



POLISH STUDENTS AND MONEY

Technical Report

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THINK FORWARD
INITIATIVE

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1. Introduction

The research on one's financial decisions, the attitude towards payments and emotional aspects of managing the budget is important due to many reasons. Firstly, from the perspective of a customer, practical insights may lead to increasing the knowledge and efficiency when managing personal budget. Secondly, innovative solutions related to this field may inspire financial institutions to boost satisfaction of their clients. What is more, better understanding of psychological sight of financial decisions is essential to provide the holistic approach for the customer. It may also enable educational institutions to provide the information and skills that are proper, interesting, and useful – especially for those, that perceive financial knowledge as boring and difficult.

The topic of financial literacy, decision and psychology at the Polish field is analysed e.g. by prof. Maison in a book “Pole in a World of Finance” – qualitative research conducted by the psychologist from University of Warsaw led to providing the profiles of the customers, including one type with strong preference of cash. The research from financial perspective was conducted by prof. Adam Szyszka (“Behavioural Finance and Capital Markets. How Psychology Influences Investors and Corporations” – English edition) and Monika Czerwotka with Bartłomiej Gorlewski (“Behavioural Finance. Behaviours of Investors and the Market” – Polish edition). The selected conclusions are the following: the cash payments and the preference of cash differs (for instance there is a group of customers focused only on cash). The form of the money and the form of presentation of a sum also

has an impact on decisions. According to the research provided by OECD the level of financial literacy in Poland is low, especially when it comes to the risk.

The research project on Polish students – the links between emotions, financial decisions and types of payments – was inspired by the previous research conducted by Małgorzata Pawlak, psychologist (graduate of University of Warsaw) as part of MA finance and accounting programme at Warsaw School of Economics. The previous research was funded by Lesław Paga Foundation and conducted with support of Szymon Talaga (University of Warsaw) and Justyna Janowska (University of Warsaw) under supervision of prof. Adam Szyszka (Warsaw School of Economics). It was quantitative analysis of links between financial literacy, economic opinions (political views), type of studies (economic, humanistic or technical) and nationality (Polish or Czech). It led to the conclusion that students from economic faculties possess significantly different level of financial knowledge and preference of liberalism. The surprising outcome of the project, gathered during the conduction of the research, was that there was large gap in attitude towards financial issues themselves: whereas economic students were interested in providing the answers, those from humanistic faculties expressed a lack of interest and even repulsion towards focusing on financial topics. Moreover, the research increased the curiosity towards deeper dive into minds of the students to provide the understanding of an individual experience of these young customers instead of only statistic data.

2. Research question

This Think Forward research project conducted by Małgorzata Pawlak, psychologist (double diploma in psychology and finance), PhD Candidate at Warsaw School of Economics was designed as exclusively qualitative analysis of emotions, opinions and behaviours of university students. Instead of going wide, the decision was made to go deeper and focus on psychology of young customers during individual interviews. The situations that were mentioned during this part were discussed during the focus groups (part 2). This led to providing not only the insight into one's mind, but also a portfolio of solutions to problems related to spending, saving and investing. Then, going back to the interviews, the analysis was made to propose certain solutions for certain customers.

Main research questions included:

- a. What are past, present and future students' behaviours and opinions related to money?
- b. What is the attitude towards cash and non-cash payments and its links to control over one's budget?
- c. How is an economic (or non-economic) academic background linked to opinions and behaviours related to money?
- d. What is one's emotional landscape: which links may be observed between certain emotional and situations related to money?

As the research is qualitative and the sample is relatively small, every question is going to be responded according to a certain person. It is impossible to generalize, because every case is different, this is why it is discussed separately – and this is valuable quality of the results. As the project is innovative from a methodological point of view, this kind of approach may be inspiring for further research.



3. Interviews

3.1 Methodology

The script of the interview is included in the appendix – as it turned out to be too complex for the goal of the research, the focus was put on certain parts and some other were omitted. Moreover, the respondents differed also in terms of willingness to reveal the information about them. Especially – the family issues – whereas Paul (KAT2M) doesn't want to reveal much about the past, Martha (KAT2F) discusses the family problems very openly. The topic of addiction – addiction to shopping and alcoholism (or, in this case, mostly co-dependency) turned out to be unexpected motif. It is also discussed from psychological perspective and in terms of its influence on the financial behaviours in the paragraph on shopping spree cycle.

Main outcomes from the interview are enriched with the section called “emotional landscape”. It is based on the characteristics of situations linked to emotions – analysis of this part of the interview was also combined with an analysis of a whole material to suggest certain patterns. Moreover, the table and discussion on solutions that may be attractive for this type of customer is included.

Regarding technical details: the code presents the city of residence and gender and the number of the respondent from this category. WAW1F – the first respondent from Warsaw, female. The more detailed description of a person is included at the beginning of the interview. Due to the fact that the data gathered is large and may be reused for the different purposes, the decision was made to provide (almost full) transcription both in Polish and English. The transcriptions are so long that they form

the additional reports itself, this is why in this report only quotes of them are used to illustrate certain effects and outcomes. Full version is accessible in the separate file upon request.

3.2 Respondents

This report is an analysis of interviews with 6 students or recent graduates. To assure privacy and make the reports more convenient for readers, there are fake names given to every person. Sometimes the code co-occurs with the name, sometimes only one type of the description is assured. This is why the list of the respondents is provided below:

Those from Katowice study in this city, but their place of residence is in surrounding towns. They differ in terms of education. Kate and Mark are graduates/students of humanistic faculties, the rest studies at University of Economics so has at least slight contact with economics as an academic discipline. Whereas the majority of them lives by themselves (in rented or bought flats), Dorothy lives with the parents. Their work experience is also different – the majority of them works at least part time or seek employment at the moment (Megan, Dorothy, Paul), some of them (Mark, Kate, Dorothy who is “employed” without the contract in a shop) are full-time employees (or interns with regular salary). Also the relationship with parents – revealed to a different extent – is different. From close bonds (Martha) to lack of mentioned contact (Paul). The financial support from the family plays different role in their lives – from only “emotional money” (100 PLN transferred every month by grandma of Mark), through important support (buying clothes, paying for rented room – Megan) to the opposite situation –

the child being obliged to support the parents (Martha). This diversity led to a lack of possibility to analyse and compare their budgets in a traditional way – some of them planned monthly, some shared the money with parents, and some even paid for them. This is why quantitative analysis would not be efficient and focus was put on the attitude towards

cash/non-cash, control over budgets and so-called emotional landscape – list of situations related to certain emotions. Their attitude towards certain financial products and cash was also unified – the preference of non-cash was very strong in the majority of situations. In this part the focus was put on the exceptions (opinions supporting cash in rare situations).

Table 1: Overview of interview respondents

Code	Name [ENG]	City	Graduate of economic faculty?	Lives with parents?	Year of birth	Full-time job?
WAW1F	Kate	Warsaw	No, recent graduate of humanistic	No	1995	Yes
WAW1M	Mark	Warsaw	No, postgraduate studies (culture)	No	1989	Yes
KAT1F	Megan	Katowice /Bielsko	Yes	No	1997	No
KAT2F	Martha	Katowice	Partly (logistics)	No	1997	No
KAT1M	Paul	Katowice	Yes	No	1995	No
KAT3F	Dorothy	Katowice	Yes	Yes	1997	Yes

4. Interviews: Results

4.1 Kate (WAWF1F)

4.1.1 Outcomes of the interview

Kate seems to be quite open discussing her financial life – maybe because she has just got accepted as an intern in an international NGO with salary above the average Polish salary. As a child, Kate used to be given money on demand. The parents assessed if her needs were legit – but before she asked they also checked if she really needs to spend the money. She calls it *self-regulation*. Nowadays Kate doesn't have the monthly budget as well and she prefers to avoid thinking about the money "too much". Her control over her budget is not strict. The future goal regarding this topic is related to saving a larger sum. According to her the parents shared with her the opinion that the money is important to assure the quality of life, "at the European level". On the other hand, she doesn't express a lot of interest in financial aspects of life.

The respondent discusses the difficulties related to obtaining (earning) the money by the parents. It seems like during the childhood there was some sense of guilt related to using their resources – the focus is put on the strong effort the parents made to give her money. And yes, the word "their" is correct in this sense – this is why the respondent felt large responsibility for being "reasonable" in her choices related to how to spend the money. Later in the interview this (parental) attitude pops up as an internalised rule applicable also to adult life. Reasons for earning money seem to be social (following the group or the example of her girlfriend). On the other hand, she mentions, once again, need to be loyal to her parents. Money is associated with (use of) time.

This motif is visible also in the adult life of the respondent.

The main purpose of saving is related to the entertainment – satisfying the needs that are not basic. Kate perceives investing as a "materialization of the money". The respondent seems not to be aware of differences between consumption and investments. This topic seems to be quite abstract for her – during this part of the interview she keeps on saying "somehow" to distance herself from this issue.

How about the distribution of cash and non-cash payments? Kate pays with card in majority of cases. She says that the cash is practical only in situations when it's impossible to pay with card. On the other hand, the discount would encourage her to use cash. This is contrary to the opinions expressed in the other parts of the interview that she doesn't want to devote time for "financial affairs". Nonetheless, financial efficiency and not over-spending seems to be priority for her.

What enables the respondent to control the budget? The only form of control is checking the status at the bank account when processing transfers. She finds control over budget unattractive and prefers to avoid it, or, as she says, do it in an "intuitive way". From this perspective e-banking is very beneficial.

Is there any relation between the studies and attitude to financial issues? She doesn't notice any links between her education and financial decisions, she claims to be more influenced by the people around her. Nonetheless, defining consumption of

large consumer goods as “investing” may be result of a lack of financial knowledge. She doesn’t find the values such as a career or financial success convenient – quality of life and non-materialistic values, such as free time or relationships plays an important role for her. This is also why she is not interested in any additional financial products, she expect to simplify it as much as she can and has some willingness to be supported by the bank, but in a not-invasive way.

4.1.2 Emotional landscape

Kate associates *joy* with salary and scholarship, but, importantly, the outlines not only the amount of the money – also the way of earning it. Earning the money in a boring, meaningless job would be for her more joyful than her current situation, working for NGO and not doing over-hours. *Trust* is related to supporting other people financially – mostly lending the money. The *fear* and *anxiety* are not mentioned frequently. Kate’s attitude towards financial issues doesn’t seem to be much fearful. The mentions the sense of security she has thanks to her wealthy family. *Amusement* was related to positive outcome of discussion about the salary. The respondent didn’t pay enough attention to remember the exact sum of the monthly salary, so the first transfer surprised her in a positive way. *Expecting* is related to small things that have already been ordered (e.g. food at the café).

Sadness and *repulsion* in her case are related to perceiving poor financial situation of the other people (beggars, prostitutes). As a person sensitive to social injustice she feels *shame* when comparing her (very good) financial situation to the other people. *Sense of guilt* turns out to be the most important motif in the emotional landscape of Kate. She mentions hard work of her parents and the time devoted to support her financially, not only in this

part of an interview, but also in other places. She feels guilty also when paying for herself, she prefers to buy presents for friends instead of buying something for herself. This attitude is noticed even by her mother who “tells her to buy new clothes”. It is visible that the sense of guilt imposed to her by her parents has been strongly internalised.

