



THE MAGYAR NEMZETI BANK'S CLIMATE-RELATED FINANCIAL DISCLOSURE - 2023



CLIMATE CHANGE IS AMONG TOP CHALLENGES FOR OUR GENERATION



Long-term effects, short term action necessary



Optimal allocation of resources needed



Strict action plans are critical to achieve Paris Goals



No time to waste, active engagement required

Potential interferences with climate change



Secondary mandates:

Maintain the stability of the financial intermediary system

Support the government's economic policy and its policy related to environmental sustainability



Primary mandate:

**Achieve and maintain
PRICE STABILITY**

- Deterioration of asset values, credit portfolios
- Lower household wealth and corporate incomes

- Coordination with fiscal measures to foster the green transition of the economy

- Impact on economic activity and prices
- Increase in fossil fuel prices
- Cost of transition

- Financial stability is required to conduct monetary policy efficiently



MNB among first central banks to receive green mandate

CREATING TRANSPARENCY IS ONE OF THE GREEN TRANSITION'S CORNERSTONES



*„There may be unique recipes and different solutions for a green transition, but it is beyond dispute that **green transformation** will not happen without measurement.*

***Measurable and verifiable data are essential** for building strategies, setting targets, and evaluating actions.*

For an accelerated green economic transition, green central banks, green regulators, green loans, and above all green transparency will be required”

György Matolcsy, Governor of Central Bank of Hungary



MNB publishes its annual Climate-related Financial Disclosure

MNB INTENDS TO INCREASE TRANSPARENCY AND LEAD BY EXAMPLE



Broadest possible coverage of assets

Covering physical and transition risk – backward and forward looking metrics

Following central bank best practices

Following TCFD recommendations

Creation of an annual climate report

Continuous enhancement of the metrics and coverage

Transparency of methodologies and data sources used



Being a good example for market participants

Enhancing internal climate risk-related processes



MNB'S TCFD RIPOUT IS BUILT AROUND FOUR KEY AREAS



Task Force on Climate-related Financial Disclosures (TCFD): Recommendations of G30 to achieve carbon-neutrality

Only a few – but increasing number of – central banks published climate-related financial disclosure in line with the TCFD recommendations

The initiatives of central banks (e.g. BoE, BdF, BND) have been developing in a gradual but continuous way

When applying TCFD recommendations:

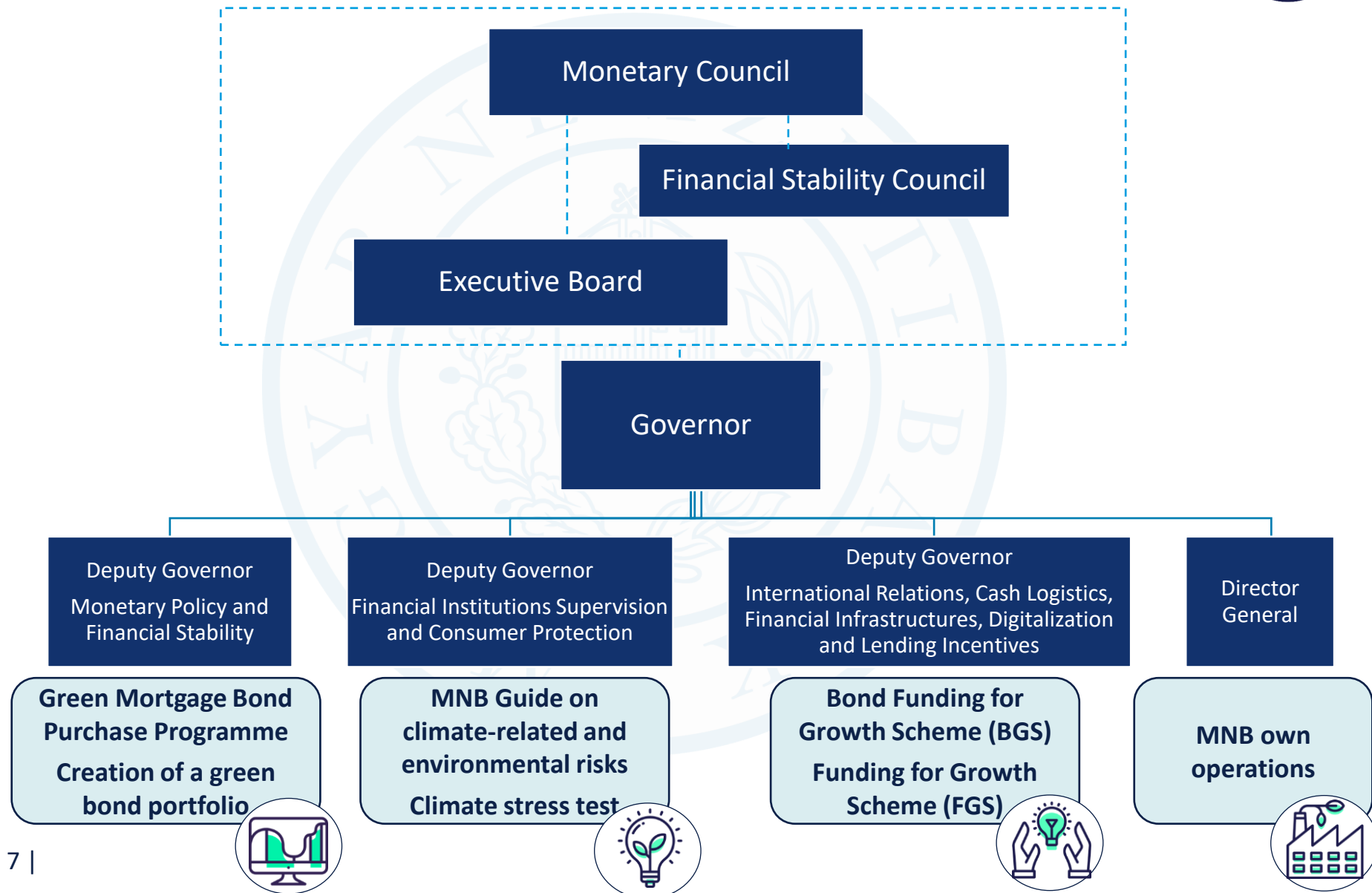
- Flexibility in the content of the report
- Opportunity for graduality

