

ARTICLES

CENTRAL EUROPEAN REVIEW OF ECONOMICS & FINANCE
Vol. 45. No 4 (2023) pp. 110-123
DOI <https://doi.org/10.24136/ceref.2023.026>

Grażyna A. Olszewska¹

HOUSEHOLD SAVINGS IN POLAND – SIZE, STRUCTURE, AND MAIN DETERMINANTS

Abstract

Household savings are major elements that determine, alongside other factors, the equilibrium in the financial market and thus in the national economy. They are an important macroeconomic variable and a potential source of investments and economic growth. They play a major role in the money circulation in the economy and create conditions for the normal functioning of both the whole market and the households themselves. Given the macro- and microeconomic significance of the savings, they are discussed at length in specialist literature. Their volume and structure are affected by a broad variety of factors, both subjective and objective, internal and external, those connected with the macro- and micro-environment (Harasim, 2010, pp. 29-30). They can be analysed from the perspective of factors determining the decisions of an individual household, where qualitative factors are important, and of macroeconomic equilibrium, where quantitative factors and conditions prevail. In the case of individual household decisions, these are inter alia financial, fiscal, economic, legal, technological, demographic, psychological, sociological, educational, and cultural factors. The literature classifies them in diverse ways, depending on criteria adopted by a given author. The major schools of economics claim economic crises are as a rule accompanied by increasing rates of household savings. This is primarily, though not exclusively, due to precautionary measures.

¹ PhD, Assistant Professor, Faculty of Economics and Finances, Casimir Pulaski University in Radom.

The size and structure of household savings in Poland have changed in recent years. The pandemic experience suggests the emergence of savings which are as if forced by a reducing 'activity' of households. The war in Ukraine is an additional factor affecting not so much the volume as the structure of the savings.

This paper is an attempt at answering the question to what extent these factors have determined the size and structure of household savings in Poland.

The following research methods are applied: a review of literature and state of the art on household savings in the Polish economy, a diagnosis and interpretation of available data concerning the volume and structure of household savings in Poland. The statistics from Eurostat, OECD, and the Polish National Office for Statistics (GUS) and the National Bank of Poland (NBP) reports on the development of the financial market in Poland are the key sources of data for this study.

Keywords: savings, households, deposits, financial assets, pandemic, war in Ukraine

JEL Classification: 210

Household savings – a theoretical view

Savings are monetary resources that have not been spent on the daily needs of customers. They are, therefore, disposable income less the value of consumption. They can be divided into private and public savings. The former are based on the current disposable income of households and enterprises. Public savings are created by the state and constitute budget surpluses. Savings may be voluntary or compulsory. Voluntary savings mean a household resigns from spending some of its disposable income on day-to-day consumption consciously and independent from any external pressures. Compulsory saving, on the other hand, is a result of legal or economic obligations (Bywalec, 2012, p. 197). The legal compulsion may be for instance a result of national insurance regulations, while economic duress may arise from commodity deficits in the market. In the instance of Polish households, these conditions have played important parts in the past.

Savings are a result of the saving process, which consists in the ability to withhold all or part of monies from profits or earnings for future use (GUS). Saving is thus deferred consumption. Although it bases on monies generated, savings themselves may take a range of forms. In the narrow sense, these can be: cash at hand (at home), money bank deposits, term deposits, insurance policies, investment fund units, Treasury and other

securities (shares and bonds). Broadly speaking, savings are anything households amass to multiply their assets, including material assets.

Any time a household temporarily spends on consumption less than its disposable income gives rise to positive savings. Households may also generate negative savings where they temporarily spend on consumption more than their disposable income. The difference is financed with loans, credits or earlier savings. Where a household spends its entire disposable income on consumption and has neither positive nor negative savings is known as the point of parity.

The process of saving is a result of an inclination to save or an individual's ability to defer consumption in time. This inclination is a psychological and sociological process that depends on social norms and attitudes to consumption prevailing in a household's micro-environment.