She seems to be afraid to overspend – this is her basic motivation, not saving or investing. On the other hand there is a strong need to avoid thinking about financial issues. *Pride* is related to her current financial situation – good salary. *Enthusiasm* is linked to childhood memory and expensive bike she got.

4.1.3 Solutions for the customer

Kate is a type of customer with a low level of financial knowledge and a lack of willingness to get to know more or be active as investor. Her main motivation is to keep it simple, non-invasive and to enable her not to spend too much – spending makes her guilty very often. Whereas her goal is to start saving more relevant sums, she already hasn’t done anything to accomplish it. The solutions proposed to her have to be simple, not frequent nor invasive. The table below – based on the brainstorming during focus groups – shows the ideas that may be convenient to her. The suggestions have been based on the analysis of psychological profile of the customer. It is essential to note that they were proposed during brainstorming *after* the conduction of interviews. Nonetheless, this method of profiling seems to be interesting, this is why it has been included.

4.2 Megan (KAT1F)

4.2.1 Outcomes of the interview

Megan is open and enthusiastic about discussing the financial issues. She seems to be carefree about the

finance, on the other hand possesses knowledge and motivation to manage the budget in an efficient way. The sense of security from the childhood is visible, whereas in comparison to Kate she is more focused on her budget and motivated to save and invest in the future. She says that as a student of finance and accounting she feels obliged to do it.

According to her, the control over the budget is sufficient, but she is mostly supported by parents. This is why it is impossible to exclude her own budget from the family's one. She's enthusiastic about non-cash payments and attentive to financial behaviours which she discusses in a detailed way. Due to high level of self-awareness she knows the limits of her knowledge related to finance. Her realistic attitude is contrary to the idealistic and over-confident attitude of Kate, who "knows how real life looks like".

The main purpose of saving and earning the money is related to the sense of independence. The majority of income in Megan's current budget is the money from her parents. She wants to change it. Firstly, she feels guilty for using their resources. Secondly, she has more needs (e.g. entertainment and beauty products). Moreover, there is a tension visible between her and her mother. The mother manages family budget (the role of her dad is just "going to work") and takes part in shopping (e.g. buying clothes). She wants to have an impact on her daughter's decisions and purchases – Megan mentions that even if she wants to buy something by herself, she gets the support. She seems to be overwhelmed with it, seeking independence and a full-time job in order to separate more from the family budget and influence. This separation is not accepted by her mother, who in general discourages her to work and wants her to focus on studying – e.g. by presenting her catastrophic vision of the future as a cleaning lady. Surprisingly, this motif occurs also in

interview with Paul. When confronted with cleaning lady at his office, he feels guilty for his high position and sorry for her low salary and hard work. Whereas his emotions may be based by his life experience, Megan, who comes from relatively wealthy family (they possess their own house near Bielsko), is being presented an abstract image to make her anxious about the future. Nonetheless, her struggle for the financial independence seems to be efficient as she manages to work every summer and is actively seeking job at the moment of the interview: *"The only thing I miss is to earn my own money so that it is only mine and not my parents."*

Is there any relation between the studies and attitude to financial issues? Yes, Megan notices better financial knowledge and higher sense of general awareness. She compared herself with her friends who study social sciences/humanities and describes better knowledge, more interest in financial aspects of life and practical skills such as an assessment of certain types of financial products in terms of benefits. From the perspective of the researcher her motivation to focus on investment or saving is at the high level – she mentions the pressure from university professors and the other students to invest (she even notices her sense of guilt related to not investing!). Even though she thinks she is not competent enough to invest at the stock exchange, she sees it as something negative. Kate, who was aware that "too much should be materialized", didn't spot the difference between consumption and investments, moreover, she seemed to be satisfied with her lack of knowledge, willing to focus on different things in her life.

How about the distribution of cash and non-cash payments? What enables the respondent to control the budget? Similarly to all interviewees, she uses debit card in the majority of situations. She claims to

spend less while paying with cash, also when sticking to lump sums (which is in line with the research results):

I prefer to withdraw money, as I have withdrawn it, I have much more control over it and I spend much less than I pay with the card. (...)Well, I do not know, I have this money and, for example, I know that I want to spend so much, and when I go shopping, or I know that for example I have 20 PLN, then 50 PLN, and I do not know how much, and I say that for what I have spent, I will get fit in these twenty.

But, surprisingly, she recently stopped using this method, because she finds it more comfortable to stick to the debit card or pay with mobile phone. Comfort is more important then. In addition to that, she uses shopping lists. It seems that the small amounts she receives weekly (not monthly or not on demand as the other respondents) motivate her to focus on the budget. She's rather critical about her financial behaviours, she quotes negative voice in her head that is criticising her for over-spending. Her main goal is not to overspend, same as Kate's, but her attitude is more serious. Asked about benefits of keeping the budget she responds: *"Very beneficial, because then you can see how much it seems, although on the other hand it is also scary when you look at how much you can spend."*

Megan is rather sceptical about saving credit card data in the applications and discusses scam scandal related to online banking. While Paul was worried about the privacy, she's more concerned about possibility of losing the money. But on the other hand she thinks we have to let go some fears due to the technological progress that cannot be stopped: *"The world has gone so far that nobody pays any attention to it."*

4.2.2 Emotional landscape

Joy is related to the category of "emotional money" – money that reminds of important relationships (such as support from the relatives): *"I get a transfer from my mother, it's such a joy that, oh, she thought about me."*

The family members trust each other, this is why she associates trust with their relationships. This association is pure opposite to the attitude of Paul (who claims that trust and money are completely exclusive) and Martha (who doesn't leave the cash at home because she doesn't trust her mother). Repulsion and shame is linked to the situation of former flatmate, shopping addict, who lies to her parents to get more money from them.

The respondent is unable to mention any situation related to negative emotions such as fear or anxiety: *"I do not think anything is related to fear and money."* She is also unable to discuss feeling of sadness – it looks like all negative emotions are suppressed from her landscape. Difficult situations are also described in a bit humoristic way – as the one related to surprise (see below). Her attitude towards the financial issues seems to be a bit carefree, but on the other hand she is more motivated and attentive than Kate. This is how she describes the situation related to being surprised: *"It seems to me that this surprise is how I enter my account and it turns out, wow, what happened to the money, where it was gone [laughs] and looking."*

But what these two share is sense of guilt related to the support from their parents. Both Kate and Megan find it difficult to rely on their parents' money – not because they cannot afford, just because it's always "too much". Kate had minimalistic attitude, Megan describes herself as a person fond of shopping, she's good at finding best value for certain price ("I'm a

promotions champion”, she says). Nonetheless, the outcome is linked to feeling guilty: *“Sometimes I have a feeling of guilt, how we go shopping such a post-holiday and the promotions begin, and so on and actually it is on the principle that my mother pays for these purchases, so with my sister how to speed up and then we go with these shopping bags, with all this, it is however that I took so much money for my mother, it is just that I could not do it, or pay for something.”* This is also why the fact that she doesn't overspend is the thing she's proud of. In her case reasonable financial decisions are related to being loyal to her parents, especially her mother.

4.2.3 Solutions for the customer

In case of Megan spending is controlled in an efficient way. She has the willingness to invest in the future, possesses some knowledge and motivation to educate herself, but doesn't have the resources. The problem she mentioned is inability to save for the car. She wanted to buy it after the graduation, but was unable to save large sums on a regular basis. There is a hypothesis that this is due to lack of resources, not lack of the willingness. She gets relatively small amount of money every week – the majority of important purchases is made by her parents. In order to change this she already planned to find a job. This is why in a current situation it is difficult to save enough, because a large part of the budget is outside of her control (which is a bit contradictory to the fact that she blames herself and “reality” for not being able to save). Moreover, the car was her goal, is not essential for her at the moment – she already has an old car she got from her parents. This is why proper analysis of motivation and further planning is recommended. Until the independent, regular source of income is found, it may be difficult to change the situation.

4.3 Paul (KAT1M)

4.3.1 Outcomes of the interview

Paul seems quite distant during the interview. Before responding, he thinks a bit about a certain question, he's also not interested in discussing his childhood in a detailed way. On the other hand, possesses large knowledge about financial issues – as a student of economic faculty uses economic and financial terms very easily, giving examples and mixing it with his own experience regarding this topic.

The main purpose of saving is related to the sense of security – since teenage years he has been saving to buy an apartment in his hometown. This is why he spends every summer in UK as blue-collar worker. Two years ago he eventually bought this apartment (paying in cash, which is not very common in Poland, especially in the young age – the cost of a studio was about 25k EUR). Now he saves the money for another flat to rent it for students (as an investment), but the amount of the money he wants to have is not defined.

How about the distribution of cash and non-cash payments? The income and spending is realised with non-cash solutions, the only contact with large amount of cash is after the summer in UK when he withdraws pounds and exchanges the money in Poland. Paul is the only respondent from the group who mentions privacy as the benefit of cash payments – he finds modern banking-system as “Orwell-like”. Nonetheless, nowadays, as “regular person” he doesn't value it that much to resign from non-cash payments, but in the future, as he wants to pursue a business and academic career, he will consider sticking more to cash.

What enables the respondent to control the budget? First of all, knowledge – e.g. being aware of the price

differences in Poland and UK. Secondly, keeping to the exact sum – his monthly budget is based on his monthly income and his goal is not to exceed this sum. As mentioned before, the money earned during the summer is devoted for the future investments or some emergency needs. The simplicity of this solution makes it convenient for him. The third reason of willingness to control is the anxiety he discusses several times during the interview – he's afraid of deterioration of financial situation, because he experienced it as a child. This may be why he was so motivated to succeed financially. It may be illustrated with his attitude towards paying the rent:

Paul: *"What I save on holidays [working in UK], I keep on my account and [it's] actually enough. In addition, I try to do so that the rent for the apartment and there other charges have been paid for half a year ahead".*

MP²: *"Why?"*

Paul: *"I'm coming back from England, I pay, and I know I have a lot of money. And later in half a year. Well, it's such an awareness that if I am out of money, nobody will throw me away for half a year, that I can live peacefully and not worry about it."*

Is there any relation between the studies and attitude to financial issues? Paul doesn't notice many links, he is rather sceptical about the level of economic education at the university. Nonetheless, his knowledge about financial markets enabled him to earn the money, he also expresses a lot of interest in financial topics and active attitude towards investing (saving money to buy flat to rent). The investments are perceived as an option for the

future. From this perspective, his attitude is exceptional in comparison to the other respondents.

