal information was followed by questions about the consumer credits. First two questions asked if the participants already took a consumer credit in the past and if they were planning on taking one in the future. Following chart sums up the obtained results.

¹⁸ in further analysis, we will merge the employed and entrepreneurs into one variable – variable Employed will thus in econometric results include both of these groups.

Chart 12 Consumer credit take up



As it turned out, nearly 33% of the recipients have an experience with consumer credit and vast majority does not plan on taking one in the near future - only 6% of the whole sample declared that they wanted to use such option of financing.

Finally, the recipients were asked to rank the offered loans from 1 (the most suitable for them) to 3 (the least acceptable for them).

5.2 ROBUSTNESS CHECK

Randomization

To see whether there are significant differences between the means, we conducted T-test and tested equality of each two means, given unequal sample and unequal variances. Results showed that on 5 % level of significance there are no significant differences between the means, therefore the randomization was executed in the right way. Thus, in our estimates of treatments we do not need to control for observable characteristics.

Table 5 reports on the frequency of each information or format manipulation. To see whether there are significant differences between the means, we conducted T-test¹⁹ and tested equality of each two means, given unequal sample and unequal variances. Results showed that on 5 % level of significance there are no significant

¹⁹ Student's T-test is a test in which the test statistic follows Student's t distribution given that the null hypothesis, H_0 (in our case equality of two chosen means), is not rejected. To compute Student's T-test we used STATA 9.1 software.

differences between the means, therefore the randomization was executed in the right way. Thus, in our estimates of treatments we do not need to control for observable characteristics.

Table 5 Summary of randomized interventions

Recipients characteristics	Price treatments			Sanction treatments			
	Control group	Treatment Final amount info	Treatment Payment plus final amount info	Control group	Treatment Up to 2 months delay scenarios	Treatment Up to worst case scenarios	Treatment Graph
Whole sample	0.3554 (0.4790)	0.3325 (0.4717)	0.3120 (0.4636)	0.2519 (0.4344)	0.2698 (0.4442)	0.2519 (0.4344)	0.2263 (0.4187)
Male	0.4820 (0.5006)	0.450 (0.4985)	0.5041 (0.5010)	0.4650 (0.500)	0.5071 (0.5011)	0.4588 (0.4996)	0.4802 (0.5010)
Primary educated	0.0252 (0.1570)	0.0192 (0.1376)	0.0287 (0.1673)	0.0150 (0.1219)	0.0379 (0.1914)	0.0309 (0.1736)	0.0113 (0.1060)
Secondary educated	0.6439 (0.4797)	0.6077 (0.4892)	0.6721 (0.4704)	0.645 (0.4797)	0.5972 (0.4916)	0.660 (0.4750)	0.6667 (0.4727)
Tertiary educated	0.3309 (0.4714)	0.3731 (0.4846)	0.2992 (0.4588)	0.340 (0.4749)	0.3650 (0.4826)	0.3093 (0.4634)	0.3220 (0.4686)
Student	0.2878 (0.4535)	0.250 (0.4338)	0.2295 (0.4214)	0.2250 (0.4186)	0.2701 (0.4451)	0.2423 (0.4296)	0.2938 (0.4568)
Employed	0.5971 (0.4914)	0.6231 (0.4856)	0.6148 (0.4877)	0.650 (0.4782)	0.6066 (0.4897)	0.6134 (0.4882)	0.5706 (0.4964)
Unemployed	0.0540 (0.2263)	0.0769 (0.2670)	0.0738 (0.2619)	0.075 (0.2640)	0.0711 (0.2576)	0.0609 (0.2398)	0.0621 (0.2421)
Pensioner	0.0612 (0.2400)	.0500 (0.2184)	0.0820 (0.2749)	0.0355 (0.1856)	0.0521 (0.2228)	0.0964 (0.2960)	0.0734 (0.2616)
Took consumer credit in the past	0.3094 (0.4630)	0.3269 (0.470)	0.3607 (0.4812)	0.310 (0.4637)	0.3223 (0.4685)	0.3351 (0.4732)	0.3616 (0.4818)
Plans on taking consumer credit	0.0647 (0.2465)	.050 (0.2184)	0.0656 (0.2480)	.075 (0.2641)	0.0664 (0.2495)	0.0464 (0.2109)	0.0508 (0.2203)

Note: Presented in the table are means and standard deviations (in parentheses)

Order effect

To control for order effect, we randomized the order of credits presented in the table. We defined three order types – first order type presented the credits from the cheapest to the most expensive one. Second order was random – the compromise credit was presented as first, the most expensive one as second and the cheapest one as third and third order type presented the credits from the most expensive to the cheapest one. Results show that order types did not have any significant effects on credit take-up rates.

Table 6 Effect of credit offers order on credit take-up

Independent variables	Dependent variables		Sample size
	Random order	Order expensive to cheap	
Credit 1 take-up (low P, high S)	0.0228 [0.0418]	0.0189 [0.0419]	782
Credit 2 take-up (mid P, mid S)	-0.0489 [0.0302]	-0.0221 [0.0312]	782
Credit 3 take-up (high P, low S)	0.0444 [0.0354]	0.0409 [0.0365]	782

Notes

1. Each row corresponds to the estimation of a probit model. Reported in the table are marginal effects relative to order “Cheap to expensive” and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

5.3 GENERAL PATTERNS

Data including both information about the participants and the results of their decision making are analyzed by probit model reporting marginal effects relative to control group.

First of all let us have a look at the effects of revealed information solely based on take-up rates. That will give us a picture of the patterns related to individual treatments.

The price manipulation

We can see from the table below, that the price manipulations caused slight change of take up distribution in the direction we expected.

Table 7 Credit take-up rates under individual price treatment

	Price treatments			Sample size
	Control	Treatment Final amount info	Treatment Payment plus final amount info	
Credit 1 take-up (low P, high S)	0.6223 [0.486]	0.661 [0.474]	0.659 [0.475]	782
Credit 2 take-up (mid P, mid S)	0.158 [0.366]	0.181 [0.386]	0.159 [0.367]	782
Credit 3 take-up (high P, low S)	0.223 [0.417]	0.158 [0.365]	0.180 [0.386]	782

Note: Presented in the table are means and standard deviations (in parentheses), P stands for price, S stands for sanctions. Control group received only monthly payments information.

When the price was presented only in the form of monthly payments (Control), the vast majority of participants chose the first and thus cheapest loan (62.2%) , the second place belonged to the third and thus the most expensive loan (22.3%) and the second loan ended up as the least chosen. When the information about the included the final amount which is paid by the lender, monthly payments and APR, there was a slight shift from the third loan in favor of the first and second loan. Such effect caused by adding the whole amount in the presented information can be seen in more significant matter when comparing the payment treatment with the case when only the whole amount that lender owes was presented. There is visible shift from the third the most expensive loan towards partly the second one but mainly towards the cheapest loan – which suggests that our hypothesis “consumers are more sensitive to the whole costs of the loan in comparison to monthly payments.” might be confirmed.

Sanction manipulations

Regarding the sanction manipulations, we can see that adding two extra sanction scenarios caused relative to control group slight shift from the first credit– the cheapest but with extremely high sanctions –in favor of the second credit – more expensive but with lower sanctions. Moreover, adding set of up to worst case

sanction scenarios to no additional information version of the questionnaire, the effect of leaving the first option relative to Control group is even greater. What is surprising is the shift not only towards the second credit, but the increase of the third credit take-up rate which increased from 17% to 25.3 %. Adding the scenarios thus made consumers more aware of the sanctions which confirms our expectations.

Table 8 Credit take-up rates under individual sanction treatment

	Sanction treatments				Sample size
	Control	Treatment Up to 2 months delay scenarios	Treatment Up to worst case scenarios	Treatment Graph	
Credit 1 take-up (low P, high S)	0.710 [0.455]	0.654 [0.477]	0.552 [0.499]	0.672 [0.471]	782
Credit 2 take-up (mid P, mid S)	0.120 [0.332]	0.175 [0.381]	0.196 [0.398]	0.169 [0.376]	782
Credit 3 take-up (high P, low S)	0.170 [0.377]	0.171 [0.377]	0.253 [0.436]	0.158 [0.366]	782

Note: Presented in the table are means and standard deviations (in parentheses), P stands for price, S stands for sanctions. Control group received sanction information only as is presented in credit contracts.

On the contrary, as it turns out, presenting the sanctions in the form of graph has much lower effect than the scenarios in the form of table (the take-up rate of credit 1 with low price but high sanctions decreased from 71% to 67.2%), which is against our expectations.

The credit take up rates under the presence of individual sanction treatment are summed up in the table above. Whether the shifts in take-up rates under individual treatments are significant will be tested by probit model with marginal effects in following section.

5.4 THE MODEL ESTIMATION

To provide a comprehensive overview of the results, we first present results for each manipulation separately. For each manipulation Z, we run a probit regression of the type:

$$\Pr (Y=1) = \Phi (\beta Z + \varepsilon)$$

where Y is a dummy indicating loan take-up.

The probit estimation enables us to evaluate various effects on dependent variable, which is whether the participant takes up the specific loan or not. The variable is a binary variable that equals 1 if the participant chose the specific loan, or 0 if the participant chose other loan.

There are several assumptions that need to be satisfied in order to use probit estimation correctly:

1. The explained variable must be a binary variable.
2. The error term must follow standard normal distribution
3. None of any two explanatory variables are correlated with each other.

Since in our case these are satisfied, we can build a probit model.²⁰

Moreover, for testing whether the effect of certain price or sanction manipulation is significantly different for certain group of recipients relative to the rest, we use probit model with two-way interactions in the form:

$$\Pr(Y=1) = \Phi(\beta_1 C + \beta_2 Z + \beta_3 C*Z + \epsilon),$$

where Y represents specific credit take-up,

C is chosen characteristics of the recipient (i.e. sex, level of education, etc.),

Z is chosen treatment (i.e. Treatment Final amount info, Treatment Graph, etc.)

and C*Z is product of C and Z, which is the test of their interaction.²¹

²⁰For detailed description of probit model see i.e. Verbeek (2004) or Greene (2002)

²¹For detailed explanation of interaction terms in probit models see Ai and Norton (2002)

5.5 ECONOMETRIC RESULTS

5.5.1 Price manipulations

To find out the effects of price manipulations, we run probit model reporting marginal effects in the form:

$$\Pr(Y_i=1) = \Phi(\beta_1 P_1 + \beta_2 P_2 + \varepsilon_i),$$

where Y_i represents the specific credit take-up,

P_1 represents treatment “Final amount info”,

P_2 represents treatment “Payment plus final amount info”.

