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Households' Savings Portfolio Allocation in an Inflationary Environment in the MNB's New Quarterly Survey*

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Using data from the new quarterly household survey of the Magyar Nemzeti Bank (the Central Bank of Hungary, MNB), we show how households' saving habits changed between early 2022 and early 2023 as a result of higher inflation. Although savings plans changed considerably during the turbulent year 2022, the key difference is that households significantly increased their government bond holdings, mainly through inflation-linked, high-yielding government securities, at the expense of term deposits, showing that households with financial wealth are very sensitive to interest rates.

1. Introduction

In recent years, Hungarian households have had to cope with unprecedented shocks: the coronavirus pandemic and resulting lockdowns, followed by a surge in inflation as the economy reopened, and the war in a neighbouring country would have forced family budgets to be significantly restructured even if these events had all happened separately. Fortunately, these shocks were faced by a strengthened household sector, which had managed to increase its financial wealth (calculated without other ownership interest) by roughly one third in real terms between 2015 and 2019 (*Figure 1*).

Higher financial wealth (together with the forced savings generated during the pandemic) can effectively cushion the impact of the above shocks if it is accumulated across broad segments of society and in relatively liquid financial assets. However, financial accounts (along with macro statistics in general) do not provide sufficient information on such aspects. Therefore, the MNB has launched a new data collection programme to gather timely data on household savings at a quarterly frequency.[1]

* The papers in this issue contain the views of the authors which are not necessarily the same as the official views of the Magyar Nemzeti Bank.

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[1] In recent years, several central banks around the world have launched regular surveys to assess the current financial situation and expectations of households, such as the European Central Bank: *Consumer Expectations Survey* (*Bańkowska et al. 2021*); Federal Reserve Bank of New York: *Survey of Consumer Expectations* (*Armantier et al. 2017*); and the Bank of Canada: *Canadian Survey of Consumer Expectations* (*Gosselin – Khan 2015*).

In this article, we use these data to show how household savings have changed since the beginning of 2022, mainly through the use of retail government securities, which provide effective protection against high inflation. First, we briefly present the methodology of the new survey, then we examine the changes at the household level behind the macro aggregates, and finally we present details on the evolution of the retail government securities portfolio.

2. Framework for the MNB's new household wealth survey

The 2008 crisis highlighted that an accurate assessment of the economic situation, especially in the household sector, requires the precise knowledge of the distribution of household wealth (*Krueger et al. 2016*). Central banks in advanced economies now conduct regular household wealth surveys: for example, the *Household Finance and Consumption Survey* in the euro area (*HFCS 2020*), the related *What do we live from?* household survey (*MNB 2022*) in Hungary, and the *Survey of Consumer Finances* in the United States (*SCF 2023*).

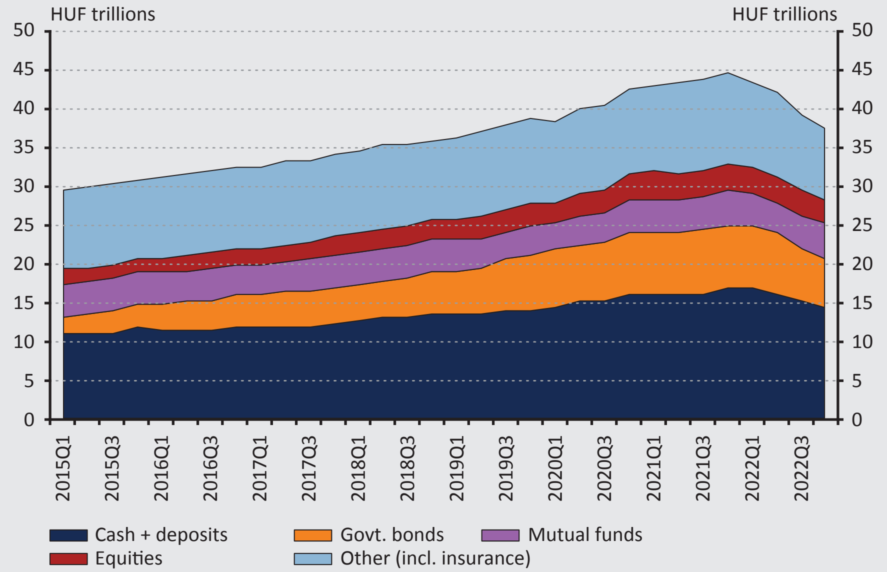
However, these surveys are typically only carried out every three years, and because data processing takes a long time, they cannot provide accurate, timely information in the case of frequent shocks. It is precisely to complement these detailed surveys that the MNB has started to use a survey that can be fielded and aggregated more quickly, with the added benefit of being able to include questions relevant in the current economic situation. The speed of data collection is ensured by a quarterly online questionnaire, for which respondents are selected from an online panel using stratified random sampling. Rapid data collection comes with methodological trade-offs: sampling is less sophisticated than, for example, the HFCS or SCF, and there is less time for data processing. Therefore, with the MNB quarterly surveys it is better to focus more on significant shifts, which can provide an appropriate snapshot of actual developments.

