Bond funds trumped but many could have done better with more Hungarian government bonds

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Bond investors closed an outstanding year in 2023 cashing in returns not seen in a long time amid a yield environment that started high and went down. The performance of mutual funds reflected this, funds investing in government securities performed well along a significant capital inflow. The increase in Hungarian government securities holdings was not similar. This however might not have been the best decision, as not all fund managers were able to beat the return of Hungarian government bond indices compiled by ÁKK Zrt. (ÁKK). Even taking risk into account, only half of bond funds were able to achieve returns exceeding the risk-free yield during the past five years. ÁKK compiled this article based on publicly available data, drawing its own conclusions with the aim to initiate a dialogue. This is first in the series of articles discussing topics concerning the Hungarian government securities market, hoping to invigorate a dialogue on professional grounds between market participants.

Money poured into funds, but not predominantly into Hungarian government securities

According to data from the Magyar Nemzeti Bank (MNB), the net asset value of mutual funds in Hungary increased by a modest HUF 5,000 billion in 2023, with HUF 17,858 billion in these assets at the end of December. A significant part of this, more than HUF 5,200 billion, was held in bond funds at the end of the year, and this category achieved the highest growth in 2023, as the stock of investments in bond funds doubled. According to the data of the Association of Hungarian Investment Fund and Asset Management Companies (BAMOSZ), two-thirds of this amount is in bond funds investing in domestic assets, so it would be logical to assume that a significant part of this amount is in Hungarian government securities.

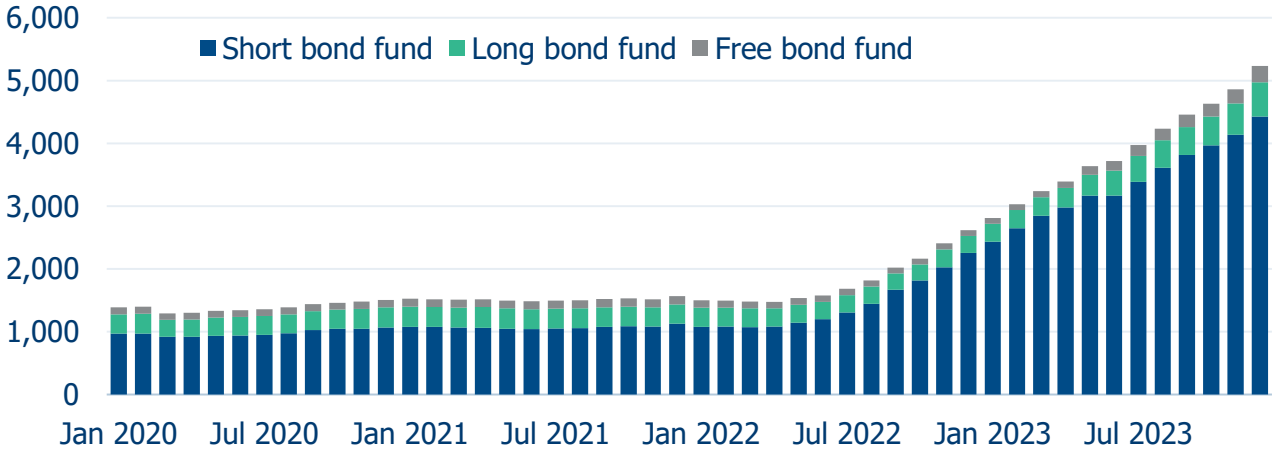

Figure 1: Net asset value of bond funds by type of fund (HUF billions); Source MNB

It is therefore interesting to note that the rise in bond funds assets under management ("AuM") was not accompanied by a similar increase of their HUF government securities holdings last year. According to central bank data, at the end of 2023, Hungarian government securities held in the

portfolio of funds was HUF 2,014 billion, which is **only 11.3 percent of the total amount invested**. In one year, the assets of bond funds grew by more than HUF 2,600 billion, while the portfolio of Hungarian government securities increased by HUF 1,044 billion and

for the first time, Hungarian investment funds held more foreign government securities than Hungarian ones.