Omitted variable is variable Control, which represent revealing only monthly payment information.²²

By manipulating the price information, we try to measure the sensitivity of consumers to different form of credit price despite the fact that it bares the same information. Our hypothesis assumes that consumers are more sensitive to the total amount to be paid than if the conditions are expressed only in monthly payments, since in case of monthly payments the overall difference of the credit prices is not that visible.

The results from the probit models applied on the whole sample are summed up in **Table 9**. The coefficients that represent marginal effects relatively to the Control group show the same tendencies we already described from descriptive statistics. When the price conditions were expressed solely as the final amount to be paid without revealing the monthly payments, the coefficient of the Credit 3 take-up variable turned out to be significant on the 10 % level of confidence. Therefore, based on the coefficient, we can conclude that revealing the price of the credit only in terms of the total amount to be paid decreases probability of the most expensive credit take-up by 6.3 percentage points (from 22.3 % take-up rate when the control treatment information is revealed to 16% take-up rate). Such results support our hypothesis that consumers are more sensitive to information of the total amount to be

²² For estimations software STATA 9.1 was used

paid than to monthly payments.

Relatively to the Control group (when only partial price information -APR and monthly payment is presented), revealing information about monthly payment plus final amount paid caused slight increase in the take-up of the cheapest credit and similar decrease in the take up of the most expensive credit. Nevertheless, based on the p-values, this treatment turns out to be insignificant, which means that adding the information of the total amount to be paid to the monthly payment information had no significant effect on the participants' decision making.

Table 9 Effect of price manipulations on credit take-up

Independent variables	Dependent variables		Sample size
	Treatment Final amount plus info	Treatment Payment plus final amount info	
Credit 1 take-up (low P, high S)	0.0389 [0.0406]	0.0370 [0.0412]	782
Credit 2 take-up (mid P, mid S)	0.0225 [0.0328]	0.0016 [0.0330]	782
Credit 3 take-up (high P, low S)	-0.0626* [0.0312]	-0.0398 [.0320]	782

Notes

1. Each row corresponds to the estimation of a probit model. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

5.5.2 Sanction manipulations

To find out the effects of price treatments, we run probit model reporting marginal effects in the form:

$$\Pr(Y_i=1) = \Phi(\beta_1 S_1 + \beta_2 S_2 + \beta_3 S_3 + \varepsilon_i),$$

where Y_i represents the specific credit take-up,

S_1 represents treatment “Up to 2 month scenarios”,

S_2 represents treatment “Up to worst case scenarios” and

S_3 represents treatment “Graph”

Omitted variable is variable Control, which represents revealing sanction costs only

in the contract form.

Regarding sanction manipulations, we try to measure the effects of adding extra scenarios that bare the same information as the control treatment, but in different and clearer terms. Control group received information about sanction costs in the standardized form as it is presented in the contract – percentage of the remaining debt per day of delay plus fees presented as a percentage of monthly payment.

Our hypothesis assumes that adding the scenarios make the sanction costs more visible which will influence the consumers’ decision making and there will be significant outflow from the cheapest credit with the highest sanction costs towards slightly more expensive but “safer” options.

Moreover, we expect that adding the information about the sanction costs in the form of graph will have even more significant effect on the participants’ decision making than adding the scenarios.

Table 10 The effect of additional sanction information on credit take-up

Independent variables	Dependent variables			Sample size
	Treatment Up to 2 months delay scenarios	Treatment Up to worst case scenarios	Treatment Graph	
Credit 1 take-up (low P, high S)	-0.0590 [0.0489]	-0.1617*** [0.0504]	-0.0401 [0.0512]	782
Credit 2 take-up (mid P, mid S)	0.0565 [0.0413]	0.0781* [.0433]	0.0506 [0.0435]	782
Credit 3 take-up (high P, low S)	0.0006 [0.0392]	0.0819** [.0431]	-0.0126 [0.0404]	782

Notes

1. Each row corresponds to the estimation of a probit model. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

The results from the probit models applied on the whole sample are summed up in

Table 10.

As it turns out, adding Up to 2 months delay scenarios (specifically “Delay in 1st payment by 1 month” and “Delay in 1st payment by 2 months”)²³ had no significant effect on the credit take-up rate. Participants were not influenced by these scenarios and were consistent in their decision making. This might be explained by the fact that these scenarios represented examples of relatively low sanction fees which might not have been considered as “dangerous” by participants and therefore not worth switching to more expensive but “safer” credits.

Nevertheless, when there were Up to worst case scenarios added (specifically „Delay in 1st payment by 1 month”, “Delay in 1st payment by 2 months”, “Possible sanction costs of delayed payments throughout the second half of the year” and “Possible sanction costs of delayed payments throughout the whole year”²⁴), the coefficients of the probit models turn out to be significant. Probability of the Credit 1 take-up decreased by 16 percentage points, which, compared to the take-up rate under control treatment, represents considerable drop from 71% to 55%. On the other hand, probability of the Credit 2 (mid P, mid S) take-up increased due to this treatment by 7.8 percentage points, which is highly significant jump in comparison to original 12% take-up rate; probability of Credit 3 take-up increased by 8.2 percentage points which as well represents considerable growth in comparison to the original 17% take-up rate.

As shown by the results, adding more pessimistic scenarios that above all include certain “worst case scenario” made participants more concern about the risks of the credit offers, which caused significant shift from the cheapest but more risky product towards a bit more expensive but relatively safer products. Surprising is the similar level of increase in both credit 2 and credit 3 take-up rate – we expected such treatment will cause shift from credit 1 mainly towards the compromise option – credit 2. However, as it turns out, nearly half of the participants who were influenced by the up to worst case scenarios was willing to pay for the most expensive product in order to face nearly zero sanction costs. The significance of the up to worst case

²³ For more details about the sanction settings see part 3.3 Experimental design

²⁴ For more details about the sanction settings see part 3.3. Experimental design

scenarios effect supports our hypothesis that adding well chosen scenarios make the sanction costs more visible which influences the consumers' decision making and there will be significant outflow from the cheapest credit with the highest sanction costs towards more expensive but "safer" ones.

Regarding the case, when the possible development of the sanctions in case of delayed payments throughout the year is presented in the form of graph, the effect on the credit take-up is surprisingly none. Such result contradicts with our expectation that adding sanctions in the form of graph will make the sanctions more visible and readable. One of the possible explanations might be the fact that regarding the layout of the questionnaire, the graph was located below the table of credit offers which might have negatively affected its inclusion into participants' decision making.

5.5.3 Subsample analysis - Price manipulations

Sex

This section tries to test sensitivity to different forms of price information of male and female participants separately. Globally, we assumed that consumers will react more to final (total) amount they have to pay for the credit than to individual payments.

When we have a look **Table 11** summing up the results for female participants, we can see that on 10% level of confidence women confirm our hypothesis. In comparison to control group, (which received price information in the form of monthly payments and number of payments) when the price was represented by the final amount to be paid, the take up of the most expensive credit decreased by 7.4 percentage points, despite the fact that both forms bear the same credit price information.

Nevertheless, as can be seen from the results, men did not change their decision about credit choice, no matter what price information was revealed to them. Men therefore do not confirm our hypothesis.

Table 11 Effect of price information on men and women

	Independent variables	Dependent variables			Sample size
		(Z ₁) Treatment Final amount info	(Z ₂) Treatment Payment plus final amount info	(C ₁ xZ ₁) FemalexFinal amount info	
(C ₁) Female	Credit 1 take-up (low P, high S)	0.0357 [0.0443]	-0.0056 [0.0454]		408
	Credit 2 take-up (mid P, mid S)	0.0357 [0.0443]	-0.0056 [0.0454]		408
	Credit 3 take-up (high P, low S)	-0.0737* [0.0429]	-0.0219 [0.0455]		408
(C ₂) Male	Credit 1 take-up (low P, high S)	0.0371 [0.0597]	0.0461 [0.0589]		374
	Credit 2 take-up (mid P, mid S)	0.00791 [0.0488]	0.00728 [0.0481]		374
	Credit 3 take-up (high P, low S)	-0.0496 [0.0456]	-0.0581 [0.0451]		374
Whole sample	Credit 1 take-up (low P, high S)			0.0111 [0.0724]	782
	Credit 2 take-up (mid P, mid S)			0.0363 [0.0609]	782
	Credit 3 take-up (high P, low S)			-0.0408 [0.0551]	782

Notes

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristic type, Z for manipulation type.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

However, when we examine the decision making of women relative to men in the situation when only the final amount is revealed, variable femalexfinal_amount does not turn out to be significant – our conclusion from the subsample analysis that women are more sensitive to such type of information than men is thus not proven and remains rather suggestive.

Education

Regarding the level of education of participants, we divided the sample into two subsamples – one includes both primary and secondary educated²⁵, second group covers tertiary educated participants.

As shown in

Table 12, participants with lower education reacted to revealed final price of the credit, no matter if it was added to information about payments (treatment Payment plus final amount info) or if it was the only information revealed (treatment final amount info). In comparison to control group, when the participants received in addition to payments final price of the credit, the credit1(low price, high sanctions) take-up rate increased by 10.7 percentage points. That indicates that adding final price of the credit caused shift to the cheapest credit. Moreover, when only the final price of the credit was presented (without revealing individual payments), there was 7.6 percentage points decrease in credit 3 (high price, low sanctions) take-up rate – indicating outflow from the most expensive credit.

Regarding participants with tertiary education, the difference between their credit choice in case of revealing either solely individual payments or solely final amount to be paid turns out to be insignificant. Unlike participants with lower education thus stayed consistent in their decision making and did not change their preference. Nevertheless, when complete information about the credit (payment plus total amount to be paid) was revealed, tertiary educated participants rather switched to “mid price mid sanctions” credit 2. The credit 2 take-up rate thus within treatment

²⁵ due to very small sample of primary educated

complete information increased by 12.3 percentage points.