The sampling unit of the survey is a household, and the sample is representative of the gender, age and education of the head of the household, and of the region of the household. The sample was initially composed of 1,000 households with working-age household heads between 2021 Q3 and 2022 Q2, to which 300 households with retirement-age members were added from 2022 Q3.

3. Significant increase in household financial wealth from 2015

Including the forced savings due to lockdowns during the pandemic, household financial wealth (excluding other equity investments) increased by 50 per cent in real terms between 2015 and 2021, according to the financial accounts,[2] but as economies reopened, this trend reversed and savings started to fall in real terms. The macro statistics, however, tell us little about the distribution of this change across different household segments. Our survey reveals which demographic groups had financial wealth at the beginning of 2023. This aspect can be examined according to a wide range of demographic characteristics, such as household income, the education level of the head of household, or in regional breakdowns. For the sake of clarity, we stick to the breakdown by income, while the breakdown by other demographic factors yields the expected results due to the high correlation with income.

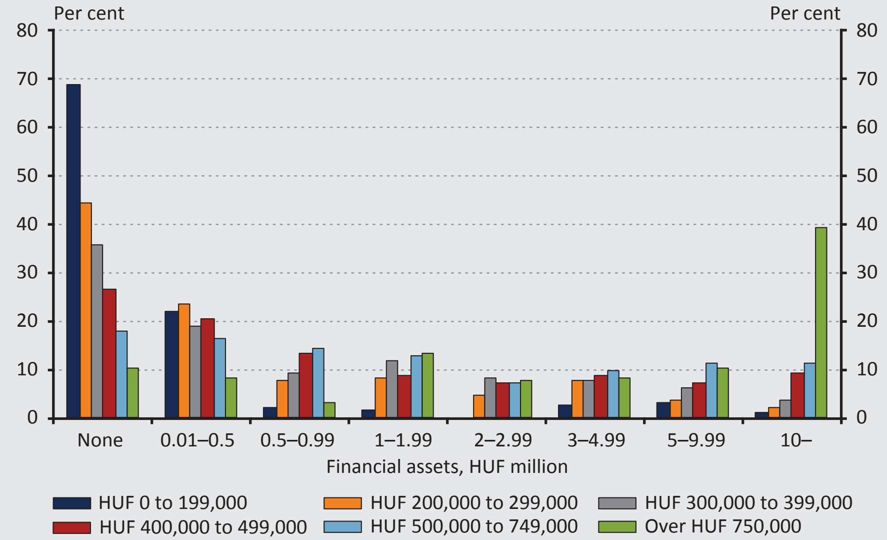
Figure 1
Household sector financial assets (excluding other equity investments) at current prices, in HUF trillions



Source: Financial accounts of the national economy (MNB)

[2] Since the survey does not ask about household assets held in non-listed companies, we have adjusted the macro statistics for this asset class for comparability.

