

Journal of Management and Financial Sciences Volume XV • Issue 46 pp. 89–104 SGH Warsaw School of Economics Collegium of Management and Finance

Kamila Słupińska University of Szczecin ORCID: 0000-0003-3229-3410

Patryk Pyzia Institute of Economic Analyses and Expertises

The consumer in the process of deciding on a bank and the Swiss franc as a loan currency: the impact of the decision on consumers' disposable income

ABSTRACT At the beginning of the article the authors referred to the consumer, the factors affecting his or her choices and the decision-making process. Subsequently, the factors and circumstances determining the consumer's choice of a loan denominated in the Swiss franc (CHF) in Poland were specified. In the following section there wa presented an analysis of the value of granted CHF loans in the period from 07.2008 to 05.2022. It was assumed that the analysed group regards: a family of 2+2, i.e., two working individuals with incomes equal to 150% of a minimum wage; a loan of PLN 250,000 to be repaid over 30 years, disbursed on 1.08.2008 in one tranche, being repaid since 1.09.2008. A comparative analysis entailed three selected banks. In the summary, the authors referred to the main hypothesis: despite the knowledge of the economic conditions, the consumer possesses a lower disposable income when choosing a CHF credit, and two auxiliary hypotheses: hypothesis 1 was that home loans denominated in CHF, despite having a lower interest rate are less favourable to the borrower in the long run than the loans denominated in the Polish zloty, and hypothesis 2 was that in the process of deciding upon a bank, the consumer is guided by economic factors.

Keywords: Swiss franc loan, consumer, disposable income, decision-making process JEL Classification: M39, O16, L29

Introduction

In order to present the problem of the loans denominated in CHF, it needs to be observed that at the peak of their popularity, i.e., at the turn of July and August 2008, the LIBOR 3M rate was approximately 2.80%, whereas the WIBOR 3M rate was about 6.70%, which resulted in an average installment of a PLN loan being even 50% higher than that of a foreign currency loan, assuming that both credit types featured the same parameters (loan amount, bank's margin and loan term).

For the purpose of this paper, a study was conducted on the documentation of the Polish Financial Supervision Authority (FSA) regarding the number of loans granted and the data published by Statistics Poland (in Polish: GUS) demonstrating the amount of a minimum wage in Poland in the 21st century. The authors developed models of the repayment of CHF and PLN loans with the assumption that a loan agreement was concluded at the peak of CHF loan popularity, i.e., at the turn of July and August of 2008, thanks to which they analysed the share percentage of a loan installment in consumers' disposable income and determined the amount of total expenses incurred by the consumer in the period from July 2008 to May 2022. Furthermore, the authors established a potential benefit gained on account of incurring a CHF loan in comparison to a loan denomined in the Polish zloty.

As previously mentioned, the following main hypothesis was adopted for the paper: despite the knowledge of the economic conditions, the consumer possesses a smaller disposable income when choosing a CHF-denominated credit and the following auxiliary hypotheses: hypothesis 1 was that home loans denominated in CHF, despite a lower interest rate, are less favourable to the borrower in the long run than the loans denominated in the Polish zloty and hypothesis 2 was that in the process of deciding upon a bank the consumer is guided by economic factors.

The consumer in the process of economic decision-taking

Studies on consumer behaviour demonstrate the complexity of the subject matter and the need for its in-depth research analysis. Consumer behaviour is the subject of multiple fields of science, such as: economics, management, psychology, sociology, [Burlita, 2020; Ferber, 1977; Jacoby et al., 1976; Światowy 2006; Triandis, 1979] and they demonstrate its various aspects [Engel, Blackwell et al., 1993; Hansen, 1972; Górka-Chowaniec, 2022; Rudnicki, 2000; Xiao et al., 2011]. The definitions discussed and referred to provide information on both the reasons for making a purchase, a choice, but also on what the course of the decision-making process is, and thereby what factors may affect the stages of the decision-making process [Biliciler et al., 2022; Concari et al., 2020; Włodarczyk-Śpiewak, 2013].