Table 12 The effect of price information on less and more educated

	Independent variables	Dependent variables				Sample size
		(Z ₁) Treatment Final amount info	(Z ₂) Treatment Payment plus final amount info	(C ₁ xZ ₁) Edu_lower xFinal_amou nt	(C ₁ xZ ₂) Edu_lower xPayment_plus _final	
(C ₁) Edu_lower	Credit 1 take-up (low P, high S)	0.0668 [0.0500]	0.107** [0.0489]			520
	Credit 2 take-up (mid P, mid S)	0.00621 [0.0389]	-0.0492 [0.0371]			520
	Credit 3 take-up (high P, low S)	-0.0761* [0.0394]	-0.0610 [0.0395]			520
(C ₂) Edu_tertiary	Credit 1 take-up (low P, high S)	-0.0278 [0.0697]	-0.116 [0.0764]			262
	Credit 2 take-up (mid P, mid S)	0.0630 [0.0599]	0.123* [0.0688]			262
	Credit 3 take-up (high P, low S)	-0.0291 [0.0509]	0.00128 [0.0554]			262
Whole sample	Credit 1 take-up (low P, high S)			-0.00843 [0.0771]	0.167** [0.0682]	782
	Credit 2 take-up (mid P, mid S)			0.0249 [0.0618]	-0.113*** [0.0435]	782
	Credit 3 take-up (high P, low S)			-0.0136 [0.0629]	-0.0429 [0.0608]	782

Notes

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

The results show that regardless of level of education, combination of the forms of price information can change consumers' choice despite the fact that both forms say

the same. In addition, participants with lower education showed general sensitivity to final price of the credit when such information was included in the table - no matter if it was in combination with individual payments or independently, consumers revealed tendencies to choose cheaper credit.

Now let us examine if the interaction of lower level of education and complete price setting is significant. Results show that when adding the final price to the information about monthly payment, there is significant difference in reaction of less educated in comparison to tertiary educated in terms of greater shift towards the cheapest credit. When both payment and final amount information is revealed, the fact that participant is less educated increased the probability of credit 1 take-up by 16.7 percentage points relative to tertiary educated under the same information setting. The outflow from more expensive credits is also visible in case of credit 2 take-up rate which under the combination of complete info treatment and lower education decreased by 11.3 percentage points.

However, when the credit price is presented only in the form of final amount to be paid, the change in preferences of less educated turns out to be insignificant in comparison to tertiary educated. The difference in reaction to price manipulations is therefore significant only in case of presenting both monthly payment and final amount to be paid - less educated switch to the cheapest credit with significantly higher probability than participants with tertiary education.

Age

We divided participants based on their age into 3 categories:

- young (18-30 years old),
- middle age (31-55 years old),
- elderly (56-80 years old)

and tested what price information influenced decision making of each category. As it turns out, within each category, consumers reacted differently to our price manipulations. Young participants stayed consistent in their credit choice and no additional price information influenced their preferences, whereas middle aged participants showed tendency to shift from the most expensive credit towards cheaper

credits when the price was revealed solely as total sum of monthly payments. In comparison to revealing price only in the form of monthly payments, total price caused decrease in credit 3 take-up by 12.4 percentage points.

Table 13 Effect of price manipulation on age groups

	Independent variables	Dependent variables					Sample size
		(Z ₁) Treatment Final amount info	(Z ₂) Treatment Payment plus final amount info	(C ₂ xZ ₁) Middle_age Final_amount	(C ₃ xZ ₁) Elderly Final_amount	(C ₃ xZ ₂) Elderly Payment_plus_ final	
(C ₁) Young	Credit 1 take-up (low P, high S)	-0.0767 [0.0663]	-0.0458 [0.0688]				306
	Credit 2 take-up (mid P, mid S)	0.0557 [0.0584]	0.0622 [0.0611]				306
	Credit 3 take-up (high P, low S)	0.0143 [0.0488]	-0.0231 [0.0489]				306
(C ₂) Middle_age	Credit 1 take-up (low P, high S)	0.0950 [0.0578]	0.0548 [0.0598]				349
	Credit 2 take-up (mid P, mid S)	0.0296 [0.0440]	-0.0266 [0.0433]				349
	Credit 3 take-up (high P, low S)	-0.124*** [0.0452]	-0.0279 [0.0483]				349
(C ₃) Elderly	Credit 1 take-up (low P, high S)	0.207** [0.105]	0.240** [0.102]				127
	Credit 2 take-up (mid P, mid S)	-0.0620 [0.0771]	-0.0422 [0.0771]				127
	Credit 3 take-up (high P, low S)	-0.129 [0.0854]	-0.184** [0.0841]				127
Whole sample	Credit 1 take-up (low P, high S)			0.0902 [0.0675]	0.0510 [0.0918]	0.114 [0.0820]	782
	Credit 2 take-up (mid P, mid S)			0.0447 [0.0630]	-0.0639 [0.0582]	0.000574 [0.0752]	782
	Credit 3 take-up (high P, low S)			-0.109** [0.0432]	0.0288 [0.0829]	-0.0930* [0.0520]	782

^aNotes

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

Nevertheless, elderly seem to be even more sensitive to absolute price of the credit –

it was sufficient to add the total price of the credit to monthly payments and the credit 3 takeup in comparison to control group decreased by 18.4 percentage points. Take up of the cheapest credit – credit 1 - on the other hand increased by 24 percentage points. When the price was presented only by the total price of the credit (as sum of monthly payments), there was also significant shift towards credit 1 - its take-up rate increased by 20.7 percentage points.

The subsample analysis thus suggests, that middle age participants were sensitive to final amount information and elderly to both complete and final amount information. To find out, if these reactions of certain age group are significant relatively to the participants from other age groups under the same form of information revealed, we run set of probit regressions reporting marginal effects with two way interaction.

Results show that there was significant difference in reactions to final amount by middle age participants relative to the rest of participants, whereas the change in preferences of elderly due to the same information setting turns out to be insignificant. However, elderly react more significantly in comparison to other age groups to complete information setting – when both monthly payment and final amount to be paid is revealed, the fact that participant is above 55 years old decreases the probability of the most expensive credit take-up by 9.3 %

Occupation

Within the questionnaire, we asked participants to state their current occupation – whether they are students, employed, unemployed or retired. We kept the way groups were divided in the questionnaire (despite the fact that group “unemployed” and “retired” was relatively small) and ran probit reporting marginal effects.

Results revealed, that students did not change their preferences throughout different presentations of credit prices or their combinations. Such result might be explained by the fact that majority of students were students of University of Economics in Prague, therefore the sample was biased towards economically educated students. Nevertheless, when we divided the group of students to economic students and non-economic students, no treatment turned out significant either, which means that even non-economic students stayed consistent in their decision making.

Regarding employed participants, adding the information of final amount to

individual payments did not affect their credit choice. However, when the credit price was presented only as final amount to be paid, the take-up rate of the compromise credit (credit 2) increased by 7.3%.

Table 14 Effect of price manipulation on groups based on current occupation

	Independent variables	Dependent variables					Sample size
		(Z ₁) Treatment Final amount info	(Z ₂) Treatment Payment plus final amount info	(C ₃ xZ ₁) Unemployedx Final_amount	(C ₄ xZ ₁) Retiredx Final_a mount	(C ₄ xZ ₂) Retiredx Payment_ plus_final	
(C ₁) Student	Credit 1 take-up (low P, high S)	-0.0373 [0.0810]	0.0235 [0.0838]				201
	Credit 2 take-up (mid P, mid S)	0.0029 [0.0696]	0.0197 [0.0733]				201
	Credit 3 take-up (high P, low S)	0.0206 [0.0598]	-0.0571 [0.0580]				201
(C ₂) Employed	Credit 1 take-up (low P, high S)	-0.0200 [0.0519]	-0.0129 [0.0529]				478
	Credit 2 take-up (mid P, mid S)	0.0736* [0.0428]	0.0286 [0.0430]				478
	Credit 3 take-up (high P, low S)	-0.0501 [0.0393]	-0.0120 [0.0408]				478
(C ₃) Unemployed	Credit 1 take-up (low P, high S)	0.672*** [0.110]	0.515*** [0.132]				53
	Credit 2 take-up (mid P, mid S)						15
	Credit 3 take-up (high P, low S)	-0.326*** [0.114]	-0.147 [0.123]				53
(C ₄) Retired	Credit 1 take-up (low P, high S)	0.174 [0.185]	0.161 [0.164]				
	Credit 2 take-up (mid P, mid S)	0.135 [0.175]	0.146 [0.146]				
	Credit 3 take-up (high P, low S)	-0.258* [0.152]	-0.276* [0.147]				
Whole sample	Credit 1 take-up (low P, high S)			0.326*** [0.0420]	0.0641 [0.143]	0.0564 [0.132]	782
	Credit 2 take-up (mid P, mid S)				0.0151 [0.123]	0.106 [0.140]	
	Credit 3 take-up (high P, low S)			-0.146*** [0.0462]	-0.0462 [0.0967]	-0.0918 [0.0678]	782

Notes

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation

- (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
 3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

Due to small sample size regarding unemployed participants the

Table 14 is not complete, since the sample size was insufficient, nevertheless, from the available results it is clear that total price of the credit was strong form of information for unemployed and when being revealed, there was significant shift towards the cheapest credit.

When the total price of the credit was revealed together with monthly payments, the credit take-up rate increased by 51.5. percentage points. When the price information was presented solely in the form of final price of the credit, the probability of choosing credit 1 increased even by 67.2 percentage points.

When we have a look at changes in preferences of retired participants, the results suggest that pensioners reacted to final amount information no matter if it was presented in combination with monthly payment or independently. In former case, the take-up rate of the most expensive credit – credit 3- decreased by 27.6 percentage points, in latter case it decreased by 25.8 percentage points. Pensioners therefore turn out to be sensitive to form of information that makes the complete price of credit visible.

Now let us have a look whether the effect of certain price manipulation is different for specific occupation status relative to the rest.

The effect of treatment final amount turns out to be significantly different for unemployed participants (variable `unemployedxfinal` in the table) – which supports our conclusion that unemployed react more sensitively to revealing the price solely as sum of monthly payments in comparison to the rest of participants. Based on the subsample analysis we also suggested that both price manipulations had larger effect on pensioners relative to the rest of occupation statuses– however, both variables `retiredxcomplete` and `retiredxfinal` turn out to be insignificant.

Area of employment

To test whether consumers from different area of employment react on different types of information, we divided the reported jobs into three major categories:

- **business sphere**
(including business; finance, banking and insurance services; real estate; IT; and media, marketing and PR)
- **public services**
(including public administration; health and social services; other public and social services; and education)
- **technical/manual jobs**
(including manufacturing; constructions; and logistics and transportation)

Creating such categories had several reasons – it was supposed to represent both certain (and of course very rough) estimate of income levels and certain area of knowledge. We assume that Business sphere has the highest economic and financial knowledge and probably the highest income. Public services should represent middle income level and rather middle or low financial or economic knowledge. Technical and manual jobs within our assumption represent lower income level and low or none economic and financial knowledge. We of course realize the limits of such assumptions, however, since we did not have any chance to find out the real levels of income of participants, their areas of employment was the only representation of possible income we could obtain. As it turns out, both business sphere and public services reacted to price manipulations, whereas participants employed in technical or manual jobs were not affected by other forms of information and stayed consistent in their credit choice. Let us have a closer look at each group separately.