4.3.2 Emotional landscape

Paul's emotional landscape is partly similar to Kate's landscape – they share lack of interest in shopping (they do not find it interesting nor fulfilling). They are also both sensitive to situation of the poor, but in Paul's case this sensitivity is rooted in his childhood. The identification with those who struggle financially is also visible in strong emotional reactions he has, discussing the situations such as a meeting with a cleaning lady, overusing financial support for the state and homelessness among the people he knows. In Kate's case the empathy for the poor is rather intellectual, but probably due to upbringing in a wealthy family she cannot fully identify. The difference between them is also illustrated with the fact that both of them used to live in the same Western European country. Kate studied at one of the top universities, he worked at the factory. This may be also the reason why even though he's more efficient at managing his budget, he seems to be more anxious about it. Whereas Kate is rather carefree about the future (she is enthusiastic about the salary and wants to save "something"), he presents a concrete plan for the future and pride due to his successful financial decisions.

Paul associates *joy* with materialization of his goal – buying the flat he was saving for. *Trust* is unrelated to the money according to him – whereas Kate claimed to see a financial support (borrowing money or buying presents) as form of building relationship, he sees these two areas of life as completely exclusive. Mixing them may pose a threat to

² MP – Małgorzata Pawlak, who conducted the interviews. The names are given only in the case of the conversation. The rest of the quotes is given without the source, because

they simply apply to the section regarding one specific respondent.

relationship: *"Where finance begins, friendship and love end."*

It hasn't been said explicitly, but the respondent may be worried about loyalty and honesty of a person he borrowed the money to. Moreover, he mentions the situation in which he helped a friend find a job in UK, but he resigned not informing him about his decision. The *fear* and mostly the *anxiety* turned out to be leading emotions of his emotional landscape. Limited trust to others, threat of homelessness and priority to take care of his financial situation are important for his characteristic. Nonetheless, possibility to earn a lot is for him surprising and delightful (both in England and Poland). He got amused and delighted when obtained very beneficial job offer during the Climate Summit in Katowice. The same applied to his first salary in the UK before. Positive emotions are also linked to his ability to earn money thanks to his knowledge (for example benefiting for fluctuations of currency rates).

The social injustice and sensitivity to the situation of the other people is one of the leitmotifs as well. Repulsion towards the entrepreneurs who treat the employees badly and anger towards those who overuse the financial support from the government. The most significant illustration of this attitude is related to him working at the office job at the Climate Summit, watching the cleaning lady who was tidying the room up. During this situation he experiences a sense of guilt – as if he didn't deserved to be at his well-paid position whereas people two times older than him work as blue-collar workers. There is also pride related to his situation – he compares those who expect the state to support them with himself and is proud of the fact that he succeed without this kind of support (which is in this case not fully correct, because one of his sources of

income is scholarship from the university awarded for very good grades – form of the support from the government).

4.3.3 Solutions for the customer

Paul is a type of customer with very strong motivation to assure security. He is well-organized and knowledgeable about financial issues, his goals are simple and set. His main motivation is anxiety-driven, may be also status-driven. During the interview the second aspect was not examined and at the first glance is difficult to spot. Whereas his goal is to find a better job and save for another apartment (saving for investments), he claims he doesn't need any help of support. His strong sense of independence make him not interested in solutions to support saving or investing.

The solutions proposed to him have to add some value – e.g. provide advanced financial knowledge. Maybe – if the hypothesis about the ego-driven needs such as status is correct – the luxurious products and special offers would be appreciated. The table below – based on the brainstorming during focus groups – shows the ideas that may be convenient to Paul. As already mentioned, the suggestions are based on the analysis of psychological profile of the customer – as they were proposed during brainstorming after the conduction of interviews. Nonetheless, this method of profiling seems to be interesting, this is why it has been included.

4.4 Martha (KAT2F)

4.4.1 Outcomes from the interview

Martha shared her story with openness, expressing a lot of anxiety. It is related to the fact that she is responsible for the family budget. Due to (active) alcoholism of her mother and financial problems of the family, she became the head of the family. His

father's debt execution (from his personal account) led to the decision that his salary would be transferred directly to her account. She perceives her parents as irresponsible and is grateful for the separation from her due to moving to Katowice to study. This gave her, she says, new perspective and enabled her to learn practical skills related to dealing with money. Still, she sees herself as a part of family, so her main motivation at the moment is to start earning more money and save. The savings will be devoted for paying her parents' debts. She expresses a lot of scepticism about investments, she's rather insecure about her knowledge (she studies logistics, but at the university of economics).

Is there any relationship between a field of a study and attitude to financial issues? According to her, not exactly – she finds her university education too theoretical. Her over-responsibility seems to be mainly due to being “child-hero” and playing the role of a parent to her parents (which is called parentification). In this case it is an example of not only psychological, but also financial parentification. Instead of them giving her the money, she executes the distribution of a salary. Martha is focused on priorities (to assure security – as if in Paul's case) and expresses disappointment due to the fact that her financial needs are not met. She quotes as an example the wedding – not only the parents cannot effort to fund it for her, but also she's unable to devote her own savings, because she wants to pay their debts. This may be seen as an example of self-sacrifice.

How about the distribution of cash and non-cash payments? She pays mostly with non-cash payments – switched to BLIK due to lack of monthly fee and comfort. Her goal is to pay with non-cash methods as much as she can.

What enables the respondent to control the budget? The respondent controls the budget fully – according to her she sticks to it exactly. Nonetheless, it's difficult to analyse it due to the fact that she manages both incomes of a whole family and expenses of a whole family (mother and father, partly brother who works as well, but lives with parents). According to Martha sticking to cash may result in more control over the budget, but she's definitely not fond of this method: *“I HATE such a thing. I know, on the other hand, that if you have money in your hands, it seems less - although I have not done it for a long time. Because, let's say, it does not feel like a card, and it only feels like cash for what the value has.”*

4.4.2 Emotional landscape

Her emotional landscape is related to her co-dependent style – she sees herself as a part of the bigger system: her family. This is why her joy is related to end of her father's financial problems that made her very sad (but also getting an unexpected scholarship at the university). As we can see, the family's hierarchy is distorted also at the emotional level – despite the fact that usually children trust their parents, in this case the situation is opposite:

MP: *“Trust?”*

Martha: *“I feel in this direction that Dad trusts me.”*

To the contrary she cannot fully trust her mother due to her addiction.

MP: *“And fear?”*

Martha: *“I feel fear in front of my mother, how she has the money. If she has any money, it is fear - what will she come up with?”*

The situation she struggles with is the main reason for mix of emotions: shame, sadness, fear, but also

disgust related to irresponsible financial decisions of her parents. Her needs are at the last place, this is linked to her sense of guilt when taking care of herself and also being too proud to accept help. Moreover, she also expresses guilt that she doesn't have more money to support the family. On the other hand, she's glad that she started a part-time job during her bachelor's degree and became more independent.

4.4.3 Solutions for the customer

The solutions for the combined budget would be beneficial. This is applicable also for the other families in which money are shared between parents and adult children. Maybe the automatization of the transfers would be useful.

4.5 Mark (WAW1M)

4.5.1 Outcomes of the interview

Despite being significantly older than the rest of the participants, Mark was selected after pilot interviews to take part in the research project due to his issues with over-spending. As a student of postgraduate studies he meets entry criteria, but also gives a new perspective of a person that is fully financially independent. This leads also to the conclusion that further research should be conducted on the interviewees after several years (as an example of longitudinal studies) or on people at age 25-30 to analyse their first (and second) steps into financial independence and this period of life. Mark's experience of dealing with money is significantly bigger in comparison to the other respondents, he also faces different challenges related to the stage of life (e.g. willingness to buy an apartment credited by bank) and his psychological condition (further diagnosis is suggested, but there is very possible that he deals with shopping addiction).

As a person who works for culture industry, he doesn't possess a lot of knowledge nor interest in financial issues – same as Kate. The difference between them is that Kate claims to be strict about sticking to her budget, Mark is more impulsive and, as a result, not satisfied with his financial decisions, especially those related to compulsive purchases of new clothes. He perceives money as a source of pleasure and is not fond of focusing on financial aspects of his life. Kate is rather blasé about possible improvements (such as keeping a budget in Excel file) or innovations (such as paying with mobile phone – in the interviews mentioned mostly as BLIK). Mark expresses a lot of enthusiasm towards news technologies and possible support that may limit the over-spending.

Brought up in working-class family, he doesn't value highly financial skills of his parents. He never has any structured budget as a child, than obtained the scholarship from the university and worked at the bar. After moving to Warsaw from his hometown he received very low salary, but according to him he was very responsible and was doing relatively well. The problems occurred during the period of stabilization – he earns enough, but spends a lot. During the interview he mentions the control he has over the budget, but it is contradictory to addiction-like cycle of his shopping sprees. In case of Mark there's direct link between money and pleasure. This part is going to be discussed in the emotional landscape.

Is there any relation between the studies and attitude to financial issues? Mark thinks his financial knowledge is not enough, this is why he is not interested in investing. Moreover, he sees consumption (buying a flat) as a form of investing: *"I would not dare in my life because I'm not suited to it and I feel that I would make some mistakes*

somewhere. And the only investment that I understand in terms of money and which is future-proof for me is the investment in my own flat."

A lack of knowledge and poor financial situation is visible not only at micro perspective. Also at macro perspective – in the whole culture industry: *"I'm in such an industry - because there is never any money for culture! - that we are all the time attacked with messages that we have no money, we cannot do it, this project, or why we have cut off the subsidy."*

He blames school for his attitude towards the money, mentioning that there was no relevant subject at school about managing the finance (despite actually it was: "Entrepreneurship for beginners" - obligatory for high school pupils). An industry, known for paying less than the private sector, is according to him another reason why he's not capable of controlling the budget in a proper way. As we can see, he perceives the reason for his financial behaviour as external, so from this perspective it is difficult to change it.

How about the distribution of cash and non-cash payments? Mark pays mostly in cash, the exception is the taxi (due to the security reasons). Contradictory to the popular belief that cash makes managing the budget more efficient, he hates this method, because he frequently loses the coins and cannot control the amount of banknotes in his wallet.

What enables the respondent to control the budget? Mark would like to control the budget more. In his case there is a monthly cycle – after getting the salary he doesn't check the account and doesn't analyse the expenses at all. In the middle of the month he gets more worried and start controlling it more, e.g. counting how many PLN per day are there

left. The closer to the end of the month (and the money) it gets, the more self-blaming and stressed he becomes.

MP: *"OK, so checking the balance at e-banking is associated with unpleasant emotions?"*

Mark: *"Of course, these are never any pleasant emotions [related to it]. Pleasant are only when I get paid. Then it's getting worse."*

This cycle is also partly related to his shopping sprees described in the next section.

4.5.2 Emotional landscape

Mark emotional landscape is rich, and, to some extent, exaggerated. He frequently uses word "TOTALLY" in order to put more emphasis on certain parts. The joy is associated with salary and buying things he wanted to have, e.g. trendy jacket. Other emotions expressed by Mark are pride (when he gets a bonus), anger (at social injustice), and premonition (related to "emotional money" – 100 PLN he gets from grandma every month.