Figure 2
Distribution of household financial assets by net monthly income (2023 Q1)



Note: Households with a working-age household head; values expressed as a percentage of households in the respective income group.

Source: Household wealth survey (MNB)

Figure 2 shows a strong correlation between financial wealth and income, for households with working-age household heads. 70 per cent of the lowest-income households have no financial assets, and another 22 per cent have less than HUF 0.5 million in savings. By contrast, 40 per cent of the highest earners have savings of more than HUF 10 million.

The distributions between these two extremes are more similar: the share of those with financial wealth between HUF 1 and 5 million is fairly stable among those earning between HUF 300,000 and 750,000. Precautionary balances of between HUF 0.5 million and HUF 1 million are mostly accumulated by those earning between HUF 400,000 and 750,000.

4. Changes in savings plans during 2022

As accumulation is the result of a longer process, it is also worth collecting information on savings plans. The survey asks whether households plan to save in the next 12 months. According to the financial accounts, the economic upturn in the pre-pandemic period was accompanied by a significant increase in household savings, boosted by the forced savings accumulated during the pandemic period (*Figure 3*). However, this picture changed significantly in early 2022, partly due to consumption growth following the end of the lockdowns, and partly due to the sharp rise in inflation and the war. The qualitative question in the survey indicated a sharp decline in households' propensity to save in 2022 Q2. From a short-term perspective, one positive factor is that 2023 Q1 survey shows that the share of people planning to save has started to rise, but it has not yet reached the high level seen around the turn of the year in 2021–2022.

Figure 3
Trends in household sector savings

Source: Household wealth survey and financial accounts of the national economy (MNB)

A breakdown of savings plans by income group shows that although there are people in all groups who plan to save, the proportion of those in the highest income groups is roughly twice as high as it is in the lowest income groups (*Table 1*). These figures are qualitative: they do not show how much a household intends to save from its income, and of course there may be significant differences between income groups. Other differences can also be identified within particular income groups, for example by the education level of the household head. In this regard, it is interesting that the savings plans of those with a high school diploma are not significantly different from those with a college degree. However, those with lower education typically plan to save less.

There is not much difference between the savings plans of households with a household head with medium versus higher education level, but there are more highly paid household heads among those with a higher education level, among whom a higher proportion is planning to save (in both education groups).

Looking at the structure of the gap between the plans in early 2022 and 2023, we can see that in 2023 households with a net income below HUF 750,000 had a lower propensity to save than one year earlier. However, as shown in *Figure 3*, savings was at its peak in early 2022, supported by strong income growth and government redistribution (personal income tax refunds).

Table 1
Savings plans by monthly net income of households

Net income (HUF)	2022 Q1 (per cent)	2023 Q1 (per cent)	Change (percentage point)
0 to 199,000	36.9	29.9	–7.0
200,000 to 299,000	41.8	47.2	5.5
300,000 to 399,000	52.3	42.3	–10.0
400,000 to 499,000	60.5	50.8	–9.8
500,000 to 749,000	69.1	64.2	–4.9
over 750,000	78.6	80.2	1.6

Source: Household wealth survey (MNB)