Regarding business sphere, we can see interesting and unexpected shift in preferences after revealing final amount borrower has to pay for the credit – no matter if in combination with monthly payment information (treatment Payment plus final amount info) or independently (treatment Final amount info). When the final amount was revealed as addition to monthly payment, there was 15% percentage outflow from the cheapest credit – credit 1 - towards more expensive credits. Moreover, when the price was expressed only in terms of final amount to be paid, the credit 1 take-up decreased by 25.4 percentage points in favor of credit 2.

Such scheme of decision making is exactly opposite to our general hypothesis. Price

information in form of final amounts might make clearer overview of the real differences in credit prices and may make employees from business sphere (unlike the rest of the participants) perceive the difference in prices as relatively small in comparison to differences in sanction conditions. Conclusion that business sphere is able to realize the differences in sanction costs - regardless of the form of presentation - is suggested further in subsample analysis of sanction manipulations.

Of course, we are aware that such explanation is only notional and brings other questions such as why are employees from business sphere capable of realizing the sanction costs already from the basic contract setting (our control treatment) but incapable of recognizing real price differences when price is presented in terms of monthly payments. We therefore rather keep the question what is behind such scheme of decision making open and leave some space for reader's own ideas for explanation.

Table 15 Effect of price manipulations on subsamples based on area of employment

	Independent variables	Dependent variables					Sample size
		(Z ₁) Treatment Final amount info	(Z ₂) Treatment Payment plus final amount info	(C ₁ ×Z ₁) Businessx Final_amo unt	(C ₁ ×Z ₂) Businessx Payment_p lus_final	(C ₂ ×Z ₁) Publicx Final_a mount	
(C ₁) Business sphere	Credit 1 take-up (low P, high S)	-0.254*** [0.0892]	-0.150* [0.0844]				190
	Credit 2 take-up (mid P, mid S)	0.132* [0.0800]	0.0919 [0.0728]				190
	Credit 3 take-up (high P, low S)	0.115 [0.0733]	0.0482 [0.0645]				190
(C ₂) Public services	Credit 1 take-up (low P, high S)	0.128* [0.0662]	0.0845 [0.0702]				245
	Credit 2 take-up (mid P, mid S)	0.00380 [0.0490]	-0.0611 [0.0486]				245
	Credit 3 take-up (high P, low S)	-0.133** [0.0517]	-0.0249 [0.0563]				245
(C ₃) Technical/ manual jobs	Credit 1 take-up (low P, high S)	-0.0209 [0.111]	0.0366 [0.114]				111
	Credit 2 take-up (mid P, mid S)	0.119 [0.0971]	0.0654 [0.101]				111
	Credit 3 take-up (high P, low S)	-0.0844 [0.0849]	-0.0858 [0.0861]				111
Whole sample	Credit 1 take-up (low P, high S)			-0.194** [0.0854]	-0.0825 [0.0911]	0.109 [0.0696]	782
	Credit 2 take-up (mid P, mid S)			0.0865 [0.0743]	0.0618 [0.0776]	0.0170 [0.0642]	782
	Credit 3 take-up (high P, low S)			0.116 [0.0851]	0.0122 [0.0767]	-0.107** [0.0447]	782

Notes

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

Public services, unlike business sphere, react according to our hypothesis that participants are more sensitive to total amounts than to monthly payments. In case when the price was presented as final amount to be paid, the credit 1 take-up increased by 12.8 percentage points, whereas credit 3 take-up decreased by 13.3 percentage points.

On the other hand, participants involved in technical or manual jobs did not react to any additional form of price information. Based on the preferences of control group –

60.4 % preferring credit 1 (low P, high S), 18 % preferring credit 2 (mid P, mid S) and 21.6 % preferring credit 3 (high P, low S), we cannot assume that participants from this group always chose the credit with the lowest payment or total price and that's why there were no significant differences between credit take-up rates under different treatments. Nevertheless, whatever the explanation is, the message for the lenders is that no price information affects the credit choice of consumers with technical or manual jobs, who might be the target group for consumer credit offers.

Despite the significant effect of treatment “Payment plus final amount info” within the business sphere, the coefficient of variable `BusinessxPayment_plus_final` shows that the interaction of this area of employment with the presentation of credit price both as monthly payment and total amount to be paid turns out to be insignificant. Change in decision making of business sphere employees due to complete information about the credit is therefore not significantly different from the decision making of participants from other areas of employment under the same information setting.

However, as it turns out on 5% level of confidence, employees from business sphere are significantly sensitive to price in the form of final amount to be paid relative to the rest of participants – the fact that participant works in this area and the final amount to be paid is the only price information revealed decreases the probability of the cheapest credit take-up by 19.4 %. Such direction of preference shift - from the cheapest credit towards more expensive ones -is against the direction of preference shift of the rest of participants and has been briefly discussed earlier in the section.

Regarding interaction of Final amount treatment and public services employees, the shift from the most expensive credit towards cheaper ones is also significant on 5% level of confidence. Public services employees thus turn out to be more sensitive (relative to the rest of employed participants) to the final amount that represents final price of the credit and if such form of price is revealed to them, the probability of credit 3 take-up is 10.7% lower than if such information is presented to employees from other sectors.

Experience

How experience with consumer credits affects the reaction to forms of price presentation is shown in following table. Based on the results, those, who have taken consumer credit in the past, turn out to react more sensitively to final amount to be paid in comparison to the case when the price is presented only in monthly payments.

Table 16 Effect of price manipulations on experienced and unexperienced

	Independent variables	Dependent variables			Sample size
		(Z ₁) Treatment Final amount info	(Z ₂) Treatment Payment plus final amount info	(C ₁ xZ ₁) Experience_with_ creditxFinal_amo unt	
(C ₁) Experience with credit	Credit 1 take-up (low P, high S)	0.124* [0.0690]	0.0196 [0.0707]		259
	Credit 2 take-up (mid P, mid S)	-0.0103 [0.0524]	0.00806 [0.0526]		259
	Credit 3 take-up (high P, low S)	-0.112** [0.0553]	-0.0257 [0.0576]		259
(C ₂) No experience	Credit 1 take-up (low P, high S)	-0.00161 [0.0498]	0.0493 [0.0507]		523
	Credit 2 take-up (mid P, mid S)	0.0390 [0.0415]	0 [0.0421]		523
	Credit 3 take-up (high P, low S)	-0.0403 [0.0375]	-0.0518 [0.0380]		523
Whole sample	Credit 1 take-up (low P, high S)			0.132** [0.0666]	782
	Credit 2 take-up (mid P, mid S)			-0.0482 [0.0517]	782
	Credit 3 take-up (high P, low S)			-0.0725 [0.0509]	782

Notes:

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

In case of presenting the price solely in terms of total amount to be paid, those, who had experience with consumer credit, revealed strong change in their preferences from the most expensive credit to the cheapest one. In comparison to control group, to whom only monthly payments were revealed, those, who received only final amount information, chose credit 3 by 11.2 percentage points less, while credit 1 take-up rate increased by 12.4 percentage points.

On the other hand, those who have never taken consumer credit, did not show any significant change in preferences after changing the form of price information revealed. Participants with no experience with consumer credits thus did not react to any price manipulations and stayed consistent in their decision making.

How significant was the difference in shifted preferences between „experienced“ and „unexperienced“ participants due to effect of the treatment final amount information, is shown by variable `experienced_with_creditxfinal`. The coefficient implies that the difference in reaction to such form of information is significant and thus supports former suggestion that those, who have taken consumer credit in the past, are affected by final amount information more than those, who have never had any experience with consumer credits in the past.

Future

Within questionnaires we also asked participants if they were planning to take consumer credit in the near future. Unfortunately, in our sample, there were only 47 participants, who gave positive answer. Both our sample and our conclusions are therefore rather limited.

Nevertheless, the subsample analysis suggests, that those, who plan to take consumer credit, reacted more sensitively to complete price information (monthly payment and final amount to be paid), whereas those, who do not plan taking any consumer credit in the near future, were affected rather by final amount treatment.

However, interaction analysis shows that the only significant difference between these two groups in reaction to price manipulation was the change in preferences under monthly payment+final amount information - those, who plan to take consumer credit, took the most expensive credit with 12 percentage points lower probability than those, who do not plan to finance their consumption by consumer credit in the near future.

Table 17 Effect of price manipulations on potential credit takers and non-takers

	Independent variables	Dependent variables			Sample size
		(Z ₁) Treatment Final amount info	(Z ₂) Treatment Payment plus final amount info	(C ₁ ×Z ₂) Yes_credit_in_fut uretxPayment_pl us_final	
(C ₁) Yes credit in future	Credit 1 take-up (low P, high S)	-0.0732 [0.182]	-0.0491 [0.171]		47
	Credit 2 take-up (mid P, mid S)	0.248 [0.189]	0.313* [0.167]		47
	Credit 3 take-up (high P, low S)	-0.0864 [0.131]	-0.195 [0.121]		47
(C ₂) No planned credit	Credit 1 take-up (low P, high S)	0.0443 [0.0415]	0.0429 [0.0423]		735
	Credit 2 take-up (mid P, mid S)	0.0125 [0.0331]	-0.0165 [0.0332]		735
	Credit 3 take-up (high P, low S)	-0.0596* [0.0322]	-0.0291 [0.0332]		735
Whole sample	Credit 1 take-up (low P, high S)			-0.0398 [0.154]	782
	Credit 2 take-up (mid P, mid S)			0.238 [0.173]	782
	Credit 3 take-up (high P, low S)			-0.120* [0.0666]	782

Notes:

- Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
- P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
- *, **, *** represent 10%, 5% and 1% level of confidence respectively.

5.5.4 Subsample analysis - Sanction manipulations

Now let us have a look at the specific groups and analyze what treatments were significant in their decision making. The sample is divided into the same groups as in price manipulations analysis - based on the participants' sex, education, age, occupation, area of employment, experience with consumer credits and future plans to use consumer credit as a source of financing.

Sex

Dividing the sample into two groups based on sex, we try to measure if men and women react to same information manipulations or if they are influenced by different type of sanction information.