Consumer behaviour involves the purchase, possession, and use of the means for needs satisfaction. The purchase stage constitutes a particularly significant component. It is preceded by choice, which depends on numerous criteria [Rudnicki, 2000].

Purchasing behaviour is determined by a multitude of factors: economic, demographic, socio-cultural, and psychological ones [Gajewski,1997; Karczewska, 2010; Limańska, 2015].

Economic factors entail income, prices, savings, loans, the impact of marketing instruments, goods availability [Engel et al., 1997; Lambkin et al., 2001; Rodnicki, 2000; Schiffman, Wisenblit, 2015; Włodarczyk-Śpiewak, 2013; Zhao et al., 2021].

Demographic determinants include age, gender, education, material status, stage of one's family life, whereas the factors of purchasing behaviour of the socio-cultural dimension involve family, opinion leaders, reference groups (comparative, status-related, and normative groups). In the case of psychological factors affecting consumers' purchasing behaviour, the following ones are taken into account: motives for action, needs, convictions, attitudes [Liczmańska, 2015, p. 108].

As far as the decisions related to obtaining a loan and purchasing a property are concerned, the economic criterion plays a particularly important role, as it involves confronting the price to be paid for given goods, the use of a bank's service, and a consumer's income [compare: Rudnicki, 2000]. Consumers deciding to obtain specific funds with which they are going to finance their purchase are left with specific personal disposable income that will be used for the satisfaction of their current needs.

Income constitutes one of the basic factors shaping consumers' behaviour. Its lack forces one to choose the needs that can be satisfied first of all. Income affects the amount of consumption spending and it enables defining what percentage of the income will be allocated to savings [Rudnicki, p. 110].

Personal disposable income (PDI), otherwise referred to as disposable income, constitutes the sum of household income that can be designated to spending or to savings [Begg, 2014]. Average monthly disposable income per capita in a household is considered to be the fundamental indicator demonstrating an individual's income situation [Wałęga, 2012, p. 221].

At this point an issue arises of the decision itself, deliberation over the decision, and making the right choice. Individuals face choices in various circumstances, and one of them entails a financial decision the consequence of which involves dilemmas related to their economic limitations that will affect their previous level of consumption [Hamilton, 2019, pp. 47, 32–550].

Making a decision is a certain process comprising a group of logically tied thought and/or computational operations, leading to a solution of a decision-related problem by choosing one of the possible variants of an action (decision). The issues of making a decision are analysed by a field of study called the decision theory, which encompasses the analysis and support of a decision-making process [Rebizant, 2012, pp. 5–6].

In the literature of the subject numerous approaches to a decision-making process can be found, which depend on the sphere of application – presented more broadly by Bolesta-Kukułka [2000], Redziak [2013], and Samuelson, who divides a decision-making process into six fundamental stages [Samuelson, 1998, p. 21]:

- Stage 1 defining a problem;
- Stage 2 defining an objective;
- Stage 3 examining variants of a choice;
- Stage 4 predicting consequences;
- Stage 5 selecting an optimal variant;
- Stage 6 perfecting sensitivity analysis.

Within the scope of the stages a series of questions need to be posed, thanks to which one is able to exclude the occurrence of unexpected or unforeseen events. Samuelson points out [inter alia in Samuelson, 1998, p. 28] a specification of what led to the necessity of taking a decision and what impact the above factors have on the objectives, the criteria, and variants of choice.

The criteria applied in a decision-making process may be of qualitative and/or quantitative nature [Rebizant, 2012, pp. 5–6].

When economic decisions are made, mostly quantitative measures are applied regarding benefits, costs, and gains related to a given decision. The criteria are comparable to one another or they refer to pre-established decision thresholds or characteristics. In the case of the decisions concerning consumer loans, the fundamental criterion is the calculation of a suitable loan instalment, which indirectly also depends on many other parameters, such as the number of loan installments, a bank's margin, annual interest rate, etc. Its amount enables evaluating an offer and deciding upon taking out a loan at a given bank [Rebizant, 2012, p. 6].

