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MNB green bond portfolio –
positive impact equating the carbon footprint of a town

The Central Bank of Hungary (Magyar Nemzeti Bank – “MNB”) started to build its dedicated green bond portfolio in 2019, as one of the pillars of its Green Program. In the past two years the green bond market – and in a wider sense all instruments targeting a sustainable growth – from a niche market segment became the mainstream. It is essential to closely follow the positive impact generated by these investments. Taking this into consideration – besides the conventional financial performance – MNB also monitors the annual positive environmental impact of its green bond portfolio: currently this results in a CO₂ emission avoidance which approximately corresponds to the carbon footprint of a Hungarian town with 10 thousand inhabitants.

Management of the green bond portfolio

From a financial perspective, the management of the green portfolio does not substantially differ from any other: **risk-return considerations are fundamental in the investment decisions**, which confirms the general fact that **green finance targets projects which are sustainable from both, a business as well as an environmental perspective**. Nevertheless, in managing a green portfolio it is **key to monitor the expected and later the actual, materialized positive environmental impacts**. Monitoring the impacts on a single issuer level enables the optimization of the portfolio not only on financial but also on an environmental basis (CO₂ emission).

This does not mean that portfolio management should automatically target the achievement of the highest positive environmental impact: **green projects can also have a significant importance in the green transformation even if they do not directly generate a significant amount of relative greenhouse gas reduction**. For example, a renewable project replacing coal production results in a significantly greater relative CO₂ reduction (annualized and allocated to an EUR 1.0 million investment) than for example an energy efficient green building project implemented in Western-Europe. Nevertheless, the latter is also inevitable in reaching the zero emission targets. Therefore, one must strive to find the right balance between the various goals, but **obviously achieving a relative higher positive environmental impact** enjoys some priority.

In case at a later stage the bonds **do not fulfil the expectations from a green perspective**, e.g. the environmental impact of the projects miss the undertaken target levels by far, or the issuer abandons or waters down its sustainability policies („**green default**”), MNB may decide to sell the specific bonds. This latter action is essential for all the market players in maintaining the integrity of the green bond markets.

The environmental impact of MNB's green bond portfolio

The size of MNB's green bond portfolio within the reserves mirrors the relative size of the global green bond market (~1%), which is justified predominantly by liquidity aspects. Some environmental indicators¹ of our investments are summarized in the below framed box:

Ex ante environmental impact currently minimum: *circa. 55 000 tons of CO2 avoidance (reduction) per annum - this corresponds approximately to the carbon footprint of a Hungarian town with 10 thousand inhabitants**

*It is essential to emphasize that green bonds in the portfolio finance several highly complex green projects, whose positive impact could have been quantified only with numerous assumptions under current level of detail in reporting. Therefore, the **actual environmental impact is assumed to be higher.**

Highest / lowest relative environmental impact per bond: *696 tons vs. 4 tons CO2 avoidance for EUR 1.0 million nominal value per annum**

*The emission reduction should be interpreted in relation to the relevant country's/region's base scenario and strongly deviates among the projects.

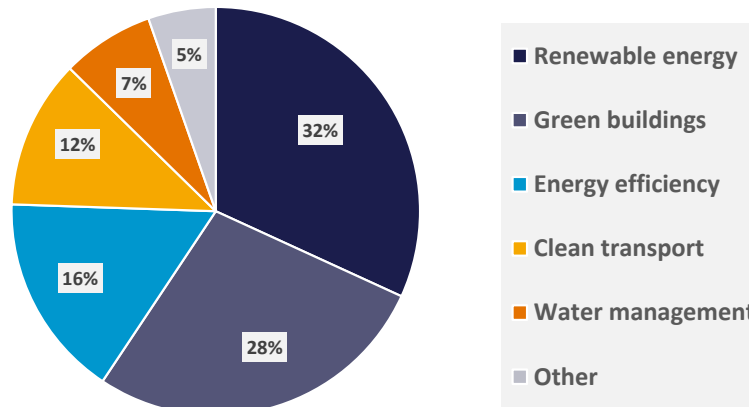
Source: Bond issuers' reports

Main characteristics and breakdown of MNB's green portfolio

The relative proportion of funded projects roughly reflects the overall market split, there is no significantly overweighted project area. It is important, that MNB does not run the risk of the specific projects, but as by conventional bonds the credit risk of the highly rated – in many cases 'AAA' – issuers, nevertheless still benefits from the positive environmental effects of the projects. Almost one third of the projects behind the green bonds in the portfolio can be related to **renewable energy**, which category includes infrastructures utilizing wind, solar, tidal, wave and biomass energy. The next most important category is **green buildings**, primarily financed in the form of green covered bonds.

¹ It is important to add that in case of the green bond portfolio we are not talking about the so called „CO2 offset“ purchase which is widespread on the market, in which case from a couple of euros some tons of carbon-dioxide avoidance can be bought. The reason behind this is that the „CO2 offset“ only provides additional marginal financing for the project in many cases, albeit the generated environmental impacts are fully included in the calculation.