5. Evolution of savings portfolios

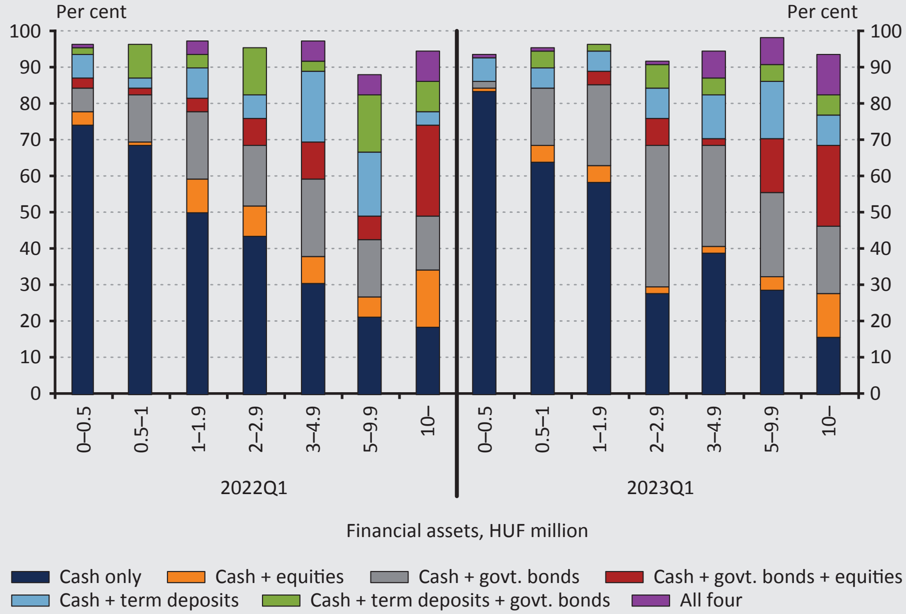
In recent years, not only have there been extreme fluctuations in the level of savings, the structure of savings has also changed significantly. In the survey, respondents were asked about their financial assets (cash, current account deposits, fixed deposits, government securities, other bonds, investment certificates, equities, pension fund savings, life and pension insurance). In the interests of clarity, the most common assets were grouped into four categories: (1) cash and cash equivalents (cash and current account deposits), (2) term deposits, (3) government securities, (4) risky assets (mutual funds and equities). We then looked at what *combinations* of these four asset classes are held by households with different financial wealth.[3]

[3] As shown in *Figure 4*, these combinations cover the portfolios of more than 90 per cent of households; accordingly, we decided not to analyse the other assets (other bonds, pension fund savings, life and pension insurance) separately. In addition, pension and life insurance savings are less liquid than the four asset classes analysed in more detail, and therefore households are unlikely to be able to reallocate them in the short term. Of course, substantial portfolio shifts in investments managed by pension funds and insurance companies may also occur, but this falls outside the scope of our feature article, which focuses on the decisions of households.

Households with low financial wealth mainly hold liquid assets, but above HUF 0.5 million, government securities and fixed-term deposits also appear alongside liquid assets in 2022 (*Figure 4*). Riskier assets appear with households having more than HUF 1 million in savings, but are only really significant in the wealthiest segment.

Looking at 2023, the most striking change is that, among households with savings between HUF 1 million and 10 million, government bond holdings have become much more widespread. This increase was largely driven by a decrease in fixed-term deposits, but in the HUF 2 million to 3 million segment, the share of portfolios consisting exclusively of the most liquid assets has also decreased significantly.

Figure 4
Household financial portfolio changes between Q1 2022 and Q1 2023



Note: The columns in the figure do not add up to 100 per cent as infrequently selected asset portfolios are omitted. govt.: government

Source: Household wealth survey (MNB)

Restructuring of the portfolios was not limited to shifts between assets: significant shifts also took place within the government bond portfolios, with the growing popularity of inflation-linked government securities as the main driver of the changes shown in *Figure 4*. This change is analysed in more detail below.