Decisions regarding the choice of a foreign currency loan denominated in Swiss francs (CHF) in Poland

In order to analyse the volume of Swiss franc loans granted in Poland in the years of increased bank activity, i.e., in the years of 2006–2009, first one ought to review the macroeconomic situation of that period. In those years Poland enjoyed a highly favourable economic situation linked to Poland's accession to the European Union. The trend of the zloty's appreciation was observed in the currency market, and the real property market experienced a strong boom. Those phenomena resulted in growing optimism among both consumers (borrowers) and market analysts, who predicted lasting market development trends in the future. Furthermore, the boom period in the real property market featured drastic differences in the interest rates charged on loans denominated in the Polish zloty in relation to loans denominated in foreign currencies [Polish Financial Ombudsman Report, 2016; *The White Book of Swiss Franc Loans in Poland*, 2015]. The differences between reference rates of three-month term deposits for PLN (WIBOR 3M) and for CHF (LIBOR 3M) are presented in Chart 1.

On account of the fact that the WIBOR rates substantially exceeded the LIBOR rates, borrowers decided to take out loans denominated in a foreign currency, since it enabled them to take out loans for relatively higher amounts and at the same time incur lower costs of servicing the loan. Simultaneously, banks were keen to grant such loans at the time owing to a favourable situation in the inter-bank market, allowing them to close a currency position at relatively low costs and with an option of obtaining the financing for lines of credit from parent companies (shareholders' financing).



Chart 1. Comparison of WIBOR 3M and LIBOR 3M rates in 2005–2009 (%)

A growing trend in the number of granted loans and their value was observed from 2005, while the year of 2008 was deemed to have been the cumulative year. In 2008 the value of 'currency' loans in relation to the loans denominated in the Polish zloty was nearly six times greater [the Polish Financial Supervision Authority, 2014]. That year is also considered to have been particularly attractive in terms of growing real property prices. Such an increased activity resulted in accelerated decisions of household members to purchase their own property, or to make investment decisions involving the purchase of a property. The actions taken strengthened a feedback mechanism involving price increases feeding the buying trend, which consequently led to an increase of the price spiral [Wałęga, 2013, p. 221].

The choice of a particular bank depended on the attractiveness of the terms the bank offered to consumers as well as on buzz marketing which accompanied a given offer. In the process of searching for information in the services market, buzz marketing, also referred to as 'word-of-mouth marketing,' plays an important role. Such information is of crucial significance to a consumer, since it is particularly effective as an information source, moreover, its use saves time and money. Additionally, it is adjusted to what a given consumer needs and seeks. It is perceived as being complete, trustworthy, and reliable [Sowa, 2011, p. 253], which is especially consequential in the case of financial decisions, burdened with a high degree of risk.

Source: own elaboration on the basis of money.pl [20.05.2022].

Analysis of the loans denominated in CHF granted in Poland

In order to establish the value of CHF loans in the period of 2006–2009, an analysis was conducted of the available financial data presenting a combined value of mortgage loans granted in a given year, followed by a calculation of the percentage share of granted CHF loans in the total portfolio and their value. The values were presented in Table 1.

Year	Total loans granted (billion PLN)	% of CHF loans	Nominal value of CHF loans (billion PLN)
2006	21.5	54.15	11.64
2007	35.1	40.92	14.36
2008	57.128	68.60	39.19
2009	38.592	17.20	6.64
Total	152.32		71.83

Table 1. Values of CHF 2006–2009

Source: own elaboration on the basis of AMRON-SARFIN Report of March 2010 and research results of house loans and household consumer loans portfolio as of the end of 2017 [FSA, 2018].

On the grounds of the conducted analysis, it must be pointed out that in the years of 2006–2008 the value of CHF loans granted was rising until in 2008 it reached nearly 70% of the entire portfolio of the loans granted. A decrease in the number of CHF loans granted in 2009 was owed to a significant spike in the CHF value in relation to the Polish zloty and the introduction of the S (II) recommendation in December 2008, which required that clients be informed on CHF past rates of exchange as well as the risk related to currency spread.

In order to describe the current problems of CHF loans in Poland, it is necessary to demonstrate the gross value of the portfolio of such loans at Polish banks in the second quarter of 2021, i.e., more than 12 years after the peak popularity of CHF loans. The situation of selected banks is presented in Chart 2.