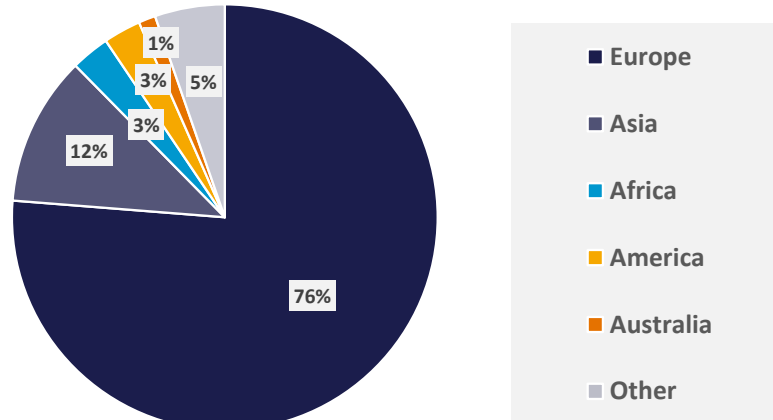
1. chart: Breakdown by the type of project financed



Source: Bond issuers' reports

The green bond portfolio of MNB is denominated in euro, which is reflected in the European dominance of the issuers and in the geographical breakdown of the implemented green projects. At the same time, projects – primarily coming from the supranational issuers – in Africa and Asia have also been financed, which in many cases generate even more effective total “green returns” due to investments that replace the often highly polluting original activities in these countries.

2. chart: Geographical split of green projects



Source: Bond issuers' reports

In their reports, bond issuers usually name which UN Sustainable Development Goals (SDGs) are targeted and effectively reached by their projects. By definition, out of the 17 SDGs the purchased green bonds primarily promote goals related to climate change, energy efficiency and clean energy.

3. chart: UN Sustainable Development Goals

Primary goals



Secondary goals



Source: Bond issuers' reports

Overall, via its green bond portfolio, MNB is an active player in the market segment supporting sustainable growth, simultaneously ensuring the primary objectives of FX reserve management (liquidity, security, yield).

General findings

The majority of the market participants are still in the learning phase of the environmental impact reporting. Hence, we would deem it as beneficial to briefly summarize some of the main points we experienced during the management and monitoring of our dedicated green bond portfolio:

- **Whilst the pre-issuance steps of green bonds are widely known and standardized sufficiently, the way how issuers report environmental impacts are quite diverse.** That obviously comes from the differing nature of the projects, nevertheless there might be room to standardize further the reports.
- **Managing green investments is extremely data-intensive:** for the time being the market infrastructure that would ensure the credible, easily and widely accessible data in user-friendly and cheap way is still missing.² In many instances the data does not exist at all.

² Some initiatives already exist for building an easily accessible central database – for example the **Green Assets Wallet** – but for the time being the majority of the issuers do not provide their data automatically and in a standardized form to these firms.

- **The reported positive impacts are based on ex ante data provided by the issuers.** Consequently, the figures presented above reflect the annualized value of the expected positive impacts generated by the funded projects during their entire lifecycle. **In the long run – especially for example in the volatile sectors that are exposed to weather conditions – it would also be worthwhile to examine ex post, materialized impacts.**
- **Although some issuers indicate exactly the invested amount that financed the published impacts, in case of others it is sometimes ambiguous.** (For instance, some of them report the total sum of positive impacts that they achieved with all of the financing instruments not only with their green bonds or do not disclose the method of calculation, etc.) **Theoretically, in order to properly calculate the positive effects of the green bond portfolio the starting point should be ‘impact per million euro financed by green bonds’.** (Not only for CO₂ emission but for example for MWh savings in energy consumption or MWh generated by green energy per million euro / dollar). **The administration of the impacts pertaining to a specific green bond would be the perfect solution, however it might be a too onerous process for the issuers at this stage.**
- **In some reports, it is difficult to interpret the exact time period during which the impacts were generated and it makes the calculation difficult:** in these cases, it was assumed that the given issuer would finance the ongoing green projects with closely identical impacts like in the past.
- **The impacts of the green projects are calculated against an alternative scenario (benchmarks); however, these benchmarks are different from region to region. It would be a positive development to have a central database where these benchmarks could be easily compared.** Obviously, the existence of these differences in benchmarks is reasonable and prudent due to the diverse circumstances across countries and regions, nevertheless it would be preferable to evaluate the benchmarks as well (how strict they are, etc.).

To conclude, one of the most important neuralgic points of sustainable investment is the availability of impact data: balancing between the quality and quantity is key. Furthermore, **there are many factors that are highly relevant from social and environmental perspective but not quantifiable, hence the excessive simplification should also be avoided.** As Einstein said: *“Not everything that counts can be counted, and not everything that can be counted counts.”*