Mark describes shopping sprees, the main reason for his problems with over-spending. Despite the fact that he used to keep the budget when his salary was low, now it's impossible for him to manage his finances in a satisfying way. At first there's an urge to go shopping – he compares it to the urge to smoke a cigarette, to get some kind of relieve. Then, impulsive decisions, moment of joy. Then it comes feeling guilty and regret, which actually doesn't lead to any change of a behaviour, even to correcting the mistakes.

Mark: *"... not so far to look, I was in a Zara type store and I spent PLN 300. And I have a feeling that no, I did not want it, I do not need it at all."*

MP: *"But I understand that this feeling comes afterwards?"*

Mark: *"I do not know, in the track no, then I absolutely do not look at it - I mean I look at how much it costs, I have a limit, how much I can spend on a shirt, but then I take it so much that it comes out of PLN 300 and I have such a mindf**k after payment or I have such thoughts that I am buying something, I go out to the store, I do not cut off the tag, I will give it back."*

MP: *"And you gave back?"*

Mark: *"No, it never happens to me."*

The situation gets worse as the amount of money at the account decreases and then there is a fear and anxiety related to risk of getting indebted. The scenario is a bit catastrophic – as we can see these fears become more generalized, exaggerated and as a consequence: overwhelming:

MP: *"And fear?"*

Mark: *"Then when you need to get a debit."*

MP: *"What are you afraid of?"*

Mark: *"I've run out of money, my payoff ... I'm afraid of interest, the consequences that I will not pay it back, that the loan gives birth to a loan, and I'm afraid of looping into a corner."*

MP: *"Something else with fear?"*

Mark: *"I am afraid of losing money at all, losing my job, the fact that I do not have savings that would help me when I do not have this job..."*

Due to the lack of savings he doesn't feel secure in the situations of unexpected debit. On the other hand, he cannot control spending in a way to feel secure enough and start building a safety buffer. Interestingly, what would encourage him to do so is finding an ideal apartment to buy – this goal is

difficult to achieve (his expectations are very high), so postpones the decision to manage his budget in a more efficient way. Still, the reason for such situation seems to be more external according to him. He mentions the examples of being incapable of controlling the money (esp. resigning from impulsive shopping), but on the other hand he claims he has control over the budget. From this perspective this case may be an illustration of an addictive behaviour, but, of course, in order to have the diagnosis it should be discussed not only with psychologist, but with addiction therapist.

4.5.3 Solutions for the customer

In case of Mark there are many solutions that may be useful to limit over-spending. He's not interested in saving large sums or making investments of any kind, but expressed concern about the spending. This is why this topic was also discussed during the interview in a detailed way. Moreover, the case study presented to the students during the focus group was based on his story. Most of the solutions related to saving and investing were marked as not applicable due to the urgent need to change harmful spending patterns at first.

4.6 Dorothy (KAT3F)

4.6.1 Outcomes of the interview

Dorothy is a student at economic faculty, she lives with her parents in a surrounding city and works as a shop assistant (3/4 to full time, depending on the schedule). She gets her salary in cash and then transfers it to bank account. The pocket money is not important in her case – she also didn't use to have any structured budget, obtained money from her relatives from time to time or thanks to certain occasions such as birthday.

And where did this money usually went? To the party [exact sense: to spend it at the party]. This is how she describes the past, but in present times she

also uses money to explore pleasant and entertaining sight of life – for example, she perceives shopping as pleasant (but sometimes is burdened by sense of guilt).

Is there any relationship between a field of a study and attitude to financial issues? Her attitude towards financial issues seems to be reasonable, with elements of professional knowledge, though she doesn't express strong interest not willingness to focus on it – she prefers to keep on living pleasurable lifestyle – not to such extent as Mark, but with the same perception of reason for earning money. She's very satisfied with the fact that she managed to save for the trip to Thailand and mentions that she went there with her boyfriend – they didn't paid 50/50, he paid more which she finds *natural*. This aspect lead us to gender topics – despite being well-educated, financially independent and brought up in large town, Dorothy sees men (partners) in a traditional way - as those who are obliged to support women financially: *"In total we paid, well, I guess 10k and me, let me see, I guess 3k or something, he paid for the majority of expenses – of course."*

What enables respondent to control the budget? She claims to overspend during shopping sprees, but on the other hand is able to cut the expenses (e.g. by living with her parents) or save for certain goal when gratification is postponed (such as trip to Thailand). The focus is put more on memories, not customer goods in her case.

4.6.2 Emotional landscape

Dorothy associated joy with nice clothes or cosmetics bought on sale ("Or for instance I wait for something for a long time, wait, wait, then there's a promotion and I buy. Yes!"). This may be also source of pride – e.g. in case of a coat that "everyone envies". Fascination and enthusiasm may be also

experienced when thinking about the celebrities: *"We are fascinated by those celebrities, their style, what do they wear, but we know that we won't have it, we won't be able to buy these clothes."*

By avoiding "I" form Dorothy distances herself a bit from these aspirations, but also expresses an acceptance for the situation that she cannot afford to buy designer clothes. This acceptance is lacking in case of Mark, who expresses much more frustration and anger, not mild sadness related to the fact that he's not capable of buying designer clothes. Trust is linked to relationships – familial or even with representatives of customer service. She mentions that she appreciates advice from shop assistants when buying the mobile phone. Fear is related to the fact that something may be bought for a price "higher than in a reality" or that the promotion will come soon after the purchase – this shows that efficiency (quality/price index) is important for Dorothy as a customer. Surprise is related to unexpected gifts, bonuses (for example when subscribing for some newsletters).

How about the sadness? It is related to the loss of money – for instance losing the purse. What is significant, Dorothy mentions such situation and links it to feeling of sadness – she doesn't self-blame, as was it in Megan's case and inability to save for the car. Also, she empathizes with people in need and the sadness motivates her to support charity organizations. By doing so, she also claims she protects herself against feeling ashamed (that she doesn't support). Repulsion is mentioned in case of illegal sell of cosmetics that was offered for her. Anger is related to the mistakes of the institutions: employer, telecom company – when the expected sum is too high/too low. Sense of guilt is linked over-spending, but not related to gifts for relatives or friends. It is rather related to wide consumption or its

lack: *"For instance when [my] mum says: hey, save the water, don't use it too much, because the bill is too high once again."*

Martha still lives with her parents, but expects her to be anxious about her budget when leaving home. "Shame is not to have money and do nothing about it" – she says. Her emotional landscape reveals the need to balance being reasonable and seeking pleasure/fashion/entertainment, but general impression is stability and calmness. She's not afraid to reveal situations she's ashamed of and discuss socially controversial feelings such as sadness. Despite the fact that she's fascinated with fashion and cosmetics, she turns out to be sensitive to social injustice and mentions being outraged by low salaries of cleaning ladies. This motif is visible in other interviews as well.

4.6.3 Solutions for the customer

The case of Dorothy is unique in that sense, that she gets the cash (salary) and *prefers* to put it to banking account. The preference of non-cash payments is then even deeper than in case of rest of respondents who just stick to the way they obtain the money (bank transfer). The willingness to control the expenses and save for pleasant activities make her a customer potentially interested in new banking solutions. Moreover, the regret she expresses about the shopping sprees may lead her to try additional tools to limit overspending. To the contrary, the topic of investment is maybe not blur, but distant and not that attractive as in case of Paul. If we compare her to Megan, we can notice that although pleasure related to shopping may be similar, the feeling of being obliged to be reasonable as customer/investor is not that strong – in addition to that Dorothy is not as self-critical as Megan.

5. Focus groups

5.1 Methodology and respondents

What are the solutions convenient for Polish students when it comes to managing their finances? What e-banking solutions could be implemented to limit over-spending in case of young customers? What do Poles in their twenties find attractive and efficient to boost saving money? Which tools could be offered for the customer to encourage him/her to invest the money already gathered at the savings account? How should e-banking panel/banking app look like to satisfy the needs of young customers according to Polish students? These questions were addressed by the research project based on focus groups with university students from Katowice and Warsaw, Poland.

The focus group as a form of moderated discussion is popular qualitative research method. It was useful for the project to get new ideas and confront the opinions of university students. The participants were recruited via social media – the advertisement was posted on numerous Facebook groups. After registration they have been informed about the expectations (e.g. no financial knowledge was expected of them) and the structure of the research. Three focus groups were organised at Warsaw School of Economics (Warsaw: F1 – 4 participants) and Katowice University of Economics in January 2019 (F2 – 6 participants - and F3 – 8 participants). Due to the fact that the traditional focus group is based on discussion with less than 10 participants the decision was made to stick to 4-10 participants instead of planned 20-30.

It turned out that the interest was larger in Katowice, probably thanks to the cooperation with local

students encouraged their fellow students to take part. The script of the focus group is included in additional materials. It was based on real-life case studies inspired by the individual interviews, the first part of Think Forward research project. It enabled us to address the real problems faced by young people in Poland: sense of guilt after over-spending, inefficient saving strategies and willingness to start investing. These problems were described in short stories related to fictional, but specific person in order to enable the participants to relate to the person as if they were his friend or client support specialist at the bank. Analysis of every case consisted of 5 minutes of individual work and 15 minutes of group discussion. Moreover, in order to provide practical tips related to banking apps/panels the participants were asked to draw their ideal banking app/banking profile (accessible from the computer) and discuss it with the group. The most innovative were discussed at the beginning of this report. The duration of the focus group was 150 minutes (including short break and two warm-up exercises).

Whereas whole duration of the focus groups is available in audio version in Polish, transcripts of the most essential parts were included to the report. The participants from certain groups are coded with age and gender, e.g. M21 means “male, 21 years old”, or, if applicable, also number of the focus group, e.g. F1M21 – describing the participant from the first focus group. The further parts contain the descriptions of presented ideas related to three key areas such as over-spending, saving and investing as well as the comment on an ideal banking application (online panel). This reports contains also the table

summarizing the frequency of certain types of solutions.

5.2 Students

18 students took part in focus groups – 4 from Warsaw, 14 from Katowice. 11 were students of a subject related to economics, the rest of them studied at the different faculties/universities such as chemistry, history, etc. The average age was 22, whereas the participants were aged from 19 to 30. Gender distribution: 6 women, 12 men. In general

economic students expressed enthusiastic attitude from the very beginning, whereas the minority – those from non-economic faculties – were quite shy due to their lack of knowledge (e.g. before the focus group one chemistry student was assuring me that “her financial knowledge is really poor”). Nonetheless, after the focus group there were mostly energized and satisfied, the outcome exceeded their expectations (e.g. “I thought that It would be some boring lecture and it turned out to be fun, and I am even rewarded for it, cool”).

6. Focus groups: Results

6.1 How to limit spending?

How to help somebody who wants to limit spending? This was the first brainstorming task for the participants – helping student who becomes indebted every month despite having decent salary. The solutions were proposed from the perspective of his colleague and from perspective of customer service specialist at the bank (also responsible for design of new banking products – at the beginning this category was excluded as the first one, but then turned out that the only division during the discussion is solution from the bank versus non-bank). The majority of propositions were based on obvious cuts of costs of living (e.g. renting a cheaper room, resigning from buying brand clothes, etc.). Some solutions were also related to finding a new, better-paid job or additional source of income.