The examination of the above chart leads to a conclusion that the total sum of the three largest CHF mortgage loan portfolios at the end of the 2nd quarter of 2021 exceeds PLN 43 billion, nearly half of which is represented by PKO BP (PLN 20.323 billion). For the sake of comparison, the total value of home loans portfolio at the end of the 2nd quarter of 2021 was equal to PLN 486.092 billion (the figure comprises both the loans denominated in the Polish zloty and in foreign currencies, including CHF) [AMRON-SARFIN Report, 2021]. It means that the sum total of the portfolios of only those three banks constituted nearly 10% of the entire home loans portfolio in Poland, despite the fact that from the second half of 2009 the number of CHF loans diminished significantly, while the present volume of CHF loans is less than 0.1% [AMRON-SARFIN Report, 2021].





On the basis of the above analysis of the financial market in Poland in the period from 2006 to 2009 as well as the analysis of agreement specimen used at the time, the following factors for the selection of the entities for the study were determined:

- in the analysed period the entities offered both the loans denominated in PLN and in CHF;
- the loan amount in an agreement is expressed in the Polish zloty (PLN);
- the reference rate assumes the form of a 3-month deposit reference interest rate;
- a change in interest rates occurs on the date corresponding to a loan disbursement date;
- the same formula of calculating the interest part of an installment is used.

Having examined specimen agreements used by banks in the analysed period, the following banks were selected for the study:

- mBank SA (formerly BRE Bank);
- Santander Bank Polska SA (legal successor of Kredyt Bank SA);
- Raiffeisen Bank International AG branch in Poland (legal successor of Polbank EFG SA).

All these banks disclosed the loan value in the Polish zloty in their loan agreements, which on a disbursement date was indexed to the Swiss franc by applying the buying rate for CHF/ PLN in force at a given bank on the date of the loan disbursement; the banks used a reference rate of the LIBOR 3M (CHF) to determine the loan interest rate, and they made any changes in the interest rate in subsequent periods on the date corresponding to the date of the loan disbursement. Additionally, the same formula was applied to calculate the interest rate, i.e., 365/365 (in the formula, the number of days in a month is divided by 365 days of the year, i.e., it corresponds to calendar months).

Source: https://www.bankier.pl/wiadomosc/Ile-frankow-maja-banki-II-kwartal-2021-r-8182346.html [accessed: 20.05.2022].

Results of the study of loan installment amounts and their impact on consumers' disposable income

For the purpose of this paper, a study was conducted presenting the impact of the choice of a bank at which a loan was granted on the amount of expenditure on account of the actual loan repayment and the impact of a loan installment on a consumer's disposable income (ex post) for a loan indexed in CHF (loan agreement clauses specify the loan amount in the Polish zloty, which was recalculated into CHF on the date of the loan disbursement by applying the buying rate in force at a given bank on the date of the loan disbursement) granted at the turn of July and August 2008, i.e., in the peak period of CHF loans sales. The study was conducted with a loan repayment model developed by the authors. The aim of the study was to determine the impact of the borrower's decision regarding both the choice of a loan currency as well as the choice of a bank granting the loan on the burden to the consumer's disposable income in the course of the loan agreement term, and to determine whether the financing based on a foreign currency allows the consumer to draw benefits in the form of lower installments than in the case of the loans denominated in the zloty, thereby affecting the consumer's disposable income to a lesser degree. The study was conducted by comparing the variability of indebtedness at three selected banks by determining the amount of installments in the Swiss franc and their equivalents in the Polish zloty, the percentage share of the burden to a consumer's income and total repayment amounts in the periods from the date of the agreement conclusion until 1 May 2022. Additionally, for the sake of comparison, calculations for a loan indexed in accordance with the average exchange rate of the National Bank of Poland and for a PLN loan based on the WIBOR rate were prepared. Thereby, the study was intended to demonstrate or to deny the profitability of taking out foreign currency mortgage loans in CHF from the standpoint of Polish borrowers and to demonstrate how a decision to conclude a mortgage loan agreement affects the consumer during the term of such an agreement.