Table 18 Effect of sanction manipulations on men and women

	Independent variables	Dependent variables			Sample size
		(Z ₁) Treatment Up to 2 months delay scenarios	(Z ₂) Treatment Up to worst case scenarios	(Z ₃) Treatment Graph	
(C ₁) Male	Credit 1 take-up (low P, high S)	0.0749 [0.0693]	-0.1277* [0.0737]	-0.0193 [0.0735]	374
	Credit 2 take-up (mid P, mid S)	-0.0635 [0.0613]	0.0458 [0.0635]	0.0921 [0.0671]	374
	Credit 3 take-up (high P, low S)	0.0 [0.0500]	0.0687 [0.0599]	-0.0739 [0.0507]	374
(C ₂) Female	Credit 1 take-up (low P, high S)	-0.1008 [0.0693]	-0.1923*** [0.0689]	0.0587 [0.0714]	408
	Credit 2 take-up (mid P, mid S)	0.0363 [0.1020]	0.1020* [0.0583]	0.0104 [0.0554]	408
	Credit 3 take-up (high P, low S)	0.0691 [0.0607]	0.0965* [0.0616]	0.0511 [0.0623]	408
Whole sample	Credit 1 take-up (low P, high S)			-0.0224 [0.0794]	782
	Credit 2 take-up (mid P, mid S)			0.103 [0.0753]	782
	Credit 3 take-up (high P, low S)			-0.0572 [0.0524]	782

Notes:

- Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
- P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
- *, **, *** represent 10%, 5% and 1% level of confidence respectively.

Running probit with marginal effects on the two subsamples, we can see that only up to worst case scenarios added to the sanction information had significant effect on the participants' decision making – regardless of their sex. As summed up in **Table 18**, when presenting the sanction costs in such additional scenarios to men, the probability of take-up of credit 1 decreased by 12.8 percentage points. When analysing the effect on the participating women, revealing additional up to worst case scenarios caused 19.2 percentage point drop in credit 1 take-up and caused balanced increase in both the „compromise“ credit (credit 2) and the most expensive credit (credit 3). Results of the marginal probit applied on female subsample are also presented in **Table 18**.

To sum the results up, adding up to 2 months delay scenarios, which showed sanction costs in case of 1 and 2 months delay, as well as presenting development of potential sanction costs throughout the year in a graph did not change participants' preferences. Both men and women thus stayed consistent in their decision making under these two treatments.

The only significant treatment for both groups was the effect of additional up to worst case scenarios, which caused shift towards credits more expensive in price but less dangerous in sanction costs. From the results it looks like women were affected by this treatment more than men, nevertheless, when we have a look at the effect of combination 1. presenting the sanctions in the form of scenarios including worst case scenario and 2. female characteristics on credit take-up, we can see that it is not significant. There is therefore no gender heterogeneity, difference in reactions between women and men under such treatment is not significant (p-value of variable $femalex4scenarios$ in case of credit 2 take-up is 0.132), which leaves us with only suggestive results that women might be slightly more sensitive to sanctions in the form of worst case scenario.

Education

Based on our hypothesis, we expect less educated consumers to react more to additional forms of sanction information than more educated consumers.

Results show that less educated participants reacted to additional up to worst case scenarios and shifted their preferences towards more expensive, but safer credit, whereas tertiary educated stayed consistent in their decision making regardless of

form of sanction costs presentation. Nevertheless, to find out whether there is really a significant difference between the reactions of these two groups under Up to worst case scenarios treatment, we run probit model with two way interaction.

Table 19 Effect of sanction manipulations regarding level of education

	Independent variables	Dependent variables				Sample size
		(Z ₁) Treatment Up to 2 months delay scenarios	(Z ₂) Treatment Up to worst case scenarios	(Z ₃) Treatment Graph	(C ₂ xZ ₂) Edu_lowerx Up_to_ worst_case	
(C ₁) Edu_lower	Credit 1 take-up (low P, high S)	-0.0503 [0.0612]	-0.170*** [0.0613]	-0.0409 [0.0629]		520
	Credit 2 take-up (mid P, mid S)	0.0394 [0.0499]	0.0703 [0.0514]	0.0422 [0.0518]		520
	Credit 3 take-up (high P, low S)	0.00507 [0.0509]	0.0942* [0.0542]	-0.00735 [0.0518]		520
(C ₂) Edu_tertiary	Credit 1 take-up (low P, high S)	-0.0767 [0.0816]	-0.140 [0.0883]	-0.0361 [0.0879]		262
	Credit 2 take-up (mid P, mid S)	0.0876 [0.0726]	0.0948 [0.0797]	0.0685 [0.0794]		262
	Credit 3 take-up (high P, low S)	-0.00430 [0.0598]	0.0515 [0.0685]	-0.0254 [0.0622]		262
Whole sample	Credit 1 take-up (low P, high S)				-0.0357 [0.0860]	782
	Credit 2 take-up (mid P, mid S)				0.00553 [0.0651]	782
	Credit 3 take-up (high P, low S)				0.0193 [0.0709]	782

Notes:

- Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
- P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
- *, **, *** represent 10%, 5% and 1% level of confidence respectively.

However, as can be shown by estimated coefficients of variable `edu_lowerxUp_to_worst_case`, the effect of presenting sanction costs in the form of worst case scenarios is not significantly different for less educated relative to tertiary educated. The assumption that less educated react more sensitively to worst case scenario than tertiary educated stays therefore rather suggestive.

Age

Similar to the analysis of price manipulations, we divided the participants into 3 age groups (young defined as 18 – 30 years old, middle age between 31 and 54, and elderly being above 55) and looked at the effects of sanction manipulations within these groups.

Table 20 Effect of sanction manipulations on age groups

	Independent variables	Dependent variables						Sample size
		(Z ₁) Treatment Up to 2 months delay scenarios	(Z ₂) Treatment Up to worst case scenarios	(Z ₃) Treatment Graph	(C ₂ xZ ₂) Middle_age x Up_to_worst _case	(C ₃ xZ ₁) Elderly x Up_to_2 months	(C ₃ xZ ₂) Elderly x Up_to_worst _case	
(C ₁) Young	Credit 1 take-up (low P, high S)	-0.0971 [0.0779]	-0.0888 [0.0831]	0.0221 [0.0779]				360
	Credit 2 take-up (mid P, mid S)	0.0494 [0.0671]	0.0119 [0.0697]	-0.0188 [0.0652]				360
	Credit 3 take-up (high P, low S)	0.0344 [0.0601]	0.0637 [0.0671]	-0.0180 [0.0577]				360
(C ₂) Middle_age	Credit 1 take-up (low P, high S)	0.0353 [0.0690]	-0.151** [0.0730]	-0.0719 [0.0774]				349
	Credit 2 take-up (mid P, mid S)	0.00864 [0.0538]	0.0894 [0.0605]	0.108 [0.0678]				349
	Credit 3 take-up (high P, low S)	-0.0409 [0.0558]	0.0677 [0.0621]	-0.0271 [0.0605]				349
(C ₃) Elderly	Credit 1 take-up (low P, high S)	-0.232* [0.128]	-0.327*** [0.117]	-0.121 [0.135]				127
	Credit 2 take-up (mid P, mid S)	0.227* [0.135]	0.229* [0.123]	0.0740 [0.127]				127
	Credit 3 take-up (high P, low S)	0.0519 [0.120]	0.144 [0.116]	0.0700 [0.124]				127
Whole sample	Credit 1 take-up (low P, high S)				-0.0332 [0.0802]	-0.0840 [0.112]	-0.100 [0.108]	782
	Credit 2 take-up (mid P, mid S)				0.0291 [0.0656]	0.0962 [0.104]	0.0907* [0.0980]	782
	Credit 3 take-up (high P, low S)				0.00856 [0.0633]	0.00164 [0.0851]	0.00564 [0.0788]	782

Notes:

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

As shown by results, young participants did not react to any additional form of sanction information - the change in preferences towards credit offers relative to control group turns out to be insignificant.

Middle age participants, on the contrary, showed highly significant shift from the cheapest credit with the highest sanction costs towards more expensive but safer credits when sanction scenarios including the worst case scenario were added to standard (contract) form of sanction costs presentation. Due to the effect of additional (plus worst case) sanction scenarios, the credit 1 take-up decreased by 15.1 percentage points and the preferences moved towards „more expensive in price but less expensive in sanction costs“ credits.

As far as elderly are concerned, their preferences changed already when additional up to 2 months delay scenarios were revealed. This form of information decreased the credit 1 take-up rate by 23.2 percentage points and shifted the elderly's preferences towards the compromise credit – credit 2 take-up rate increased by 22.7 percentage points.

Moreover, when additional scenarios including the worst case scenario were revealed, the shift from the cheapest but highest in sanctions credit was even more significant – its take-up rate decreased on 1% level of significance by 32.7 percentage points, whereas compromise credit take-up rate increased by 22.9 percentage points. Interesting thing is, that the increase in take-up rate of “mid-price mid-sanctions” credit 2 stays in both sanction manipulations relatively same, whereas credit 1 decrease is in the latter case much higher – that might suggest that adding the worst case scenario did not change preferences about compromise credit that much but made elderly prefer rather the most expensive but the safest credit.

To sum the results up, it turns out that none of the group reacted to sanctions in the form of graph, young participants did not react to any additional form of sanction information, middle age participants were influenced by set of scenarios including the worst case scenario and elderly changed their preferences under both short term scenarios and long term scenarios.

Nevertheless, to find out whether the effect of additional scenarios was different for certain age group relative to others, we run set of probit models with two way interaction.

As it turns out, the interaction of age between 31 and 55 and the up to 2 months delay scenarios plus up to worst case sanction scenarios is not significant. The reaction of

middle age participants relative to others under such treatment is therefore not significantly different.

Such conclusion applies to interaction of age above 55 and effect of up to 2 months delay scenarios. Nevertheless, variable `elderlyxup_to_worst_case` shows, that the shift in the preferences of elderly due to the additional long-term scenarios is significantly different from the change in preferences of others.

Such result implies that elderly are more vulnerable regarding sanction costs presentation than others and together with the available data showing this group as one of the most frequently delayed in payments it is highly important to provide them with transparent form of sanction costs presentation.

Occupation

When testing the effects of treatments on different groups based on their occupation, the results show, that some groups stayed consistent in their decision making no matter in what way the sanction information was revealed to them, whereas certain groups did not.

As can be seen from the **Table 21**, students belong to such group of “consistent“ decision makers – compared to the control group, neither additional scenarios nor sanctions in the form of graph changed their preferences towards offered credits. This may have several explanations. First, majority of students in our sample were students of University of Economics in Prague, therefore economically educated, who may have realized the sanction costs already in the control setting and thus additional clarifying forms of information were unnecessary.

Such explanation seems to apply - when we divided the sample to students with economic major and students with non-economic major, we found out that non-economic students react to both 2 additional scenarios and 4 additional scenarios by shifting from the credit with highest potential sanctions towards the credit with the lowest potential sanctions.