There are several theories of savings and saving in economic science that differ in their approaches to savings and their impact on the development of financial markets and economic growth. The differences relate to the role of stimulating savings as a value in themselves, on the one hand, and the need to stimulate effective consumer demand, seen as an opportunity for triggering continued development processes, on the other hand. This in turn requires allocation of more disposable income to consumption at the expense of savings.

The theories which address savings and their significance to household and the economy as such can be broadly divided into two major currents. The endogenous trend assumes the effect of savings and saving-related habits on the development of financial markets and economic growth. J. Keynes' absolute income hypothesis or D. Ricardo's and R. Barro's equivalence theorem are the most characteristic for this approach (Tobin, 1979, pp. 217-236). The assumption earlier investments translate into higher income at present is the common denominator of these concepts. In turn, the higher income drives greater rates of savings that, given a rate of return on risk-free assets, adjusts the savings to the investment rate in earlier periods. In the event, a growth of consumption financed with current income at the expense of lower savings is good as it contributes to a higher global demand, which encourages more business investment.

M. Friedman's permanent income hypothesis (Friedman, 1957, pp. 20-37) and F. Modigliani's and A. Ando's life cycle hypothesis (Bywalec, 2007, pp. 124-127 and (Kulpaka, 2013, pp. 42-43) are some examples of the exogenous approach, which assume no such impact. Both are parts of the classical economics, sharing the assumption investments and savings are automatically equalised in the conditions of a perfectly flexible interest rate mechanism in the financial market. Investments, dependent on market interest rates and returns expected by enterprises, promptly adjust to the value of savings. Since savings are instantly transformed into investments in the market, a lower current consumption is desirable in order

to stimulate the growth of savings. In effect, more investments can be financed in future. The life cycle hypothesis, in spite of the same assumptions as the permanent income hypothesis, differs as to factors determining household income on which their savings are built. F. Modigliani and A. Ando assume households prefer a constant or rising level of consumption. Therefore, savings will depend on income from work activities at the subsequent life cycle stages. Household savings will be positive if generated by active workers and positive in pensioners' households. The application of the life cycle hypothesis to the analysis of the volume and structure of household savings may be particularly useful for countries whose demographics suggest ageing societies.

Another approach to the saving process and the structure of savings is shown by D. Kahneman and A. Tversky (Kahneman and Tversky 1979, p. 225) in their theory grounded in behavioural economics (Warneryd 2004, pp. 26–28). The authors replace the notion of utility with that of valuation, defined as deviations from a reference point. This leads to the conclusion households or individuals assess their choice decisions based on results achieved in the conditions of risk. The inclination to risk associated with the saving process mainly depends on demographic and economic variables. Disposable income, satisfaction of higher needs, and wealth understood as the sense of financial security at a given time are the key economic factors differentiating approaches to risk. An individual's subjective point of reference to information coming from their surrounding is the last factor. They may ignore, under- or overestimate it in their decision-making processes. In the same circumstances, individuals or households may assess risk quite differently and make completely different decisions as to the volume and structure of their savings they find to be subjectively best. This theory may be of special use with regard to various crises.

J.S. Duesenberry's relative income hypothesis (Warneryd 2004, pp. 26–28) is an instance of psycho-sociological approach to the process of saving. He observed households' tendency to consume declines as their income and that of their community change proportionally. However, households with below-average income consume more at the cost of savings. This behaviour is called the imitation effect.

The determinants of household savings' size and structure

It has already been mentioned a variety of factors affect the levels and structures of savings. Some assumptions need first of all be made regarding the object of this analysis itself. If household savings are to be studied from the macroeconomic perspective, quantitative factors and conditions, independent from households themselves, will be crucial to the analysis. These comprise the key measures of macroeconomic equilibrium. Where a single household is examined, on the other hand,

qualitative factors become important, including financial, fiscal, economic, legal, technological, demographic, psychological, sociological, educational, and cultural factors.