T C F D



CORE ELEMENTS OF TCFD-RECOMMENDATIONS

CLIMATE RELATED PROCESSES, DECISIONS ARE ALIGNED WITH THE MNB'S ORGANISATIONAL STRUCTURE



SUSTAINABILITY STRATEGY HAS BEEN ESTABLISHED IN LINE WITH THE MANDATE AND ORGANIZATIONAL STRUCTURE OF THE MNB



Green monetary policy toolkit strategy

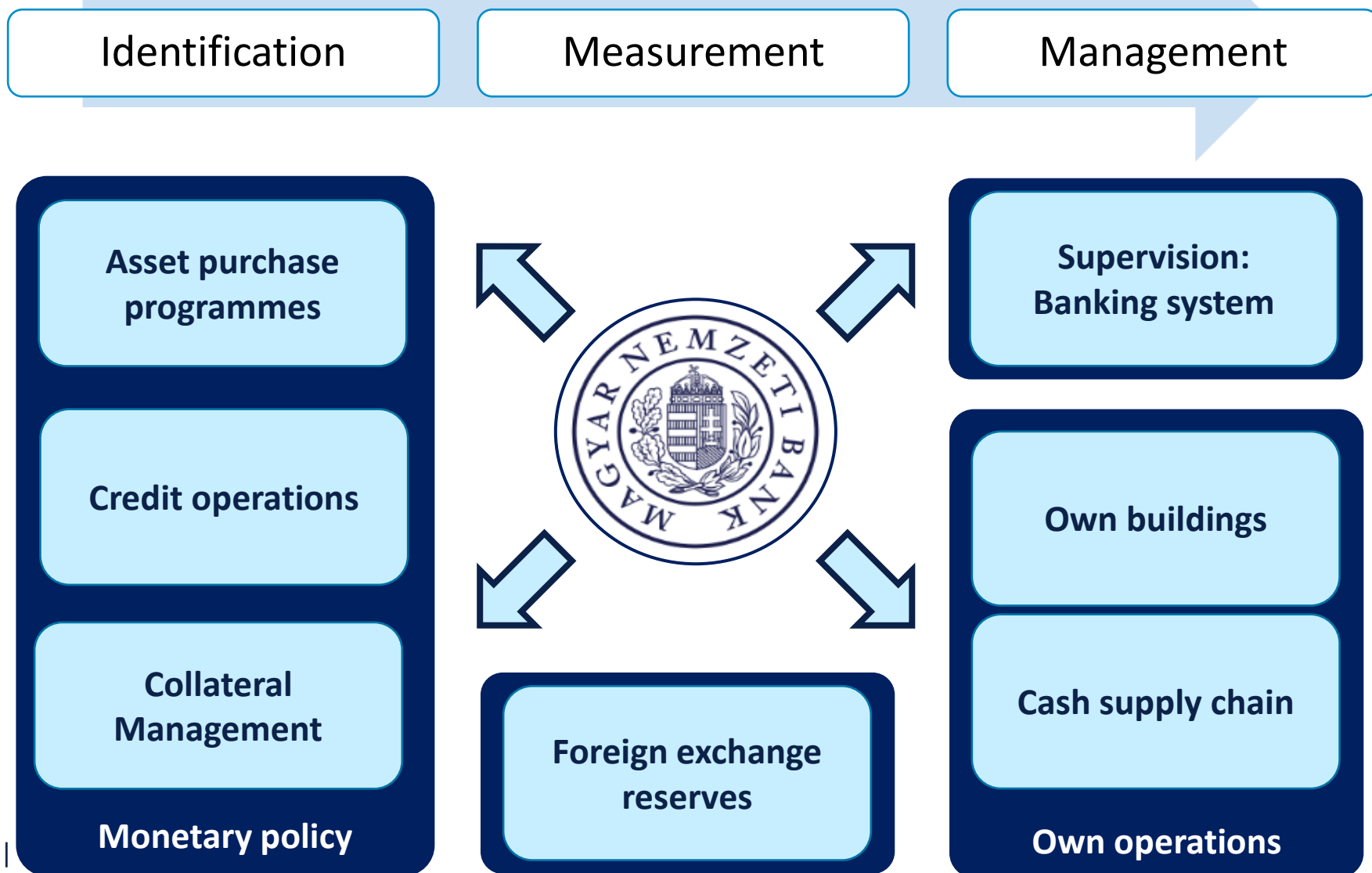


Supervisory Strategy and Green Programme



Strategy relating to greening the MNB's operation

THE MNB STRIVES TO INTEGRATE CLIMATE-RELATED RISK MANAGEMENT INTO IT'S OPERATION AS WIDE AS POSSIBLE



CLIMATE-RELATED RISK ANALYSIS OF THE PORTFOLIOS IS BASED ON TWO CLIMATE CHANGE RISK CATEGORIES



Pillars of climate risk analysis

Transition risk

Transitioning to a lower-carbon economy may entail extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change.

WACI, Brown-share, Energy mix

Physical risk

Event driven (acute) or longer-term shifts (chronic) in climate patterns. These risks may have financial implications for organizations (direct damage to assets, indirect impacts from supply chain disruption).