Table 21 Effect of sanction manipulations on subsamples based on occupation

	Independent variables	Dependent variables						Sample size
		(Z ₁) Treatment Up to 2 months delay scenarios	(Z ₂) Treatment Up to worst case scenarios	(Z ₃) Treatment Graph	(C ₂ ×Z ₂) Employed x Up_to_worst _case	(C ₄ ×Z ₁) Retired x Up_to_2 months	(C ₄ ×Z ₂) Retired x Up_to_worst _case	
(C ₁) Student	Credit 1 take-up (low P, high S)	-0.0651 [0.0976]	-0.0487 [0.1022]	0.0693 [0.0962]				201
	Credit 2 take-up (mid P, mid S)	0.0394 0.0842	-0.0310 0.0831	-0.0302 [0.0815]				201
	Credit 3 take-up (high P, low S)	0.0023 [0.0709]	0.0535 [0.0798]	-0.0631 [0.0658]				201
(C ₂) Employed	Credit 1 take-up (low P, high S)	-0.0460 [0.0605]	-0.1536** [0.0628]	-0.03811 [.0646]				478
	Credit 2 take-up (mid P, mid S)	0.0506 [0.0516]	0.1166** [0.0560]	0.1025 [.0590]				478
	Credit 3 take-up (high P, low S)	0.0026 [0.0468]	0.0473 [0.0500]	-.0530 [.0459]				478
(C ₃) Unemployed	Credit 1 take-up (low P, high S)	0.000 [0.1797]	-0.0849 [0.1930]	-0.1227 [0.1984]				53
	Credit 2 take-up (mid P, mid S)	0.000 [0.1094]	-0.0471 [0.1036]	-0.0393 [0.1073]				53
	Credit 3 take-up (high P, low S)	0.000 [0.1689]	0.1414 [0.1893]	0.1720 [0.1963]				53
(C ₄) Retired	Credit 1 take-up (low P, high S)	-0.1484 [0.1923]	-0.5146*** [0.1290]	-0.2806 [0.1648]				
	Credit 2 take-up (mid P, mid S)	0.2055 [0.2257]	0.2320 [0.2319]	-0.0366 [0.1824]				
	Credit 3 take-up (high P, low S)	-0.0254 [0.2382]	0.3803* [0.1964]	0.36023* [0.2062]				
Whole sample	Credit 1 take-up (low P, high S)				0.00504 [0.0780]	-0.368** [0.160]	-0.0631 [0.166]	
	Credit 2 take-up (mid P, mid S)				0.0733 [0.0712]	0.134 [0.151]	-0.129** [0.0508]	
	Credit 3 take-up (high P, low S)				-0.0518 [0.0534]	0.111 [0.139]	0.244 [0.168]	

Notes:

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

When there were example of sanction costs in the form of additional up to 2 months delay scenarios in the table – delay in payment by 1 month and delay in payment by 2 months – students of non-economic major chose credit 1 by 36.6 percentage points less than when such information was not revealed (on 5 % level of significance). The shift was straight towards the “ safest“ credit – credit 3, which is interesting – no other group had such strong reaction after revealing sanctions in additional clarifying

scenarios. Same scheme of decision making was performed when we presented the sanction costs in additional scenarios including the „worst case scenario“ – credit 1 take-up rate decreased by 28 percentage points (on 10% level of significance) in favor of credit 3. However, there is a need to point out that our sample size includes 45 non-economic students, which limits our conclusions to rather suggestions of explanation.

Regarding the group of employed, there can be seen significant effect of the treatment Up to worst case additional scenarios on their credit choice. Those, who received such type of additional sanction information, shifted from the cheapest credit with highest sanctions (credit 1) to mainly the compromise alternate with higher price but lower sanction costs (credit 2). Compared to control group, the probability of credit 1 take-up under Up to worst case scenarios treatment decreased by 15.4 percentage points (from 76.6 % to 61.2 %) , whereas the probability of credit 2 take-up increased by 11.7 percentage points (control group chose credit 2 with 9.9% probability, whereas those, to whom these additional sanction scenarios were revealed, decided for credit 2 with 21.6% probability).

When we have a look at the effect of additional sanction information on decision making of unemployed participants, there is no significant effect of adding more forms of sanction costs bearing the same information. Neither additional scenarios nor development of potential sanction costs in the form of graph changed the preferences of unemployed participants. One of the possible explanations might be hypothesis that participants decided solely based on the price of the credits and thus ignored the sanction costs at all. Such conclusion may be supported by highly significant increase in the cheapest credit take up rate when the price was presented as total sum of payments. However, regardless of what really stays behind the decision making of unemployed, our relatively small sample size prevents us from making any reasonable conclusions on tested effects.

The results show that pensioners switched to „safer“ credits (mainly credit 3) in the case of revealing additional scenarios up to the worst case scenario – covering one month delay, two months delay in payment, delayed payments throughout second half of the year and delayed payments throughout the whole year. After revealing such type of information, the probability of credit 1 take-up decreased by 51.5

percentage points, whereas the probability of credit 3 take-up increased by 38 percentage points.

Moreover, as it turns out on the 10% level of significance pensioners also reacted on the sanction costs in the form of graph. Such form of information did not turn out to be significant regarding participants' choice in general, but when revealed to retired participants, it caused increase in take-up rate of credit 3 (the most expensive but with very low potential sanction costs) by 36 percentage points. Nevertheless, since our sample size regarding this group is relatively small, the results and their significance are rather suggestive.

The subsample analysis showed that employed and pensioners were sensitive to sanction costs in the form of long-term scenarios and pensioners were influenced also by development of sanction costs revealed in a graph. Nevertheless, as shown in **Table 21**, variable `employedxup_to_worst_case` scenarios turns out to be insignificant - the change in preferences under such form of sanction information relative to reaction of other participants is significant only in case of pensioners. When there were up to worst case sanction scenarios added, the take-up rate of Credit 1 (the cheapest but with highest potential sanctions) decreased in case of pensioners by 36.8 percentage points more than it decreased due to such sanction presentation in case of other participants. Regarding the sanctions revealed in the form of graph, such form in combination with the fact that participant is pensioner decreased the probability of compromise credit 2 take-up by 12.9 percentage points and shifted the preferences towards the most expensive but safest credit.

Area of employment

Same as for the price treatments, we divided participants into three groups based on their field of employment. **Table 22** summarizes the results.

As it turns out, within the business sphere no additional form of sanction costs presentation influenced the participants' decision making - they stayed consistent in their credit choice. Such results offer possible explanation that people with higher economic and financial knowledge better orientate themselves in conditions of consumer credit contract, therefore no additional clarifications change their choice. Other possible explanation might stem from the fact that consumers with higher income may not include potential sanctions in their decision making process since

they do not feel threatened by delayed payments. Based on the preferences of control group, credit 1 was chosen by approximately 69% of business sphere employees, credit 2 by 12% and credit 3 by 19% of business sphere employees.

Table 22 Effect of sanction manipulations on employees based on area of employment

	Independent variables	Dependent variables						Sample size
		(Z1) Treatment Up to 2 months delay scenarios	(Z2) Treatment Up to worst case scenarios	(Z3) Treatment Graph	(C ₃ xZ ₁) Technical_ manual x Up_to_2_ months	(C ₃ xZ ₂) Technical_ manual x Up_to_worst case	(C ₃ xZ ₃) Technical_ manual x Graph	
(C ₁) Business sphere	Credit 1 take-up (low P, high S)	0.0271 [0.0888]	-0.0568 [0.0981]	0.0159 [0.0983]				190
	Credit 2 take-up (mid P, mid S)	0.0827 [0.0836]	0.0808 [0.0916]	0.0309 [0.0914]				190
	Credit 3 take-up (high P, low S)	-0.1115 [0.0504]	-0.0276 [0.0581]	-0.0493 [0.0564]				190
(C ₂) Public services	Credit 1 take-up (low P, high S)	-0.0971 [0.0849]	-0.1121 [0.0875]	0.0514 [0.0827]				245
	Credit 2 take-up (mid P, mid S)	-0.0014 [0.0581]	0.0425 [0.0639]	-0.0450 [0.0547]				245
	Credit 3 take-up (high P, low S)	0.1016 [0.0769]	0.0708 [0.0775]	-0.0053 [0.0723]				245
(C ₃) Technical/ manual jobs	Credit 1 take-up (low P, high S)	-0.226* [0.133]	-0.246* [0.128]	-0.182 [0.138]				111
	Credit 2 take-up (mid P, mid S)	0.190 [0.140]	0.164 [0.133]	0.341** [0.147]				111
	Credit 3 take-up (high P, low S)	0.0814 [0.116]	0.119 [0.114]	-0.124 [0.0954]				111
Whole sample	Credit 1 take-up (low P, high S)				-0.107 [0.120]	0.0145 [0.108]	-0.0690 [0.123]	
	Credit 2 take-up (mid P, mid S)				0.00239 [0.0878]	-0.0505 [0.0683]	0.250* [0.132]	
	Credit 3 take-up (high P, low S)				0.114 [0.114]	0.0366 [0.0940]	-0.128** [0.0542]	

Notes:

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

Participants employed in public services also did not react to any additional form of sanction costs presentation. No treatment turned out to be significant, therefore revealing additional scenarios or graph did not „nudge“ public services employees towards credits with lower potential sanction costs. Therefore, in comparison to control group, participants did not change their preferences regarding credit take-up

after receiving additional (nevertheless equivalent) illustration of potential sanction costs. Such results may have two explanations. First, income level of this group may make participants feel certain about their bonity. Second, based on our assumptions, employees in this field might have certain financial or economic knowledge which may help them see potential sanction costs already from the basic percentual description and thus any further clarifications do not change their preferences.

Nevertheless, participants with technical or manual jobs were influenced by all additional forms of sanction costs clarifications. Regarding preferences of control group – group without any clarifying additional forms of sanction information – 75% chose credit 1, credit 2 was chosen by 6% and credit 3 was most suitable for 19% of the sector's control group. However, when there were additional up to 2 months scenarios revealed, the probability of credit 1 take-up decreased by 22.6 percentage points, when there were up to worst case sanction scenarios revealed, the probability of credit 1 take-up decreased by 24.6 percentage points. Surprisingly, for this subsample information in the form of graph is highly significant. In the case of presenting development of sanction costs in a graph, there is significant shift towards „compromise“ credit – credit 2. Probability of credit 2 take-up under this treatment increased by 34.1 percentage points. Such results suggest that participants with lower knowledge and lower income level put more stress on sanction costs if there are additional clarifying forms of sanction costs information.

However, based on further analysis, the only significant change in preferences of employees with technical/manual jobs relative to others was shifting preferences towards the compromise mid P mid S credit when sanction costs were presented as a graph. Relative to other areas of employment, the presentation of development of potential sanction costs in the form of graph to employees with technical or manual jobs caused increase in probability of compromise credit 2 take-up by 25 percentage points, whereas decreased (in comparison to reaction of others) the probability of credit 3 (lowest price, highest sanctions) take-up by 12.8 percentage points.