The literature classifies factors influencing savings and the very inclination to save in several ways. A division into subjective and objective factors is one. The former focus around the assessment of one's financial standing and the sense of financial stability. They are a result of such factors as age, the structure and membership of a household, education, economic knowledge, profession or an individual tendency to risk. Public confidence in financial institutions, commonly conditioned by historical experience, also plays an important role in explicating the variety of inclinations to save and the structures of household savings when international comparisons are undertaken. The objective factors comprise the current economic position of a country, interest rate levels and their expected developments in future, the standard of a financial market's development that determines the supply and availability of saving products (Bretyn, 2014, pp. 135-138)

It's necessary to determine over which internal and external factors a household has control. The internal factors dependent on a household include: its income, a stage of life cycle, present living standard, the environment it lives in and aspires to, and the inclination to intergenerational asset transfers. The latter is of particular significance to households in ageing societies and in developing countries like Poland (Rytlevska, Kłopotcka, 2011 p. 519). The external factors are independent from a household. They include: the rate of GNP growth, inflation, rates of interest, unemployment or tax burdens (Nosal-Szczygieł, 2011, pp. 100-101).

Households operate in both micro- and macro-environments in parallel. The micro-environment is where households make decisions and cooperate with one another and with enterprises. It determines day-to-day behaviour. Macro-environment, on the other hand, is determined by the condition of a national or regional economy and, in the case of open economies, encompasses international environment as well. This is also the demographic and legal environment (Bogacka-Kisiel, 2012, p. 28).

The purpose of saving itself influences household preferences as to the process of saving (the volume and forms of savings). These purposes vary depending on the characteristics of household members. Based on available studies, socio-demographic factors, in particular, the transition to the successive stages of household life cycle, are crucial (Rytlevska, Kłopotcka, 2011 pp. 520-521). Other socio-demographic factors comprise education, professional status, and financial awareness of household members, especially its head, the number and ages of household members, and (economic and social) relationships among them. Non-economic conditions relate to historical experience, trust

in government and financial institutions, consumption and saving customs, habits, and stereotypes (Wierzbicka, 2018, pp. 64-65).

Both micro- and macro-economically, income and interest rates are the key factors affecting saving levels. Income determines the demand for transactional savings (technical and organisational) and precautionary (provisions for unexpected expenditures or income drops) balances, whereas the demand for speculative monies is a function of interest rates and returns on financial instruments. In line with the Keynesian theorem, economic entities prefer liquidity. In the opinion of classical economists and monetarists, on the other hand, entities tend towards a subjectively balanced structure of their portfolio. Households are not guided by any theories in their saving processes and strive for a required 'financial security'. A household's financial security consists of liquidity required to satisfy day-to-day needs, on the one hand, and 'surpluses', that is, an asset portfolio of a maximum marginal utility. The latter depends on returns on the particular assets, determined by objective external factors, and on the subjective, internal preferences of household members. The rate of return, liquidity, risk levels, and availability are the most common parameters used to assess the attractiveness of particular assets (Zaleśkiewicz, 2012, p. 227).

Economic models assume people making economic decisions, including those to consume and save, have clear preferences and attempt to maximise the expected utility of their choices. Economic entities are assumed to act fully rationally and, in complex economic environments, are capable of noting, correctly interpreting and comparing all possible alternatives of income distribution between consumption and savings, and of choosing the best. They are additionally able to choose from among equal forms of saving and investing to construct an effective portfolio (here defined as an effective structure of savings, too).

In uncertain conditions, liquidity preferences in saving processes shift towards protecting assets against depreciation. Regardless of external conditions, liquid resources must objectively be maintained for transaction purposes in a trade economy (Musiał, 2014, pp. 1148-1152). What is more, a growing uncertainty associated with economic shifts requires more commitment and knowledge of households making decisions regarding the size and structure of their savings. Any decision made in a crisis is more risky than one in normal conditions and often relates to a longer time horizon.

Polish households have for years tended to preserve the real value of their income by investing in material assets. This is conditioned by non-economic factors that reach back to historical experience, such as the 1950 currency reform, which cost households about 2/3 of their savings, a ban on currency holding and trade or martial law restrictions. The 1995 denomination, though following on an educational campaign and not jeopardising household savings, triggered a huge upsurge in demand for consumer credits. Everyone

tried to 'convert' liquid into material assets. The value of loans to households rocketed from PLN 2332.4 to 3344.3 m during 1994. The low inclination of households to save is additionally due to inflation. As inflation rises, the public tend to trust the government and financial institutions less. In the circumstances, even if real interest rates grow, the inclination to save refuses to rise, which it does in periods when inflation is not experienced.