The following assumption was adopted in the study – a family of four comprising two working individuals with an income per person equal to 1.5 net minimum wage and two minor children on 15 July 2008 were granted a loan in the amount of PLN 250,000, which corresponds to an average house loan amount in a foreign currency granted in 2008, with the assumption of financing 100% of a property value through the loan (LtV ratio = 100%). The examined loan was taken out at mBank, Raiffeisen Bank (formerly Polbank EFG SA), or Santander Bank Polska (formerly Kredyt Bank SA). In the study it was assumed that the loan interest rate is indexed with the LIBOR CHF 3M reference rate for the Swiss franc and with the WIBOR 3M for the Polish zloty in each subsequent loan quarter, while the interest rate of the first date of a new quarter was assumed as the interest rate for a given quarter. For both types of financing the adopted loan margin was equal to 200 basis points. In order to determine the loan amount, it was assumed that the loan was disbursed on 1st August 2008, whereas loan repayments were to be made on the 1st day of each month and the selling rates

of that date were adopted for determining the equivalent of an installment expressed in PLN. A loan repayment period of 30 years in fixed (annuity) monthly installments was adopted for the analysis. In terms of an interest rate, the rate was determined by adopting the 365/365 formula, irrespectively of the fact whether the actual number of days in a month was divided by 365 days of the year. The impact of the loan on a consumer's disposable income in a given month was established as a percentage share of an installment expressed in PLN in a family's total disposable income.

The schedule of minimum wage in the years of 2008–2022 is presented in Table 2

Year	Minimum net wage (PLN/month)
2008	845.17
2009	954.96
2010	984.15
2011	1 032.34
2012	1 111.86
2013	1 181.38
2014	1 237.20
2015	1 286.16
2016	1 355.69
2017	1 459.48
2018	1 530.00
2019	1 633.78
2020	1 920.62
2021	2 061.67
2022	2 363.56

Table 2. The schedule of the minimum wage in the years of 2008–2022

Source: own elaboration on the basis of the data of Statistics Poland (GUS) and https://www.zus.pl/baza-wiedzy/skladki-wskazni-ki-odsetki/wskazniki/minimalne-wynagrodzenie-za-prace-od-2003-r

On the grounds of Table 1, it is possible to establish that upon the conclusion of the analysed agreement the examined family would be obtaining an income of PLN 2,535.52, whereas in the last year of the study the income would be equal to PLN 7,090.68.

First of all, the value of an installment repaid in a given month by the borrowers was determined for each variant. The results for individual variants are presented in Chart 3.

Chart 3. Comparison of the amount of due installments in the examined variants (PLN)



The analysis of the above chart leads to an observation that in the case of a loan indexed in CHF, the value of an installment for a given period in each variant would range between PLN 1,300.00 to PLN 2,100.00, whereas for a loan denominated in the Polish zloty it would be between PLN 1,050.00 and PLN 1,950.00. At the same time, it needs to be noted that the lowest installment amount for a loan indexed to CHF occurred in the second year of the agreement terms, in which the exchange rate of the Swiss franc oscillated around the amount of PLN 2.80, whereas the LIBOR 3M reference rate was at the level of 0.25%. In turn, for a loan denominated in the zloty the lowest installment amount occurred in the twelfth year of the agreement, i.e., 2020, during which the WIBOR 3M reference rate was at the level of 0.21%. The highest installment amount for an indexed loan occurred at the time of the lowest installments of a PLN loan, i.e., the years of 2020–2022, during which the exchange rate of CHF to PLN was at an average rate of 4.15–4.70 PLN, with a simultaneously negative LIBOR rate. This situation was linked, firstly, to the outbreak of the COVID-19 pandemic in 2020, and secondly, to the outbreak of the Russian-Ukrainian war in February 2022. In the chart we can notice that since 2013 a PLN loan installment was lower than that of a loan indexed to CHF.

Another stage involved examining the burden of a loan installment on a household budget. Chart 4 shows a percentage share of a loan installment in the income of the examined family.



Chart 4. Percentage share of a loan installment on borrowers' income

Source: own elaboration.