In addition, of the HUF 1,044 billion increase, almost HUF 400 billion were accounted for by T-bills, so the funds' net purchases of HGBs did not reach HUF 650 billion. The regulation introduced in the summer of 2023 may have contributed to this increase, according to which certain mutual funds were obliged to invest to a certain extent in Hungarian T-bills and to meet the specified minimum level daily.

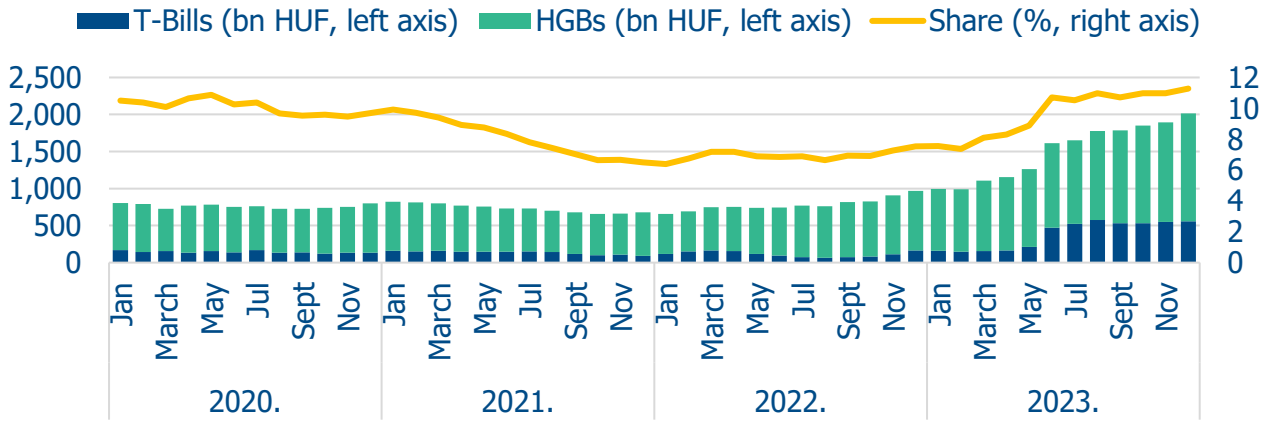

Figure 2: Investment funds' holdings of HUF government securities (HUF billions) and their percentage (%) within the total assets; Source MNB

While the stock of domestic government securities increased by a good HUF 1,000 billion, the stock of foreign bonds in mutual funds rose by HUF 1,576 billion over a year, accounting for 13.3% of total assets at the end of the year. This proportion doubled in a year, and the stock tripled.

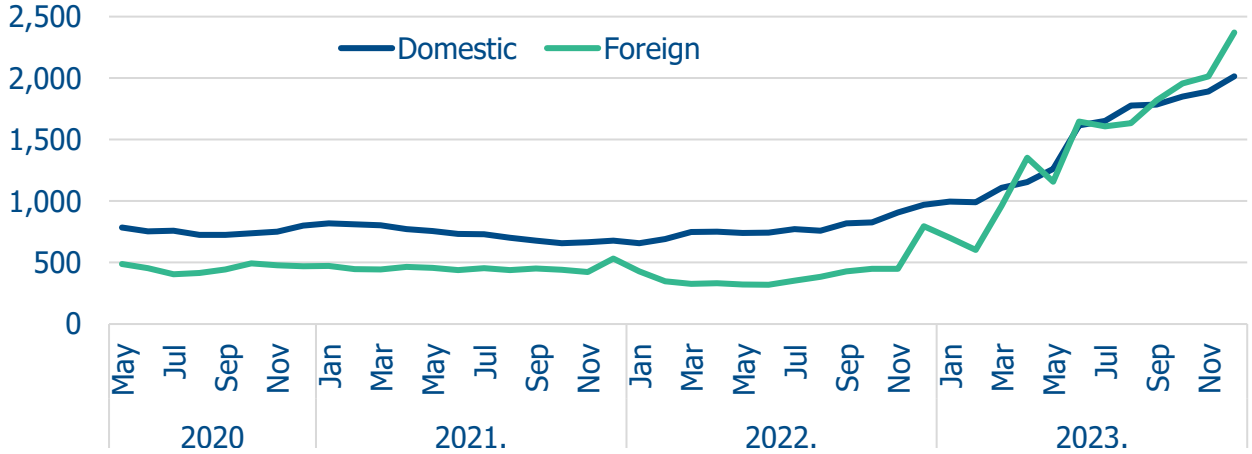

Figure 3: Stocks of Hungarian and foreign government securities in investment funds (HUF billions); Source: MNB

More local government bonds bought by funds in CEE

To put the asset allocation of Hungarian funds into a regional context, it is worth looking at the share of local government securities in the asset portfolios of investment funds in some regional countries. This will show whether underweighting is a Hungarian peculiarity or an international trend.