Firstly, knowledge and planning were highly valued as solutions to a problem – Marek, the character from the case study, was recommended to analyse the budget and then, aware of its monthly structure, evaluate it and plan more efficiently for the next month. Education and motivation of the student can be – according to the respondents – supported by bank (e.g. by chat bots and presentation of long-term benefits of reasonable budget). Not thinking about the future was associated with lack of savings by some (F3M23: *“these people spend the money month by month, they don't see the future, don't see the perspective”*).

The spending patterns were perceived differently by different people:

F1M21: *“Yes, he spends a lot now, but he will soon graduate, it may change for better”*

F1F29: *“In my opinion if he's not confronted with long-term benefits, it gets even worse soon.”*

The second group of solutions was related to changing the financial products to limit spending. It means both limiting risk of becoming indebted (at least in perception of the students): from a credit card to debit card (F3M19: *“He spends the money that is not actually his money – is he cannot control himself, he shouldn't do it”*). Also, to the implementation of automatic transfers of part of the salary to the savings account (F3M22: *“this would be a different attitude then, o, I'm running out of money”*). Every group (and also part of respondents from individual interviews) mentioned an automatic transfer of small rest of the money as very useful. It is already implemented by some banks – e.g. when we pay 9.5 PLN, the rest of 10 PLN – 0.5 PLN is automatically transferred to the savings account. The process of saving is more invisible then. According to the respondents, decreasing the sum accessible for the client every month would be helpful to control the spending.

How about the solutions related to the form of money? The power of the lump, large sums such as 1k was mentioned only once as a method discouraging to spend money. The attitudes towards cash/non-cash payments were diverse, paying only with cash was considered as one of the solutions. Respondents found this method more psychologically harmful (F1M21: *“If you simply put the card, you don't feel the real exchange”*, F3M23: *“Sometimes it's more scary when you spend 400 PLN in cash”*). On the other hand as those who use mostly non-cash methods they were not

recommending this in the first place. Only one respondent mentioned that keeping large banknotes (and not changing them into smaller sums) makes spending more difficult. Surprisingly, the interviewee that discussed inability to limit spending during the individual interview found cash even less convincing to solve this problem ("Never! Everything would be lost" – WAW2M, individual interview). The preference of cash to boost saving was not that evident even within one focus group (F3):

F3M20: *"The best is to go to the shop in the exact sum of money in cash, only what he needs."*

F3F22: *"It only seems like this, you know..."*.

Peer support and psychological aspects were also mentioned. Collective saving and shaping new financial habits in a group of friends was recommended (F1). One group proposed even finding the partner who is more financially responsible. One of the students mentioned also sticking to lump sums as a method to avoid overspending (F2F23: *"I have the psychological barrier, I prefer lump sums, and I try not to spend below it"*).

Psychological support was considered as an idea according to the first group, but it turned out that naming it openly "psychologist" or "addition therapist" would not be convincing. This is why students proposed hiring an employee at the bank who would be competent, but called rather "a saving advisor". Nonetheless, some claimed that it is rather private issue and even in this form it wouldn't be beneficial (F1M23: *"in our culture it's associated with people who have problems"*, F3M19: *"it is too severe solution to this situation"*).

The forth group of solutions were dedicated to the process of spending itself – debit or card limits (per day and month), reminders and additional access

blockades. Surprisingly, only one person mentioned CashBack as a method to benefit from spending (F3M20). The ideas related to banking innovation were mostly linked to the process of spending. Students proposed "Party app" as a part of the banking app. Before the party the limit of spending would be defined according to specific budget category (in this case: bars, restaurants). During the party after the limit is exceeded there's additional code or task needed to obtain the access to funds.

F2M22: *"The fact that you're required to do some additional activity would be discouraging for a person."*

F2F23: *"Depending on how sober you would be!"*

This conversation outlines important aspect of overspending at the parties – when drunk at the party. Students from the group that proposed the solution mentioned sense of guilt while checking the balance next day, this is why according to them it would be helpful.

Shopping version of this app would show the clothes that are already bought the following month (for example using links from online shops – "Are you sure you want another T-shirt? You have already bought 10 of them this month"). More general reminders were also recommended in a form of an SMS or notification at the banking app (not via e-mail). They would be sent during the process of paying with card (before the final confirmation) or after. The reminders would show the % of funds left the following month for certain budget category. The case of those who could become irritated by this kind of support was solved by the first group by proposing a short online survey on the willingness to spend less or to save more. Otherwise, too many notifications were considered as irritating:

F1M22: *"Tricky, people may laugh at it, take a look at Netflix's case..."*

F1M21: *"Maybe, it makes sense, it may show that the bank takes care for the clients!"*

All in all, this kind of notifications were also mentioned to be useful in the computer games when someone have been playing for many hours in a row (F1).

6.2 How to encourage students to save more?

The case study related to over-spending was followed by the case related to willingness to save in an efficient and structured way. A second fictional character, Anna, an advertising specialist, wanted to save enough money for the car, but she was not very effective at sticking to this goal. Surprisingly, the most common reaction every group was related to use credit instead of gathering savings. The fact that the character was employed and didn't have financial problems led to focusing on credit, leasing and other forms didn't related to collecting funds to buy a car. The most surprising opinion was expressed by a student of economic faculty, who claimed that it's always better to invest the money that are saved and fund the car using credit. This is an example of mental accounting – perceiving certain parts of personal budget as split instead of thinking holistically.

The solutions related to savings at least partly were: saving smaller sum as a "trial period", buying a cheaper car in order not to be obliged to save as much money. The ideas mentioned in the previous case turned out to be also convenient: an automatic transfer, an analysis of a budget and setting the limits for credit/debit cards. Finding better source of income was also an option according to the students. Also, the analysis of the motivation and setting more concrete goal was proposed. Group no 2 recommended personality quiz to find the proper method of support for certain types of customers.

Whereas many ideas turned out to be traditional and emphasis was put rather on crediting instead of saving, this part of the focus group turned out to be the most energetic in all three groups. The students designed multiple solutions to boost the motivation by visualising the goal, adding some entertainment and rivalry to the process of saving and offer gratification at the different stages of saving. Encouraged to provide the solutions that are non-existent yet, the students recommended the following ones:

- a. Measuring the progress: how much is left till achieving the goal [%] – information provided with SMS or banking app notifications or visible after logging into the banking account,
- b. Reminding about the goal while shopping – also SMS notifications („You've just spend X PLN, remember that you save to buy a car"),
- c. Financial awards for saving (e.g. lower fee for savings account, debit card, etc.),
- d. Non-financial awards for saving (small gifts to choose from list visible at the banking account, collecting points to pay for presents e.g. the meetings – elegant dinners for the winners of the competition),
- e. Anonymous ranking and statistics published regularly (based e.g. on the percentage of salary saved or on the other index),
- f. Visualisation of a goal and check-points at the certain stage (e.g. the image of the car with parts that can already be purchased with certain amount of the money),
- g. Gamification: game-like challenge related to the process of saving. Choosing the avatar, after saving certain amount of money there would be possibility to e.g. buy new outfit for the avatar, upgrade an

interface or gain access to more convenient functionalities. Milestones unrelated to saving (or related, but in a virtual reality) – for instance travelling through planets as a progress of saving (F2: “You managed to earn 10 k, you fly to Mars, another 5 k – to Saturn”);

- h. Banking Universe: meetings, ranking, new interface and character (avatar) gathered in one place.

Despite the majority of positive opinions towards the solutions listed above there were also sceptical voices. The scepticism was related to: being distracted by the gifts, difficulty to find a universal index to measure the progress, the risk of getting used to the awards. The Google+ was given as an example (F3) to put an emphasis on the risk related to implementation of this kind of banking environment - something innovative may be spoiled if customers are forced to use it. Also, according to the students, these kinds of support would be convenient only for some young people, not for members of the older generations.

6.3 How to encourage to invest?

The third case was related to investing the money from the savings account. Students recommended several methods of investing (e.g. real estate, gold, bitcoins, also investing in oneself – education, trainings, pursuing hobby), much less ideas were related to the actual way to encourage someone to start using these methods. A lot of scepticism related to the support from the bank was also expressed:

F3M22: *“I am sceptical towards these advertisements from the banks (...) an influence on the client and different types of marketing are linked.”*

F3M20: *“I used to work as a client service consultant for the different industry (...) everything that comes from the bank is bulls***.”*

The trust turned out to be one issue, the incompetent client advisors – the second one. There were opinions (expressed mostly by students from economic faculties) that bank employees (frontline) were not competent enough at explaining certain types of investment to the client. This led to decrease of trust. Moreover, lack of financial knowledge in case of the “regular people” (not linked professionally to economics) was mentioned as one of the difficulties:

F2M22: *“I think the main problem is that the majority of people do not even recognize the difference between stocks and bonds.”*

F2M21: *“Real estate, it is simple, just buying flats, so material... but stock exchange – this sounds scary.”*

Instead of f2f meetings or reading books some members of the groups recommended videos (F2: *“watching is easier than reading”*, F2: *“It reduces the risk of meeting someone incompetent at the bank”*), free trial (e.g. investing smaller sums in order to see how does it work, showing different scenarios by the bank).

Also checking the customer’s attitude towards risk turned out to be essential. It was recommended to be checked with short personality test. Moreover – overcoming risk-avoidance associated with not investing by some:

F2M22: *“We have to tell him: “not doing anything with the money is also risky”.”*

F2F22: *“Who doesn’t risk, doesn’t drink the champagne! [Laughs].”*

The last category of ideas was related to ego-related benefits for the client – e.g. making him feel more luxurious by offering golden/black credit card.

6.4 Online banking and applications

The last task for the students was drawing their ideal banking app or an online banking panel. Then every participant did the short presentation of the drawing.

The first outcome was that an ideal e-banking differed to large extent. It seems that the best recommendation would be to enable client to modify the app by oneself – e.g. by enabling one to hide parts/panels/buttons/data that are not useful for him/her on a daily basis. This was also recommended to avoid adds, especially those hidden as regular correspondence from the bank – this was what students found particularly irritating. Another way of avoiding too much data was related

to the construction of the first panel (the first screen after logging in). Instead of accessing every option with one click at one screen, there were suggestions to provide less options inside of one screen, but also possibility to “go deeper” (move to another screens) with another clicks.

Secondly, students recommended to implement the solutions invented in previous sections of focus groups, e.g. gamification panel, avatar, information about progress related to saving, etc.

Table 2 offers the summary of the solutions recommended by students. It illustrates the frequency of certain ideas related to the following categories: over-spending, saving, and investing.