On the basis of the above chart it can be concluded that in the case of a loan indexed to CHF the burden of a loan installment was at the level of 80% at the turn of 2008 and 2009 falling to the level of approximately 30% at present, whereas on the day of the loan agreement conclusion it was at the level of 54% – 58%, depending on the agreement variant. In the case of a PLN loan, the burden stood at 77% at the end of 2008 and at 17% in the period of 2021–2022.



Chart 5. Evaluation of the maximum cost-effective CHF/PLN exchange rate

Source: own elaboration.

The decrease in the burden of the loan installment in subsequent years is observed for each variant. It is tied to both the reduction of the reference rates on the grounds of which the amount of a principal-interest installment amount is determined, and the increase in consumers' disposable income.

When assessing the benefits of a loan indexed in CHF in relation to a PLN loan, one needs to examine at what CHF/PLN exchange rate, with unchanged reference rates in force in a given period, the indexed loan will be more favourable than a PLN loan. To that end, the variability of CHF/PLN exchange rates in the period covered by the study and the value of a PLN installment were analysed. The values for the examined period were presented in Chart 5.

The chart presented above demonstrates that since 2013 PLN loan installments assumed lower amounts than the installments expressed in PLN for a loan indexed in CHF. It means that the borderline exchange rate for the model loan is the CHF/PLN exchange rate in force at the turn of 2012 and 2013. That exchange rate was around PLN 3.40. It means that at the above value of that exchange rate, the installments of indexed loans, despite their lower interest, were still less favourable to borrowers than those of PLN loans.

For the borrower, the most significant piece of information is the total sum of loan repayments made in that period relative to the income obtained. From August 2008 to May 2022, the analysed borrowers would reach an income equal to PLN 677,839.60, out of which they would need to allocate the following amounts to the payment of loan installments, respectively:

- for a PLN loan variant: PLN 220,373.39;
- for a loan indexed with an average rate of exchange of the National Bank of Poland: PLN 272,035.75;
- for an indexed loan incurred at mBank: PLN 285,292.82;
- for an indexed loan incurred at former Kredyt Bank (currently Santander Bank Polska): PLN 287,051.56;
- for an indexed loan incurred at former Polbank EFG (currently Raiffeisen): PLN 292,577.77. It means that in the analysed period the difference between the sum of PLN loan installments

and the most expensive indexed loan in this comparison would be as high as PLN 72,204.38.

Conclusions from the study of loan installment amounts and their impact on the consumers' disposable income

Assessing the issue of financing a property with house loans in Poland as well as their impact on consumers' disposable income, the following conclusions can be drawn.

- 1. In the case of a loan granted at the turn of July and August 2008, when the rate of exchange of CHF/PLN was at its historic low, such a loan eventually turned out to be less favourable for the borrower than a PLN loan.
- 2. Loans indexed to CHF, owing to lower interest rates in relation to a comparable PLN loan, yielded benefits at a time when CHF/PLN exchange rate did not exceed PLN 3.40. Above

that level, with a simultaneous decrease of the WIBOR 3M reference rate, indexed loans constituted a greater burden to borrowers' budget than PLN loans.

- 3. Loans indexed to CHF generate a greater risk in the event when financing was obtained at a historic low of CHF/PLN exchange rate, with the LtV ratio equalling 100% or more at the time the loan was granted and in a situation when the borrower had a low or unstable income. The risk affects in particular the loans contracted for a period of thirty years (as is the case of the loan examined in this paper), since in the case of such loans repaid in equal installments mainly interest is repaid over the first years.
- 4. A monthly repayment of the debt expressed in CHF, in the form of an amount given in PLN, owing to significant variations of the CHF/PLN exchange rate, creates uncertainty among borrowers as to the amount of a loan installment to be paid in a given month, which in extreme cases may lead to a decrease in trust in the banking sector.
- 5. Despite the fact that in the analysed case a PLN loan would be more favourable for the borrower than a loan indexed to CHF, on the date of the loan agreement conclusion (July 2008) the borrower, owing to insufficient income and legal regulations, would not possess satisfactory creditworthiness to be granted a loan denominated in the Polish zloty. This forces the borrower wishing to purchase a property to decide on a loan indexed to CHF, which in the long-term was not an instrument favourable to the borrower. It demonstrates that in the decision-making process, in spite of the knowledge possessed regarding one's economic situation, non-economic factors resulting from the consumer's wish to own a property affected the decision.