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At the end of the third quarter of last year, Poland had a total of PLN 118 billion in open-ended mutual funds, of which PLN 43 billion was invested in Polish government bonds. In other words, the share of Polish government securities in Polish funds was 36 percent. This is somewhat overshadowed by closed-end funds, where only 6.2 per cent of the PLN 152 billion was held in Polish government securities. Overall, Polish government securities still accounted for 19 per cent of assets under management of around PLN 270 billion, almost double the share of Hungarian funds.

In the Czech Republic, the total net asset value of investment funds was CZK 1,306 billion, of which CZK 262 billion was in bonds, of which 188 billion was in domestic government bonds. This represented 14.4 percent of total assets, which was also higher than the Hungarian fund figure.

If we look at the total net asset value, the Polish-Czech average is 16.7 per cent compared to 11.3 per cent for the Hungarian average, meaning that there is a shortfall of more than HUF 960 billion in demand compared to the total asset value of HUF 17,858 billion.

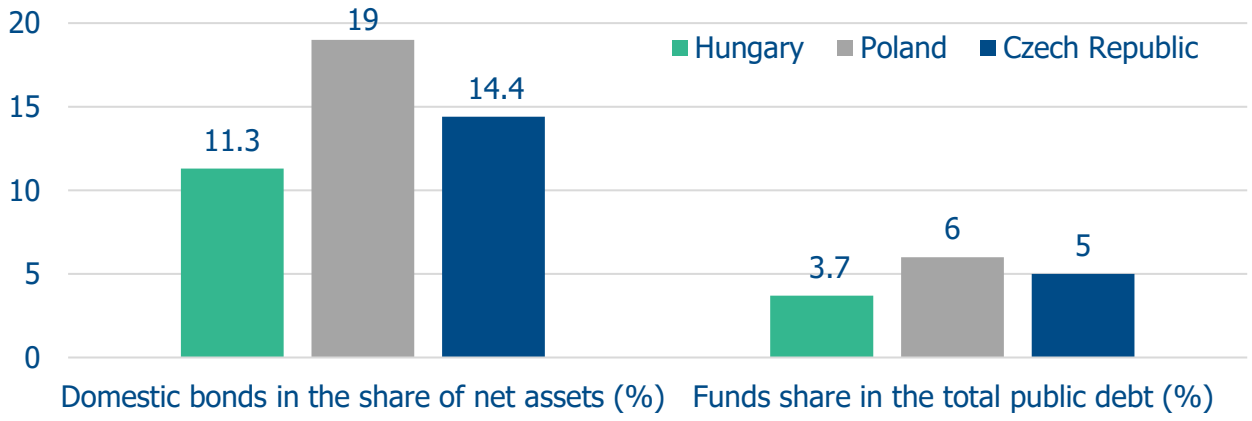

Figure 4: The weight of investment funds on the region's bond markets; Source: ÁKK, regional central banks

From a different angle: in Hungary, the HUF 2,000 billion holdings of government securities in investment funds accounted for 3.7 percent of the gross public debt, in the Czech Republic this ratio was 5 percent, and in Poland 6 percent. Therefore, if we look at the financing ratio of the public debt, compared to the regional average of 5.5 percent, based on the Hungarian ratio of 3.7 percent, there is almost the same amount of 950 billion forints in short-term demand from the side of investment funds.

Thus, it can be stated that

the mutual funds' demand for government securities is several hundred billion forints short of the regional average.

Would funds be better off with Hungarian government bonds?