Four Twenty Seven (Moody's Analytics)

THE GOAL IS TO PROVIDE CLIMATE-RELATED INFORMATION ON THE WIDEST POSSIBLE RANGE OF FINANCIAL INSTRUMENTS



Broad set of assets covered by the report
Due to the lack of data and reliable methodology full coverage not achievable



	Gold and Foreign Exchange Reserves	Government Securities Purchase Programme	Bond Funding for Growth Scheme (BGS)	Funding for Growth Scheme (FGS)	Mortgage Bond Purchase Programme	Collateral Management
Coverage in the Report	sovereign issues	Hungarian government securities	Hungarian corporate bonds	Hungarian SME-loans	Hungarian mortgage bonds	Hungarian government and corporate bonds
Metrics applied	WACI, energy mix, CAT, physical risk	WACI, energy mix, physical risk	WACI, brown share, physical risk	WACI, brown share, physical risk	saved GHG-emissions	WACI, brown share, physical risk

98% OF THE MNB'S ASSETS ARE FINANCIAL ASSETS



Government securities

FGS-programme

Mortgage bonds

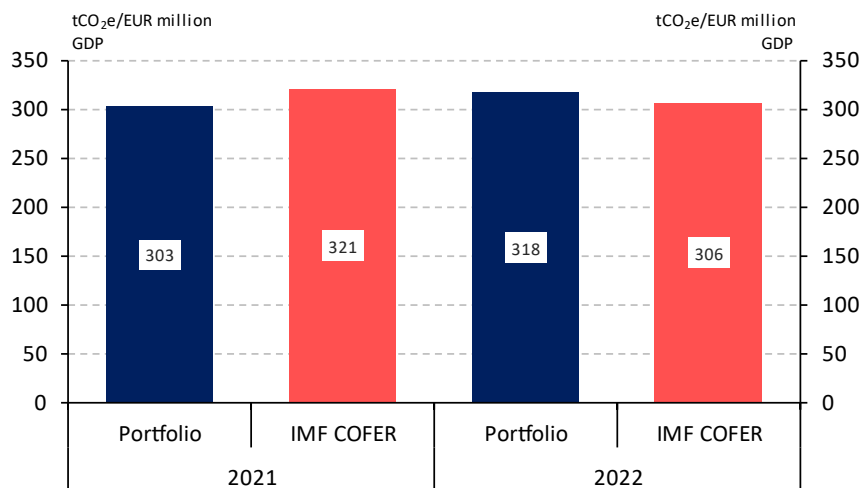
BGS-programme

FX reserves

IN THE CASE OF FOREIGN EXCHANGE RESERVES, THE FOCUS OF THE ANALYSIS IS ON THE SOVEREIGN EXPOSURES

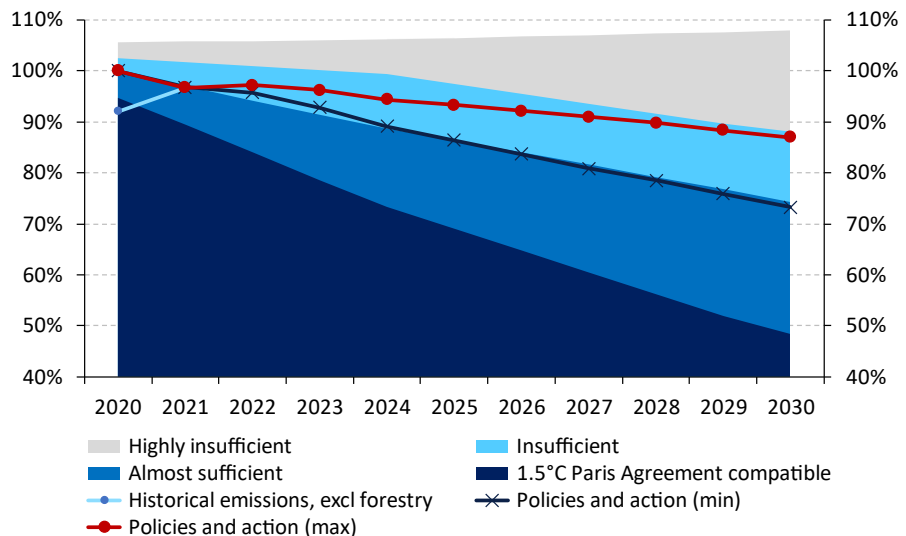


- The WACI for the sovereign exposure of the reserve portfolios slightly increased in 2022, due to changes and reallocations in the reserve structure.
- The exposure is in the range of 'almost sufficient' and 'insufficient' climate scenarios, based on CAT scenarios, i.e. not in line with the Paris Climate goals.