The size and structure of household savings in Poland – the responses to the pandemic and the war in Ukraine

91.6% of household assets in Poland are material, first of all real estate. Approximately 12% of their value are household liabilities, chiefly mortgage loans – 86% (NBP, 2016). Financial assets form the remaining part of an average Polish household's property. Some analysts believe (Polityka Insight, 2016, p.5) material assets are overestimated and their actual share in an average household's property is not more than 80%. Regardless of the different valuations of material assets and their shares in overall property, the fact is Poles display a strong need to possess. This is to a large extent due to the historical background. The value of intergenerational transfers in Polish society is very high. Inheriting material assets, mainly flats and houses, is the key source of wealth for the successive generations. With their low liquidity, material assets don't tend to lose their value in crisis situations. What's more, they are in increasing demand. Neither the pandemic nor the war in Ukraine reduced the value of this asset group of Polish households. The lockdown caused by the pandemic did restrict the demand for flat rental, yet the influx of Ukrainian refugees boosted the demand and raised rent payments. All in all, the return on real estate has grown.

The size and structure of Polish households' financial assets suggest the households prefer to invest their surpluses in such ways that funds can be easily available or easily withdrawn in the least risky manner. Bank deposits, cash, and investment units prevail. Table 1 shows changes in the volume and structure of Polish households' savings in 2009-2022. Data for Q4 of 2022 are not available at the NBP or GUS website.

Table 1. Financial assets of households in Poland in 2009-2022

Financial assets of households															
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Q1, 2022*	Q3, 2022*
Total, PLN bn	675.8	724.6	761.4	814.5	889.5	968.1	1054.8	1160.7	1218.3	1289.5	1423.9	1644.5	1773.1	1629.1	1884.2
Relative to GDP	50.3	51.2	49.8	51.1	54.4	56.0	58.7	62.4	61.2	60.9	62.3	70.3	67.6	44.2	62.8
Percentage of total assets															
Bank deposits	57.2	57	61.4	61.9	60.3	61.2	61.7	61.5	61	63.5	63.1	60.5	59.8	55.1	67.3
SKOK deposits	1.7	31.12.1899	1,9	1,9	2,0	1,3	1,1	0,9	0,8	0,7	0,6	0,5	0,5	0,5	0,5
Investment fund units	8.01.1900	10,2	8,2	8,9	10,2	10,7	10,6	10,7	11,8	10,0	10,4	9,3	9,4	8,3	4,3
Unit-linked insurance funds and life insurance savings	10,3	10,2	9,2	9,5	9,0	8,5	7,8	7,2	5,6	4,8	4,3	3,8	3,2	4,1	7,1
Treasury securities	1,9	1,4	1,2	1,0	1,0	1,0	1,0	1,0	1,3	1,6	1,9	2,5	3,1	3,2	3,4
Other than Treasury securities	0,4	0,3	0,3	0,2	0,1	0,1	0,2	0,2	0,3	0,4	0,5	0,2	0,1	0,1	0,6
Quoted stock	6,3	7,1	5,1	4,5	5,0	4,2	3,8	3,9	4,4	3,7	3,9	4,9	5,0	6,2	3,0
Cash out of banks	12,7	12,0	12,7	12	12,3	13,0	13,8	14,6	14,8	15,3	15,4	18,3	18,9	22,5	13,7

Source: (NBP, *Raporty o rozwoju rynku finansowego*).

* The author's calculations based on NBP, *Kwartalne rachunki finansowe Q3,2022*

Figures 1 and 2 illustrate change dynamics for the data in Table 1. Savings clearly rocketed in 2020 owing to the prosperity and rising income in earlier periods. The pandemic halted the growth of consumer demand due to the lockdown restrictions. The value of households' financial assets rose at the time. Their structure shifted towards cash in hand and Treasury securities, whereas bank deposits shrank. The National Office for Statistics 'Household budget' survey in 2019 and 2020 (NBP, 2021, p. 25) implies households in Poland responded to the pandemic by limiting their expenditure or resorting to their savings. This is corroborated by the GUS data on the share of household consumption in the changes of real gross domestic product in Table 2, which show a 'forced' nature of those savings. Households couldn't consume in line with their preferences due to the restricted access to public space where certain goods and services can be consumed. Savings rose in 2021, little compared to the preceding periods, in spite of income reductions caused by the lockdown. Despite a slight increase of households' financial assets, their value relative to the GDP fell.