Table 2: Focus groups - summary of solutions proposed by students

1. How to limit overspending? <i>*-mentioned by researcher, accepted as useful by the group</i>	Group 1	Group 2	Group 3
Limiting expenses (such as rent) and focusing on quality instead of quantity and on priorities	x	x	x
Changing credit card into cash	x		x
Changing credit card into debit card with small limit	x		x
Manual/ automatic transfer of part of the salary at the beginning of the month to different account	x	x	x
Psychological support for shopaholics (called "savings advisor")	x		x
Education - piece of advice (online: by chat boots, books, YouTube, films about rational spending)	x		x
Education - presenting long-term profits to the bank	x		x
Peer support: collective saving with friends, help from the partner	x		x
Using CashBack			x
Limits or blocking of credit option	x	x	x
Analysis and planning of the monthly budget (by himself or together with the advisor)	x	x	x
Application with the categories of spending -> SMS warnings when exceeding		x	
Simple SMS warnings (after or before purchase)	x*		x
Short online surveys to make sure if the person needs help	x		
Psychological barriers such as sticking to lump sums			x
Additional sources of income instead of saving (e.g. better-paid job or selling the possessions)		x	x

2. How to encourage to save more for specific goal? (car)	Group 1	Group 2	Group 3
Analysis of the motivation - setting more concrete goal	x		x
Try to save for something smaller in order to check	x		
Buy something cheaper ("trial version", "trial period" for the visualisation) or for a short period of time (e.g. used car)	x	x	x
Analysis of income - finding another (better) source of income	x		x
Credit/leasing instead of saving	x	x	x
Change of the decision - rent a car	x		x
Automatic transfer of part of salary	x		x
Analysis of budget: daily/monthly spending limit not that convenient (OK, but mostly "not practical")	x*		
Visualisation (SMS: "you spend xx, remember that you save"), how much is left,	x		x
Awards for saving	x*		
Financial awards (smaller fee for account or the card if certain saving goal is achieved)	x	x	x
Non-financial awards	x*		
Check-points at the certain stage of saving (e.g. gathering 20% of the sum)			x
Gamification: game-like challenge, new outfit for our character, change of interface (upgrade), access to better interface	x	x	
Milestones unrelated to saving (or related in virtual reality)			
Ranking	x	x	
Banking Universe: meetings, ranking, new interface and character (avatar)	x		
SMS/information about amount [%] left to achieve the goal (also graphic or part of the information)		x	
Personality quiz to choose the right method of motivation		x	
3. Investing	Group 1	Group 2	Group 3
Support from bank employee: working on motivation and knowledge	x	x	x
Very basic training offered by bank	x		
Online tutorials - video	x	x	
Presentation of the offer and risk (1000 PLN as an example)	x		
Measuring the attitude towards risk before any intervention	x		
Visualisation - different scenarios presenting benefits	x		
To feel more luxurious - golden/black credit card		x	
Success stories		x	x
Demo version of investing (free trial as a game)		x	
Showing that doing nothing is also risky		x	
Investment in himself (education, hobby, own business)			x

7. Summary

The research proved that the world of financial decision of university students is much more complex than we may expect. First of all, non-cash payments are popular among young people, but the reasons for that differ, as well as the sources of scepticism. Secondly, there is a large gap between conscious and sub-conscious – whereas respondents with economic background usually denied the influence, general outcomes of the interviews proved better knowledge, but also – what was not expected at the beginning – more motivation to gain more skills and be efficient at managing one's budget. Thirdly, the solutions that enable to keep the budget on track differ, but the world of cash is gradually disappearing.

Nonetheless, it has to be noted that the more solutions/tools doesn't mean more efficiency. It is also applicable to the construction of the banking apps/panels – it's better to offer the customer a choice than burden him/her with too much data/options. Especially respondents not related to finance professionally (with no economic background) expressed the need to *avoid focusing on financial issues*. This is why for certain types of customers the support should be more invisible. To

the contrary, large group of those who are interested would appreciate new, innovative tools such as apps, gamification, financial and non-financial awards for certain behaviours and extensive use of reminders and visualization to achieve their goals. It has to be decided than if the intervention of the financial institution (such as SMS reminder after exceeding the limit) will be perceived as irritating and burdening or sign of support and help.

There is no doubt that the topics discussed in this report need further research, especially qualitative with psychological insights. Three main areas that may bring the most intriguing outcomes are related to: longitudinal studies at different stages of life (childhood, teenage years, studies, young adulthood), deeper understanding of psychological functioning of customers, further exploration of opinion of those, who are not interested in finance at all. Young customer, especially in post-socialist countries, enter adulthood with set of facts, opinions and emotional patterns that influence their decision. Helping them to make these decision rational and satisfying is one of the ways to shape their better future.

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9. Appendix

A: SCRIPT OF INDIVIDUAL INTERVIEWS

Participant(s): basic information

Year of birth _____ Gender: M/F Faculty: _____ Year of studies: ____

Monthly budget [in PLN]

_net income (approx.) _____

_expenditure (approx.) _____

_savings _____

_investments _____

Source of income:

_employment/own business

_scholarship/pensions

_transfers from family members

_other (such as? _____)

Professional experience in years (incl. all forms of employment): _____

The interview/scenario of focus group

1. Earning and saving in the past

Please think about your budget in the past – in childhood and teenage years. Describe it, its structure and the way you managed it. What was different in comparison to nowadays? What is the most significant difference? Discuss it according to the following phases of your life (if applicable):

- a) Childhood (till 10 y.o.)
- b) Teenage years (till 20 y.o.)
- c) Studies
- d) Now

2. What kind of changes regarding your budget do you expect in the future?
3. Everyone has many opinions regarding the money. Can you name any of them that are popular among your family members? What have you been told about money by your parents? Do you agree with these opinions? Why?
 - 3.1. Opinions related to money in general
 - 3.2. Opinions related to earning
 - 3.3. Opinions related to saving
 - 3.4. Opinions related to investing

I. Attitudes towards money

1. How would you describe your attitude towards money in general?
2. How would you describe your attitude towards spending?
What encourages you to spend more? Why?
3. How would you describe your attitude towards saving?
What encourages you to save more? Why?
4. How would you describe your attitude towards investing? How do you define it?
What encourages you to invest more, if applicable? Why?
5. You're interested in [...] and you study [*type of studies*]. Can you notice any links between your attitude towards money and your professional/academic interests? If yes, that kind of links?

II. Budget – structure and control over financial decisions

6. Please describe your level of satisfaction from your financial situation
[-----]
Definitely not satisfied Definitely satisfied
Why?
7. What are your sources of income? Please name them.

Form of income?
]-----[
Cash [100%] Non-cash [100%]

8. Form of spending

]-----[
Cash [100%] Non-cash [100%]

Questions applicable to sections 8.1-8.5.

How do you pay for the following spending categories (parts of budget)? Do you prefer Cash or non-cash?

What kind of method would enable you to control your budget more effectively?

Brainstorming: what kind of solutions would you propose to enable people like you to control their budgets more efficiently?

Note: if there interviewee does not spend money on a category, cross the section ("now")

8.1. Food and cosmetics

Now
[-----]
100% cash 100% non-cash
Preferred method
[-----]
100% cash 100% non-cash

8.2. Flat (e.g. rent, mortgage)

Now
[-----]
100% cash 100% non-cash
Preferred method
[-----]
100% cash 100% non-cash

8.3. Media and bills (Internet, mobile, electricity, etc.)

Now
[-----]
100% cash 100% non-cash
Preferred method
[-----]
100% cash 100% non-cash

8.4. Culture and entertainment (e.g. cinema tickets, partying)

Now
[-----]
100% cash 100% non-cash
Preferred method
[-----]
100% cash 100% non-cash

8.5. Transportation (e.g. metro, gas, car insurance, train tickets)

Now
[-----]
100% cash 100% non-cash
Preferred method
[-----]
100% cash 100% non-cash

9. Everyday life and cash payments versus non-cash payments

What kind of payments do you use in situations mentioned below? Why?

If you use non-cash payments – which types? What would encourage you to change the method of payment?

What kind of discount (%) would encourage you to change the method of payment? Cash->Non-cash or Non-cash->cash?

Situation	Cash	Non-cash	How? What would encourage you to change the method?
In taxi			

In public transport			
Ordering food (e.g. via Uber Eats)			
Shopping at fair / flea market			
Paying for electricity			
Grocery shopping in supermarket			
Purchasing train ticket			

10. Do you feel you have enough control over your monthly budget?

]-----[
 No, not at all Yes, full
 Why?

11. How often do you control your spending? How? Why?

]-----[
 Everyday Not at all

12. Would you like to change your financial behaviours/decisions in the future? How? Why?

III. Emotions

13. Please name two situations related to money, when you felt emotion mentioned below *[list of emotions based on Plutchik's model]*

- 13.1. Joy
- 13.2. Trust
- 13.3. Fear
- 13.4. Amusement
- 13.5. Sadness
- 13.6. Repulsion
- 13.7. Anger
- 13.8. Expecting
- 13.9. Guilt
- 13.10. Pride
- 13.11. Enthusiasm
- 13.12. Shame
- 13.13. Anxiety
- 13.14. Disgust

IV. Cash versus non-cash payments

14. According to you, what are advantages and disadvantages of cash payments?

15. According to you, what are advantages and disadvantages of non-cash payments?

16. Have you used the financial solutions mentioned below during last 12 months (or use them now)?

- _bnk account with an online access
- _bank transfers
- _debit card payment
- _credit card payment
- _mobile phone payment
- _automatic payment
- _bank deposit
- _savings account
- _payment app (such as BLIK, PeoPay, Android Pay, mobile banking payment app),
- _payment platform (such as PayPal, Visa Checkout, MasterPass)

17. Online shopping and apps

17.1. Do you have your credit/debit card data saved in mobile apps?

17.2. Do you have your credit/debit card data saved in online shopping accounts?

Monitoring

17.3. How often do you monitor your spending?

17.4. How often do you analyse spending categories?

17.5. When do you monitor your spending? What is your motivation?

17.6. What kind of emotions do you feel before/during/after?

17.7. What would enable you to monitor your budget more efficiently?

17.8. What would make budget monitoring more pleasant?

18. One form of payment

Are there any situations in which you use only cash? Which? Why?

Are there any situations in which you use only cash? Which? Why?

19. Motivation and possibilities to control the budget

Would you like to save more? What for?

Would you like to spend less? On what?

What is the easiest thing related to your personal finance?

What is the most challenging one?

20. Solutions. What kind of them do you utilize? I you don't – why? Are they potentially useful for you? If not, what would encourage you to try? (*applicable to traditional and non-traditional methods*)

What kind of solutions do you find helpful for managing personal finance at the moment?

What kind of solutions should be implemented to simplify budget management in the future?

20.1. Traditional methods:

_ keeping savings (cash) in one place (e.g. special box)

_ keeping record of expenses (in a notebook)

20.2. Electronic and mixed methods:

_ Apps analysing financial actions and designing schema of one's budget,

_ Planning – goals related to the **amount** of savings in a certain period,

_ Planning – goals related to **consumer goods** to buy after saving certain amount of money,

_ SMS warnings **after** exceeding daily/monthly limit of expenses,

_ SMS-owe warnings **before** exceeding daily/monthly limit of expenses,

_ List of shopping platforms/shopping apps with a monthly limit of usage,

_ Planning of a budget with dedicated specialist at the bank (f2f),

_ App enabling to publish small successes related to saving (similar to Endomondo)

_ Paying only with cash,

_ Paying only with cash – certain amount for every budget category.