WACI FOR THE SOVEREIGN EXPOSURE OF FOREIGN EXCHANGE RESERVES AND THE IMF COFER, 2021-2022

Source | MNB calculation based on IMF, OECD, World Bank, UNFCCC GHG Data Interface, and Climate Watch data



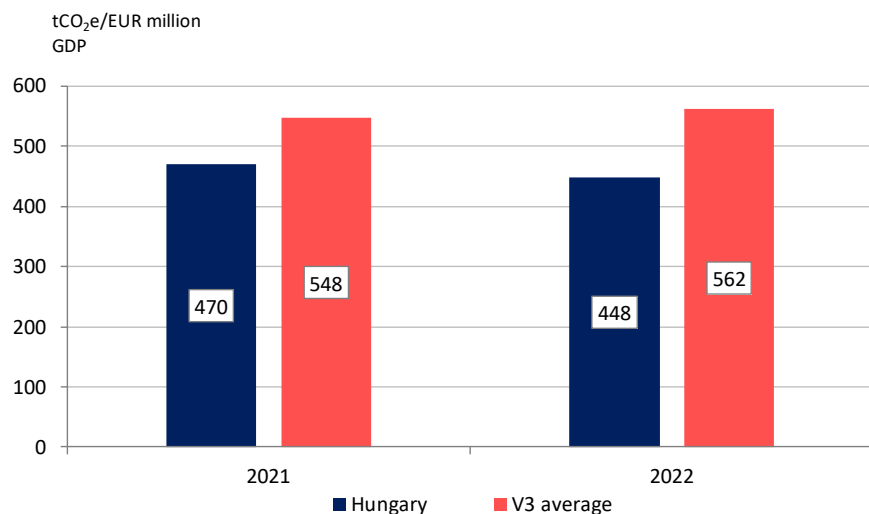
DIFFERENT FUTURE CLIMATE SCENARIOS FOR THE SOVEREIGN EXPOSURE OF FOREIGN EXCHANGE RESERVES

Source | MNB calculations based on Climate Action Tracker 2021 climate scenario data

WACI OF THE GOVERNMENT SECURITIES PURCHASE PROGRAMME IMPROVED

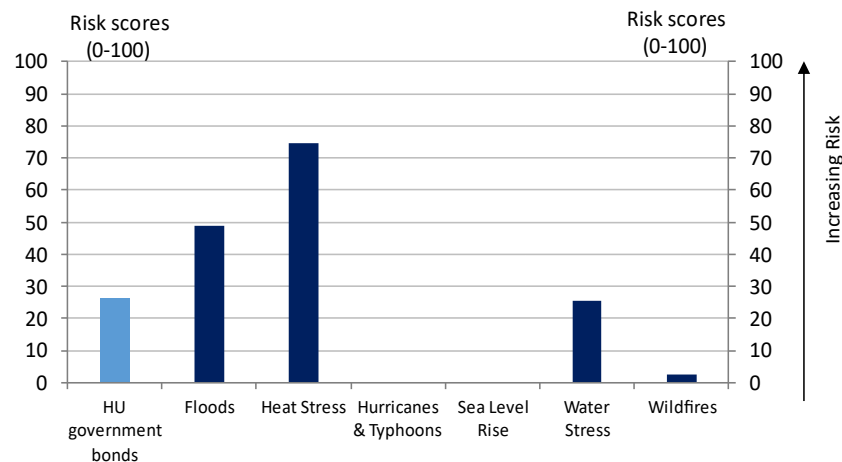


- **The WACI of the Hungarian sovereign assets is 448 tonnes CO₂e per million euro of GDP**, which is lower than the average regional carbon intensity used as a benchmark and lower than the 2021 value.
- **Hungary's physical risk exposure is relatively low**, ranking in the lower third of the universe examined, with only the heat stress risk category posing a serious challenge