In principle, it would be understandable that mutual funds would not necessarily be looking to buy only Hungarian government bonds in 2023, as it was a banner year for the bond market globally, meaning that it was easy to find good bond market investments in other markets. Each fund follows its own investment policy, which may include a variety of criteria (benchmark, region, time horizon, etc.). However, it might be a revealing fact that

most bond funds have been barely able to outperform even their own benchmark.

Our aim is to point out that the shift towards foreign assets did not necessarily provide a better outcome for the end investors of mutual fund units than if the fund managers had bought only Hungarian forint-denominated government securities and had followed the benchmark structure of

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the institutional government securities market. From this point of view, it is also worth looking at different types of government benchmark indices depending the investment policy and time horizon:

- the RMAX index reflects the performance of government securities between 3 months and 1 year,
- whereas the MAX index is the reference index for Hungarian government securities longer than 1 year.

More than 80 percent of bond funds' assets are in short bond funds, therefore the RMAX index can be the benchmark against which most funds measure their performance. For long bond funds, the MAX index can be the benchmark.

It is important to point out that in the comparison we take into account the institutional government securities market and its benchmarks, the yield available on residential securities was not examined in this case. The annual costs of each fund are reported by the so-called Total Expense Ratio (TER), which is published annually by the MNB. As of today, the 2023 figures are not known, so we can only use the last publicly available costs for 2022. The TER indicator includes all annual costs of the fund, from management fees to custody fees and success fees. (The reported net asset value is after deduction of costs, therefore the performance of the respective fund takes into account all costs and expenses.)

The most popular short bond funds have a net asset value of over HUF 100 billion, which is where we drew the line before we looked. Without naming individual funds, it is clear that they have not always outperformed their own benchmark, and even when compared to the RMAX, performance is not clearly positive.

	Net assets (bn HUF)	2023 performance (%)	Benchmark performance in 2023 (%)	RMAX performance 2023 (%)	Performance compared to the benchmark in 2023 (%)	Performance compared to the RMAX in 2023 (%)	TER (2022, %)
Fund1	887.1	17.08	16.93	15.33	0.15	1.75	1.11
Fund2	530.4	15.34	15.77	15.33	-0.43	0.01	1.06
Fund3	435.1	15.03	n.a.	15.33	n.a.	-0.3	1.36
Fund4	272.8	14.64	n.a.	15.33	n.a.	-0.69	1.06
Fund5	268.4	14.07	n.a.	15.33	n.a.	-1.26	1.31
Fund6	138.2	18.6	18.5	15.33	0.1	3.27	1.27
Fund7	112.7	16.16	n.a.	15.33	n.a.	0.83	1.22

Table 1: Performance of short-term bond funds in 2023; Source: BAMOSZ, MNB, ÁKK

The situation is different for long bond funds, where only one fund outperformed the MAX index, while the other funds underperformed the benchmark index by a significant margin. In fact, all but one fund underperformed their own benchmark for 2023.

	Net assets (bn HUF)	2023 performance (%)	Benchmark performance in 2023 (%)	MAX performance 2023 (%)	Performance compared to the benchmark in 2023 (%)	Performance compared to the MAX in 2023 (%)	TER (2022, %)
Fund8	81.7	27.81	26.82	27.67	0.99	0.14	1.64
Fund9	54.6	24	26.4	27.67	-2.4	-3.67	1.33
Fund10	24.6	25.71	n.a.	27.67	n.a.	-1.96	1.43
Fund11	23.2	25.77	26.82	27.67	-1.05	-1.9	1.46
Fund12	20.4	26.39	26.82	27.67	-0.43	-1.28	1.76

Table 2: Performance of long bond funds in 2023; Source: BAMOSZ, MNB, ÁKK

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Only one of the open-term funds is eligible and to mention, the stock of net assets in the other products listed here is very low, a few billion forints. The annual performance of a little over 22 percent for the one investigated fund was significantly lower than the 2023 return of the MAX index.