Summary

As was demonstrated by the results of the study, even though consumers were aware of the economic factors, overall, they possessed a lower personal disposable income when they selected a CHF loan. Foreign currency house loans carried a greater risk, despite the possibilities they offered to consumers, i.e., owing their own property.

Arguments in favour of deciding upon a foreign currency loan and not a loan in the Polish zloty included distinctly low interest rates, financial availability in the long-term, open crediting policy enabling a high degree of flexibility as well as the influence of other individuals also deciding to choose a foreign currency loan [Buszko, 2013a; Reszka, 2016, p. 95; Szopiński, 2018].

The process of deciding on a particular bank was guided by the current situation, which largely translated into consumers' moods and their decision-making factors. According to the adopted auxiliary hypotheses, house loans expressed in CHF, despite lower interest rates, in the long run occurred to be less favourable than PLN loans. When deciding on a bank, despite their knowledge of the economic factors related to the income possessed and the financial risks, consumers were also affected by non-economic factors, such as a wish to own a property and the influence of other individuals, which eventually determined their choice.

Reference:

- 1. AMRON-SARFiN Report (2021, Feb). Retrieved from: https://www.amron.pl/strona. php?tytul=raporty-amron-sarfin, [accessed: 25.09. September 2021].
- 2. Begg, D. (2014). Makroekonomia, Warszawa: Polskie Wydawnictwo Ekonomiczne.
- 3. Bolesta-Kukuła, K. (2000). *Decyzje menedżerskie w teorii i praktyce zarządzania*. Warszawa: Wydawnictwa Naukowe Wydziału Zarządzania Uniwersytetu Warszawskiego.
- 4. Burlita, A. (Ed.) (2020). *Zachowania konsumentów: wybrane problemy*. Warszawa: Polskie Wydawnictwo Ekonomiczne.
- Biliciler, G., et al. (2022, April). How Visual Entropy Cues Shift Temporal Focus and Influence Product Evaluations. *Journal of Consumer Research*, 48(6), pp. 1010–1031, https://doi. org/10.1093/jcr/ucab042
- Concari, A. Kok, G. Martens, P.A. (2020). Systematic Literature Review of Concepts and Factors Related to Pro-Environmental Consumer Behaviour in Relation to Waste Management Through an Interdisciplinary Approach. *Sustainability*, 12, pp. 4452, https://doi.org/10.3390/ su12114452
- 7. Engel, J.F., Blackwell, R.D., Miniard, P.W. (1993). Consumer Behavior (8th ed.). Fort Worth: Dryden Press.
- 8. Ferber, R. (1977). Can Consumer Research be Interdisciplinary? *Journal of Consumer Research*, 4(3), pp.189–192. Retrieved from: http://www.jstor.org/stable/2488651 [accessed: 02.06.2022].
- 9. Gajewski, S. (1997). Zachowanie się konsumenta a współczesny marketing. Łódź: Wyd. Uniwersytetu Łódzkiego.
- 10. Górka-Chowaniec, A. (2022). Zachowania konsumentów aktywizujące działania przedsiębiorstw świadczących usługi gastronomiczne w turbulentnym i niepewnym otoczeniu. Warszawa: Polskie Wydawnictwo Ekonomiczne.
- Hamilton, R., Thompson, D., Bone, S., et al. (2019). Skutki niedoboru na ścieżki decyzyjne konsumentów. J. z Acad. Ocena. Nauka, 47, pp. 532–550, https://doi.org/10.1007/s11747-018-0604-7
- 12. Hansen, F. (1972). Consumer Choice Behaviour. A Cognitive Theory. New York: The Free Press.
- Jacoby, J., Szybillo, G.J., Berning, C.K. (1976, March). Time and Consumer Behavior: An Interdisciplinary Overview. *Journal of Consumer Research*, 2(4), pp. 320–339, https://doi. org/10.1086/208644
- Karczewska, M. (2010). Determinanty zachowań konsumenckich na rynku. Materiały Krakowskiej Konferencji Młodych Uczonych nr 5. Kraków: Wyd. Grupa Naukowa Pro Futuro, Fundacja dla AGH Akademii Górniczo-Hutniczej, pp. 478–481.
- 15. Lambkin, M., Foxall, G., van Raaij, F., Heilbrunn, B. (2001). Zachowania konsumenta, Koncepcje i badania europejskie. Warszawa: PWN.
- Liczmańska, K. (2015). Kluczowe czynniki determinujące zachowania konsumenckie na przykładzie mieszkańców województwa kujawsko-pomorskiego. Zeszyty Naukowe Uniwersytetu Szczecińskiego. Problemy Zarządzania, Finansów i Marketingu, 41(2), https://doi.org/10.18276/ pzfm.2015.41/2-09