Additional apps:

_ CashDroid, NBP Portfel, budget monitoring by apps offered by banks,

_ Listonic app - shopping list (incl. voice recognition and voice memos)

_ Motolog app – monitoring of expenses related to owning a car,

_ SkyCash app – parking and public transport – simple purchase of the tickets,

_ Ceneo app – comparison of the prices,

_ Qpony – promo hunting (similar one: Kizzu)

_ Tocomoje – invoice scanning,

_ Wallet – budget tracker (synchronizing expenses in cloud)

_ Spendee (foreign currencies, different accounts for different categories of budget)

Positive topic to finish the interview:

What kind of achievement/action/habit related to money makes you proud the most?

B: SUMMARY OF SOLUTIONS PROPOSED BY STUDENTS (INTERVIEWS) VERSUS PREDICTED BENEFIT FOR THIS TYPE OF CUSTOMER.

KATE [WAWF1F]	
1. How to limit overspending?	Would it solution be convenient for this type of the customer?
Limiting expenses (such as rent) and focusing on quality instead of quantity and on priorities	N/A
Changing credit card into cash	N/A
Changing credit card into debit card with small limit	N/A
Manual/ automatic transfer of part of the salary at the beginning of the month to different account	Yes – doesn't require effort
Psychological support for shopaholics (called "savings advisor")	N/A
Education - piece of advice (online: by chat boots, books, YouTube, films about rational spending)	Maybe
Education - presenting long-term profits to the bank	Maybe
Peer support: collective saving with friends, help from the partner	Yes – strong focus on peers
Using CashBack	Yes – doesn't require effort
Limits or blocking of credit option	N/A
Analysis and planning of the monthly budget (by himself or together with the advisor)	Maybe
Application with the categories of spending -> SMS warnings when exceeding	Maybe – doesn't require effort, on the other hand may be intrusive
Simple SMS warnings (after or before purchase)	Maybe – doesn't require effort, on the other hand may be intrusive
Short online surveys to make sure if the person needs help	Yes
Psychological barriers such as sticking to lump sums	N/A
Additional sources of income instead of saving (e.g. better-paid job or selling the possessions)	N/A – strong preference of free time
2. How to encourage to save more for specific goal? (car)	
Analysis of the motivation - setting more concrete goal	Yes, mentioned in the interview
Try to save for something smaller in order to check. Buy something cheaper ("trial version", "trial period" for the visualisation) or for a short period of time (e.g. used car)	Maybe
Analysis of income - finding another (better) source of income	N/A
Credit/leasing instead of saving	N/A
Change of the decision - rent a car	N/A
Automatic transfer of part of salary	Yes

Analysis of budget: daily/monthly spending limit not that convenient (OK, but mostly "not practical")	Yes
Visualisation (SMS: "you spend xx, remember that you save"), how much is left,	No, too intrusive
Awards for saving	No, too much effort
Financial awards (smaller fee for account or the card if certain saving goal is achieved)	Yes, discounts mentioned as preferred
Non-financial awards	No
Check-points at the certain stage of saving (e.g. gathering 20% of the sum)	Maybe
Gamification: game-like challenge, new outfit for our character, change of interface (upgrade), access to better interface	No, too much effort
Milestones unrelated to saving (or related in virtual reality)	No, too much effort
Ranking	No, too much effort
Banking Universe: meetings, ranking, new interface and character (avatar)	No, too much effort
SMS/information about amount [%] left to achieve the goal (also graphic or part of the information)	Maybe
Personality quiz to choose the right method of motivation	Maybe
3. Investing	
Support from bank employee: working on motivation and knowledge	Maybe
Very basic training offered by bank	Maybe
Online tutorials - video	Yes, may be appreciated
Presentation of the offer and risk (1000 PLN as an example)	No
Measuring the attitude towards risk before any intervention	Yes
Visualisation - different scenarios presenting benefits	Maybe
To feel more luxurious - golden/black credit card	No, luxury isn't important for her
Success stories	No
Demo version of investing (free trial as a game)	Maybe
Showing that doing nothing is also risky	Maybe, but she is not driven by anxiety
Investment in himself (education, hobby, own business)	Maybe

MEGAN [KAT1F]	
1. How to limit overspending?	Would it solution be convenient for this type of the customer?
Limiting expenses (such as rent) and focusing on quality instead of quantity and on priorities	Yes, but she already does it
Changing credit card into cash	Yes, she mentions it
Changing credit card into debit card with small limit	N/A
Manual/ automatic transfer of part of the salary at the beginning of the month to different account	N/A
Psychological support for shopaholics (called "savings advisor")	N/A
Education - piece of advice (online: by chat boots, books, YouTube, films about rational spending)	N/A
Education - presenting long-term profits to the bank	N/A
Peer support: collective saving with friends, help from the partner	N/A
Using CashBack	Maybe
Limits or blocking of credit option	N/A
Analysis and planning of the monthly budget (by himself or together with the advisor)	She already uses it in ING app and finds beneficial
Application with the categories of spending -> SMS warnings when exceeding	N/A
Simple SMS warnings (after or before purchase)	N/A
Short online surveys to make sure if the person needs help	N/A
Psychological barriers such as sticking to lump sums	She already finds it beneficial
Additional sources of income instead of saving (e.g. better-paid job or selling the possessions)	She's searching for a job atm
2. How to encourage to save more for specific goal? (car)	
Analysis of the motivation - setting more concrete goal	Yes
Try to save for something smaller in order to check. Buy something cheaper ("trial version", "trial period" for the visualisation) or for a short period of time (e.g. used car)	Maybe
Analysis of income - finding another (better) source of income	Yes
Credit/leasing instead of saving	No
Change of the decision - rent a car	No
Automatic transfer of part of salary	Maybe
Analysis of budget: daily/monthly spending limit not that convenient (OK, but mostly "not practical")	Maybe
Visualisation (SMS: "you spend xx, remember that you save"), how much is left,	Maybe
Awards for saving	Maybe

Financial awards (smaller fee for account or the card if certain saving goal is achieved)	Maybe
Non-financial awards	Maybe
Check-points at the certain stage of saving (e.g. gathering 20% of the sum)	Maybe
Gamification: game-like challenge, new outfit for our character, change of interface (upgrade), access to better interface Milestones unrelated to saving (or related in virtual reality)	Maybe
Ranking	Maybe
Banking Universe: meetings, ranking, new interface and character (avatar)	Maybe
SMS/information about amount [%] left to achieve the goal (also graphic or part of the information)	Maybe
Personality quiz to choose the right method of motivation	Maybe
3. Investing	
Support from bank employee: working on motivation and knowledge	Yes
Very basic training offered by bank	Advanced training – yes
Online tutorials - video	Yes
Presentation of the offer and risk (1000 PLN as an example)	Yes
Measuring the attitude towards risk before any intervention	Yes
Visualisation - different scenarios presenting benefits	Yes
To feel more luxurious - golden/black credit card	No
Success stories	No
Demo version of investing (free trial as a game)	Yes
Showing that doing nothing is also risky	Yes
Investment in himself (education, hobby, own business)	Maybe

PAUL [KAT1M]	
1. How to limit overspending?	Would it solution be convenient for this type of the customer?
Limiting expenses (such as rent) and focusing on quality instead of quantity and on priorities	No
Changing credit card into cash	No, maybe in the future, but only to assure more privacy
Changing credit card into debit card with small limit	No
Manual/ automatic transfer of part of the salary at the beginning of the month to different account	No, due to the actual model structure of income
Psychological support for shopaholics (called "savings advisor")	No
Education - piece of advice (online: by chat boots, books, YouTube, films about rational spending)	Maybe, but related to advanced financial knowledge
Education - presenting long-term profits to the bank	No
Peer support: collective saving with friends, help from the partner	No
Using CashBack	Maybe
Limits or blocking of credit option	No
Analysis and planning of the monthly budget (by himself or together with the advisor)	No
Application with the categories of spending -> SMS warnings when exceeding	No
Simple SMS warnings (after or before purchase)	No
Short online surveys to make sure if the person needs help	No
Psychological barriers such as sticking to lump sums	No
Additional sources of income instead of saving (e.g. better-paid job or selling the possessions)	Getting better-paid job is already his plan
2. How to encourage to save more for specific goal? (car)	
Analysis of the motivation - setting more concrete goal	No
Try to save for something smaller in order to check. Buy something cheaper ("trial version", "trial period" for the visualisation) or for a short period of time (e.g. used car)	No
Analysis of income - finding another (better) source of income	No
Credit/leasing instead of saving	No
Change of the decision - rent a car	No
Automatic transfer of part of salary	No
Analysis of budget: daily/monthly spending limit not that convenient (OK, but mostly "not practical")	No
Visualisation (SMS: "you spend xx, remember that you save"), how much is left,	No

Awards for saving	No
Financial awards (smaller fee for account or the card if certain saving goal is achieved)	No
Non-financial awards	No
Check-points at the certain stage of saving (e.g. gathering 20% of the sum)	No
Gamification: game-like challenge, new outfit for our character, change of interface (upgrade), access to better interface	No
Milestones unrelated to saving (or related in virtual reality)	No
Ranking	No
Banking Universe: meetings, ranking, new interface and character (avatar)	No
SMS/information about amount [%] left to achieve the goal (also graphic or part of the information)	No
Personality quiz to choose the right method of motivation	No
3. Investing	
Support from bank employee: working on motivation and knowledge	Maybe
Very basic training offered by bank	No, he possesses enough knowledge
Online tutorials - video	Maybe, advanced level
Presentation of the offer and risk (1000 PLN as an example)	No
Measuring the attitude towards risk before any intervention	No
Visualisation - different scenarios presenting benefits	Maybe
To feel more luxurious - golden/black credit card	Maybe
Success stories	No
Demo version of investing (free trial as a game)	No
Showing that doing nothing is also risky	No
Investment in himself (education, hobby, own business)	Maybe