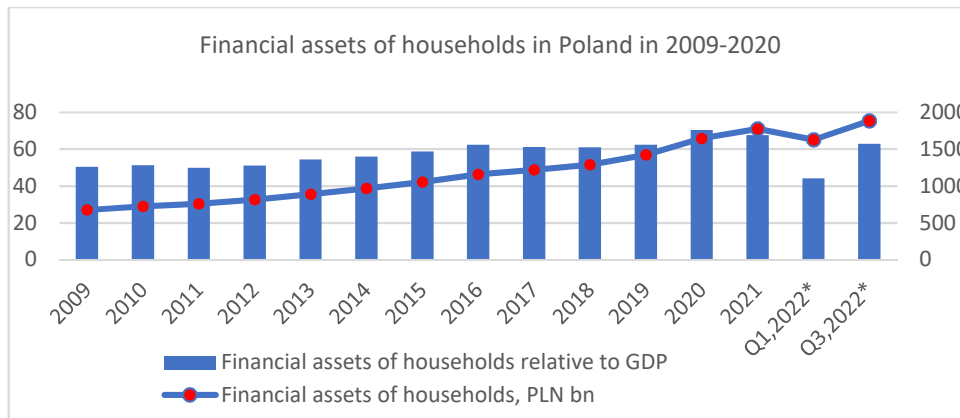


Figure 1. The financial assets of households in Poland in 2009-2022

Source: (NBP, *Raporty o rozwoju rynku finansowego*).

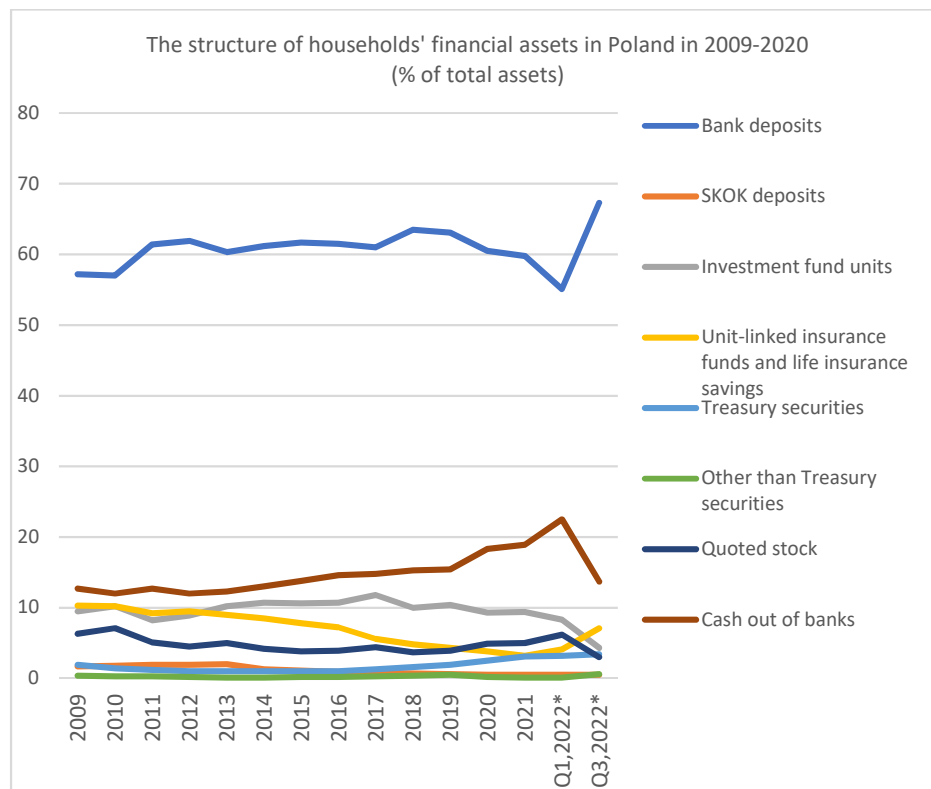


Figure 2. The structure of households' financial assets in Poland in 2009-2022

Source: (NBP, *Raporty o rozwoju rynku finansowego*).