6. Characteristics of the retail government securities market

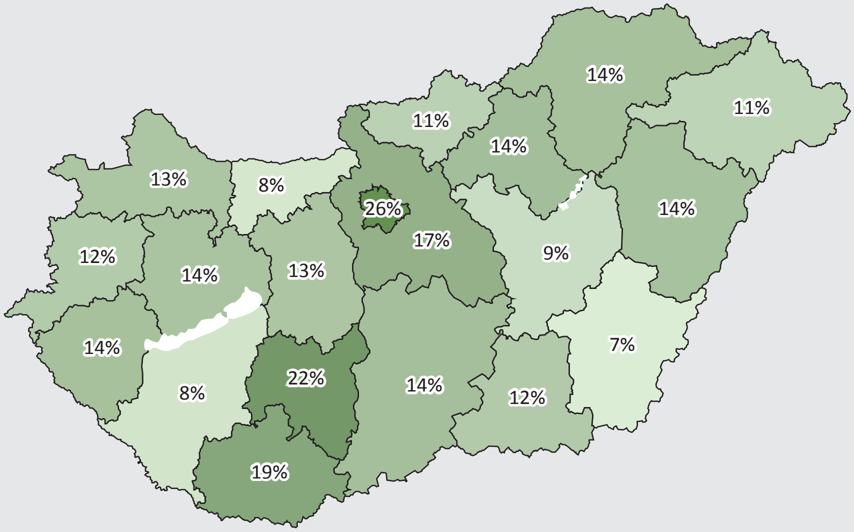
Among retail government securities, the inflation-linked Premium Hungarian Government Security (*PMÁP*) *has become the most popular product.* Since the renewal of the strategy in 2019, one of the main elements of which was the introduction of the Hungarian Government Security Plus (MÁP Plusz), government securities have become one of the most popular forms of saving among households: according to preliminary financial account data, 12 per cent of households' financial assets were held in these instruments at the end of 2022, representing an outstanding stock of over HUF 10 trillion. According to statistics published by the Government Debt Management Agency (ÁKK), retail government securities accounted for around one fifth of total government debt at the end of January 2023, making them particularly important from a debt financing perspective. The changing inflationary environment prompted investors to rebalance their portfolios. On the one hand, holdings of the fixed interest rate Hungarian Government Security Plus gradually declined due to increased selling by investors before maturity, while the inflation-linked Premium Hungarian Government Security became the most popular and most widely held retail product: its amount outstanding doubled in one year, reaching nearly HUF 4,800 billion by the end of January 2023, according to monthly securities statistics.

The share of government security holders increases with households' savings. According to the latest survey, conducted in February 2023, 19 per cent of respondents hold government securities, which can be considered relatively stable in line with previous data collection (the share has been in the range of 13–18 per cent). In cities, a higher proportion of households typically own government securities, with Budapest standing out, with 26 per cent of respondents holding this investment according to the results of previous surveys. There are no significant differences in government securities ownership by county (*Figure 5*).

The share of government security holders rises in line with the increase in households' net monthly income. Almost 40 per cent of respondents with earnings over HUF 750,000 hold government securities, while less than one tenth of respondents in the lowest income category (under HUF 200,000) entered the market. A similar picture emerges when examining educational attainment: as the number of years of education increases, the share of government security holders also increases. This also reflects the strong positive correlation between educational attainment and income level.

This form of saving is least popular in the younger age group (18–30 years), which exhibits significantly lower shares of government security holders compared to other age groups, with a share of slightly above 10 per cent among all constituents and 15 per cent when narrowed down to those with savings.

Figure 5
Percentage of government security holders by county



Note: In relation to the number of respondents living in a given county, based on data from all previous surveys.

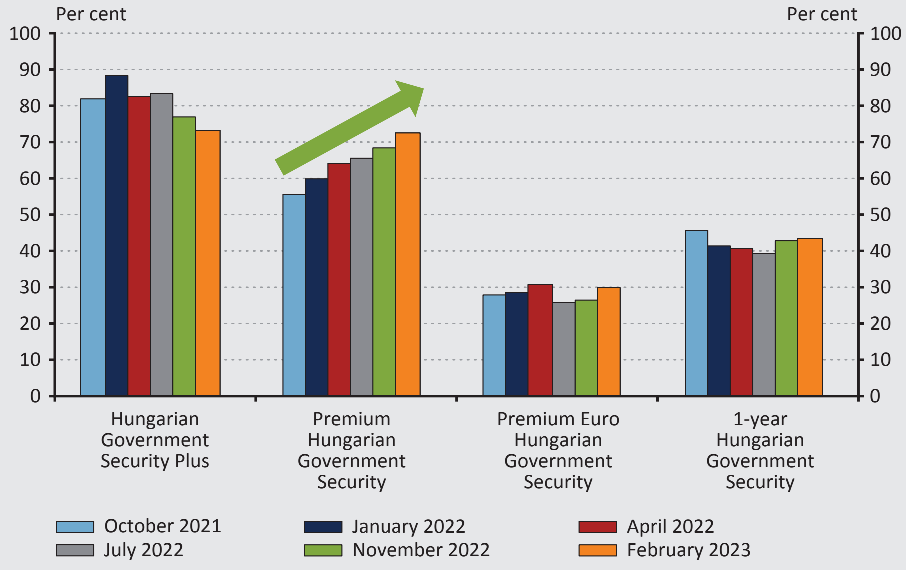
Source: Household wealth survey (MNB)