MARTHA [KAT2F]	
1. How to limit overspending?	Would it solution be convenient for this type of the customer?
Limiting expenses (such as rent) and focusing on quality instead of quantity and on priorities	N/A
Changing credit card into cash	No
Changing credit card into debit card with small limit	Maybe
Manual/ automatic transfer of part of the salary at the beginning of the month to different account	Maybe – for her parent's account
Psychological support for shopaholics (called "savings advisor")	Family counselling would be appreciated
Education – piece of advice (online: by chat boots, books, YouTube, films about rational spending)	Maybe
Education – presenting long-term profits to the bank	N/A
Peer support: collective saving with friends, help from the partner	Already support from the boyfriend
Using CashBack	Maybe
Limits or blocking of credit option	Maybe
Analysis and planning of the monthly budget (by himself or together with the advisor)	Maybe
Application with the categories of spending -> SMS warnings when exceeding	Maybe
Simple SMS warnings (after or before purchase)	Maybe
Short online surveys to make sure if the person needs help	N/A
Psychological barriers such as sticking to lump sums	Yes
Additional sources of income instead of saving (e.g. better-paid job or selling the possessions)	Yes
2. How to encourage to save more for specific goal? (car)	
Analysis of the motivation – setting more concrete goal	N/A
Try to save for something smaller in order to check. Buy something cheaper ("trial version", "trial period" for the visualisation) or for a short period of time (e.g. used car)	N/A
Analysis of income – finding another (better) source of income	N/A
Credit/leasing instead of saving	N/A
Change of the decision – rent a car	N/A
Automatic transfer of part of salary	Yes
Analysis of budget: daily/monthly spending limit not that convenient (OK, but mostly "not practical")	Yes
Visualisation (SMS: "you spend xx, remember that you save"), how much is left,	N/A

Awards for saving	N/A
Financial awards (smaller fee for account or the card if certain saving goal is achieved)	N/A
Non-financial awards	N/A
Check-points at the certain stage of saving (e.g. gathering 20% of the sum)	N/A
Gamification: game-like challenge, new outfit for our character, change of interface (upgrade), access to better interface Milestones unrelated to saving (or related in virtual reality)	N/A
Ranking	N/A
Banking Universe: meetings, ranking, new interface and character (avatar)	N/A
SMS/information about amount [%] left to achieve the goal (also graphic or part of the information)	N/A
Personality quiz to choose the right method of motivation	N/A
3. Investing	
Support from bank employee: working on motivation and knowledge	N/A
Very basic training offered by bank	N/A
Online tutorials - video	N/A
Presentation of the offer and risk (1000 PLN as an example)	N/A
Measuring the attitude towards risk before any intervention	N/A
Visualisation - different scenarios presenting benefits	N/A
To feel more luxurious - golden/black credit card	N/A
Success stories	N/A
Demo version of investing (free trial as a game)	N/A
Showing that doing nothing is also risky	N/A
Investment in himself (education, hobby, own business)	N/A

MARK [WAW1M]	
1. How to limit overspending?	Would it solution be convenient for this type of the customer?
Limiting expenses (such as rent) and focusing on quality instead of quantity and on priorities	Yes
Changing credit card into cash	No
Changing credit card into debit card with small limit	Yes
Manual/ automatic transfer of part of the salary at the beginning of the month to different account	Yes
Psychological support for shopaholics (called "savings advisor")	Yes
Education - piece of advice (online: by chat boots, books, YouTube, films about rational spending)	Maybe
Education - presenting long-term profits to the bank	Maybe
Peer support: collective saving with friends, help from the partner	Maybe
Using CashBack	Maybe
Limits or blocking of credit option	Yes
Analysis and planning of the monthly budget (by himself or together with the advisor)	Yes
Application with the categories of spending -> SMS warnings when exceeding	Yes
Simple SMS warnings (after or before purchase)	Yes
Short online surveys to make sure if the person needs help	Maybe
Psychological barriers such as sticking to lump sums	Maybe
Additional sources of income instead of saving (e.g. better-paid job or selling the possessions)	Yes
2. How to encourage to save more for specific goal? (car)	
Analysis of the motivation - setting more concrete goal	Maybe
Try to save for something smaller in order to check. Buy something cheaper ("trial version", "trial period" for the visualisation) or for a short period of time (e.g. used car)	Maybe
Analysis of income - finding another (better) source of income	N/A
Credit/leasing instead of saving	N/A
Change of the decision - rent a car	N/A
Automatic transfer of part of salary	Yes
Analysis of budget: daily/monthly spending limit not that convenient (OK, but mostly "not practical")	Yes
Visualisation (SMS: "you spend xx, remember that you save"), how much is left,	N/A
Awards for saving	N/A

Financial awards (smaller fee for account or the card if certain saving goal is achieved)	N/A
Non-financial awards	N/A
Check-points at the certain stage of saving (e.g. gathering 20% of the sum)	N/A
Gamification: game-like challenge, new outfit for our character, change of interface (upgrade), access to better interface Milestones unrelated to saving (or related in virtual reality)	N/A
Ranking	N/A
Banking Universe: meetings, ranking, new interface and character (avatar)	N/A
SMS/information about amount [%] left to achieve the goal (also graphic or part of the information)	N/A
Personality quiz to choose the right method of motivation	N/A
3. Investing	
Support from bank employee: working on motivation and knowledge	N/A
Very basic training offered by bank	Maybe
Online tutorials - video	Yes
Presentation of the offer and risk (1000 PLN as an example)	N/A
Measuring the attitude towards risk before any intervention	N/A
Visualisation - different scenarios presenting benefits	N/A
To feel more luxurious - golden/black credit card	N/A
Success stories	N/A
Demo version of investing (free trial as a game)	N/A
Showing that doing nothing is also risky	N/A
Investment in himself (education, hobby, own business)	N/A

DOROTHY [KAT3F]	
1. How to limit overspending?	Would it solution be convenient for this type of the customer?
Limiting expenses (such as rent) and focusing on quality instead of quantity and on priorities	Maybe
Changing credit card into cash	Not for sure
Changing credit card into debit card with small limit	Maybe
Manual/ automatic transfer of part of the salary at the beginning of the month to different account	N/A due to form of salary
Psychological support for shopaholics (called "savings advisor")	Maybe
Education - piece of advice (online: by chat boots, books, YouTube, films about rational spending)	No
Education - presenting long-term profits to the bank	No
Peer support: collective saving with friends, help from the partner	No, resilient to peer pressure
Using CashBack	Maybe
Limits or blocking of credit option	Maybe
Analysis and planning of the monthly budget (by himself or together with the advisor)	Maybe
Application with the categories of spending -> SMS warnings when exceeding	Yes
Simple SMS warnings (after or before purchase)	Yes
Short online surveys to make sure if the person needs help	Maybe, but not very probable with that sense of independence
Psychological barriers such as sticking to lump sums	No
Additional sources of income instead of saving (e.g. better-paid job or selling the possessions)	Not at this stage of life
2. How to encourage to save more for specific goal? (car)	
Analysis of the motivation - setting more concrete goal	Already does it
Try to save for something smaller in order to check. Buy something cheaper ("trial version", "trial period" for the visualisation) or for a short period of time (e.g. used car)	Maybe
Analysis of income - finding another (better) source of income	Not at this stage of life
Credit/leasing instead of saving	N/A
Change of the decision - rent a car	N/A
Automatic transfer of part of salary	N/A
Analysis of budget: daily/monthly spending limit not that convenient (OK, but mostly "not practical")	Yes
Visualisation (SMS: "you spend xx, remember that you save"), how much is left,	Yes (trip to Thailand)

Awards for saving	Maybe
Financial awards (smaller fee for account or the card if certain saving goal is achieved)	Maybe
Non-financial awards	Yes
Check-points at the certain stage of saving (e.g. gathering 20% of the sum)	Yes
Gamification: game-like challenge, new outfit for our character, change of interface (upgrade), access to better interface	Yes
Milestones unrelated to saving (or related in virtual reality)	
Ranking	Yes
Banking Universe: meetings, ranking, new interface and character (avatar)	Yes
SMS/information about amount [%] left to achieve the goal (also graphic or part of the information)	Yes
Personality quiz to choose the right method of motivation	Yes
3. Investing	
Support from bank employee: working on motivation and knowledge	Yes
Very basic training offered by bank	No
Online tutorials - video	Maybe
Presentation of the offer and risk (1000 PLN as an example)	Maybe
Measuring the attitude towards risk before any intervention	Maybe
Visualisation - different scenarios presenting benefits	Yes
To feel more luxurious - golden/black credit card	Yes, for sure
Success stories	Maybe
Demo version of investing (free trial as a game)	Maybe
Showing that doing nothing is also risky	Maybe, but pleasant consumption is more important for her
Investment in himself (education, hobby, own business)	Maybe

C: FOCUS GROUPS: AGENDA & CASE STUDY

Agenda

- 17:30-17:45 Formalities (money and signatures on the list and statement)
- 17:45-18:00 Welcome: discussion of the purpose of the research, presentation of the teacher and participants
- 18:00-18:15 Saving: what motivates us? What helps us? What bothers you? How would we like it (wanted) to look like?
- 18:15-18:35 Case study 1 (how to reduce expenses? 5 'independent work, 15' discussions)
- 18:35-18:55 Case study 2 (how to save effectively? 5 'independent work, 15' discussions)
- 18:55-19:05 Break
- 19:05-19:25 Case study 3 (how to start investing? 5 'independent work, 15' discussion)
- 19:25-19:45 Perfect online banking on the computer and in the application (5 '-' drawing task, 15' - discussion)
- A. Perfect banking in the application - draw the one that suits you (convenience, clarity, information needed)
 - B. Perfect banking on your computer - draw one that suits you (convenience, clarity, information needed)
- 19:45-20:00 Summary, next steps, farewell.

Case study 1 (time for independent work: 5 minutes)

Marek is 24 years old, works full-time in a Polish company. Graduate studies. He rents a room in a student apartment for PLN 1000, earns about PLN 3000 [netto]. Marek claims that by some miracle at the end of the month he does not have much or he has to be indebted. He eagerly uses a credit card, likes electronic gadgets and designer clothes, so the debt on the card is not diminishing. Marek would like to spend less.

Version A: What would you advise him as a friend? What actions should be taken? What solutions to use?

Version B: You are an employee of the bank responsible for customer service and taking care of its satisfaction. What solutions could you suggest? What solutions should be available for such clients?

Version C: You are a bank employee responsible for the product portfolio for customers. What solutions would you come up with for such clients?

Case study 2 (time for independent work: 5 minutes)

Ania works at an advertising agency. She came up with the idea that she would like to save money on the car. She is quite satisfied with her earnings, she is not indebted anywhere and says that she can keep her budget in check. On the other hand, the car has been thinking for a long time and the prospect of purchase is not getting closer. What would help her?

Version A: What would you advise her as a friend? What actions should be taken? What solutions to use? What do you think people like Ania should do?

Version B: You are an employee of the bank responsible for customer service and taking care of its satisfaction. What solutions could you suggest? What solutions should be available for such clients?

Version C: You are an employee of the bank responsible for the product portfolio for customers. What solutions would you come up with for such clients?

Case study 3 (time for independent work: 5 minutes)

Marek is 26 years old, works full-time and is satisfied with his budget. Thanks to the fact that he worked in Germany every summer, he managed to save quite a lot. He feels that although part of this amount should somehow invest, one for a long time this money just lie on the account. Maybe he needs more knowledge, maybe more motivation, maybe something else.

Version A: What would you advise her as a friend? What actions should be taken? What solutions to use? What do you think people like Marek should do?

Version B: You are an employee of the bank responsible for customer service and taking care of its satisfaction. What solutions could you suggest? What solutions should be available for such clients?

Version C: You are an employee of the bank responsible for the product portfolio for customers. What solutions would you come up with for such clients?

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