Banks experienced a rising demand for mortgage loans, owing chiefly to the improved situation of the housing market in the beginning of that year and households' stated desire to use their savings to fund more profitable investments in real estate co-financed with crediting (NBP, Q2-2020, pp. 9-11, and NBP, Q-2022, pp. 9-12). In addition, they noted a falling demand for consumer loans between Q2 2020 and Q2 2022. That was caused mainly by a deteriorating financial position of households and the rising rates of loan interest. This explains the lower value of financial assets in relation to GDP coupled with their higher total value and the growth of the GDP itself (GUS, 2023, pp 1-2). They were partly replaced with material assets. This is commonly real estate in the case of Polish households.

Households assessed their financial standing as declining after the pandemic, since their income was dropping, they feared for their jobs, saw higher costs, and expected more price rises (NBP, 2021, p 26). These observations drove the demand for material assets, house repairs and building. The inclination to save dwindled, on the other hand.

Table 2. The real dynamics of gross domestic product without seasonal equalisation (average annual prices of the previous year) referred to the same period of the previous year = 100

Item	2018				2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Total consumption	104.3	104.4	104.3	104.2	104.7	104.4	104.8	104.0	101.9	93.2	101.0	100.0	100.3	110.6	104.2	106.7
including:																
- in the household sector	104.4	104.5	104.1	104.1	103.7	104.2	103.7	101.2	89.5	100.2	96.9	99.8	113.0	104.7	108.0	
- public	102.9	103.1	104.0	103.9	108.9	105.7	107.1	104.8	103.4	104.4	103.3	107.8	102.4	104.2	102.8	104.0

Source: (GUS, *Informacja GUS w sprawie zaktualizowanego szacunku PKB wg kwartałów 2020-2021*)

The war in Ukraine caused some changes in the structure of household savings. Both the total value of financial assets and their relation to GDP fell considerably. The income of a statistical household grew at the same time. The demand for foreign currencies increased in Q1 2022. The share of Polish zloty deposits shrank compared to that of currency deposits. The volumes and dynamics of those changes are shown in Table 3 and Figure 3.

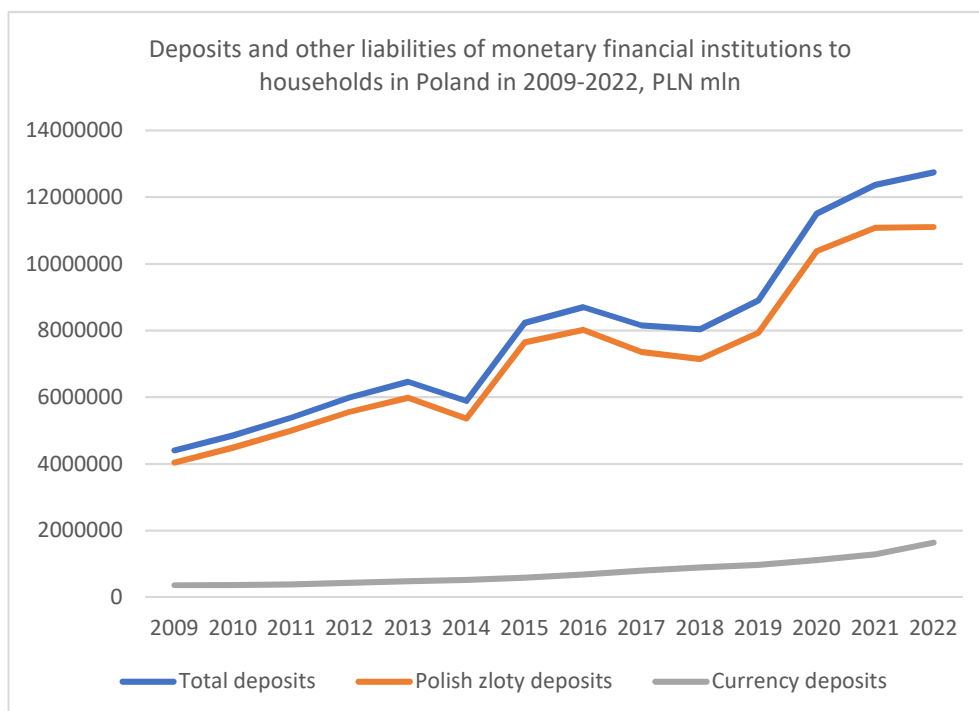
Table 3. Deposits and other liabilities of monetary financial institutions to households in Poland in 2009-2022, PLN m