	Net assets (bn HUF)	2023 performance	MAX performance in 2023 (%)	Performance compared to the MAX in 2023 (%)	TER (2022, %)
Fund13	171.4	22.06	27.67	-5.61	1.52

Table 3: Performance of open-term bond funds in 2023; Source: BAMOSZ, MNB, ÁKK

One more thing to consider is the so-called Sharpe ratio, which expresses the excess return per unit of risk, i.e. the impact of taking more risk on the performance of an investment. We have analysed the annual and 5-year performance of the investment funds in question using Sharpe ratios between 2019 and 2023. The Sharpe ratio of an investment fund can be described by the following relationship:

$$sharpe_a = \frac{r_a - r_f}{\sigma_a}$$

where r_a is the annual return of the portfolio, r_f is the return of the risk-free asset, and σ_a is the annualized standard deviation of the weekly returns of the portfolio.

It is important to underline that it may not be worth drawing serious conclusions from the performance of a fund on the basis of one year. If we look at five-year Sharp ratios for short bond funds, the picture is similarly positive from their point of view. All but one of the funds concerned have managed to achieve a higher Sharpe ratio than the RMAX index.

To calculate the yields, we used data published by BAMOSZ. The risk-free rate of return, based on market practice, is the average annual return on the shortest maturity instrument available to participants, the three-month T-bill. **Thus, the higher the Sharpe ratio of an instrument (in this case, an investment fund), the better it performs relative to the risks it assumes. In other words, if a fund's Sharpe ratio is higher than the benchmark index, it has paid off to invest in riskier assets.**

In the case of short-term bond funds, the majority produced a Sharpe ratio higher than the RMAX index over a one-year period, meaning that active asset management paid off in 2023.

	1Y Sharpe	RMAX 1Y Sharpe	5Y Sharpe	RMAX 5Y Sharpe
Fund1	3.34	3.17	0.76	0.17
Fund2	4.37	3.17	-0.55	0.17
Fund3	8.31	3.17	1.50	0.17
Fund4	7.52	3.17	0.80	0.17
Fund5	7.22	3.17	1.56	0.17
Fund6	2.09	3.17	0.23	0.17
Fund7	4.24	3.17	1.11	0.17

Table 3: The Sharpe ratio of the largest short bond funds and the RMAX index; Source: BAMOSZ, ÁKK

For long bond funds, a similar picture emerges; over a one-year time horizon, weighted by total net asset value, the funds achieved a Sharpe ratio roughly half as high as the benchmark MAX index. In other words, active asset management paid off for them, allowing them to outperform the government bond market benchmark. Over a five-year time horizon, however, the picture is far less positive for the funds, with only one portfolio achieving a Sharpe ratio higher than the MAX index.

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In other words, the active asset management strategy and hence higher risk-taking has not paid off at all for long bond funds over the long term.

	1Y Sharpe	MAX 1Y Sharpe	5Y Sharpe	MAX 5Y Sharpe
Fund8	2.02	1.54	0.14	0.014
Fund9	1.37	1.54	-0.23	0.014
Fund10	1.85	1.54	-0.09	0.014
Fund11	1.49	1.54	-0.21	0.014
Fund12	1.58	1.54	-0.23	0.014

Table 4: Sharpe ratio of the largest long bond funds and the MAX index; Source: BAMOSZ, ÁKK

Overall, over a one-year horizon in 2023, the funds were still able to perform relatively well compared to the relevant sovereign benchmarks, probably largely due to the inverted yield curve over the period and the completely risk-free, exceptionally high base rate of the MNB, which the short bond funds had easy access to. **However, if we look at the last five years, many funds have not managed to outperform the passive strategy of tracking indices published by ÁKK.** This is evidenced by the typically negative performance of long bond funds, for whom the rising base rate of the MNB was less of an available alternative**.** In fact, weighted by net asset values, almost half of short bond funds owe their 5-year performance surge to the last 2-3 years. **And one could really say that active asset management has been worthwhile if the fund had managed to achieve a Sharpe ratio higher than the benchmark index over the longer term, even under normal conditions.**

Looking at the performance of the funds, another question arises: **why hasn't yet anyone launched a bond market ETF that follows the government bond market benchmark published by ÁKK?** According to our analysis, the active fund management strategy cannot substantially surpass the performance of the passive MAX index, let alone produce sustainable "alpha", so a passive instrument that follows government bond market indices by ÁKK could have a justification, naturally with a lower fee than the cost of active portfolio management.

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