CARBON INTENSITY OF DOMESTIC AND REGIONAL ECONOMIES, 2021-2022

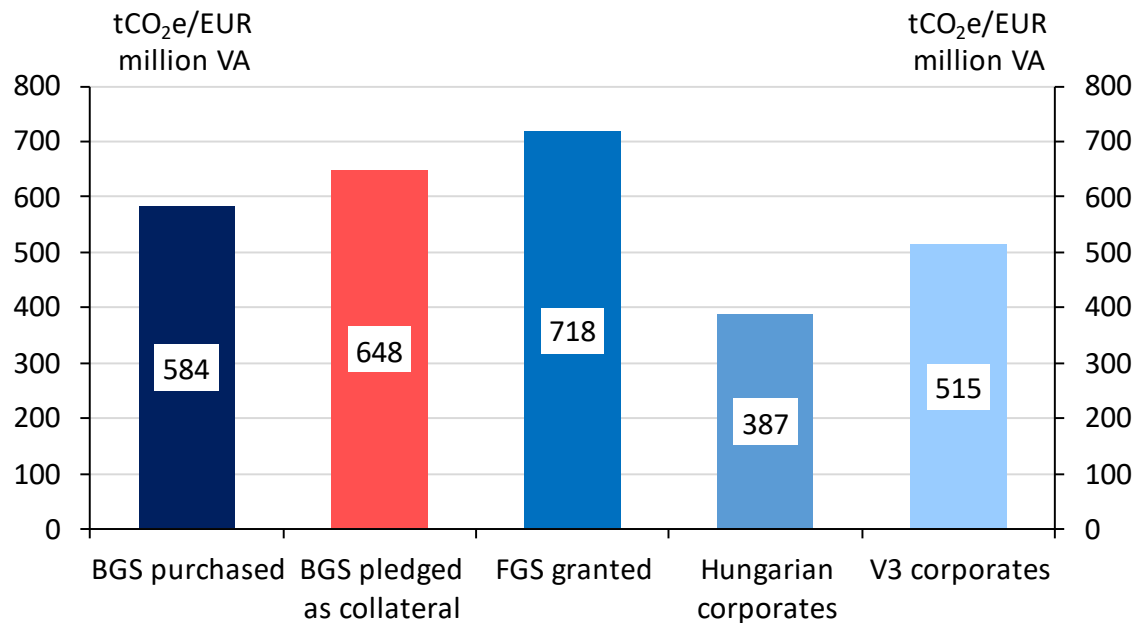
Source | Eurostat, MNB Calculation



PHYSICAL RISK SCORES FOR HUNGARY (HUNGARIAN GOVERNMENT SECURITIES)

Source | Moody's Analytics, MNB calculations

THE WACI OF THE BGS AND THE FGS PORTFOLIOS ARE HIGHER THAN THAT OF THE HUNGARIAN CORPORATE SECTOR



CARBON INTENSITY OF THE BGS BONDS, FGS LOANS, HUNGARIAN AND V3 COMPANIES

Source | Eurostat, MNB

The WACI of the corporate portfolios increased due to the change in the portfolio composition, despite the improving average corporate sector carbon figures.

The WACI of the BGS portfolio is lower than that of the pledged BGS securities.

The WACI of the FGS exposure exceeds that of the other Hungarian corporate portfolios and the benchmark.

Increased, but still relatively low brown-share exposure in the portfolios.