Investors report that they only buy occasionally, mainly upon maturity of their existing government securities, and the share of those investing regularly in government securities is low and slightly decreasing. However, nearly three quarters of holders do not plan to sell their existing government securities before maturity, and 77 per cent of investors plan to renew their securities at maturity at least partially.

Government security holders appreciate the high interest rates and risk-free nature of this investment the most. Respondents who hold government securities rank the top-rated features of this product group in the survey. In first place was the favourable interest rate, which one half of the respondents considered to be a very important factor. This is closely followed by its risk-free nature: in line with this, the survey shows that those with an average risk appetite are most likely to hold government securities. In third place is the fact that this form of investment is exempt from interest tax. Favourable terms for selling the securities before maturity and easy accessibility are also important, although investors place less emphasis on these than on the features listed above. There are no significant differences in the role of information channels: in addition to advisors, advertising and press releases, recommendations from acquaintances are also important when it comes to buying government securities.

It can also be observed in the results of the surveys so far that the Premium Hungarian Government Security, which provides protection against inflation, has been gradually gaining ground. Familiarity with the product among retail government security holders has been steadily increasing since autumn 2021, and the latest data show that it has even caught up with the Hungarian Government Security Plus: more than 70 per cent of government security holders said they had heard of the Premium Hungarian Government Security (*Figure 6*). At the same time, the general familiarity with government securities remains low among those who have not entered the market: less than one fifth of these respondents have heard of this instrument. At the end of January 2023, a new 7-year series of the Premium Hungarian Government Security was launched in conjunction with the publication of the annual inflation data for 2022, with an initial interest rate of 16 per cent. The majority of survey respondents (35 per cent) had heard about the product through press releases, but it also reached many people through advertising and online banking platforms. One tenth of respondents had learned about the new Premium Hungarian Government Security series on social media.

Figure 6
Familiarity with government security products among government security holders



Source: Household wealth survey (MNB)

However, buying new types of government securities is not the only way for households to adapt to the changing inflationary environment, and thus we assessed which other types of investments have become more popular as a result of higher inflation. Since spring 2022, the share of respondents looking for instruments offering protection against inflation has been gradually increasing. In the latest survey, more than one third of respondents had already invested to protect themselves against inflation, an increase of 16 percentage points compared to spring 2022. The most popular instrument was the Premium Hungarian Government Security, with 18 per cent of respondents buying more of it to hedge against inflation. This also represents a substantial increase compared to one year ago, when the inflation-linked instrument was only ranked in third place behind foreign currency and cash/bank deposit options.