Year	Total deposits	Polish zloty deposits	Currency deposits
2009	4405347.12	4042541.86	362805.27
2010	4848605.33	4484091.50	364513.83

Continued Table 3:

2011	5384606.06	4998321.66	386284.40
2012	5993885.25	5561113.67	432771.58
2013	6461065.49	5981823.47	479242.02
2014	5887175.99	5362040.64	525135.35
2015	8232037.55	7640717.20	591320.36
2016	8703905.92	8023311.97	680593.95
2017	8157819.40	7358536.22	799283.18
2018	8036310.28	7144986.20	891324.08
2019	8904653.24	7929899.13	974754.11
2020	11500775.94	10385294.21	1115481.73
2021	12372303.08	11085382.70	1286920.38
2022	12744504.15	11105735.72	1638768.44

Source: (NBP, 2023, *Należności i zobowiązania monetarnych instytucji finansowych i banków*).



Source: (NBP, 2023, *Należności i zobowiązania monetarnych instytucji finansowych i banków*).

The declining total value of households' financial assets and their lower relation to GDP indicate some households have withdrawn some of their funds from the market and invested in currencies and gold (Mennica Polska, 2023). In the uncertain context of growing inflation and the risk of a spreading military conflict, households continued to prefer liquid forms of saving. There is a clear tendency to neutralise the main risk factors in the market. The lower purchasing power of the domestic currency, fears for the accessibility of funds in banks and other financial institutions which may experience infrastructure disruptions and cyberattacks became the key determinants of the structure of household savings in the first and second quarters of 2022.

Conclusion

Households in Poland prefer material assets as the central component of their long-term savings. The high inclination towards ownership is determined by historical experience. Confidence in financial institutions still tends to be quite low with the Polish society. The same is true of trust in the government. Inflationary expectations suggest it's low. The inclination to save has not been raised by interest rate hikes. The structure of savings has shifted towards material and liquid financial assets, including currencies, meanwhile. As the market interest grew due to the lockdown and the Russian aggression against Ukraine, Poles set aside more deposits denominated in foreign currencies. Households believe the purchase of material assets, currencies or precious metals are the safest means to protecting their property against depreciation. This is not positive from the macro-economic point of view, since the economy becomes less capable of stimulating the internal rate of investment.

References

1. Bogacka-Kisiel E., red. (2012), *Finanse osobiste. Zachowania-Produkty-Strategie*, Wydawnictwo Naukowe PWN, Warszawa.
2. Bretyn A., (2014), *Analiza preferencji w zakresie wielkości i struktury oszczędności gospodarstw domowych w Polsce*, Studia i Prace Wydziału Nauk Ekonomicznych i Zarządzania 35/1.
3. Bywalec Cz., (2007), *Konsumpcja w teorii i praktyce gospodarowania*, PWN, Warszawa.
4. Bywalec Cz., (2012), *Ekonomika i finanse gospodarstw domowych*, Wydawnictwo Naukowe PWN, Warszawa s. 197.
5. Friedman M., (1957), *A Theory of the Consumption Function*, Princeton University Press, Princeton.
6. Harasim J., (2010), *Oszczędzanie i inwestowanie nadwyżek finansowych przez ludność*, w: *Oszczędzanie i inwestowanie w teorii i praktyce*, PTE, Katowice.