Experience

Regarding distribution of participants based on their experience with consumer credits, we can see that both those who took consumer credit in the past and those

who have not were influenced by adding four scenarios showing how sanctions can gradually increase.

Table 23 Effect of sanction manipulations on subsample based on experience

	Independent variables	Dependent variables			(C ₁ xZ ₂) Credit_experience xUp_to_worst_case	Sample size
		(Z ₁) Treatment Up to 2 months delay scenarios	(Z ₂) Treatment Up to worst case scenarios	(Z ₃) Treatment Graph		
(C ₁) Experience with credit	Credit 1 take-up (low P, high S)	-0.0504 [0.0867]	-0.173* [0.0885]	-0.00703 [0.0872]		259
	Credit 2 take-up (mid P, mid S)	0.129 [0.0783]	0.123 [0.0793]	0.0181 [0.0711]		259
	Credit 3 take-up (high P, low S)	-0.0654 [0.0664]	0.0639 [0.0753]	-0.00650 [0.0712]		259
(C ₂) No experience	Credit 1 take-up (low P, high S)	-0.0631 [0.0594]	-0.156** [0.0613]	-0.0586 [0.0633]		523
	Credit 2 take-up (mid P, mid S)	0.0255 [0.0491]	0.0610 [0.0522]	0.0725 [0.0550]		523
	Credit 3 take-up (high P, low S)	0.0314 [0.0482]	0.0892* [0.0523]	-0.0218 [0.0486]		523
Whole sample	Credit 1 take-up (low P, high S)			-0.0378 [0.0850]		782
	Credit 2 take-up (mid P, mid S)			0.0397 [0.0721]		782
	Credit 3 take-up (high P, low S)			0.000612 [0.0650]		782

Notes:

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

Experience with consumer credits thus does not seem to matter regarding the forms of additional information that influence participants' credit choice. Both groups show significant decrease of credit 1 take-up when additional Up to worst case scenarios were revealed - in case of those with experience by 17.3 percentage points, in case of those without experience by 15.6 percentage points. Nevertheless, the results suggest that those with consumer credit experience rather switched to compromise credit 2, whereas those, who has not taken consumer credit, significantly changed their preferences towards credit 3 - its take-up increased by 8.9 percentage points.

Table 23 also includes estimates of interaction between presentation of the sanction costs in the form of long-term sanction scenarios and experience with consumer credits (credit_experienceup_to_worst_case). Based on the results, the difference between reaction to such sanction cost presentation of those, who took consumer credit in the past and those, who have not turns out to be insignificant. Therefore, the conclusion that when sanctions are presented in the form of up to worst case scenarios, experience with consumer credit decreases the take-up rate of the cheapest but highest in sanctions credit and shifts the preferences towards more expensive, but safer in sanctions credits, stays rather suggestive.

Future

As shown by the results, those, who plan to take consumer credit in the near future did not react to any form of additional sanction information. That can be explained by assumption that participants were able to include the sanctions in their decision making process already within the control treatment and no additional form of sanction explanation was necessary. However, there might be also chance that participants from this group did not take sanctions into account at all, thus any form of information could not affect their choice. When we compare credit choices of control groups, credit 1 was chosen by 57.4 % of those, who plan to take consumer credit in the near future, whereas by 65.5% of those, who do not. That would suggest that those, who plan to take consumer credit, included sanctions in their decision making already within the control setting without requiring additional information, which would support our first explanation. Nevertheless, t-test shows that these differences in take up rates within control groups are not significant (p value=0.3), which would suggest that sanctions were not taken into account at all. However, all our conclusions are rather suggestive than conclusive based on the sample size.

Table 24 Effects of sanction scenarios on participants based on

	Independent variables	Dependent variables					Sample size
		(Z ₁) Treatment Up to 2 months delay scenarios	(Z ₂) Treatment Up to worst case scenarios	(Z ₃) Treatment Graph	(C ₂ xZ ₁) No_planned _credit xUp_to_ 2_months	(C ₂ xZ ₂) No_planned _credit xUp_to_ worst_case	
(C ₁) Yes credit in future	Credit 1 take-up (low P, high S)	0.109 [0.178]	0.0219 [0.206]	0.0219 [0.206]			47
	Credit 2 take-up (mid P, mid S)	-0.128 [0.147]	0.0604 [0.180]				38
	Credit 3 take-up (high P, low S)	0.0150 [0.159]	0.238 [0.205]	-0.102 [0.160]			47
(C ₂) No planned credit	Credit 1 take-up (low P, high S)	-0.0740 [0.0511]	-0.178*** [0.0521]	-0.0493 [0.0532]			735
	Credit 2 take-up (mid P, mid S)	0.0741* [0.0442]	0.103** [0.0462]	0.0562 [0.0458]			735
	Credit 3 take-up (high P, low S)	0.0 [0.0405]	0.0753* [0.0440]	-0.00730 [0.0418]			735
Whole sample	Credit 1 take-up (low P, high S)				-0.0910 [0.162]	-0.112 [0.185]	782
	Credit 2 take-up (mid P, mid S)				0.0913 [0.143]	0.989*** [0.00129]	782
	Credit 3 take-up (high P, low S)				0.0004 [0.124]	-0.115 [0.103]	782

Notes:

1. Each row corresponds to the estimation of a probit model for specified subsample. Reported in the table are marginal effects relative to the Control group (which received only payment info) and the standard deviation (in parentheses).
2. P stands for price, S stands for sanctions, C for characteristics of participant, Z for manipulation type.
3. *, **, *** represent 10%, 5% and 1% level of confidence respectively.

Such limitation of course applies also on our interaction analysis, which shows, that the only significant difference under specific sanction manipulation between the reactions of those, who are planning to take consumer credit in the future and those, who do not, is when the sanction information are presented in the form of additional up to worst case scenarios. Under such sanction presentation, those with no intentions to take consumer credit in the near future showed significantly higher tendency to prefer compromise credit in comparison to those, who plan to finance their consumption by consumer credit and who did not show any significant change in their preferences regardless of the additional form of sanction clarification.

Chapter 6 CONCLUSION

Consumer credits in the Czech Republic became one of the issues for heated debates. Based on Czech Credit Bureau, (regarding individuals, excluding companies), consumer credits became one of the riskiest credits, where share of defaulted credits relative to total volume of provided credits reached 4.4%. According to statistics from the Chamber of Executors, the number of execution proceedings grew rapidly from 4 302 cases in 2001 to 554 128 cases in 2008.

The question therefore is, how to increase consumer protection at the consumer credit market. Some political parties suggest tougher regulation in the form of interest rates caps, others such as organisation People in Need sees solution in forcing financial institutions to declare conditions in contract in transparent and manageable way for consumers to be able to consider all risks related to each product. Recently, financial institutions especially in the non-banking sector try to hide certain terms of the credit including sanction costs, which are never presented anywhere else than in very complicated and long contracts.

Such point of view was the main inspiration for our study, which tries to examine what information and in what form should be revealed to consumers in order to make them aware of all key conditions of the contract.

We focused on two major questions - what influence have different revealed price information on the take-up decision and what forms of the sanction costs make the consumers include these costs in their decision making process.

We distributed specially designed questionnaires including 3 hypothetical credit offers (credit 1 being high in price and low in sanction costs, credit 2 representing the compromise credit and credit 3 being the most expensive in price but the safest regarding sanction costs) and managed to collect diversified sample, which consisted of 782 participants.

Results confirmed our hypothesis that consumers are more sensitive to information of the total amount to be paid than to monthly payments – revealing the price of the credit only in terms of the total amount to be paid decreased the probability of the most expensive credit take-up by 6.3 percent points (from 22.3 % take-up rate when

the control treatment information is revealed to 16% take-up rate) and caused shift in preferences towards cheaper credits.

Regarding sanction costs presentation, adding Up to 2 months delay scenarios (specifically “Delay in 1st payment by 1 month” and “Delay in 1st payment by 2 months”) to standard form of sanction costs as it is in contracts had no significant effect on participants preferences. Participants were not influenced by these scenarios and were consistent in their decision making. This might be explained by the fact that these scenarios represented examples of relatively low sanction fees which might not have been considered as “dangerous” by participants and therefore not worth switching to more expensive but “safer” credits. Furthermore, when the possible development of the sanctions in case of delayed payments throughout the year was presented in the form of graph, the effect on the credit take-up was also surprisingly none, which is against our expectations.

Nevertheless, when we added Up to worst case scenarios (specifically „Delay in 1st payment by 1 month”, “Delay in 1st payment by 2 months”, “Possible sanction costs of delayed payments throughout the second half of the year” and “Possible sanction costs of delayed payments throughout the whole year”), there was significant shift in participants’ preferences from the cheapest in price but highest in sanctions credit to safer credits. Probability of credit 1 (low price, high sanctions) take-up decreased by 16 percentage points, which, compared to the take-up rate under control treatment, represents considerable drop from 71% to 55%. On the other hand, probability of the compromise credit 2 take-up increased due to this treatment by 7.8 percentage points, which is highly significant jump in comparison to original 12% take-up rate; probability of credit 3 take-up increased by 8.2 percentage points which as well represents considerable growth in comparison to the original 17% take-up rate.

As shown by the results, adding more pessimistic scenarios that above all include certain “worst case scenario” made participants more concern about the risks of the credit offers, which caused significant shift from the cheapest but more risky product towards a bit more expensive but relatively safer options. Worst case scenario therefore works as suggested by Thaler and Sunstein (2009).

The subsample analysis revealed no significant gender heterogeneity regarding reactions both to price and sanction manipulations. Results nevertheless confirmed

our hypothesis that when adding the final price to the information about monthly payment, there was significant difference in reaction of less educated in comparison to tertiary educated in terms of greater shift towards the cheapest credit. Education thus played significant role in decision making of respondents - but only in case of price information. Regarding forms of sanction costs presentation - despite the fact that less educated changed their preferences significantly under the worst case scenario and tertiary educated did not react to any form of sanction manipulations - the difference between reactions of these two groups turned out to be insignificant. The assumption of higher sensitivity of less educated regarding clarifying forms of sanction costs therefore stays only suggestive.

Subsample analysis moreover revealed, that elderly were more sensitive to revealing final price to be paid than others and also the shift towards safer credits due to the worst case scenario was more significant than in case of other age groups.

Such result implies that elderly are more vulnerable regarding sanction costs presentation than others and together with the available data showing this group as one of the groups with highest share of defaulted credits it is highly important to provide them with transparent form of sanction costs.