- Polish Financial Ombudsman Report (2016, June). Legal analysis of selected contractual clauses used by banks in foreign-currency indexed loan agreements concluded with consumers. Warsaw. Retrieved from: https://bip.brpo.gov.pl/sites/default/files/Raport_RF_Kredyty_walutowe.pdf [accessed: 03.06.2022].
- Rebiznat, W. (2012). *Metody Podejmowania Decyzji*. Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej, ISBN 978-83-7493-688-0
- 19. Redziak, Z. (2013). *Podstawy teorii podejmowania decyzji*. Warszawa: Wydawnictwo Akademii Obrony Narodowej.
- 20. Rudnicki, L. (2000). Zachowanie konsumentów na rynku. Warszawa: PWE, pp. 110-112.
- 21. Samuelson, W.F., Marks, S.G. (1998). Ekonomia menedżerska. Warszawa: PWE.
- 22. Schiffman, L.G., Wisenblit, J. (2019). Consumer behawior. Boston: Pearson.
- 23. Szczepański, J. (1976). Wydajność pracy a konsumpcja. Nowe Drogi, 11.
- 24. Światowy, G. (2006). Zachowania konsumenckie. Warszawa: PWE.
- The White Book of Swiss Franc Loans in Poland (2015, March). Warsaw: The Polish Bank Association. Retrieved from: https://www.zbp.pl/getmedia/583d24ee-450e-4a97-a9bc-4c71b85f7749/06-Biala-ksiega-kredytow-frankowych-w-Polsce_marzec_2015 [accessed: 03.05.2022].
- 26. Triandis, H.C. (1979). Values, attitudes, and interpersonal behavior. *Neb. Symp. Motiv.* 27, pp. 195–259.
- 27. Wałęga, A. (2012). Zróżnicowanie poziomu i źródeł dochodów gospodarstw pracowniczych w Polsce. *Acta Universitatis Lodziensis*, p. 221.
- Wiśniewska, A. (2005). Czynniki decydujące o wrażliwości konsumentów na markę. In: A. Grzegorczyk (Ed.), *Instrumenty kształtowania wizerunku marki* (pp. 16–20). Warszawa: Wyższa Szkoła Promocji.
- 29. Włodarczyk, K. (2013). *Rynkowe zachowania polskich konsumentów w dobie globalizacji konsumpcji*. Toruń: Wydawnictwo Adam Marszałek, p. 468.
- Xiao, J.J., Ford, M.W., Kim, J. (2011). Consumer Financial Behavior: An Interdisciplinary Review of Selected Theories and Research. *Family and Consumer Sciences Research Journal*, 39(4), pp. 399–414, DOI: 10.1111/j.1552–3934.2011.02078.x
- 31. Zhao, J., Xue, F., Khan, S., Khatib, S.F. (2021). Consumer behaviour analysis for business development. *Aggression and Violent Behavior*, 101591.
- 32. ZUS. *Wynagrodzenie za prace od 2003r* Retrieved from: https://www.zus.pl/baza-wiedzy/skladki-wskazniki-odsetki/wskazniki/minimalne-wynagrodzenie-za-prace-od-2003-r [accessed: 10.05.2022].