7. Reasons for avoiding the government securities market

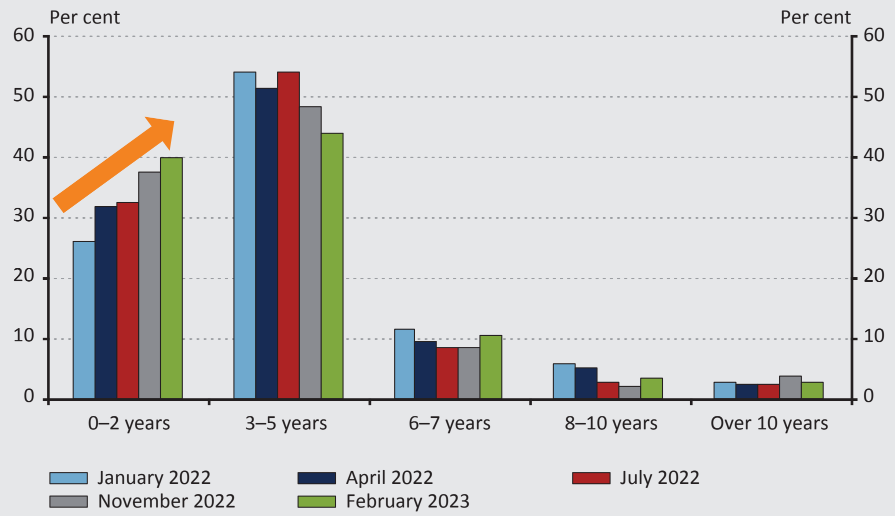
The main reason given by respondents for avoiding the government securities market was a lack of savings, with almost one half of those without government securities not buying for this reason. As seen in *Figure 4*, the HUF 500,000 level may be the threshold for entering the market, as the proportion of government security holders with savings below this level is negligible. However, plenty of people did not buy this form of investment for other reasons. The main disincentives were the perceived low interest rates and the perceived riskiness (the very factors that were considered most attractive to government security holders), but the ranking of these two factors reversed over time. Between 2021 and mid-2022, the main reason for avoiding the market was that potential investors did not find government security yields attractive enough. However, the proportion of investors who considered the yields to be low gradually declined as the yields of certain government security instruments increased.

As a mirror image to this, the perception of the riskiness of government securities is increasingly prominent in the responses. This points to a lack of confidence in government securities. By educational level, more than one third of those with higher education did not buy government securities because of the perceived risk, while the proportion is even higher for those with lower educational attainment. A significant proportion (46 per cent) of respondents who say they do not take any risk in their investments also consider government securities to be risky. This also supports the assumption that some investors are not aware of the true risk rating of government securities. However, it also highlights the importance of other risks associated with the products, such as a lack of confidence in the predictability and long-term foreseeability of the schemes. Other reasons given for not buying were lack of familiarity with the products and difficulties in opening a securities account:

however, according to the responses, these aspects were reported relatively rarely as barriers to purchasing.

The survey posed two questions to understand the motivations of those planning to buy government securities. The first asks what would be the minimum annual interest rate at which the respondent would invest in government securities. Currently, more than 40 per cent of potential buyers are already attracted by double-digit yields, while one quarter of those surveyed would consider entering the market if interest rates were above 15 per cent. For the second question, participants had to answer what would be the longest tenor of government security they would be willing to buy (*Figure 7*). Interest in 8-year and longer instruments is negligible, but one tenth of potential investors are open to 6- to 7-year products. The share of investors looking for short tenor investments (0–2 years) is gradually increasing, while interest in 3- to 5-year instruments is declining in parallel, according to surveys to date. This could be explained by the general uncertainty in 2022 and a strong increase in short-term yields, as evidenced by surging retail demand for short tenor Discount Treasury Bills.

Figure 7
Government security tenor preferences among potential buyers



Source: Household wealth survey (MNB)

8. Conclusion

Overall, the financial portfolio of households has changed significantly over the past year, with the share of government security holdings increasing, mainly due to a reduction in fixed-term deposits and sight deposit holdings. Looking at retail government securities in more detail, we see that the rising inflationary environment has led to a shift towards variable interest rate products. The Premium Hungarian Government Security has become the most popular government security, with its particularly attractive inflation-linked interest rate. In other words, part of the population reacted flexibly to changes in (real) interest rates. The other part of the population, however, does not take advantage of the opportunity offered by higher-yielding government securities, largely because they do not have enough savings; but there is also a segment that is distrustful of government securities.

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