Regarding subsamples based on area of employment, business and public sector reacted more significantly to price manipulations, while staying consistent in their credit choice under all sanction treatments, whereas employees with technical or manual jobs did not react to any additional form of price information, but all forms of clarifying sanction information shifted their preferences towards more expensive, but safer credits. Such results are relevant in context of the fact that borrowers with lower income are the ones to get most frequently into distraintment. (Nevertheless we are aware of the limits of our assumption that employees with manual and technical jobs have lower income and lower financial knowledge than participants from business sector or public sector)

Interesting were also results regarding experience with consumer credits. Those, who have taken consumer credit in the past showed significant sensitivity to final amount to be paid in comparison to those, who have not, nevertheless, experience turned out to be irrelevant regarding reactions to additional clarifying form of sanction costs.

Our results represent new contribution to currently debated consumer protection issue. The effort of this study is to show that consumers can be protected by presenting the conditions in more transparent way – by adding clarifying forms of contract conditions it seems to be possible to make consumers realize the potential risks of the credit and nudge them towards safer offers without any further regulation within the market. Nevertheless, further research and discussions should follow to find out to what extent these results are policy relevant and whether suggested solution is the right solution to recent situation in the Czech Republic.

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Example of questionnaire (control treatment both for price and sanction manipulation)

Questionnaire on consumer credits

(in cooperation with Institute of Economic Studies, Charles University and People in Need)

1. Age: _____
2. Sex: _____
3. Highest obtained level of education:
 - a) primary
 - b) secondary – without “maturita”
 - c) secondary – with “maturita”
 - d) tertiary – lower degree
 - e) tertiary – university
4. Current status:
 - a) student
 - b) employed
 - c) self employed
 - d) retired
 - e) unemployed
5. If you are employed, what area do you work in?
 - a) public administration
 - b) business
 - c) finance, banking, insurance
 - d) real estate
 - e) IT
 - f) logistics, transportation
 - g) media, marketing, PR
 - h) manufacturing
 - i) construction
 - j) education
 - k) health and social care
 - l) other public and social services
 - m) other _____
6. Have you ever taken consumer credit?
 - a) yes
 - b) no
7. Are you planning to take consumer credit in the near future?
 - a) yes
 - b) no

8. What conditions of credit for 30 000 CZK from following table would be for you personally the most acceptable and what the least? Fill in following table please)

	Most acceptable credit	Less acceptable credit	The least acceptable credit
Symbol of the credit			
amount of 30 000 CZK with 1 year maturity			
	credit Δ	credit O	credit *
APR (Annual percentage rate)	22,02%	48,39%	88,7%
Monthly payment	2780 CZK	3076 CZK	3468 CZK
Total number of payments	12	12	12
Sanction costs including:			
- sanction fee	<u>7 days past due date</u> 8% of the monthly payment	<u>7 day past due date</u> 8% of the monthly payment	none
	<u>more than 35 days past due date</u> 50% of the total amount	<u>more than 35 days past due date</u> 20% of the total amount	none
- sanction interest rate	<u>above 1 day past due date</u> 0,08% from the debt/ day	<u>above 1 day past due date</u> 0,06% from the debt/ day	<u>above 1 day past due date</u> 0,02% from the debt/ den

Example of questionnaire in czech (treatment Final amount plus Treatment graph)

DOTAZNÍK NA TÉMA SPOTŘEBITELSKÉ ÚVĚRY

(ve spolupráci s Institutem ekonomických studií Univerzity Karlovy a Člověkem v tísní)

1. Věk: _____

2. Pohlaví: _____

3. Nejvyšší dosažené vzdělání:

- f) základní
- g) středoškolské bez maturity
- h) středoškolské s maturitou
- i) vyšší odborné
- j) vysokoškolské

4. Jste:

- f) studující
- g) zaměstnaný/á
- h) podnikatel/ka
- i) v důchodu
- j) momentálně nezaměstnaný/á

5. Pokud pracujete, jaký je Váš obor zaměstnání?

- n) veřejná správa
- o) obchod
- p) finance, bankovníctví, pojišťovnictví
- q) činnosti v oblasti nemovitostí, pronájmu
- r) výpočetní technika
- s) logistika, doprava

- t) média, marketing, PR
- u) zpracovatelský průmysl
- v) stavebnictví
- w) školství, vzdělávání
- x) zdravotní a sociální péče
- y) ostatní veřejné a sociální služby
- z) jiné _____

6. Už jste si někdy vzal(a) spotřebitelský úvěr?

(spotřebitelský úvěr je půjčka pro jednotlivce obvykle ve výši 10 000 – 600 000 Kč poskytovaná bankou nebo jinou finanční institucí buď na libovolné účely nebo na specifickou službu či věc)

- c) ano
- d) ne

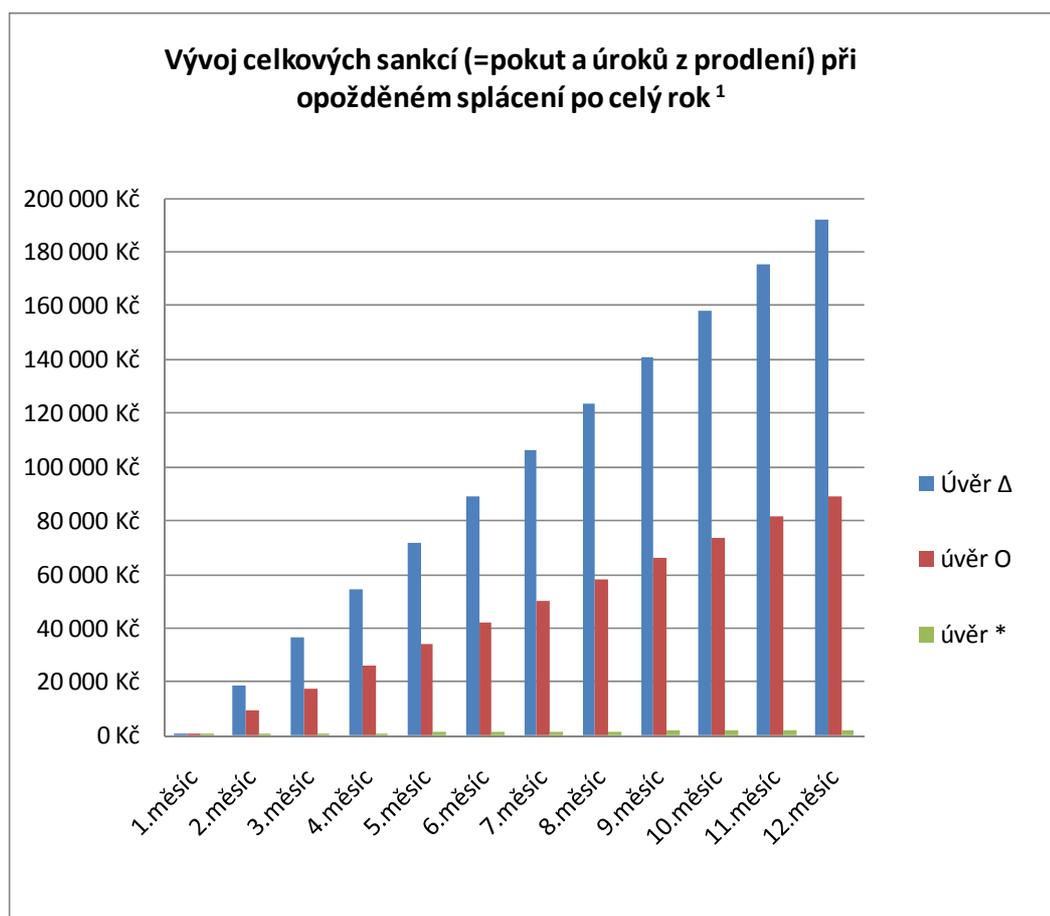
7. Plánujete si v nejbližší budoucnosti vzít spotřebitelský úvěr?

- c) ano
- d) ne

8. Jaké podmínky úvěru na 30 000 Kč z následujícího výběru by pro Vás osobně byly nejvíce přijatelné a jaké nejméně? (Doplňte prosím následující tabulku)

	Nejvíce přijatelný úvěr	Méně přijatelný úvěr	Nejméně přijatelný úvěr
Symbol úvěru			

výše úvěru 30 000 Kč na 1 rok			
	úvěr Δ	úvěr O	úvěr *
Celkově zaplacená částka dlužníkem (cílová částka)	33 360 Kč	36 912 Kč	41 616 Kč
RPSN (Roční průměrná sazba nákladů)	22,02%	48,39%	88,7%
Celkový počet splátek	12	12	12
Sankční náklady skládající se z:			
- pokuta z prodlení	nad 7 dní 8% ze splátky	nad 7 dní 8% ze splátky	není
	nad 35 dní 50% z cílové částky	nad 35 dní 20% z cílové částky	není
- úroky z prodlení	nad 1 den 0,08%z dluhu/ den	nad 1 den 0,06%z dluhu/ den	nad 1 den 0,02%z dluhu/ den



¹ v případě, že je 1.splátka zpožděná o měsíc a následující splátky jsou spláceny v měsíčních intervalech, avšak opožděné vždy o týden.

Treatment Payment plus Final amount plus Up to worst case scenario

výše úvěru 30 000 Kč na 1 rok			
	úvěr *	úvěr O	úvěr Δ
Celkově zaplacená částka dlužníkem (cílová částka)	41 616 Kč	36 912 Kč	33 360 Kč
RPSN (Roční průměrná sazba nákladů)	88,7%	48,39%	22,02%
Měsíční splátka	3 468 Kč	3 076 Kč	2 780 Kč
Celkový počet splátek	12	12	12
Sankční náklady skládající se z:			
- pokuta z prodlení	není	nad 7 dní 8% ze splátky	nad 7 dní 8% ze splátky
	není	nad 35 dní 20% z cílové částky	nad 35 dní 50% z cílové částky
- úroky z prodlení	nad 1 den 0,02%z dluhu/ den	nad 1 den 0,06%z dluhu/ den	nad 1 den 0,08%z dluhu/ den
Příklady navýšení dlužné částky:			
A. jednorázová sankce při opožděném splacení 1. splátky o měsíc	258 Kč	933 Kč	1 050 Kč
B. jednorázová sankce při opožděném splacení 1. splátky o 2 měsíce	499 Kč	8 957 Kč	18 504 Kč
C. celkové možné sankce při opožděném splacení v 2.půlroce (1. splátka opožděná o měsíc, následující splátky v měsíčních intervalech, opožděné vždy o týden)	524 Kč	41 629 Kč	86 416 Kč
D. celkové možné sankce při opožděném splacení během celého roku (1. splátka opožděná o měsíc, následující splátky v měsíčních intervalech, opožděné vždy o týden)	1 906 Kč	89 231 Kč	192 287 Kč