PHYSICAL RISK SCORES OF CORPORATE EXPOSURES ARE DRIVEN BY THE CONCENTRATED LOCATION OF COMPANY HEADQUARTERS



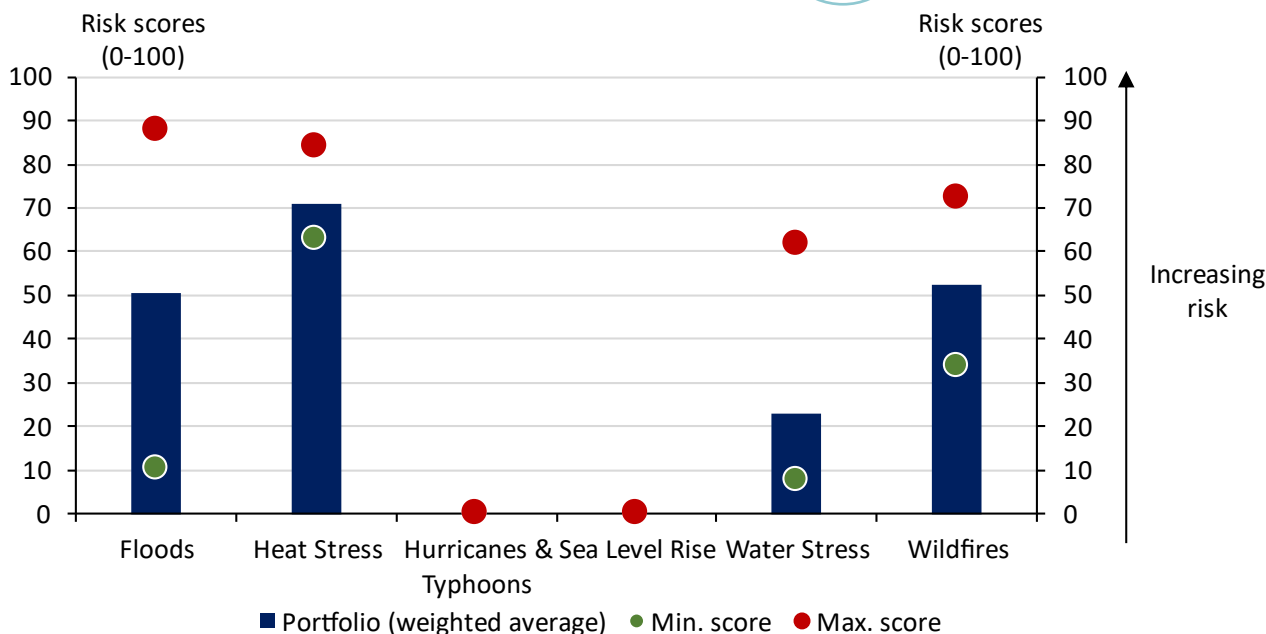
Heat stress and wildfire dominate the physical risk exposure of corporate portfolios.



The headquarters of the issuing companies are highly concentrated geographically (majority in Budapest).



Category scores of floods have increased in some cases due to methodological change of the data provider.



PHYSICAL RISK SCORES OF BGS EXPOSURE

THE CARBON FOOTPRINT OF THE MNB'S OPERATIONAL ACTIVITIES DECREASED BY 30% OVER THE PAST YEARS



MNB has been continuously monitoring its operational carbon footprint for 10 years and is striving to reduce it

The MNB achieved to reduce its operational carbon footprint by 30 percent by the end of 2021

The goal is to reduce the carbon footprint by 80 percent by 2025

Installation of photovoltaic systems and the use of renewable energy

Habitat restoration projects that can absorb the entirety of its carbon footprint in the coming years

27-hectare afforestation project near Geszt with the help of WWF Hungary

Carbon emissions/sources	Evolution of the carbon footprint (CO2 emissions in tons)					Change from base year 2019, %
	2017	2018	2019	2020	2021	
SCOPE 1 total	1,015	960	971	1,076	1,090	11.8
SCOPE 2 total	3,785	4,010	4,092	2,624	3,013	-28.5
SCOPE 3 total	1,136	857	958	383	170	-69.4
SCOPE 1 - SCOPE 3 total	5,936	5,827	6,021	4,082	4,273	-29.4
Carbon footprint per capita (tons/capita)	4.7	4.5	4.6	3.1	3.2	-30.4

TREND IN CARBON FOOTPRINT OF OPERATIONAL ACTIVITIES

Source | MNB



THANK YOU
FOR YOUR
ATTENTION!

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THE MAGYAR NEMZETI BANK'S
CLIMATE-RELATED FINANCIAL
DISCLOSURE



2023
APRIL