7. Kahneman D., Tversky A., (1979), *Prospect Theory: An Analysis of Decision under Risk*, *Econometrica*, 47(2), <https://courses.washington.edu/pbafhall/514/514%20Readings/ProspectTheory.pdf> (accessed: 15.02.2023).
8. Kulpaka P., (2013), *Oszczędności, konsumpcja i dochody rozporządzalne gospodarstw domowych w wybranych krajach rozwiniętych i po transformacji ustrojowej*, Oficyna Wydawnicza Szkoła Główna Handlowa w Warszawie, Warszawa.
9. Mennica Polska, 2023, <https://www.mennica.com.pl/produkty-inwestycyjne/analiza-ryнку-złota/szczegoly-złoto-inwestycyjne/złota-hossa>.
10. Musiał M., (2014), Zachowania oszczędnościowe Polaków na tle wybranych krajów Unii Europejskiej, *Marketing i Rynek* 8.
11. Nosal-Szczygieł E., (2011), *Prognoza poziomu oszczędności gospodarstw domowych na podstawie ich wielkości w latach 1999-2008*, Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie, Kraków.
12. Rytłewska G., Kłopotcka A., (2011), *Oszczędzanie a transfery międzypokoleniowe*, Prace naukowe Uniwersytetu Ekonomicznego we Wrocławiu nr 171.
13. Samuelson P. A., Nordhaus W. D., (1997), *Ekonomia*, PWN Warszawa
14. Tobin J., (1979), *Deficit Spending and Crowding Out in Shorter and Longer Runs*, Cowles Foundation Paper 1979, No. 486, <https://elischolar.library.yale.edu/cgi/viewcontent.cgi?article=1694&context=cowles-discussion-paper-series> (accessed: 10.02.2023).
15. Warneryd K. E., (2004), *Psychologia i ekonomia*, w: Tyszka T., red., *Psychologia ekonomiczna*, Gdańskie Wydawnictwo Psychologiczne, Gdańsk.
16. Wierzbicka E., (2018), *Determinanty zwiększania w Polsce oszczędności gospodarstw domowych*, Zeszyty Naukowe WSH Zarządzanie, Warszawa.
17. Zaleśkiewicz T., (2012), *Psychologia ekonomiczna*, PWN, Warszawa.
18. <https://stat.gov.pl/metainformacje/slownik-pojec/pojecia-stosowane-w-statystyce-publicznej/4166,pojecie.html>.
19. NBP, (2021), *Raport o stabilności systemu finansowego*, <https://nbp.pl/wp-content/uploads/2022/09/rsf122021.pdf>.
20. NBP, (2020), *Sytuacja na rynku kredytowym – wyniki ankiety do przewodniczących komitetów kredytowych*, https://nbp.pl/wp-content/uploads/2022/09/rynek_kredytowy_2020_2.pdf.
21. NBP, (2023), *Sytuacja na rynku kredytowym – wyniki ankiety do przewodniczących komitetów kredytowych*, https://www.nbp.pl/systemfinansowy/rynek_kredytowy_2023_1.pdf.
22. NBP, (2023), *Należności i zobowiązania monetarnych instytucji finansowych i banków*, <https://nbp.pl/statystyka-i-sprawozdawczosc/statystyka-monetarna-i-finansowa/naleznosci-i-zobowiazania-monetarnych-instytucji-finansowych-i-bankow/>.

23. GUS, (2023), *Produkt krajowy brutto w 2022 r. – szacunek wstępny*, <https://stat.gov.pl/obszary-tematyczne/rachunki-narodowe/roczne-rachunki-narodowe/produkt-krajowy-brutto-w-2022-roku-szacunek-wstepny,2,12.html>.
24. NBP (2016), *Zasobność gospodarstw domowych w Polsce*, Raport z badań, NBP, Warszawa.
25. Polityka Insight, (2016), *Prognoza majątku – jak demografia zmieni aktywa Polaków* <https://businessinsider.com.pl/finanse/majatek-netto-polakow-raport-nbp/fsecbp1> (accessed 28.02.2023).